



1005

Catalogue

Explosion-Protected Products



COOPER Crouse-Hinds



1

PORTABLE EX-LAMPS

Torches and hand lamps
Searchlights
Hand- and machine lamps
Tank inspection lamps

3

EX-SIGNAL- AND ESCAPE SIGN LUMINAIRES

Escape sign luminaires in plastic design with LED-technology
Escape sign luminaires in metal design with LED-technology
Safety and emergency luminaire in plastic design
Signal- and emergency light fitting

5

EX-AUDIO/VISUAL-SIGNALLING

Manual call points
Status lamps
Beacons and strobes
Sounders, Horns and speakers
Heat detectors

7

EX-JUNCTION BOXES AND TERMINAL ENCLOSURES

Junction boxes in plastic and metal design
Terminal boxes and in plastic and metal design
Terminal enclosures in stainless steel
Connection and intermediate motor terminal boxes in plastic design

9

EX-CONTROL UNITS AND CONTROL STATIONS

Installation switch in plastic design
Control stations in plastic and metal design
Control and signal units for panel mounting
Control switches with/without measuring instrument
Flameproof control stations

11

EX-DISTRIBUTIONS

Distributions in plastic and metal design
Distribution enclosures and components
Flameproof distributions for gases in Ex-group IIC and IIB
Flameproof panels and racks

EX-FLUORESCENT LIGHT FITTINGS

Light fitting in plastic design
Emergency light fitting in plastic design
Recessed ceiling light fitting in metal design
Flameproof light fittings
Light fitting for zone 2/22

2

EX-PENDANT LIGHT FITTINGS AND FLOODLIGHTS

Pendant light fittings in metal design
Floodlights in metal design
Vessel light fittings
Pendant light fittings and floodlights for zone 2/22

4

ELECTRICAL CONNECTIVITY

eXLink Ex-connector system in plastic and metal design up to 16 A
Ex-multi purpose terminals
Plugs and sockets up to 125 A for Ex-Zone 1, 2 and industry application
Ex-repair and maintenance sockets and distributions up to 80 A
Portable Ex-cable reels

6

EX-CABLE GLANDS

Cable glands in plastic design
Cable glands in metal design
Accessories: Reducing rings, screw plugs, breathing gland etc.

8

SAFETY AND MAIN CURRENT SWITCHES

Ex-safety switches up to 630 A
Industrial safety switches up to 630 A
Ex-main current switches up to 630 A
Ex-circuit breakers up to 630 A
Ex-manual motor starter

10

REGISTER

Subject catalogue
Order-code index

12

REGULATIONS

from A to Z

REGULATIONS ON EXPLOSION PROTECTION

A

THE DIRECTIVE 94/9/EC

B

HAZARDOUS AREAS DUE TO EXPLOSIVE
GASES, VAPOURS AND MISTS

C

EX-HAZARDOUS AREAS DUE TO EXPLOSIVE
DUST/AIR MIXTURES

D

CLASSIFICATION OF APPARATUS

E

MARKING OF EX-PROTECTED APPARATUS

F

DEGRESS OF PROTECTION

G

REGULATIONS AND APPROVALS OUTSIDE
OF THE EC JURISDICTION

H

CHEMICAL STABILITY OF PLASTIC FOR
EXPLOSION-PROTECTED APPARATUS

I

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YOUR PARTNER WITH COMPETENCE IN EXPLOSION-PROTECTED

J



Explosion-protected apparatus according to the directive 76/117/EEC bear the **Ex-symbol**.



A Regulations on Explosion-Protection

Electrical apparatus for use in hazardous areas must be explosion-protected in design and must comply with the regulations on Explosion-Protection. In order to establish a requirement and safety level that is the same throughout Europe, the European Union has compiled product-related “European Directives” for all types of products.

In 1976 the Council of the European Community issued basic directives on Explosion-Protection. These were converted into national law in Germany in the “Regulations concerning electrical installations in explosive atmospheres (Elex V)” issued in February 1980. CENELEC, the European committee for electrotechnical standardization, worked out European standards for apparatus for use in hazardous areas. In Germany these standards DIN EN 50014 to 50020/VDE 0170/0171, Parts 1 to 7, designated as VDE regulations, came into force on 1.5.1978. They contain constructional and test requirements for explosion-protected electrical apparatus for hazardous areas.

The certificates of conformity or inspection certificates issued by notified bodies of member states of the EC, which are issued on the basis of the tests carried out, are recognized by all member states of the EU as type examination certificates.

B The Directive 94/9/EC

After a transition period, as of July 1, 2003 the **directives 94/9/EC of the European Parliament and Council** for the harmonization of the statutory provisions of member states on apparatus and protective systems intended for use in potentially explosive atmospheres dated 23.3.1994 (Directive 94/9/EC) will replace any existing directives on Explosion-Protection on a European level.

All explosion-protected apparatus which have been put into circulation for the first time since **1. July 2003 have to be** in compliance with this directive.

This new Ex directive was converted into national German law by the new **“Explosion-Protection decree (ExVO)”** issued in December 1996.

These ATEX directives 1999/92/EC regulate the explosion-protection and the standards for the required monitoring of apparatus in Germany. These national regulations were replaced by the **“Industrial Safety Regulations“** in **October 2002**.

Amongst other things, the ATEX directive 94/9/EC now regulates the classification and marking of apparatus for use in hazardous areas.



New is the classification of apparatus in the following:

Apparatus for mining operations: Apparatus Group I
Apparatus for use in all other hazardous areas: Apparatus Group II

This is divided further into apparatus categories that regulate the safety level of the apparatus for the respective zone:

Categories 1, 2 and 3

In addition to this, distinction is also made between apparatus for use in **Gas-Ex hazardous areas**, code letter "G", and apparatus for use in **Dust-Ex hazardous areas**, code letter "D"

Apparatus for Gas-Ex hazardous areas

Apparatus category	Zone	Marking
1	0	II 1 G
2	1	II 2 G
3	2	II 3 G

Apparatus for Dust-Ex hazardous areas

Apparatus category	Zone	Marking
1	20	II 1 D
2	21	II 2 D
3	22	II 3 D

After successful completion of the type test within the scope of the conformity evaluation procedure, the authorized testing stations, now called **notified bodies**, issue an "EC Type Examination Certificate".



To fulfil all requirements of the Explosion-Protection directive 94/9/EC (as well as those of any further EC-directives which are applicable), the manufacturer issues an **"EC-Declaration of Conformity"**.

To allow free movement of goods throughout Europe, the



CE marking

shall be affixed to all apparatus to which this EC declaration of conformity applies.

All explosion-protected products in this catalogue have already been certified in accordance with the new ATEX-Directive 94/9/EC. Additionally, most of the products in this catalogue have supplementary approvals for the use in areas where hazardous flammable dusts are present.



C Hazardous Areas due to Explosive Gases, Vapours and Mists

Hazardous areas due to the presence of explosive gases, vapours and mists are classified into three zones. This classification depends on the probability of the occurrence of an explosive gas atmosphere.

Zone 0 covers areas in which an explosive atmosphere caused by a mixture of air and gases, vapours or mists is present, **continuously, for long periods or frequently.**

Zone 0 mainly encompasses the areas inside closed containers, pipelines and apparatus which contain inflammable liquids. The respective operating temperature lies above the flash point. The hazardous area is above the liquid level and not within the liquid.

With **apparatus in the category 1 G** (for Zone 0), in order to avoid ignition hazards resulting from electrical circuits of the apparatus, it is necessary to guarantee the specified degree of safety:

- in the event of two independent faults when only one protection measure is applied, or
- in the event of the failure of one protection measure, by means of a second, independent protective measure.

These conditions are deemed fulfilled if, for example, the apparatus is designed

- in the type of protection "ia" to IEC 60079-11 (EN 60079-11), or if "specially casted encapsulations" "ma"

are used according to IEC 60079-18 (EN 60079-18), or .

- a combination of two independent ignition protections according to IEC 60079... (EN 60079...) are used.

So can for example, hand lamps with intrinsic supply circuits or intrinsic apparatus "ib", an additional and in accordance to IEC 60079-18 (EN 60079-18) flameproof encapsulation.

The requirements on apparatus with regard to electrostatic charges are considerably higher than those for Zone 1 or Zone 2.

Additionally to the original types of protection the constructional and testing requirements for electrical apparatus in Group II 1 G according to IEC 60079-26 (EN 60079-26) are valid.

Zone 1 covers areas in which the **occasional** occurrence of an explosive atmosphere due to the presence of gases, vapours or mists is likely.

Inflammable or explosive substances are made, processed or stored in Zone 1. This includes the area surrounding charging doors, the immediate vicinity of filling and emptying devices, the immediate vicinity of fragile equipment and lines, as well as around cable glands on pumps and slides that do not seal adequately. The occurrence of an explosive atmosphere is likely during normal operation.

With **apparatus of the category 2 G** (for Zone 1), it is either necessary to ensure that the occurrence of an ignition source is excluded, or the ignition

source must be encapsulated by a recognized type of protection in such a way that the ignition of an explosive atmosphere surrounding the apparatus is prevented.

This applies in Zone 1 for both normal, trouble-free operation and for the operating faults that commonly occur.

The constructional and test regulations for the permissible types of protection are laid down in IEC 60079-... (EN 60079-...).

Zone 2 covers areas in which the occurrence of an explosive atmosphere due to the presence of gases, vapours and mists is not likely, but if one should occur, then only rarely and only for a short period.

Zone 2 encompasses areas where explosive or flammable materials are manufactured or stored. Zone 2 also encompasses areas around Zones 0 and 1, for example areas around flanged joints of pipelines in closed rooms. Furthermore, it includes areas in which, due to natural or forced ventilation, the lower explosion limit is reached in exceptional cases only, e.g. the surroundings of outdoor installations.

Apparatus in the category 3 G

(Zone 2) must be designed in such a way that it is safe during normal, trouble-free operation. All apparatus that fulfils the requirements for Category 1G and 2G may be used. The requirements for electrical apparatus specially designed for use in Zone 2 have been newly regulated in IEC 60079-15 (EN 60079-15). The previous practice of also using apparatus of "good industrial quality" in



Zone 2, a common practice in some countries, is no longer possible.

The requirements for Zone 2 (3 G) apparatus according to previous national standards have been regulated by the new European Zone 2 standard and provide a considerably higher safety standard.

The table below contains all relevant types of explosion protection, which can be used singularly or in a combination for explosion protected apparatus.

The **type of protection “n”** applies for Zone 2 apparatus: apparatus that cannot ignite a surrounding explosive

atmosphere under normal and certain abnormal operating conditions. In addition to this, distinction is made between apparatus that does normally not produce arcs/sparks and/or hot surfaces **“non-sparking apparatus”** and apparatus that produce sparks/arcs and/or hot surfaces **“sparking apparatus”**. The Explosion-Protection methods resulting from this were derived, in part, from the types of protection for Zone 1/category 2 apparatus, whereby they were adapted for Zone 2/ category 3 apparatus on a lower level.

Non-sparking apparatus “nA”:
The risk of the occurrence of sparks, arcs and/or hot surfaces during normal

operation is minimized by constructional measures.

Sparking apparatus:

Here sparks, arcs and/or hot surfaces occur during normal operation: The following protection methods are permissible:

- Apparatus with protected contacts:* **“nC”**
This includes enclosed switchgear, non-ignitable components, hermetically sealed, sealed and encapsulated devices.
- Restricted breathing apparatus:* **“nR”**
- Simplified pressurized apparatus:* **“nZ (py)”**
- Limited power apparatus:* **“nL (ic)”**

Types of protection for apparatus in Gas-Ex-areas

Type of protection	Symbol	IEC EN	Princip	Application
Flameproof enclosure	d	IEC 60079-1 EN 60079-1		Power-operated apparatus, switchgear, motors (all types of apparatus producing ignitable arcs in normal operation)
Sand filling	q	IEC 60079-5 EN 60079-5		Capacitors, electronic components, fuses
Pressurization	p	IEC 60079-2 EN 60079-2		Power-operated apparatus (active safety measures required)
Oil immersion	o	IEC 60079-6 EN 60079-6		Transformers (rarely used)
Encapsulation	m	IEC 60079-18 EN 60079-18		Measurement and control devices, relays, electronic circuits
Increased safety	e	IEC 60079-7 EN 60079-7		Coonection and distribution boxes light fittings, measuring instruments, squirrel cage motors (no ignitable sparks in normal operation)
Intrinsic safety	i	IEC 60079-11 EN 60079-11		Measurement and control devices, data processing (low electric values)
Protection type for Zone 2	n	IEC 60079-15 EN 60079-15	<ul style="list-style-type: none"> ● non-sparking apparatus: nA ● apparatus with protected contacts: nC ● restricted breathing apparatus: nR ● apparatus with simplified pressurization: nZ (py) ● limited power apparatus: nL (ic) 	Lamps, motors, plugs and sockets, measurement and control devices



potentially explosive concentration of inflammable dust mixed with air under normal operating conditions.

Zone 22 covers areas in which the occurrence of an explosive atmosphere due to whirled-up dust is not likely, but, if it occurs, then in all probability only rarely and only for a **short period**.

This can, for example, include areas in the vicinity of apparatus containing dust if the dust can escape from leaks and in time build up a dangerous dust layer (e.g. milling rooms, where dust leaks from the mill and builds a dust layer).

Only apparatus that fulfils the conditions of the ATEX directive shall be used in these areas.

Electrical apparatus for use in hazardous dust-areas the type of protection "dust Explosion-Protection due to enclosure" is mostly common.

D Hazardous Areas due to explosive Dust-/Air-Mixtures

Hazardous areas due to the presence of inflammable dust/air mixtures are also subdivided into 3 zones that are comparable to the zones for explosive gas atmospheres.

Zone 20 covers areas in which an explosive atmosphere due to dust/air mixtures is present **continuously, for long periods or frequently**.

If these conditions occur, they are usually found in closed containers, pipelines, apparatus, etc. where a continuous or for longer periods a dust/air mixture is probably to be found.

Zone 21 covers areas in which the occurrence of an explosive atmosphere due to dust/air mixtures is to be expected **occasionally**.

This can, for example, include areas in the immediate vicinity of dust extraction or filling stations and areas where dust deposits can occur and can form a

The design- and test regulations for the type of protection "tD" are based in the standard IEC/EN 61241-0 and -1, for the future as type of protection „t“ included in the IEC/EN 60079-31...

With such dust explosion-protected apparatus, there are, among other things, given surface temperatures and minimum IP degrees of protection required.

The approval amendments for dust Explosion-Protection in accordance with EC-directive 94/9/EC are already available for many of the explosion-protected light fittings and apparatus in this catalogue.

E Classification of Apparatus

In accordance with the various properties of gases with regard to ignition temperature, ignition capability and flame transmission capacity, explosion-protected electrical apparatus is divided into explosion groups and temperature classes.

Division of explosion-protected apparatus into explosion groups

To specify the scope of application of explosion-protected electrical apparatus, it is sub-divided into two groups:

Group I: Electrical apparatus for use in mines susceptible to the hazard of firedamp

Group II: Electrical apparatus for use in all other hazardous areas

A further sub-division of the Explosion Group II into "A", "B" and "C" is prescribed for the types of protection "flameproof enclosure" and "intrinsic safety", as well as for "increased safety" with regard to electrostatic requirements.

This is also for the protection types nC and nL. With the type of protection "flameproof enclosure" this sub-division is made according to the maximum experimental safe gap for the non-transmission of an internal ignition (MESG), whereas with the type of protection "intrinsic safety" this sub-division is made according to the ratio of the minimum ignition current of the mixture being tested to the minimum ignition current of a mixture of laboratory methane and air (MIC).

Group II C apparatus is suitable for use in all types of gas atmospheres.

Division of explosion-protected apparatus into temperature classes

The ignition temperature is the lowest temperature of a surface at which an explosive atmosphere will ignite. Gases and vapours can be divided into temperature classes according to their ignition temperatures. This results in a subdivision of explosion-protected electrical apparatus into the tempera-

Division of explosion-protected apparatus into Explosion Groups and temperature classes

	T1	T2	T3	T4	T5	T6
I	Methan					
IIA	Acetone, Ethane	Ethylalkohol	Petrol	Acetaldehyde		
	Ethylacetate	i-amylacetate	Diesel-fuel	Ethylether		
	Ammonia	n-butane	Aviation-fuel			
	Benzol	n-butylalcohol	Heating-oils			
	Acetic acid			n-hexane		
	Carbonmonoxide					
	Methanol, Propane					
	Toluene					
IIB	Town gas (lamp gas)	Ethylene				
IIC	Hydrogen	Acetylene				Carbon-disulphide




ture classes T1 to T6. This classification allows explosion-protected apparatus to be used economically. The maximum surface temperature of an apparatus must always be lower than the ignition temperature of the gas/air or vapour/air mixture.

Generally speaking, explosion-protected apparatus must be suitable for an ambient temperature from **-20 °C** to **+40 °C**. The following tables show both the division of explosion-protected apparatus according to the temperature classes and examples of the classification of gases and vapours in accordance with the explosion groups and temperature classes (material-specific factor).




The max. surface temperature of an electrical apparatus for use in hazardous dust-areas with the type of protection "dust Explosion-Protection due to enclosure" "tD" resp. "t" is defined with a dust layer of 5 mm height. This is relevant to select electrical apparatus for dust-ex areas. The ignition temperature respective the glow temperature of the dust is determining for the suitability of the apparatus.

Division of explosion-protected apparatus into temperature classes

Temperature class	Max. surface temperature
T1	450 °C
T2	300 °C
T3	200 °C
T4	135 °C
T5	100 °C
T6	85 °C

 CEAG CEAG Sicherheitstechnik GmbH PTB Nr. Ex-92.C.1801		eLLK 92036/36  	
EEx ed IIC T4	⑨	110-254 V 50-60 Hz	⑪
Lampe: G13-IEC-1305-2	⑪	110-230 V DC	⑪
Ser. Nr.: D189115	⑫	Tu ≤ 50 °C	⑪

Type label according to previous directive

 CEAG www.ceag.de Made in Germany		eLLK 92036/36 	
S. Nr.: D123456	⑫	2009	④
BVS 09 ATEX E 034	⑧	110-254 V 50-60 Hz	⑪
IECEx BVS 09.0033		110-250 V DC	⑪
⑥  II 2 G Ex d e IIC T4	⑨	Ta = -25 °C – +55 °C	⑪
II 2 D Ex tD A21 IP66 T80°C	⑩	Lampe: G13-81-IEC	⑪

Type label according to Explosion-Protection directive 94/9/EC

- ① Name / Code of manufacturer
- ② Type code
- ③ Address of manufacturer
- ④ Year of manufacture
- ⑤ Community marking for explosionprotected apparatus in accordance with directive 76/117/EWG
- ⑥ Marking of apparatus in accordance with directive 94/9/EC: for use in hazardous areas: **II** apparatus Group II for use in zone 1 areas category: **2** for use in gas hazardous areas: **G** for use in Dust-Ex-areas: **D**
- ⑦ CE marking confirming conformity with all requirements of the applicable directives for the product. The number next to the CE marking (only typical for ATEX) stands for the notified body involved in the production quality system (in this case PTB)
- ⑧ Testing station (notified body) and the respective number
- ⑨ Marking of apparatus in accordance with the European Standards for the construction and testing of explosion protected apparatus:
 - EEx:** Built and tested according to the European Standards
 - e d:** Type of protection here „increased safety“ and „flameproof encapsulation“
 - II C:** Explosion group
 - T 4:** Temperature class
- ⑩ Additional marking of the apparatus for Dust-Ex:
 - tD:** Ignition protection type „protection by housing“
 - A21:** For Zone 21 acc. process A
 - T 80 °C:** Max. surface temperature + 80 °C
 - IP 66:** Type of protection
- ⑪ Technical data
Testing station (notified body) and the respective number
- ⑫ Serial number

F Marking of Explosion Protected Apparatus

As, until the transition period expires, both the previous basic Explosion-Protection directive 76/117/EEC, supplemented by the individual Explosion-Protection directive 79/196/EEC, and the new Explosion-Protection directive 94/9/EC are valid, there are two valid parallel certification procedures and marking methods for explosion-protected apparatus.

By way of example, the two type labels for an explosion-protected light fitting for fluorescent lamps show both the marking according to the previous directive and the ATEX stands for the notified body in marking according to the new directive. involved in the production quality system (in this case PTB).

Additionally in the future Ex-protected apparatus according to the latest standard EN 60079-0, 2009 will be marked in conformance to the Equipment Protection Level (EPL):

- Ga, Gb or Gc for Gas-Ex-apparatus
- Da, Db or Dc for Dust-Ex- apparatus

G Degrees of Protection of Explosion Protected Apparatus

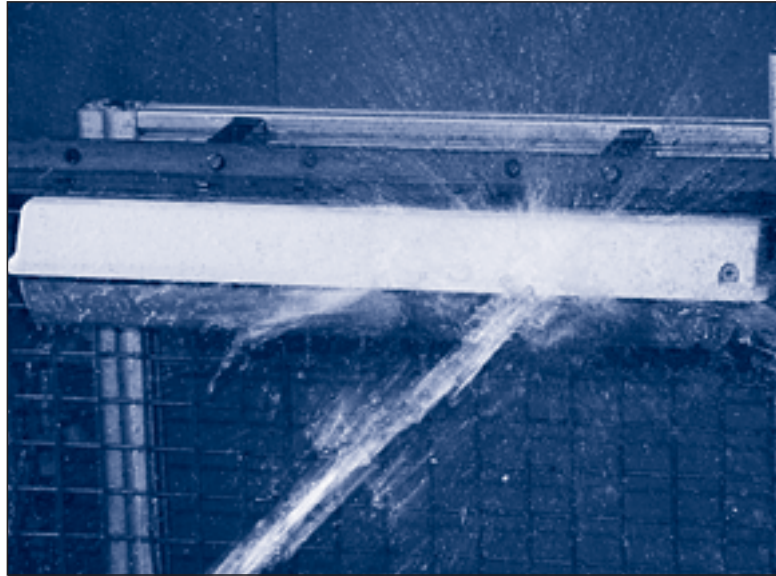
Because they are often used in outdoor installations and often come into contact with dust and water, as well as with other environmental influences caused by chemical media, explosion-protected electrical apparatus are subjected to particularly extreme operating conditions. In accordance with the constructional and test requirements explosion-protected apparatus must, therefore, satisfy the requirements for a minimum degree of protection, normally **IP 54**. The IP degrees of protection according to EN 60529 are defined according to the protection against inadvertent contact, foreign matter and water.

The degrees of protection against solid foreign matter are designated by the first code number.

Degrees of protection against water are designated by the second code number.

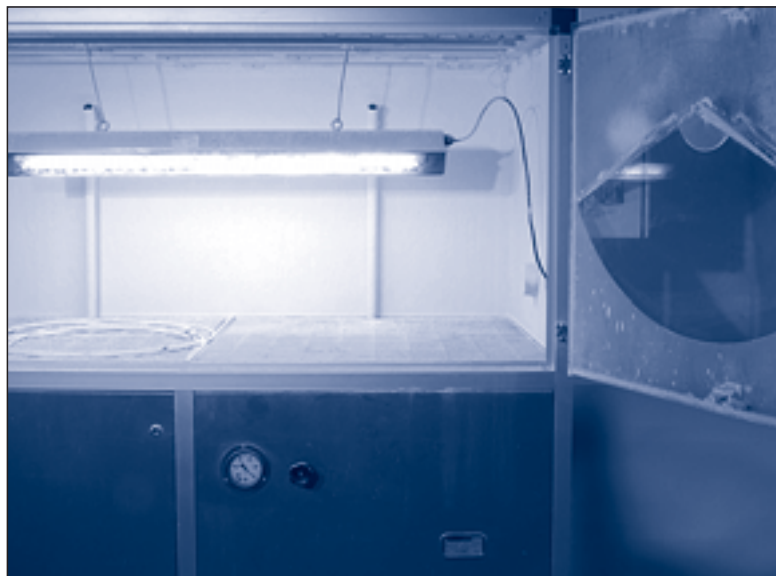
Example: **IP 65**: dust-tight, protected against jet water.

According to the test procedures for explosion protected apparatus the degree of protection has to be tested and meet the requirements after the necessary climatic storage and impact tests. This is more harder to pass than the normal test according to IEC 60529.



Degrees of protection according to IEC 60529

First Number	Degree of protection	Second Number	Degree of protection
0	No special protection	0	No special protection
1	Protected against solid foreign bodies Ø 50 mm and larger	1	Protected against vertically dripping water
2	Protected against solid foreign bodies Ø 12.5 mm and larger	2	Protected against dripping water when enclosure is inclined up to 15 °C
3	Protected against solid foreign bodies Ø 2.5 mm and larger	3	Protected against spray water being sprayed at an angle up to 60 °
4	Protected against solid foreign bodies Ø 1 mm and larger	4	Protected against splash water from any direction
5	Dust protected	5	Protected against jet water from any direction
6	Dust-tight	6	Protected against powerful water jets from any direction
		7	Protected against water intrusion when submerged for a limited time
		8	Protected against water intrusion when submerged, time irrelevant



Regulations and Approvals Outside of the EC Jurisdiction

Outside the jurisdiction of the ATEX directive 94/9/EC (EC area and associated countries) there are other standards and approvals that apply for the operation of electrical apparatus for use in hazardous areas.

National approvals on the basis of the EN directives

The majority of the eastern European countries such as Russia, Belarus,



Ukraine, Poland, Hungary and Kazakhstan, etc. have their own certification bodies that issue their own approvals on the basis of the current EC type examination certificates. These

are requisite for the installation and operation of electrical apparatus in hazardous areas in these countries. Cooper Crouse-Hinds GmbH is in possession of approvals for the products listed in this catalogue in many of these countries.

Explosion-Protection in North America



The IEC/EN approach to Explosion-Protection differs to the engineering practices in North America. Here, to name one example, they use closed

conduit systems with potted ignition barriers. Other criteria also apply for the classification. In addition to the "hazardous (classified) locations"

Class I (gases, vapours and mists), there are **Class II** (dusts) and **Class III** (fibres). These design regulations and classifications are laid down in the NEC regulation, Sections 500 (divisions) to 505 (zones), valid for the USA, and in the CEC standard, Section 18, valid for Canada. In addition to this the areas are divided into Division 1 and Division 2 (chapter 500).

In Canada the IEC-zone classification was introduced as a standard. To use the division classification is the exception rather the rule.

Due to the introduction of the IEC zone classification concept in Canada in 1988 and in the USA in 1996 (amendment of NEC, Article 505 and of CEC), the use of a comparable technology became possible.

An continuously growing part of the Cooper Crouse-Hinds GmbH explosion-protected products are additionally certified in accordance to the American norms.

Comparison of the IEC - NEC - CEC Classifications

	Gases, vapours or mists Class I	(IEC)	Dusts Class II	Fibres Class III
Regulation USA	NEC 500-5	NEC 505-7	NEC 500-6	NEC 500-7
Regulation Kanada	CEC J18-004	CEC 18-006	CEC 18-008	CEC 18-010
Classification	Division 1	Zone 0 Zone 1	Division 1	Division 1
	Division 2	Zone 2	Division 2	Division 2
Groups (Groups to NEC 500... or CEC J18-050)	- 3	- 7	- 3	
	Div. 1 and 2	Zone 0, 1, 2		Div. 1 and 2
	A (acetylene)	II C (acetylene, hydrogen)	E (metals)	---
	B (hydrogen)	II B (ethylene)	F (coals)	
	C (ethylene)	II A (propane)	G (grain)	
	D (propane)			
Temperature classes I	Div. 1 and 2	Zone 0, 1 and 2	Div. 1 and 2	none
	T1 ≤ 450 °C	T1 ≤ 450 °C	T1 ≤ 450 °C	
	T2 ≤ 300 °C	T2 ≤ 300 °C	T2 ≤ 300 °C	
	T2A ≤ 280 °C; T2B ≤ 260 °C		T2A ≤ 280 °C; T2B ≤ 260 °C	
	T2C ≤ 230 °C; T2D ≤ 215 °C		T2C ≤ 230 °C; T2D ≤ 215 °C	
	T3 ≤ 200 °C; T3A ≤ 180 °C	T3 ≤ 200 °C	T3 ≤ 200 °C; T3A ≤ 180 °C	
	T3B ≤ 165 °C; T3C ≤ 160 °C		T3B ≤ 165 °C; T3C ≤ 160 °C	
	T4 ≤ 135 °C; T4A ≤ 120 °C	T4 ≤ 135 °C	T4 ≤ 135 °C; T4A ≤ 120 °C	
	T5 ≤ 100 °C	T5 ≤ 100 °C	T5 ≤ 100 °C	
	T6 ≤ 85 °C	T6 ≤ 85 °C	T6 ≤ 85 °C	

**International Certification/
IECEX Scheme**

The **IECEX-Scheme** is an international compliant assessment scheme relating to equipment for use in explosive atmospheres based on IEC-standards.

The **IEC-norms** as a world-wide standard are an important basis for the certification of explosion protected products.

The work on the **IECEX-Scheme** are well advanced so that certification for apparatus based on IEC-standards are possible in the meantime and will be issued by an **IECEX-Certificate**.

The aim is to accomplish a global acceptance of the IECEX-certificate so that manufacturers do not need additional certificates for the global market.

In the course of international praxis of explosion protection certificates according to IECEX Scheme will become more important. Cooper Crouse-Hinds apparatus will extended step by step to this IECEX certifications.



Certification according to Ex-Nepsi are guided from IEC standards.





Chemical Stability of Plastics

Material	Polyamide	Polyester	Polycarbonate
Acetone	+	+	-
Ethyl alcohol (up to 30 %)	O	+	0.96 %
Ethyl glycol	O	+	+
Ammonia (at 23 °C)	+	+ 10 %	-
Benzene 60/140 °C	+	+	+
Benzol (at 23 °C)	+	+	-
Boric acid 3 %	+	+	+
Butane	+	+	+
Chlorine bleaching solution	O	+	
Chloric gas (damp)	O	+	-
Chloride of lime	O	+	+
Chromic acid 10 %	-	+	+
Cyclohexane	+	+	+
Diesel oil	+	+	+
Jet fuel	+	+	+
Acetic acid (up to 25 %)	O	+	+ 10 °C
Formaldehyde	+	+	+
Glycol	+	+	+
Glycerine	+	+	+
Uric acid (up to 20 %)	+	+	+
Fuel oil	+	+	+
Machinery oil	O	+	+
Sea water	+	+	+
Methyl alcohol	O	+	O
Lactic acid conc. 20 %	+	+	+
Mineral oil	+	+	
Sodium chloride	O	+	+
Soda lye (20 - 25 °C)	+	+ 5 %	-
Petroleum	+	+	-
Phosphoric acid conc.	-	+	+
Soap suds (at 23 °C)	+	+	+
Sulphuric acid 5 - 30 % and 70 %	O	+	+
Sulphuric dioxide, dry (at 23 °C)	+	+	O
Super fuel (at 60 °C)	+	+	-
Turpentine (at 23 °C)	+	+	-
Tartaric acid	O	+	+ up to 10 %
Citric acid up to 32 %	+	+	+

Explanation of symbols: + = stable O = limited stability - = non-stable

Chemical Stability of Plastics for Explosion-Protected Apparatus

Nowadays explosion-protected electrical apparatus is often made in the economical type of protection "increased safety". This calls for the use of high-grade, specially selected and tested plastics that meet the high requirements and provide a high mechanical, thermal and chemical stability.

The plastics listed in the table beside have been used in practice for years and have proved to be reliable. The table beside gives details issued by the manufacturers of the plastics relating to the chemical stability of the plastics listed compared to a series of media.

These details can, however, only be applied up to a degree for the evaluation of the usability of explosion-protected electrical apparatus in chemical and petrochemical installations, as the aggressive atmosphere often only occurs for a short time and in a relatively low concentration.



PRODUCT LISTING

Product Category	Product Name	Description	Product Reference	Product No.
Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION
Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION
Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION
Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION
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Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION
Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION
Explosion Protection	Explosion Protection	Explosion Protection	EXPLOSION PROTECTION	EXPLOSION PROTECTION

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**Your Partner with
 Competence in
 Explosion Protection**

It is our goal to make the theme of explosion-protection as clear and as understandable as possible. So that you can access “online” and be able to have access to **all** the important and interesting information that you might need, you can use both web-sites to update product data, latest information from standardisation and user-friendly themes out of the scope of explosion protection.



Do you need urgently an actual operation instruction or a certification of a product? No problem – you can use our service without any registration or log-in procedure.

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PORTABLE EX-LAMPS



INFORMATION ON EX-PROTECTED PORTABLE LAMPS

1.2

EX-TORCHES

1.6

EX-HAND LAMPS

1.10

EX-SEARCHLIGHTS

1.16

EX-CAP LIGHT

1.22

EX-HAND- AND MACHINE LAMPS

1.24

EX-TANK INSPECTION LAMPS FOR ZONE 0

1.30

ACCESSORIES

1.32

1

2

3

4

5

6

7

8

9

10

11

12

Field of Application

Explosion-protected portable lamps are predominantly used for industrial applications such as security patrols, inspections and repair work. The police and fire brigade use explosion-protected lamps to ensure safety at the scene of an accident, in case explosive substances are present. Besides reliability and safety, explosion-protected portable lamps must meet the standard requirements of handling, weight, lighting properties and operating time. Explosion-protected portable lamps must not be opened in explosive atmospheres. Similarly, batteries may only be charged outside the hazardous area.

Minimum Safety Standard: minimum requirement is Zone 1

Since there are no physical barriers between the hazardous areas which are subdivided into zones, special attention has to be paid to portable electrical apparatus. For this reason all portable lamps of our brand "CEAG" are approved for Zone 1 hazardous areas. Zone 2 is automatically included. The Cooper Crouse-Hinds GmbH also offers solutions for Zone 0 (which exists for example, in closed tanks), Zone 21 and Zone 22.

Hazard Warning Lamps according to the ADR-Directive

A special version of the SEB 8 Ex-Searchlight has been developed for use in the field of transportation of hazardous goods. This version conforms to 94/55/EG and can therefore be used throughout Europe as a Hazard Warning Lamp.

Material choice

The lights described in this catalogue are mainly made of high-quality impact resistant plastic (eg. polyamide or polycarbonate). By adding conductive substances, a surface resistance for



the housing is achieved which prevents an electrostatic charge. All plastics used can be recycled.

Housings of explosion-protected electrical apparatus must conform to IP54 protection as a minimum. Especially for usage in rough environments the brand "CEAG" offers hand lamps that conform to the high standard up to IP67.

Scratch resistant mineral glass is used for the light aperture.

This ensures that, in spite of rough use, the light aperture remains clear for the duration of its use.

Ergonomics: Single-Handed Operation

All portable lamps are designed for "singlehanded operation". This means they can be switched on and off with one hand (even when wearing safety gloves), while the other hand is free for other tasks.



Focussing Stabex HF

Lighting technology

Depending on their use, explosion-protected portable lamps are required to have different luminous intensity distributions, such as a broad beam (working light) or a spotlight. This is achieved by the use of powerful lamps and different systems of focussing the light. In the new types of CEAG lights the need to be able to focus the light has been realized by the use of an adjustable reflector. This kind of reflector enables focussing a broad beam into a spotlight. Different slip-on filters enable a change of light colour. A novel dispersive filter composed of many small prisms enables the beam of light to be broadened without a major loss of working light.

Halogen lamps with a double bulb: bright and cool

Halogen lamps have a very bright, white light, but due to their high surface temperature their light output must be limited. By means of a special method, whereby the halogen lamp is provided with a "double bulb", Cooper Crouse-Hinds GmbH has considerably increased the useful light output. Thus, explosion-protected lights can make optimum use of the advantages of the halogen lamp (high light output, pleasant light colour and long service life).

LEDs: robust and long-lasting

With substantial progress of LED technique in the last years today exists new product-specific designed light sources for handlamps. Cooper Crouse Hinds



Focussing HE 8

as a pioneer for innovative light systems starts with the introduction of the new Stabex mini II this LED technique combined with optimized reflector technique. The robust lamp enclosure combined with the long-lasting and vibration-insensitive LED source will increase additional safety for the operator.

Guidance of light

In order to achieve optimum lighting properties, all components are analyzed, calculated and measured. The development and manufacture of the series are based on the results of our in-house light laboratory. The range diagrams essential for a portable lamp, have been derived from the polar curves established by the light laboratory. These diagrams tell the user at what distance a round surface is irradiated with an illumination of min. 1 lux.

Battery Technology

The CEAG explosion-protected lamps can be fitted with rechargeable (secondary cells) or non-rechargeable batteries (primary cells). Which battery is best from an economical point of view depends on the respective application. If lamps are used on an irregular basis, high-quality primary cells (alkaline manganese batteries) to IEC 60086 should be used. If the lamps are used frequently, it is preferable to use gas-tight, rechargeable nickel cadmium batteries (NiCd). In addition to the fact that they are extremely economical, the outstanding characteristics of these batteries are

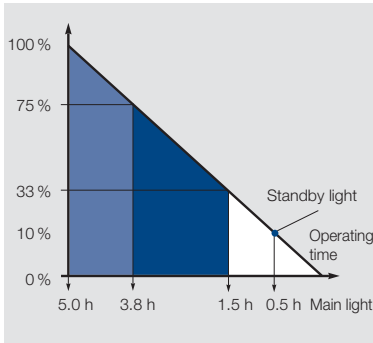
the constant voltage, the high energy density and the suitability for use in hazardous areas. Discharged NiCd batteries can easily be stored for several years. NiCd batteries have to be recycled and are almost 100 % reusable.

Furthermore new battery concepts are implemented to increase the light duration of the lamp. The hand-lamp series SEB 9 for example is equipped with new nickel-metal hydride (NiMH) batteries. The operating time of the main lamp will be increased to 7 h. (5.5 with NiCd)

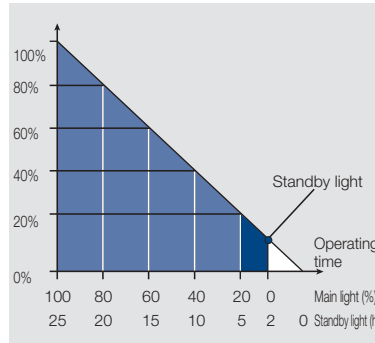
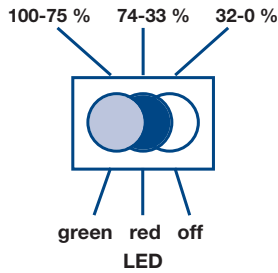
Hand lamps type „CEAG“ may be used only with certified battery packs.



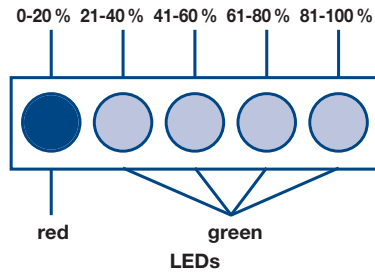
Rechargeable battery for SEB 8



Function „indication of residual operating time“ HE 8 N



Function „indication of residual operating time“ SEB 8/SEB 9



Charge state indication

Unlike with lead batteries, the charge state of NC batteries cannot be determined by means of the residual charge voltage, but must be calculated using an involved micro-processor technology. Cooper Crouse-Hinds GmbH offers various systems for this in their portable lamps.

HE 8

With lamps of the series HE 8 N/EURO PLUS the remaining duration and the charge state is indicated in three stages via a twocoloured LED display. This means that the operator is always informed about the state of the battery and can, therefore, reach a safe place before the batteries are completely run down. If the main filament breaks or when the operating life expires, the HE 8 N EN automatically switches over to the less powerful standby filament. Thus, a sudden loss of light is avoided. If the standby filament continues to be discharged, a protective circuit arrangement switches off the lamp after approx. 0.5 hours.

SEB 8... / SEB 9...

The lighting electronics in the explosion-protected searchlight SEB 8 features 5 LEDs that indicate the residual capacity in 20 % stages. If the residual capacity falls below the 20 % limit, a red LED warns the operator. Before the overdischarge protection stage is reached, the powerful main light

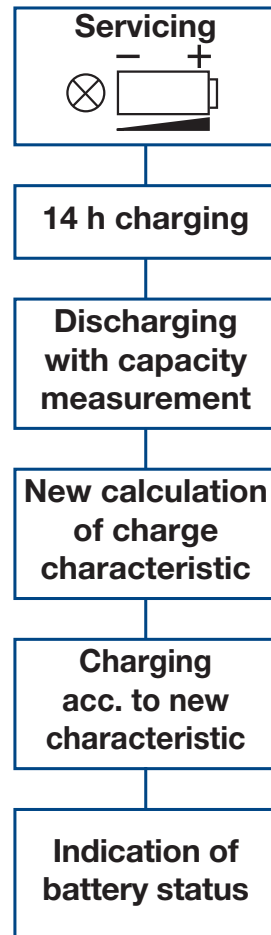
switches over to the weaker standby light to give the operator an optical signal and to conserve energy. If, to ward off any hazards, it is necessary to continue to operate the standby lamp, the standby lamp can be switched over to manual operation, whereby the monitoring electronics is bridged.

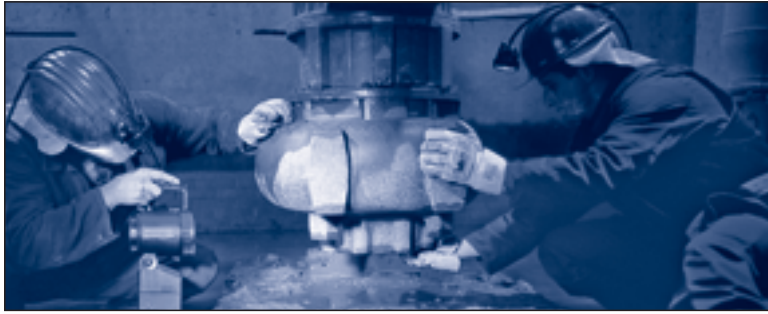
Safety functions

Each time the light is switched on, the lighting electronics check the function of the standby lamp. If the main lamp fails, the light is switched over automatically to the standby lamp. The fault is signaled by the flashing red LED.

Service circuit

Lights of the series SEB 8 feature a unique service circuit that calculates the remaining capacity according to the ageing of the battery and adapts the charge data accordingly. This ensures a gentle, service-life prolonging battery charge at all times. In addition, the operator is also given information on the state of the battery with regard to ageing and can, therefore, replace the batteries at an appropriate point in time. This means that hazards resulting from changing the batteries too early or too late are avoided. The service test is fully automatic.





The right light for every type of operation

Each type of operation calls for a specially selected light. The requirements for lights for inspection work, where a searchlight is rarely needed or is only needed for a short time, are different to those for lights for repair work, where a powerful, robust light with a long operating life is needed all the time. The CEAG-brand range provides a suitable light for almost every application possible. Due to their size and the use of primary cells, the mini, mini II, mini LED and the HF Stabex torches and the HE5 pocket torches are suited for inspections on a regular basis and as a constant companion for security personnel. The Stabex HF-L version with rechargeable

NC cells is suitable for frequent operations. Here, the extra costs for the rechargeable cells and the charger unit often pay for themselves within a relatively short time considering the maintenance costs for replacing empty batteries.

The powerful HE 8 hand lamps are either fitted with rechargeable cells or with primary batteries and can be used as work lights or searchlights.

The robust SEB 8/SEB 9 light series is used by the mobile task forces of fire brigades and rescue services, as well as for maintenance and repair work in all hazardous areas. It meets the requirements of the fire brigade standard DIN 14642. A luminous

intensity of 15,000 cd allows light to be projected up to 150 m. A consistent working light can be achieved with a diffusing lens, that is supplied with the lamp. Due to the battery capacity, long operation times of up to approx. 5.5 h resp. 7 h, do not pose a problem. The special SEB 8-ADR can be used for hazard warning in the transportation of hazardous goods.

Overview: Features of the explosion-protected hand lamps

Type of light fitting	Primary cells	Secondary cells	Built-in mains charger	External mains charger	12/24 V charger	Special features
Stabex mini	2 x R6/LR6	–	–	–	–	Single-handed operation
Stabex mini II	2 x R6/LR6	–	–	–	–	Can be focused
Stabex mini LED	3 x R6/LR6	–	–	–	–	Can be focused, Power LED
Stabex HF	2 x R20/LR20	–	–	–	–	Can be focused
Stabex HF-L	–	2 x 4 Ah	–	LG 493	–	Can be focused
Stabex MO	2 x R20/LR20	–	–	–	–	Use in Zone 0
HE 5 EN	1 x 3R12	–	–	–	–	Extremely flat design
HE 8 N EN	–	3 x 4 Ah	–	LG 483	–	Indication for residual operating time, red signal light
HE 8 EURO	3 x R20/LR20	–	–	–	–	Can be focused
HE 8 EURO PLUS	–	3 x 4 Ah	–	Plug-in charger	–	Indication of residual operating, can be focused
SEB 8	–	4 x 7 Ah	–	LG 443	Vehicle charger 90	Capacity indication, can be
SEB 8 ADR	–	4 x 5 Ah	–	LG 443	Vehicle charger 90	focused, standby light,
SEB 8 DIN	–	4 x 5 Ah	–	LG 443	Vehicle charger 90	servicing circuit
SEB 8 L	–	4 x 7 Ah	yes	LG 443	Vehicle charger 90	Capacity indication, can be focused, standby light, servicing circuit, mains charger cable with plug
SEB 9	–	4 x 9.5 Ah	–	LG 443	Vehicle charger 90	see SEB 8/SEB 8 L
SEB 9 L	–	4 x 9.5 Ah	yes	LG 443	Vehicle charger 90	
HLE 7 LEN	–	3 x 7 Ah	yes	–	–	Flexible cable from battery to headpiece

E X - T O R C H L I G H T

Stabex mini / Stabex mini II / Stabex mini LED / Stabex HF / Stabex MO

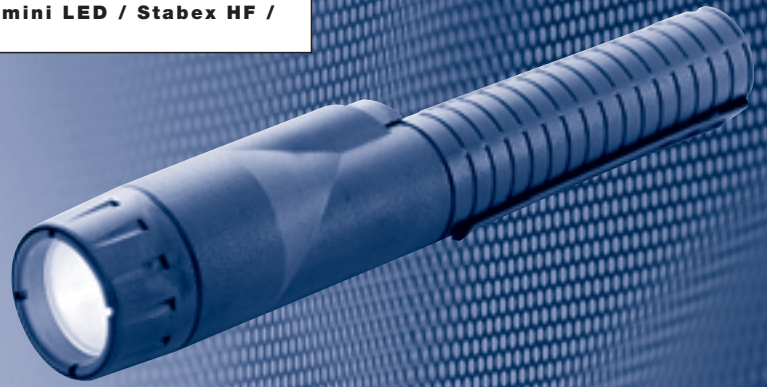
The Stabex mini, Stabex mini II, Stabex LED, Stabex HF and the Stabex HF-L range of explosion-protected torchlights meets the requirements of the ATEX-Directive 94/9/EG. The torchlights have been conceived for use in Zone 1 and Zone 2.

The Stabex mini II and mini LED are also suitable for the Zones 21 and 22. Complementary the Stabex HF and HF-L are also for use in the Zone 20. Due to the temperature classification T5/ T4 these torchlights can be used in nearly any hazardous area. Because of their compact design, the torches are used for security patrols and inspection duties. The Stabex mini II with micro-xenon filled lamp and the Stabex LED with high-power LED will reach highest light intensity with smallest battery power.

The Stabex HF and HF-L models equipped with a halogen lamp can be uniformly focused for short and long ranges.

The ergonomically designed light switch is easily operated by means of a sliding switch – even with safety gloves. The Stabex mini and mini II is fitted with 2 dry cells size AA, the Stabex mini LED with 3 dry cells size AA and the Stabex HF with 2 dry cells size D.

The Stabex HF-L model is equipped with an Ex e certified handle containing 2 NiCd accumulators, that can be recharged in the LG 493 charger. By replacing the complete handle with NiCd batteries, any new Stabex HF can be converted into a rechargeable version. Due to the special design of the battery housing, a special locking device is not required. Thus, the batteries can easily be replaced outside of the hazardous area, no special tool being required.



Single-handed operation
even with work gloves

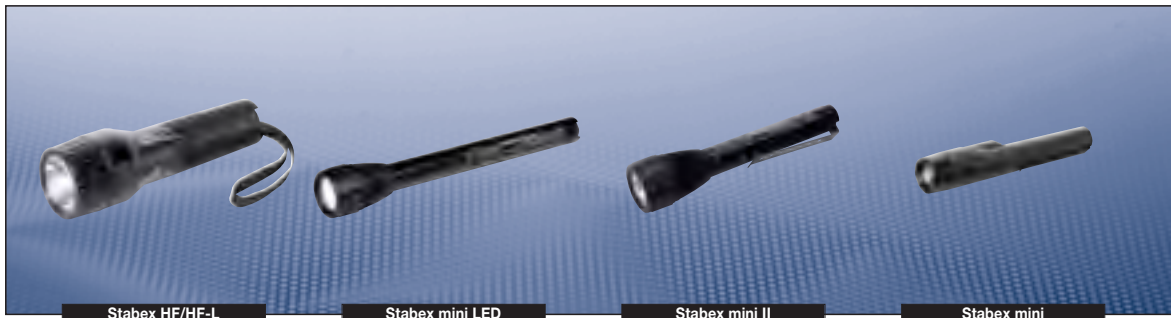
Degree of protection IP65

Light cone can be focused –
Stabex mini II/LED/ HF/HF-L

Halogen bulb – HF Stabex HF/HF-L

Scratch resistant mineral glass

International Approvals



Technical data

	Stabex mini II	Stabex mini LED
Marking to 94/9/EC	Ⓔ II 2 G Ex e ib IIC T4 Ⓔ II 2 D Ex tD A21 IP66 T56 °C	Ⓔ II 2 G Ex e ib IIC T4 Ⓔ II 2 D Ex tD A21 IP66 T85 °C
EC-Type Examination Certificate	PTB 04 ATEX 2119	BVS 08 ATEX E 158
IECEX Certificate of Conformity	IECEX BK1 08.0002	-
Marking accd. to IECEx	Ex eib IIC T4 Ex tD A21 IP66 T56 °C	-
Permissible ambient temperature	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)	-20 °C to +40 °C / +50 °C ¹⁾ specified data: 0 °C to +30 °C (battery)
Lamp/illuminant	2.3 V/0.36 A (XENON)	1 W Power LED
Max. luminous intensity	> 4000 cd	
Luminous flux	approx. 10 lm	approx. 20 lm
Battery	2 dry cell AA-size IEC 60086 R 6/LR 6	3 dry cell AA-size IEC 60086 R 6/LR 6
Rated operating duration	approx. 8 h	approx. 8 h
Rotary switch	ON - OFF (focusable)	ON - OFF (focusable)
Degree of protection accd. EN 60529	IP66	IP66
Dimension (L x W x H)	154 x Ø 34 mm	208 x Ø 34 mm
Weight	approx. 0.09 kg (without battery)	approx. 0.12 kg (without battery)
Enclosure material	Aluminium	Aluminium
Enclosure colour	black	black
Protective cover/protective bowl	Ø 24 mm, mineral glass	Ø 24 mm, mineral glass

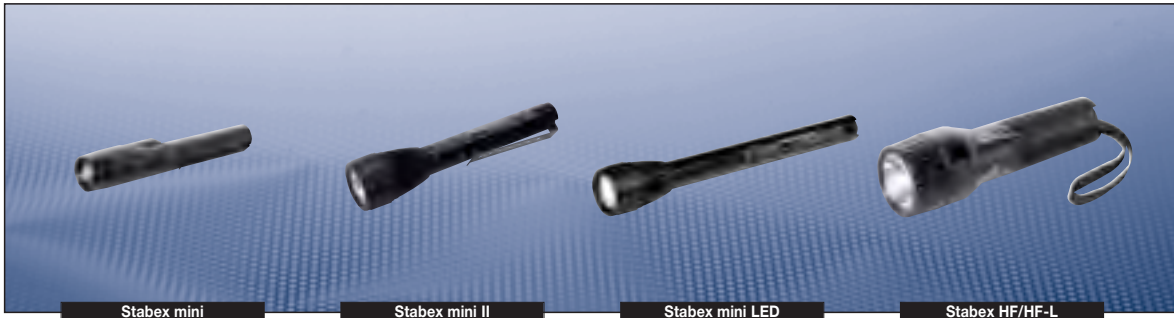
	Stabex mini	Stabex HF	Stabex HF-L
Marking to 94/9/EC	Ⓔ II 2 G Ex e ib IIC T4 Gb (applies for)	Ⓔ II 2 G Ex e ib IIC T4 Ⓔ II 1 D Ex tD A20 IP65 T90 °C	Ⓔ II 2 G Ex e ib IIC T4 Ⓔ II 2 D Ex tD A21 IP65 T57 °C
EC-Type Examination Certificate	PTB 98 ATEX 2061	PTB 98 ATEX 2062	PTB 98 ATEX 2062
IECEX Certificate of Conformity	-	IECEX BK1 08.0002	IECEX BK1 08.0002
Marking accd. to IECEx	-	Ex e ib IIC T4 Ex tD A21 IP65 T57 °C	Ex e ib IIC T4 Ex tD A21 IP65 T57 °C
Permissible ambient temperature	-20 °C to +40 °C specified data: 0 °C to +30 °C	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Incandescent lamp	2.2 V/0.4 A	2.8 V/0.5 A (Halogen)	2.8 V/0.5 A (Halogen)
Lamp cap	E10	PX 13.5s	PX 13.5s
Luminous flux	7 lm	17 lm	17 lm
Battery	2 dry cells IEC 60086 R 6/LR 6	2 dry cells IEC 60086 R 20/LR 20	2 rechargeable NiCd battery 1,2 V/4 Ah
Rated operating duration	approx. 8 h	approx. 12 h	7 h
Switch	ON - OFF	ON - OFF	ON - OFF
Degree of protection accd. EN 60529	IP65	IP65	IP65
Dimension (L x W x H)	166 x Ø 32 mm	220 x Ø 60 mm	220 x Ø 60 mm
Weight	approx. 0.07 kg (without battery)	approx. 0.25 kg (without battery)	0.55 kg (incl. accu)
Enclosure material	Polycarbonate	Polyamide	Polyamide
Enclosure colour	black	black	black
Protective cover/protective bowl	Ø 23 mm, mineral glass	Ø 48 mm, mineral glass	Ø 48 mm, mineral glass

Charger LG 493

Rated voltage	220 - 250 V AC
Dimensions (L x W x H)	163.5 x 151.5 x 129 mm
Weight	approx. 1.3 kg
Charging duration	max. 14 h (dep. on the state of charge)

¹⁾ Depends on battery, see operation manual

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Ordering details | Accessories

Type	Scope of delivery	OU	Order No.
Stabex mini (Phase out type)	with incandescent lamp, without battery (set order qty's 10 units)	10	1 1358 000 001

Accessories for Ex-torchlight Stabex mini

Type	OU	Order No.
1 incandescent lamps 2.2 V/0.4 A	10	1 1358 000 070

Type	Scope of delivery	OU	Order No.
Stabex mini II	with xenon lamp, without battery (set order qty's 10 units)	10	1 1360 000 001
Stabex mini LED	mit LED, without battery (set order qty's 10 units)	10	1 1360 000 006

Accessories for Ex-torchlight Stabex mini II / LED

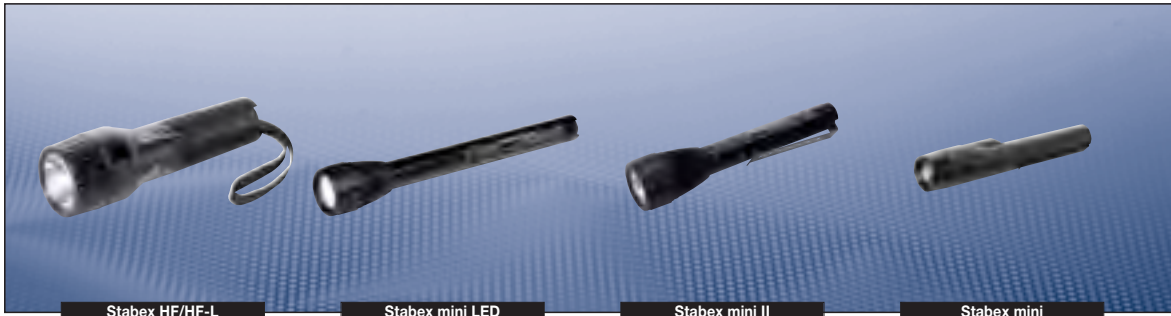
Type	OU	Order No.
Xenon lamp 2.3 V/0.36 A for Stabex mini II	10	1 1360 002 001
Bumbag Stabex mini II	1	3 1360 001 900
Bumbag Stabex mini LED	1	3 1360 006 900

Type	Scope of delivery	OU	Order No.
Stabex HF	with halogen lamp, without battery	1	1 1359 000 001
Stabex HF-L (rechargeable)	Lamp with halogen lamp and battery	1	1 1359 000 010
Charger LG 493	for Stabex HF-L	1	1 1540 000 493

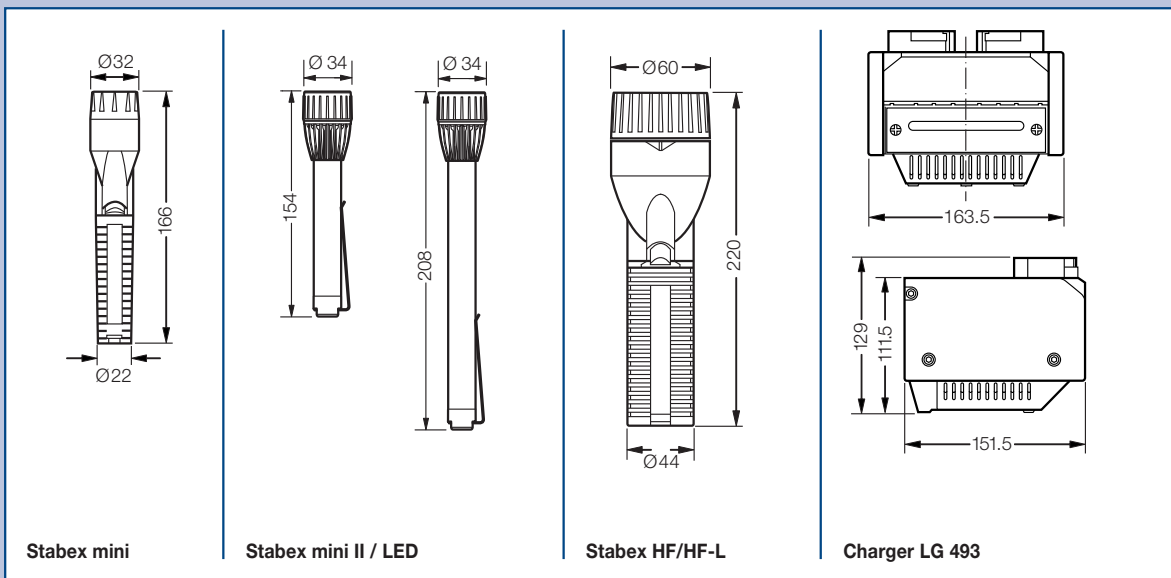
Accessories for Ex-torchlight Stabex HF/HF-L

Type	OU	Order No.
1 halogen lamp 2.8 V/0.5 A	10	1 1359 000 070
Handle with 2 NC battery	1	2 1359 200 000

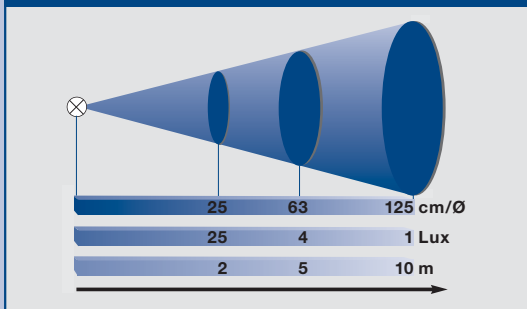
Please note that only Order Unit (OU) can be ordered.



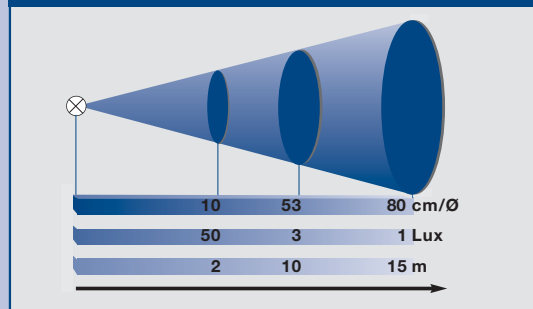
Dimension drawing | Range-diagram



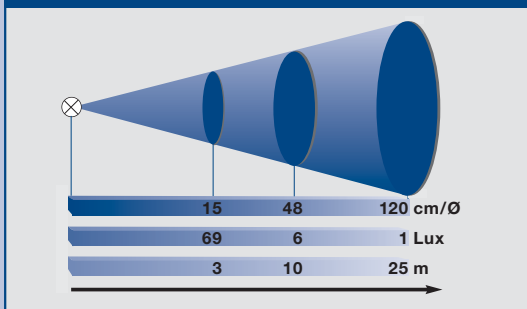
Range-diagram Stabex mini



Range-diagram Stabex mini II



Range-diagram Stabex HF/HF-L



Dimensions in mm

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EX - TORCHLIGHT

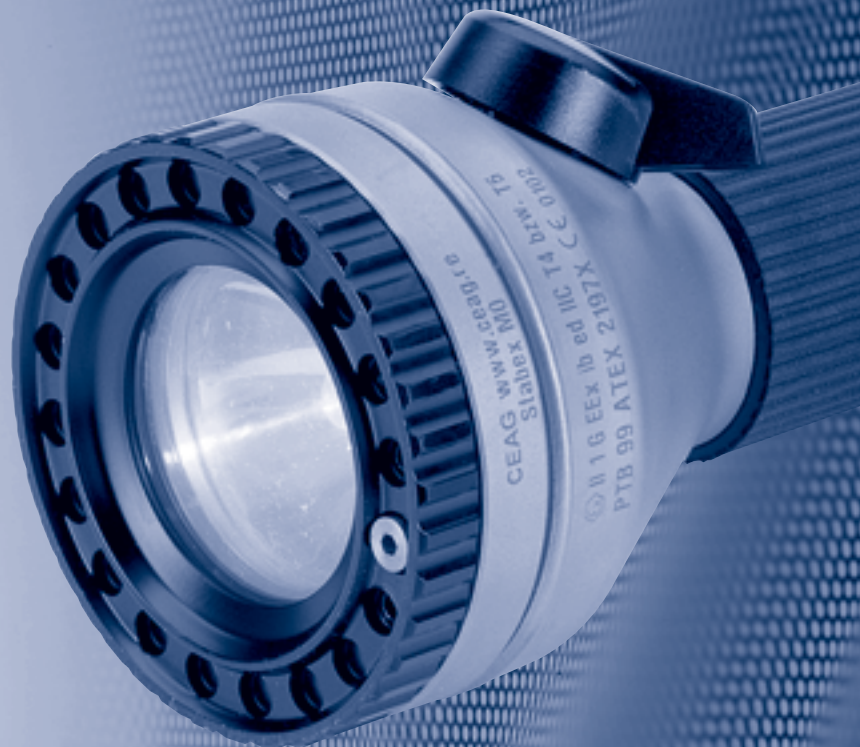
Stabex M0

The Stabex M0 was specially developed as an inspection lamp for gas or empty mineral oil tanks where the permanent hazard of an explosive gas atmosphere exists.

The Stabex M0 explosion-protected torch has specifically been approved for use in Zone 0 hazardous areas up to the temperature class T6, and also fulfills the ATEX-Directive 94/9/EG.

The Zone 0 safety requirements are met, since a permanent overlapping of 2 to 3 explosion categories is provided for. The torchlight may be operated in the Zone 0 without additional safety measures up to a height of 5 metres above ground level. After use, the lamp must not be left in the Zone 0 hazardous areas.

The rotary switch is designed for singlehanded operation. Even when safety gloves are worn, it can be operated without difficulty. The housing of the extremely robust torch is made of stainless steel and bronze which prevents the generation of ignitable sparks due to impact. The multipart front pane is made of mineral safety glass. The torch is equipped with 2 dry cells size D according 8 IEC 86 LR20 which are impact-protected by a metal sheath.

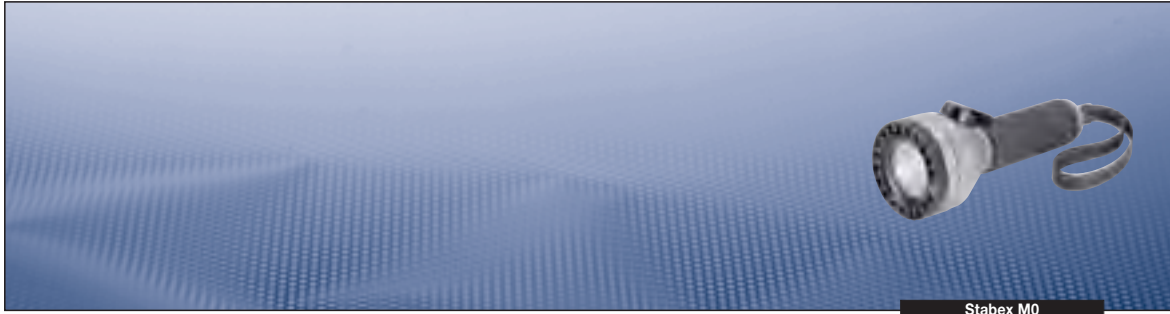


Zone 0

Extremely robust housing made of stainless steel and bronze

Ergonomic switch design makes it suitable for operation with safety gloves

International Approvals



Stabex M0

Technical data

Stabex M0	
Marking to 94/9/EC	⊕ II 1 G EEx ib ed IIC T6/T4
EC-Type Examination Certificate	PTB 99 ATEX 2197 X
Permissible ambient temperature	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Incandescent lamp	2.5 V/0.3 A
Light aperture	Ø 44 mm, mineral glass
Battery	2 dry cells IEC 60086 R 20/LR 20 (T6/T4)
Operating time	approx. 12 h (alkaline battery)
Luminous flux	approx. 12 lm
Degree of protection accd. EN 60529	IP65
Weight	approx. 2.2 kg (without battery)
Enclosure material	Stainless steel/bronze
Max. permitted height of fall	5 m

Phase out type

Ordering details | Accessories

Type	Scope of delivery	Order No.
Stabex M0	with incandescent lamp and battery	1 1350 000 001

Accessories for Ex-torchlight Stabex mini

Type	OU	Order No.
1 incandescent lamp 2.5 V/0.3 A	5	1 2041 820 000
Protective sheath for battery	1	3 1350 001 024

Dimension drawing | Range-diagram

Stabex M0

Range-diagram Stabex M0

Distance (cm)	Beam Diameter (cm)	Illuminance (Lux)
14	63	2.5
70	10	16
120	16	

Dimensions in mm

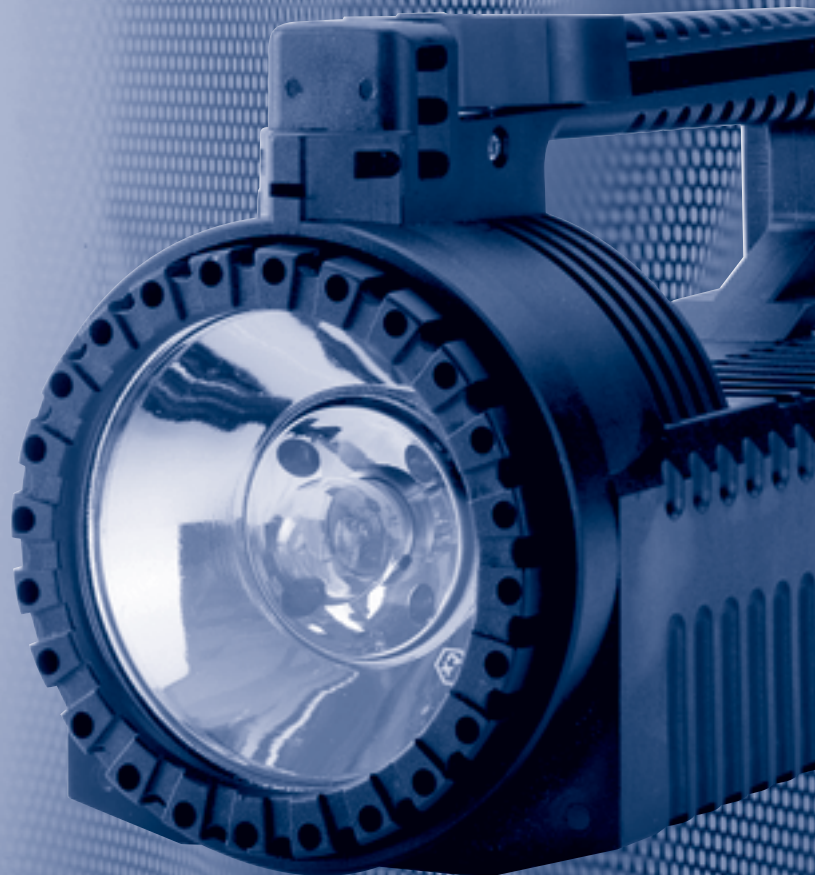
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EX - H A N D L A M P

HE 5 EN / HE 8

The powerful handlamps meets the requirements of ATEX-Directive 94/9/EG and has been approved for use in Zones 1 and 2 hazardous areas. These lamps are particularly suitable for inspection and repair work, security patrols, and in railway workshops and shunting yards and inspection duties. The lamps have been designed for single-handed operation. Due to its flat, handy shape the lamp HE 5 with temperature class T6 can be put in any pocket. There is also a strap for fastening the lamp to clothing or to a belt. By the use of both a parabolic reflector and a fresnel lens, a light distribution is obtained which equally serves short and long distances. The battery is a (flat) 4.5 V dry battery to IEC 60086 3 R 12. The handlamps HE 8 EN fulfils additional requirements. By means of the light switch it can be switched over to a red signal light, which is produced by 4 powerful light emitting diodes visible at a long range. The working light can be uniformly focused for a short and long range. In conjunction with the LG 483 charger, the light is automatically switched on in the event of a mains failure (non-maintained system mode). While the working light is switched on, an electronic indication of the residual operating time is provided. During the charging process the charging state is also indicated. In case of a broken filament or at the end of the duty cycle, the hand lamp automatically switches over to the stand by light. The built-in safety circuit prevents the deep discharge of the battery. The battery insert is fitted with a rechargeable NiCd battery (3.6 V/4 Ah). The lamp is charged in the LG 483 charger. When the battery is charged, only the amount of energy that has been used will be replaced. The HE 8 EURO is fitted with 3 dry batteries while the HE 8 EURO PLUS is fitted with a rechargeable, gas-tight NiCd battery. By using the rechargeable battery insert, the HE 8 EURO can be converted into a type HE 8 EURO PLUS.

- Up to temperature class T6
- Handy shape
- Scratch resistant mineral glass
- Gentle charge dependent on the drawn capacity (HE 8 N EN)
- Reversible to red signal light by light switch (HE 8 N EN)
- Indication of residual operating time and charging state (except HE 8 EURO)
- Degree of protection up to IP65
- International Approvals





Technical data

HE 5 EN	
Marking to 94/9/EC	⊕ II 2 G EEx e ib T6/T4 / ⊕ II 2 G Ex e ib T4/T6 Gb (applies for)
EC-Type Examination Certificate	PTB 99 ATEX 2196
Permissible ambient temperature	-20 °C to +40 °C / specified data: 0 °C to +30 °C (battery)
Incandescent lamp	3.7 V/0.3 A
Battery	Flat battery 4.5 V IEC 60086 3 R 12 (T6) resp. IEC 60086 3 LR12 (T4)
Operating time	approx. 6 h
Switch	Slide switch „ON - OFF“
Degree of protection accd. EN 60529	IP54
Enclosure material	Polyamid / black
Weight	approx. 0.14 kg (without battery)
Light aperture	Ø 40 mm, mineral glass

	HE 8 N EN	HE 8 EURO/HE 8 EURO PLUS
Marking to 94/9/EC (new standard)	⊕ II 2 G EEx e ib IIC T4 ⊕ II 2 G Ex e ib IIC T4 Gb (applies for)	⊕ II 2 G EEx e ib IIC T4 ⊕ II 2 G Ex e ib IIC T4 Gb (applies for)
EC-Type Examination Certificate	PTB 98 ATEX 2063	PTB 98 ATEX 2063
Permissible ambient temperature	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Incandescent lamp	3.75 V / 0.8 / 0.4 A	4 V / 0.82 A
Battery	rechargeable NC battery (3.6 V/4 Ah)	EURO: battery insert for 3 x 1.5 V/IEC 60086, R 20/LR 20 EURO PLUS: batter insert with rechargeable NC battery 3.6 V/4 Ah
Operating time	approx. 5 h	approx. 10 h (HE 8 EURO) approx. 4 h (HE 8 EURO PLUS)
Rotary switch	3 positions „Main beam - OFF - signal light (red)“	3 positions „Main beam - OFF - main beam“
Degree of protection accd. EN 60529	IP65	IP65
Enclosure material	Polyamide/black	Polyamide/black
Function	- Indication of residual operating time - Emergency light in event of mains failure - Charge depending on the drawn capacity - Red signal light, switchable - Switching for standby light or in case of broken filament	- Easily replaceable battery insert - Halogen lamp with double bulb - Indication of residual operating time (HE 8 EURO PLUS) - Protection against overcharge (HE 8 EURO PLUS)
Weight	approx. 1.0 kg (with battery)	approx. 0.64 kg (HE 8 EURO, without battery) approx. 1.0 kg (HE 8 EURO PLUS, with battery insert, rechargeable)
Light aperture	Ø 71 mm, mineral glass	Ø 71 mm, mineral glass

	Charger LG 483	Plug-in charger HE 8 EURO PLUS
Rated voltage	220 - 250 V AC 50/60 Hz	220 V ± 10 %, 50/60 Hz
Input power	12 VA	6.5 VA
Insulation class	II	II
Charging duration	max. 8 h (dep. on the state of charge)	16 h (for approx. 4 h operating time) > 24 h (for approx. 5 h operating time)
Degree of protection accd. EN 60529	IP 31	IP 20
Weight	approx. 1.3 kg	approx. 0.42 kg

**| HE 5 EN | HE 8 N EN | HE 8 EURO/HE 8 EURO PLUS | Charger LG 483 |
| Plug-in charger HE 8 EURO PLUS |**



Plug-in charger

Charger LG 483

HE 8 Euro Plus

HE 8 N EN

HE 5 EN

Ordering details

Type	Scope of delivery	Order No.
HE 5 EN	with incandescent lamp, without battery	1 1125 000 111

Accessories for Ex-pocket torch HE 5 EN

Type	OU	Order No.
1 incandescent lamps 3.7 V/0.3 A	10	1 2041 810 000

Type	Scope of delivery	Order No.
HE 8 N EN	with incandescent lamp and battery	1 1118 000 050
Charger LG 483		1 1540 000 483

Accessories for Ex-hand lamp HE 8 N EN

Type	OU	Order No.
Battery pack with NC-battery 3.6 V/4 Ah	1	2 1118 020 000
1 incandescent lamps 3.75 V/0.8/0.4 A	5	1 2035 300 000

Type	Scope of delivery	Order No.
HE 8 EURO	with lamp, without battery	1 1118 000 001
HE 8 EURO PLUS	with lamp and battery pack, rechargeable	1 1118 000 010
Plug-in charger		1 1518 000 111

Accessories for Ex-hand lamp HE 8 EURO/EURO PLUS

Type	OU	Order No.
Battery pack with NC-battery 3.6 V/4 Ah, rechargeable	1	2 1118 024 000
Halogen lamp with double bulb 4 V/0.82 A	1	2 2061 080 000



Plug-in charger

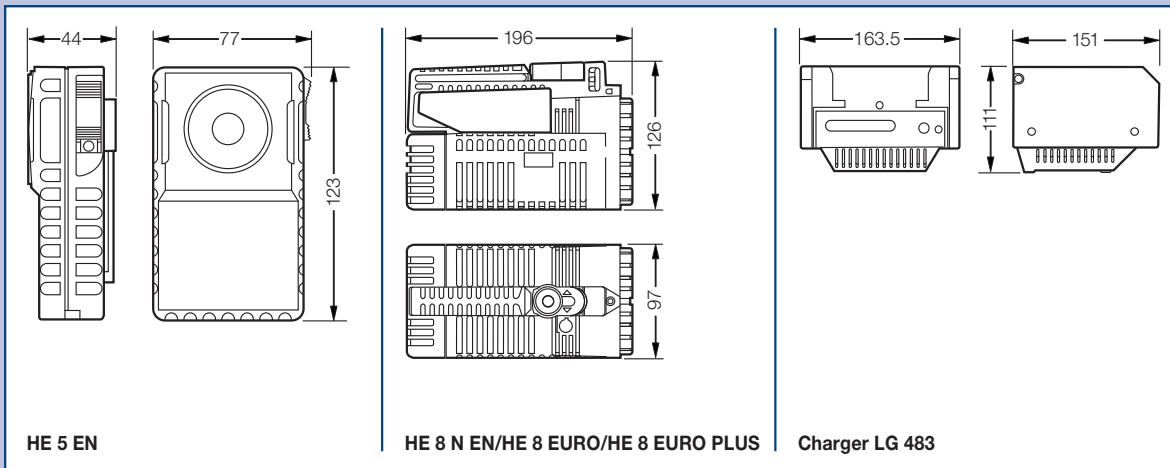
Charger LG 483

HE 8 Euro Plus

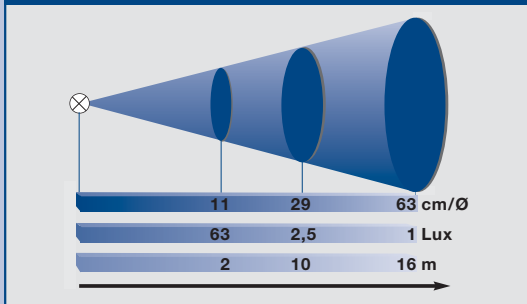
HE 8 N EN

HE 5 EN

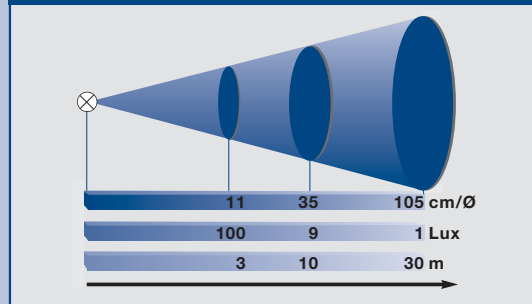
Dimension drawing | Range-diagram | Indication of residual operating time



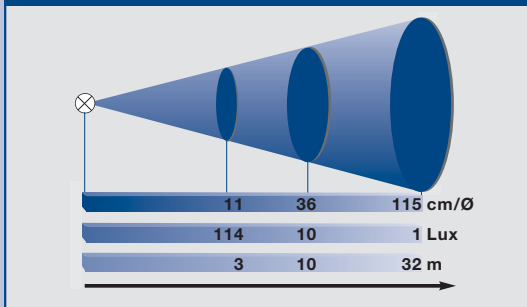
Range-diagram HE 5 EN



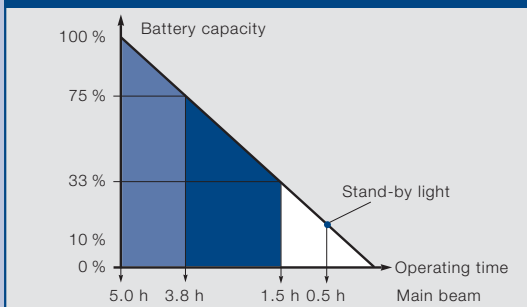
Range-diagram HE 8 N EN



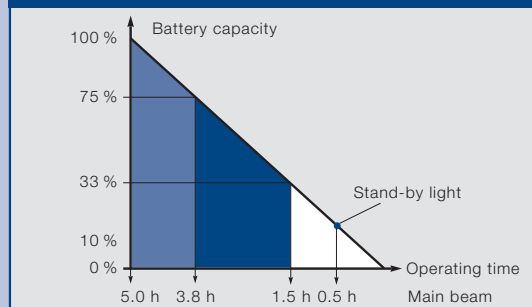
Range-diagram HE 8 EURO/EURO PLUS



Indication of residual operating time HE 8 N EN



Indication of residual operating time HE 8 EURO PLUS



Dimensions in mm

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E X - S E A R C H L I G H T

SEB 8 / SEB 8 L / SEB 8 ADR / SEB 8 DIN / SEB 8 L DIN / SEB 9 / SEB 9 L

The powerfull explosion-protected portable searchlights SEB 8/SEB 9 are in accordance to the ATEX-Directive 94/9/EG and have therefore been certified for usage in the Zones 1, 2, 21 and 22 up to temperature class T4. Their use is permitted in nearly any area where the hazard of an explosive atmosphere exists. They have been developed for inspection, maintenance and repair operations in hazardous explosive atmospheres. Due to their robust construction and the high IP65 safety standard they can be used in nearly any work area subject to high mechanical stress and high humidity. Five light emitting diodes provide continuous information on the current operating and charging state, plus it will also "warn" you in due time when the battery capacity is low or it needs to be replaced. The electronics additionally protect against excessive discharging as well as overcharging – only the amount of energy that has been used will be replaced. This increases the service life of the battery. In the event of a broken filament, the lamp will automatically switch over from the main beam to the standby light, in order to prevent the user from being left suddenly in the dark.

The searchlights SEB 8 ... have a light intense halogen double bulb lamp and a gas-tight NiCd battery 4,8 V/7 Ah.

The new searchlight SEB 9 contains a NiMH 4.8 V 9.5 Ah battery and the well known halogen double-bulb lamp.

Max. luminous intensity 15,000 cd.

The SEB 8 DIN is equipped with a Xenon filled lamp and a 4.8 V 5 Ah NiCd batterie.

This type fulfils the additional standarts EN 60068-2-27 for use in fire brigade vehicles. Max. luminous intensity 12,000 cd.



Indication of available duration provides safety of operation

Broken filament detection and automatic switchover to pilot light occurs

No overcharging of the battery due to a recharge dependent on the used capacity

Focusing beam

Degree of protection IP65

International Approvals

SEB 8 ADR as a warning light according to StVZO and ADR-Directives

For special operations such as a warning and inspection light for the transport of hazardous goods by road the Cooper Crouse-Hinds GmbH has developed the SEB 8 ADR. This version has been certified by the Federal Motor Vehicle Department as a warning and inspection light according to the Road Traffic Regulations and has been issued with an EC-Type Examination Certificate. According to the ATEX-Directive 94/55/EG, this lamp can be used across Europe as a hazard warning and inspection light for the transportation of hazardous good on the road. This is possible due to optimized orange filter and the special switching technology.

Charging possibilities SEB 8.. / SEB 9..

The SEB 8.../SEB 9... model can be charged from a motor vehicle battery using the vibrationproof motor vehicle holder (10-33 V) or from the mains supply of the LG 443 charger. The SEB 8 L/SEB 9 L model features an integrated mains connecting lead by means of which it can be recharged from the 230 V mains supply.



SEB 8/SEB 8 L as search and work light

SEB 8 / SEB 9

A search and working light

This explosion-protected portable searchlight has been developed in order to comply with the requirements for control and rescue operations of the police and the fire brigade. The electronics of the lamp are reliably protected against electromagnetic fields (EMC). They are in accordance with the ATEX-Directive 94/9/EG. Special for operations where a constant luminosity is required the prism filter will give you a quadratic working light with a uniform, widespread luminous intensity distribution and that with no major loss. Slip-on coloured filters extend the range of functions for the SEB 8 such as safeguarding and giving signals.



SEB 8 ADR as a warning light in the transportation of hazardous goods on the road

SEB 8 DIN

The compliance with relevant standards and the various options makes this explosion-protected search light to an exceeding handlamp for controlling- and rescue applications of fire brigades and other public forces. Hence, it is listed with almost all public and local fire brigades in Germany and for many years exceedingly successfully in use of application.

The robust and proven technology ensures with a high **protective grade IP65** a save function, even on high mechanical stress and wet locations. The ergonomic single-handed operation, the belt hook and the limited weight according the new standard guarantees the user-friendly application.

A NiCd accumulator 4.8 V/5 Ah and an **operation period of 5.5 hours** the SEB 8 DIN provides a safety reserve on site and exceed at all the standard requirements.

All required lighting tasks are fulfilled by the use of the excellent light technology of the xenon main-light lamp 4.8 V/4 W. In addition focusing the light from searchlight to scattered light and a max. luminous intensity of more than **12,000 cd** will meet all requirements of lighting.

Approvals and test certificates

These search lamp fulfil as the only one of its kind the following construction- and test standards and passed following Approvals and test certificates:

- DIN14642 (German Institute for Standardization) for explosions protected hand lamps with motor vehicle charger edition 9/2003, for installation within vehicles of the fire brigade.
- EC Type Examination Certificate for explosion protection for gas-ex and dust-ex-areas (ATEX Certificate)
- ECC type approval of the Federal Office for Motor Vehicles for the

EMC guideline 95/54/EC using within motor vehicles (e1 certificate)

- Shock test report according to DIN EN 60068-2-27 for the use of the lights in fire brigade vehicles (DIN 1846-2:2001)
- General design approval of the Federal Office for Motor Vehicles for the use of the SEB 8 as a warning light (type SEB 8 ADR).





Technical data

	SEB 8...	SEB 9...
Marking to 94/9/EC	Ⓔ II 2 G Ex e ib IIC T4 Ⓔ II 2 D Ex tD A21 IP66 T85 °C	Ⓔ II 2 G Ex e ib IIC T4 Ⓔ II 2 D Ex tD A21 IP66 T85 °C
EC-Type Examination Certificate	BVS 08 ATEX E 116	BVS 09 ATEX E 005
Permissible ambient temperature	-20 °C to +40 °C, specified data: 0 °C to +30 °C (battery)	-20 °C to +40 °C, specified data: 0 °C to +30 °C (battery)

	SEB 8 | SEB 8 L SEB 9 | SEB 9 L	SEB 8 ADR	SEB 8 DIN SEB 8 L DIN
EC-Type approval acc. guideline 95/54/EC	[e1]	[e1]	[e1]
EMV in vehicles	23025	23025	23025
Approved design of Federal Office for motor vehicles	-	~ K 265	-
Incandescent lamp	5.5 V/5.5 W (halogen lamp with double lamp)	5.5 V/5.5 W (halogen lamp with double lamp)	4.8 V/4 W (Xenonlight)
Lamp cap	BA 15d	BA 15d	BA 15d
Pilot lamp	4.8 V/0.3 A	4.8 V/0.3 A	4.8 V/0.3 A
Lamp cap 2	BA 9s	BA 9s	BA 9s
Max. luminous intensity	15000 cd	15000 cd	12000 cd
Luminous flux	approx. 100 lm	approx. 100 lm	approx. 65 lm
Battery	SEB 8: NC-Battery rechargeable 4.8 V/7 Ah SEB 9: NiMH-Battery rechargeable 4.8 V/9.5 Ah	NC-Battery, rechargeable 4.8 V/7 Ah	NC-Battery, rechargeable 4.8 V/5 Ah
Rated operating duration (main light)	SEB 8: approx. 5.5 h SEB 9: approx. 7 h	approx. 5.5 h	approx. 5.5 h
Charging duration	SEB 8: max. 14 h (capacity-dependent) SEB 9: max. 20 h (capacity-dependent)		
Rotary switch	Service – pilot light – Off – main light – signal		
Degree of protection accd. EN 60529	IP65	IP65	IP65
Dimensions (L x W x H)	325 x 119 x 146.5 mm	325 x 119 x 146.5 mm	343 x 119 x 146.5 mm
Weight	SEB 8: 2.2 kg/SEB 8L: 2.5 kg SEB 9: 1.9 kg/SEB 9L: 2.2 kg	2.2 kg	SEB 8 DIN: 1.6 kg SEB 8 L DIN: 2.2 kg
Enclosure material	Polyamide	Polyamide	Polyamide
Enclosure colour	black	black	black
Protective cover/protective bowl	Ø 98 mm mineral glass	Ø 98 mm mineral glass	Ø 98 mm mineral glass
Function	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, switching for standby light or in case of broken filament, internal charger		

Integrated Charger SEB 8 L | SEB 9 L

Rated voltage	230 V
Frequency	50 - 60 Hz

Charger LG 443 for SEB 8/9 ...

Rated voltage	220 - 250 V
Frequency	50 - 60 Hz
Dimension (L x W x H)	163.5 x 151 x 111 mm

Motor vehicle charger 90 for SEB 8/9 | SEB 8/9 L | SEB 8 ADR

Rated voltage	10 - 33 V DC
Dimension (L x W x H)	152.5 x 145 x 128 mm



Ordering details

Type	Scope of delivery	Order No.
SEB 8 L	With halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable directly about mains lead, LG 443 or motor vehicle charger 90)	1 1147 000 001
SEB 8	With halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable with LG 443 or motor vehicle charger 90)	1 1147 000 002
SEB 8 ADR	With halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable with LG 443 or motor vehicle charger 90)	1 1147 000 200
SEB 9 L	With halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable directly about mains lead, LG 443 or motor vehicle charger 90)	1 1147 009 001
SEB 9	With halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable with LG 443 or motor vehicle charger)	1 1147 009 002

Accessories for Ex-hand lamps SEB 8/9 / SEB 8/9 L / SEB 8 ADR

Type	OU	Order No.
Battery set 7 Ah, 4.8 V NC	1	2 1147 701 000
Battery set 9.5 Ah, 4.8 V NiMh	1	2 1147 791 000
Conversion kit for motor vehicle charger 90	1	2 1147 400 000
Halogen lamp with double bulb 5.5 V/5.5 W	1	1 2061 000 040
1 Incandescent lamp 4.8 V/0.3 A (pilot lamp)	10	1 2041 450 000
Radial diffuser cap, orange	1	2 1145 017 000
Slip on filters red, orange, green	1	2 1147 300 000
Slip-on filter orange with adapter and magnet for SEB 8 ADR	1	1 1147 080 000

Type	Scope of delivery	Order No.
SEB 8 DIN	with belt hook, xenon-main light, pilot lamp, Prismenlinse und Batterie (rechargeable with LG 443 or motor vehicle charger 90)	1 1147 000 004
SEB 8 L DIN	with belt hook, xenon-main light, pilot lamp, diffusing lens and battery (rechargeable directly about mains lead, with LG 443 or motor vehicle charger 90)	1 1147 000 003

Accessories for Ex-searchlight SEB 8 DIN

Type	Scope of delivery	OU	Order No.
Battery set	5 Ah, 4.8 V NC	1	2 1147 512 000
Main beam	4.8 V/4 W	1	1 2061 001 400
Incandescent lamp	4.8 V/0.3 A (pilot lamp)	10	1 2041 450 000
Belt hook	stainless steel hook	1	2 1147 500 000

Type	Scope of delivery	Order No.
Charger LG 443	220 V - 250 V AC	1 1540 000 443
Motor vehicle charger 90	10 V - 33 V DC	1 1145 000 792
Wall bracket SW	console without charging module	1 1145 000 795



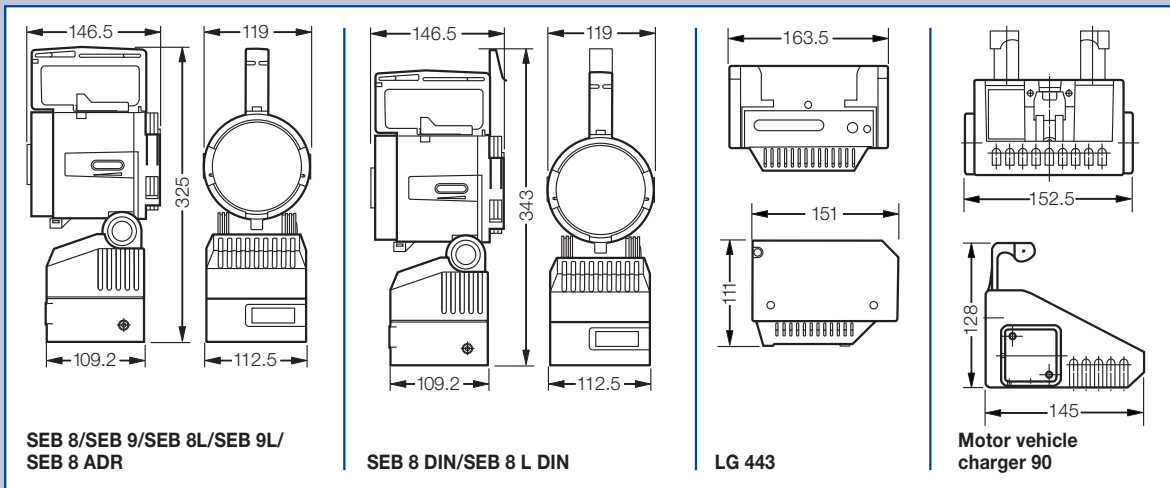
Motor vehicle charger 90

Charger LG 443

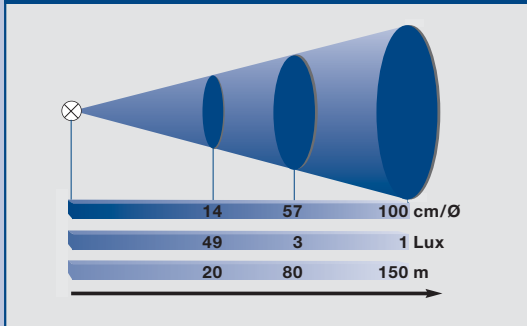
SEB 8 ADR as warning light

SEB 8 DIN

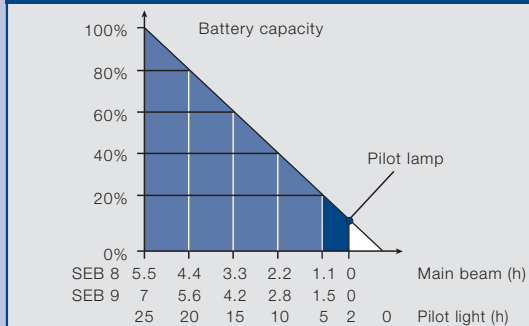
Dimension drawing | Range-diagram | Indication of residual operating time



Range-diagram



Indication of residual operating time



Dimensions in mm

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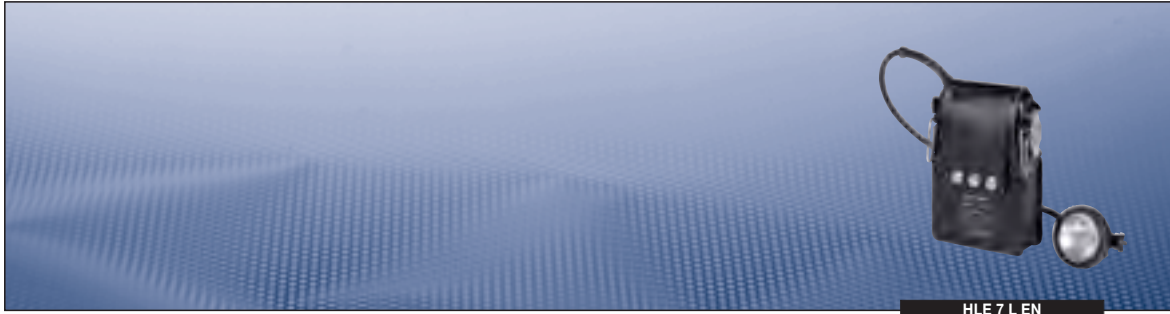
E X - C A P L I G H T

HLE 7 L EN

The explosion-protected HLE 7 L EN has been developed as a working and inspection lamp for tunnelling and for duties in sewage systems. It is in accordance with the ATEX-Directive 94/9/EG and has been approved for use in the Zones 1 and 2 hazardous areas up to the temperature class of T4. The lamp can easily be fixed onto the headpiece holder of the protective helmet. The main or secondary filament of the two-filament lamp is operated by the switch on the headpiece. The lamp has a highly flexible neoprene-sheathed connecting cable. The battery container is additionally protected by a leather case. The powerful energy source consists of a three-cell maintenance free and gas-tight 7 Ah NiCd battery which can be charged from the 230 V mains supply by means of the provided connecting lead. The battery has an integrated charging circuit. The battery container does not have to be opened for charging. A red and green LED indicate the charging state.



- Abrasion resistant flexible connection between battery and headpiece
- Powerful maintenance free, gastight 7 Ah battery
- Battery container with integrated charging circuit
- Red and green LED's indicating the charging state
- Two-filament lamp provides safety in case of a broken filament
- International Approvals



HLE 7 L EN

Technical data

HLE 7 L EN	
Marking to 94/9/EC	Ⓔ II 2 G EEx e ib IIC T4 / Ⓔ II 2 G Ex e ib IIC T4 (applies for)
EC-Type Examination Certificate	PTB 99 ATEX 2194
Permissible ambient temperature	-20 °C to +40 °C, specified data: 0 °C to +30 °C (battery)
Permissible ambient temperature during charging	0 °C to +35 °C
Rated voltage	230 V ± 10 %, 50/60 Hz
Input power	4 VA
Insulation class	II
Incandescent lamp	3.75 V / 0.8 / 0.4 A
Battery	rechargeable NC battery 3.6 V/7 Ah
Operating time	approx. 8 h
Charging duration	max. 18 h
Light aperture	Ø 65 mm, mineral glass
Rotary switch	4 positions: „OFF - pilot light - OFF - main light“
Degree of protection accd. EN 60529	IP54
Weight	approx. 2.0 kg (with battery)
Enclosure material	Polyamide/black
Function	- Integrated charger - Charge state indication - Two-flament lamp

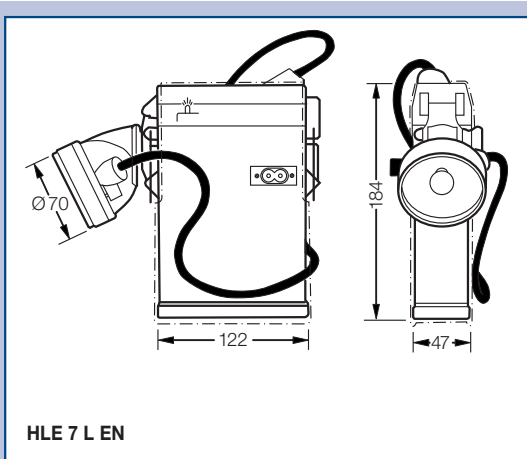
Ordering details

Type	Scope of delivery	Order No.
HLE 7 L EN	with incandescent lamp, battery and mains connection lead	1 1229 000 416

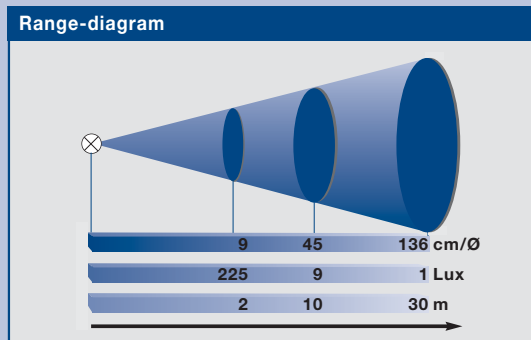
Accessories for Ex-cap light HLE 7 L EN

Type	OU	Order No.
Power supply complete	1	2 1229 456 000
1 Incandescent lamp 3.75 V/0.8 A/0.4 A	5	1 2035 520 000
Belt	1	3 0231 001 011
Head ribbon for helmets	1	2 1261 191 000

Dimension drawing | Range-diagram



HLE 7 L EN



Dimensions in mm

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EX - HAND AND MACHINE LAMPS

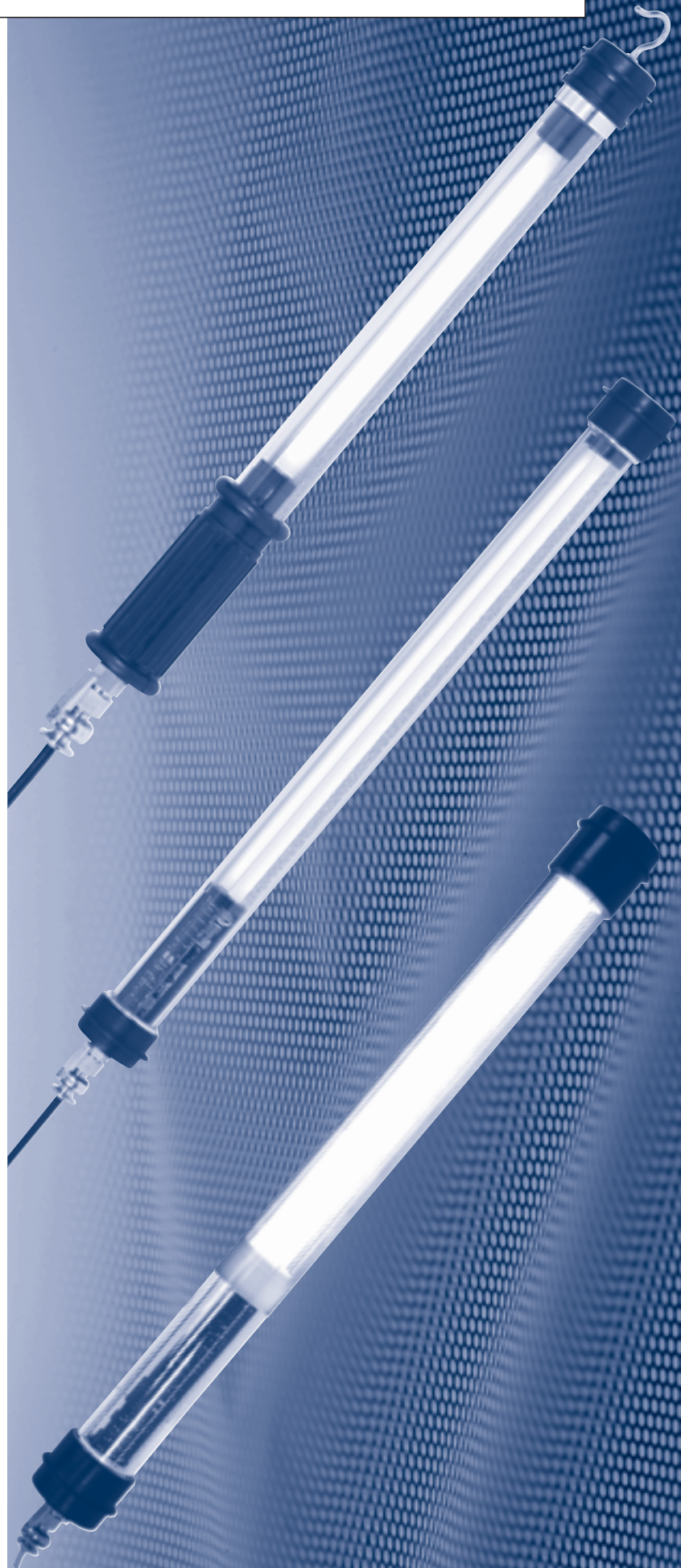
HL/ML 43 / HL/ML 50 / HL/ML 60 / HL/ML 70
with fluorescent lamps and LEDs

These explosion-protected hand- and machine lamps with fluorescent or LED illuminants were designed especially for inspection and maintenance work in potentially explosive atmospheres, such as are found in the chemical industry, in offshore installations, in the automobile sector, in the aircraft industry and in shipyards.

Due to the small dimensions combined with a high light output, these robust lamps are particularly well suited for use in confined spaces, inside machines and in silos, etc., as well as anywhere where a reliable, portable light source is needed. Together with the appropriate accessories (optional), these lamps can also, for example, be used at sampling openings or as level gauges, or they can be fitted to railings.

When working in confined spaces, containers and silos with metallic materials, special attention shall be paid to the protection of persons in accordance with the installation requirements. Lamps for low-voltage operation (24 V - 50 V) or with an isolating transformer (TR version) are available for such applications. Alternatively, earth-leakage circuit breakers with a rated tripping current of 10 mA can also be used. The explosion-protected versions of these protection devices can be positioned in the immediate vicinity of the lamps. Due to the low surface temperatures, they may also be mounted in the immediate vicinity of combustible materials.

- Single and twin-lamp versions
from 6 W to 58 W
- Rated voltage ranges 24/230 V AC/DC
- With electronic ballast
- Robust protective tube made of polycarbonate
- Suited for use in gas and dust Ex-atmospheres
- Safety standard IP68



Application range

The powerful, explosion-protected hand and machine lamps with bi-pin fluorescent lamps fulfil the requirements of ATEX directive 94/9/EC. They are generally suited for use in potentially explosive gas atmospheres in Zones 1 and 2, as well as in potentially explosive dust atmospheres in Zones 21 and 22, and are approved for temperature class T5 or surface temperatures up to 80°C.

Constructional features

The explosion-protected hand and machine lamps feature an integrated electronic ballast (EVG) and are available with one or two built-in fluorescent lamps. Depending upon the type, they are approved for various supply voltages. The light-transmitting, protective tube is made of impact-resistant polycarbonate and features a built-in reflector. The lamp caps are made of robust neoprene rubber.

Versions

Hand lamps (marking E) feature a grooved grip made of neoprene rubber with a metal, trumpet-shaped gland



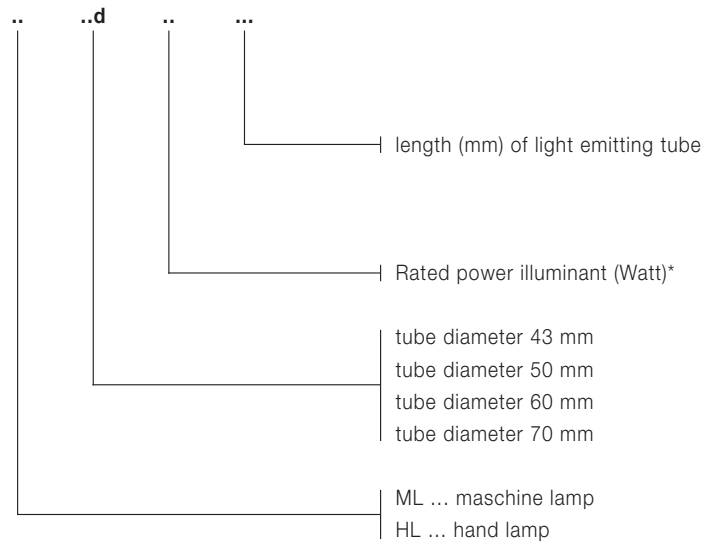
and a neoprene rubber end cap with hook for hanging up the lamp at the workplace.

Machine lamps (marking EM) are used for the local illumination of machines and parts thereof. They are also ideally suited for use as level gauges. They feature a metal trumpet-shaped gland and two neoprene rubber caps. They can be mounted directly onto the machines with suitable clamps.

Lamps with isolating transformer

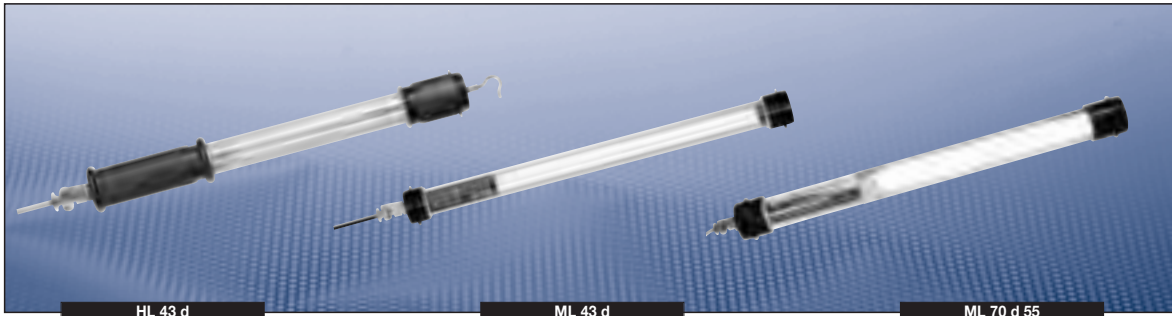
(marking TR) are particularly suited for the safe protection of persons. For this purpose there is a completely potted isolating transformer for the galvanic isolation of the lamp from the supply voltage in the power supply cable.

Type code



* Twin-lamp version is marked with ./2

Ex-lamps with electronic ballasts (EVG) |

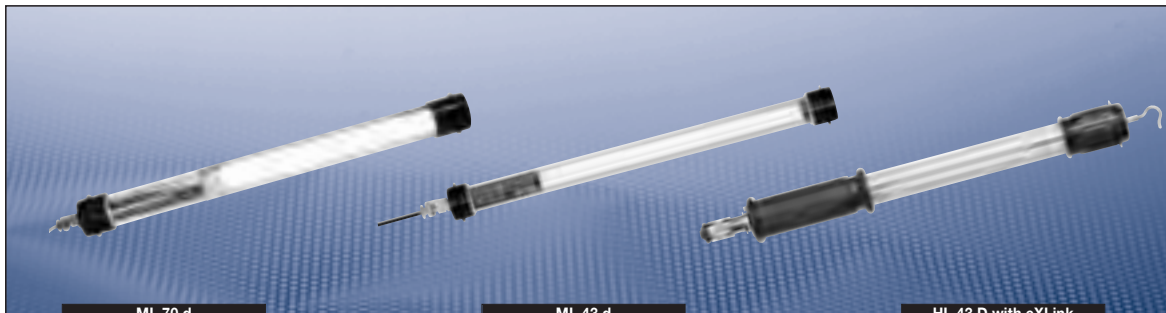


Technical data

	HL 43 d/ML 43 d	ML 50/60/70 d
Marking to 94/9/EC	Ex II 2 G Ex d IIC T5 Ex II 2 D Ex tD A21 IP68 T95 °C	Ex II 2 G Ex d IIC T5 Ex II 2 D Ex tD A21 IP68 T95 °C
EC-Type Examination Certificate	BVS 07 ATEX E 164 X	BVS 07 ATEX E 164 X
IECEX-Certificate of Conformity	IECEX BVS-08.0014X	IECEX BVS-08.0014X
Marking to IECEx	Ex d IIC T5 Gb Ex t IIIC T95 °C Db (IP68)	Ex d IIC T5 Gb Ex t IIIC T95 °C Db (IP68)
Permissible ambient temperature	-20 °C to +40 °C -20 °C to +60 °C (option)	-20 °C to +40 °C -20 °C to +60 °C (option)
Rated voltage 1	230 V AC/DC	110 - 240 V AC/DC
Rated voltage 2	24 V AC/DC	24 - 50 V AC/DC
Frequency	50 - 400 Hz	50 - 400 Hz
Power	max. 13 W ¹⁾	max. 58 W ¹⁾
Power factor cos ϕ	> 0.95	> 0.95
Ballast	EVG integrated	EVG integrated
Standard cable length	5 m cable 3 x 1 mm ² without plug ²⁾	5 m cable 3 x 1 mm ² without plug ²⁾
Insulation class	I resp. II	I resp. II
Lamp/illuminant	¹⁾	T8/TC-L ¹⁾
Lamp cap	G5	2G11 (PL-lamps) / G13 (18 - 58 W)
Luminous flux	¹⁾	¹⁾
Degree of protection accd. EN 60529	IP68	IP68
Dimension (L x W x H)	¹⁾	¹⁾
Weight	¹⁾	¹⁾
Enclosure colour	black	black
Protective cover/protective bowl	Polycarbonate	Polycarbonate

¹⁾ see Ordering details

²⁾ Plug on request, optional with eXLink[®] coupler

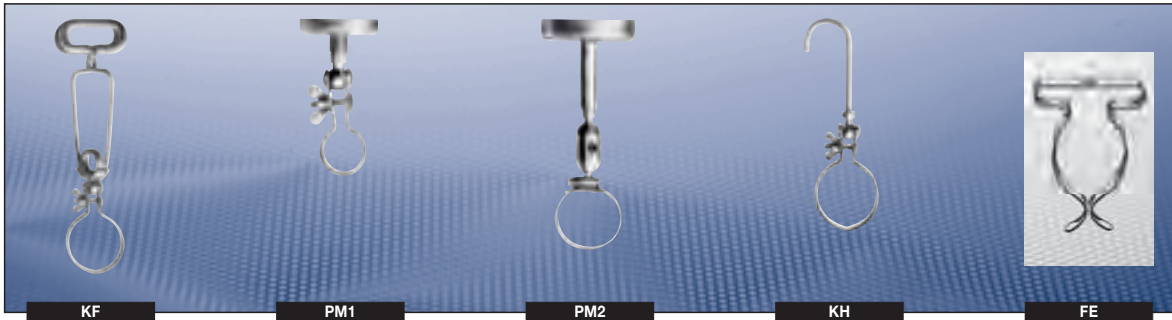


Ordering details

Type	with fluorescent lamps	Lamp cap	Luminous flux ¹⁾ lm	Dimensions			Weight approx. kg	Order No.
				A mm	Ø B mm	Ø C mm		
24 V AC/DC hand lamps								
HL43d 6 383	1 x 6 W	G 5	215	563	66	43	1.4	1 1700 000 000
HL43d6/2 383	2 x 6 W	G 5	430	563	66	43	1.5	1 1700 000 005
HL43d8460	1 x 8 W	G 5	448	640	66	43	1.5	1 1700 000 001
HL43d8/2 460	2 x 8 W	G 5	896	640	66	43	1.6	1 1700 000 006
HL43dLED6 460 (DC)	6 W LED	-	315	640	66	43	1,5	1 1700 000 003
24 V AC/DC machine lamps								
ML43d6383	1 x 6 W	G 5	215	504	66	43	1.4	1 1700 000 010
ML43d6/2383	2 x 6 W	G 5	430	504	66	43	1.5	1 1700 000 015
ML43d8460	1 x 8 W	G 5	448	581	66	43	1.5	1 1700 000 011
ML43d8/2460	2 x 8 W	G 5	896	581	66	43	1.6	1 1700 000 016
230 V AC/DC hand lamps								
HL43d6383	1 x 6 W	G 5	215	563	66	43	1.4	1 1700 000 200
HL43d6/2383	2 x 6 W	G 5	430	563	66	43	1.5	1 1700 000 205
HL43d8460	1 x 8 W	G 5	448	640	66	43	1.5	1 1700 000 201
HL43d8/2460	2 x 8 W	G 5	896	640	66	43	1.6	1 1700 000 206
HL43d13690	1 x 13 W	G 5	949	870	66	43	1.7	1 1700 000 202
HL43dLED6 460	6 W LED	-	315	640	66	43	1,5	1 1700 000 107
230 V AC/DC machine lamps								
ML43d6383	1 x 6 W	G 5	215	504	66	43	1.4	1 1700 000 210
ML43d6/2383	2 x 6 W	G 5	430	504	66	43	1.5	1 1700 000 215
ML43d8460	1 x 8 W	G 5	448	581	66	43	1.5	1 1700 000 211
ML43d8/2460	2 x 8 W	G 5	896	581	66	43	1.6	1 1700 000 216
ML43d13690	1 x 13 W	G 5	949	811	66	43	1.7	1 1700 000 212
24-50 V AC/DC machine lamps								
ML50d18920	1 x 18 W	G 13	1296	1041	72	50	2.4	1 1700 000 310
ML50d301225	1 x 30 W	G 13	2460	1346	72	50	2.4	1 1700 000 311
ML60d361530	1 x 36 W	G 13	3348	1651	82	60	2.8	1 1700 000 312
ML60d581830	1 x 58 W	G 13	5220	1951	82	60	3.2	1 1700 000 313
ML70d18570(PL)	1 x 18 W	G 13	1200	691	92	70	2.2	1 1700 000 317
ML70d24665(PL)	1 x 24 W TC-L	2G11	1800	786	92	70	2.8	1 1700 000 316
ML70d36761(PL)	1 x 36 W TC-L	2G11	2900	882	92	70	3.4	1 1700 000 315
ML70d55881(PL)	1 x 55 W TC-L	2G11	4780	1002	92	70	3.8	1 1700 000 314
110-240 V AC/DC machine lamps								
ML50d18870	1 x 18 W	G 13	1296	991	72	50	2.4	1 1700 000 510
ML50d301175	1 x 30 W	G 13	2460	1296	72	50	2.4	1 1700 000 511
ML50d361480	1 x 36 W	G 13	3348	1601	72	50	2.8	1 1700 000 512
ML60d581780	1 x 58 W	G 13	5220	1901	82	60	3.2	1 1700 000 513
ML70d18522(PL)	1 x 18 W	G 13	1200	643	92	70	2.2	1 1700 000 517
ML70d24617(PL)	1 x 24 W TC-L	2G11	1800	738	92	70	2.8	1 1700 000 516
ML70d36713(PL)	1 x 36 W TC-L	2G11	2900	834	92	70	3.4	1 1700 000 515
ML70d55833(PL)	1 x 55 W TC-L	2G11	4780	954	92	70	3.8	1 1700 000 514

¹⁾ Depends on lamps

Ex-lamps with electronic ballasts (EVG) |



Accessories

Clamp with ball joint KF

Type	for diameter in mm	Height A in mm	Weight kg	Order No.
KFV 3	40	265	0.260	1 1700 000 900
KFV 4	50	280	0.260	1 1700 000 901

Fixing clip - INOX 1.4301

Type	for diameter in mm	Dimensions height in mm	Weight kg	Order No.
BS 70	70	-	0.012	1 1700 000 951

Spring clip FE

Type	for diameter in mm	Height A in mm	Weight kg	Order No.
FE 3	40	62	0.020	1 1700 000 930
FE 4	50	78	0.023	1 1700 000 931

Permanent magnet PM 1 (adhesion 10 kg)

Type	for diameter in mm	Height A in mm	Weight kg	Order No.
PM 1	50	130	0.210	1 1700 000 911

Permanent magnet PM 2 (adhesion 50 kg)

Type	for diameter in mm	Height A in mm	Weight kg	Order No.
PM 2	40	190	0.680	1 1700 000 915
PM 2	50	205	0.680	1 1700 000 916
PM 2	53	207	0.680	1 1700 000 917
PM 2	60	215	0.680	1 1700 000 918
PM 2	70	225	0.680	1 1700 000 919
PM 2	80	235	0.680	1 1700 000 920

Suspension hook with ball joint KH

Type	for diameter in mm	Height A in mm	Weight kg	Order No.
KH 4	50	183	0.115	1 1700 000 921
KH 5	53	185	0.118	1 1700 000 922
KH 6	60	195	0.120	1 1700 000 923
KH 7	70	205	0.123	1 1700 000 924
KH 8	80	215	0.127	1 1700 000 925

Eye bolt with ball joint M5 - INOX 1.4301

Type	for diameter in mm	Height A in mm	Weight kg	Order No.
RS 4	15	58	0.034	1 1700 000 950

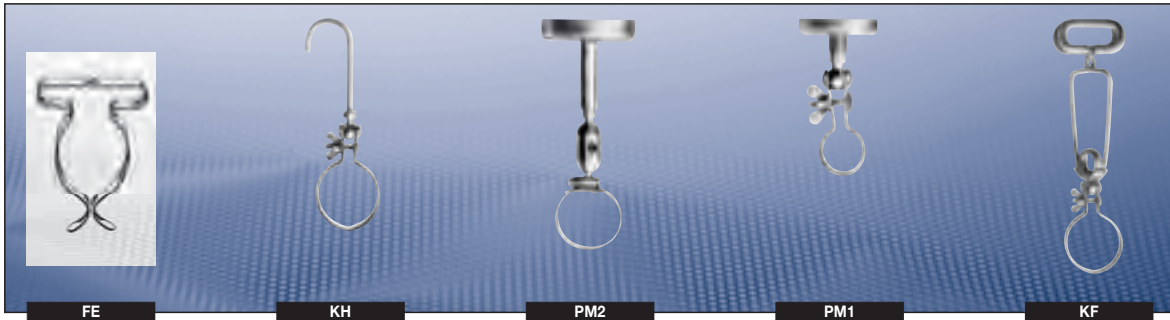
Plastic pipe clamp

Type	for diameter in mm	Height C in mm	Width A in mm	Order No.
CILC 63	63 – 71	115	78	1 1700 000 960
CILC 71	71 – 80	124	87	1 1700 000 961
CILC 80	80 – 90	136	98	1 1700 000 962

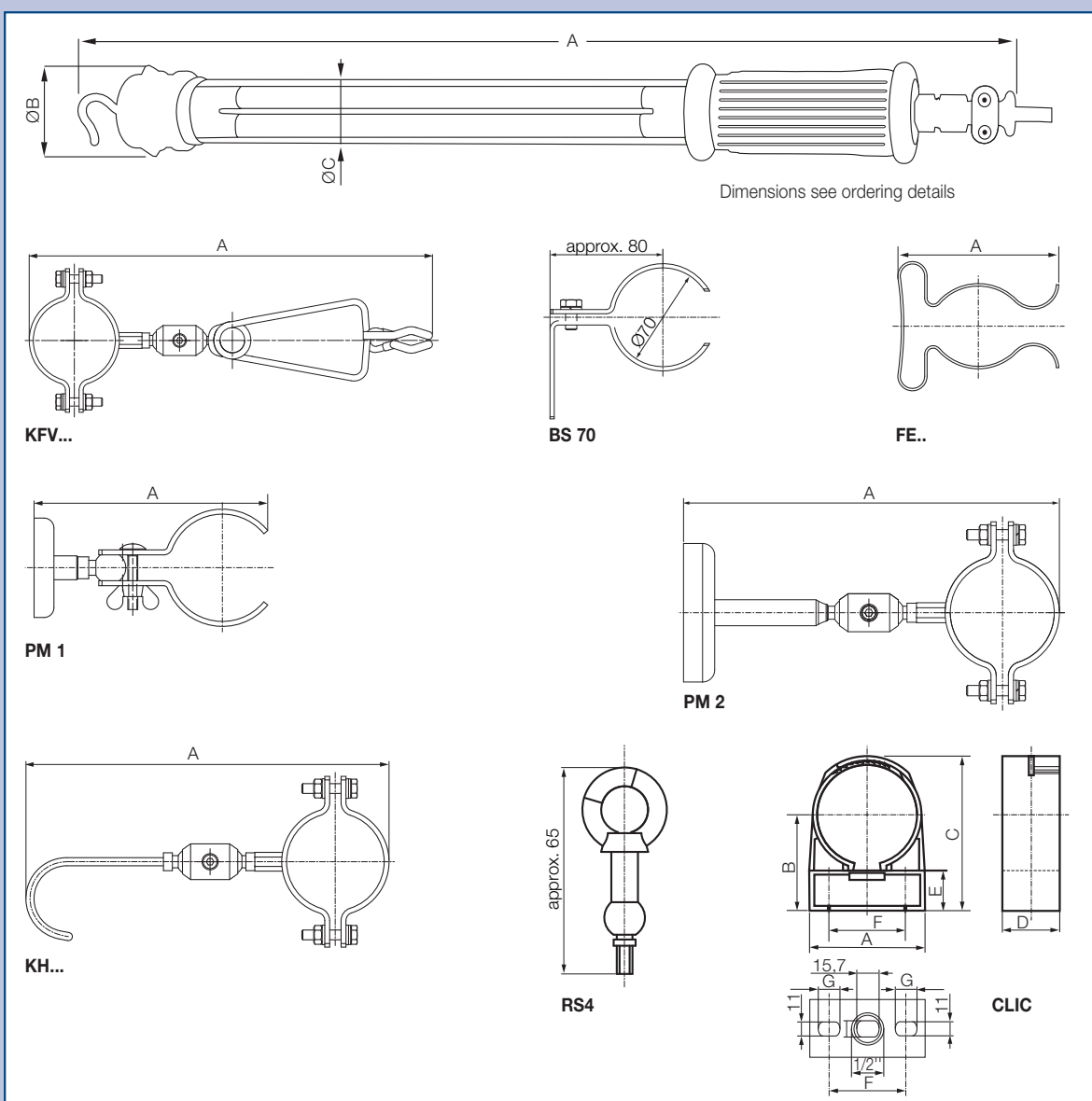
Luminaire key SCH

Type	Application	Weight kg	Order No.
SCH 2	Luminaire key	0.1	1 1700 000 940

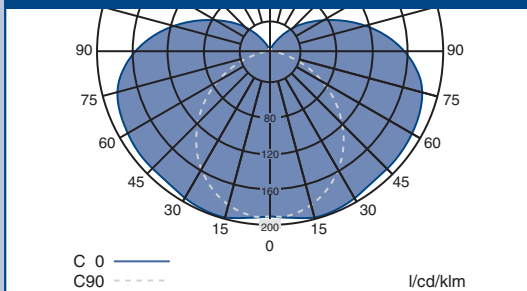
| Ex-lamps with electronic ballasts (EVG) |



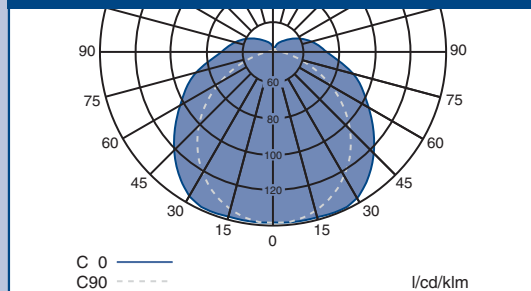
Dimension drawing | Polar curve



Polar curve HL../ML.. (single lamp)



Polar curve HL../ML..d (TC-Lamp) (twin lamp)



Dimensions in mm

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EX - TANK INSPECTION LAMP

FOC Fibre-Optic Light Guide Cable with 25 m long portable system for operating in Zone 0

In order to create adequate working lighting in the Zone 0 areas during maintenance work, only hand-held lamps, such as the Stabex MO with relatively low levels of light, have been available to date. But if large areas of illumination are needed, a system to light up the inside of the tank in Zone 0 is now available for the first time in the form of the new Tank Inspection Lamp FOC 25.

Mechanical Version

The system comprises 2 units:

1. A transport trolley with a fixed cable reel, an Ex-de lamp housing and a supply cable with a plug allow the transport and operation of the light cable system in Zone 1. The size of the cable reel is also designed to prevent intentional access through the tank opening.
1. The 25 m long fibre-optic cable may be introduced into Zone 0 after the equipotential bonding has been connected.



High light capacity in Zone 0 (approx. 300 lm)

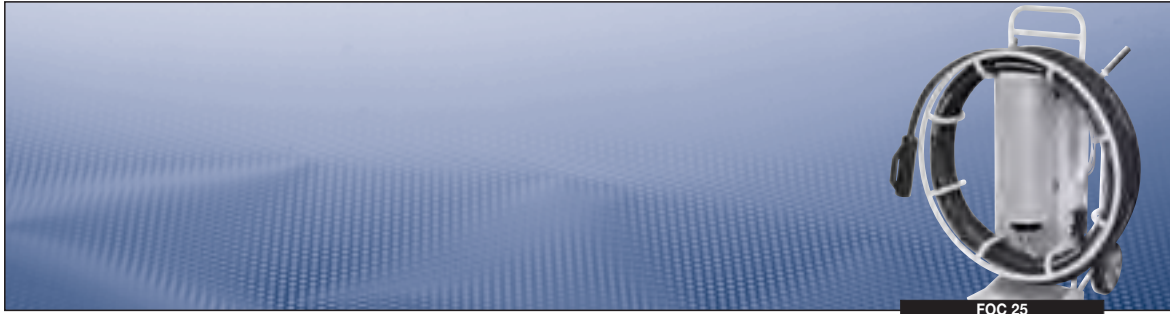
metal halide lamp 150 W with electronic ballast and specially sized reflector for use with light guide systems

Permanently installed transport carriage with large wheels (200 mm diameter) for easier and safer handling even on uneven ground

Light guide cable with highest degree of protection IP67

Only a screw terminal is needed for central equipotential bonding, since the protective hose that conducts electricity and the conductive wheel construction include the whole system

High-quality protective hose for the light guide cable pursuant to EN 12115 in a chemical and oil-resistant design



FOC 25

Technical data

Transport trolley with light source (Equipment 1)

Marking to 94/9/EC	Ex II 2 G Ex de IIC T4 ¹⁾
EC-Type Examination Certificate	PTB 02 ATEX 2179
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	220 V - 230 V AC
Rated current	1.8 A
Frequency	50 Hz
Ballast	EVG
Cable length	approx. 2.5 m with CEE-plug 16 A Zone 1
Insulation class	I
Lamp/illuminant	150 W Halogen metal vapour lamp
Degree of protection accd. EN 60529	IP66
Dimension (L x W x H)	1305 x 1000 x 600 mm
Type of mounting	mobile trolley
Enclosure material	Metal
Enclosure colour	yellow

Fibre-optic base (Equipment 2)

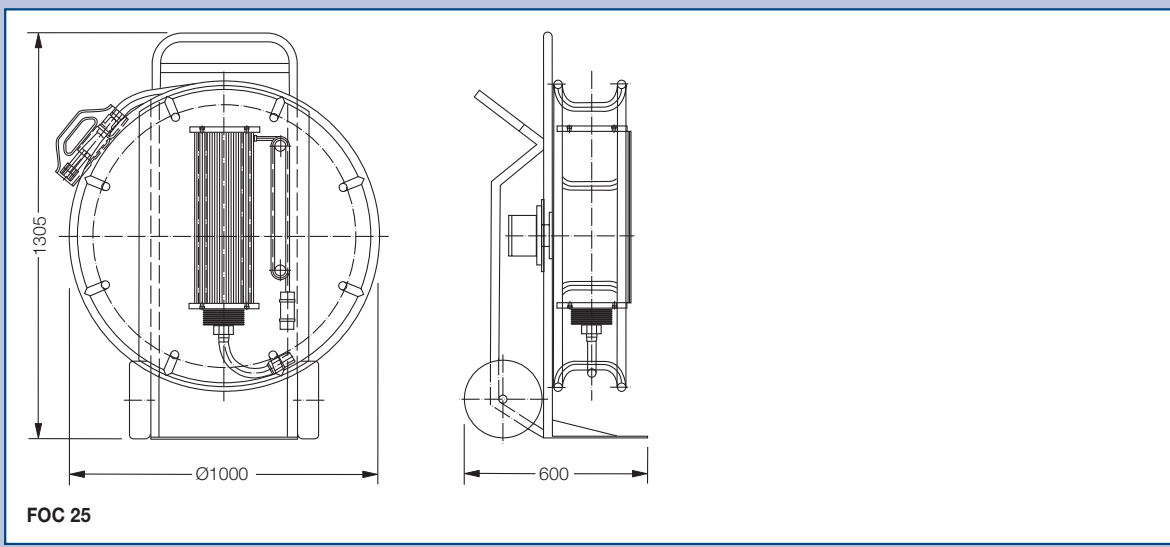
Marking to 94/9/EC	Ex II 1 G Ex IIC T6
Degree of protection accd. EN 60529	IP67
Luminous flux	approx. 300 lm
Dimension (L x W x H)	25 m fibreoptic light guide cable
Total weight of the system	112 kg

¹⁾ Fulfils IEC 31WG8/TD3 protection against ignition by optic radiation

Ordering details

Type	Scope of delivery	Order No.
FOC 25	incl. 25 m light guide cable	1 3032 000 001

Dimension drawing



FOC 25

Dimensions in mm

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Accessories

On the following page you will find Accessories and Spare Parts for the portable Ex-Lamps covered in chapter 1.

Spare Parts

As well as the above, there is also a large amount of spare parts available for maintenance and repair work. If required, please contact us, you will find that we will be more than pleased to help you. We must point your attention to the fact that repair work done on explosive-protected products must be carried out with original spart parts only! If this is not the case and third-party parts are used, the Certification and Approval for the product will be forfeited and a possible reduction of the explosion-protection may be achieved.

Repair Service

Of course the Cooper Crouse-Hinds GmbH upholds its own repair department where customer repairs are carried out. Our qualified and schooled personnel carry out repairs and overhauling using original spare parts, quickly and efficiently. This service also includes the end quality testing needed for explosion-protected products. With this service you have an "assured safety" as do all overhauled Ex-Lamps and products by Cooper Crouse-Hinds GmbH.

Repair Schooling/Training

Repairs on explosion-protected electrical products must be carried out by qualified Electricians only! For our customers to be able to repair explosion-protected goods themselves we offer Qualification Training Courses in our house several times a year. Each trainee will become extensive training documentation and will, after having completed the course, a course completion certification. Please get in contact with us if you require further informaton.



EX-FLUORESCENT LIGHT FITTINGS

EX-LIGHT FITTING eLLK 92... - MAIN FEATURES

2.2

EX-LIGHT FITTING eLLK 92...

2.12

EX-POLE MOUNTED LIGHT FITTING eLLM 92...

2.14

EX-EMERGENCY LIGHT FITTING eLLK 92... NIB

2.18

EX-RECESSED CEILING LIGHT FITTING eLLB 20...

2.26

EX-RECESSED CEILING LIGHT FITTING RLF 250...

2.38

EX-d LIGHT FITTING AB 12 AND EVF...

2.46

EX-LIGHT FITTING nLLK 08... FOR ZONE 2

2.56

EX-EMERGENCY LIGHT FITTING nLLK 08... N FOR ZONE 2

2.62

EX-PHOTOCELL

2.68

LIGHTING MOUNTING SYSTEMS

2.70

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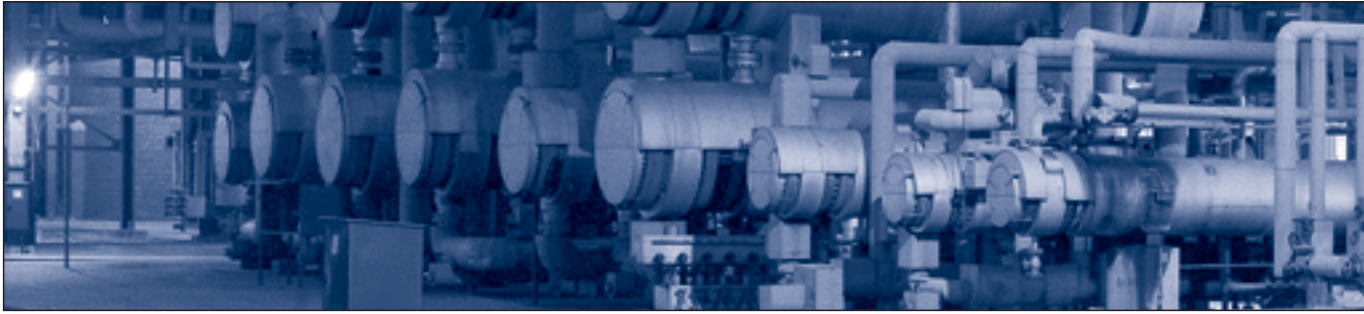
8

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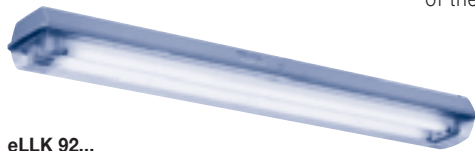
12



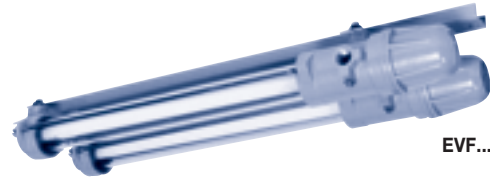
The best choice for an economical solution for the illumination of probable explosive environments is the fluorescent lamp.

The advantages of fluorescent lamps in light fittings:

- worldwide availability
- low cost
- very good colour reproduction
- immediate starting
- easy handling
- long service life with EVG-Technology
- immediate restart
- standardised disposal of the fluorescent lamps



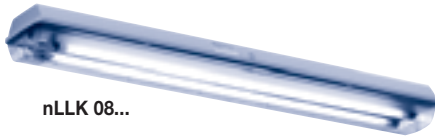
eLLK 92...



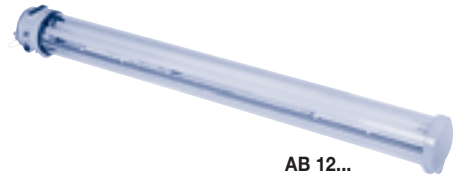
EVF...

Depending on the proposed usage there is a variety of groups to choose from:

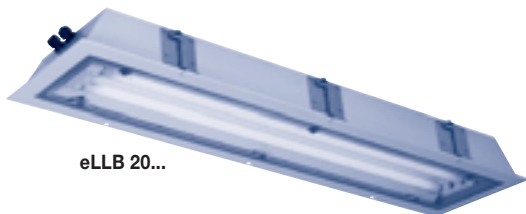
- eLLK/M 92...:
Surface and pole mounted for use in the Zones 1, 2, 21 and 22
- nLLK 08...:
Surface mounted for use in the Zones 2, 21 and 22
- eLLB 20 and RLF 250.....:
Recessed ceiling mounting for use in the Zones 1, 2, 21 and 22
- AB 12.../EVF.:
Flameproof surface mounted for use in the zones 12, 2 and 22



nLLK 08...



AB 12...



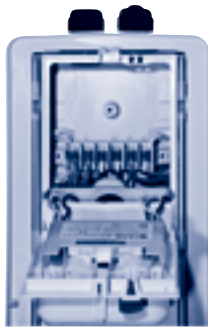
eLLB 20...



RLF 250...



**one sided
through-wiring
Type 1/6**



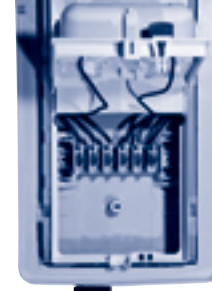
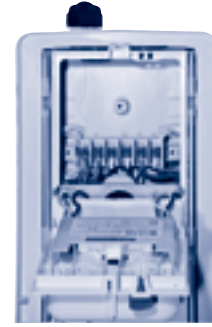
Fluorescent light fittings of the series **eLLK 92...** / **nLLK 08...** are equipped with a single-end through-wiring **1/6** as standard. Here there are 2 cable entries M25 for cable sizes \varnothing 8-17 mm, where as one of these is fitted with a certified blanking plug (red) as a stopper.

The **2/6** version is fitted with a cable entry M25 for cable sizes \varnothing 8-17 mm and a certified blanking plug (red) as stopper on both ends. The mains terminal block has 6 clamps enabling wire of up to $2 \times 6 \text{ mm}^2$ (solid) or $2 \times 4 \text{ mm}^2$ (multi wire) to be connected. This allows for a comfortable and problem free wiring (L, L1, L2, L3, N and PE) and installation.

The **2/6** version is fitted with a second mains terminal block of 6 clamps on the opposite side. The required internal wiring of the light fitting has been rated for 16 A.

The standard screwable terminal block allows single sided connecting without having to bend the wire. Simply push the hinged cover shut and you already have protection against contact according to BGV A2.

**double sided
through-wiring
Type 2/6**



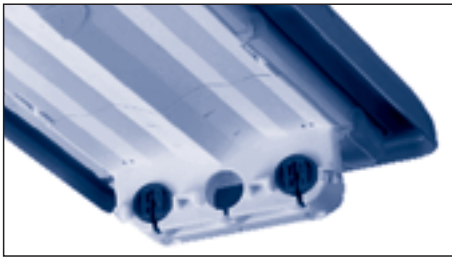
EX - LIGHT FITTINGS

Technical Special Features on hand of the eLLK 92

The fluorescent lamp series eLLK 92..., eLLM 92..., nLLK 08... and in some parts the eLLB 20... have in their architecture, the same characteristics, which we show here on hand of the eLLK 92-Series.

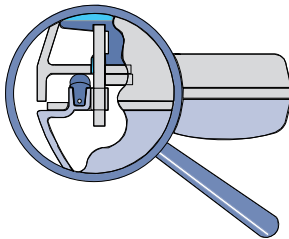
Materials

The eLLK 92 light fitting is made of highgrade plastics that, in addition to the excellent mechanical properties, also feature a high stability against many chemicals found in industrial plants. All the materials used for the light fitting



Combination of high resistant materials

provide are effectively protected against corrosion and have already been successfully tried and tested in chemical and off-shore installations.



Optimized
Sealing system

Sealing system

The bowl and the enclosure form a labyrinth, that protects the seal against jet water. The continuous seal is extremely elastic and, in conjunction with the locking mechanism, ensures that the light fitting is sealed tightly for a long time. As was also confirmed by an ERA test, this is the only way to reliably maintain the degree of protection IP66 for a longer period.

Aptitude tests

The eLLK 92 light fitting has already passed both tests with lateral thrusts due to wind up to 12 Bft and the ERA¹⁾ test specified for British off-shore installations. Here, for example, the sealing qualities and the resistance to vibration are tested.

¹⁾ ERA-Test= UK-test institute
for offshore technology

Standard – two moulded plastic or brass (optional) cable entries for one-ended through-wiring

Double thread (MS)
for reliable PE contacting of metal gland (optional)

Standard terminal block with
6 terminals for conductors up to 2 x 6 mm²

Optional double-ended
through-wiring for cable connection

Enclosure made of polyester
reinforced with glass fibre

Special Ex-EVG in the type of protection Ex d
to meet high requirements

Locking bolt for operating the
light fitting locking mechanism on both sides

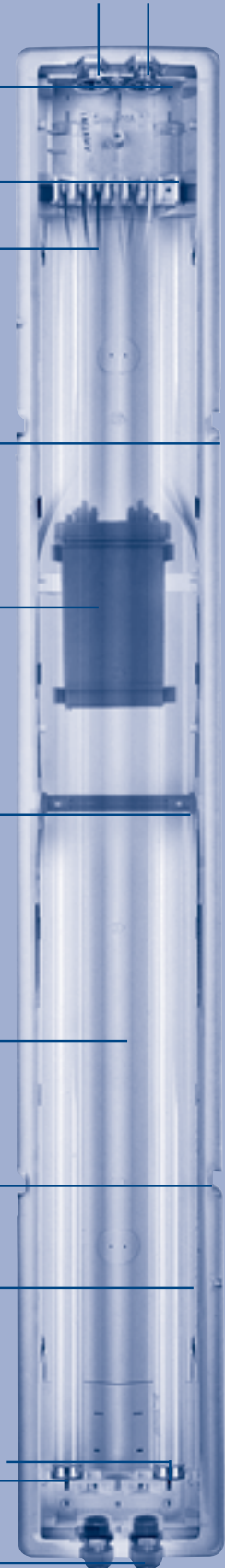
Bowl made of transparent,
impact-resistant polycarbonate

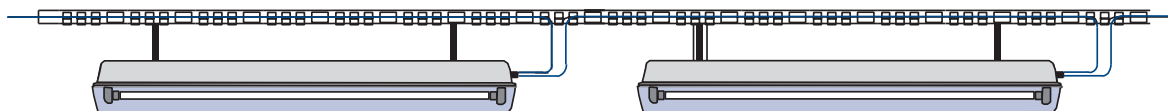
Sockets for the hinges
of protective bowl – on both sides

Internal sealing system for IP66

Special lamp socket in the type of protection
Ex e for bi-pin lamps to IEC 81

Moulded plastic or brass cable entries for
double-ended cable connection (optional)





Cost reduction with single-end through-wiring



generously dimensioned terminal compartments

Standard version for two cables

The standard version of the eLLK 92 is designed for a single-ended through-wiring. According to the verdict in an independent expertise, together with the easily accessible terminal compartment, this connection method results in a time saving of up to 30% compared to conventional light fittings using the classical through-wiring method.



Plastic cable entries

Installation of the eLLK 92/nLLK 08

Whether it is mounted on rails or suspended from the ceiling, the lion's share of the overall costs is taken up by the installation and electrical connection of the light fitting. Here, due to the standardized fixing clearances and the generously dimensioned terminal compartments, the eLLK 92 provides a high saving potential. The terminal compartment can be opened without removing covers or reflectors, thus permitting the easy connection of cables.



Metal thread

Three ways – one solution

Depending on the type of installation, different cable entries could be required for the connection of the light fitting. Available for all types are the following:

- M25 x 1.5 Plastic cable entries
- M20 x 1.5 Earthed metal thread for metal cable entries
- non-metric threads, for example Myer Hubs 3/4" NPT-Thread



Myer Hubs (for Conduit-System)

Lamp replacement made easy

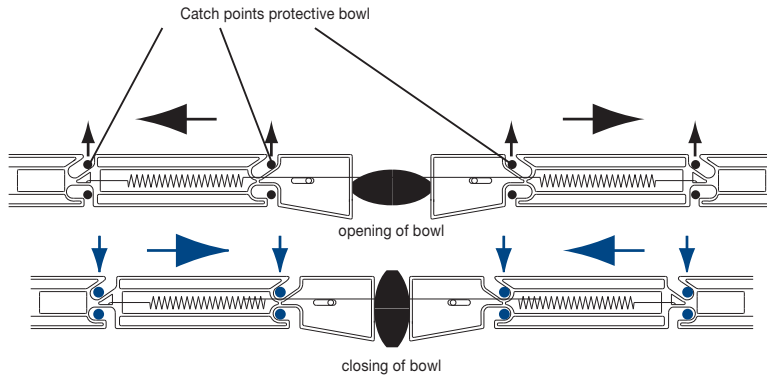
Irrespective of how the light fitting is installed, the locking mechanism can be operated on either side – this means that there are no future surprises with



Easy lamp replacement

light fittings that were installed at a later point in time. The fact that the locking mechanism can be operated on both sides and that the protective bowl is hinged on both sides, means that there is plenty of scope for the arrangement of light fittings. The bowl can simply be swung open in the respective direction without tools – this is made possible by the hinge fasteners fitted on both sides of the light fitting housing. A quarter turn of the locking bolt and the bowl opens up downwards. The hinges on the cover are fixed in such a way that the replacement lamps can be safely deposited in the bowl, thus saving time when replacing lamps. The bowl cannot fall down, even in wind and rain.





Closing system using the "strongbox principle" guarantees a correct sealing

Locking mechanism

The housing and the protective bowl are securely locked by means of a locking mechanism according to the „strongbox principle“ on both sides that features as many as 24 latch points . This new type of locking system features stainless steel springs that regulate the pressure applied to the seal, thus guaranteeing the tightness of the light fittings, even in the event of changes due to the ageing of the sealing material and variable climatic influences.



compulsory N/C contact safeguarded against contact

Double the safety is better

The regulations require the automatic disconnection of the supply voltage when the light fitting is opened. The built-in compulsory NC contact is safeguarded against inadvertent operation and, as soon as the locking mechanism of the light fitting is operated, it de-energizes all parts that can be touched. A second interlock switch increases the safety level for the operator. Therefore, even if the lock of the light fitting is actuated while the protective bowl is still open, the switch cannot be operated, as, in this case, the circuit for the light fitting remains disconnected.

Lamps

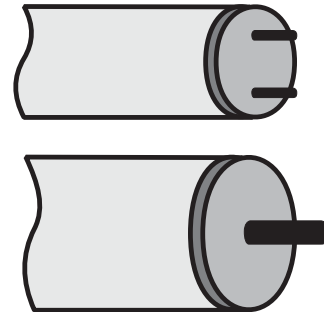
All the light fittings in the eLLK 92/ nLLK 08 /eLLB 20 and RLF 250.. series have been developed and certified for Ø 26 mm bi-pin fluorescent lamps with a G 13 lamp cap in accordance with:

IEC 60081 – page 22/20 (18 W)

IEC 60081 – page 24/20 (36 W)

IEC 60081 – page 21/22 (58 W)

This means that the lamps, that are available all over the world, can be used for both hazardous and non-hazardous areas. Not only does this simplify stock-keeping, but the operator also benefits from all the technical advantages in conjunction with EVG operation. Compared to the old Ø 38 mm single-pin fluorescent lamps, the luminous power of the system is increased by a factor of 2.2. Special thermo-lamps with 38 mm diameter can be used in all bi-pin lamp holder of CEAG fluorescent light fittings. This allows an economical use of fluorescent lamps even below ambient temperatures of -5°C



International Ø 26 mm bi-pin fluorescent lamp and the old Ø 38 mm single-pin fluorescent lamp

Lighting engineering

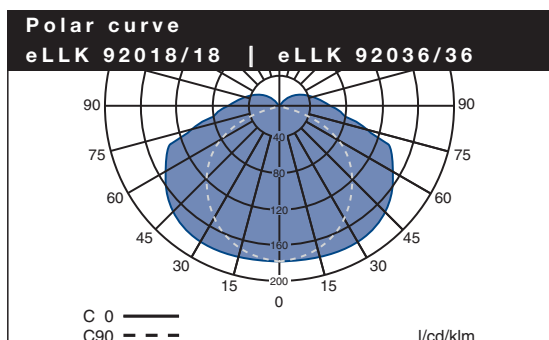
Due to the various fields of application light fittings are equipped with a large variety of lamps and reflectors. The criteria for the selection of the types of lamps and reflectors are basically determined by the type of lighting required (illumination of surfaces or objects, etc.) and the economic efficiency. When planning a lighting installation, the polar curves of the luminous intensity of the light fittings being used are required in order to calculate the illumination distribution.



CEAG products are constantly being advanced and tested in the company's own lighting laboratory

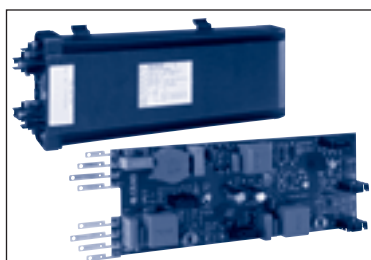
Polar curves

During the development phase the lighting properties of all explosion-protected light fittings are tested in the Cooper Crouse-Hinds GmbH lighting laboratory.



In this way it is ensured that the reflectors, as well as the protective bowls for fluorescent light fittings are optimized down to the last detail. In the case of the light fittings eLLK 92..., nLLK 08..., eLLB 20 and

RLF 250.. series of Cooper Crouse-Hinds GmbH has succeeded in optimizing both the illumination of surfaces with the largest possible light distribution and the illumination of objects with the highest possible axial light intensity. The polar curve of each light fitting can be found in the technical data and can be used together with the other lighting values to calculate the illuminance. All lighting design data can be downloaded from our Web page: www.ceag.de



Electronic ballasts (EVG)

Nowadays it is not possible to imagine modern light fittings for fluorescent lamps without the EVG technology. Features such as immediate starting, the absence of flickering during operation or the minimal heat rise are only possible with this technology. With the CEAG EVG technology, fluorescent light fittings for use in hazardous areas also provide decisive advantages:

- possibility of a lamp-sparing cold start
- use of bi-pin lamps, Ø 26 mm
- use with various mains voltages from 110 V up to 254 V ± 10 %

- Regulation of luminous flux with fluctuating mains voltage
- safe lamp ignition at low and high ambient temperatures
- longer service life for lamps
- AC/DC operation possible
- Standard dual channel ballast, that means on failure of one lamp the second lamp will continue in operation independent from the failed one.

EOL (END OF LIFE) – What is it?

As with all other lamps, the lifetime of every fluorescent lamp is limited. Users of all Ex fluorescent light fittings reported on some critical situations where, after being in operation for longer periods, they overheated or even caught fire. It is not possible to say for certain to what extent the EOL effects were the cause of this. At the request of the German Manufacturers Association the Physikalisch-Technische Bundesanstalt (PTB) in Braunschweig carried out an independent investigation of this phenomenon. The results of this latest investigation have been published and can be found on the Internet pages of the PTB.

Extract from this report:

„In the more recent past, luminaires used in conjunction with these fluorescent lamps have been found to fail as a result of local overheating of the lamp cap and the lamp socket. There are different kinds of faults that may have led to these failures. One possible explanation is the end-of-life effect (EOL) of the lamp, which will occur only in exceptional cases at the end of the lamp lifetime. It is for the time being not possible to reproduce this EOL effect in the laboratory in a conclusive manner, but it may be described as follows in qualitative terms ...“



The solution for Zone 1 applications – CEAG EVG 09

All the EVGs (electronic ballast's) supplied by CEAG since 1988 feature monitoring of the lamp circuit, detection of the rectifier effect, as well as a shutdown of the circuit in the event that the lamp does not strike. Therefore, the CEAG EVGs already ensured a high level of safety at the service life of the lamps long before the discussions on EOL ever started. The new CEAG EVG 09 also fulfils the relevant EOL requirements of the industrial standard IEC 61347-2-3 (§ 17.2 and 17.3), as well as those laid down in the latest draft of IEC 60079-7 Ed. 4 7/2006 (Electrical Apparatus in the type of protection Increased Safety), for luminaires for use in potentially explosive atmospheres Zone 1. Thus, the CEAG EVG 09, which is certified to: BVS 09 ATEX E 054 U, meets the latest findings and the newest standards.

The advantages for you:

- Time-tested and reliable technology
- Latest lamp circuit monitoring as an additional safety factor
- Meets all requirements of the standard draft IEC 60079-7 for luminaires with fluorescent lamps in "Increased Safety" (EOL)
- EVG designed specially for rough operating conditions of Zone 1 – not just an encapsulated industrial EVG
- Thermally optimised circuitry for long service life, even in high ambient temperatures
- Wide input voltage range and DC operation for universal use
- Two separate lamp circuits (autarkic switching) provide more safety for your employees and installations
- Practically insensitive to network harmonics and over-voltage influences
- Isolation of one lamp circuit for use in emergency lighting installations (economic battery use)

The EVG 09 in practice: Explosion protected luminaires with trademark CEAG

All these functions are just one component in the extensive safety concept of the CEAG EVG 09. The use of high impact resistant plastic materials for the encapsulation in the type of protection Ex-de, as well as the additional unit fuses for the event that a fault occurs rounds off the whole package.

The new CEAG EVG 09 will become standard for our fluorescent light fittings series:

eLLK 92 .../... , eLLM 92 .../.... NIB as well as for the recessed ceiling luminaires eLLB 20... and RLF 250...

Which protective circuits does the new EVG 09 have?

The standard DIN EN 61347-2-3 (VDE 0712-33), which was issued in February 2005, only stipulates a permanent monitoring of the lamp circuit for EOL effects for T4 and T5 lamps (16 mm and thinner). The draft version of the standard IEC 60079-7, which was derived from this standard, lays down the test requirements for Ex-e light fittings with cold start EVGs for T6 (26 mm) fluorescent lamps.

Unlike industrial luminaires with EVGs, Ex-e luminaires shall fulfil all of the relevant conditions of this standard.

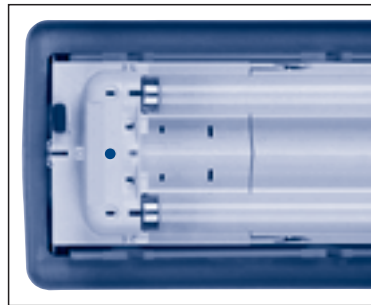




EVG-Capsulation

Robust technology for extreme applications

The operation of explosion-protected light fittings places high requirements on the reliability and durability of the circuits being used. In addition to temperature, moisture and mechanical stress, mains contamination or voltage peaks can affect the light fittings. Here the EVGs specially developed by Cooper Crouse-Hinds GmbH provide safe protection against harmful influences. Whereas conventional industrial EVGs are designed for an ambient temperature of the light fittings of up to + 30°C, the CEAG EVGs are designed for an ambient temperature of + 50°C. The large-scale printed wiring board layouts ensure an even heat distribution, through-connections and encapsulation of sensitive components provide mechanical protection. A hermetically sealed enclosure provides protection against undesirable substances that could cause damage to the PCB.



Direct or alternating voltage?

Conventional ballasts only work with an alternating voltage and can only be used with group or central battery installations under certain conditions. Cooper Crouse-Hinds GmbH, as the leading manufacturer of emergency lighting installations, offers an explosion-protected ballast that can be operated with alternating and direct voltages.

Quality cannot be left to chance

Extensive testing and a highly automated production process are necessary

to ensure a constant good quality. Cooper Crouse-Hinds GmbH has been manufacturing EVGs for more than 25 years and has the necessary know-how. In addition to the routine verifications and tests carried out on all apparatus, stress tests are carried out on individual batches to ensure safe findings with regard to component specifications.

Computer-aided final inspections

The uncompromising safety of the explosion-protected eLLK 92 light fittings is maintained throughout the various production stages and includes the final inspection. Each light fitting is tested in detail by a computer test program. All data relating to the manufacture and safety is stored and can still be called up years later. This is where the Cooper Crouse-Hinds GmbH quality assurance system, that is certified to ISO 9001:2000, clearly makes its mark.



Ex-emergency light fitting with self-contained battery system eLLK 92036/36 NIB

Emergency lighting – central or decentral

Appertaining to Emergency Lighting in hazardous explosive areas, their are two general philosophies. That of the supply assurance, the test and maintainance effort and that of the economic efficiency.

Emergency light fittings with a self-contained battery system

Emergency light fittings with self-contained battery systems provide the required Emergency lighting decentral, independant from central systems. That means the battery, the charger and the electronics are integrated in the light fitting. Taking the availability and the redundance into consideration, this system has with respect to the supply assurance in safety-engineering sensible areas a very high standard. Taking the economic efficiency into consideration, the required effort of testing, maintance and the environmental effect on the battery life span of eachself-contained battery system has to be taken into account. Taking the above into consideration it is without reason the best solution when emergency light fittings with a self-contained battery system are used in large and spacious explosion hazardous areas where the number of fittings to be used is limited.

The new CEAG series of emergency light fittings with self-contained battery systems eLLK 92 NIB, eLLB 20... NIB

have all the necessary self-control features needed and does the required functionality and operating time tests automatically. Hereby the battery lifespan is optimized.

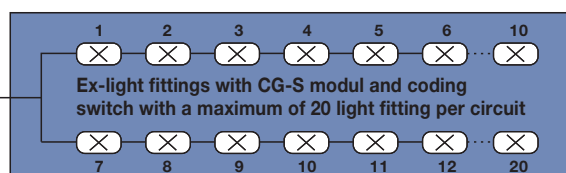
Centrally controlled emergency lighting systems with CG-Modules

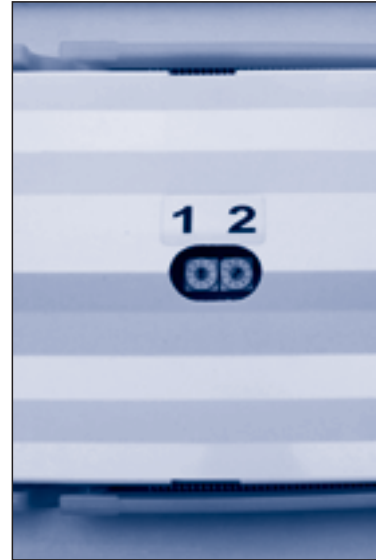
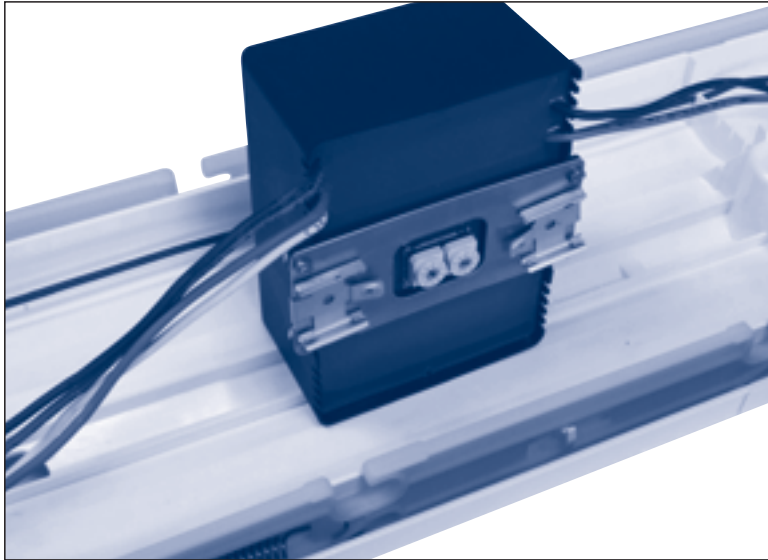
A centrally controlled emergency light system using the CEAG group supply and a central battery system is installed when a large number of emergency lights are conglomerated and can be used as a system emergency lighting. These battery systems are generally, not installed in the hazardous areas and therefore do not have to cope with the same environmental conditons as the light fittings themselves. This usually results in an extended life span of the batteries with a minimized maintainance effort. One must of course take into consideration that the cable laying from the central battery to each light fitting in the hazardous areas affords an increased effort.

CEAG emergency lighting supply unit for non-hazardous areas



One line, e.g. 3 x 1.5 mm² for both the mains and the emergency power supply





To be able to run on the CEAG emergency light fittings system we can provide the following light fitting series eLLK 92, nLLK 08 and eLLB 20 versions with **"CG-S Modules"**. This controlling module controls amongst other things the data exchange between the main emergency light apparatus and the individual light fittings per power supply cable and reports all functional errors.

In conjunction with the CG-S Modules, it is now possible to connect individually monitored emergency light fittings to a CEAG emergency lighting installation with monitoring system. Here it is now possible to integrate explosion-protected light fittings as system light fittings into the practical monitoring system of CEAG group or central battery installations.

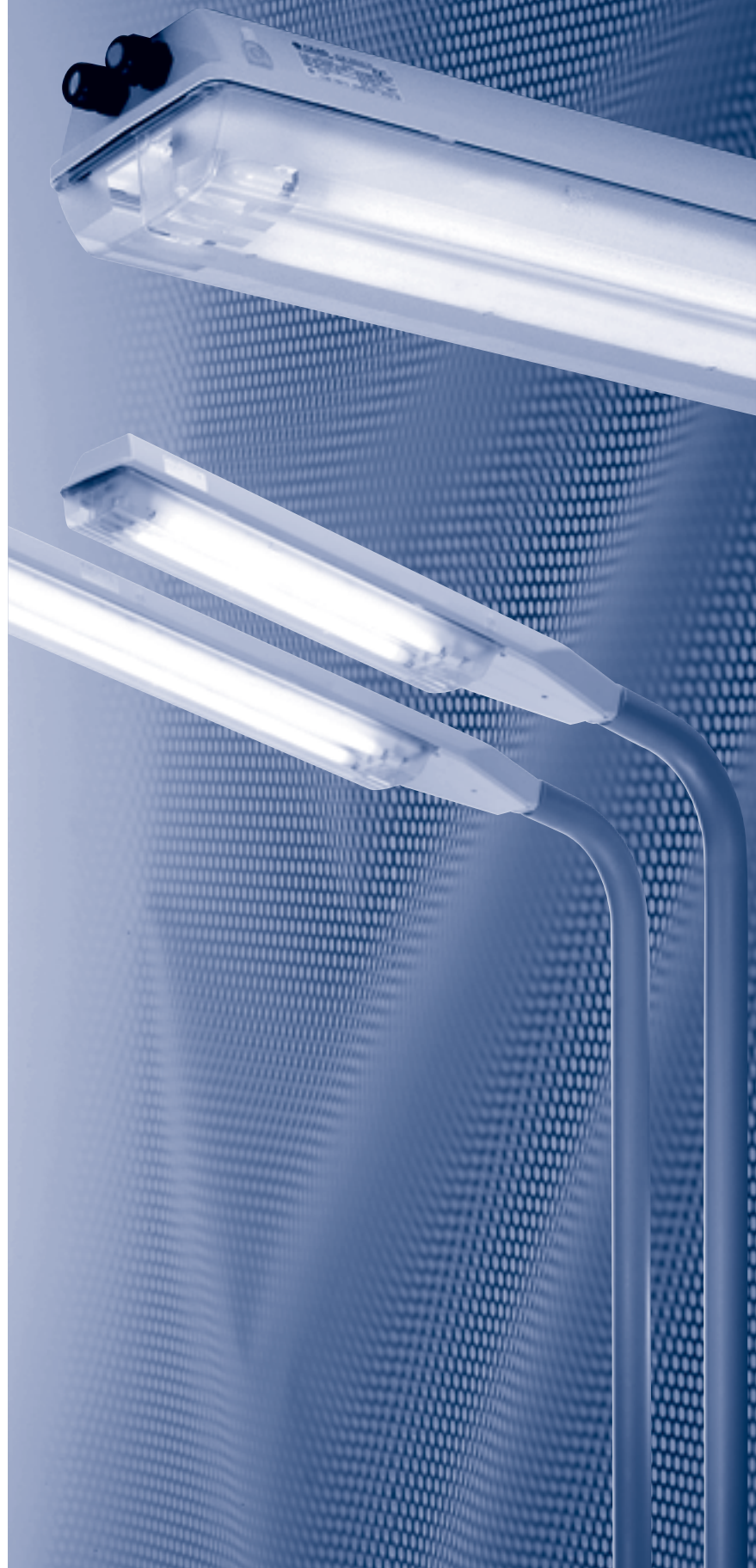
This combination offers the following advantages:

- Automatic performance of the necessary function test with central record-keeping
- Enormous cost savings as manual testing is no longer necessary
- Two-lamp operation with mains supply, single lamp operation with emergency power supply, therefore cost saving for batteries and apparatus
- High degree of safety of emergency lighting due to constant display of availability
- Simplified installation:
 - mains and emergency power supply have a common connection
 - a separate data line is not required
 - a maximum of 20 light fittings can be connected to one circuit
 - automatic performance of the necessary function tests with central record-keeping

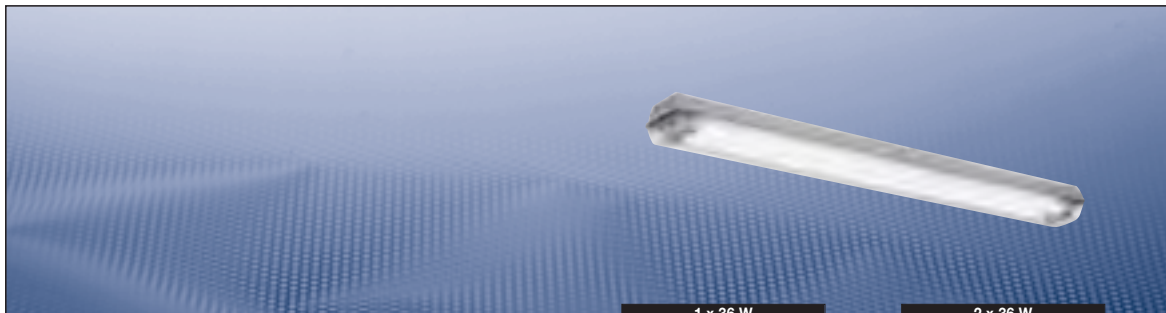
E X - L I G H T F I T T I N G S

eLLK 92... 18 W - 58 W
All plastic design for Zone 1 and 21

The eLLK 92 Ex-protected light fittings for bi-pin fluorescent lamps are fitted with an electronic ballast and conform to the ATEX Directive 94/9/EG. The modern economical ballast EVG 09 according to the latest standards (IEC 60079-7: 2006) allows a safe and economical operation of bi-pin fluorescent lamps G13 according to IEC 60081. Lamps reaching its end of life will be monitored and securely switched off (EOL-effect). The high input voltage range allows international use. Due to the standard dual channel architecture (with double lamp fittings) if one fluorescent lamp fails, the other fluorescent lamp will independently stay in operation. The standard single-sided through-wiring in connection with the variety of possibilities offers a cost efficient installation. Double-sided lock with 10, 20 or 24 latch points allows the protective bowl to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the right side. Automatic switch built as a safety disconnecter according to EN 60947 (IEC 664) with an automatic switch ensuring the disconnection of all exposed components when the fitting is opened. The optional CG-S module represents an optimum solution for the individual monitoring of light fittings connected to CEAG emergency battery systems.



- Standard dual channel ballast
- Double-sided safety lock
- Safety locking system due to an integrated forced isolating switch
- Safety standard IP66
- Connection to CEAG emergency light monitoring systems possible
- International Approvals



Technical data

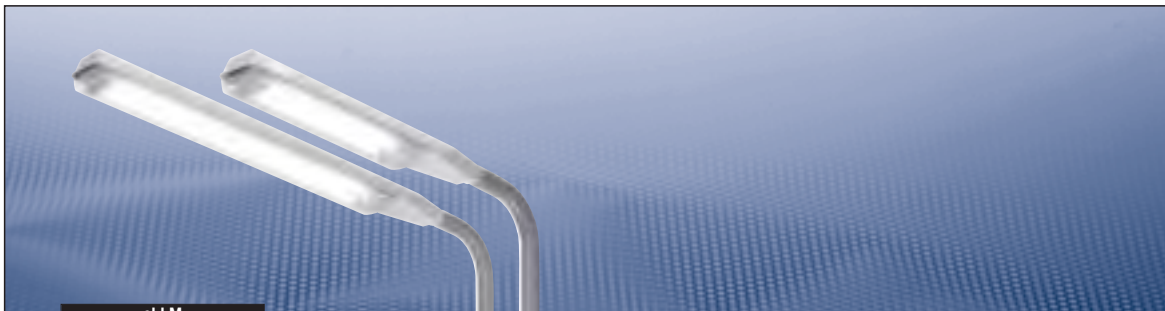
eLLK 92018/18 | eLLK 92036 / eLLK 92036/36 | eLLK 92058 / eLLK 92058/58	
Marking to 94/9/EC	⊕ II 2 G Ex de IIC T4 / ⊕ II 2 G Ex de mb II T4 (CG-S variant) ⊕ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEX-Certificate of Conformity	IECEX BVS 09.0033
Marking to IECEx	Ex de mb IIC T4 Ex tD A21 IP66 T 80 °C
Permissible ambient temperature	-25 °C to +55 °C (U _n ≥ 220 V) -25 °C to +50 °C (U _n < 220 V) ¹⁾
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG resp. EVG/CG-S
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal
Insulation class	I
Lamp cap	G13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure entry holes	Ex-e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, Option: M20 x 1.5 metal thread
Enclosure material	Glass-fibre reinforced polyester
Protective cover/protective bowl	Polycarbonate

	eLLK 92018/18	eLLK 92036	eLLK 92036/36
Rated voltage	110 - 254 V AC /	110 - 254 V AC /	110 - 254 V AC /
	110 - 250 V DC	110 - 250 V DC	110 - 250 V DC
Rated voltage CG-S	220 - 254 V AC /	220 - 254 V AC /	220 - 254 V AC /
	195 - 250 V DC	195 - 250 V DC	195 - 250 V DC
Rated current	0.18 A	0.18 A	0.34 A
	0.19 A (CG-S variant)		0.35 A (CG-S variant)
Lamp/illuminant	2 x T26 / 18 W (T8)	1 x T26 / 36 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux ²⁾	2700 lm	3350 lm	6700 lm
Light efficiency in operation	78 %	86 %	78 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm	1360 x 188 x 130 mm
Weight	approx. 5.2 kg /	approx. 7.2 kg	approx. 7.4 kg /
	approx. 5.6 kg (CG-S variant)		approx. 7.7 kg (CG-S variant)

	eLLK 92058	eLLK 92058/58
Rated voltage	220 - 254 V AC /	220 - 254 V AC /
	195 - 250 V DC	195 - 250 V DC
Rated voltage CG-S	220 - 254 V AC /	220 - 254 V AC /
	195 - 250 V DC	195 - 250 V DC
Rated current	0.27 A	0.53 A / 0.54 A (CG-S variant)
Lamp/illuminant	1 x T26 / 58 W (T8)	2 x T26 / 58 W (T8)
Rated luminous flux ²⁾	5200 lm	10400 lm
Light efficiency in operation	83 %	72 %
Dimensions (L x W x H)	1660 x 188 x 130 mm	1660 x 188 x 130 mm
Weight	approx. 8.2 kg	approx. 9.1 kg / approx. 9.6 kg (CG-S variant)

¹⁾ eLLK 92058/58: max. +40 °C

²⁾ depends on used lamps



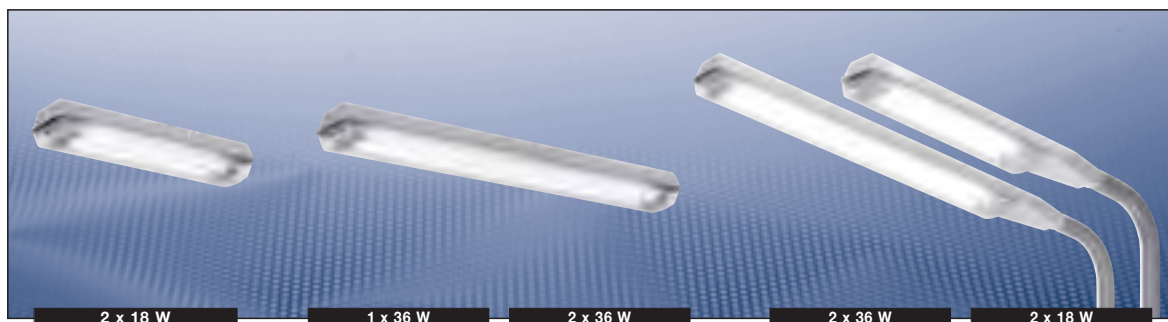
eLLM

Technical data

eLLM 92018/18 | eLLM 92036/36

Marking to 94/9/EC	II 2 G Ex de IIC T4 II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEX-Certificate of Conformity	IECEX BVS 09.0033
Marking to IECEx	Ex de IIC T4 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-25 °C to +55 °C ($U_n \geq 220$ V) -25 °C to +50 °C ($U_n < 220$ V)
Rated voltage	110 - 254 V AC / 110 - 250 V DC
Frequency	50 - 60 Hz
Power factor $\cos \varphi$	≥ 0.95
Circuit	EVG
Connecting terminals	L1, N, PE; max. 2 x 6 mm ² per terminal
Insulation class	I
Lamp cap	G13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure entry holes	Ex-e cable glands M25 x 1.5 (plastic) for cables from $\varnothing 8 - 17$ mm
Enclosure material	Glass-fibre reinforced polyester
Protective cover/protective bowl	Polycarbonate

	eLLM 92018/18	eLLM 92036/36
Rated voltage	110 - 254 C AC / 110 - 250 V DC	
Rated current	0.18 A	0.34 A
Lamp/illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux ¹⁾	2700 lm	6700 lm
Light efficiency in operation	78 %	78 %
Dimensions (L x W x H)	1060 x 188 x 130 mm	1660 x 188 x 130 mm
Pole socket	$\varnothing 44$ mm x 150 mm	$\varnothing 44$ mm x 150 mm
Weight	approx. 7.0 kg	approx. 9.5 kg



Ordering details

Type	Terminals	Through-wiring		Cable glands ³⁾	Plugs	Order No.
		single-ended	double-ended			
eLLK 92018/18 (2 x 18 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2265 875 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2265 875 103
1/6-1 M ¹⁾	1 x 6	x	–	2 x M20 x 1.5	1 x threaded	1 2265 875 109
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2265 875 111
eLLK 92018/18 (2 x 18 W)						
Level gauge P2	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2265 875 126
eLLK 92018/18 CG-S²⁾ (2 x 18 W)						
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2265 881 103
2/6-2M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2265 881 211
eLLM 92018/18 (2 x 18 W)						
1/6-1	1 x 3	–	–	1 x M25 x 1.5		1 2268 875 101
eLLK 92036 (1 x 36 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2263 875 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2263 875 103
1/6-1 M	1 x 6	x	–	2 x M20 x 1.5	1 x threaded	1 2263 875 111
eLLK 92036 (1 x 36 W)						
Level gauge P3 1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2263 875 125
eLLK 92036/36 (2 x 36 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2266 875 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2266 875 103
1/6-1 M ¹⁾	1 x 6	x	–	2 x M20 x 1.5	1 x threaded	1 2266 875 109
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2266 875 111
eLLK 92036/36 CG-S²⁾ (2 x 36 W)						
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2266 881 103
2/6-2M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2266 881 211
eLLM 92036/36 (2 x 36 W)						
1/6-1	1 x 3	–	–	1 x M25 x 1.5		1 2269 875 101
eLLK 92058 (1 x 58 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2264 875 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2264 875 103
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2264 875 111
eLLK 92058/58 (2 x 58 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2267 875 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2267 875 103
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2267 875 111
eLLK 92058/58 CG-S²⁾ (2 x 58 W)						
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2267 881 103
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 2267 881 211

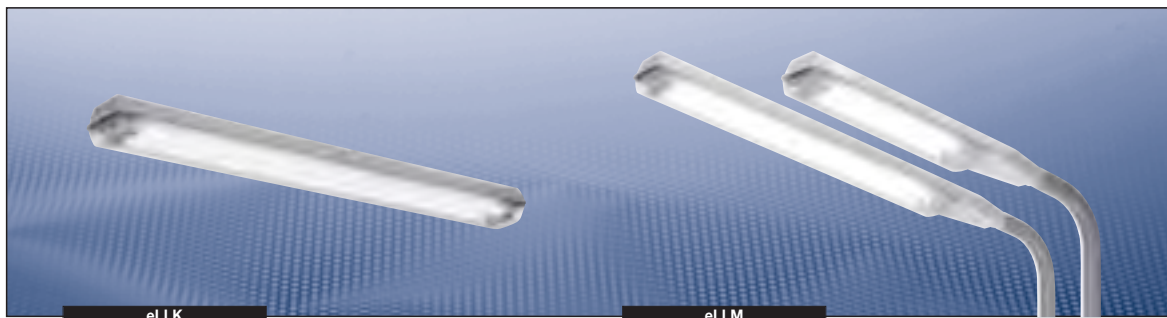
¹⁾ M: with metal thread, without cable gland

²⁾ CG-S: design single monitored emergency light fitting for use in CEAG emergency light supply unit

³⁾ With dustcover if entry/thread is not closed

Scope of delivery without lamp and fixing accessories.

| eLLK 92... (18-58 W) | eLLM 92.../.. (18 + 36 W) |



Accessories

Lamp for luminaire eLLK92/eLLM92

Type of lamp socket/ diameter	Power	Luminous flux light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2520-1	58 W	5200 lm white	3 2475 900 003
Aura-Ultimate T26/Ø 26 mm (T8) Longlife G13-socket	18 W 36 W 58 W	1300 lm white 3350 lm white 5200 lm white	3 2475 900 087 3 2475 900 088 on request
Aura Super Ex T-HS 26/Ø 26 mm ¹⁾ Single pin cap Fa6	18 W 36 W 58 W	1150 lm white 3000 lm white 4800 lm white	3 2475 900 084 3 2475 900 085 on request

Series eLLK 92... and eLLM 92...

Type	Order No.
Hexagon screw SW 13	3 2485 000 005

Series eLLM 92018/18 and eLLM 92036/36

Type	Order No.
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	2 2218 602 000

Fixing materials eLLK 92

Type/code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Hexagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	2 2480 092 000

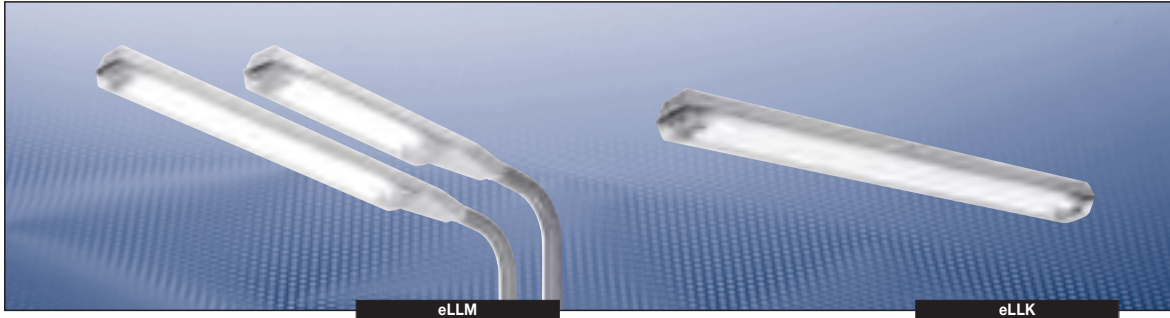
Fixing materials

Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R24	CrNi	1 1/2"	47 - 51	2	2 2480 474 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
R34	CrNi	2"	56 - 60	2	2 2480 484 000
Wall bracket W27	hot galvanized		42.4	1	2 2483 027 000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	2 2480 000 122

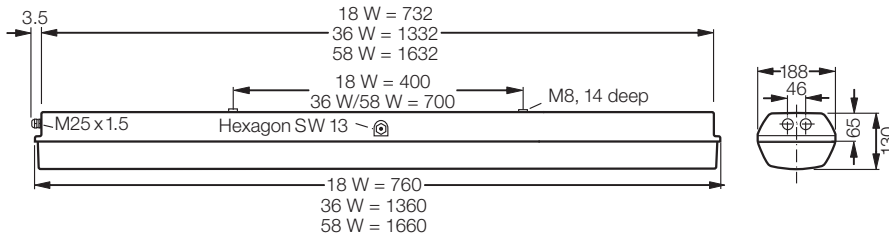
¹⁾ For luminaires eLLK 923.../.. and eLLM 923.../.. with single pin caps Fa6

Metal cable glands M20/M25 see page 8.10.

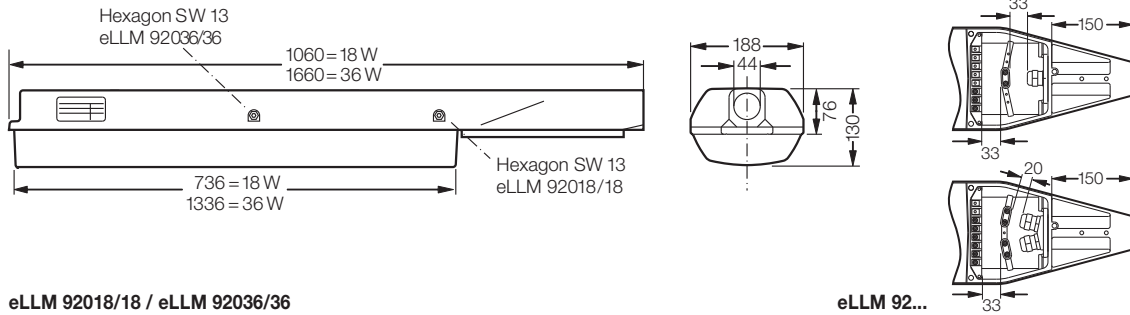
Complete Mounting Systems see page 2.70 to 2.76.



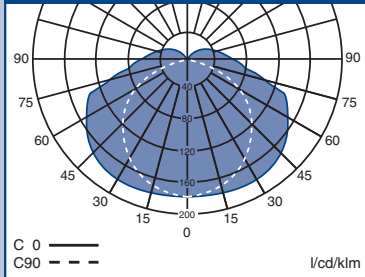
Dimension drawing | Polar curve | Accessories



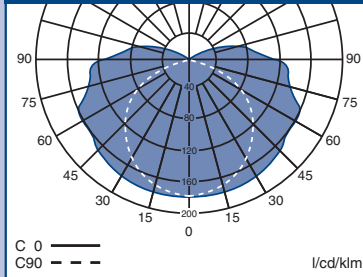
eLLK 92018/18 / eLLK 92036 / eLLK 92036/36 / eLLK 92058 / eLLK 92058/58



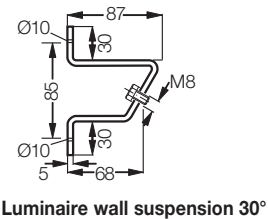
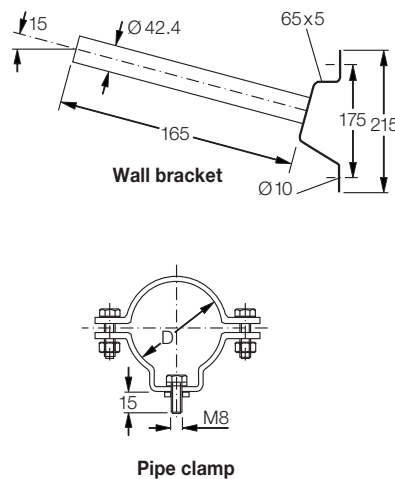
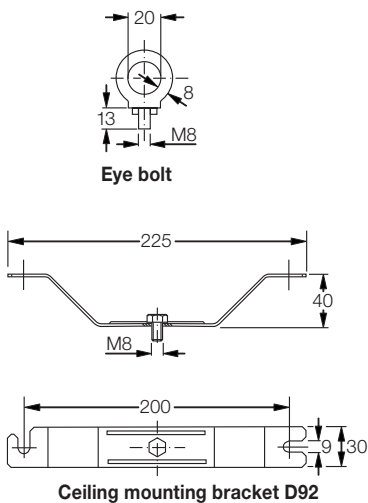
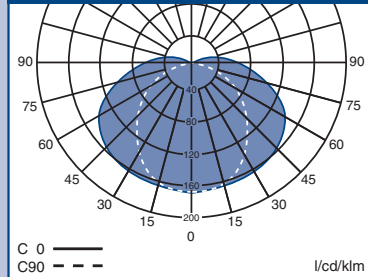
Polar curve
eLLK 92018/18 / eLLK 92036/36



Polar curve
eLLK 92036 / eLLK 92058



Polar curve
eLLK 92058/58

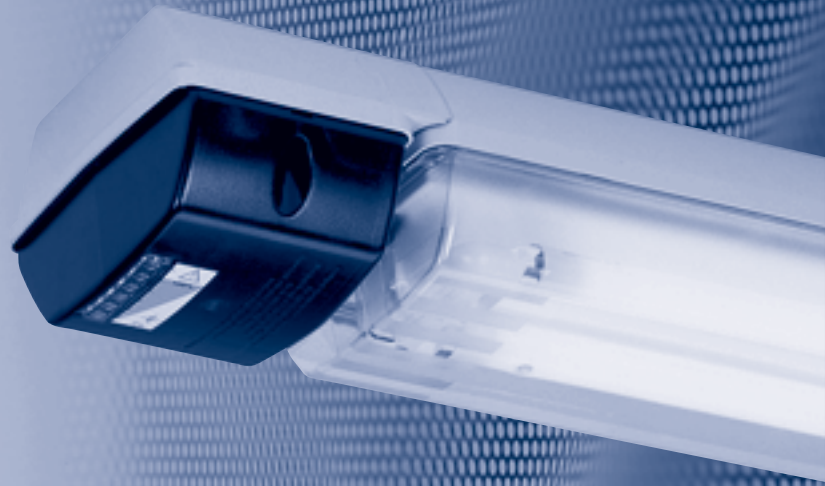


Dimensions in mm

EX - EMERGENCY LIGHT FITTINGS

eLLK 92... NIB/eLLM 92... NIB 18 W - 36 W
All-plastic for Zone 1 and 21

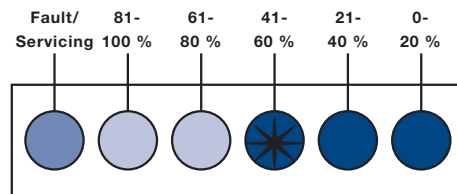
The new Ex-emergency light fittings with self-contained battery unit, types eLLK 92... NIB, for bi-pin fluorescent lamps are fitted with an electronic ballast (EVG). They meet the requirements of ATEX Directive 94/9/EC. The electronic ballast EVG 09, according to the newest standard (IEC 60079-7:2006) enables the safe and economic use of G13 bi-pin lamps according to IEC 60081. Lamps are monitored and safety shut down at the event that the lamp does not strike. Due to a new charging and monitoring technology with intelligent microelectronics, they provide reliable safety and reduced maintenance costs. A function test lasting 5 minutes, that is carried out automatically on a weekly basis, even during mains operation, and a quarterly partial duty-cycle test provide additional safety and drastically reduce the necessary amount of manual tests. The charging and discharging functions are monitored constantly by the micro-processor and are indicated via a diode display. Only the spent energy is recharged – therefore, overcharging is not possible. The so-called memory effect cannot occur – the service life of the battery is optimized. The need to replace a battery, a fault in the emergency lighting circuit or a faulty battery is indicated by the LED display. Due to a new type of battery connection, the battery can be replaced in the hazardous area. The emergency lighting cycle can be set locally for 1.5 or 3 hours. A remote switch inquiry is standard.



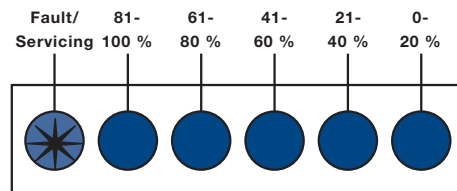
- **Two-channel EVG with EOL monitoring as standard**
- **Automatic weekly 5 minute function test**
- **Automatic quarterly partial duty cycle test**
- **Fault indication by flashing red LED with reset after fault elimination**
- **Monitoring of battery cells with fault indication**
- **Capacity-dependant charging: indication of charged capacity and remaining operating time by 5 green LEDs**
- **Easy replacement of battery, even in Ex-area**
- **International approvals**



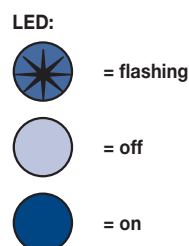
red LED green LEDs
Monitoring Display



Capacity larger than 40 %, Charging (flashing), no faults



Capacity 100 %, Charging, Fault after Function or duty cycle



Emergency light fittings with self-contained battery systems

Emergency light fittings with self-contained battery systems provide the required emergency lighting from a decentralized source and function independent of the central system. These light fittings are particularly economical when used in extensive plants. Until now, compared to the centrally operated and monitored installations, the disadvantage of the emergency light fittings with self-contained battery systems was that they do not supply any information on the state of the light fittings. With the introduction of the eLLK 92 NIB, Cooper Crouse-Hinds GmbH has now incorporated monitoring. Five LEDs supply constant information on the charging state, and the available battery capacity.

Monitoring functions NIB

A novelty is the enlarged self-monitoring function with automatic function and duration tests. For further safety, all battery cells are permanently monitored. In the event of a fault, the red LED lights up. Then the battery must be changed. Resetting is not possible for safety reasons.

Guarded by a lens, the 5 green LEDs continuously indicate the charging state and the battery capacity. Charging is indicated by flashing green LEDs. The loaded capacity is shown in 20 % steps. An automatic 5 minute function test is carried out on a weekly basis. Thereby, the electronics of the emergency lamp switches from mains to emergency operation, while the mains lamp stays in normal operation. The battery capacity and also the converter- and lamp-function is being tested and possible faults are shown by a flashing red LED. After removing the fault (p.e. by lamp change) and a new function test the fault indication resets automatically.

A partial duty cycle-test (35 min.) is initiated automatically after approx. 3 months. If the min. operation time of 30 minutes is not reached, this is indicated by a flashing red LED. When the cause of the fault has been eliminated, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of approx. 30 minutes has been reached.

Handling

The battery is installed in a separate, certified housing. There are up to 7 Ex-d connectors for the data transfer between the battery unit and the luminaire. Therefore, a battery change is also possible in hazardous areas – at any time. If the luminaire is closed all contacts are safely closed (Fig. 1).

After opening

After loosening the screw plug the battery can be taken away. Thereby the Ex-d switching contact first is cutoff and disconnect the battery circuit (Fig. 2).

So the battery can be completely cut off from the charging circuit of the luminaire (Fig. 2a).

A battery change in hazardous areas can be done at every time. A detachable strap protects the insert from being dropped inadvertently (Fig. 3).

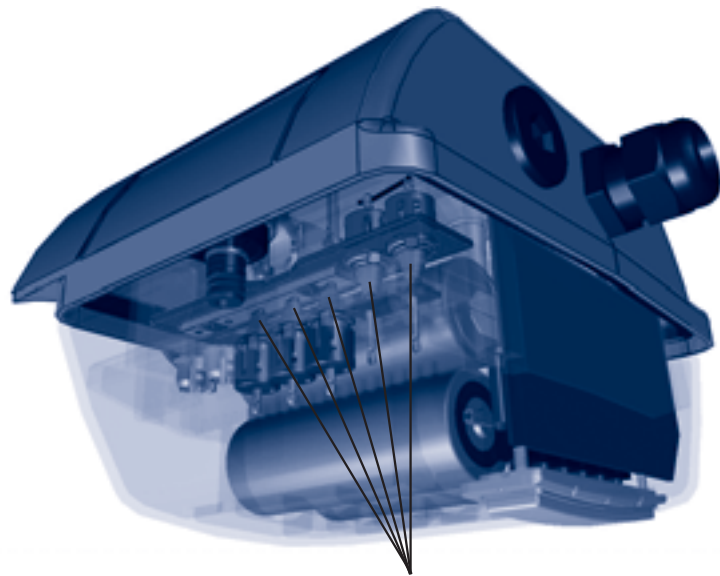


Fig. 1: Ex-d Contact pins

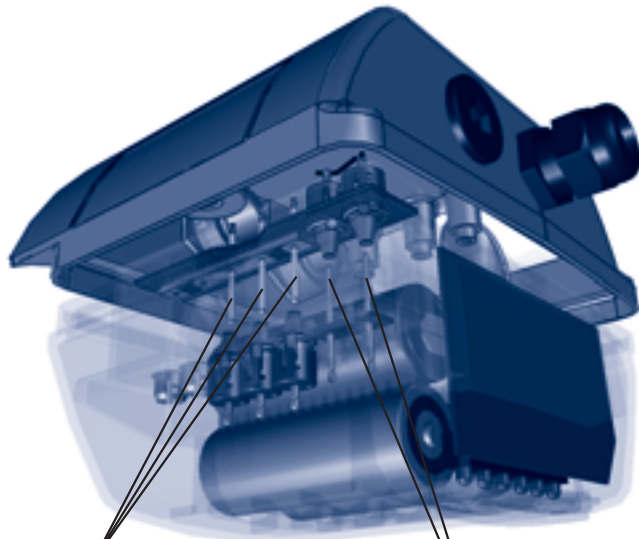


Fig. 2: Ex-d contact for battery circuit

Fig. 2 a: Ex-d switching contact

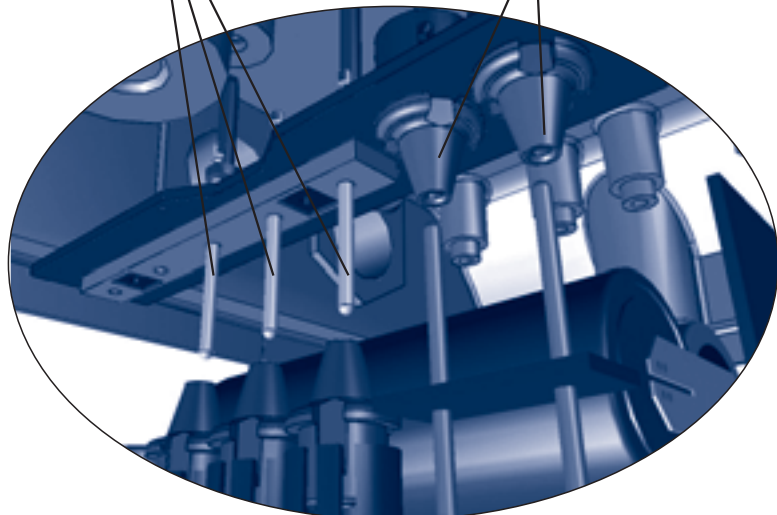
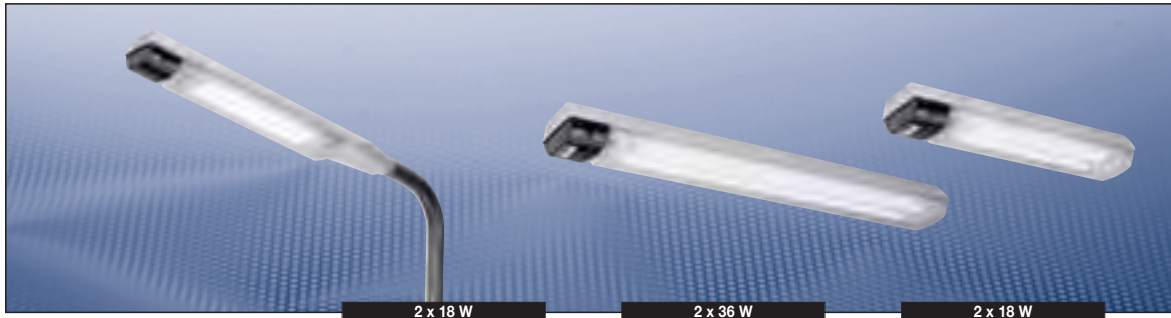


Fig. 3

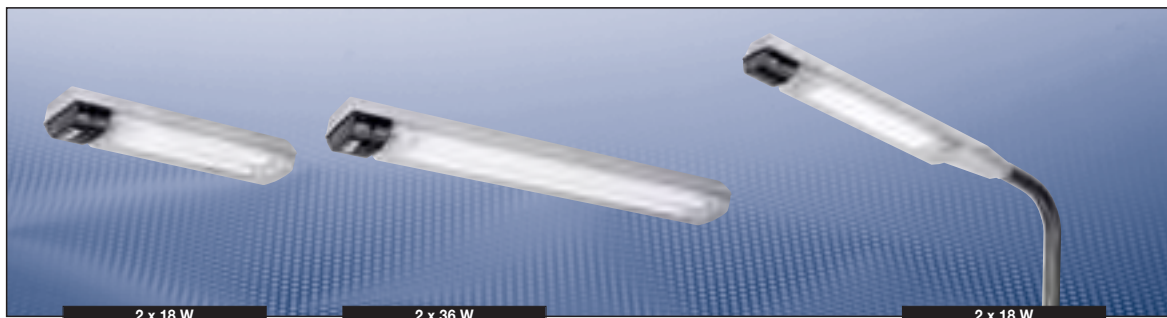


Technical data

eLLK 92018/18 NIB | eLLK 92036/36 NIB | eLLM 92018/18 NIB	
Marking to 94/9/EC	Ⓔ II 2 G Ex de mb ib IIC T4 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEX-Certificate of Conformity	IECEX BVS 09.0033
Marking to IECEX	Ex de mb [ib] IIC T4 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-25 °C to +50 °C (specified data: -5 °C to +35 °C)
Rated voltage	220 - 254 V AC
Rated voltage (option)	110 - 127 V AC
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG with emergency lighting supply
Insulation class	I
Lamp cap	G13 accd. to IEC 60081
Light efficiency in operation	78 %
Battery	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated emergency lighting operation	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Charging duration	> 14 h
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, Option: M20 x 1.5 metal thread (eLLK 92 NIB)
Enclosure material	Glass-fibre reinforced polyester
Protective cover/protective bowl	Polycarbonate

	eLLK 92018/18 NIB	eLLK 92036/36 NIB	eLLM 92018/18 NIB
Rated current	0.23 A	0.40 A	0.23 A
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal
Lamp/illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)	2 x T26 / 18 W (T8)
Rated luminous flux ¹⁾	2700 lm	6700 lm	2700 lm
Luminous flux in emergency operation (1.5 h, one lamp) ¹⁾	1215 lm (90 %)	1507 lm (45 %)	1215 lm (90 %)
Luminous flux in emergency operation (3 h, one lamp) ¹⁾	607 lm (45 %)	873 lm (25 %)	607 lm (45 %)
Dimensions (L x W x H)	900 x 188 x 130 mm	1500 x 188 x 130 mm	1205 x 188 x 130 mm
Pole socket			Ø 44 x 150 mm
Weight	approx. 8.8 kg	approx. 12 kg	approx. 10.5 kg

¹⁾ depends on used lamps



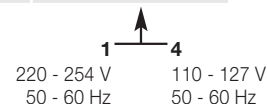
Ordering details

Type	Terminals	Through-wiring single-ended	double-ended	Cable glands ²⁾	Plugs	Order No.
eLLK 92018/18 NIB (2 x 18 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2260 879 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2260 879 103
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	3 x threaded	1 2260 879 111
eLLK 92036/36 NIB (2 x 36 W)						
1/6-1	1 x 6	x	–	2 x M25 x 1.5	1 x blanking	1 2261 879 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 2261 879 103
2/6-2 M ¹⁾	2 x 6	–	x	4 x M20 x 1.5	3 x threaded	1 2261 879 111
eLLM 92018/18 NIB (2 x 18 W)						
2/6-1	1 x 8	x	–	1 x M25	–	1 2273 879 101

¹⁾ M: with metal thread, without cable gland

²⁾ With dustcover if entry/thread is not closed

Scope of delivery without lamp and fixing accessories

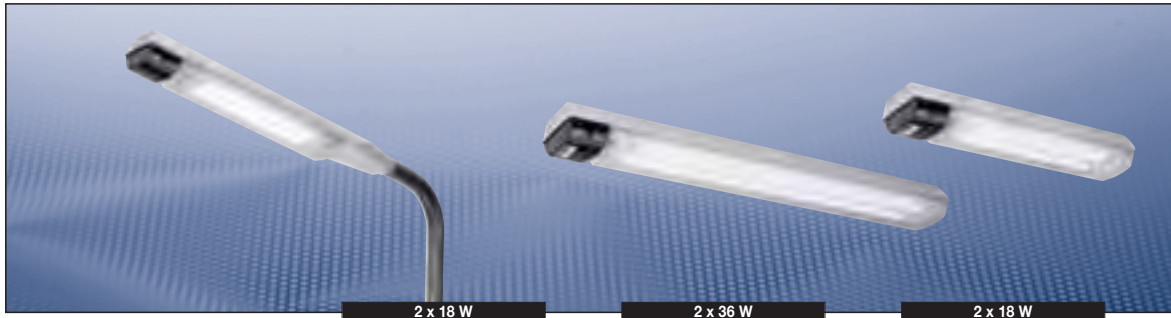


Accessories

Lamp for luminaire eLLK92... NIB/eLLM92... NIB

Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Aura-Ultimate T26/Ø 26 mm (T8) Longlife Socket G13	18 W 36 W	1300 lm white 3350 lm white	3 2475 900 087 3 2475 900 088
Aura Super Ex T-HS 26/Ø 26 mm ¹⁾ Single pin cap Fa6	18 W 36 W	1150 lm white 3000 lm white	3 2475 900 084 3 2475 900 085

¹⁾ For luminaires eLLK 923../.. and eLLM 923../.. single-pin caps Fa6



Accessories

Series eLLK 92... NIB and eLLM 92... NIB

Type	Order No.
Hexagon key SW 13	3 2485 000 005

Series eLLM 92018/18 NIB and eLLM 92036/36 NIB

Type	Order No.
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	2 2218 602 000

Fixing materials eLLK 92... NIB

Type/code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Hexagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	2 2480 092 000

Fixing materials

Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp					
R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R24	CrNi	1 1/2"	47 - 51	2	2 2480 474 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
R34	CrNi	2"	56 - 60	2	2 2480 484 000
Wall bracket W27	hot galvanized		42.4	1	2 2483 027 000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	2 2480 000 122

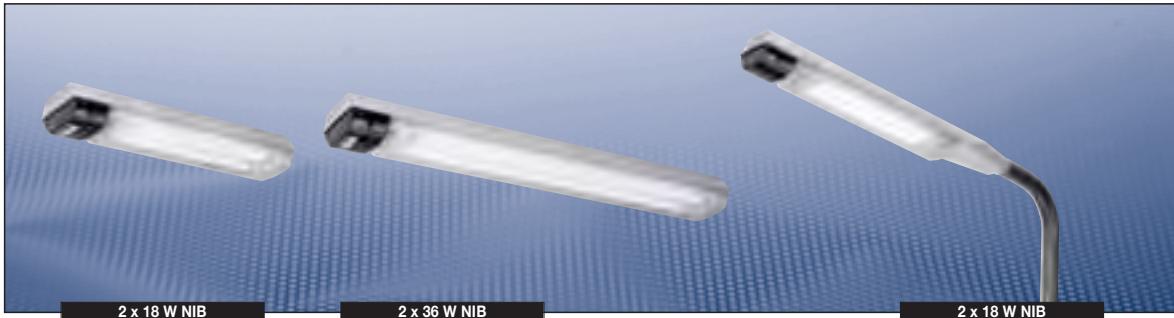
Battery

Type	Order No.
eLLK 92..., eLLM 92... NIB Battery set type 2710-3 with LED display and micro-processor monitoring, complete	2 2710 904 000

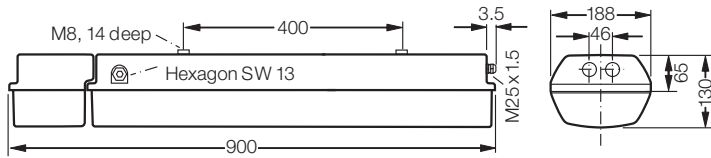
¹⁾ For luminaires eLLK 923../.. and eLLM 923../.. with single pin caps Fa6

Metal cable glands M20/M25 see page 8.10.

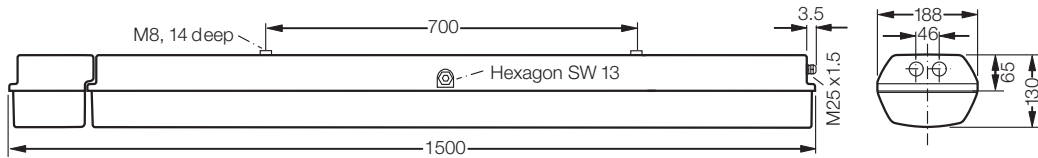
Complete Mounting Systems see page 2.70 to 2.76.



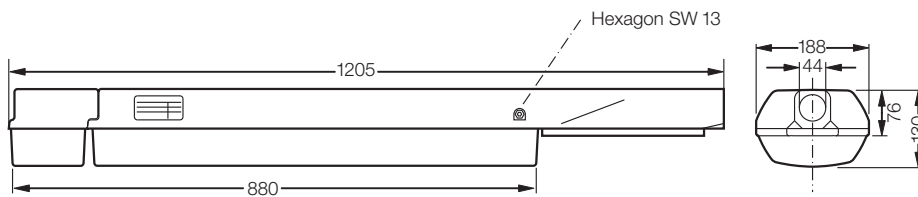
Dimension drawing | Polar curve



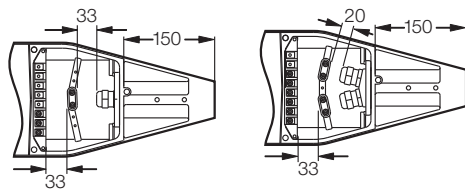
eLLK 92018/18 NIB



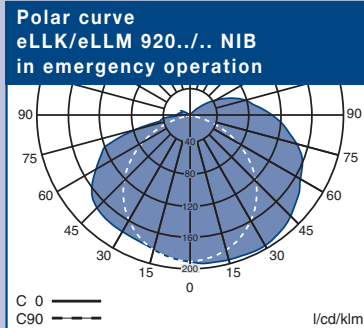
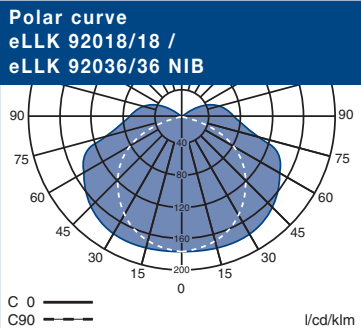
eLLK 92036/36 NIB



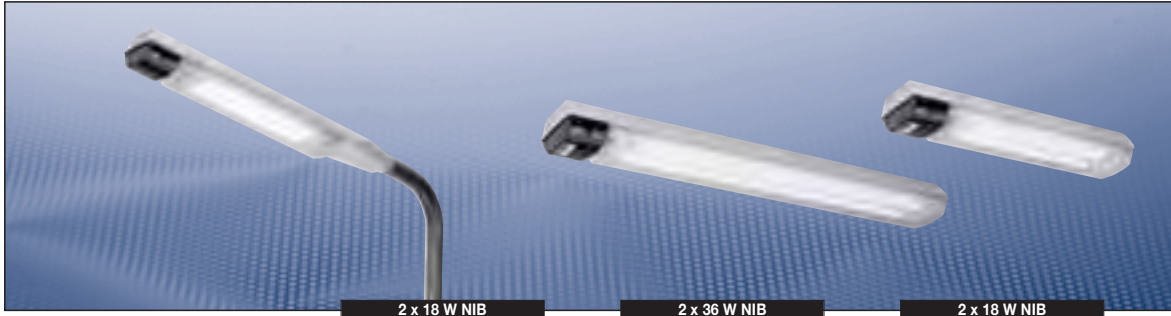
eLLM 92018/18 NIB



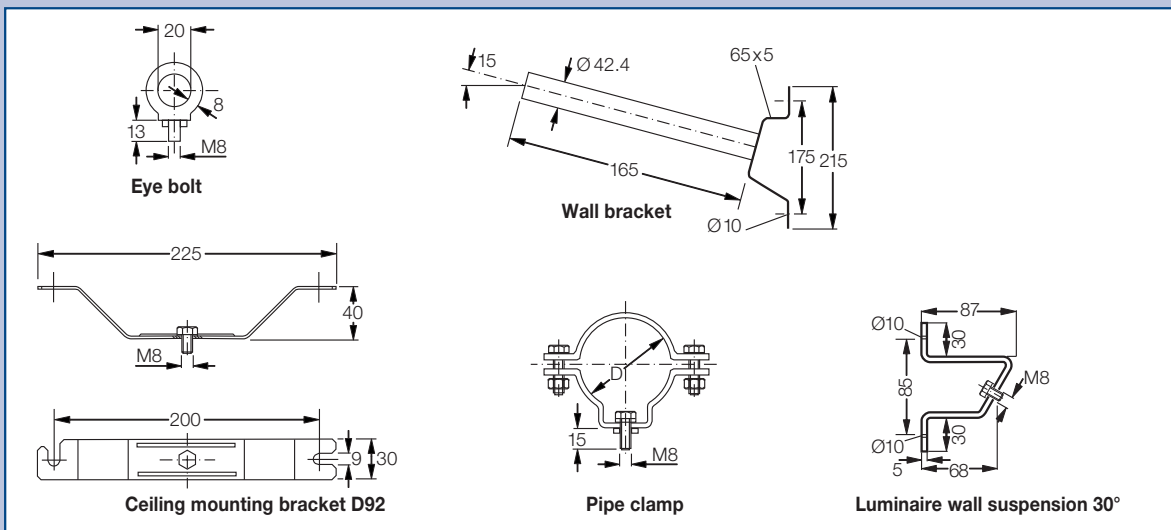
eLLM 92018/18 NIB



Dimensions in mm



Dimension drawing



Dimensions in mm

1
2
3
4
5
6
7
8
9
10
11
12

EX-RECESSED CEILING LIGHT FITTINGS

eLLB 20... 18 - 58 W Metallic design for Zone 1 and 21

The eLLB 20 explosion-protected ceiling light fitting with electronic ballast meet the requirements of ATEX-Directive 94/9/EC and are suitable for two-pin fluorescent lamps.

These lamps are used for surface and flush mounting in ceilings, in particular in clean rooms where smooth, flush surfaces are very important. The area of application is in the pharmaceutical and chemical industry and in engineering as well as in paint shops and spraying cabinets.

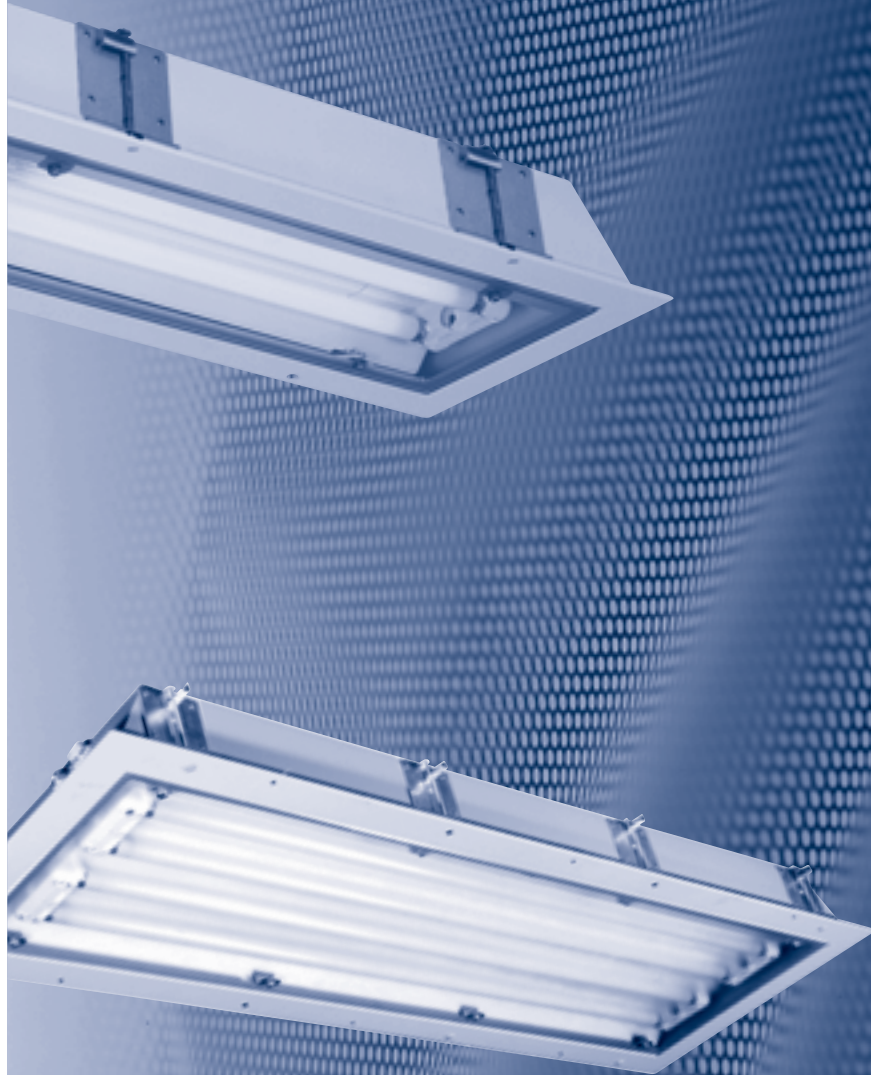
The housing comprises white-painted steel sheet with integrally moulded covering frame or, optionally, made of polished stainless steel. Safe installation in the ceiling is ensured with special fixing elements, who allows a universal and simple mounting in recessed clean room ceiling from 25 up to 90 mm thickness. In addition, it can also be fixed by means of two M8 drilled holes on the top of the housing.

The hinged, frameless pane made of 6 mm thick safety glass is fixed with captive screws and has inside hinges. The sealing material is guaranteed silicone-leak-proof. The modern economical ballast EVG 09 according to the latest standards (IEC 60079-7: 2006) allows a safe and economical operation of bi-pin fluorescent lamps G13 according to IEC 60081. Lamps reaching its end of life will be monitored and securely switched off (EOL-effect). The high input voltage range allows international use. The standard two-channel structure means that if one lamp fails, the other one remains in operation.

The standard two-sided through-wiring together with the generous terminal housing offers a cost-saving installation.

The light switch is designed as an automatic disconnecter pursuant to EN 60947-1 (IEC 60664) and reliably prevents the lamp from being switched on when the cover disc is open.

With the optional CG-S module, single monitoring of the lamp is possible with the CEAG Emergency Light Supply Systems.



Two channel EVG with EOL monitoring as standard

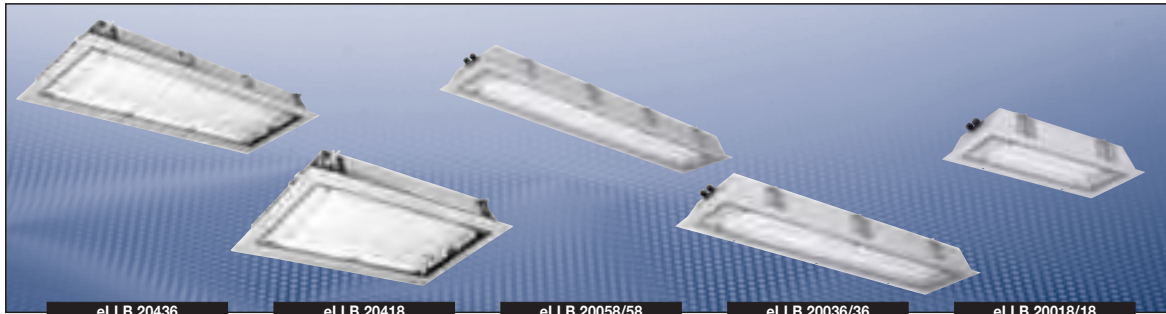
Flush Installation Specially for Clean Rooms

Optionally in painted sheet steel or stainless steel

Safety locking due to integral automatic disconnecter

High degree of protection IP66

Connection to CEAG Emergency Light Supply Systems possible



Technical data

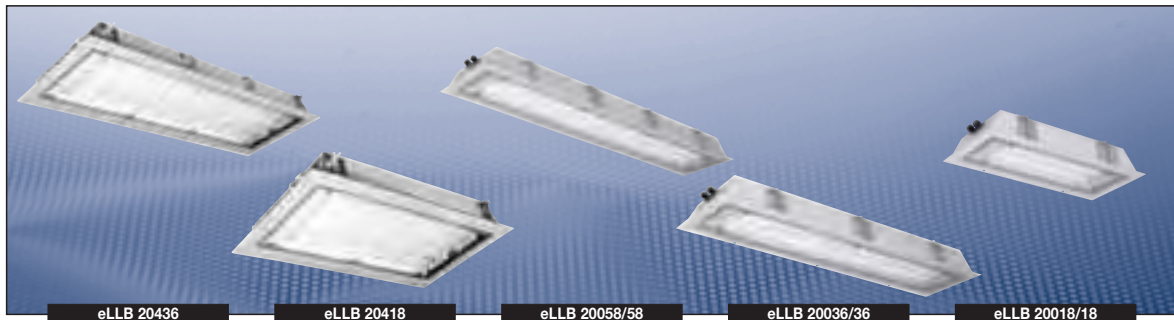
eLLB 20018/18 | eLLB 20418 | eLLB 20036/36 | eLLB 20436 | eLLB 20058/58	
Marking to 94/9/EC	⊕ II 2 G EEx ed IIC T4 / ⊕ II 2 G EEx dem ib IIC T4 (CG-S variant) ⊕ II 2 D IP66 T80 °C
(new standard – applies for)	⊕ II 2 G Ex de IIC T4 / ⊕ II 2 G Ex de ib m IIC T4 (CG-S variant) ⊕ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	DMT 02 ATEX E 069
Permissible ambient temperature	-25 °C to +50 °C
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG resp. EVG/CG-S
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal, through-wiring double-ended
Insulation class	I
Lamp cap	G13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, Option: metal thread M20 x 1.5
Enclosure material	Painted steel sheet, white optional polished stainless steel
Enclosure colour	white RAL 9010, optional stainless steel
Protective cover/protective bowl	Single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm

	eLLB 20018/18	eLLB 20418
Rated voltage	110 - 254 V AC / 110 - 250 V DC	110 - 254 V AC / 110 - 250 V DC
Rated voltage CG-S	220 - 254 V AC / 195 - 250 V DC	220 - 254 V AC / 195 - 250 V DC
Rated current	0.18 A / 0.19 A (CG-S variant)	0.36 A / 0.37 A (CG-S variant)
Lamp/illuminant	2 x T26 / 18 W (T8)	4 x T26 / 18 W (T8)
Rated luminous flux ¹⁾	2700 lm	5400 lm
Light efficiency in operation	70 %	69 %
Dimensions (L x W x H)	862 x 340 x 120 mm	862 x 490 x 120 mm
Weight	apx. 15 kg / apx. 15.5 kg (CG-S variant)	apx. 25 kg / apx. 25.5 kg (CG-S variant)

	eLLB 20036/36	eLLB 20436
Rated voltage	110 - 254 V AC / 110 - 250 V DC	110 - 254 V AC / 110 - 250 V DC
Rated voltage CG-S	220 - 254 V AC / 195 - 250 V DC	220 - 254 V AC / 195 - 250 V DC
Rated current	0.34 A / 0.35 A (CG-S variant)	0.68 A / 0.69 A (CG-S variant)
Lamp/illuminant	2 x T26 / 36 W (T8)	4 x T26 / 36 W (T8)
Rated luminous flux ¹⁾	6700 lm	13400 lm
Light efficiency in operation	70 %	69 %
Dimensions (L x W x H)	1460 x 340 x 120 mm	1460 x 490 x 120 mm
Weight	apx. 22 kg / apx. 22.5 kg (CG-S variant)	apx. 34 kg / apx. 34.5 kg (CG-S variant)

	eLLB 20058/58
Rated voltage	220 - 254 V AC / 195 - 250 V DC
Rated voltage CG-S	220 - 254 V AC / 195 - 250 V DC
Rated current	0.53 A / 0.54 A (CG-S variant)
Lamp/illuminant	2 x T26 / 58 W (T8)
Rated luminous flux ¹⁾	10400 lm
Light efficiency in operation	68 %
Dimensions (L x W x H)	1760 x 340 x 120 mm
Weight	approx. 26 kg / approx. 26.5 kg (CG-S variant)

¹⁾ depends on used lamps



Ordering details

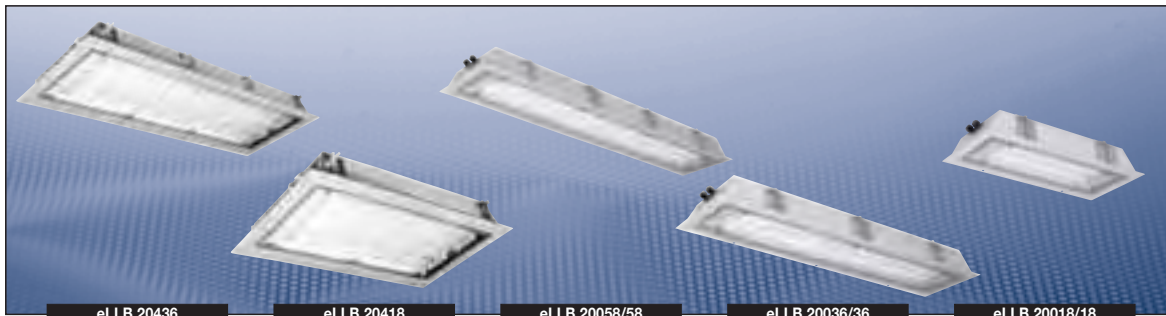
Type	Cable gland ³⁾	Enclosure	Order No.
Type eLLB 20018/18			
eLLB 20018/18	M20M ²⁾	stainless steel 316	1 2190 218 111
eLLB 20018/18	M20M ²⁾	painted steel sheet	1 2190 218 101
eLLB 20018/18	M25K	stainless steel 316	1 2190 218 011
eLLB 20018/18	M25K	painted steel sheet	1 2190 218 001
eLLB 20018/18 CG-S ¹⁾	M20M ²⁾	stainless steel 316	1 2190 218 723
eLLB 20018/18 CG-S ¹⁾	M20M ²⁾	painted steel sheet	1 2190 218 713
eLLB 20018/18 CG-S ¹⁾	M25K	stainless steel 316	1 2190 218 733
eLLB 20018/18 CG-S ¹⁾	M25K	painted steel sheet	1 2190 218 703
Type eLLB 20036/36			
eLLB 20036/36	M20M ²⁾	stainless steel 316	1 2190 236 111
eLLB 20036/36	M20M ²⁾	painted steel sheet	1 2190 236 101
eLLB 20036/36	M25K	stainless steel 316	1 2190 236 011
eLLB 20036/36	M25K	painted steel sheet	1 2190 236 001
eLLB 20036/36 CG-S ¹⁾	M20M ²⁾	stainless steel 316	1 2190 236 723
eLLB 20036/36 CG-S ¹⁾	M20M ²⁾	painted steel sheet	1 2190 236 713
eLLB 20036/36 CG-S ¹⁾	M25K	stainless steel 316	1 2190 236 733
eLLB 20036/36 CG-S ¹⁾	M25K	painted steel sheet	1 2190 236 703
Type eLLB 20058/58			
eLLB 20058/58	M20M ²⁾	stainless steel 316	1 2190 258 111
eLLB 20058/58	M20M ²⁾	painted steel sheet	1 2190 258 101
eLLB 20058/58	M25K	stainless steel 316	1 2190 258 011
eLLB 20058/58	M25K	painted steel sheet	1 2190 258 001
eLLB 20058/58 CG-S ¹⁾	M20M ²⁾	stainless steel 316	1 2190 258 723
eLLB 20058/58 CG-S ¹⁾	M20M ²⁾	painted steel sheet	1 2190 258 713
eLLB 20058/58 CG-S ¹⁾	M25K	stainless steel 316	1 2190 258 733
eLLB 20058/58 CG-S ¹⁾	M25K	painted steel sheet	1 2190 258 703
Type eLLB 20418			
eLLB 20418	M20M ²⁾	stainless steel 316	1 2190 418 111
eLLB 20418	M20M ²⁾	painted steel sheet	1 2190 418 101
eLLB 20418	M25K	stainless steel 316	1 2190 418 011
eLLB 20418	M25K	painted steel sheet	1 2190 418 001
eLLB 20418 CG-S ¹⁾	M20M ²⁾	stainless steel 316	1 2190 418 723
eLLB 20418 CG-S ¹⁾	M20M ²⁾	painted steel sheet	1 2190 418 713
eLLB 20418 CG-S ¹⁾	M25K	stainless steel 316	1 2190 418 733
eLLB 20418 CG-S ¹⁾	M25K	painted steel sheet	1 2190 418 703
Type eLLB 20436			
eLLB 20436	M20M ²⁾	stainless steel 316	1 2190 436 111
eLLB 20436	M20M ²⁾	painted steel sheet	1 2190 436 101
eLLB 20436	M25K	stainless steel 316	1 2190 436 011
eLLB 20436	M25K	painted steel sheet	1 2190 436 001
eLLB 20436 CG-S ¹⁾	M20M ²⁾	stainless steel 316	1 2190 436 723
eLLB 20436 CG-S ¹⁾	M20M ²⁾	painted steel sheet	1 2190 436 713
eLLB 20436 CG-S ¹⁾	M25K	stainless steel 316	1 2190 436 733
eLLB 20436 CG-S ¹⁾	M25K	painted steel sheet	1 2190 436 703

¹⁾ CG-S: design single monitored emergency light fitting for use in CEAG emergency light supply unit

²⁾ M: with metal thread, without cable gland

³⁾ With dustcover if entry/thread is not closed

Scope of delivery without lamp and fixing accessories.



Accessories

Lamp for luminaire eLLB 20...

Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2520-1	58 W	5200 lm white	3 2475 900 003
Aura-Ultimate T26/Ø 26 mm (T8) Longlife G13-socket	18 W 36 W 58 W	1300 lm white 3350 lm white 5200 lm white	3 2475 900 087 3 2475 900 088 on request

Fixing materials eLLB 20...

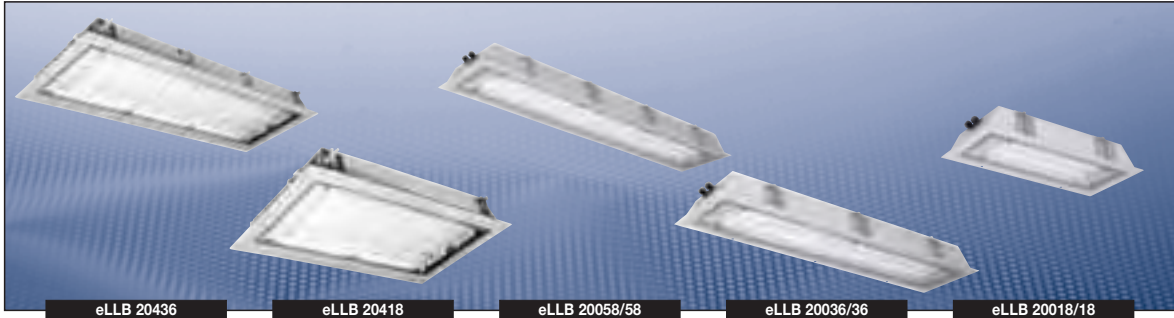
Type/code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Hexagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	2 2480 092 000

Fixing materials eLLB 20...

Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R24	CrNi	1 1/2"	47 - 51	2	2 2480 474 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
R34	CrNi	2"	56 - 60	2	2 2480 484 000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	2 2480 000 122

Metal cable glands M20/M25 see page 8.10.

Complete Mounting Systems see page 2.70 to 2.76.



Dimension drawing | Polar curve

	A	B	C
eLLB 20018/18	802	400	862
eLLB 20036/36	1400	700	1460
eLLB 20058/58	1700	700	1760
eLLB 20418	802	400	862
eLLB 20436	1400	700	1460

	A	B
eLLB 20018/18	315+3	832+5
eLLB 20036/36	315+3	1432+5
eLLB 20058/58	315+3	1732+5
eLLB 20418	465+3	832+5
eLLB 20436	465+3	1432+5

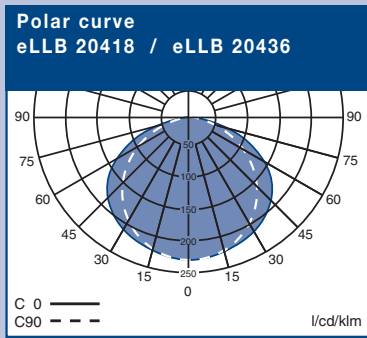
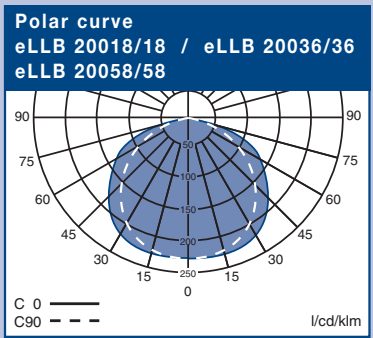
	ap.280	ap.430
eLLB 20018/18	ap.280	ap.430
eLLB 20036/36	ap.340	ap.490
eLLB 20058/58	ap.340	ap.490

eLLB 20018/18
eLLB 20036/36
eLLB 20058/58

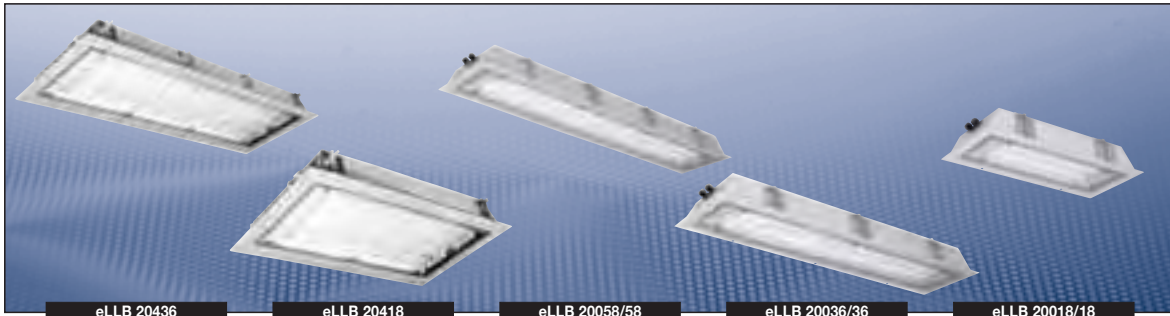
eLLB 20418
eLLB 20436

Thickness of the ceiling t_c
 max. 90
 min. 25

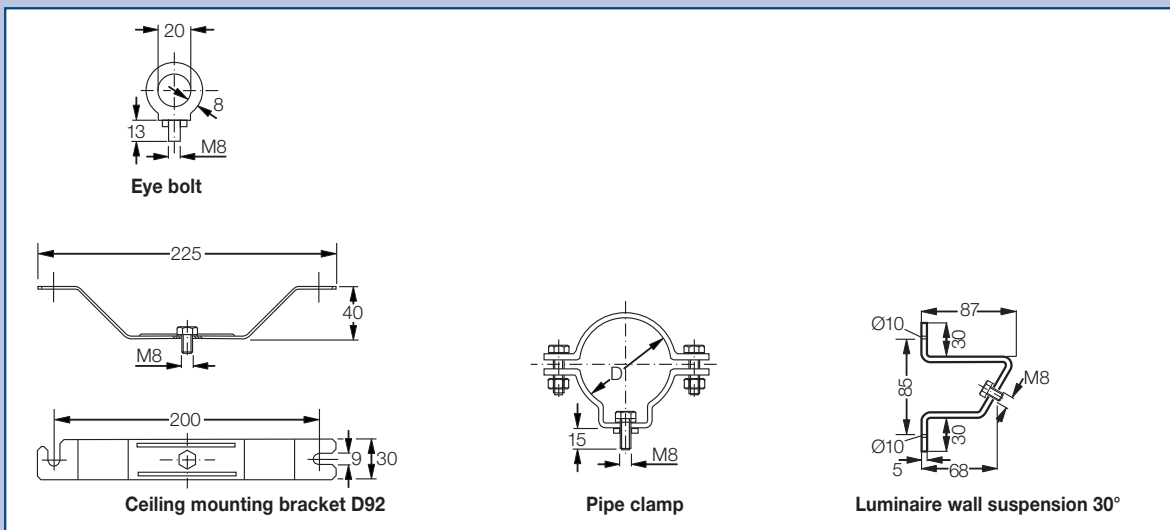
Ceiling cut-out



Dimensions in mm



Dimension drawing



Dimensions in mm

EX-EMERGENCY RECESSED CEILING LIGHT FITTINGS

eLLB 20... NIB 18-36 W
Metallic design for Zone 1 and 21

The new Ex-emergency light fittings with self-contained battery unit, type eLLB 20 ... NIB for bi-pin fluorescent lamps are fitted with an electronic ballast (EVG). They meet the requirements of ATEX-Directive 94/9/EC. The electronic ballast EVG 09, according to the newest standard (IEC 60079-7:2006) enables the safe and economic use of G13 bi-pin lamps according to IEC 60081. Lamps reaching its end of life will be monitored and securely switched off (EOL-effect). Due to a new charging and monitoring technology with intelligent microelectronics, they provide reliable safety and reduced maintenance costs. A function test lasting 5 minutes, that is carried out automatically on a weekly basis, even during mains operation, and a quarterly partial duty-cycle test provide additional safety and drastically reduce the necessary amount of manual tests.

The charging and discharging functions are monitored constantly by the micro-processor and are indicated via a diode display. Only the spent energy is recharged – therefore, overcharging is not possible. The so-called memory effect cannot occur – therefore life of the battery is optimized. The need to replace a battery, a fault in the emergency lighting circuit or a faulty battery is indicated by the LED display.

Due to a new type of battery connection, the battery can be replaced in the hazardous area. The emergency lighting cycle can be set locally for 1.5 or 3 hours.

A remote switch inquiry is standard.

All the other mechanical details are corresponding to the eLLB 20... serie. The separate battery housing with a 1.5 m long connecting load can be mounted directly in line with the light fitting or, depending on the ceiling raster, alongside it.



Two channel EVG with EOL monitoring as standard

Automatic weekly 5 min. function test

Automatic quarterly partial duty cycle test

Fault indication by flashing red LED with reset after fault elimination

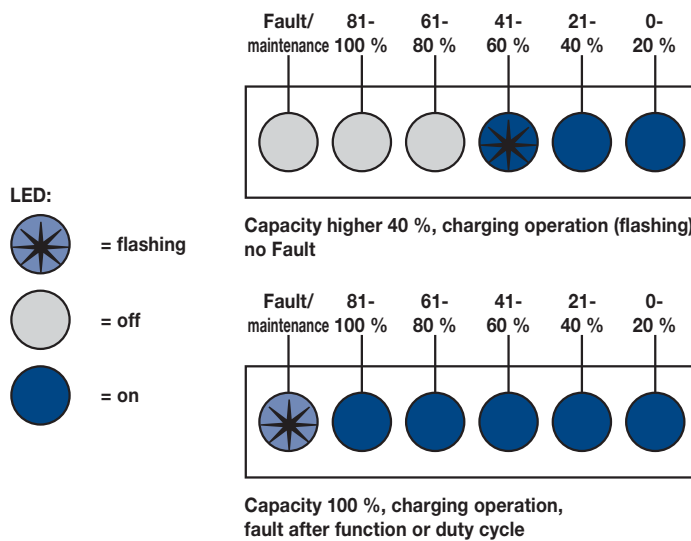
Capacity-dependent charging: indication of charged capacity and remaining operating time by 5 green LEDs

Easy replacement of battery, even in Ex-area

Separate mounted no battery housing



red LED green LEDs
Monitoring display



Battery set NIB

Emergency light fittings with self-contained battery systems

Emergency light fittings with self-contained battery systems provide the required emergency lighting from a decentralized source and function independent of the central system. These light fittings are particularly economical when used in extensive plants. Until now, compared to the centrally operated and monitored installations, the disadvantage of the emergency light fittings with self-contained battery systems was that they do not supply any information on the state of the light fittings. With the introduction of the eLLB 20 ... NIB, Cooper Crouse-Hinds has now incorporated monitoring. Five LEDs supply constant information on the charging state and the available battery capacity.

Monitoring functions NIB

Guarded by a lens, the 5 green LEDs continuously indicate the charging state and the battery capacity. Charging is indicated by flashing green LEDs. The loaded capacity is shown in 20 % steps.

A novelty is the enlarged self-monitoring function with automatic function and duration tests.

An automatic 5 minute function test is carried out on a weekly basis. Thereby, the electronics of the emergency lamp switches from mains to emergency operation, while the mains lamp stays in normal operation. The battery capacity and also the converter and lamp-function is being tested and possible faults are shown by a flashing red LED. After removing the fault (p.e. by lamp change) and a new function test the fault indication resets automatically.

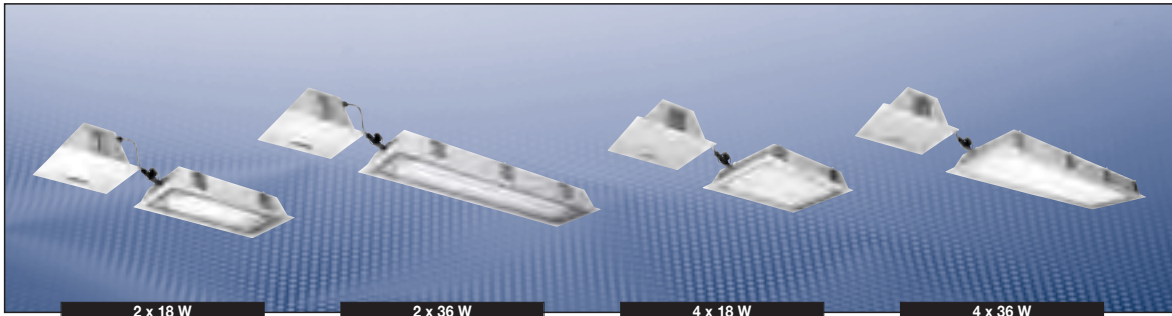
A partial duty cycle-test (35 min.) is initiated automatically after approx. 3 months. If the min. operation time of 30 minutes is not reached, this is indicated by a flashing red LED. When the cause of the fault has been eliminated, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of approx. 30 minutes has been reached.

Handling

The battery is installed in a separate, certified housing.

There are up to 7 Ex-d connectors for the data transfer between the battery unit and the luminaire. Therefore, a battery change is also possible in hazardous areas – at any time.

The run-down battery set can be replaced by loosening the screws and simply pulling off the battery set. A detachable strap protects the insert from being dropped inadvertently.



Technical data

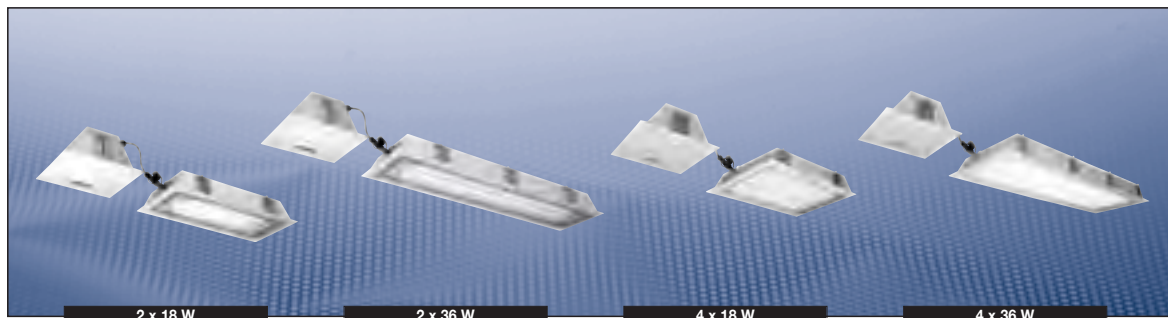
eLLB 20018/18 NIB | eLLB 20418 NIB | eLLB 20036/36 NIB | eLLB 20436 NIB	
Marking to 94/9/EC (new standard – applies for)	⊕ II 2 G EEx edm ib IIC T4 / ⊕ II 2 G IP66 T80 °C ⊕ II 2 G Ex dem ib IIC T4 / ⊕ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	DMT 02 ATEX E 069
Permissible ambient temperature	-20 °C to +50 °C (appecified data: -5 °C to +35 °C)
Rated voltage	220 - 254 V AC
Rated voltage (option)	110 - 127 V AC
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG with emergency lighting supply
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal, through-wiring double-ended
Insulation class	I
Lamp cap	G 13 accd. to IEC 60081
Battery	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Battery housing	Connection via 1.5 long connection lead with plugs
Rated emergency lighting operation	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Charging duration	> 14 h
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) for cables Ø 8 - 17 mm Option: M20 x 1.5 metal thread
Enclosure material	Painted steel sheet, white optional polished stainless steel
Enclosure colour	white, optional stainless steel
Protective cover/protective bowl	Single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm

	eLLB 20018/18 NIB	eLLB 20418 NIB
Rated current	0.23 A	0.41 A
Lamp/illuminant	2 x T26 / 18 W (T8)	4 x T26 / 18 W (T8)
Rated luminous flux	2700 lm	5400 lm
Luminous flux in emergency operation (1.5 h, one lamp) ¹⁾	1215 lm (90 %)	1215 lm (90 %)
Luminous flux in emergency operation (3 h, one lamp) ¹⁾	607 lm (45 %)	607 lm (45 %)
Light efficiency in operation	70 %	69 %
Dimensions (L x W x H)	862 x 340 x 120 mm	862 x 490 x 120 mm
Weight	approx. 18 kg	approx. 29 kg

	eLLB 20036/36 NIB	eLLB 20436 NIB
Rated current	0.40 A	0.74 A
Lamp/illuminant	2 x T26 / 36 W (T8)	4 x T26 / 36 W (T8)
Rated luminous flux	6700 lm	13400 lm
Luminous flux in emergency operation (1.5 h, one lamp) ¹⁾	1507 lm (45 %)	1507 lm (45 %)
Luminous flux in emergency operation (3 h, one lamp) ¹⁾	873 lm (25 %)	873 lm (25 %)
Light efficiency in operation	70 %	69 %
Dimensions (L x W x H)	1460 x 340 x 120 mm	1460 x 490 x 120 mm
Weight	approx. 25 kg	approx. 38 kg

Battery housing	
Cable glands/gland plates/enclosure drilling ¹⁾	Connection via 1.5 long connection lead with plugs eXLink
Dimensions (L x W x H)	350 x 340 x 143 mm
Weight	approx. 5.7 kg

¹⁾ depends on used lamps



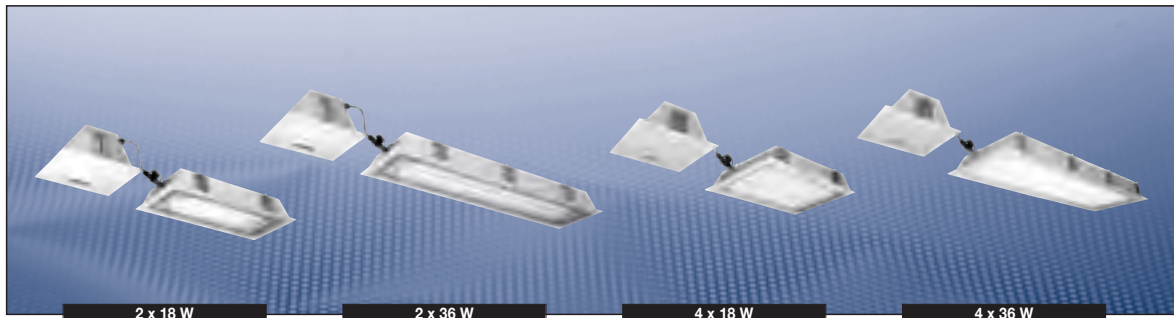
Ordering details

Type	Cable gland ²⁾	Enclosure	Order No.
Type eLLB 20018/18 NIB			
eLLB 20018/18 NIB	M25K	painted steel sheet	1 2190 218 002
eLLB 20018/18 NIB	M25K	stainless steel 316	1 2190 218 012
eLLB 20018/18 NIB	M20M ¹⁾	painted steel sheet	1 2190 218 102
eLLB 20018/18 NIB	M20M ¹⁾	stainless steel 316	1 2190 218 112
Type eLLB 20036/36 NIB			
eLLB 20036/36 NIB	M25K	painted steel sheet	1 2190 236 002
eLLB 20036/36 NIB	M25K	stainless steel 316	1 2190 236 012
eLLB 20036/36 NIB	M20M ¹⁾	painted steel sheet	1 2190 236 102
eLLB 20036/36 NIB	M20M ¹⁾	stainless steel 316	1 2190 236 112
Type eLLB 20418 NIB			
eLLB 20418 NIB	M25K	painted steel sheet	1 2190 418 002
eLLB 20418 NIB	M25K	stainless steel 316	1 2190 418 012
eLLB 20418 NIB	M20M ¹⁾	painted steel sheet	1 2190 418 102
eLLB 20418 NIB	M20M ¹⁾	stainless steel 316	1 2190 418 112
Type eLLB 20436 NIB			
eLLB 20436 NIB	M25K	painted steel sheet	1 2190 436 002
eLLB 20436 NIB	M25K	stainless steel 316	1 2190 436 012
eLLB 20436 NIB	M20M ¹⁾	painted steel sheet	1 2190 436 102
eLLB 20436 NIB	M20M ¹⁾	stainless steel 316	1 2190 436 112

¹⁾ M: with metal thread, without cable gland

²⁾ With dustcover if entry/thread is not closed

Scope of delivery without lamp and fixing accessories.



Accessories

Lamp for luminaire eLLB 20... NIB

Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Aura-Ultimate T26/Ø 26 mm (T8) Longlife G13-socket	18 W 36 W	1300 lm white 3350 lm white	3 2475 900 087 3 2475 900 088

Fixing materials eLLB 20... NIB

Type/code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Hexagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	2 2480 092 000

Fixing materials eLLB 20... NIB

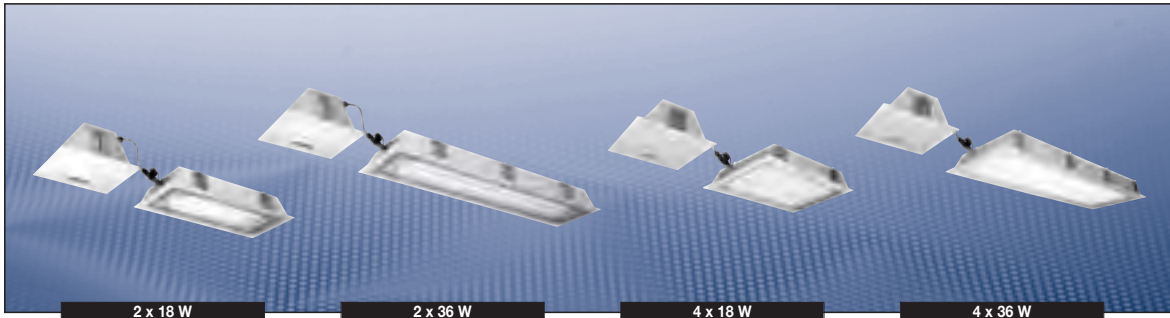
Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp					
R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R24	CrNi	1 1/2"	47 - 51	2	2 2480 474 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
R34	CrNi	2"	56 - 60	2	2 2480 484 000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	2 2480 000 122

Spare part battery eLLB 20... NIB

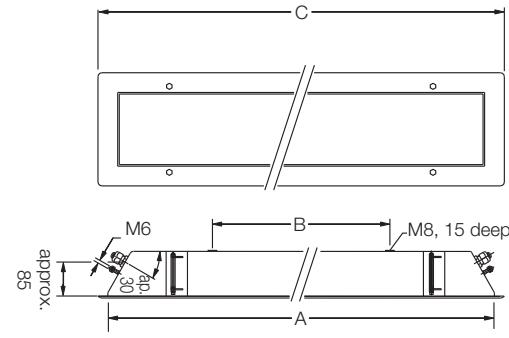
Type	Order No.
Battery set Type 2710-3 with LED display and micro-processor monitoring, complete	2 2710 904 000

Metal cable glands M20/M25 see page 8.10.

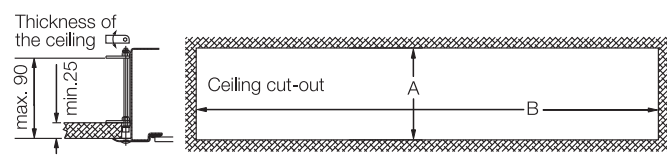
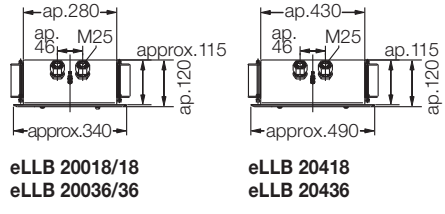
Complete Mounting Systems see page 2.70 to 2.76.



Dimension drawing | Polar curve

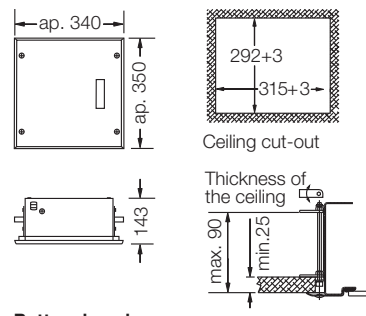


	A	B	C
eLLB 20018/18	802	400	862
eLLB 20036/36	1400	700	1460
eLLB 20418	802	400	862
eLLB 20436	1400	700	1460

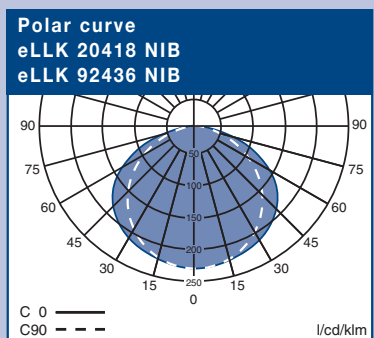
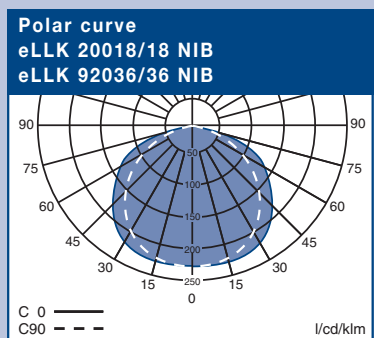


	A	B
eLLB 20018/18	315+3	832+5
eLLB 20036/36	315+3	1432+5
eLLB 20418	465+3	832+5
eLLB 20436	465+3	1432+5

eLLB 20018/18 / eLLB 20036/36 / eLLB 20418 / eLLB 20436



Battery housing



Dimensions in mm

1
2
3
4
5
6
7
8
9
10
11
12

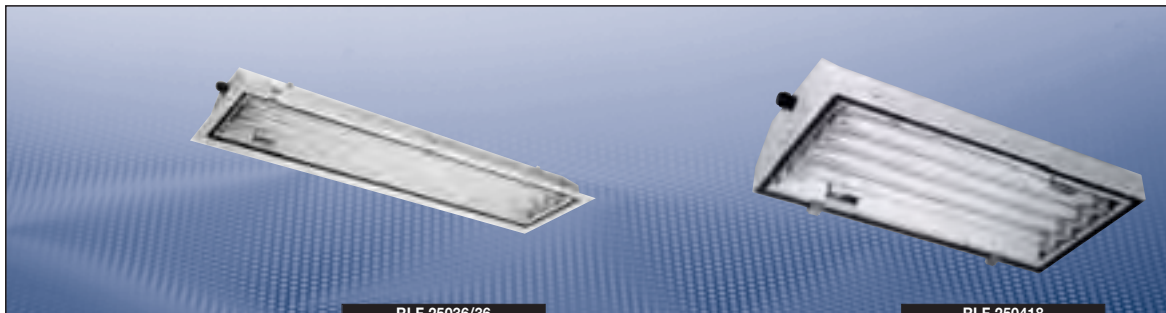
EX-RECESSED CEILING LIGHT FITTINGS

RLF/RLF-INOX 250 18 - 58 W / RLF/RLF-INOX 250... N 18 - 36 W
Metallic design for Zone 1 and Zone 21

The RLF... explosion-protected recessed ceiling light fittings with electronic ballast meet the requirements of ATEX-Directive 94/9/EC and are suitable for two-pin fluorescent lamps. These lamps are used for surface and flush mounting in ceilings, in particular in clean rooms where smooth, flush surfaces are very important. The area of application is in the pharmaceutical and chemical industry and in labs as well as in paint shops and spraying cabinets. The housing comprises white-painted steel sheet with an optionally integrally moulded covering frame for safe installation in the ceiling. The type RLF-INOX is made of stainless steel. In addition, it can also be fixed by means of two M8 drilled holes on the top of the housing. The hinged, frameless pane made of 5 mm thick safety glass is fixed with 3 alt. 4 captive screws. The sealing material is EPDM and guarantees the high protection IP65. The electronic ballasts of the latest generation can be used internationally due to their large input voltage range and contents the "End of Life" disconnection acc. latest standard. The standard two-channel structure means that if one lamp fails, the other one remains in operation. The standard two-sided through-wiring together with the generous terminal housing offers a cost-saving installation. The light switch reliably prevents the lamp from being switched on when the cover pane is open. An emergency light fitting version with self-contained battery-system allows a decentral emergency light with an emergency lighting cycle of 1.5 or 3 hours.



- Flush installation specially for lean rooms by using the accessed mounting frame
- Standard, two-channel electronic
- Enclosure polished available made of stainless steel 304 (RLF-INOX 250...)
- Safety locking due to integral disconnecter
- High degree of protection IP65
- Version with self-contained battery system



Technical data

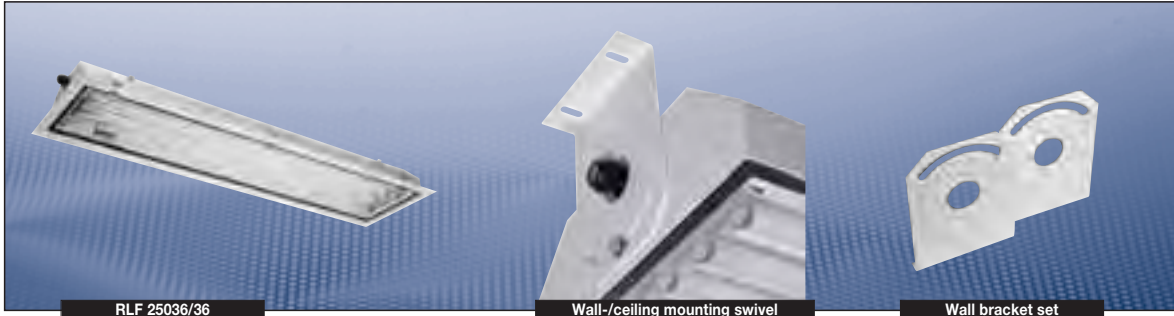
RLF 250... / RLF-INOX 250...	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T4 / Ⓔ II 2 D Ex tD A21 IP65 T60 °C
EC-Type Examination Certificate	FTZU 06 ATEX 0050 X
Permissible ambient temperature	-20 °C to +40 °C
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG
Connecting terminals	L1, L2, L3, N, PE; max. 2 x 4.0 mm ² Through-wiring double-ended
Insulation class	I
Lamp cap	G 13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP65
Cable glands/gland plates/enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, Option: M20 x 1.5 metal thread
Enclosure material	Painted steel sheet (RLF-INOX 250...: polished stainless steel 304 (1.4301))
Enclosure colour	white, stainless steel
Protective cover/protective bowl	Single-safety glass pane of 5 mm thick

	RLF... 25018/18	RFL... 250418
Rated voltage	110 - 254 V AC / 110 - 250 V DC	110 - 254 V AC / 110 - 250 V DC
Rated current	0.18 A	0.36 A
Lamp/illuminant	2 x T26 / 18 W (T8)	4 x T26 / 18 W (T8)
Rated luminous flux ²⁾	2700 lm	5400 lm
Light efficiency in operation	70 %	69 %
Dimensions (L x W x H)	701 x 302 x 130 mm	701 x 362 x 130 mm
Weight	6.9 kg	9.5 kg

	RLF... 25036/36	RFL... 250336	RFL... 250436
Rated voltage	110 - 254 V AC / 110 - 250 V DC	110 - 254 V AC / 110 - 250 V DC	110 - 254 V AC / 110 - 250 V DC
Rated current	0.34 A	0.51 A	0.68 A
Lamp/illuminant	2 x T26 / 36 W (T8)	3 x T26 / 36 W (T8)	4 x T26 / 36 W (T8)
Rated luminous flux ²⁾	6700 lm	10050 lm	13400 lm
Light efficiency in operation	70 %	68 %	69 %
Dimensions (L x W x H)	1312 x 302 x 130 mm	1312 x 302 x 130 mm	1312 x 362 x 130 mm
Weight	12.9 kg	13.4 kg	16.5 kg

	RLF... 25058/58	RFL... 250358	RFL... 250458
Rated voltage	220 - 254 V AC / 195 - 250 V DC	220 - 254 V AC / 195 - 250 V DC	220 - 254 V AC / 195 - 250 V DC
Rated current	0.53 A	0.80 A	1.06 A
Lamp/illuminant	2 x T26 / 58 W (T8)	3 x T26 / 58 W (T8)	4 x T26 / 58 W (T8)
Rated luminous flux ²⁾	10400 lm	15600 lm	20800 lm
Light efficiency in operation	68 %	66 %	67 %
Dimensions (L x W x H)	1611 x 302 x 130 mm	1611 x 302 x 130 mm	1611 x 362 x 130 mm
Weight	17.2 kg	17.8 kg	19.8 kg

¹⁾ depends on used lamps



Ordering details

Type	Cable gland ¹⁾	Thread ¹⁾	Order No.
Type RLF 250... made of sheet steel			
RLF 25018/18 2/5-2 K	M25 x 1.5	-	1 2283 218 001
RLF 25036/36 2/5-2 K	M25 x 1.5	-	1 2283 236 001
RLF 25058/58 2/5-2 K	M25 x 1.5	-	1 2283 258 001
RLF 25018/18 2/5-2 M	-	M20 x 1.5	1 2283 218 002
RLF 25036/36 2/5-2 M	-	M20 x 1.5	1 2283 236 002
RLF 25058/58 2/5-2 M	-	M20 x 1.5	1 2283 258 002
RLF 250336 2/5-2 K	M25 x 1.5	-	1 2283 336 011
RLF 250358 2/5-2 K	M25 x 1.5	-	1 2283 358 011
RLF 250336 2/5-2 M	-	M20 x 1.5	1 2283 336 012
RLF 250358 2/5-2 M	-	M20 x 1.5	1 2283 358 012
RLF 250418 2/5-2 K	M25 x 1.5	-	1 2283 418 011
RLF 250436 2/5-2 K	M25 x 1.5	-	1 2283 436 011
RLF 250458 2/5-2 K	M25 x 1.5	-	1 2283 458 011
RLF 250418 2/5-2 M	-	M20 x 1.5	1 2283 418 012
RLF 250436 2/5-2 M	-	M20 x 1.5	1 2283 436 012
RLF 250458 2/5-2 M	-	M20 x 1.5	1 2283 458 012
Type RLF-INOX 250... made of stainless steel			
RLF-INOX 25018/18 2/5-2 K	M25 x 1.5	-	1 2283 218 004
RLF-INOX 25036/36 2/5-2 K	M25 x 1.5	-	1 2283 236 003
RLF-INOX 25058/58 2/5-2 K	M25 x 1.5	-	1 2283 258 003
RLF-INOX 25018/18 2/5-2 M	-	M20 x 1.5	1 2283 218 003
RLF-INOX 25036/36 2/5-2 M	-	M20 x 1.5	1 2283 236 004
RLF-INOX 25058/58 2/5-2 M	-	M20 x 1.5	1 2283 258 004
RLF-INOX 250336 2/5-2 K	M25 x 1.5	-	1 2283 336 001
RLF-INOX 250358 2/5-2 K	M25 x 1.5	-	1 2283 358 001
RLF-INOX 250336 2/5-2 M	-	M20 x 1.5	1 2283 336 002
RLF-INOX 250358 2/5-2 M	-	M20 x 1.5	1 2283 358 002
RLF-INOX 250418 2/5-2 K	M25 x 1.5	-	1 2283 418 001
RLF-INOX 250436 2/5-2 K	M25 x 1.5	-	1 2283 436 001
RLF-INOX 250458 2/5-2 K	M25 x 1.5	-	1 2283 458 001
RLF-INOX 250418 2/5-2 M	-	M20 x 1.5	1 2283 418 002
RLF-INOX 250436 2/5-2 M	-	M20 x 1.5	1 2283 436 002
RLF-INOX 250458 2/5-2 M	-	M20 x 1.5	1 2283 458 002

¹⁾ With dustcover if entry/thread is not closed

Scope of delivery without lamps and fixing material.

Note: mounting frames are not part of the delivery. Please see accessories.



Accessories

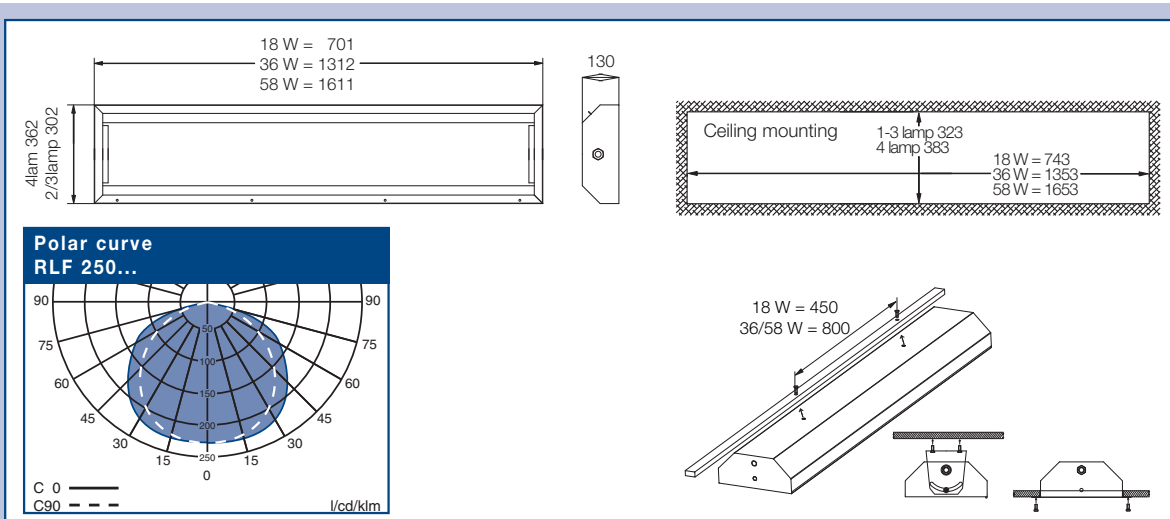
RLF ...

Type	Version	Application	Order No.
Wall bracket set	2 pcs.	RLF 250...	3 2283 000 007
Mounting frame for ceiling mounting:	for luminaires 2 x 18 W	RLF 250...	3 2283 000 001
	for luminaires 4 x 18 W	RLF 250...	3 2283 000 002
	for luminaires 2 x/3 x 36 W	RLF 250...	3 2283 000 003
	for luminaires 4 x 36 W	RLF 250...	3 2283 000 004
	for luminaires 2 x/3 x 58 W	RLF 250...	3 2283 000 005
Wall bracket set INOX	2 pcs.	RLF-INOX 250...	3 2283 000 014
Mounting frame INOX for ceiling mounting:	for luminaires 2 x 18 W	RLF-INOX 250...	3 2283 000 008
	for luminaires 4 x 18 W	RLF-INOX 250...	3 2283 000 009
	for luminaires 2 x/3 x 36 W	RLF-INOX 250...	3 2283 000 010
	for luminaires 4 x 36 W	RLF-INOX 250...	3 2283 000 011
	for luminaires 2 x/3 x 58 W	RLF-INOX 250...	3 2283 000 012
	for luminaires 4 x 58 W	RLF-INOX 250...	3 2283 000 013

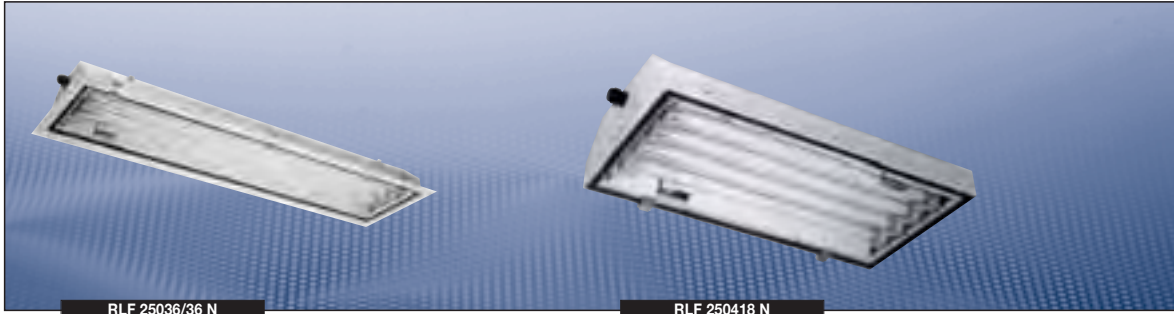
Metal cable glands M20/M25 see page 8.10.

Complete Mounting Systems see page 2.70 to 2.76.

Dimension drawing | Polar curve



Dimensions in mm

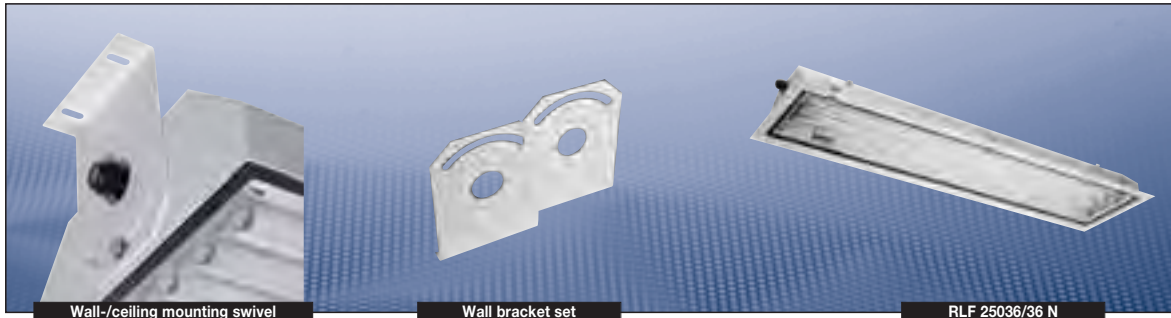


Technical data

RLF 250... N / RLF-INOX 250... N	
Marking to 94/9/EC	⊕ II 2 G Ex de mb IIC T4 / ⊕ II 2 D Ex tD A21 IP65 T60 °C
EC-Type Examination Certificate	FTZU 08 ATEX 0188 X
Permissible ambient temperature	-5 °C to +40 °C
Rated voltage	230 - 240 V AC
Frequency	50 - 60 Hz
Circuit	EVG with emergency lighting supply
Connecting terminals	L, L1, L2, L3, N, PE max. 6 x 4.0 mm ² , through-wiring double-ended
Insulation class	I
Lamp cap	G 13 accd. to IEC 60081
Battery	3.6 V/4 Ah (18 W) / 6 V/4 Ah (36 W)
Rated emergency lighting operation	1.5 h / 3 h
Charging duration	> 24 h
Degree of protection accd. EN 60529	IP65
Cable glands/gland plates/enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, Option: M20 x 1.5 metal thread
Enclosure material	Painted steel sheet (RLF-INOX 250.. N: polished stainless steel)
Enclosure colour	white, stainless steel
Protective cover/protective bowl	Single-safety glass pane of 5 mm thick

	RLF... 25018/18 N	RFL... 250418 N
Rated current	0.20 A	0.36 A
Lamp/illuminant	2 x T26 / 18 W (T8)	4 x T26 / 18 W (T8)
Rated luminous flux ¹⁾	2700 lm	5400 lm
Luminous flux in emergency operation (1.5 h, one lamp) ¹⁾	270 lm (20 %)	270 lm (20 %)
Luminous flux in emergency operation (3 h, one lamp) ¹⁾	216 lm (16 %)	216 lm (16 %)
Light efficiency in operation	70 %	69 %
Dimensions (L x W x H)	701 x 302 x 130 mm	701 x 362 x 130 mm
Weight	8.9 kg	11.5 kg

	RLF... 25036/36 N	RFL... 250436 N
Rated current	0.36 A	0.68 A
Lamp/illuminant	2 x T26 / 36 W (T8)	4 x T26 / 36 W (T8)
Rated luminous		



Wall-/ceiling mounting swivel

Wall bracket set

RLF 25036/36 N

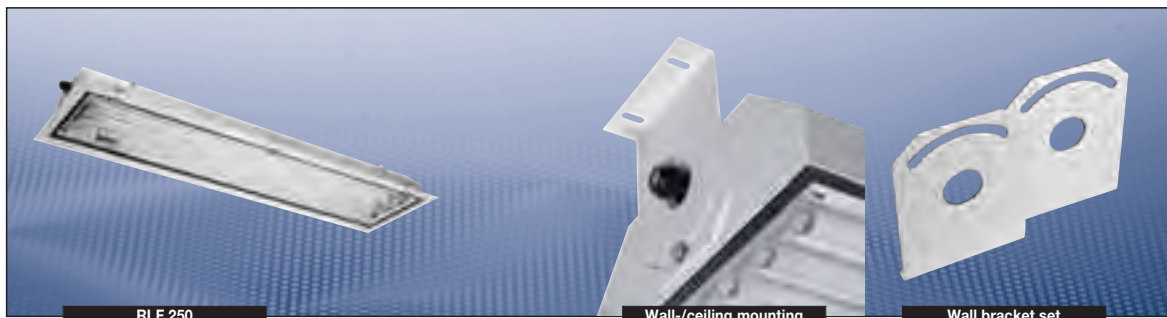
Bestellangaben

Type	Cable gland	Thread	Order No.
Typ RLF 250.. made of sheet steel			
RLF 25018/18 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 218 201
RLF 25036/36 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 236 201
RLF 25018/18 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 218 202
RLF 25036/36 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 236 202
RLF 250418 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 418 201
RLF 250436 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 436 201
RLF 250418 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 418 202
RLF 250436 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 436 202
RLF 25018/18 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 218 301
RLF 25036/36 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 236 301
RLF 25018/18 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 218 302
RLF 25036/36 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 236 302
RLF 250418 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 418 301
RLF 250436 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 436 301
RLF 250418 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 418 302
RLF 250436 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 436 302
Typ RLF-INOX 250.. made of stainless steel			
RLF-INOX 25018/18 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 218 203
RLF-INOX 25036/36 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 236 203
RLF-INOX 25018/18 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 218 204
RLF-INOX 25036/36 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 236 204
RLF-INOX 250418 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 418 203
RLF-INOX 250436 N 2/6-2 K - 1.5 h	M25 x 1.5	-	1 2283 436 203
RLF-INOX 250418 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 418 204
RLF-INOX 250436 N 2/6-2 M - 1.5 h	-	M20 x 1.5	1 2283 436 204
RLF-INOX 25018/18 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 218 303
RLF-INOX 25036/36 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 236 303
RLF-INOX 25018/18 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 218 304
RLF-INOX 25036/36 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 236 304
RLF-INOX 250418 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 418 303
RLF-INOX 250436 N 2/6-2 K - 3 h	M25 x 1.5	-	1 2283 436 303
RLF-INOX 250418 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 418 304
RLF-INOX 250436 N 2/6-2 M - 3 h	-	M20 x 1.5	1 2283 436 304

¹⁾ With dustcover if entry/thread is not closed

Scope of delivery without lamps and fixing material.

Note: mounting frames are not part of the delivery. Please see accessories.



Accessories

Lamp for luminaire RLF 250...

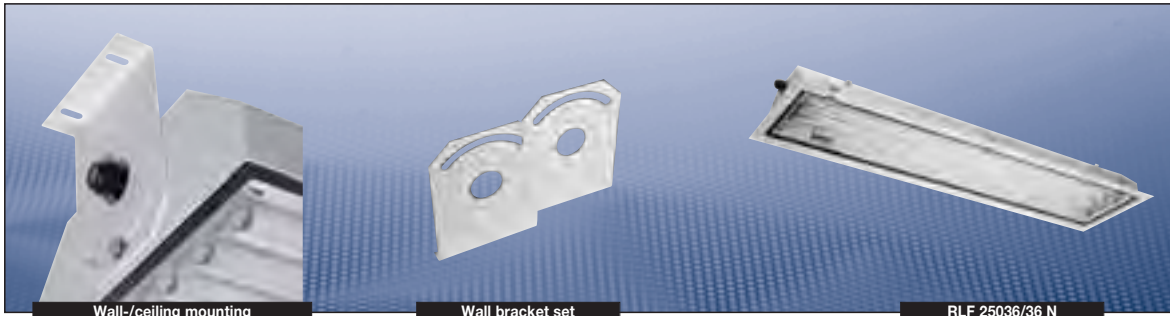
Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2520-1	58 W	5200 lm white	3 2475 900 003
Aura-Ultimate	18 W	1300 lm white	3 2475 900 087
T26/Ø 26 mm (T8) Longlife	36 W	3350 lm white	3 2475 900 088
G13-socket	58 W	5200 lm white	on request

RLF 250...

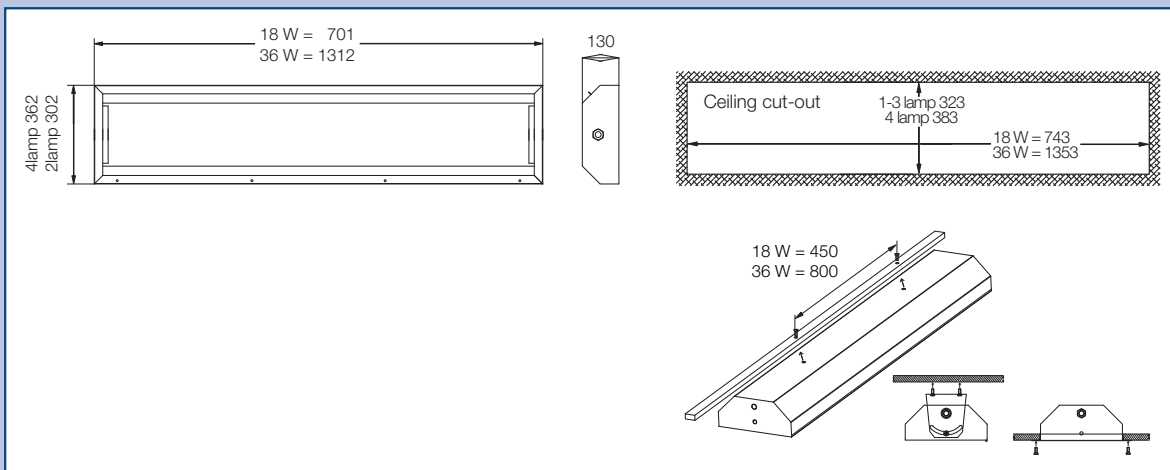
Type	Version	Application	Order No.
Wall bracket set	2 pcs.	RLF 250...	3 2283 000 007
Mounting frame for ceiling mounting:	for luminaires 2 x 18 W	RLF 250...	3 2283 000 001
	for luminaires 4 x 18 W	RLF 250...	3 2283 000 002
	for luminaires 2 x/3 x 36 W	RLF 250...	3 2283 000 003
	for luminaires 4 x 36 W	RLF 250...	3 2283 000 004
	for luminaires 2 x/3 x 58 W	RLF 250...	3 2283 000 005
Wall bracket set INOX	2 pcs.	RLF-INOX 250...	3 2283 000 014
Mounting frame INOX for ceiling mounting:	for luminaires 2 x 18 W	RLF-INOX 250...	3 2283 000 008
	for luminaires 4 x 18 W	RLF-INOX 250...	3 2283 000 009
	for luminaires 2 x/3 x 36 W	RLF-INOX 250...	3 2283 000 010
	for luminaires 4 x 36 W	RLF-INOX 250...	3 2283 000 011
	for luminaires 2 x/3 x 58 W	RLF-INOX 250...	3 2283 000 012
	for luminaires 4 x 58 W	RLF-INOX 250...	3 2283 000 013
Battery set	3.6 V/4 Ah		on request
Battery set	6 V/4 Ah		on request

Metal cable glands M20/M25 see page 8.10.

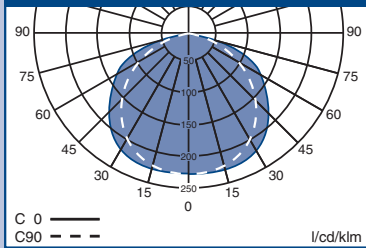
Complete Mounting Systems see page 2.70 to 2.76.



Dimension drawing | Polar curve



Polar curve
RLF 250... N

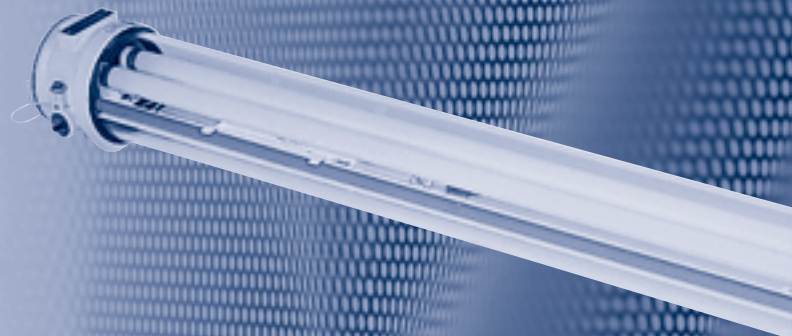
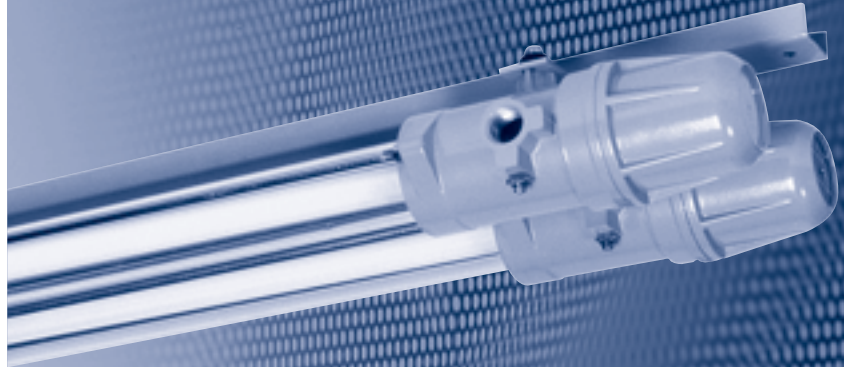


Dimensions in mm

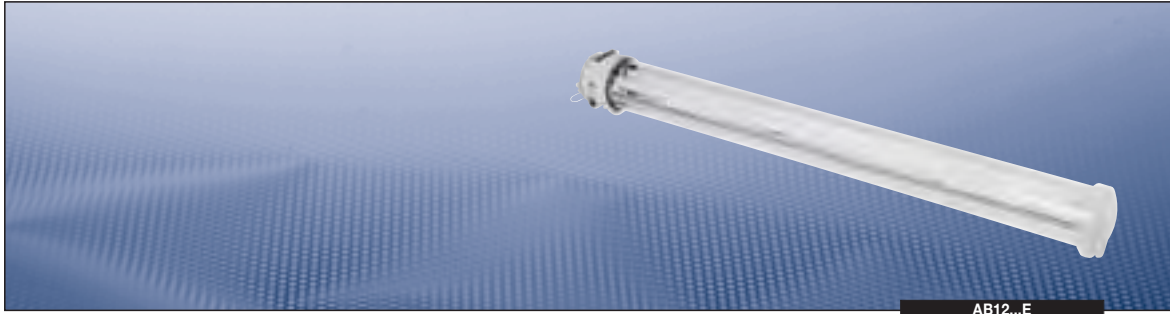
E X - L I G H T F I T T I N G S

AB 12... and EVF... 18 - 58 W Metal version for Zone 1 and Zone 21 (AB 12...)

The light fittings series AB12 and EVF for fluorescent lamps are in accordance with the ATEX-Directive 94/9/EC and can be used in the Zones 1, 2 (for EVF...) and Zone 1, 2, 21 and 22 (for AB 12...). They are fitted alternatively with electronic or electromagnetic ballasts for fluorescent lamps with G13 sockets. The flameproof housing is made of copperfree aluminium (Cu < 0.1 %), the protective tube is made of borosilicate glass with high mechanical and thermal stability. The easy to open threaded cover, the large terminal compartment and lamp guide on a guide carriage make it simple for servicing.



- Robust housing
- Easy opening due to screw plug on end
- 2 individual circuits (double lamp version)
- Large terminal compartment



AB12...E

Technical data

AB 12...E with electronic ballast

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB T5 / Ⓔ II 2 D Ex tD A21 IP67 T78 °C ¹⁾
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
IECEX Certificate of Conformity	IECEX BK1 07.0008 X
Marking accd. to IECEx	Ex d IIB T5 Ex tD A21 IP67 T76 °C
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage	198 V - 254 V AC / 175 - 280 V DC
Frequency	50/60 Hz
Power factor cos φ	> 0.9
Circuit	EVG
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² / PE ext. 2 x 6 mm ²
Insulation class	I
Light efficiency in operation	73%
Lamp cap	G 13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP67
Cable glands/gland plates/enclosure drilling	Direct entry: 2 x 3/4" ISO 7/1, 1 x Ex d plugs 3/4", eXLink inlet on request
Enclosure material	Copper-free aluminium
Enclosure colour	Polyester finish grey
Protective cover/protective bowl	Borosilicate glass

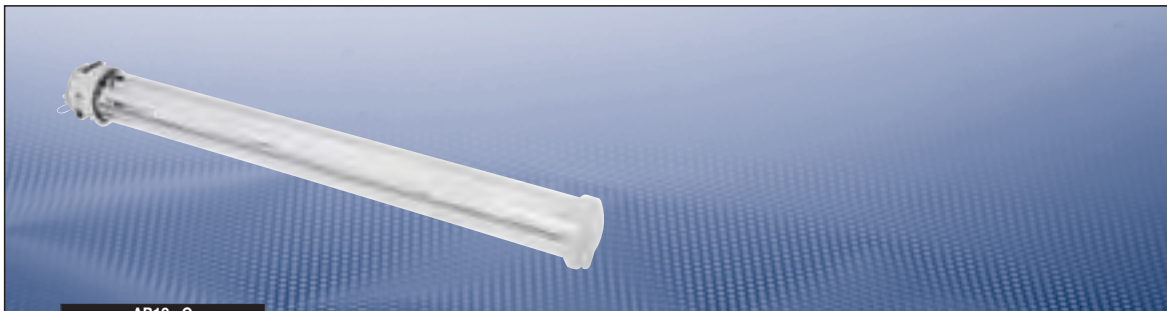
	AB 12220 E	AB 12240 E	AB 12265 E
Rated current	0.17 A	0.48 A	0.49 A
Lamp/illuminant	2 x T26 / 18 W	2 x T26 / 36 W	2 x T26 / 58 W
Rated luminous flux ²⁾	2700 lm	6700 lm	10400 lm
Dimensions (L x W x H)	707 x 144 x 140 mm	1320 x 144 x 140 mm	1620 x 144 x 140 mm
Weight	7 kg	12 kg	14 kg

Options	Through-wiring with terminals L1, L2, L3, N and PE: 2 x 2.5 mm ² , other lamps, single lamp versions
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¹⁾ certification accd. to new standard applies for

²⁾ depends on used lamps

AB 12...C with electromagnetic ballast



AB12...C

Technical data

AB 12... C/PL with conventional ballast

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB T5 / Ⓔ II 2 D Ex tD A21 IP67 T93 °C ¹⁾
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
IECEX Certificate of Conformity	IECEX BK1 07.0008 X
Marking accd. to IECEx	Ex d IIB T5 Ex tD A21 IP67 T93 °C
Permissible ambient temperature	-20 °C to +55 °C
Rated voltage	230 V
Frequency	50 Hz
Power factor cos φ	> 0.9
Circuit	conventional ballast with ignitor
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² / PE ext. 2 x 6 mm ²
Insulation class	I
Light efficiency in operation	70 %
Degree of protection accd. EN 60529	IP67
Cable glands/gland plates/enclosure drilling	Direct entry: 2 x 3/4" ISO 7/1, 1 x Ex d plugs 3/4", eXLink inlet on request
Enclosure material	Copper-free aluminium
Enclosure colour	Polyester finish grey
Protective cover/protective bowl	Borosilicate glass

	AB 12220 C	AB 12236PL
Rated current	0.37 A	0.39 A
Lamp/illuminant	2 x T26/ 18 W / T38/ 20 W	2 x TC-L 36 W
Luminous flux ¹⁾	2700 lm	2900 lm
Lamp cap	G 13 accd. to IEC 60081	2G11
Dimensions (L x W x H)	707 x 144 x 140 mm	707 x 144 x 140 mm
Weight	7 kg	8.5 kg

	AB 12240 C	AB 12265 C
Rated current	0.43 A	0.67 A
Lamp/illuminant	2 x T26 / 36 W / T38/ 40 W	2 x T26 / 58 W / T38/ 65 W
Luminous flux ¹⁾	6700 lm	10400 lm
Lamp cap	G 13 accd. to IEC 60081	G 13 accd. to IEC 60081
Dimensions (L x W x H)	1320 x 144 x 140 mm	1620 x 144 x 140 mm
Weight	12 kg	14 kg

Options	Through-wiring with terminals L1, L2, L3, N and PE: 2 x 2.5 mm ² , other lamps, single lamp versions
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¹⁾ certification accd. to new standard applies for

²⁾ depends on used lamps



Ordering details

Type	Lamp	Rated current	Cable gland for cable	Order No.
Type AB 12...E				
AB12220E	2 x 18 W	0.17 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 301
	2 x 18 W	0.17 A	-	NOR 000 005 060 300
AB12240E	2 x 36 W	0.32 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 309
	2 x 36 W	0.32 A	-	NOR 000 005 060 308
AB12265E	2 x 58 W	0.49 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 317
	2 x 58 W	0.49 A	-	NOR 000 005 060 316
Type AB 12...C				
AB12220C	2 x 18/20 W	0.37 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 347
	2 x 18/20 W	0.37 A	-	NOR 000 005 060 346
AB12236PL	2 x 36 W-TC-L	0.39 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 670
	2 x 36 W-TC-L	0.39 A	-	NOR 000 005 060 669
AB12240C	2 x 36/40 W	0.43 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 355
	2 x 36/40 W	0.43 A	-	NOR 000 005 060 354
AB12265C	2 x 58/65 W	0.67 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 060 363
	2 x 58/65 W	0.67 A	-	NOR 000 005 060 362

Accessories

Lamp for luminaire AB12..

Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
T26/Ø 26 mm (T8) Bi-pin socket G13	18 W	1350 lm white	3 2475 900 001
	36 W	3350 lm white	3 2475 900 002
	58 W	5200 lm white	3 2475 900 003
T26/Ø 26 mm (T8) Longlife Bi-pin socket G13 Aura-Ultimate	18 W	1300 lm white	3 2475 900 087
	36 W	3350 lm white	3 2475 900 088
	58 W	5200 lm white	on request
TC-L four-pin/Ø 18 mm Socket 2G11 for AB 12236 PL	36 W	2900 lm white	on request

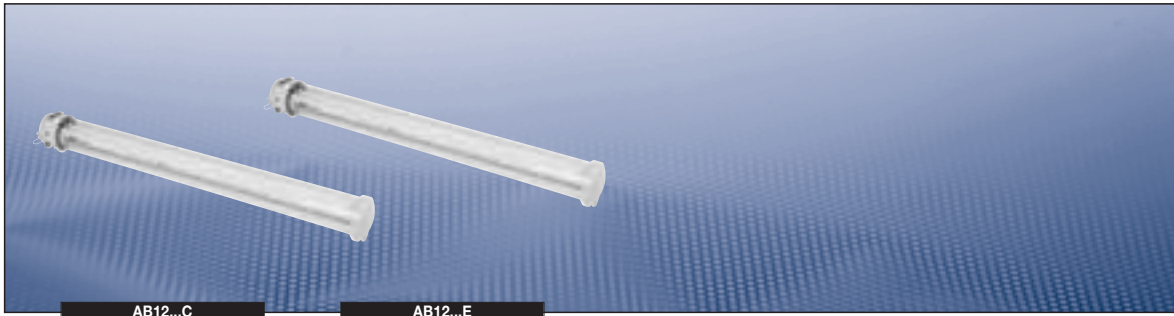
Reflector for luminaire AB12..

Type	Material	Version	Application	Order No.
Reflector RAB 220	AISI 304		for AB 12220../AB 12236 PL	NOR 003 045 060 403
Reflector RAB 240	AISI 304		for AB 12240..	NOR 003 045 060 411
Reflector RAB 265	AISI 304		for AB 12265..	NOR 003 045 060 429
Reflector RAB 220	AISI 316		for AB 12220..	NOR 003 165 060 403
Reflector RAB 240	AISI 316		for AB 12240..	NOR 003 165 060 411
Reflector RAB 265	AISI 316		for AB 12265..	NOR 003 165 060 429
Reflector GRAB 220	AISI 304	with wire guard (steel, white epoxid coated)	for AB 12220../AB 12236 PL	NOR 003 045 060 479
Reflector GRAB 240	AISI 304	with wire guard (steel, white epoxid coated)	for AB 12240..	NOR 003 045 060 487
Reflector GRAB 265	AISI 304	with wire guard (steel, white epoxid coated)	for AB 12265..	NOR 003 045 060 485
Reflector GRAB 220	AISI 316	with wire guard (steel, white epoxid coated)	for AB 12220../AB 12236 PL	NOR 003 165 060 479
Reflector GRAB 240	AISI 316	with wire guard (steel, white epoxid coated)	for AB 12240..	NOR 003 165 060 487
Reflector GRAB 265	AISI 316	with wire guard (steel, white epoxid coated)	for AB 12265..	NOR 003 165 060 495

Scope of delivery without lamps and fixing material.

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11
12

AB 12...E | with electronic ballast |
AB 12...C | with electromagnetic ballast |



Accessories

Type	Material	Order No.
Eye bolt A1	galvanized steel	NOR 000 005 009 261
Ceiling mounting bracket A5	galvanized steel	NOR 000 005 009 162
Wall suspension BFP 45	galvanized steel	NOR 000 005 009 196
Pipe clamp A8 1" 1/2 D 47 – 51 mm	hot galvanized steel	NOR 000 005 009 211
Pipe clamp A9 2" D 56 – 60 mm	hot galvanized steel	NOR 000 005 009 229

For these applications, it will be necessary to have 2 parts for each luminaire.

Metal cable glands M20/M25 see page 8.10.

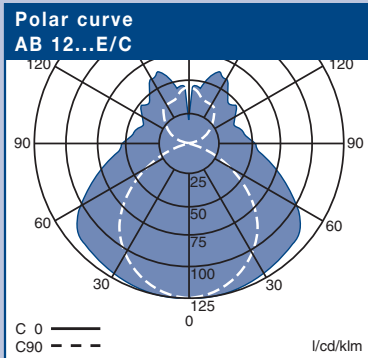
Complete Mounting Systems see page 2.70 to 2.76.

Dimension drawing | Polar curve

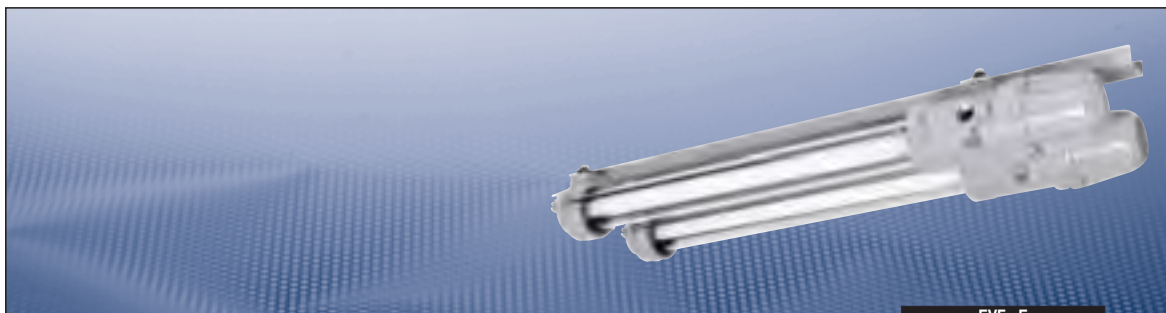
▽ optional entries, on request
 ▴ entries

Type	A	B
AB 12220	652	707
AB 12236 PL	652	707
AB 12240	1265	1320
AB 12265	1565	1620

AB 12220E / AB 12220C / AB 122236PL



Dimensions in mm



EVF...E

Technical data

EVF...E	
Marking to 94/9/EC	⚠ II 2 G Ex d IIC T6 ¹⁾ ⚠ II 2 D Ex tD A21 IP67 T76 °C
EC-Type Examination Certificate	LOM 02 ATEX 2019 X
IECEX Certificate of Conformity	IECEX BKI 07.0033 X
Marking accd. to IECEx	Ex d IIC T6 Ex tD A21 IP67 T76 °C
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	198 V - 254 V AC / 175 V - 280 V DC
Frequency	50/60 Hz
Power factor cos φ	> 0.9
Circuit	EVG
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² / PE ext. 2 x 6 mm ²
Insulation class	I
Lamp cap	G 13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP67
Cable glands/gland plates/enclosure drilling	Direct entry: 2 x 3/4" ISO 7/1, 1 x Ex d plugs 3/4", eXLink inlet on request
Enclosure material	Copper-free aluminium
Enclosure colour	Polyester finish grey
Protective cover/protective bowl	Borosilicate glass

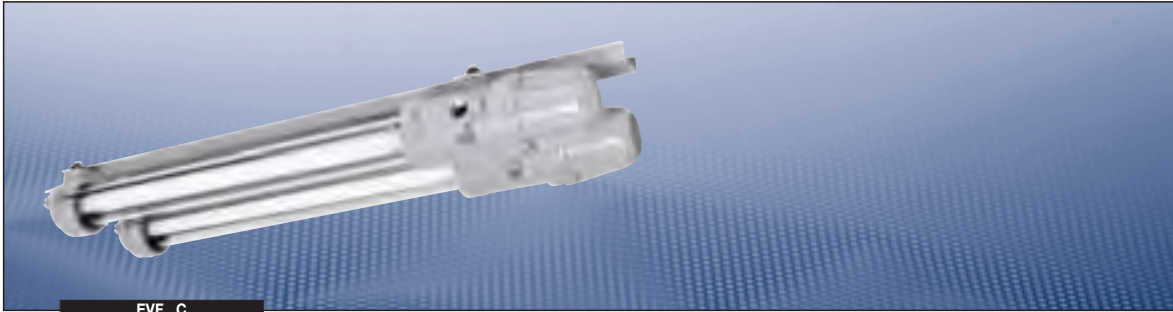
	EVF 120 E	EVF 140 E/240 E	EVF 165 E / 265 E
Rated current	0.09 A	0.16 A / 0.32 A	0.25 A / 0.49 A
Lamp/illuminant	1 x T26 / 18 W	1 x T26 / 36 W, 2 x T26 / 36 W	1 x T26 / 58 W, 2 x T26 / 58 W
Rated luminous flux ²⁾	1350 lm	3350 lm / 6700 lm	5200 lm / 10400 lm
Light efficiency in operation	83 %	83 % / 73 %	83 % / 73 %
Dimensions (L x W x H)	990 x 120 x 145 mm	1598 x 120 x 145 mm 1598 x 275 x 150 mm	1908 x 120 x 145 mm 1908 x 275 x 150 mm
Weight	6.2 kg	9.0 kg / 16.9 kg	14.6 kg / 26.4 kg

Options	Through-wiring with terminals L1, L2, L3, N and PE: 2 x 2.5 mm ² other lamps, single lamp versions
---------	--

¹⁾ certification accd. to new standard applies for

²⁾ depends on used lamps

EVF...C with electromagnetic ballast



EVF...C

Technical data

EVF...C with conventional ballast

Marking to 94/9/EC	II 2 G Ex d IIC T6 ¹⁾ II 2 D Ex tD A21 IP67 T76 °C
EC-Type Examination Certificate	LOM 02 ATEX 2019 X
IECEX Certificate of Conformity	IECEX BK1 07.0033 X
Marking accd. to IECEX	Ex d IIC T6 (58/65 W T5 bei T _a > +40 °C) Ex tD A21 IP67 T76 °C
Permissible ambient temperature	-20 °C to +55 °C
Rated voltage	230 V
Frequency	50 Hz
Power factor cos φ	> 0.90
Circuit	conventional ballast with ignitor
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² / PE ext. 2 x 6 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP67
Cable glands/gland plates/enclosure drilling	Direct entry: 2 x 3/4" ISO 7/1, 1 x Ex d plugs 3/4", eXLink inlet on request
Enclosure material	Copper-free aluminium
Enclosure colour	Polyester finish grey
Protective cover/protective bowl	Borosilicate glass

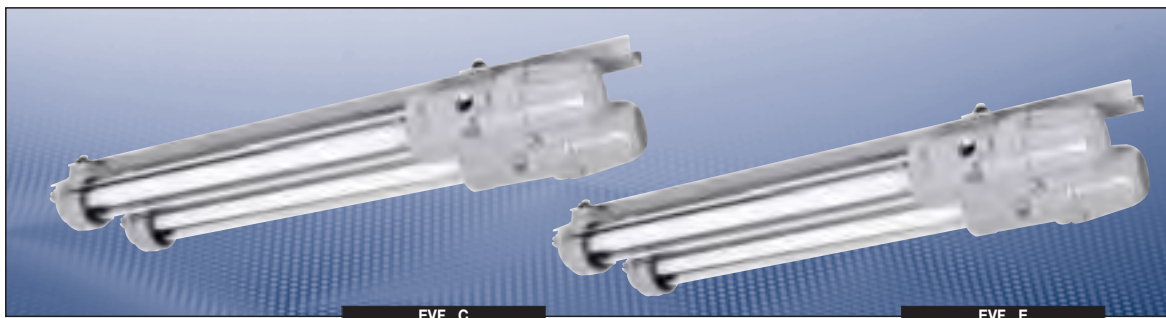
	EVF 120 C	EVF 140 C	EVF 165 C
Rated current	0.15 A	0.25 A	0.39 A
Lamp/illuminant	1 x T26 / 18 W, 1 x T38 / 40 W	1 x T26 / 36 W, 1 x T38 / 40 W	1 x T26 / 58 W, 1 x T38 / 65 W
Rated luminous flux	1350 lm	3350 lm	5200 lm
Light efficiency in operation	81 %	81 %	81 %
Dimensions (L x W x H)	990 x 120 x 145 mm	1598 x 120 x 145 mm	1908 x 120 x 145 mm
Weight	6.2 kg	9.0 kg	14.6 kg

	EVF 240 C	EVF 265 C
Rated current	0.50 A	0.78 A
Lamp/illuminant	2 x T26 / 36 W, 2 x T38 / 40 W	2 x T26 / 58 W, 2 x T38 / 65 W
Rated luminous flux ²⁾	6700 lm	10400 lm
Light efficiency in operation	71 %	71 %
Dimensions (L x W x H)	1598 x 275 x 150 mm	1908 x 275 x 150 mm
Weight	16.9 kg	26.4 kg

Options	Through-wiring with terminals L1, L2, L3, N and PE: 2 x 2.5 mm ² other lamps, single lamp versions
---------	--

¹⁾ certification accd. to new standard applies for

²⁾ depends on used lamps



Ordering details

Type	Lamp	Rated current (230 V/50 Hz)	Cable gland for cable	Order No.
Type EVF...E				
EVF120E	1 x 18 W	0.09 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 301
	1 x 18 W	0.09 A	-	NOR 000 005 070 300
EVF140E	1 x 36 W	0.16 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 309
	1 x 36 W	0.16 A	-	NOR 000 005 070 308
EVF165E	1 x 58 W	0.25 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 317
	1 x 58 W	0.25 A	-	NOR 000 005 070 316
EVF240E	2 x 36 W	0.32 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 329
	2 x 36 W	0.32 A	-	NOR 000 005 070 328
EVF265E	2 x 58 W	0.49 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 335
	2 x 58 W	0.49 A	-	NOR 000 005 070 333
Type EVF...C				
EVF120C	1 x 18/20 W	0.15 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 065
	1 x 18/20 W	0.15 A	-	NOR 000 005 070 064
EVF140C	1 x 36/40 W	0.25 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 031
	1 x 36/40 W	0.25 A	-	NOR 000 005 070 030
EVF165C	1 x 58/65 W	0.39 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 403
	1 x 58/65 W	0.39 A	-	NOR 000 005 070 402
EVF240C	2 x 36/40 W	0.50 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 023
	2 x 36/40 W	0.50 A	-	NOR 000 005 070 022
EVF265C	2 x 58/65 W	0.78 A	1 x 3/4" Ø 9 - 14 mm	NOR 000 005 070 429
	2 x 58/65 W	0.78 A	-	NOR 000 005 070 428

Accessories

Lamp for luminaire EVF..

Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
T26/Ø 26 mm (T8) Bi-pin socket G13	18 W	1350 lm white	3 2475 900 001
	36 W	3350 lm white	3 2475 900 002
	58 W	5200 lm white	3 2475 900 003
T26/Ø 26 mm (T8) Longlife Bi-pin socket G13 Aura-Ultimate	18 W	1300 lm white	3 2475 900 087
	36 W	3350 lm white	3 2475 900 088
	58 W	5200 lm white	on request

Wire guard for luminaire EVF..

Type	Version	Order No.
Wire guard REVF 20 (steel, white epoxid coated)	for EVF 120	NOR 000 000 507 385
Wire guard REVF 40 (steel, white epoxid coated) ¹⁾	for EVF 140/240	NOR 000 000 507 393
Wire guard REVF 65 (steel, white epoxid coated) ¹⁾	for EVF 165/265	NOR 000 000 507 319

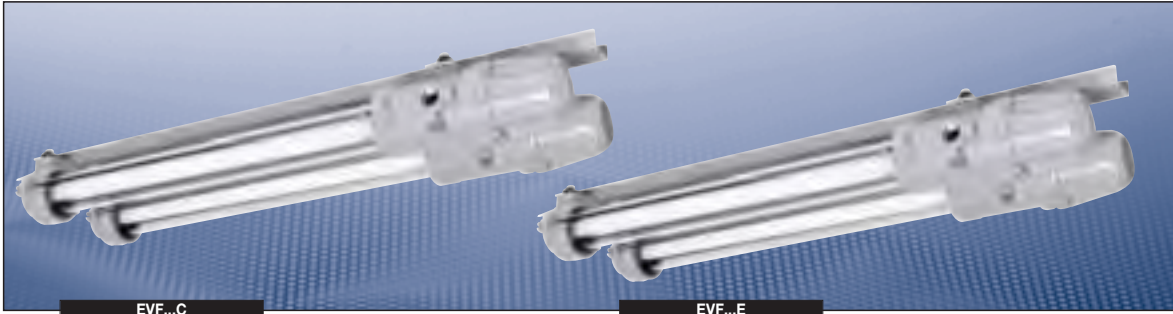
¹⁾ EVF 240 and 265-two wire guards per fitting.

Scope of delivery without lamps and fixing accessories.

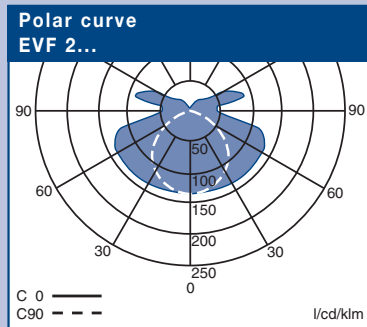
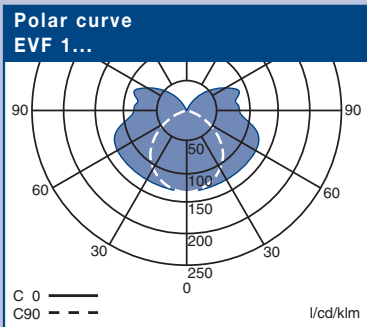
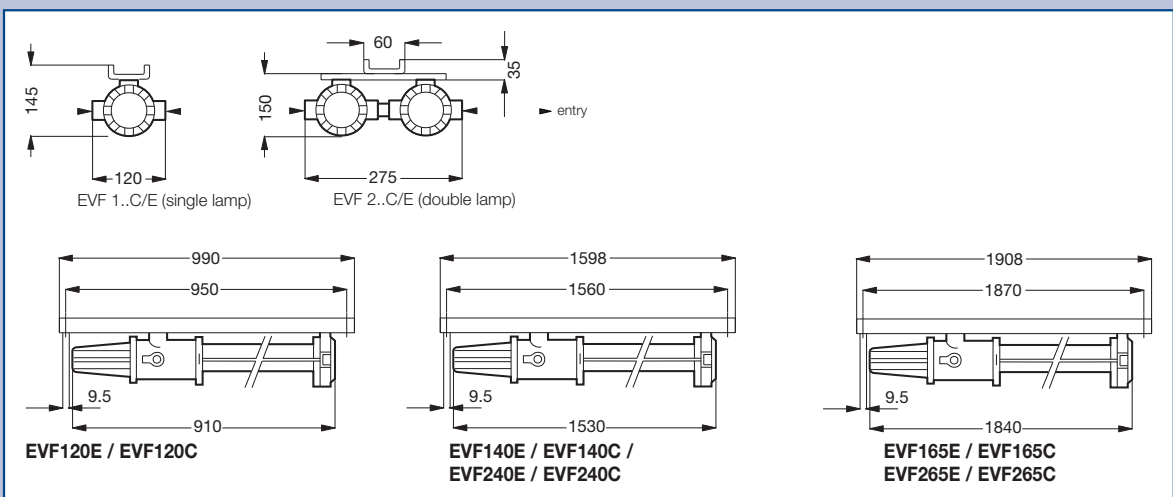
Metal cable glands M20/M25 see page 8.10.

Complete Mounting Systems see page 2.70 to 2.76.

| EVF...E with electronic ballast |
| EVF...C with electromagnetic ballast |



Dimension drawing | Polar curve



Dimensions in mm

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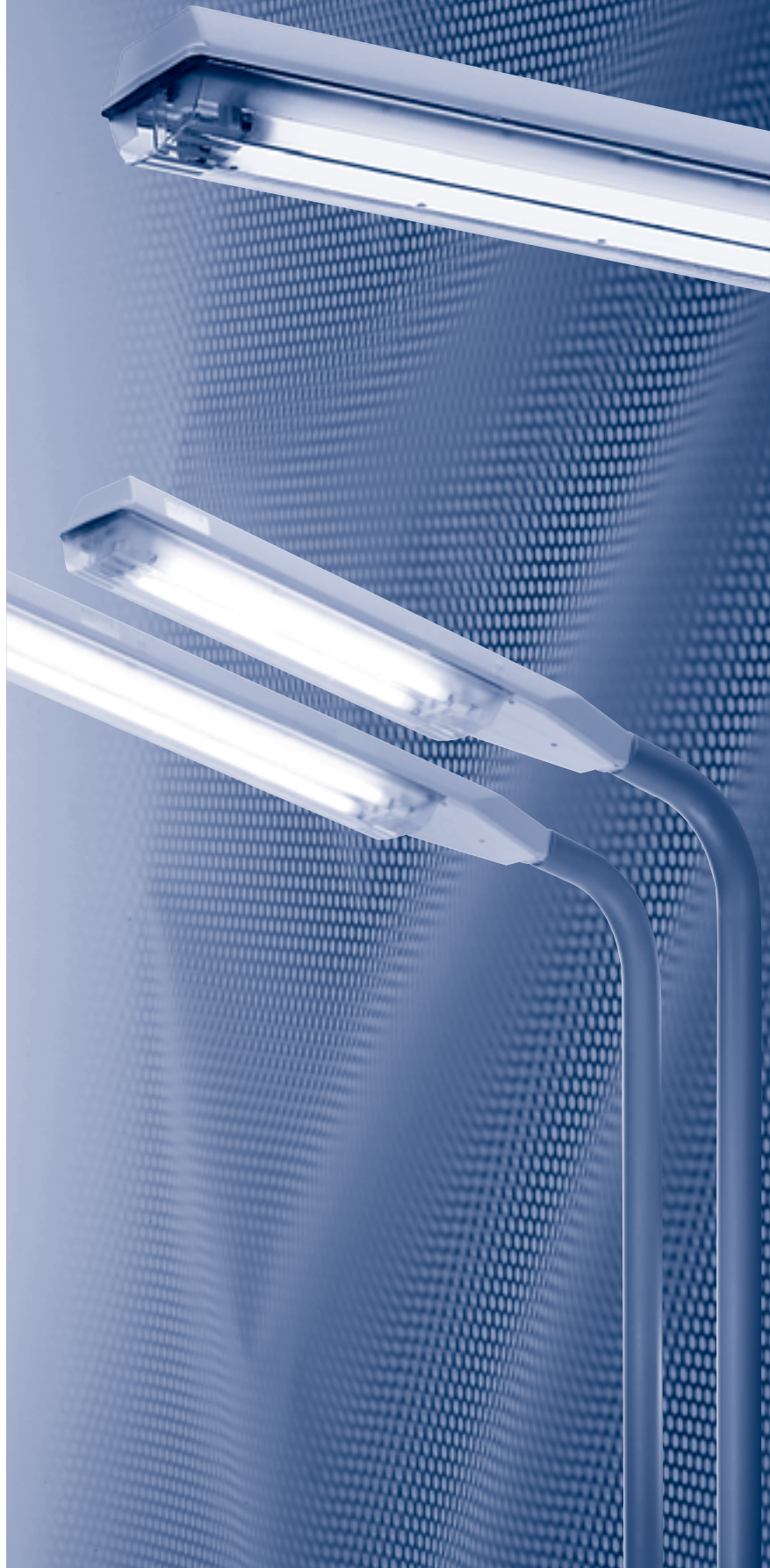
11

12

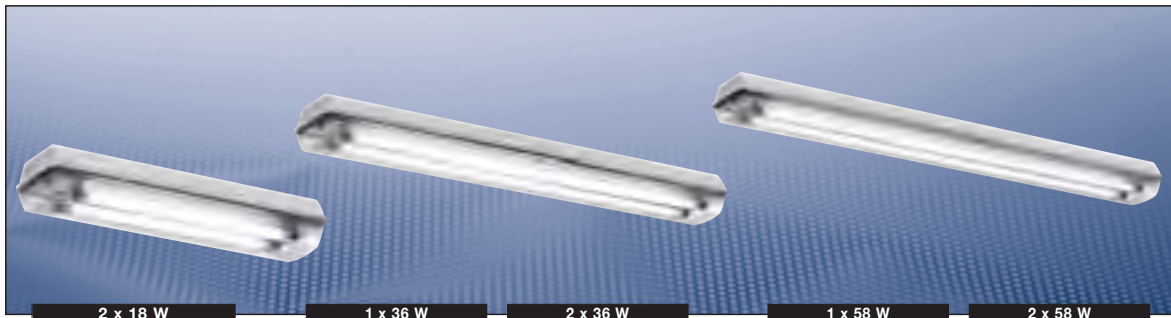
EX - LIGHT FITTINGS

nLLK 08... 18 - 58 W
All-plastic design for Zone 2 and Zone 21/22

The explosion-protected light fittings of the series nLLK 08 conform to the requirements of the ATEX-Directive 94/9/EC. They are designed and tested acc. to the latest standard IEC EN 60079-15 for Ex equipment for use in zone 2 and EN 61241-1 for use in Zone 21 and Zone 22 of dust Ex-areas. They are equipped with electronic ballasts (EVGs) for G13 bi-pin fluorescent lamps. The new EVG additionally fulfills the relevant requirements of "End of Life" (EOL) acc. IEC 60079-7 for explosion protected fluorescent light fittings design "increased safety". The standard single-sided through-wiring architecture in conjunction with the generously large terminal compartment offers a cost efficient installation. Double-sided lock with 10, 20 or 24 latch points allows the protective bowl to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the right side. With the optional CG-S module, single monitoring of the lamp is possible with the CEAG Emergency Light Supply Systems.



- Cost efficient installation due to single-sided through-wiring
- With electronic ballast incl. EOL set-up
- Double-sided safety lock
- Safety standard IP66
- Integration in the CEAG Emergency Light Supply System



Technical data

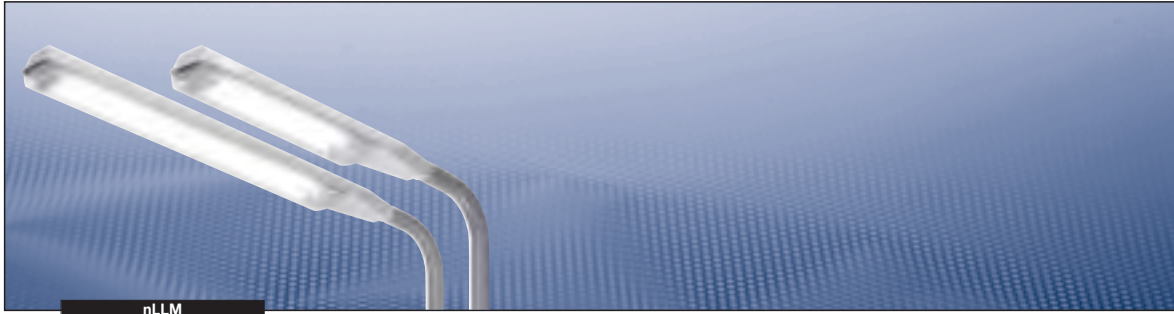
nLLK 08018/18	nLLK 08036	nLLK 08036/36	nLLK 08058	nLLK 08058/58
Marking to 94/9/EC	Ⓔ II 3 G Ex nA de/de mb IIC T4 Ⓔ II 3 D Ex tD A22 IP66 T80 °C Ⓔ II 2 D Ex tD A21 IP66 T80 °C			
Examination Certificate	BVS 09 ATEX E 147			
EC-Type Examination Certificate	BVS 09 ATEX E 162			
Permissible ambient temperature	-25 °C to +50 °C / -25 °C to +40 °C (2 x 58 W) -25 °C to +45 °C (2 x 36 W 2/5 + 2/6, excl. CG-S-Version)			
Rated voltage AC	220 V - 240 V AC			
Rated voltage AC (CG-S)	220 V - 254 V AC			
Rated voltage DC	220 V - 240 V DC			
Rated voltage DC (CG-S)	195 V - 250 V DC			
Frequency	50 - 60 Hz			
Power factor cos φ	≥ 0.95			
Circuit	EVG resp. EVG/CG-S			
Connecting terminals	L1, N, PE (option L1, L2, L3, N, PE) max. 2 x 2.5 mm ² , clamp terminals; optional screw-type terminals max. 2 x 6 mm ² (L1, L2, L3, L, N, PE)			
Insulation class	I			
Lamp cap	G13 accd. to IEC 60081			
Degree of protection accd. EN 60529	IP66			
Cable glands/gland plates/enclosure drilling	Ex e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm Option: M20 x 1.5 metal thread			
Enclosure material	Glass-fibre reinforced polyester			
Protective cover/protective bowl	Polycarbonate			

nLLK 08018/18	
Rated current	0.16 A / 0.17 A (CG-S variant)
Lamp/illuminant	2 x T26 / 18 W
Rated luminous flux ¹⁾	2700 lm
Light efficiency in operation	78 %
Dimensions (L x W x H)	760 x 188 x 130 mm
Weight	approx. 3.6 kg / approx. 5.6 kg (CG-S variant)

	nLLK 08036	nLLK 08036/36
Rated current	0.16 A	0.34 A / 0.35 A (CG-S variant)
Lamp/illuminant	1 x T26 / 36 W	2 x T26 / 36 W
Rated luminous flux ¹⁾	3350 lm	6700 lm
Light efficiency in operation	86 %	78 %
Dimensions (L x W x H)	1360 x 188 x 130 mm	1360 x 188 x 130 mm
Weight	approx. 5.6 kg	approx. 5.8 kg / approx. 8.0 kg (CG-S variant)

	nLLK 08058	nLLK 08058/58
Rated current	0.27 A	0.53 A / 0.54 A (CG-S variant)
Lamp/illuminant	1 x T26 / 58 W	2 x T26 / 58 W
Rated luminous flux ¹⁾	5200 lm	10400 lm
Light efficiency in operation	83%	72%
Dimensions (L x W x H)	1660 x 188 x 130 mm	1660 x 188 x 130 mm
Weight	approx. 6.7 kg	approx. 6.9 kg / approx. 9.0 kg (CG-S variant)

¹⁾ depends on used lamps



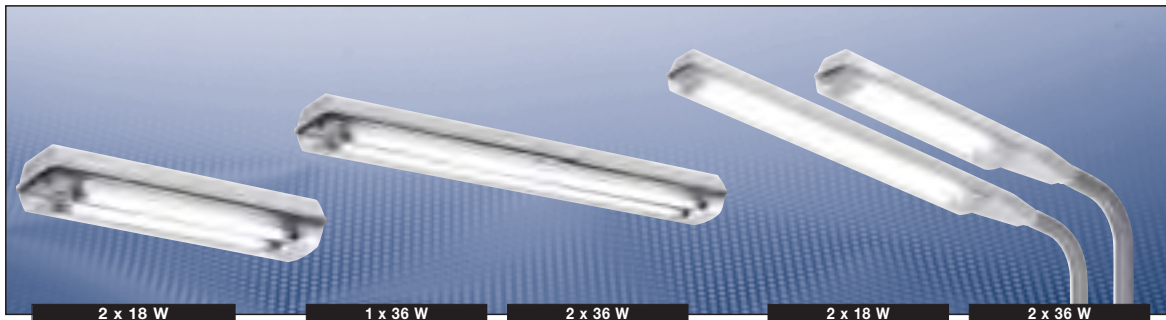
Technical data

nLLM 08018/18 | nLLM 08036/36

Marking to 94/9/EC	Ex II 3 G Ex nA de/de mb IIC T4 Ex II 3 D Ex tD A22 IP66 T80 °C Ex II 2 D Ex tD A21 IP66 T80 °C
Examination Certificate	BVS 09 ATEX E 147
EC-Type Examination Certificate	BVS 09 ATEX E 162
Permissible ambient temperature	-25 °C to +50 °C
Rated voltage	220 V - 240 V AC
Rated voltage	220 V - 240 V DC
Frequency	50 - 60 Hz
Power factor $\cos \varphi$	≥ 0.95
Circuit	EVG
Connecting terminals	L, N, PE screw-type terminals max. 2 x 6 mm ²
Insulation class	I
Lamp cap	G13 accd. to IEC 60081
Degree of protection accd. EN 60529	IP66
Cable glands	1 x Ex e cable glands M25 x 1.5 (plastic) for cables from \varnothing 8 - 17 mm
Enclosure material	Glass-fibre reinforced polyester
Protective cover/protective bowl	Polycarbonate

	nLLM 08018/18	nLLM 08036/36
Rated current	0.16 A	0.34 A
Lamp/illuminant	2 x T26 / 18 W	2 x T26 / 36 W
Rated luminous flux ¹⁾	2700 lm	6700 lm
Light efficiency in operation	78 %	78 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Pole socket	\varnothing 44 mm x 150 mm	\varnothing 44 mm x 150 mm
Weight	approx. 6.1 kg	approx. 8.4 kg

¹⁾ depends on used lamps



Ordering details

Type	Terminals	Through-wiring		Cable glands ²⁾	Plugs	Order No.
		single-ended	double-ended			
Type nLLK 08018/18 (2 x 18 W)						
1/3-1	1 x 3	x	–	1 x M25 x 1.5	1 x threaded	1 3465 218 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5	2 x threaded	1 3465 218 011
2/6-2 M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 218 021
Type nLLK 08018/18 CG-S²⁾ (2 x 18 W)						
2/6-2 ⁴⁾	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 3465 218 912
2/6-M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 218 922
Type nLLM 08018/18 (2 x 18 W)						
1/3-1	1 x 3	–	–	1 x M25 x 1.5	–	1 3465 218 101
Type nLLK 08036 (1 x 36 W)						
1/3-1	1 x 3	x	–	1 x M25 x 1.5	1 x threaded	1 3465 136 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5	2 x threaded	1 3465 136 011
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 136 021
Type nLLK 08036/36 (2 x 36 W)						
1/3-1	1 x 3	x	–	1 x M25 x 1.5	1 x threaded	1 3465 236 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5	2 x threaded	1 3465 236 011
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 236 021
Type nLLK 08036/36 CG-S²⁾ (2 x 36 W)						
2/6-2 ⁴⁾	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 3465 236 912
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 236 922
Type nLLM 08036/36 (2 x 36 W)						
1/3-1	1 x 3	–	–	1 x M25 x 1.5	–	1 3465 236 101
Type nLLK 08058 (1 x 58 W)						
1/3-1	1 x 3	x	–	1 x M25 x 1.5	1 x threaded	1 3465 158 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5	2 x threaded	1 3465 158 011
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 158 021
Type nLLK 08058/58 (2 x 58 W)						
1/3-1	1 x 3	x	–	1 x M25 x 1.5	1 x threaded	1 3465 258 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5	2 x threaded	1 3465 258 011
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 258 021
Type nLLK 08058/58 CG-S²⁾ (2 x 58 W)						
2/6-2 ⁴⁾	2 x 6	–	x	2 x M25 x 1.5	2 x threaded	1 3465 258 912
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5	2 x threaded	1 3465 258 922

¹⁾ M: with metal thread, without cable gland

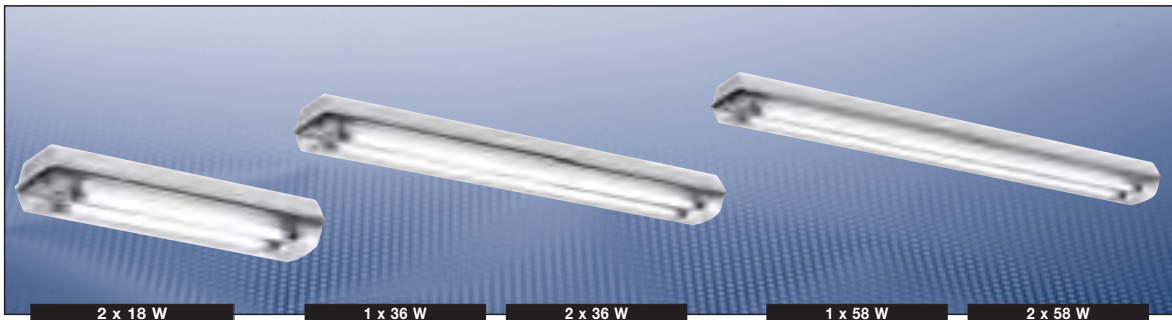
²⁾ CG-S: design single monitored emergency light fitting for use in CEAG emergency light supply unit

³⁾ With dustcover if entry/thread is not closed

⁴⁾ With screw-type terminals max. 2 x 6 mm²

Version with integrated isolating switch on request

Scope of delivery without lamp and fixing accessories



Accessories

Lamp for luminaire nLLK08/nLLM08

Type of lamp	Power	Luminous flux Light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2520-1	58 W	5200 lm white	3 2475 900 003
Aura-Ultimate	18 W	1300 lm white	3 2475 900 087
T26/Ø 26 mm (T8) Longlife	36 W	3350 lm white	3 2475 900 088
Socket G13	58 W	5200 lm white	on request

Series nLLK 08... and nLLM 08...

Type	Order No.
Hexagon screw SW 13	3 2485 000 005

Series nLLM 08018/18 and nLLM 08036/36

Type	Order No.
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	2 2218 602 000

Fixing materials nLLK 08

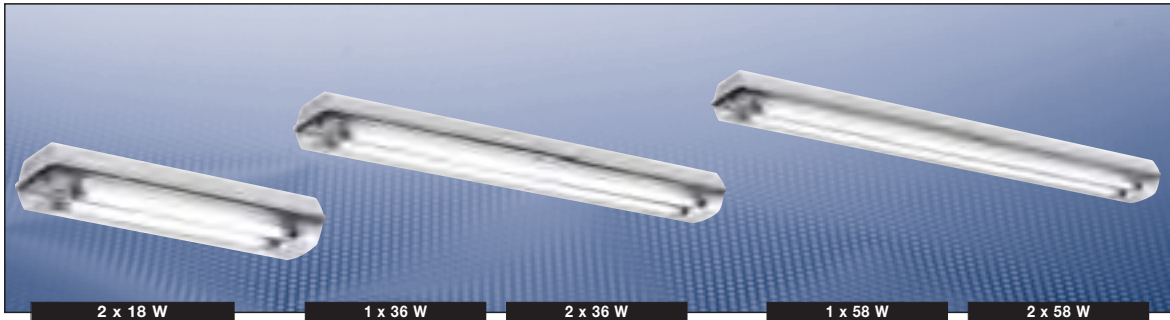
Type/code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Hexagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	2 2480 092 000

Fixing materials nLLK 08... and nLLM 08...

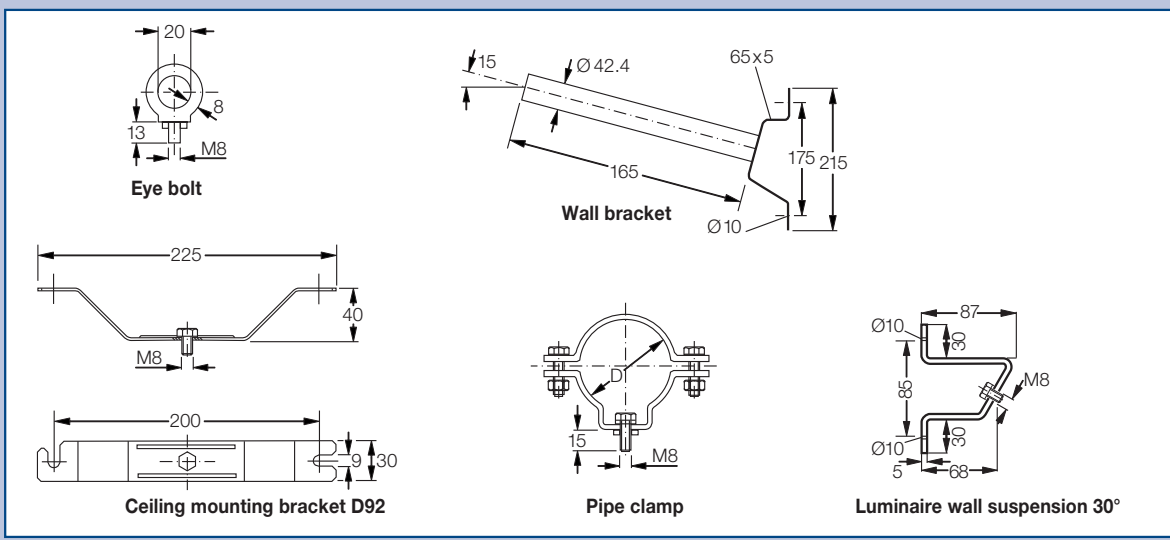
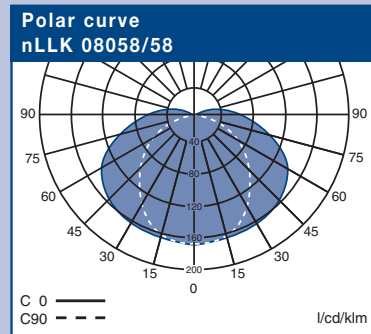
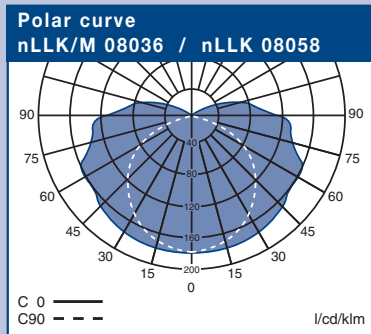
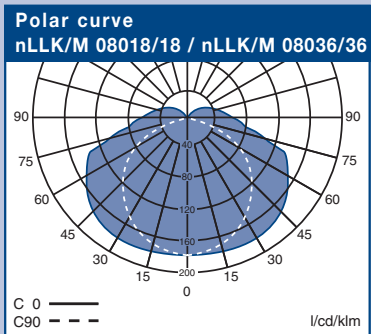
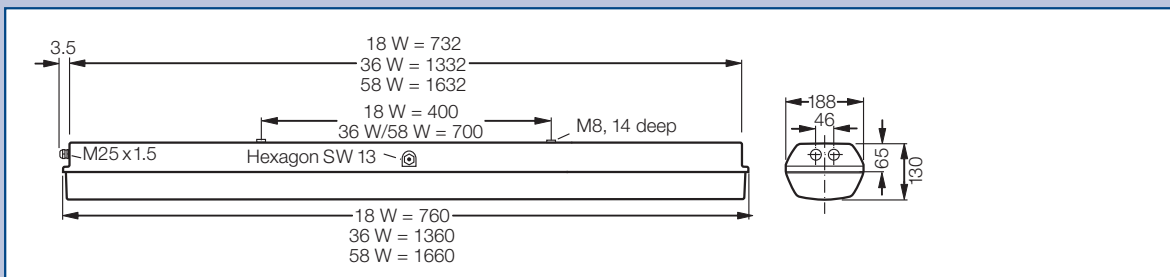
Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp					
R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R24	CrNi	1 1/2"	47 - 51	2	2 2480 474 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
R34	CrNi	2"	56 - 60	2	2 2480 484 000
Wall bracket W27	hot galvanized		42.4	1	2 2483 027 000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	2 2480 000 122

Metal cable glands M20/M25 see page 8.10.

Complete Mounting Systems see page 2.70 to 2.76.



Dimension drawing | Polar curve | Accessories



Dimensions in mm

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EX - EMERGENCY LIGHT FITTINGS

nLLK 08...N 18 - 36 W
Plastic version for Zone 2 and Zone 21/22

The explosion-protected light fittings of the series nLLK 08 N are conform to the requirements of the ATEX-Directive 94/9/EC. They are designed and tested acc. to the latest standard IEC EN 60079-15 for Ex equipment for use in zone 2 and EN 61241-1 for use in Zone 21 and Zone 22 of dust Ex-areas.

They are equipped with electronic ballasts (EVGs) for G13 bi-pin fluorescent lamps and are available for 18 W and 36 W.

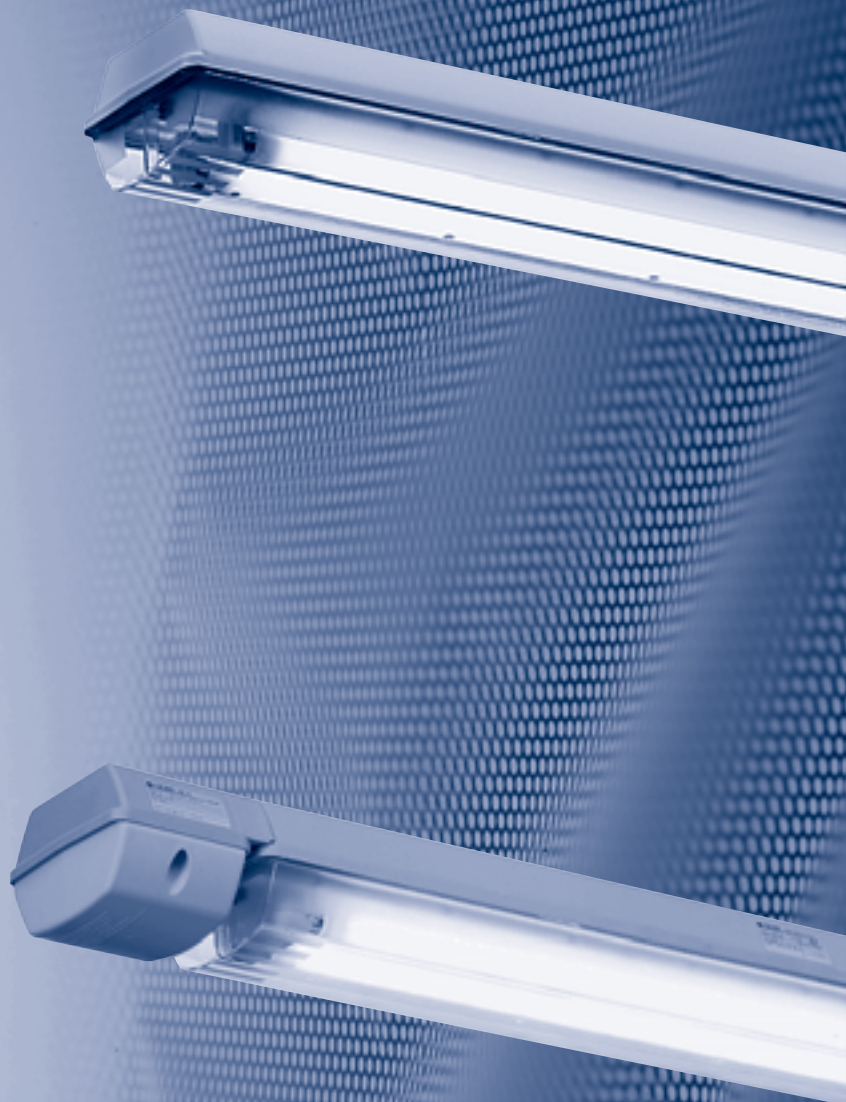
Additionally it fulfills the relevant requirements „End of Life“ (EOL) acc. IEC 60079-7 for explosion protected fluorescent light fittings design „increased safety“ as well as for mains operation and for emergency light operation. Additionally the light fittings fulfill the requirements acc. EN 60598 part 2-22 for emergency light fittings.

They are fitted with a self contained battery for maintained and non maintained mode.

The light fitting has an emergency lighting duration time of 1.5 h, alternativ 3.0 h and a green indication LED for charging current and fault indication.

The standard single-sided through-wiring architecture in conjunction with the generously large terminal compartment offers a cost efficient installation.

Double-sided lock with 10 resp. 20 latch points allows the protective bowl to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the right side. Maintenance-friendly the self-contained battery is mounted beneath a reflector-flap. Versions with double sided through wiring have a flanged battery housing.



Cost efficient installation due to single-sided through-wiring

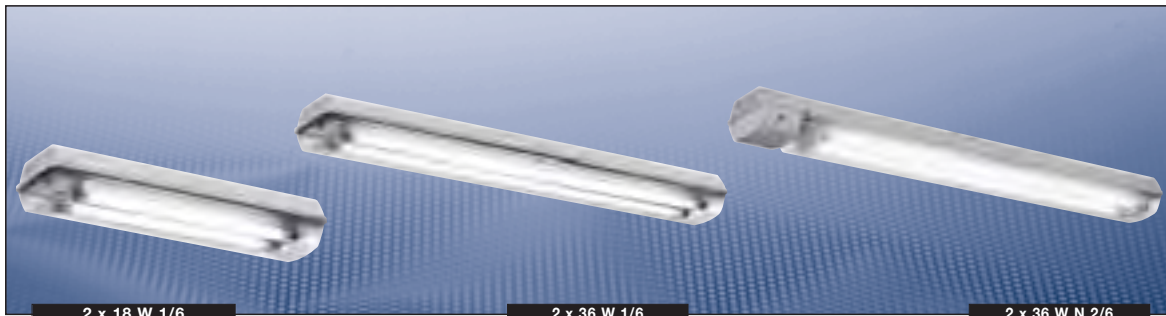
With electronic ballast incl. EOL set-up

Double-sided safety lock

High degree of protection IP66

Self-contained NC-battery for emergency lighting 1.5 h, alt. 3.0 h

Easy battery change



Technical data

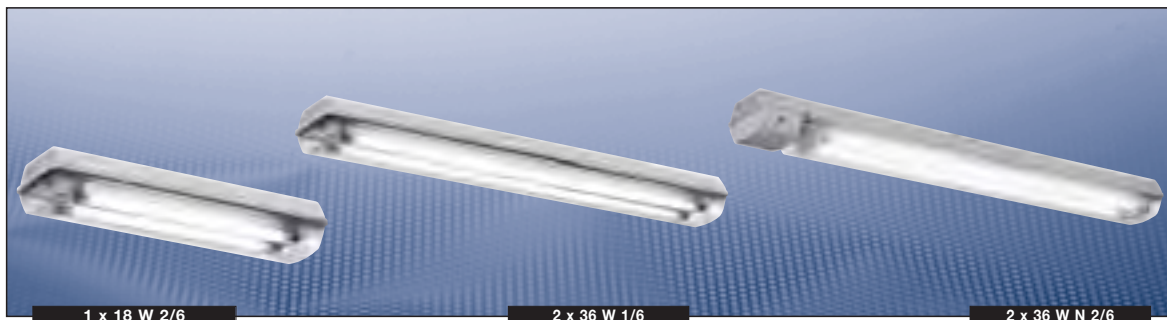
nLLK 08018/18 N 1/6	nLLK 08018/18 N 2/6	nLLK 08036/36 N 1/6	nLLK 08036/36 N 2/6
Marking to 94/9/EC		⚠ II 3 G Ex nA de/de mb IIC T4 ⚠ II 3 D Ex tD A22 IP66 T80 °C ⚠ II 2 D Ex tD A21 IP66 T80 °C	
Examination Certificate		BVS 09 ATEX E 147	
EC-Type Examination Certificate		BVS 09 ATEX E 162	
Permissible ambient temperature		-25 °C to + 45 °C / -25 °C to +40 °C (2 x 36 W 2/6) (specified data: -5 °C to +35 °C)	
Rated voltage		220 V - 240 V AC	
Frequency		50 - 60 Hz	
Power factor cos φ		≥ 0.95	
Circuit		EVG with emergency lighting supply	
Connecting terminals		L1, L2, L3, L, N, PE, max. 2 x 6 mm ² per terminal	
Insulation class		I	
Lamp cap		G13 accd. to IEC 60081	
Light efficiency in operation		78%	
Rated emergency operation duration		1.5 h / 3 h	
Charging duration		> 24 h	
Degree of protection accd. EN 60529		IP66	
Cable glands/gland plates/enclosure drilling ¹⁾		Ex e cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm Option: M20 x 1.5 metal thread	
Enclosure material		Glass-fibre reinforced polyester	
Protective cover/protective bowl		Polycarbonate	

	nLLLK 08018/18 N 1/6	nLLLK 08018/18 N 2/6 ²⁾
Rated current	0.18 A	0.18 A
Lamp/illuminant	2 x T26 / 18 W	2 x T26 / 18 W
Rated luminous flux ¹⁾	2700 lm	2700 lm
Luminous flux in emergency operation (1.5 h, one lamp) ¹⁾	880 lm (65 %)	880 lm (65 %)
Luminous flux in emergency operation (3 h, one lamp) ¹⁾	415 lm (30 %)	415 lm (30 %)
Battery	6 V/4 Ah NC Accu	6 V/4 Ah NC Accu
Dimensions (L x W x H)	760 x 188 x 130 mm	900 x 130 x 188 mm
Weight	approx. 4.5 kg	approx. 6.0 kg

	nLLK 08036/36 N 1/6	nLLK 08036/36 N 2/6 ²⁾
Rated current	0.36 A	0.36 A
Lamp/illuminant	2 x T26/ 36 W	2 x T26/ 36 W
Rated luminous flux ¹⁾	6700 lm	6700 lm
Luminous flux in emergency operation (1.5 h, one lamp) ¹⁾	1200 lm (36 %)	1200 lm (36 %)
Luminous flux in emergency operation (3 h, one lamp) ¹⁾	---	1040 lm (31 %)
Battery	6 V/4 Ah NC Accu	6 V/4 Ah NC Accu (1.5 h), 6 V/7 Ah NC Accu (3.0 h)
Dimensions (L x W x H)	1360 x 188 x 130 mm	1500 x 130 x 188 mm
Weight	approx. 6.8 kg	approx. 8.3 kg (1.5 h), approx. 9.3 kg (3.0 h)

¹⁾ depends on used lamps

²⁾ Version 2/6 with separate battery housing



Ordering details

Type	Connecting terminals	Through-wiring		With M25 plastic cable glands	For M20 metal ²⁾ cable glands	Rated emergency lighting operation	Order No.
		single-ended	double-ended				
Type nLLK 08018/18 N 1/6 (2 x 18 W)							
1/6-1	1 x 6	X	–	X	–	1.5 h	1 3470 218 001
1/6-1 M ¹⁾	1 x 6	X	–	–	X	1.5 h	1 3470 218 031
1/6-1	1 x 6	X	–	X	–	3 h	1 3469 218 001
1/6-1 M ¹⁾	1 x 6	X	–	–	X	3 h	1 3469 218 031
Type nLLK 08018/18 N 2/6 (2 x 18 W) ³⁾							
2/6-2	2 x 6	–	X	X	–	1.5 h	1 3470 218 011
2/6-2 M ¹⁾	2 x 6	–	X	–	X	1.5 h	1 3470 218 131
2/6-2	2 x 6	–	X	X	–	3 h	1 3469 218 011
2/6-2 M ¹⁾	2 x 6	–	X	–	X	3 h	1 3469 218 131
Type nLLK 08036/36 N 1/6 (2 x 36 W)							
1/6-1	1 x 6	X	–	X	–	1.5 h	1 3470 236 001
1/6-1 M ¹⁾	1 x 6	X	–	–	X	1.5 h	1 3470 236 031
Type nLLK 08036/36 N 2/6 (2 x 36 W) ³⁾							
2/6-2	2 x 6	–	X	X	–	1.5 h	1 3470 236 011
2/6-2 M ¹⁾	2 x 6	–	X	–	X	1.5 h	1 3470 236 131
2/6-2	2 x 6	–	X	X	–	3 h	1 3469 236 011
2/6-2 M ¹⁾	2 x 6	–	X	–	X	3 h	1 3469 236 131

¹⁾ M: with metal thread, without cable gland

²⁾ With dustcover if entry/thread is not closed

³⁾ Version 2/6 with separate battery housing

Version with integrated isolating switch on request

Scope of delivery without lamp and fixing accessories

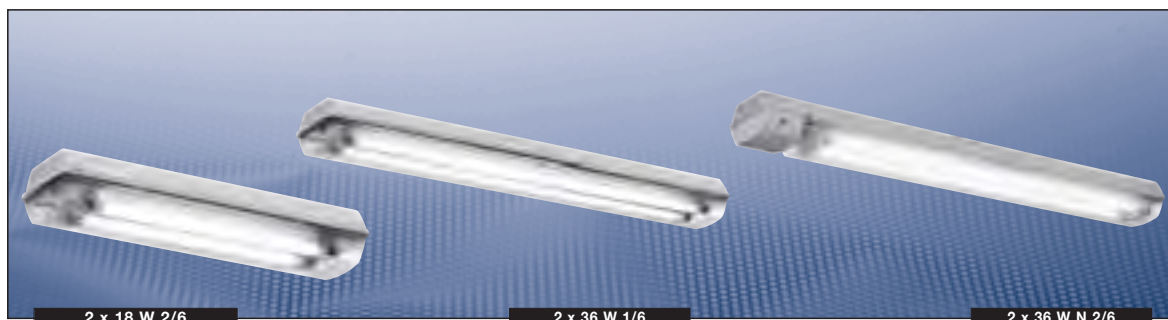
Accessories

Lamp for luminaire nLLK08... N/nLLM08... N

Type of lamp socket/ Diameter	Power	Luminous flux Light colour	Order No.
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2220-1	18 W	1350 lm white	3 2475 900 001
Bi-pin socket G13 T26/Ø 26 mm (T8) G13-60081-IEC-2420-1	36 W	3350 lm white	3 2475 900 002
Aura-Ultimate T26/Ø 26 mm (T8) Longlife Socket G13	18 W 36 W	1300 lm white 3350 lm white	3 2475 900 087 3 2475 900 088

Metal cable glands M20/M25 see page 8.10.

Complete Mounting Systems see page 2.70 to 2.76.



Accessories

Series nLLK 08... N

Type	Order No.
Hexagon screw SW 13	3 2485 000 005

Series nLLK 08... N

Type	Order No.
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	2 2218 602 000

Fixing materials nLLK 08... N

Type/code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Hexagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	2 2480 092 000

Fixing materials nLLK 08... N

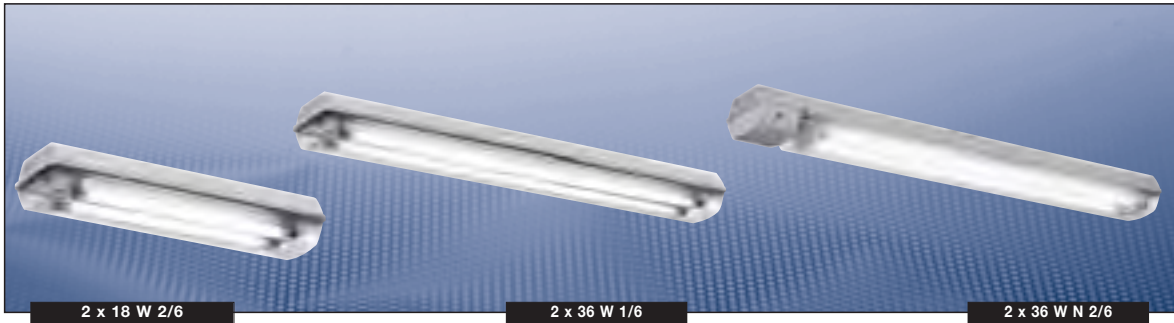
Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R24	CrNi	1 1/2"	47 - 51	2	2 2480 474 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
R34	CrNi	2"	56 - 60	2	2 2480 484 000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	2 2480 000 122

Battery nLLK 08... N

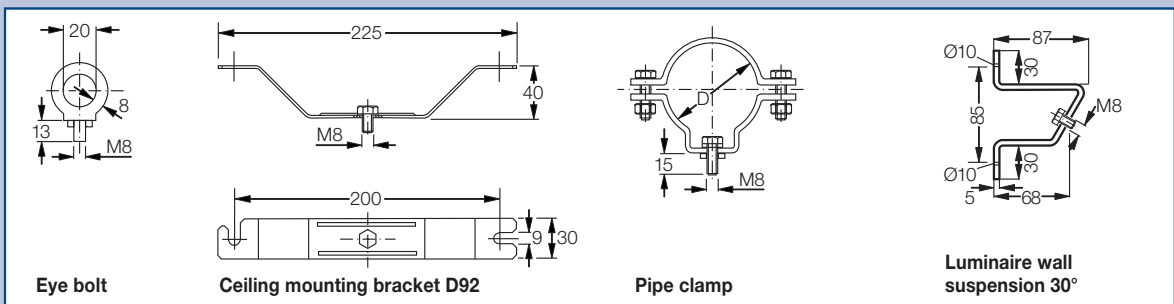
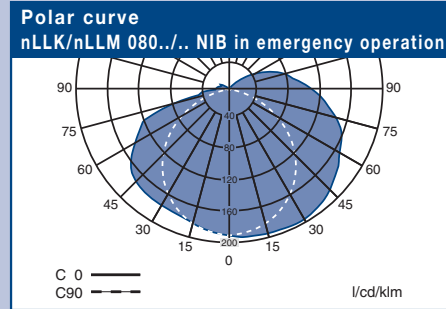
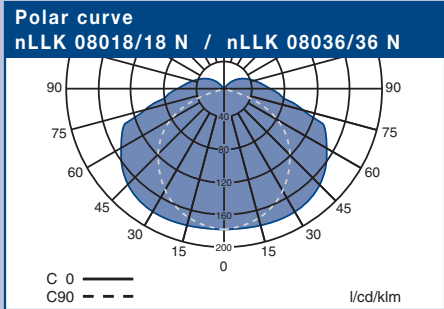
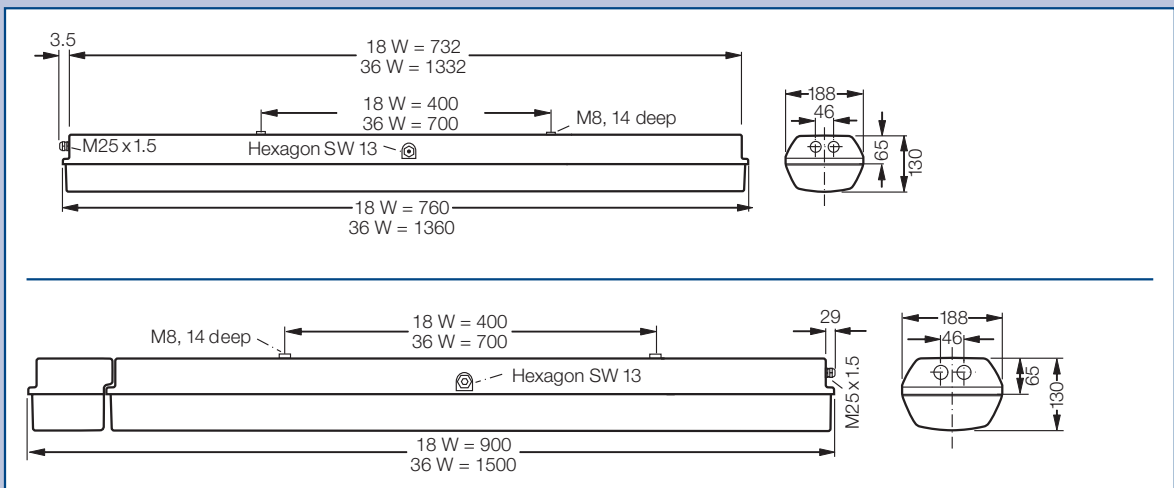
Type	Order No.
nLLK 08... N 1/6, nLLK 08... N 2/6	
Battery set 6 V/4 Ah (... 18/18 N 1/6, 1.5 h and 3 h, 36/36 N 1/6, 1.5 h)	2 3468 236 902
Battery set 6 V/4 Ah (... 18/18 N 1/6, 1.5 h and 3 h, 36/36 N 1/6, 1.5 h)	2 3468 236 903
Battery set 6 V/7 Ah (... 36/36 N 2/6, 3 h)	2 3468 236 904

Metal cable glands M20/M25 see page 8.10.

Complete Mounting Systems see page 2.70 to 2.76.



Dimension drawing | Polar curve



Dimensions in mm

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E X P H O T O R E L A Y

for use in Zone 1 and 2

This photorelay can be used for comfortable and automatic control of the illumination in hazardous areas.

This screw-in photorelay is proved for the direct installation in ex-d and ex-e enclosures.

The electronic and the photoelectric sensor is encapsulated in a flameproof light alloy enclosure with a M32 x 1.5 mm threaded connection. The encapsulated connection cables are 1.5 mm² and 500 mm long.

The photoelectric relay has an electronic circuit with low power consumption of approximately 0.3 W, operates with 105 VAC up to 305 VAC 50/60Hz and has a rated current of 10 A resp. a power of up to 1800 VA.

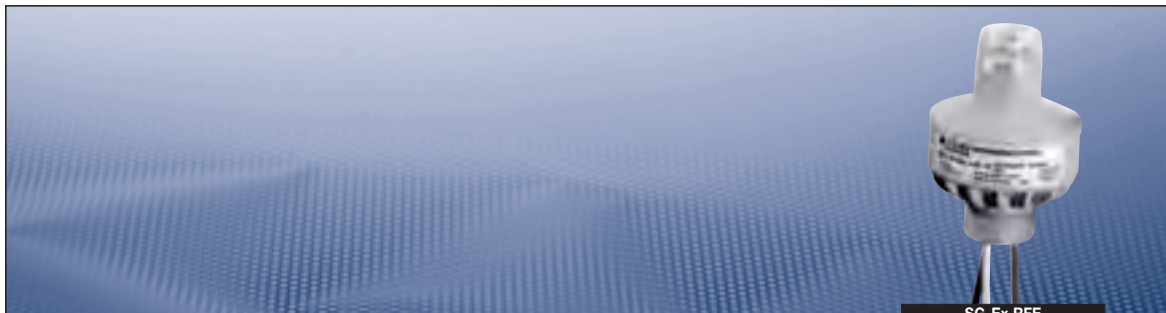
It turns ON immediately but has a 2 to 5 second delay in turning OFF to avoid accidental switching due to a flash, with a high degree of precision in recognizing the light level (lumens) and maintaining its sensibility over a long period of time.



Switching capacity up to 1000 W (1800 VA)

High degree of protection IP66

Easy to install



SG-Ex RFE

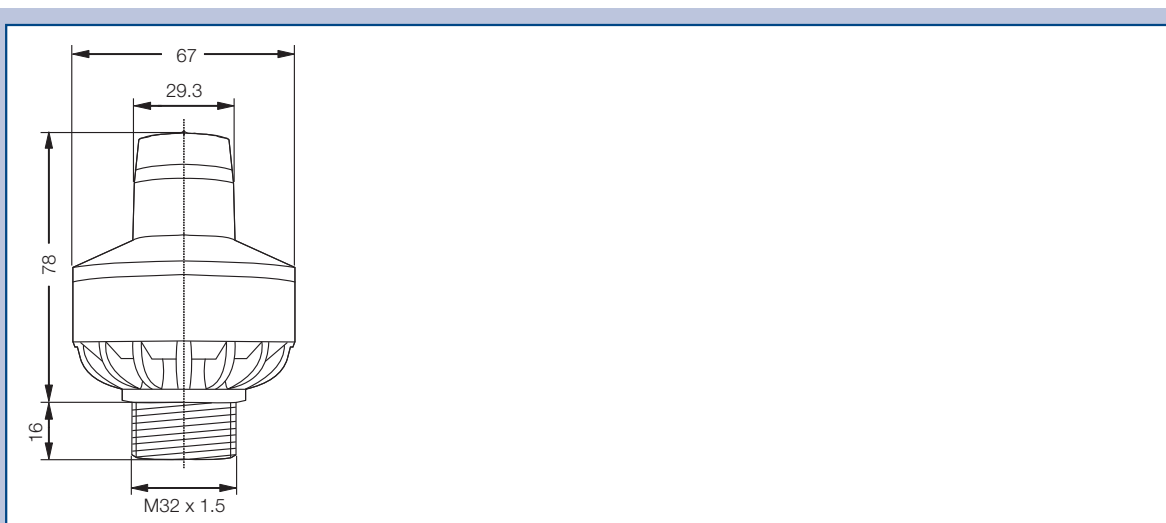
Technical data

SG-Ex RFE	
Marking to 94/9/EC	Ⓔ II 2 G Ex d II C T6
EC-Type Examination Certificate	PTB 06 ATEX 1017 X
Permissible ambient temperature	-40 °C to +70 °C
Rated voltage	105 V to 305 V AC
Rated current	max. 10 A
Frequency	50 - 60 Hz
Power consumption	1 W
Switch rating	1000 W (1800 VA)
Standard cable length	approx. 0.5 m, 1.5 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66
Weight	0.25 kg
Type of mounting	Screw in thread M32 x 1.5
Enclosure material	Light alloy
Enclosure colour	Grey

Ordering details

Type	Design	Order No.
Photocell SG-Ex RFE	Sensitivity 10 – 15 lux	GHG 640 9601 P0001
Photocell SG-Ex RFE	Sensitivity 7 – 12 lux	GHG 640 9601 P0002
Photocell SG-Ex RFE	Sensitivity 4 – 11 lux	GHG 640 9601 P0003

Dimension drawing



Dimensions in mm

F I X I N G S Y S T E M S

Complete Systems for Light Assembly

Individual assembly system for installing lamp systems can often be realised only at high cost with one-off manufacture. The patented Complete Assembly System stands for low-cost standard fixings for lighting elements on industrial rails, on walls or steel beam constructions.

Stability and Material

A specially developed shaping method is used for this programme, which ensure a high degree of stability. Stainless steel with optimised material strength is used where aggressive media determine the environment. Components that are not made of stainless steel are hot-galvanised pursuant to DIN EN ISO 1461.

Assembly

The assembly systems have been designed for inside and outside. The compact system kits can be assembled by only one person in a very short time. All individual parts are simply plugged together and fastened by a screw. Since there is no need for drilling or welding here, it is possible to work without the "work release system" in the areas at risk of explosions.

Safety

The assembly system is always installed from the safe side of the working platform, i.e. without scaffolding! The prescribed freedom for hands and the avoidance of jutting metallic parts or screws in the construction offers a high standard of safety.

Cost-Saving Maintenance

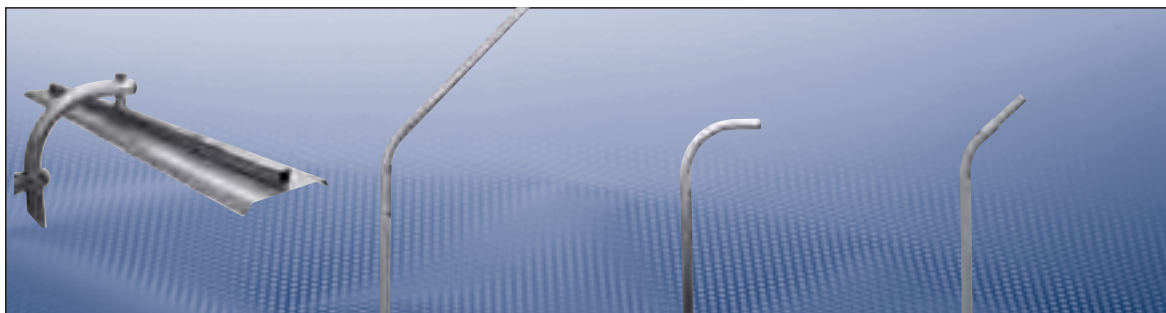
The use of tilting luminaire masts results in decisive cost advantages due to minimised maintenance. Thus, for example, changing a lamp without scaffolding or assembly aids is possible for just one person in a very short time. Cleaning and repair work can thus be minimised in terms of cost

Easy to install

Corrosion protected
(stainless steel or hot galvanized)

Extra solid construction ensures
high wind load resistance





Ordering details

Type	Description	OU	Order No.
Pole-system 90° bended for light support pipe			
LM 48 - 2300/300 - FT	Light pole 90° bended with drilling hole f. LTR 48 and LTRS 48	1	2 2480 520 001
LM 48 - 1900/300 - FT	Light pole 90° bended with drilling hole f. LTR 48 and LTRS 48	1	2 2480 520 002
LTR 48 - 600 - FT	Light fitting support pipe with cable outlet	1	2 2480 530 001
LTR 48 - 1200 - FT	Light fitting support pipe with cable outlet	1	2 2480 530 002
LTR 48 - 1500 - FT	Light fitting support pipe with cable outlet	1	2 2480 530 003
LTRS 48 - FT	Light fitting support pipe clamp 90° twisted	1	2 2480 550 012
Pole-system 45° bended			
LMZ 48 - 1900/190 - FT	Light pole 45° bended, for pole mounted light fittings	1	2 2480 520 006
LM 48 - 1900/190 - FT	Light pole 45° bended, p. e. for floodlights	1	2 2480 520 007
LMP 48 - 1900/1300 - FT	Light pole whip form 45°, bended	1	2 2480 520 003
LMP 48 - 2100/1300 - FT	Light pole whip form 45°, bended	1	2 2480 520 004
LMP 48 - 2100/800 - FT	Light pole whip form 45°, bended	1	2 2480 520 005
Light pole fixtures			
LMHK 48/48 - ER	Light pole clamp, swivel, with pole slip protection	1	2 2480 550 004
LMHS 48/48 - FT	Light pole clamp, fixed	1	2 2480 550 002
LMHSD 48/48 - FT	Light pole clamp, fixed, with pole slip protection	1	2 2480 550 003
Light poles, bended, for wall mounting			
LMW 48 - 500/1300 - FT	Wall mounted light pole whip form, 45° bended, with cable outlet	1	2 2480 520 009
LMW 48 - 500/800 - FT	Wall mounted light pole whip form, 45° bended, with cable outlet	1	2 2480 520 008
LMHW 48 - FT	Light pole fixture for wall mounting, set 2 pcs.	1	2 2480 550 001

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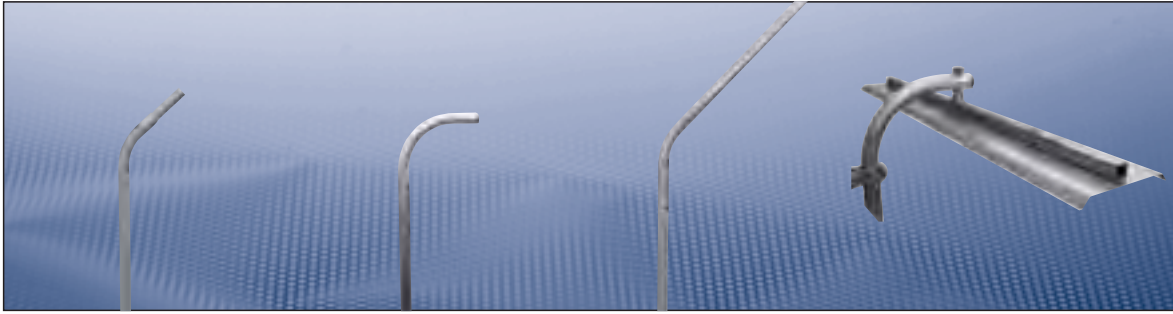
8

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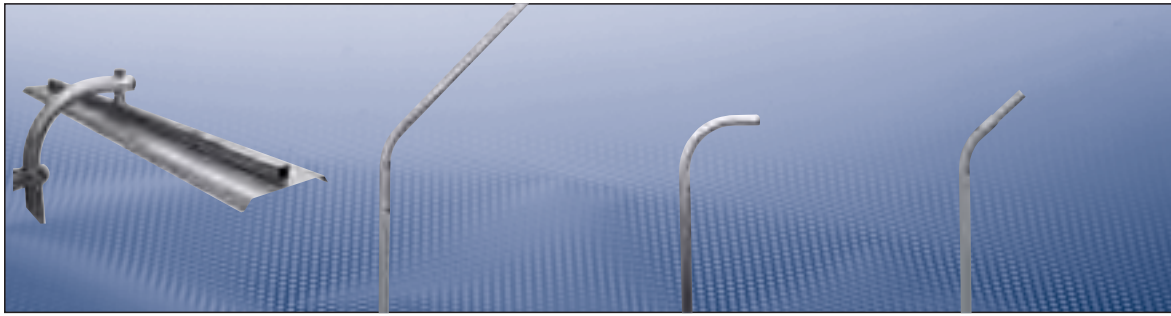
12



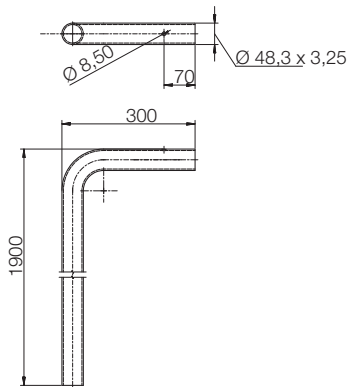
Accessories

Fixing accessories

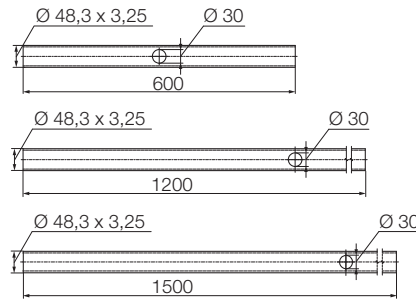
Type/code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	OU	Order No.
Pipe clamp						
R12	hot galvanized	Ø 1¼"	38-42 mm	set 2 pcs.	1	2 2480 462 000
R22	hot galvanized	Ø 1½"	47-51 mm	set 2 pcs.	1	2 2480 472 000
R32	hot galvanized	Ø 2"	56-60 mm	set 2 pcs.	1	2 2480 482 000
R14	stainless steel	Ø 1¼"	38-42 mm	set 2 pcs.	1	2 2480 464 000
R24	stainless steel	Ø 1½"	47-51 mm	set 2 pcs.	1	2 2480 474 000
R34	stainless steel	Ø 2"	56-60 mm	set 2 pcs.	1	2 2480 484 000
Light fitting mounting clamp, two-part, for pipe mounting						
LB 48 - FT	hot galvanized			set 2 pcs.	1	2 2480 550 010
C-bracket for light fitting mounting						
LAB-C50 - ER	stainless steel			set 2 pcs.	1	2 2480 550 011
Eye bolt						
A 2	hot galvanized			set 2 pcs.	1	2 2480 002 000
Luminaire wall suspension with 15° angle, for pole mounted light fittings						
W 27	hot galvanized			-	1	2 2483 027 000
Luminaire wall suspension with 30° angle for wall mounting						
LH 30 - FT	hot galvanized			set 2 pcs.	1	2 2480 550 013
Luminaire wall suspension with 45° angle for wall mounting						
LH 45 - FT	hot galvanized			set 2 pcs.	1	2 2480 550 014
Stainless steel hexagon screw M8 für light fixing						
S 4	stainless steel			set 2 pcs.	1	2 2480 054 000
Stainless steel ceiling mounting bracket						
D 92	stainless steel			set 2 pcs.	1	2 2480 092 000
End cap, open with cable outlet						
SEO 48 - K	plastic				1	2 2480 550 015
End cap, closed						
SEG 48 - K	plastic				1	2 2480 550 016
Canopy for fluorescent light fittings						
LSD 1200 - ER 1200 mm length	stainless steel				1	2 2480 540 001
Canopy for fluorescent light fittings						
LSD 1600 - ER 1600 mm length	stainless steel				1	2 2480 540 002
Hexagon nut driver						
SW 13					1	3 2485 000 005



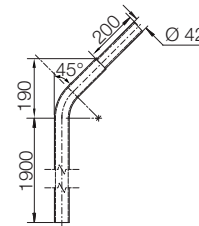
Dimension drawing



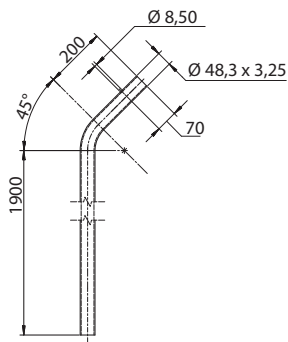
Light pole 90° bended LM 48



Light fitting support pipes LTR 48



Light pole 45°, bended for pole mounted light fittings, LMZ 48



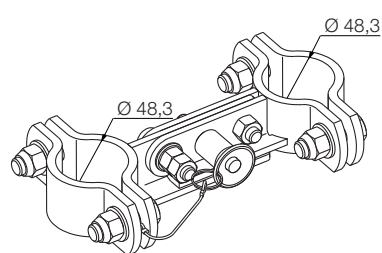
Light pole 45°, bended for floodlights LM 48



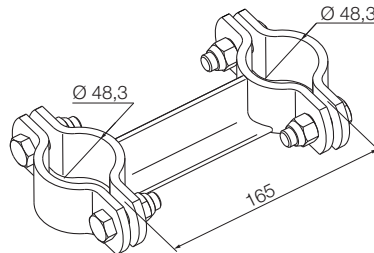
Light fitting support pipe clamps LTRS 48



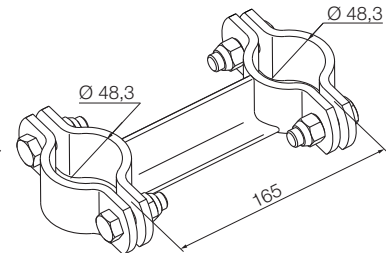
Light pole 45°, bended LMP 48



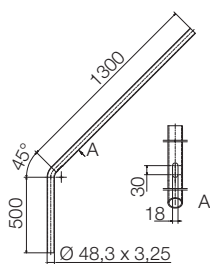
Light pole clamp LMHK



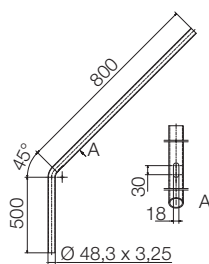
Light pole clamp LMHS



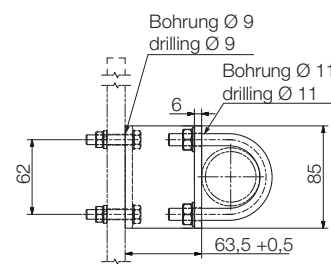
Light pole clamp LMHSD



Light pole wall bracket LMW 48

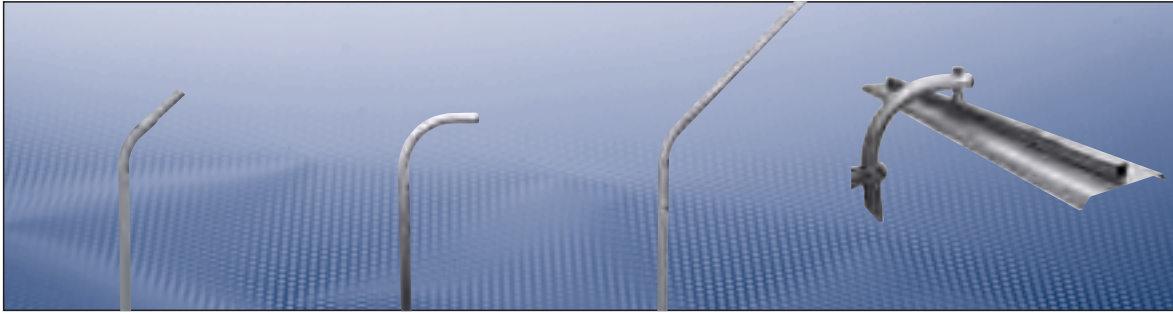


Light pole wall bracket LMW 48

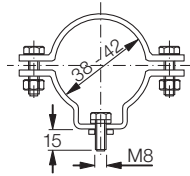


Light pole fixing LMHW 48

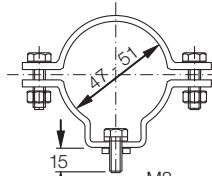
Dimensions in mm



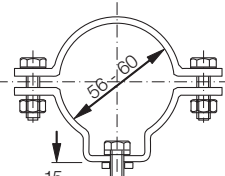
Dimension drawing Accessories



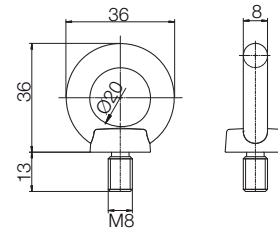
**Pipe clamp
R12/R14**



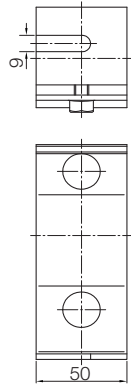
R22/R24



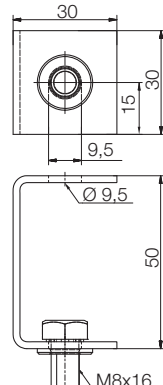
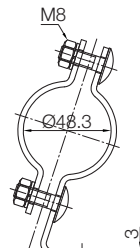
R32/R34



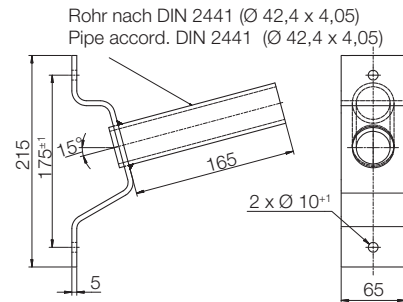
Eye bolt A 2 for light fitting mounting



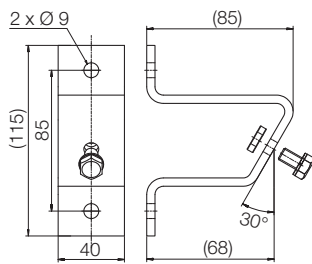
**Light fitting mounting clamp, two-part
LB 48**



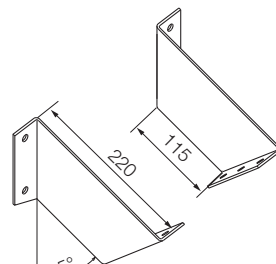
**C-bracket for light fitting mounting
LAB-C50**



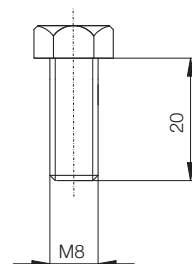
**Luminaire wall suspension
for pole mounted light fittings W 27**



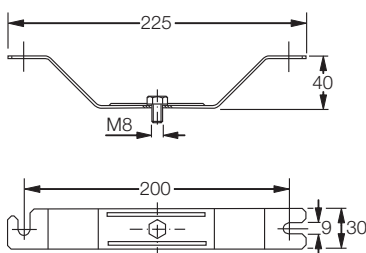
**Luminaire wall suspension
with 30° angle LH 30**



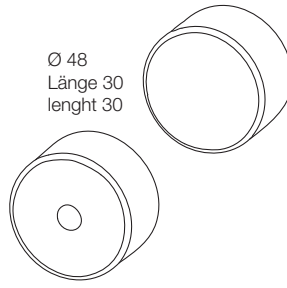
**Luminaire wall suspension
with 45° angle LH 45**



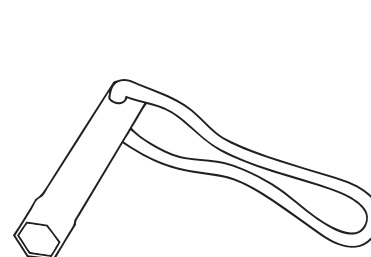
Hexagon screw S 4 for light fixing



Ceiling mounting bracket D92

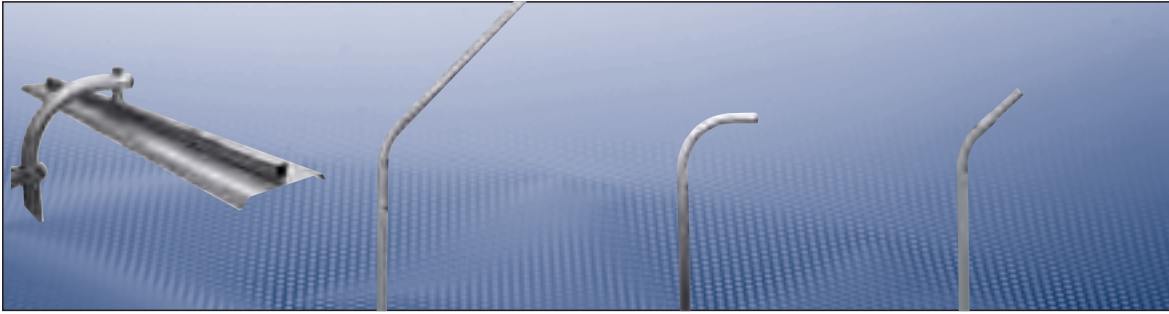


End caps SED 48/SEG 48

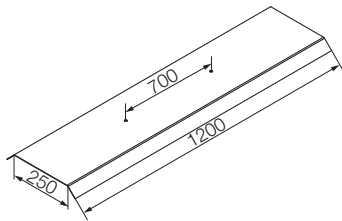


Hexagon nut driver SW13

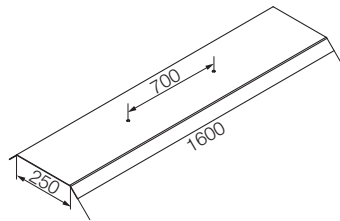
Dimensions in mm



Dimension drawing Accessories



Canopy for fluorescent light fittings 18 W
LSD 1200



Canopy for fluorescent light fittings 36 W
LSD 1600

Dimensions in mm

EX-SIGNAL- AND ESCAPE SIGN LUMINAIRES

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EMERGENCY LIGHTING – CENTRAL OR DECENTRAL

3.2

EX-ESCAPE SIGN LUMINAIRES EXIT

3.4

EX-ESCAPE SIGN LUMINAIRES EX-LITE

3.10

EX-EMERGENCY LIGHT FITTING AB 12108-EVG

3.16

EX-EMERGENCY LIGHT FITTING EE11 PL

3.16

EX-SIGNAL- AND EMERGENCY LIGHT FITTING dKLK 23

3.20

10

11

12



Emergency Lighting – central or decentral

Appertaining to Emergency Lighting in hazardous areas, there are two general philosophies. That of the supply assurance, the test and maintenance effort and that of the economic efficiency.

Emergency light fittings with a self-contained battery system

Emergency light fittings with self-contained battery systems provide the required Emergency lighting decentral, independent from central systems. That means the battery, the charger and the electronics are integrated in the light fitting.

Taking the availability and the redundancy into consideration, this system has with respect to the supply assurance in safety engineering sensible areas a very high standard.

Taking the economic efficiency into consideration, the required effort of testing, maintenance and the environmental effect on the battery life span of each self-contained battery system has to be taken into account.

Taking the above into consideration it is without reason the best solution when emergency light fittings with a self-contained battery system are used in large and spacious explosion hazardous areas where the number of fittings to be used is limited.



Escape sign luminaire Ex-Lite N



Ex-Escape sign luminaire EXIT

The CEAG Emergency light fittings with self-contained battery systems EXIT N, Ex-Lite E (in preparation) and EE 11 PL have been designed for a 3 hour or 1 hour Emergency Lighting duration. They do in part have an automatic self-test system for functionality and duration tests.



Ex-Emergency Light Fitting EE11 PL



Central Emergency Lighting Supply using system light fittings with CG-S-Modules

A centrally monitored emergency light system using the CEAG group supply and a central battery system is installed when a large number of emergency lights are conglomerated and can be used as a system emergency lighting.

These battery systems are generally, not installed in the hazardous areas and therefore do not have to cope with the same environmental conditions as the light fittings themselves. This usually results in an extended life span of the batteries with a minimized maintenance effort. One must of course take into consideration that the cable laying from the central battery to each light fitting in the hazardous areas affords an increased effort.

To be able to run the CEAG emergency light system we offer versions with CG-modules for the emergency and escape sign fittings. This controlling module monitors amongst other things the data exchange with the main emergency lighting system and reports all functional errors.

In connection with the CG-S-Modules all CEAG light fittings that are so equipped have the possibility of being connected to the CEAG emergency light system with monitoring facility. This means that each individual light fitting can be monitored individually.

With this the explosion-protected light fittings EXIT CG-S, Ex-Lite CG-S (in preparation), dKLK 23 CG-S and the AB 12108-EVG can be integrated into the monitoring system and be used as system light fittings.

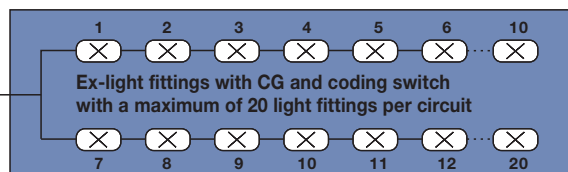
This combination offers the following advantages:

- Automatic performance of the necessary function and duration tests with a central record of all operating functions and error reports
- Enormous cost savings as manual testing is no longer necessary
- Programming function to enable a multiple lighting modus on a single power supply circuit; that means a choice of permanent or stand-by modus as well as a switching with the general lighting.
- High degree of safety of emergency lighting due to constant display of availability
- Simplified installation:
 - mains and emergency power supply have a common connection
 - no separate data line is required
 - up to 20 light fittings can be connected and addressed separately on one circuit

Non-hazardous area CEAG Emergency supply system



One line, e.g. 3 x 1.5 mm², for both the mains and the emergency power supply



EX - ESCAPE SIGN LUMINAIRES

EXIT
Moulded plastic version with LED technology for Zone 1 and Zone 21

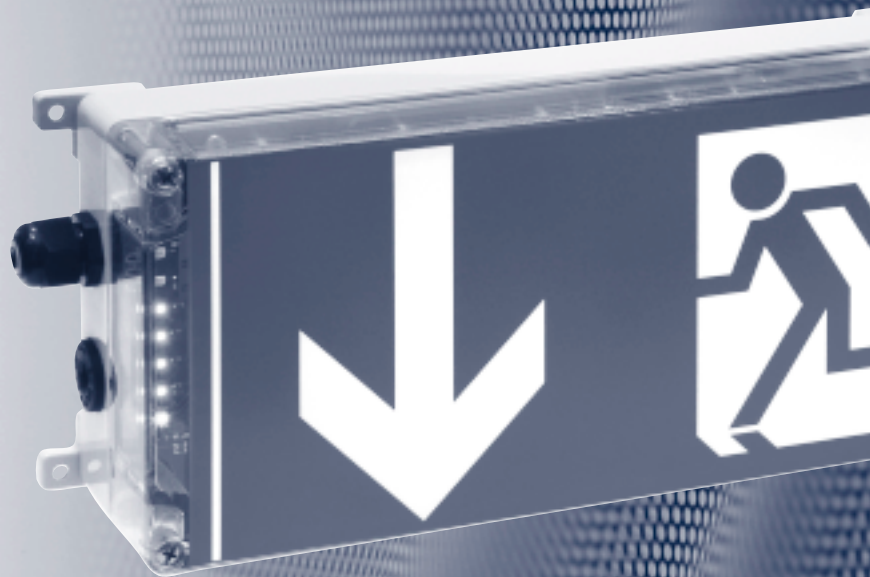
The EXIT series of explosion-protected escape sign luminaire fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Section 2.22 for emergency lighting luminaires. The luminaires are suited for marking escape routes and exits in potentially explosive atmospheres. Only white, high-efficiency LEDs are used as illuminants for these luminaires. This guarantees maintenance-free operation, as the illuminants do not need replacing throughout the complete service life of the luminaire.

The supply electronics are also laid out for this service life; the LED circuits are intrinsically safe. The wide input voltage range allows international use. The housing of these luminaires is made of high-grade polycarbonate: the escape signs comply with the latest standards.

Thanks to the robust design and high degree of protection, these luminaires are suited for both indoor and outdoor use.

As an emergency lighting luminaire with self-contained battery system for maintained operation, the EXIT N features an NC battery and automatic function monitoring with operating time test.

With the optional built-in CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can also be used as an individually monitored emergency lighting luminaire that is connected to a CEAG emergency lighting supply system. With this, the operator can programme the switching mode according to the respective requirements. Thus, as many as 20 luminaires with different switching modes can be connected to one end circuit.



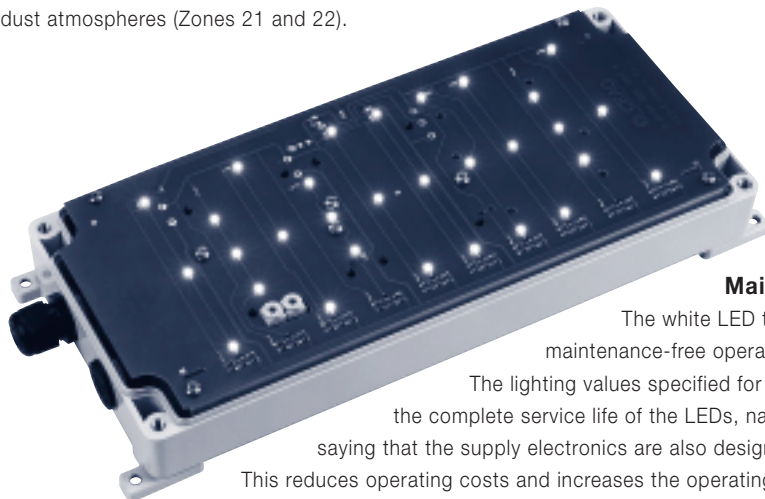
- **All-plastic polycarbonate housing**
- **Power-saving LED technology, maintenance-free throughout service life**
- **High degree of protection IP66**
- **Luminaire with self-contained battery unit and automatic function monitoring**
- **Connection and monitoring with CEAG emergency lighting supply systems possible**

For all types of application

The escape sign luminaires of the EXIT series are available as mains luminaires "EXIT", e.g. for specially safeguarded industrial networks in production plants, as "EXIT CG-S" emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, and as "EXIT-N" emergency lighting luminaires with self-contained battery systems and automatic function and operating time tests.

Green light for all zones

On account of the robust, all-plastic polycarbonate housing in the high degree of protection IP66, the EXIT luminaire can be installed almost anywhere, both indoors and out. The luminaire is designed in the type of protection EEx em ib IIC up to T6 and in accordance with the ATEX Directive. It can be used in hazardous areas with potentially explosive gas atmospheres (Zones 1 and 2) and potentially explosive dust atmospheres (Zones 21 and 22).

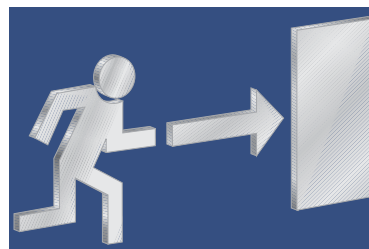


Maintenance-free operation

The white LED technology used as the light source allows maintenance-free operation without replacement of the illuminant.

The lighting values specified for the escape sign are maintained throughout the complete service life of the LEDs, namely approx. 50,000 hours. It goes without saying that the supply electronics are also designed for this extremely long operating time.

This reduces operating costs and increases the operating safety essentially, in particular in locations that are not easily accessible.

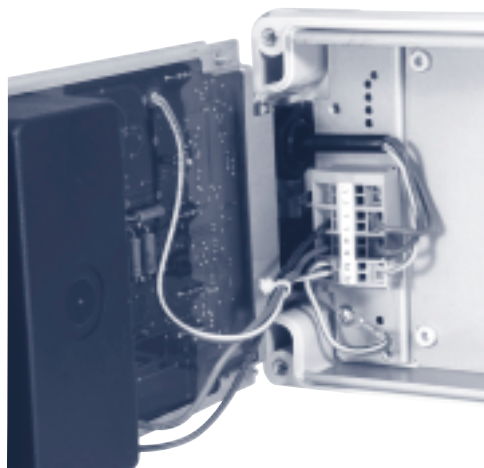


Conformity to standards

The EXIT explosion-protected escape sign luminaire series fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Part 2.22 for emergency lighting luminaires. It is suited for marking escape routes and exits in potentially explosive atmospheres. The housing of this luminaire is made of high-grade polycarbonate and it goes without saying that the escape sign comply with the latest standards.

For international use

The LED escape sign luminaire of the EXIT series was designed to meet the requirements of a large number of different safety concepts. Thanks to the wide input voltage range from 110V to 277V AC and up to 250V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe. The luminaire has a visibility range of 25 metres and it is available with a wide variety of pictograms.



Installation-friendly hinged frame for easy electrical connection

Double safety

Whenever the operational safety of explosion-protected safety



and escape sign luminaires is involved, there is no room for compromises, as only a luminaire that is fully functional at all times can save human lives. The new series of explosion-protected LED escape sign luminaires not only fulfils the extremely high explosion protection requirements, but it also fulfils the legal requirements for emergency and safety lighting installations. The new EXIT is capable of safely showing the right way to go at all times, even in complex and often badly laid out industrial installations with potentially explosive atmospheres.



Central emergency lighting supply via system luminaires with CG-S module

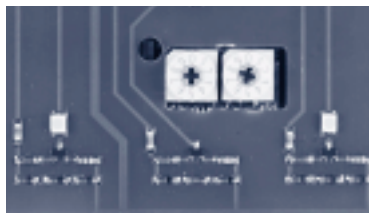
A central emergency lighting supply using CEAG group supply and central battery systems are used wherever a large number of emergency lighting luminaires can be combined and operated as system luminaires.

These battery systems are generally installed outside the hazardous areas and, therefore, they are not subjected to the ambient conditions of the luminaires in the field. As a result, the operating life of the battery is relatively long and the amount of maintenance required is minimal.

The mains and emergency lighting supplies of these luminaires are fed via separate circuits from the emergency lighting power supply installation to the escape sign luminaire in the hazardous area. Various luminaires with CG-S function can be operated in these circuits.

Better safe than sorry

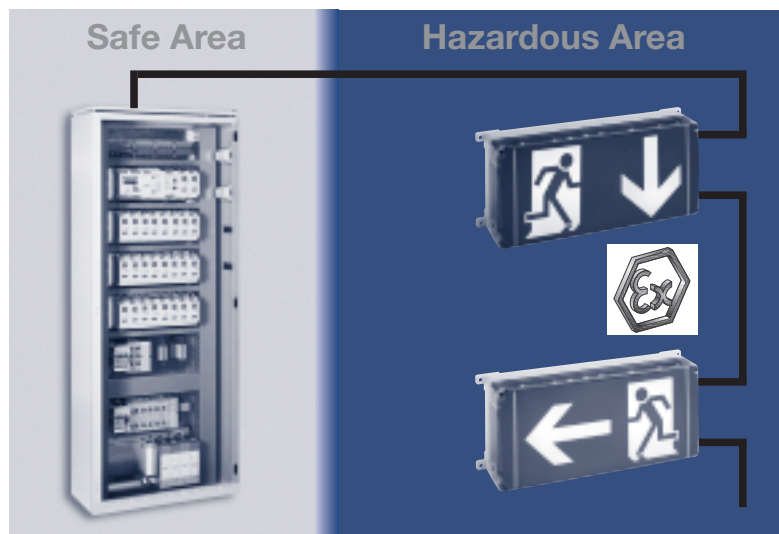
In addition to the EXIT for use as a mains luminaire, e.g. for specially safeguarded industrial networks in production plants, there is also the EXIT CG-S version with easy function monitoring. In conjunction with the CG-S monitoring module with coding switch up to 20 addresses, this luminaire can be operated as emergency lighting luminaire with individual monitoring. The operator can programme the switching mode according to his individual requirements, thus allowing the operation of up to 20 luminaires with different switching modes in one end circuit.

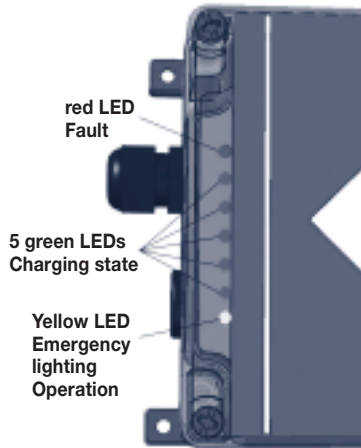


Addressing switch in the EXIT CG-S

No additional installation work is required. The central control unit monitors

all the functions of the luminaire, checks the feed line for shorts or open circuits and indicates any incidents clearly on the display. Thus, even with highly complex installations, troubleshooting and eliminating faults are not a problem. Another considerable advantage: all the function and operating time tests are carried out automatically and recorded by the central control unit. This saves no end of time and money. During this function test, the correct functioning of the luminaire is monitored by the built-in CG-S module and any faults are reported to the central control unit. Thus, for example, the failure of LED groups is indicated automatically.





Emergency lighting luminaires with self-contained battery systems

Emergency lighting luminaires with self-contained battery systems provide the required emergency lighting from a decentralized source, independent of central systems. These luminaires are particularly economical when used in extensive plants. Until now, compared to centrally operated and monitored installations, the disadvantage of the emergency lighting luminaires with self-contained battery systems was that they did not provide any information on the state of the luminaire. However, this monitoring function has been incorporated in the EXIT N escape sign luminaire. Five green LEDs supply constant information on the charging state and

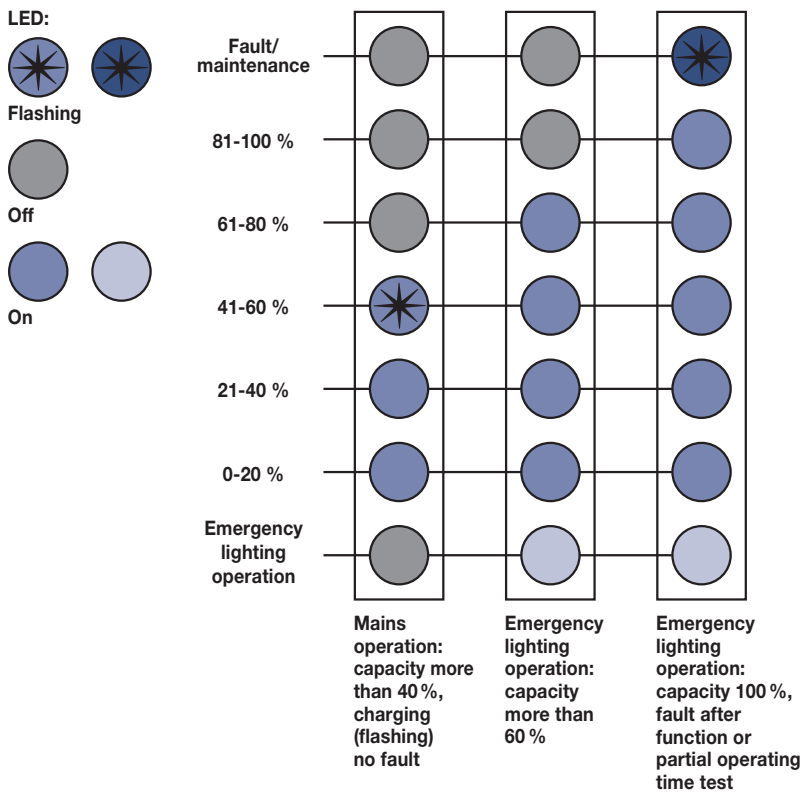
available battery capacity. A yellow LED indicates the emergency lighting operation mode and an additional red LED indicates any faults.

Monitoring functions

The extended self-monitoring with automatic function and partial duty cycle test is also new. The five green LEDs behind the protective cover provide continuous indication of the charging state and the current battery capacity. Charging is signalized by a flashing green LED. The charged capacity is indicated in 20% stages. The yellow LED indicates emergency lighting operation.

An automatic function test lasting 5 minutes is carried out on a weekly basis. For this, the luminaire is switched electronically from mains to battery operation. The emergency lighting function is tested and any faults are indicated by the flashing red LED.

After approx. 3 months a part-operating time test (35 mins.) is initiated automatically. If a minimum emergency lighting operating time of 30 minutes is not reached, it is signalized by the flashing red LED. After the cause of the fault has been eliminated, e.g. by charging or replacing the battery, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of > 30 minutes has been reached.





EXIT / EXIT CG-S

EXIT N

Technical data

EXIT | EXIT CG-S | EXIT N

Marking to 94/9/EC (new standard – applies for)	Ⓔ II 2 G EEx e m ib IIC T6/T5/T4 / Ⓔ II 2 D IP66 T60 °C Ⓔ II 2 G Ex e ib m IIC T4/T5/T6 Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 02 ATEX 2111
IECEx Certificate of Conformity	IECEx BK1 06.0003
Marking accd. to IECEx	Ex emib IIC T4/T5/T6 Ex tD A21 IP66 T60 °C
Permissible ambient temperature	-20 °C up to +40 °C / 50 °C (EXIT N: specified data +5 °C up to 35 °C)
Rated current	DC: 220 V = 20 mA, 110 V = 40 mA
Frequency	0 up to 50/60 Hz
Circuit	elektronic power supply
Connecting terminals	3 x loop terminal 2.5 mm ²
Lamp/Illuminant	high output-LEDs, white
Viewing distance	up to 25 m
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure drilling	1 x Ex e-cable gland M20 x 1.5 (plastic) / 1 x Ex e-screw plug M20 x 1.5
Dimensions (L x W x H)	340 x 150 x 75 mm
Type of mounting	wall installation
Enclosure material	polycarbonat
Enclosure colour	grey, RAL 7035
Protective cover/protective bowl	polycarbonat

EXIT | EXIT 24 V

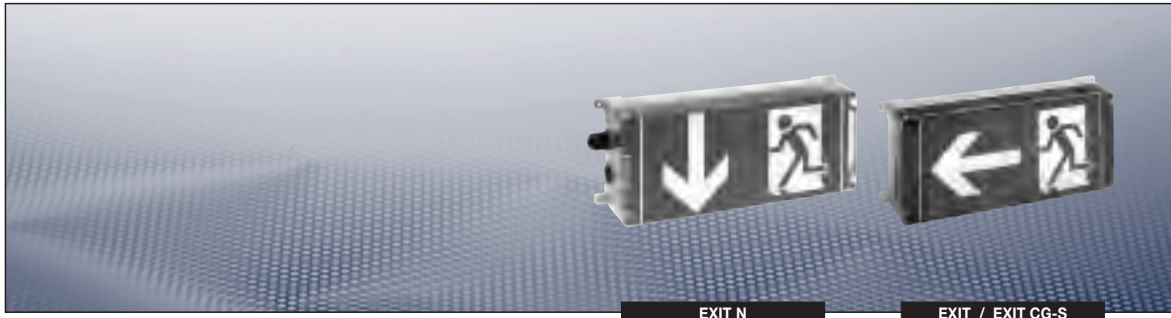
Temperature class	T6: Ta max. +40 °C, T5: Ta max. +50 °C
Rated voltage 1	110 V - 277 V AC
Rated voltage 2	110 V - 250 V DC
Rated voltage (EXIT 24V)	12 - 24 V (EXIT 24 V)
Rated power consumption	approx. 6 VA
Weight	2 kg

EXIT CG-S

Temperature class	T6: Ta max. +40 °C, T5: Ta max. +50 °C
Rated voltage 1	220 V - 254 V AC
Rated voltage 2	195 V - 250 V DC
Rated power consumption	approx. 6 VA
Weight	2.2 kg

EXIT N

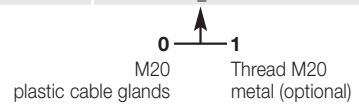
Temperature class	T5: Ta max. +40 °C, T4: Ta max. +50 °C
Rated voltage 1	110 V - 277 V AC
Rated voltage 2	110 V - 250 V DC
Rated power consumption	approx. 8 VA
Battery	NC-Akku 12 V/600 mAh
Rated emergency operating duration	3 h (specified data +5 °C up to +35)
Charging duration (Cap. >90 %)	28 h
Weight	2.5 kg



Ordering details

Type	Scope of delivery ¹⁾	Ordering Code
EXIT		
	including cover with silk-screen pictogram PR	1 2191 000 _01
	including cover with silk-screen pictogram PL	1 2191 000 _02
	including cover with silk-screen pictogram PU	1 2191 000 _03
	including cover, clear, without pictogram	1 2191 000 _04
EXIT CG-S		
	including cover with silk-screen pictogram PR	1 2191 020 _01
	including cover with silk-screen pictogram PL	1 2191 020 _02
	including cover with silk-screen pictogram PU	1 2191 020 _03
	including cover, clear, without pictogram	1 2191 020 _04
EXIT N		
	including cover with silk-screen pictogram PR	1 2191 030 _01
	including cover with silk-screen pictogram PL	1 2191 030 _02
	including cover with silk-screen pictogram PU	1 2191 030 _03
	including cover, clear, without pictogram	1 2191 030 _04

¹⁾ Other silk-screen pictograms or inscriptions available on request



Dimension drawing | Pictograms

EXIT / EXIT CG-S / EXIT N

PL PR PU

Escape sign acc. to latest standards

Dimensions in mm

1
2
3
4
5
6
7
8
9
10
11
12

EX - ESCAPE SIGN LUMINAIRES

Ex-Lite Metal version with LED technology for Zone 1 and Zone 21

The Ex-Lite series of explosion-protected escape sign luminaire fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Section 2.22 for emergency lighting luminaires. The luminaires are suited for marking escape routes and exits in potentially explosive atmospheres. Only white, high-efficiency LEDs are used as illuminants for these luminaires. This guarantees maintenance-free operation, as the illuminants do not need replacing throughout the complete service life of the luminaire.

The supply electronics are also laid out for this service life; the LED circuits are intrinsically safe. The wide input voltage range allows international use. The housing of these luminaires is made of robust light alloy: the escape signs comply with the latest standards.

Thanks to the very robust design and high degree of protection, these luminaires are suited although under rough conditions for both indoor and outdoor use.

As an emergency lighting luminaire for maintained operation with self-contained battery system, the Ex-Lite N features an NC battery and automatic function monitoring with operating time test.

With the optional built-in CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can also be used as an individually monitored emergency lighting luminaire that is connected to a CEAG emergency lighting supply system. With this, the operator can programme the switching mode according to the respective requirements. Thus, as many as 20 luminaires with different switching modes can be connected to one end circuit.



- Robust light alloy housing
- Power-saving LED technology, maintenance-free throughout service life
- High degree of protection IP66
- Luminaire with self-contained battery unit and automatic function monitoring
- Connection and monitoring with CEAG emergency lighting supply systems possible

For all types of application

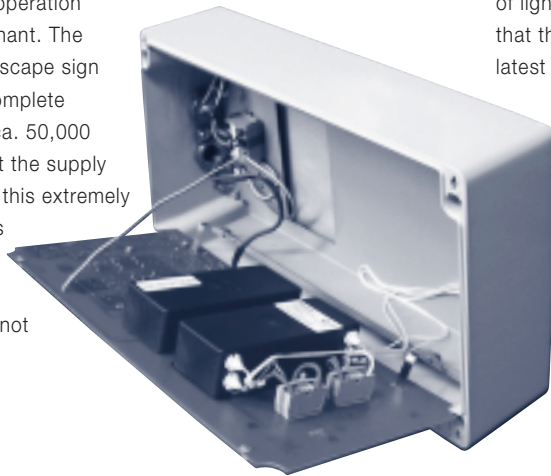
The escape sign luminaires of the Ex-Lite series are available as mains luminaires "Ex-Lite", e.g. for specially safeguarded industrial networks in production plants, as "Ex-Lite CG-S" emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, and as "Ex-Lite-N" emergency lighting luminaires with self-contained battery systems and automatic function and operating time tests.

Green light for all zones

On account of the very robust, light alloy housing in the high degree of protection IP66, the Ex-Lite luminaire can be installed almost anywhere, both indoors and out. The luminaire is designed in the type of protection EEx e m ib IIC up to T6 and in accordance with the ATEX Directive. It can be used in hazardous areas with potentially explosive gas atmospheres (Zones 1 and 2) and potentially explosive dust atmospheres (Zones 21 and 22).

Maintenance-free operation

The white LED technology used as the light source allows maintenance-free operation without replacement of the illuminant. The lighting values specified for the escape sign are maintained throughout the complete service life of the LEDs, namely ca. 50,000 hours. It goes without saying that the supply electronics are also designed for this extremely long operating time. This reduces operating costs and increases the operating safety essentially, in particular in locations that are not easily accessible.

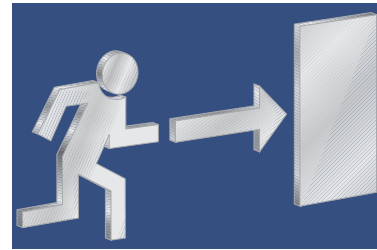


For international use

The LED escape sign luminaire of the Ex-Lite series was designed to meet the requirements of a large number of different safety concepts. Thanks to the wide input voltage range from 110 V to 277 V AC and up to 250 V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe. The luminaire has a visibility range of 28 metres and it is available with a wide variety of pictograms.



Simply change of the pictogram



Conformity to standards

The Ex-Lite explosion-protected escape sign luminaire series fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Part 2.22 for emergency lighting luminaires. It is suited for marking escape routes and exits in potentially explosive atmospheres. The housing of this luminaire is made of light alloy and it goes without saying that the escape sign comply with the latest standards.

Double safety

Whenever the operational safety of explosion-protected safety



and escape sign luminaires is involved, there is no room for compromises, as only a luminaire that is fully functional at all times can save human lives. The new series of explosion-protected LED escape sign luminaires not only fulfils the extremely high explosion protection requirements, but it also fulfils the legal requirements for emergency and safety lighting installations. The new Ex-Lite is capable of safely showing the right way to go at all times, even in complex and often badly laid out industrial installations with potentially explosive atmospheres.



Central emergency lighting supply via system luminaires with CG-S module

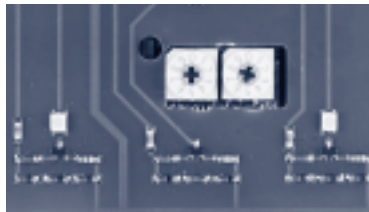
A central emergency lighting supply using CEAG group supply and central battery systems are used wherever a large number of emergency lighting luminaires can be combined and operated as system luminaires.

These battery systems are generally installed outside the hazardous areas and, therefore, they are not subjected to the ambient conditions of the luminaires in the field. As a result, the operating life of the battery is relatively long and the amount of maintenance required is minimal.

The mains and emergency lighting supplies of these luminaires are fed via separate circuits from the emergency lighting power supply installation to the escape sign luminaire in the hazardous area. Various luminaires with CG-S function can be operated in these circuits.

Better safe than sorry

In addition to the Ex-Lite for use as a mains luminaire, e.g. for specially safeguarded industrial networks in production plants, there is also the Ex-Lite CG-S version with easy function monitoring. In conjunction with the CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can be operated as emergency lighting luminaire with individual monitoring. The operator can programme the switching mode according to his individual requirements, thus allowing the operation of up to 20 luminaires with different switching modes in one end circuit.

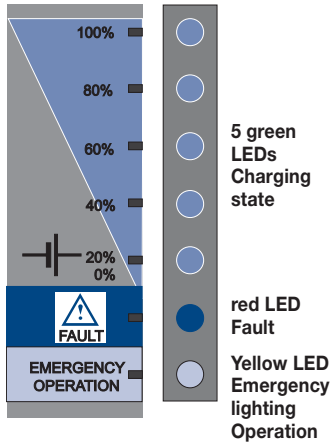


Addressing switch in the Ex-Lite CG-S

No additional installation work is required. The central control unit monitors

all the functions of the luminaire, checks the feed line for shorts or open circuits and indicates any incidents clearly on the display. Thus, even with highly complex installations, troubleshooting and eliminating faults are not a problem. Another considerable advantage: all the function and operating time tests are carried out automatically and recorded by the central control unit. This saves no end of time and money. During this function test, the correct functioning of the luminaire is monitored by the built-in CG-S module and any faults are reported to the central control unit. Thus, for example, the failure of LED groups is indicated automatically.





Emergency lighting luminaires with self-contained battery systems

Emergency lighting luminaires with self-contained battery systems provide the required emergency lighting from a decentralized source, independent of central systems. These luminaires are particularly economical when used in extensive plants. Until now, compared to centrally operated and monitored installations, the disadvantage of the emergency lighting luminaires with self-contained battery systems was that they did not provide any information on the state of the luminaire. However, this monitoring function has been incorporated in the Ex-Lite N escape sign luminaire. Five green LEDs supply constant information on the charging state and

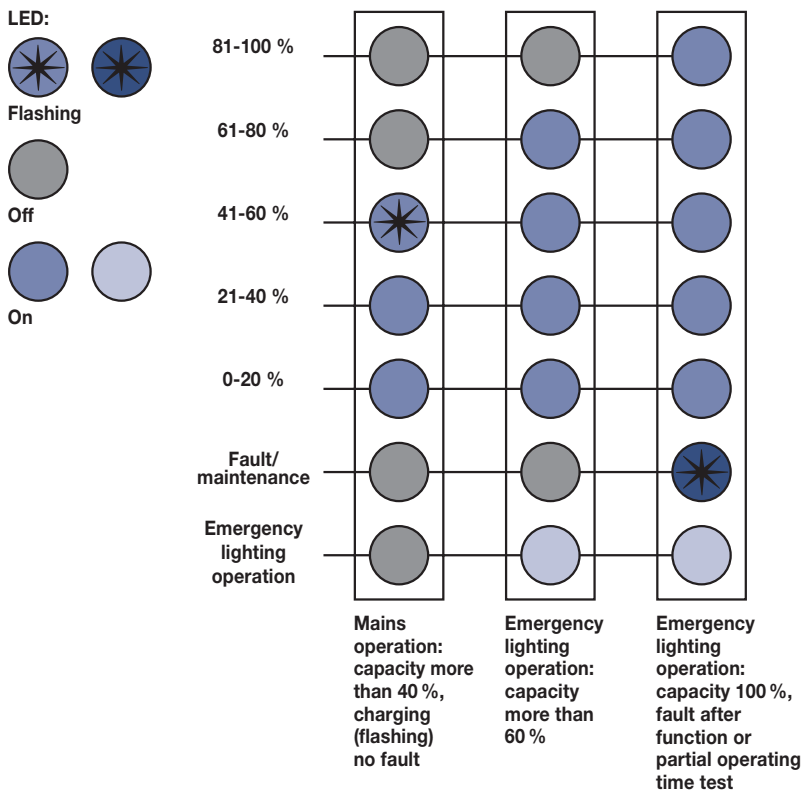
available battery capacity. A yellow LED indicates the emergency lighting operation mode and an additional red LED indicates any faults.

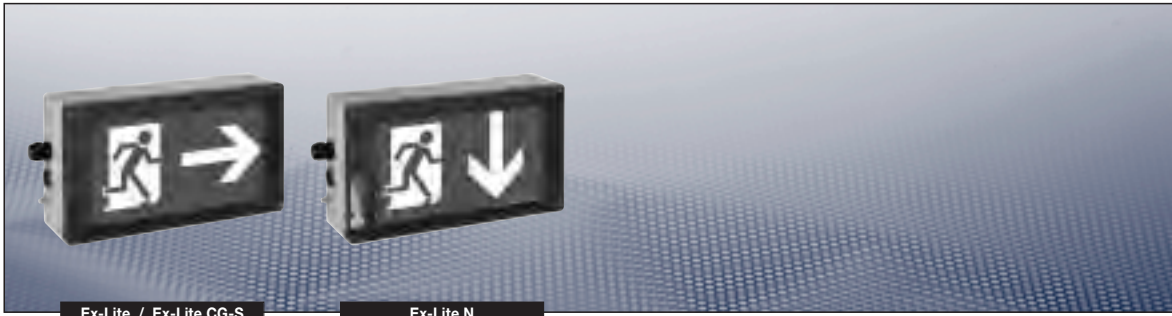
Monitoring functions

The extended self-monitoring with automatic function and partial duty cycle test is also new. The five green LEDs behind the protective cover provide continuous indication of the charging state and the current battery capacity. Charging is signalized by a flashing green LED. The charged capacity is indicated in 20% stages. The yellow LED indicates emergency lighting operation.

An automatic function test lasting 5 minutes is carried out on a weekly basis. For this, the luminaire is switched electronically from mains to battery operation. The emergency lighting function is tested and any faults are indicated by the flashing red LED.

After ca. 3 months a part-operating time test (35 mins.) is initiated automatically. If a minimum emergency lighting operating time of 30 minutes is not reached, it is signalized by the flashing red LED. After the cause of the fault has been eliminated, e.g. by charging or replacing the battery, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of > 30 minutes has been reached.





Technical data

Ex-Lite | Ex-Lite CG-S | Ex-Lite N	
Marking to 94/9/EC (new standard – applies for)	Ⓔ II 2 G EEx e m ib IIC T6/T5/T4 / Ⓔ II 2 D IP66 T60 °C Ⓔ II 2 G Ex e ib m IIC T4/T5/T6 Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 02 ATEX 2111
IECEx Certificate of Conformity	IECEx BK1 06.0003
Marking accd. to IECEx	Ex emib IIC T4/T5/T6 Ex tD A21 IP66 T60 °C
Permissible ambient temperature	-20 °C up to +40 °C / 50 °C (Ex-Lite N: specified data +5 °C up to 35 °C)
Rated current	DC: 220 V = 20 mA, 110 V = 40 mA
Frequency	0 up to 50/60 Hz
Circuit	elektronic power supply
Connecting terminals	3 x loop terminal 2.5 mm ²
Lamp/Illuminant	high output-LEDs, white
Viewing distance	up to 28 m
Degree of protection accd. EN 60529	IP66
Cable glands/gland plates/enclosure drilling	1 x Ex e-cable gland M25 x 1.5 (plastic) / 1 x Ex e-screw plug M25 x 1.5
Dimensions (L x W x H)	400 x 230 x 115 mm
Type of mounting	wall installation
Enclosure material	light alloy
Enclosure colour	grey, RAL 7032 / RAL 7022 (cap)
Protective cover/protective bowl	mineral glass

Ex-Lite | Ex-Lite 24 V	
Temperature class	T6: Ta max. +40 °C, T5: Ta max. +50 °C
Rated voltage 1	110 V - 277 V AC
Rated voltage 2	110 V - 250 V DC
Rated voltage (option)	12 - 24 V (Ex-Lite 24 V)
Rated power consumption	approx. 6 VA
Weight	6.2 kg

Ex-Lite CG-S	
Temperature class	T6: Ta max. +40 °C, T5: Ta max. +50 °C
Rated voltage 1	220 V - 254 V AC
Rated voltage 2	195 V - 250 V DC
Rated power consumption	approx. 6 VA
Weight	6.4 kg

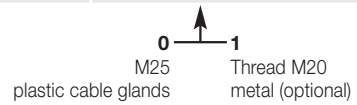
Ex-Lite N	
Temperature class	T5: Ta max. +40 °C, T4: Ta max. +50 °C
Rated voltage 1	110 V - 277 V AC
Rated voltage 2	110 V - 250 V DC
Rated power consumption	approx. 8 VA
Battery	NC-Akku 12 V/600 mAh
Rated emergency operating duration	3 h (specified data +5 °C up to +35 °C)
Charging duration (Cap. >90 %)	28 h
Weight	6.7 kg



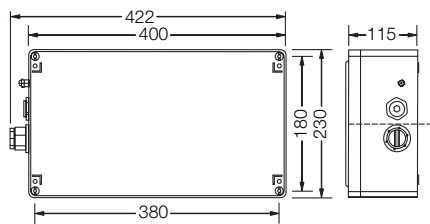
Ordering details

Type	Scope of delivery ¹⁾	Ordering Code
Ex-Lite	including cover with pictogram PR	1 2191 011 _01
	including cover with pictogram PL	1 2191 011 _02
	including cover with pictogram PU	1 2191 011 _03
	including cover clear, without pictogram	1 2191 011 _04
Ex-Lite CG-S	including cover with pictogram PR	1 2191 021 _01
	including cover with pictogram PL	1 2191 021 _02
	including cover with pictogram PU	1 2191 021 _03
	including cover, clear, without pictogram	1 2191 021 _04
Ex-Lite N	including cover with pictogram PR	1 2191 031 _01
	including cover with pictogram PL	1 2191 031 _02
	including cover with pictogram PU	1 2191 031 _03
	including cover, clear, without pictogram	1 2191 031 _04

¹⁾ Other pictograms or inscriptions available on request



Dimension drawing | Pictograms



Ex-Lite / Ex-Lite CG-S / Ex-Lite N



PL PR PU
Escape sign acc. to latest standards

Dimensions in mm

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EX - EMERGENCY LIGHT FITTING

AB 12108-EVG Safety Light Fitting for Zone Zone 1 and 21 EE11 PL Self-Contained Emergency Luminaire for Zone 1 and 21

These light fittings are in accordance to the ATEX Directive 94/9/EC for the temperature class up to T6. They are therefore certified for use in the Zones 1, 2, 21 and 22. Additionally they fulfill the directive EN 60598, Part 2.22 for Emergency Lighting accordingly.

The Ex-light fitting AB 12108-EVG is fitted with an electronic ballast and an 8 W fluorescent lamp.

With the optional built-in CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can also be used as an individually monitored emergency lighting luminaire that is connected to a CEAG emergency lighting supply system. With this, the operator can programme the switching mode according to the respective requirements. Thus, as many as 20 luminaires with different switching modes can be connected to one end circuit.

The Ex-light fitting EE 11 PL with a self-contained battery system is fitted with an 11 W compact fluorescent lamp and was designed for a 1.5 hour Emergency Lighting duration and a 3 W white GLS for permanent light.

Additionally the charging status and the mains supply are also shown by LEDs. The housing is made of a copper-free aluminium and has a borosilicate glass tube.

They are used for illuminating emergency exit routes, as well as emergency light fitting for identification of exits.



- **Housing made of copper-free aluminium with a borosilicate glass tube**
- **Safety Standard IP67**
- **8 W fluorescent lamp for main lighting (AB 12 108)**
- **11 W compact fluorescent lamp for emergency lighting (EE11 PL)**
- **Operation and monitoring possible from CEAG emergency lighting system**



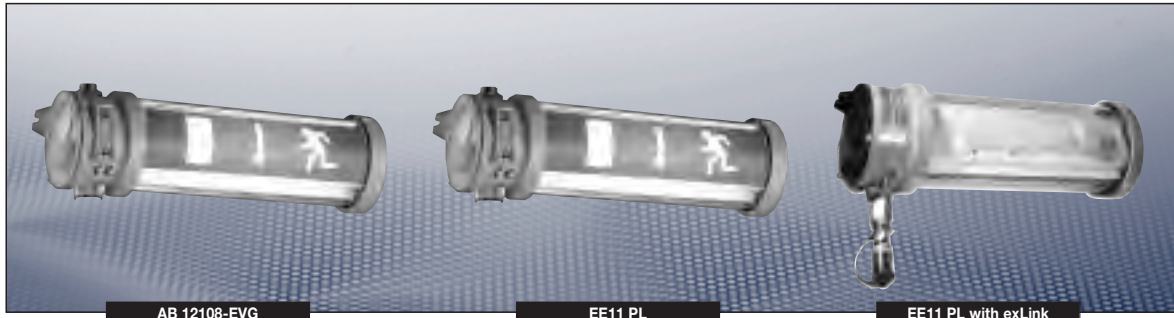
Technical data

AB 12108-EVG	
Marking to 94/9/EC (new standard – applies for)	⊕ II 2 G EEx d IIC T6/T5 / ⊕ II 2 D T 58 °C (T _a up to 40 °C) T 73 °C (T _a up to 55 °C) ¹⁾ ⊕ II 2 G Ex d IIC T5/T6 / ⊕ II 2 D Ex tD A21 IP67 T73 °C
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
Permissible ambient temperature	-20 °C up to +55 °C
Rated voltage 1	230 V AC
Rated voltage 2	220 V DC +25 %/-20 %
Frequency	50 Hz
Rated power consumption	approx. 16 VA
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² / PE ext.: 2 x 6 mm ²
Insulation class	I
Lamp/Illuminant	1 x 8 W/T5-fluorescent lamp for mains and emergency operation
Lamp cap	G5
Luminous flux Φ _E /Φ _N at the end of rated operating time	75 %
Viewing distance with legend	up to approx. 15 m
Degree of protection accd. EN 60529	IP67
Cable glands/gland plates/enclosure drilling	direct entries: see ordering details
Dimensions (L x W x H)	460 x 144 x 140 mm
Weight	approx. 5.3 kg
Enclosure material	copper-free aluminium
Protective cover/protective bowl	borosilicat-glass

EE11 PL	
Marking to 94/9/EC (new standard – applies for)	⊕ II 2 G EEx d IIC T6 / ⊕ II 2 D T 58 °C ⊕ II 2 G Ex d IIC T5/T6 / ⊕ II 2 D Ex tD A21 IP67 T73 °C
EC-Type Examination Certificate	LOM 03 ATEX 2036 X
Permissible ambient temperature	-5 °C up to +40 °C
Rated voltage 1	220 V - 240 V AC
Rated voltage (option)	108 V - 127 V AC
Frequency	50 - 60 Hz
Rated power consumption	approx. 16 VA
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² / PE ext.: 2 x 6 mm ²
Insulation class	I
Lamp/Illuminant	1 x 11 W compact-fluorescent lamp for emergency operation
Pilot lamp	3 W – GLS for permanent operation
Lamp cap of 11 W C FL	socket 2G7
Luminous flux in emergency operation	approx. 70 % after 1.5 h
Viewing distance with legend	up to approx. 15 m
Battery	nickel-cadmium 4 Ah
Rated operating in emergency	1.5 h
Charging duration	24 h
Degree of protection accd. EN 60529	IP67
Cable glands/gland plates/enclosure drilling	see ordering details, eXLink inlet on request
Dimensions (L x W x H)	460 x 144 x 140 mm
Weight	approx. 5.6 kg
Enclosure material	copper-free aluminium
Protective cover/protective bowl	borosilicat-glass
Function indication	red LED battery charging green LED main connection

Note: EE11PL Luminaire must not be opened in hazardous area.

¹⁾ Marking accd. new standard applies for



AB 12108-EVG

EE11 PL

EE11 PL with exLink

Ordering details

Type	Rated voltage	Thread	Cable gland Ex-d for Ø 9 - 14 mm	Blanking plug Ex-d	Ordering Code
AB12108-EVG					
AB12108-EVG	220 - 230 V AC /	2 x 3/4"	1 x 3/4"	1 x 3/4"	NOR 000 005 060 837
AB12108-EVG	195 - 250 V DC	2 x 3/4"	-	1 x 3/4"	NOR 000 005 060 820
EE11 PL					
EE11PL	220 - 240 V AC	2 x 3/4"	1 x 3/4"	1 x 3/4"	NOR 000 005 160 012
		2 x 3/4"	-	1 x 3/4"	NOR 000 005 160 013
EE11PL	108 - 127 V DC	2 x 3/4"	1 x 3/4"	1 x 3/4"	NOR 000 005 160 015
		2 x 3/4"	-	1 x 3/4"	NOR 000 005 160 014

Accessories

Ex-Emergency luminaires AB 12108-EVG and EE11 PL

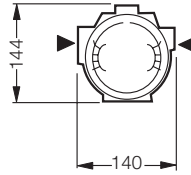
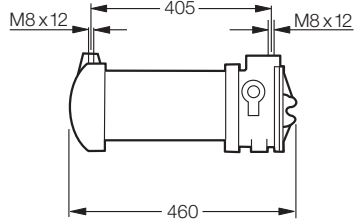
Type	Ordering Code
Ceiling bracket D 92 with screws and polyamide washer (CrNi, 2 pcs.)	2 2480 092 000
Ceiling bracket A5 hot galvanized (1 pc.)	NOR 000 005 009 162
Wall bracket 45° hot galvanized (1 pc.)	NOR 000 005 009 196
Reflector RAB 108 (AISI 304)	NOR 003 045 060 471
Reflector RAB 108 (AISI 304) + guard (steel white epoxy coating)	NOR 003 045 060 819
Reflector RAB 108 (AISI 316)	NOR 003 165 060 471
Reflector RAB 108 (AISI 316) + guard (steel white epoxy coating)	NOR 003 165 060 819

Lamps for Ex-emergency and signal light fittings

For luminaire Type	Lamp type/ lamp cap/diameter	Lamp power	rated luminous flux approx.	Ordering Code
AB 12108-EVG	T5, socket G5, Ø 16 mm	8 W	450 lm	4 0040 004 623
EE11 PL	TC-SEL, 4-pin socket 2G7	11 W	900 lm	on request

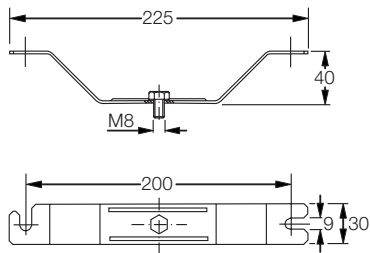
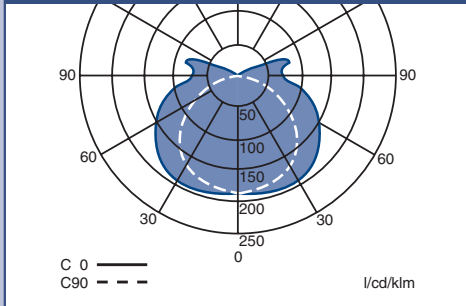


Dimension drawing | Polar curves | Accessories



AB 12108-EVG / EE11 PL

Polar curve
AB 12108-EVG / EE11 PL



Ceiling bracket D92

Dimensions in mm

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EX-SIGNAL AND EMERGENCY LIGHT FITTING

dKLK 23 **Plastic version for Zone 1**

These light fittings meet the requirements of ATEX-Directive 94/9/EC for temperature class T6. It is certified for use in hazardous areas of the Zones 1 and 2 also for the temperature class up to T6 as well as for dust-ex areas of the Zones 21 and 22.

Additionally they fulfill the directive EN 60598, Part 2.22 for Emergency Lighting. The Ex-light fitting dKLK 23 are built for compact fluorescent lamps 5-8 W with integrated electronic ballast. By use of a flash module (optional) the light fitting can be used also as a strobe light. The housing is made of a fibre-glass reinforced polyester and the protective globe of a transparent or coloured polycarbonate. When fitted with coloured protective covers they are used as signal light fittings but also as emergency light fittings in conjunction with the exit cubes. The light fitting is connected by a flameproof eXLink inlet.

With the optional CG-S monitoring module with coding switch (for max. 20 light fittings) which assigns an address to each light fitting, they can be connected as singularly monitored emergency light fittings to the CEAG emergency lighting supply system (dKLK 23 CG-S).



Signal light fitting, even with coloured protective globe in temperature class T6 environments

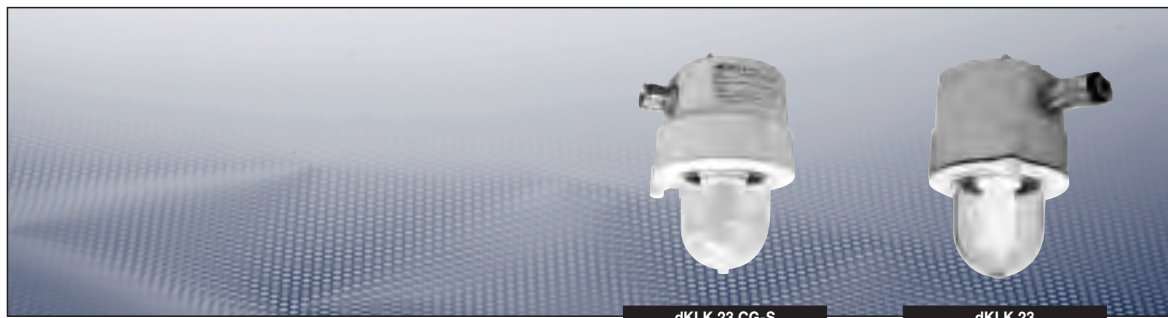
For compact fluorescent lamp with integrated EVG

For ceiling and wall mounting

Safety Standard IP66

With possible connection to the CEAG emergency lighting supply systems

Optional flash module



Technical data

dKLK 23 | dKLK 23 CG-S ¹⁾	
Marking to 94/9/EC	Ⓔ II 2 G Ex d IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 04 ATEX 1017X
Permissible ambient temperature	-20 °C up to max. +45 °C (dept. on lamp power and operating position)
Rated voltage 1	230 V AC
Rated voltage 2	230 V DC
Rated current	max. 25 mA
Frequency	0 up to 50/60 Hz
Connecting terminals	flameproof inlet eXLink, 3pole, 2 + PE cage clamp terminal for cable Ø 8-11 mm and max. 1.5 mm ² or flameproof cable gland M20 x 1.5 for cable Ø 8.5-16 mm; terminal L, N, PE max. 2.5 mm ² clamp terminal
Insulation class	I
Lamp/Illuminant	Compact-fluorescent lamp with integrated electr. ballast, lamp cap E27, lamp power 5-8 W, manufacturer Philips MASTER PL Electronic 5W/8 W or equivalent; Flashmodule (see accessories)
Lamp cap	E 27
Rated luminous flux ²⁾	approx. 400 lm (7/8 W)
Degree of protection accd. EN 60529	IP66
Dimensions (L x W x H)	164.5 x 189 x 128 mm
Weight	approx. 1.7 kg
Enclosure material	Glass-fibre reinforced polyester
Protective cover/protective bowl	Polycarbonat

Accessory Flash module type Eurolite E27 Strobe

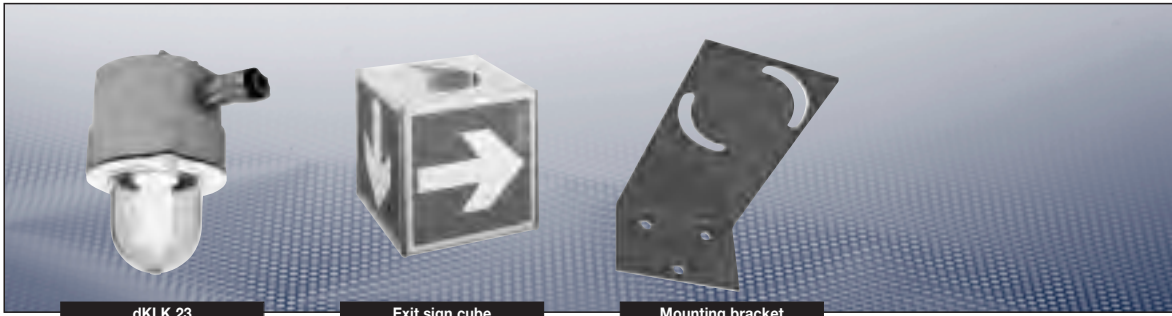
Rated voltage	230 V
Frequency	50 Hz
Rated power consumption	5 W
Flash frequency	1-3 Hz

¹⁾ For operation with CEAG emergency lighting systems, with code switch for 20 addresses

²⁾ Depends on used lamps

Scope of delivery with fixing accessories and without lamp.

| dKLK 23 | dKLK 23 CG-S |



dKLK 23

Exit sign cube

Mounting bracket

Ordering details

Type	Power connection	Colour of protective cover	Ordering Code
dKLK 23			
dKLK 23/eXLink	eXLink	clear	GHG 871 1001 R 0001
dKLK 23/eXLink	eXLink	red	GHG 871 1101 R 0001
dKLK 23/eXLink	eXLink	green	GHG 871 1201 R 0001
dKLK 23/eXLink	eXLink	blue	GHG 871 1301 R 0001
dKLK 23 CG-S ¹⁾ /eXLink	eXLink	clear with CG-S-module and code switch	GHG 871 2001 R 0001
dKLK 23/EEEx d	Cable gland M20	clear	GHG 871 1001 R 0101
dKLK 23/EEEx d	Cable gland M20	red	GHG 871 1101 R 0101
dKLK 23/EEEx d	Cable gland M20	green	GHG 871 1201 R 0101
dKLK 23/EEEx d	Cable gland M20	blue	GHG 871 1301 R 0101
dKLK 23 CG-S ¹⁾ /EEEx d	Cable gland M20	clear with CG-S-module and code switch	GHG 871 2001 R 0101

¹⁾ for connection to CEAG emergency supply systems, with address switch for 20 addresses.

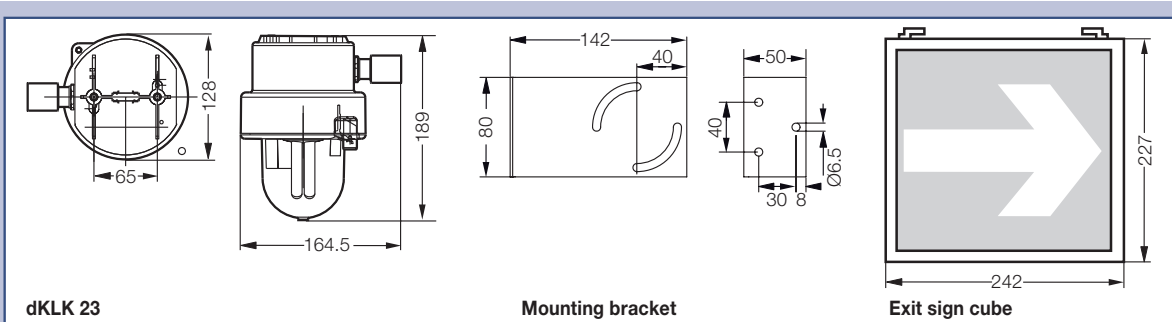
Scope of delivery with wall mounting bracket and without lamp.

Accessories

Ex-signal- and exit sign luminaire dKLK 23

Type	Ordering Code
Flash module Eurolite E27 Strobe	GHG 870 1912 R 0001
Exit sign cube (242 x 227 x 242 mm)	4 0071 344 115
Compact fluorescent lamp 7 W with EVG	GHG 870 9302 P 0002

Dimension drawing | Polar curves

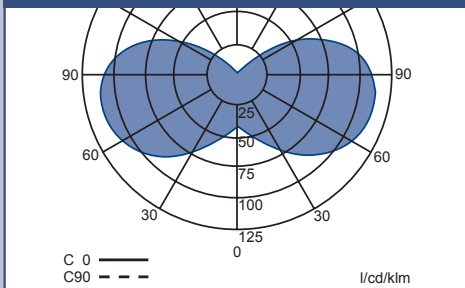


dKLK 23

Mounting bracket

Exit sign cube

Polar curve dKLK 23 / dKLK 23 CG-S



Dimensions in mm

EX-CEILING, PENDANT LIGHT FITTINGS AND FLOODLIGHTS

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EX-CEILING LIGHT FITTINGS

4.4

EX-PENDANT LIGHT FITTINGS

4.10

EX-FLOODLIGHTS

4.28

EX-VESSEL LIGHT FITTING

4.46

ZONE 2/22 EX-PENDANT LIGHT FITTINGS

4.50

ZONE 2/22 EX-FLOODLIGHTS

4.54

ACCESSORIES

4.60

Field of application of pendant light fittings and floodlights with high pressure discharge lamps in hazardous areas.

Where a lot of light is needed and/or where large complexes or areas have to be illuminated, or where there are high ceilings, these are the ideal situations for pendant light fittings and floodlights.

The main field of operation is the illumination in hazardous explosive environments such as On- and Offshore areas, production and storage buildings or Ex-companies in the chemical industry. Also the illumination of outside areas such as loading zones, harbour areas or even refineries.



The pendant light fittings and floodlights are usually fitted with high pressure discharge lamps such as Metal halide lamp or Sodium vapour lamps.

They offer a high output of light and a relatively long life span.

Due to environmental protection the use of Mercury Vapor lamps have been forbidden in more and more countries.

The typ of lamp may be replaced by other light sources e.g. Metal halide or sodium vapour lamps.

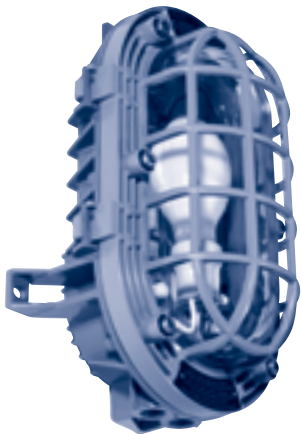
With the CEAG pendant light fittings and floodlights for the Zones 1, 2, 21 and 22 you have a safety assurance even in difficult environmental conditions such as high and low temperature, high humidity, dusty and aggressive explosive atmospheres.

The high safety standard required is assured for even after a long period of usage time. A long service life and the high reliability factor of the used electrical and mechanical components makes these lamps extremely cost-effective. Especially the innovative illuminant technology of the induction lamps used in the EVQ light fittings guarantees a lamp life expectancy of > 60,000 hours. This makes these light fittings destined for usage in uncomfortable and hard to access areas where one can efficiently minimize the maintenance costs.



Pendant light fitting EVQ for Induction lamps

The easy changing of the lamp, for example in the new CEAG floodlight series FZD (you just change the complete lamp module), also effectively reduces the maintenance costs. Even in extreme environments and temperatures of -40° C you can be sure that the light fittings will be quickly back in use. The actual lamp replacement can then take place in the work-shop at a later date.



Bulk head light fitting AB 05



FZD flood light

EX - CEILING LIGHT FITTINGS

AB 05, AB 80 and AB12 NAV 70 Metal Version for Zone 1 and 21

AB 05

This explosion-protected light fitting for Incandescent as well for high pressure discharge lamps is designed in accordance to the ATEX-Directive 94/9/EG.

The light fittings are fitted with an impact resistant and thermally stable dome-shaped glass. All external screws are made of high quality stainless steel. The distinguishing characteristics of this series are the low weight and the simple installation.

The control gear for HPS-lamps is installed on a removeable support in order to make the maintenance easy.

The AB 05 series offers a wide range of application using different type of explosion protection:

- Ex e IIC for Zone 1/21
- Ex de IIB (+H2 as an option) for Zone 1/21
- Ex nR for Zone 2/22

An internal aluminium reflector enables a well balanced light distribution characteristic.

AB 80

Due to the flameproof design all types of incandescent lamps up to 100 W or suitable compact fluorescent lamps with electronic ballast can be used.

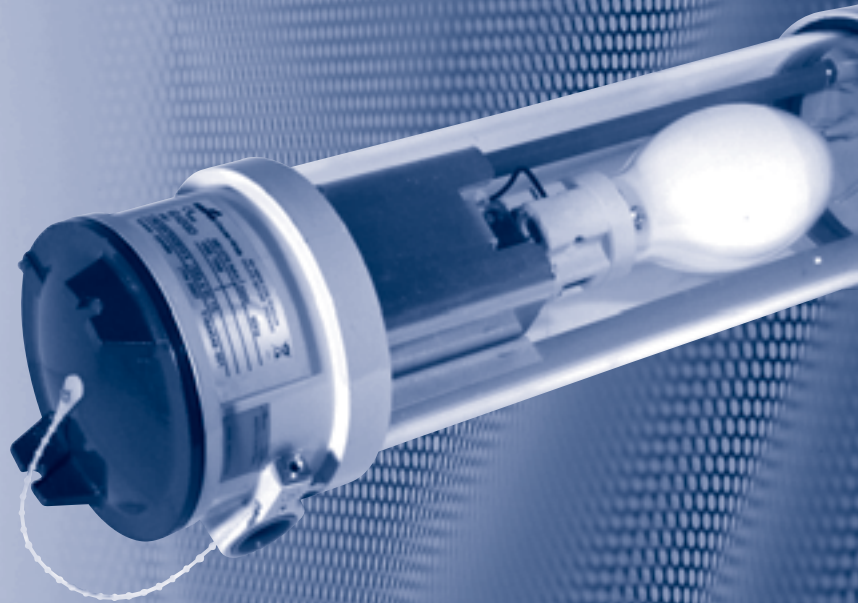
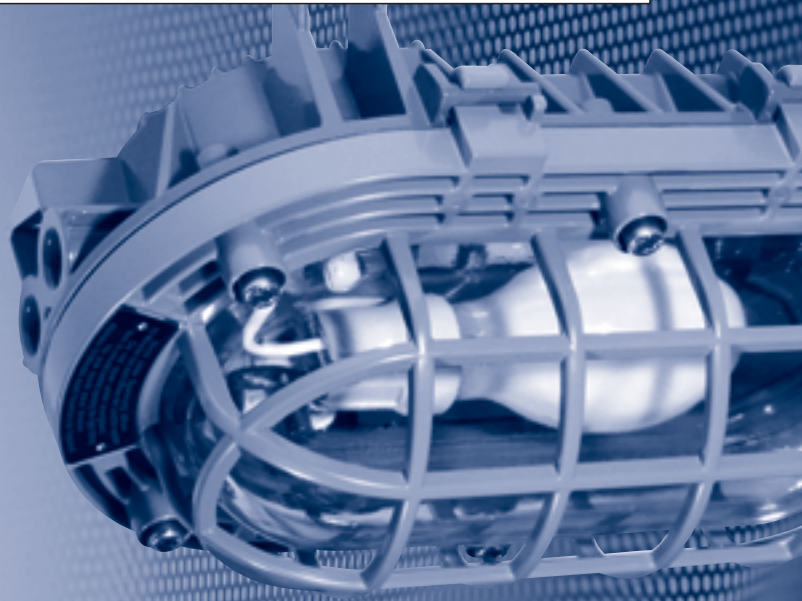
The AB 80 light fitting is a flat light fitting for ceiling mounting.

Due to their robust architecture, this light fitting is suitable for use in the chemical industry and have been certified for usage in environments with a temperature of up to +55° C.

AB 12 NAV 70

This compact Ex-d light fixture for high pressure sodium lamps allows individual lighting solutions for areas with limited mounting space. Lamp, ballast capacitor and ignitor are incorporated on a compact module, which allows easy re-lamping and maintenance procedure. An optional external reflector allows individual illumination of working places.

- Certified for environmental temperatures from -55 °C up to +55° C, depend. on type
- Fulfills highest requirements on corrosion protection and mechanical stability
- Robust light alloy housing (AB 05, AB12 NAV 70)
- Easy installation
- High quality stainless steel screws, easier lamp replacement





Technical data

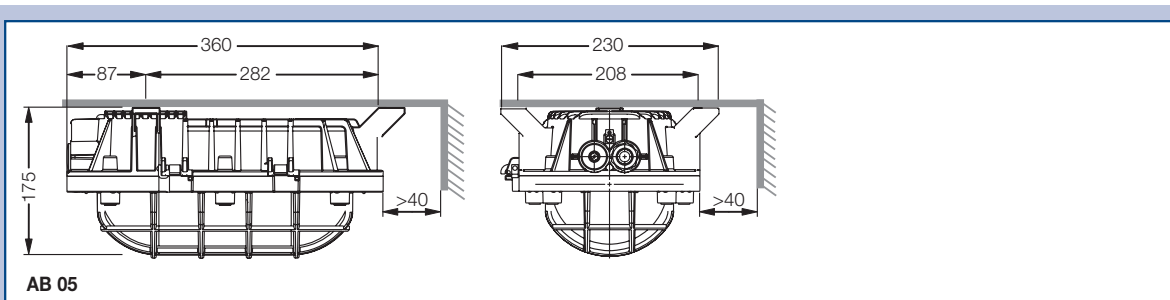
Ex-Bulkhead light fitting AB 05

Marking to 94/9/EC	AB 05 Ex-e	⊕ II 2 G Ex de IIC T3/T2	⊕ II 2 D Ex tD A21 IP66 T125 °C
	AB 05 Ex-d	⊕ II 2 G Ex d IIB (+H2) T4/T3 ¹⁾	
	AB 05 nR	⊕ II 3 G nR II T4/T3	⊕ II 3 D Ex tD A22 IP66 T100/125/140 °C
EC-Type Examination Certificate	AB 05 Ex-e	BVS 07 ATEX E 152 X	
	AB 05 Ex-d	PTB 08 ATEX 1001 X	
Type Examination Certificate	AB 05 nR	BVS 07 ATEX E 151	
Permissible ambient temperature		-20 °C to +40 °C	
		-55 °C to +55 °C (option, depends on version)	
Rated voltage		max. 250 V ²⁾ (AB 05 Ex e/nR)	
		230 V (AB 05 Ex d)	
Frequency		50 - 60 Hz	
Connecting terminals		L1, N, 1 x 1.5 - 4 mm ² , PE: 2 x 1.5 - 4 mm ²	
Insulation class		I	
Lamp/Illuminant		1)	
Degree of protection accd. EN 60529		IP66	
Cable glands/Gland plates/Enclosure drilling		1 x M20/M25 x 1.5 / 2 x M20/25 x 1.5 one plugged, or 1 x 3/4" ISO 7/1 / 2 x 3/4" ISO 7/1 one plugged	
Dimensions (L x W x H)		360 x 230 x 175 mm	
Weight		1)	
Type of mounting		ceiling/wall mounting	
Enclosure material		light alloy	
Enclosure colour		grey	
Protective cover/protective bowl		borosilicate glass	
Enclosure earth		2 x 6 mm ²	

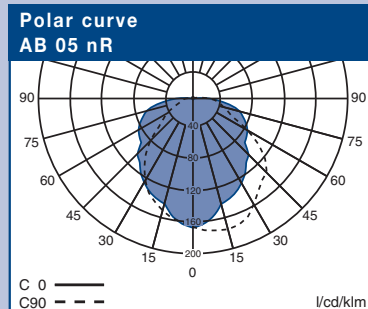
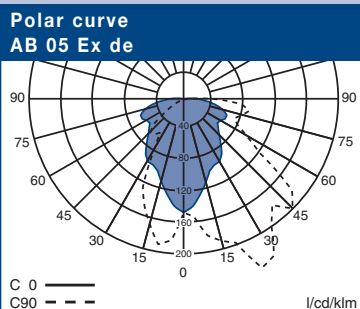
¹⁾ see ordering details

²⁾ other voltages on request

Dimension drawing | Polar curves



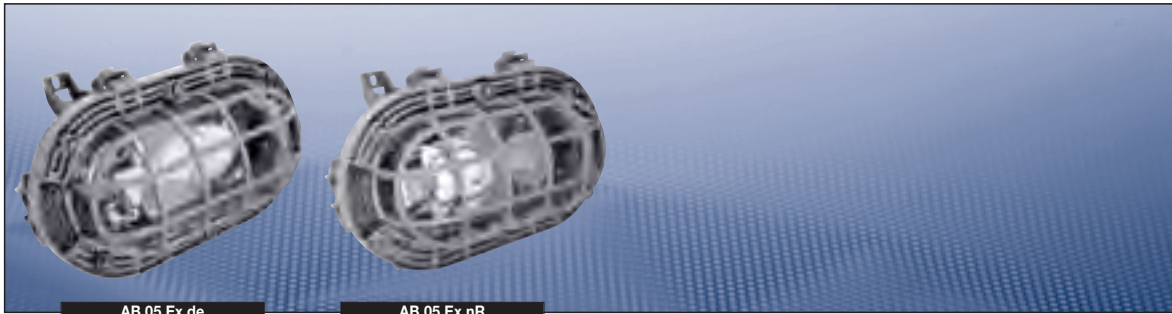
AB 05



Dimensions in mm

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Ex-ceiling light fittings



Ordering details

Type	Type of lamp	Rated luminous flux ²⁾	Temperature class	Cable glands/threads	Weight/kg	Qty.	Order No.
II 2 G IIC (-20 °C up to +55 °C)							
AB 05 Ex de	incandescent max. 60 W	710 lm	T3/T2 ¹⁾	1 x M20	5.9	1	AB 05 531 011 0001
AB 05 Ex de	incandescent max. 60 W	710 lm	T3/T2 ¹⁾	2 x M20, 1 x Ex-e M20	5.9	1	AB 05 531 111 0001
AB 05 Ex de	incandescent max. 60 W	710 lm	T3/T2 ¹⁾	1 x M25	5.9	1	AB 05 531 021 0001
AB 05 Ex de	incandescent max. 60 W	710 lm	T3/T2 ¹⁾	2 x M25, 1 x Ex-e M25	5.9	1	AB 05 531 221 0001

II 3G Ex nR II (- 50 °C up to + 55 °C)							
AB 05 nR	70 W HSE	5600 lm	T4	1 x M20	5.4	1	AB 05 611 011 0001
AB 05 nR	70 W HSE	5600 lm	T4	2 x M20, 1 x Ex-e M20	5.4	1	AB 05 611 111 0001
AB 05 nR	70 W HSE	5600 lm	T4	1 x M25	5.4	1	AB 05 611 021 0001
AB 05 nR	70 W HSE	5600 lm	T4	2 x M25, 1 x Ex-e M25	5.4	1	AB 05 611 221 0001
AB 05 nR	70 W HSE ³⁾	5600 lm	T4	1 x M25	5.4	1	AB 05 611 021 0002
AB 05 nR	70 W HSE ³⁾	5600 lm	T4	2 x M25, 1 x Ex-e M25	5.4	1	AB 05 611 221 0002
AB 05 nR	80 W HME	3800 lm	T4	1 x M25	5.4	1	AB 05 621 021 0001
AB 05 nR	80 W HME	3800 lm	T4	1 x M25, 1 x Ex-e plug	5.4	1	AB 05 621 221 0001
AB 05 nR	200 W HME	3100 lm	T3	1 x M25	5.4	1	AB 05 631 021 0001
AB 05 nR	200 W HME	3100 lm	T3	1 x M25	5.4	1	AB 05 631 221 0001

II 2 G IIB +H2 (- 20 °C up to + 55 °C)							
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x M20 thread	6.9	1	AB 05 111 011 0001
AB 05 Ex d	70 W HSE ³⁾	5600 lm	T4	1 x M20 thread	6.9	1	AB 05 111 011 0002
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x Ex d NPT 1/2" thread	6.9	1	AB 05 111 031 0001
AB 05 Ex d	70 W HSE	5600 lm	T4	2 x Ex d NPT 1/2" thread	6.9	1	AB 05 111 331 0001
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x Ex d NPT 3/4" thread	6.9	1	AB 05 111 041 0001
AB 05 Ex d	70 W HSE	5600 lm	T4	2 x Ex d NPT 3/4" thread	6.9	1	AB 05 111 441 0001
AB 05 Ex d	70 W HSE ³⁾	5600 lm	T4	1 x Ex d NPT 3/4" thread	6.9	1	AB 05 211 041 0002
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x M20 thread	6.9	1	AB 05 211 111 0001
AB 05 Ex d	70 W HSE ³⁾	5600 lm	T4	1 x M20 thread 1 x M20 plug	6.9	1	AB 05 211 111 0002

II 2 G IIB (- 20 °C up to + 55 °C)							
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x M20 thread	6.9	1	AB 05 211 011 0001
AB 05 Ex d	70 W HSE ³⁾	5600 lm	T4	1 x M20 thread	6.9	1	AB 05 211 011 0002
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x Ex d NPT 1/2" thread	6.9	1	AB 05 211 031 0001
AB 05 Ex d	70 W HSE	5600 lm	T4	2 x Ex d NPT 1/2" thread	6.9	1	AB 05 211 331 0001
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x Ex d NPT 3/4" thread	6.9	1	AB 05 211 041 0001
AB 05 Ex d	70 W HSE ³⁾	5600 lm	T4	1 x Ex d NPT 3/4" thread	6.9	1	AB 05 211 041 0002
AB 05 Ex d	70 W HSE	5600 lm	T4	1 x M20 thread	6.9	1	AB 05 211 111 0001
AB 05 Ex d	70 W HSE ³⁾	5600 lm	T4	1 x M20 thread 1 x M20 plug	6.9	1	AB 05 211 111 0002
AB 05 Ex d	70 W HSE	5600 lm	T4	2 x Ex d NPT 3/4" thread	6.9	1	AB 05 211 441 0001

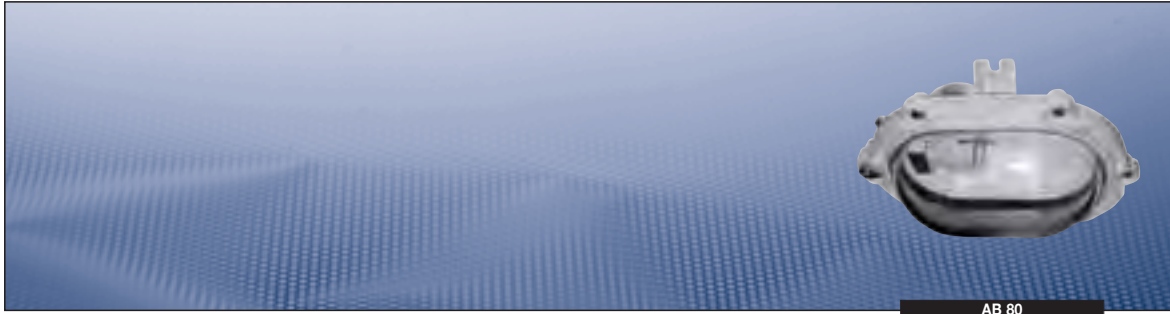
¹⁾ T3 only with lamp accd. to EN 60064 and DIN 49810 marked "T"

²⁾ depends on used lamps

³⁾ for HSE lamps with integrated ignitor

Lamps and fixing accessories are not included.

Metal cable glands see page 8.10...



AB 80

Technical data

Ex-Bulkhead light fitting AB 80

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB T4 (up to 100 W) / T6 (11 W PL) ¹⁾
EC-Type Examination Certificate	LOM 01 ATEX 2041 X
Permissible ambient temperature	-20 °C - +55 °C
Rated voltage	max. 250 V
Connecting terminals	1 x 2.5 mm ² or 2 x 1.5 mm ² ; PE 2 x 6 mm ²
Insulation class	I
Incandescent lamp	60 W, 100 W
Lamp/Illuminant	TC-DSE 11 W
Lamp cap	E 27
Rated luminous flux ¹⁾	710 lm / 1360 lm / 660 lm
Light efficiency in operation	60 %
Degree of protection accd. EN 60529	IP55
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" ISO 7/1-1/2 x M25 x 1.5 thread (Ex-d), one plugged
Weight	6.60 kg
Type of mounting	wall/ceiling mounting
Enclosure material	cast iron
Enclosure colour	grey
Protective cover/protective bowl	mechanical and chemical high resistant glass
Enclosure earth	2 x 6 mm ²

¹⁾ depends on lamp

Ordering details

Type	Entry thread	Cable gland Ex-d for cable Ø	Blanking plug Ex-d	Order No.
AB 80 with cable gland	2 x 3/4"	9 - 14 mm	1 x 3/4"	NOR 000 005 120 125
AB 80	2 x 3/4"	-	1 x 3/4"	NOR 000 005 120 124
AB 80	2 x M25	-	1 x M25	NOR 000 005 120 123

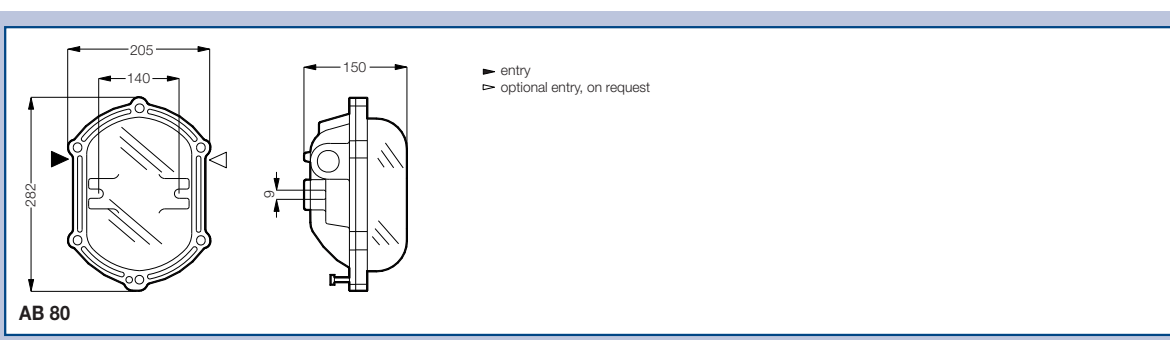
Lamps and fixing accessories are not included

Accessories

Type	Content	Application	Order No.
GAB 80	wire guard	AB 80	NOR 000 005 120 439
REP .AB 80	spare glass	AB 80	NOR 000 005 129 027

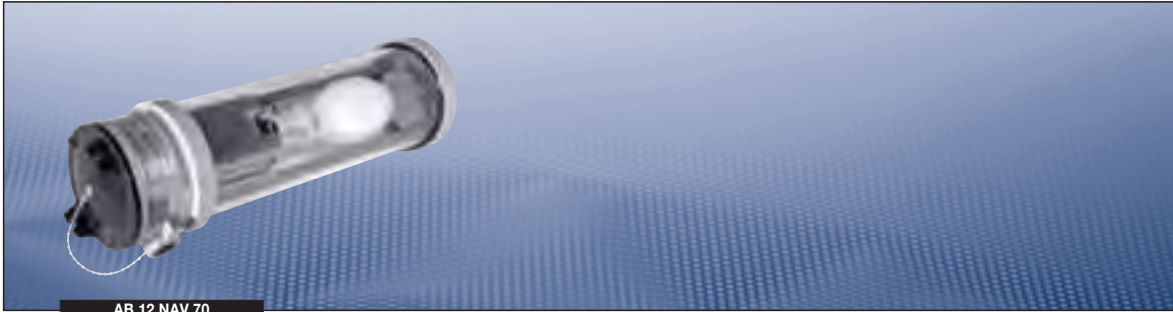
Metal cable glands see page 8.10...

Dimension drawing



Dimensions in mm

Ex-Bulkhead light fitting



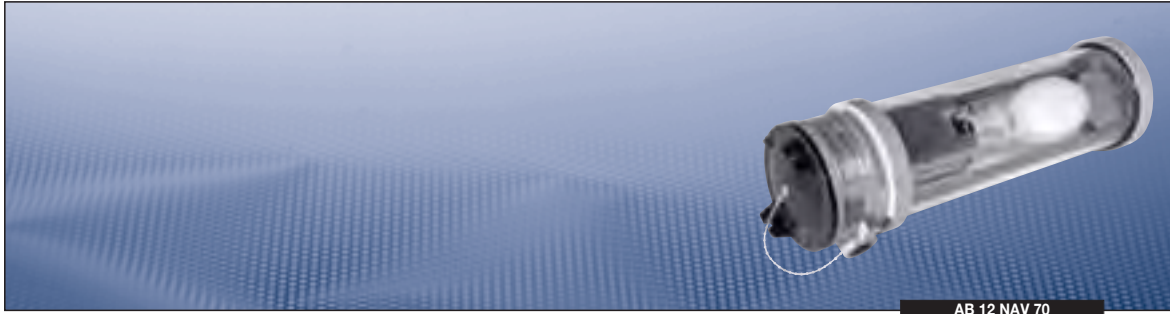
AB 12 NAV 70

Technical data

Ex-Bulkhead light fitting AB 12 NAV 70

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIC / IIB T3 / Ⓔ II 2 D Ex tD A21 IP67 T160 °C
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
IECEX Certificate of Conformity	IECEX BK1 07.0008X
Marking accd. to IECEX	Ex d IIC / IIB T3
Permissible ambient temperature	-20 °C to +55 °C – Gas group IIC
	-45 °C to +55 °C – Gas group IIB
Rated voltage	230 V ¹⁾
Rated current	0,36 A
Frequency	50 Hz
Power factor cos φ	≥ 0,9
Connecting terminals	L1, N, PE: 2 x 2.5 mm ² , PE 2 x 6 mm ²
Insulation class	I
Lamp/Illuminant	HSE 70 W
Lamp cap	E 27
Rated luminous flux ¹⁾	5600 lm
Light efficiency in operation	70 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" ISO 7/1 thread (Ex-d) one plugged
Weight	5.30 kg
Type of mounting	Wall/ceiling mounting
Enclosure material	light alloy
Enclosure colour	grey
Protective cover	Borosilicate glass tube

¹⁾ depends on lamp



AB 12 NAV 70

Ordering details

Type	Entry thread	Cable gland Ex-d for cable Ø	Blanking plug Ex-d	Qty.	Order No.
Group IIC - NORMAL (ambient temperature) (-20 °C to +55 °C)					
AB 12 NAV 70 + PE	2 x 3/4"	9 - 14	1 x 3/4"	1	NOR 000 005 060 071
AB 12 NAV 70	2 x 3/4"	-	1 x 3/4"	1	NOR 000 005 060 070
Group IIB - LOW (ambient temperature) (up to -45 °C)					
AB 12 NAV 70	2 x 3/4"	-	1 x 3/4"	1	NOR 000 005 060 072

Lamps and fixing accessories are not included

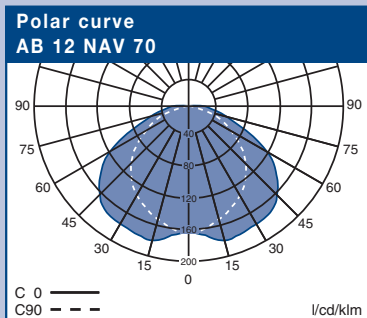
Accessories

AB 12 NAV 70		
Type	Content	Order No.
D 92	Ceiling bracket with screws and polyamide washer (CrNi, 2 pcs.)	2 2480 092 000
A5	Ceiling bracket hot galvanized (1 pc.)	NOR 000 005 009 162
BFP45	Wall bracket 45° hot galvanized (1 pc.)	NOR 000 005 009 196
RAB 108	Reflector AISI 304	NOR 003 045 060 471
RAB 108	Reflector AISI 304 + guard (steel white epoxy coating)	NOR 003 045 060 819
RAB 108	Reflector AISI 316	NOR 003 165 060 471
RAB 108	Reflector AISI 316 + guard (steel white epoxy coating)	NOR 003 165 060 819

Metal cable glands see page 8.10...

Dimensions drawing | Polar curve

AB 12 NAV 70



Dimensions in mm

EX - P E N D A N T L I G H T F I T T I N G S

for incandescent and high pressure discharge lamps up to 500 W
Metal version for Zone 1/21

All explosion-protected pendant light fittings for Incandescent, high pressure discharge and Induction lamps are in accordance with the ATEX-Directive 94/9/EG.

AB 50/SPG 1N and AB51

Due to their compact design the series AB 50, SPG 1N and AB 51 are designed for individual illumination of a local area. Beside the copper-free aluminium housings all external screws are made of stainless steel. The protective glass dome is made of borosilicate glass which has a high mechanical and thermic stability. This ensures a save use even in harsh environmental areas. Most of the world-wide field conditions can be accepted by the large permissible ambient temperature range from $-50\text{ }^{\circ}\text{C}$ up to $+55\text{ }^{\circ}\text{C}$.

EVI and EV...

The housing is made of a copper-free aluminium. The ballast for the high pressure discharge lamps (EVM/EVS/EVH) is thermically separated in its own compartment in the top part of the housing. The dome-shaped glass enclosure is made of borosilicate glass which has a high mechanical and thermic stability. All external screws and the reflector are made of stainless steel. The lamp replacement is done by opening the PTFE coated connection ring. Both the glass enclosure and the connection ring are hinged for easy access. Due to their robust architecture, these light fittings are suitable for use in the chemical industry and have been certified for usage in environments with a temperature of up to $+55\text{ }^{\circ}\text{C}$ (EVQ excluded). The new light fitting EVQ, designed for lamp replacement in > 60000 hour intervals are fitted with induction lamps and a high-frequency generator.

- For environmental temperatures range of $-50\text{ }^{\circ}\text{C}$ up to $+55\text{ }^{\circ}\text{C}$ (EVQ excluded)
- Safety Standard IP67
- Robust light alloy housing
- Easy opening of lamp compartment





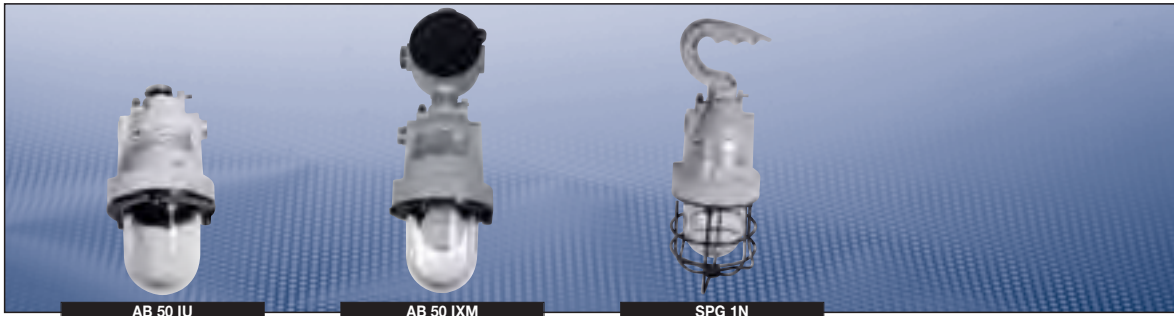
Technical data

AB 50 | SPG 1N	
Marking to 94/9/EC (new standard – applied for)	Ⓔ II 2 G Ex d IIC T3 (direct entry IU); T4 with 60 W at $t_{lamp} +40\text{ °C}$ ¹⁾ Ⓔ II 2 G Ex de IIC T3 (indirect entry IXM) Ⓔ II 2 D Ex tD IP67 T180 °C, T130 with 60 W at +40 °C
EC-Type Examination Certificate	LOM 02 ATEX 2018 X
Permissible ambient temperature	-20 °C to +55 °C -50 °C to +55 °C (option: AB 50)
Rated voltage	max. 250 V
Power consumption	max. 100 W
Connecting terminals	1 x 2.5 mm ² / 2 x 1.5 mm ² (IU and SPG1N), 2 x 2.5 mm ² , PE 2 x 6 mm ² (IXM)
Insulation class	I
Incandescent lamp	60 W, 100 W, 75 W halogene ²⁾
Lamp cap	E 27
Rated luminous flux ¹⁾	710 lm / 1360 lm
Light efficiency in operation	68 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" ISO 7/1-thread (Ex-d), one plugged (UI) / 2 x M25 x 1,5 (IXM), SPG1N incl. cable gland
Dimensions (L x W x H)	see dimension drawing
Weight	see table
Type of mounting	ceiling mounting
Enclosure material	light alloy
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

¹⁾ depends on lamp

²⁾ 75 W halogene lamp max $t_a = +40\text{ °C}$

Ex-Pendant light fittings



Ordering details

Type	Entry thread	Cable gland for cable Ø	Blanking plug	Weight	Order No.
(T _{ambient} -20 °C to +55 °C)					
AB 50 IU (direct entry)	2 x 3/4"	9 - 14 mm Ex-d	1 x 3/4" Ex-d	1.6 kg	NOR 000 115 110 292
AB 50 IU (direct entry)	2 x 3/4"	-	1 x 3/4" Ex-d	1.5 kg	NOR 000 115 110 289
AB 50 IXM (indirect entry)	2 x M25 x 1.5	9 - 14 mm Ex-e	1 x M25 x 1.5 Ex-e	2.3 kg	NOR 000 115 110 321
AB 50 IXM (indirect entry)	2 x M25 x 1.5	-	1 x M25 x 1.5 Ex-e	2.2 kg	NOR 000 115 110 320
SPG 1N (portable light fixture)	1 x 3/4"	9 - 14 mm Ex-d	-	2.2 kg	NOR 000 005 110 745

(T _{ambient} -50 °C to +55 °C)					
AB 50 IU (direct entry)	2 x 3/4"	-	1 x 3/4" Ex-d	1.6 kg	NOR 000 115 110 389
AB 50 IXM (indirect entry)	2 x M25 x 1.5	-	1 x M25 x 1.5 Ex-e	2.2 kg	NOR 000 115 110 420

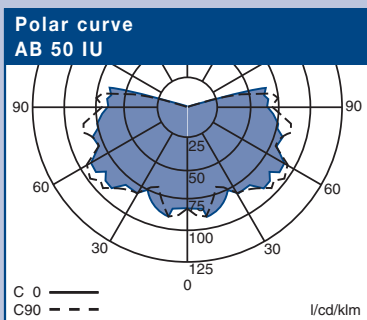
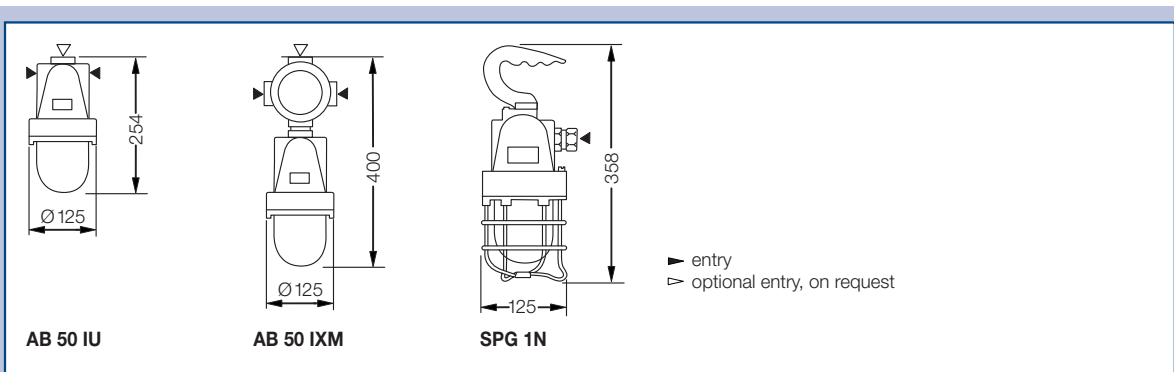
Lamps and fixing accessories are not included

Accessories

AB 50/SPG 1N				
Type	Content	Application	Order No.	
REP AB 50	Spare glass	AB 50	NOR 000 115 110 874	
WG	Wire guard, galvanized	AB 50	NOR 000 115 110 875	
ER	External reflector, coated	AB 50	NOR 000 115 110 718	
CEV / AB	Eye bolt galvanized	AB 50	NOR 000 005 110 852	
AS. EV	Ceiling bracket, galvanized	AB 50	NOR 000 005 110 828	

Metal cable glands see page 8.10...

Dimensions drawing | Polar curve



Dimensions in mm



Technical data

AB 51 IU | AB 51 IX | AB 51 M/S...	
Marking to 94/9/EC (new standard – applied for)	⊕ II 2 G Ex de IIC T ¹⁾ (indirect entry IX) / Ex d IIC T ¹⁾ (direct entry) ¹⁾ ⊕ II 2 D Ex tD A21 IP67 T ¹⁾ °C
EC-Type Examination Certificate	LOM 02 ATEX 2020 X
IECEX Certificate of Conformity	IECEX BKI 07.0028X
Marking acc. to IECEx	Ex d/de IIC T ¹⁾ Ex tD A21 IP67 T ¹⁾
Permissible ambient temperature	-20 °C to +55 °C -45 °C to +55 °C (AB 51 M/S) -50 °C to +55 °C (option)
Rated voltage	max. 250 V (AB 51..) / 230 V AC AB 51 M/S ³⁾
Power factor cos φ	≥ 0.85 (AB 51 M/S)
Connecting terminals	1 x 2.5 mm ² / 2 x 1.5 mm ² (IU), 2 x 2.5 mm ² (IX and M/S), PE ext. 2 x 6 mm ²
Insulation class	I
Lamp/Illuminant	¹⁾
Lamp cap	E 27
Rated luminous flux ²⁾	²⁾
Light efficiency in operation	75 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" ISO 7/1-thread (Ex-d), one plugged (IU and M/S) / 2 x M25 x 1.5 one plugged (IX)
Dimensions (L x W x H)	260 mm x Ø 205 mm (IU), 400 x Ø 205 mm (IX), 425 x Ø 205 (M/S)
Weight	see ordering information
Type of mounting	ceiling mounting
Enclosure material	light alloy
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

Additional lamp data

Lamp	Luminous flux ²⁾	Power	Temperature class II 2 G		Max. surface temp. II 2 D	
			T _{ambient} ≤ 40 °C	T _{ambient} > 40 °C	T _{ambient} ≤ 40 °C	T _{ambient} > 40 °C
Incandescent IGA 65	2200 lm	150 W	T3	T3	T 132 °C	T 147 °C
Incandescent IGA 80	3100 lm	200 W	T3	T3	T 137 °C	T 152 °C
Halogene lamp IQT	1100 lm	75 W	T5	T4	T 88 °C	T 103 °C
Halogene lamp IQT	2500 lm	150 W ⁴⁾	T4	T3	T 123 °C	T 138 °C
Compact Fluorescent Lamp TC-TSE	900/1200 lm	15 - 20 W ⁵⁾	T6	T6	T 60 °C	T 75 °C
High pressure mercury vapor mixed light HME-SB	1100 lm	100 W	T4	T4	T 110 °C	T 125 °C
High pressure mercury vapor mixed light HME-SB	3100 lm	160 W	T3	T3	T 127 °C	T 142 °C
High pressure mercury vapor HME	3800 lm	80 W	T4	T4	T 112 °C	T 127 °C
High pressure mercury vapor HME	6300 lm	125 W	T3	T3	T 127 °C	T 142 °C
High pressure sodium lamp HSE	3400 lm	50 W	T5	T4	T 86 °C	T 101 °C
High pressure sodium lamp HSE	5600 lm	70 W	T4	T4	T 97 °C	T 112 °C

¹⁾ see table

²⁾ depends on lamp

³⁾ others on request

⁴⁾ T_{amp} max. +40 °C

⁵⁾ T_{amp} max. +30 °C

Ex-Pendant light fittings



Ordering details

Type	Lamp	Entry thread	Cable gland for cable Ø	Blanking plug	Weight	Order No.
(T _{ambient} -20 °C up to +55 °C)						
AB 51 IU (direct entry)	all	2 x 3/4"	–	1 x 3/4" Ex-d	3.6 kg	NOR 000 115 110 396
AB 51 IX (indirect entry)	all	2 x M25 x 1.5	–	1 x M25 Ex-e	4.5 kg	NOR 000 115 110 437
AB 51 M 125 V (direct entry) ²⁾	125 W HME	2 x 3/4"	–	1 x 3/4" Ex-d	7.5 kg	NOR 000 115 110 890
AB 51 S 70 V (direct entry) ²⁾	70 W HSE	2 x 3/4"	–	1 x 3/4" Ex-d	7.5 kg	NOR 000 115 110 903

(T _{ambient} -50 °C up to +55 °C)						
AB 51 IU (direct entry)	all	2 x 3/4"	–	1 x 3/4" Ex-d	3.6 kg	NOR 000 115 110 397
AB 51 IX (indirect entry)	all	2 x M25 x 1.5	–	1 x M25 Ex-e	4.5 kg	NOR 000 115 110 438

(T _{ambient} -45 °C up to +55 °C)						
AB 51 M 125 V (direct entry) ²⁾	125 W HME	2 x 3/4"	–	1 x 3/4" Ex-d	7.5 kg	NOR 000 115 110 891
AB 51 S 70 V (direct entry) ²⁾	70 W HSE	2 x 3/4"	–	1 x 3/4" Ex-d	7.5 kg	NOR 000 115 110 870

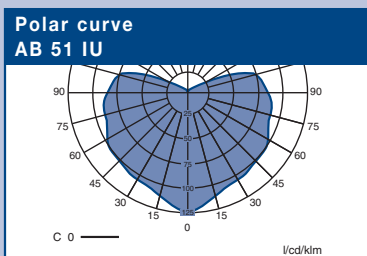
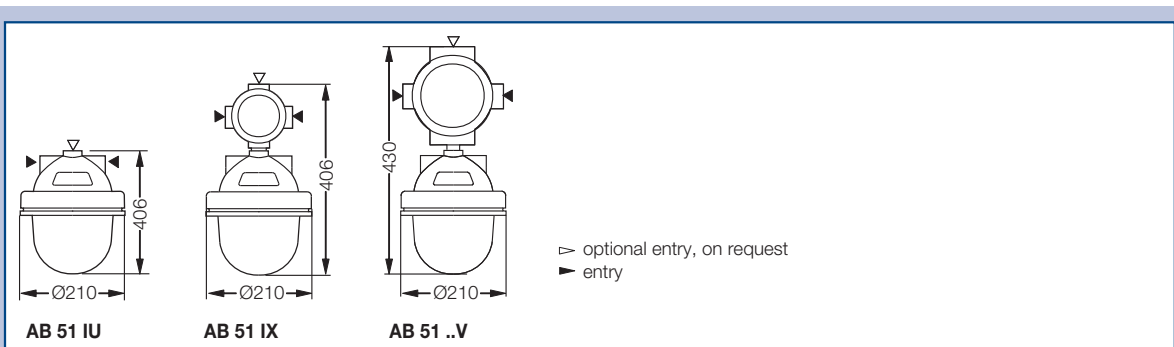
Lamps and fixing accessories are not included

²⁾ including flameproof enclosure with complete control gear

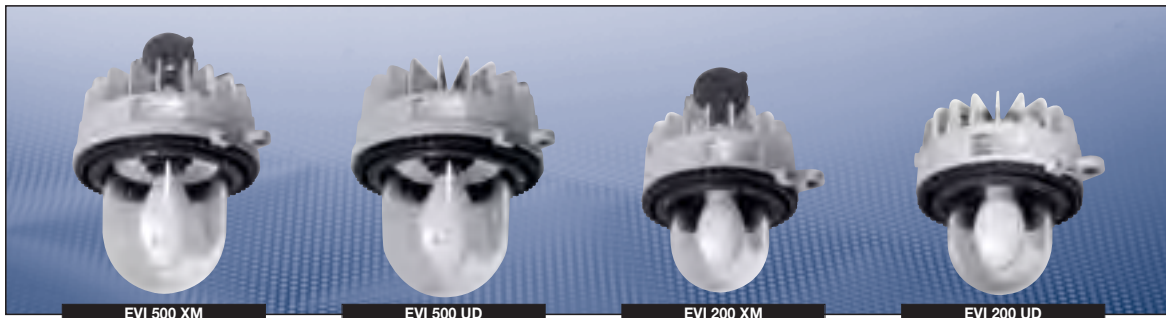
Accessories

AB 51		
Content	Application	Order No.
Spare glass with metal ring	AB 51	NOR 000 115 110 873
Wire guard	AB 51	NOR 000 005 110 860
External reflector	AB 51	NOR 000 005 110 894
Ceiling bracket ANSI 316	AB 51	NOR 003 165 110 000
Eye bolt ANSI 316	AB 51	NOR 003 165 110 001

Dimensions drawing | Polar curve



Dimensions in mm



Technical data

EVI 200 | EVI 500	
Marking to 94/9/EC (new standard – applied for)	⚠ II 2 G Ex d IIC T ¹⁾ (direct entry UD) ⚠ II 2 G Ex de IIC T ¹⁾ (indirect entry XM) ⚠ II 2 D Ex tD A21 IP67 T ¹⁾ °C
EC-Type Examination Certificate	LOM 02 ATEX 2012 X
IECEX Certificate of Conformity	IECEX BKI 07.0031X
Marking acc. to IECEx	Ex d / de IIC T ¹⁾ Ex tD A21 IP67 T ¹⁾
Permissible ambient temperature	-20 °C to +55 °C -50 °C to +55 °C
Rated voltage	max. 250 V
Connecting terminals	1 x 2.5 mm ² / 2 x 1.5 mm ² (UD), 2 x 2.5 mm ² (XM); PE ext. 2 x 6 mm ²
Insulation class	I
Lamp/Illuminant	¹⁾
Lamp cap	E 27 (EVI 200) / E 40 (EVI 500)
Rated luminous flux	¹⁾
Light efficiency in operation	75 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" ISO 7/1-thread (Ex-d), one plugged (UD) / 2 x M25 x 1.5, on plugged (XM)
Dimensions (L x W x H)	280 mm x Ø 245 mm (200 UD), 400 x Ø 225 mm (200 XM) 340 mm x Ø 300 mm (500 UD), 460 x Ø 300 mm (500 XM)
Weight	see ordering information
Type of mounting	ceiling mounting
Enclosure material	light alloy
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

Additional lamp data

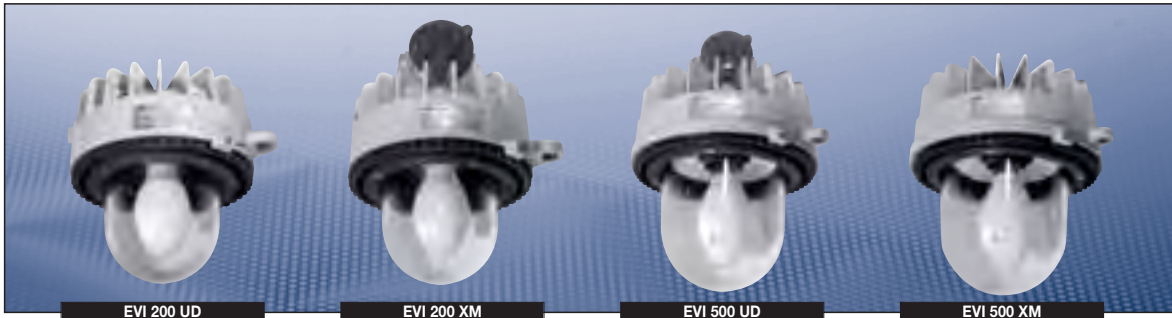
Lamp	Luminous flux ²⁾	Power	Type	Temperature class II 2 G		Max. surface temp. II 2 D	
				T _{ambient ≤ +40 °C}	T _{ambient ≤ +55 °C}	T _{ambient ≤ +40 °C}	T _{ambient ≤ +55 °C}
Incandescent IGA 65	2200 lm	150 W	EVI 200	T4	T4	T105 °C	T120 °C
Incandescent IGA 80	3100 lm	200 W	EVI 200	T4	T4	T115 °C	T130 °C
Incandescent IGA 90	5000 lm	300 W	EVI 500	T4	T4	T115 °C	T130 °C
Incandescent IGA 110	8400 lm	500 W	EVI 500	T3	T3	T155 °C	T170 °C
High pressure mercury vapor mixed light HME-SB	3100 lm	160 W	EVI 200	T4	T3	T125 °C	T140 °C
High pressure mercury vapor mixed light HME-SB	5600 lm	250 W	EVI 500	T4	T3	T125 °C	T140 °C
High pressure mercury vapor HME	3800 lm	80 W	EVI 200	T4	T4	T115 °C	T130 °C
High pressure mercury vapor HME	6300 lm	125 W	EVI 200	T4	T4	T115 °C	T130 °C
High pressure mercury vapor HME	13000 lm	250 W	EVI 500	T4	T3	T125 °C	T140 °C
High pressure sodium lamp HSE	5600 lm	70 W	EVI 200	T5	T4	T 95 °C	T110 °C
High pressure sodium lamp HSE	14000 lm	150 W	EVI 500	T5	T4	T 90 °C	T105 °C
High pressure sodium lamp HSE	25000 lm	250 W	EVI 500	T4	T4	T125 °C	T140 °C
High pressure Metal Halide HIE	17000 lm	250 W	EVI 500	T4	T3	T125 °C	T140 °C

¹⁾ see table

²⁾ depends on lamp

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Ex-Pendant light fitting



Ordering details

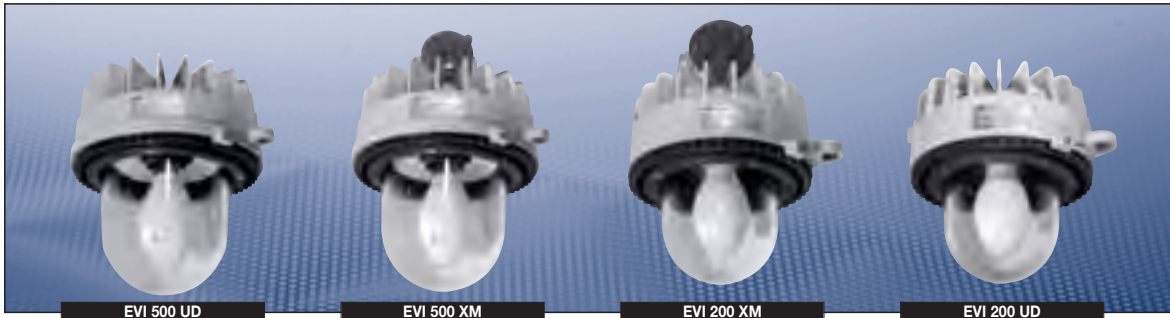
Type ¹⁾	Entry thread	Cable gland for cable Ø	Blanking plug	Weight kg	Order No.
(T _{ambient} -20 °C to +55 °C)					
EVI 200 UD (direct entry)	2 x 3/4"	9 -14 mm Ex-d	1 x 3/4" Ex-d	8.30	NOR 000 005 110 754
EVI 200 UD (direct entry)	2 x 3/4"	–	1 x 3/4" Ex-d	8.20	NOR 000 005 110 753
EVI 500 UD (direct entry)	2 x 3/4"	9 -14 mm Ex-d	1 x 3/4" Ex-d	12.90	NOR 000 005 110 762
EVI 500 UD (direct entry)	2 x 3/4"	–	1 x 3/4" Ex-d	12.80	NOR 000 005 110 761
EVI 200 XM (indirect entry)	2 x M25 x 1.5	9 -14 mm Ex-e	1 x M25 Ex-e	9.10	NOR 000 005 110 941
EVI 200 XM (indirect entry)	2 x M25 x 1.5	–	1 x M25 Ex-e	9.00	NOR 000 115 110 941
EVI 500 XM (indirect entry)	2 x M25 x 1.5	9 -14 mm Ex-e	1 x M25 Ex-e	13.70	NOR 000 005 110 942
EVI 500 XM (indirect entry)	2 x M25 x 1.5	–	1 x M25 Ex-e	13.60	NOR 000 115 110 942
(T _{ambient} -50 °C to +55 °C)					
EVI 200 UD (direct entry)	2 x 3/4"	–	1 x 3/4" Ex-d	8.20	NOR 000 115 110 753
EVI 500 UD (direct entry)	2 x 3/4"	–	1 x 3/4" Ex-d	12.80	NOR 000 005 110 763
EVI 200 XM (direct entry)	2 x 3/4"	–	1 x 3/4" Ex-d	9.00	NOR 000 115 110 943
EVI 500 XM (direct entry)	2 x 3/4"	–	1 x 3/4" Ex-d	13.60	NOR 000 115 110 944

¹⁾ Versions for high pressure lamps (HME, HSE, HIE): flameproof ballast enclosure not included
Lamps and fixing accessories are not included

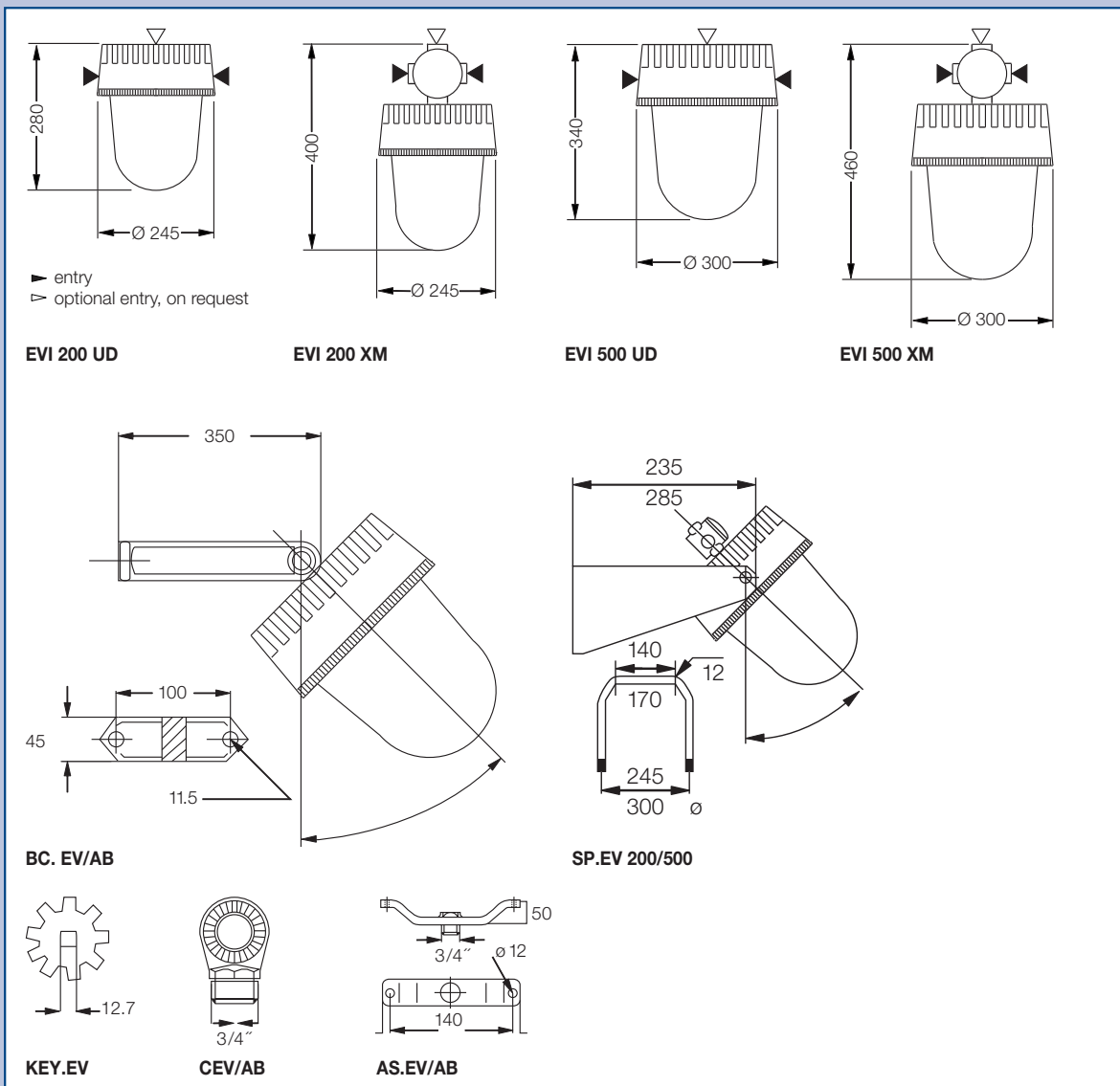
Accessories

EVI 200, EVI 500			
Type	Content	Application	Order No.
REP 200	Spare Glass	EVI 200	NOR 000 005 110 969
REP 500	Spare glass	EVI 500	NOR 000 005 110 977
G. EV 200	Wire Guard	EVI 200	NOR 000 005 110 860
G. EV 500	Wire Guard	EVI 500	NOR 000 005 110 878
PC. EV 200	External reflector	EVI 200 / EVQ 55	NOR 000 005 110 894
PC. EV 500	External reflector	EVI 500 / EVQ 85	NOR 000 005 110 901
KEY, EV	Lamp key	EV ...	NOR 000 005 110 886
CEV/AB	Eye bolt	EV ...	NOR 000 005 110 852
AS. EV	Ceiling bracket,adjustable	EV ...	NOR 000 005 110 828
SPU. EV	Wall mounting barcket	EV ...	NOR 000 005 110 951
BC. EV	Pole mounting bracket	EV ...	NOR 000 005 110 836
SP. EV 200	Wall mounting bracket	EVI 200	NOR 000 005 110 935
SP. EV 500	Wall mounting bracket	EVI 500	NOR 000 005 110 943

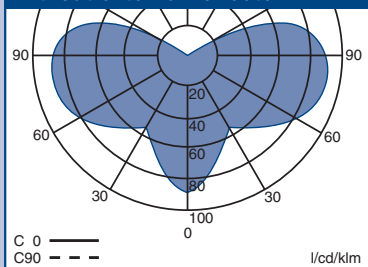
Metal cable glands see page 8.10...



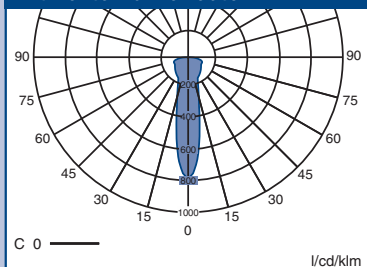
Dimensions drawing | Polar curve



Polar curve EVI 200/500 without external reflector



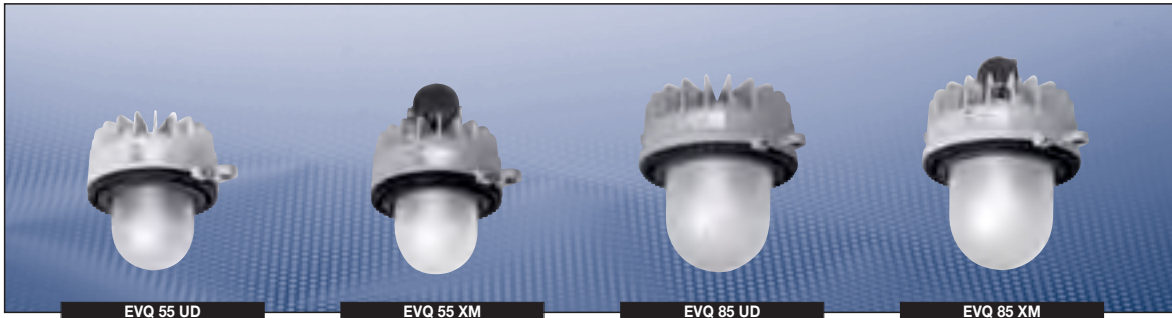
Polar curve EVI 200/500 with external reflector



Dimensions in mm

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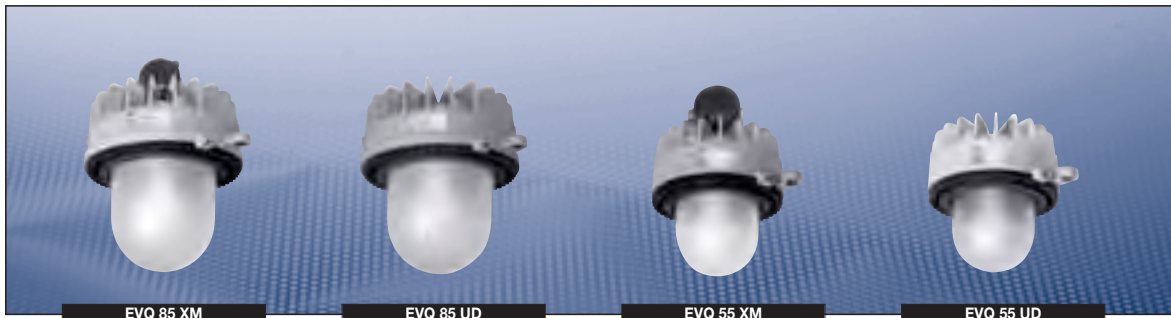
Ex-Pendant light fitting



Technical data

EVQ QL-lamps	
Marking to 94/9/EC (new standard – applied for)	II 2 G Ex d IIC T6 (direct entry UD) II 2 G Ex de IIC T6 (indirect entry XM) II 2 D Ex tD A21 IP67 T85 °C
EC-Type Examination Certificate	LOM 02 ATEX 2012 X
IECEX Certificate of Conformity	IECEX BKI 07.0031X
Marking acc. to IECEx	Ex d / de IIC T6
Permissible ambient temperature	-20 °C to +55 °C
Rated voltage	230 V AC/DC
Rated current	0.26 A (55 W), 0.40 A (85 W)
Frequency	50/60 Hz
Power factor cos φ	> 0.96
Circuit	electronic HF generator
Connecting terminals	1 x 2.5 mm ² / 2 x 1.5 mm ² (UD), 2 x 2.5 mm ² (XM); PE ext. 2 x 6 mm ²
Insulation class	I
Lamp/Illuminant	Induction lamp 55/85 W with coupler
Rated luminous flux	55 W: 3500 lm / 85 W: 6000 lm
Light efficiency in operation	66 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" ISO 7/1-thread (Ex-d), one plugged (UD), 2 x M25 thread (Ex-e), one plugged (XM)
Dimensions (L x W x H)	280 mm x Ø 245 mm (55 UD), 400 x Ø 225 mm (55 XM), 340 mm x Ø 300 mm (85 UD), 460 x Ø 300 mm (85 XM),
Weight	see ordering information
Type of mounting	ceiling mounting
Enclosure material	light alloy
Enclosure colour	grey, PTFE (optional)
Protective cover/protective bowl	borosilicate glass, opaque (clear on request)

Fixing accessories are not included, included lamps and HF generator



Ordering details

Type	Entry thread	Cable gland for cable Ø	Blanking plug	Weight kg	Order No.
EVQ 55 UD (direct entry)	2 x 3/4"	9 - 14 mm Ex-d	1 x 3/4" Ex-d	9.10	NOR 000 115 110 851
EVQ 55 UD (direct entry)	2 x 3/4"	-	1 x 3/4" Ex-d	9.00	NOR 000 115 110 850
EVQ 85 UD (direct entry)	2 x 3/4"	9 - 14 mm Ex-d	1 x 3/4" Ex-d	12.9	NOR 000 115 110 853
EVQ 85 UD (direct entry)	2 x 3/4"	-	1 x 3/4" Ex-d	12.8	NOR 000 115 110 852
EVQ 55 XM (indirect entry)	2 x M25 x 1.5	9 - 14 mm Ex-e	1 x M25 Ex-e	9.90	NOR 000 115 110 855
EVQ 55 XM (indirect entry)	2 x M25 x 1.5	-	1 x M25 Ex-e	9.80	NOR 000 115 110 854
EVQ 85 XM (indirect entry)	2 x M25 x 1.5	9 - 14 mm Ex-e	1 x M25 Ex-e	13.70	NOR 000 115 110 857
EVQ 85 XM (indirect entry)	2 x M25 x 1.5	-	1 x M25 Ex-e	13.60	NOR 000 115 110 856

Accessories

EVQ 55, EVQ 85

Type	Content	Application	Order No.
G. EV 200	Wire Guard	EVQ 55	NOR 000 005 110 860
G. EV 500	Wire Guard	EVQ 85	NOR 000 005 110 878
PC. EV 200	External reflector	EVI 200 / EVQ 55	NOR 000 005 110 894
PC. EV 500	External reflector	EVI 500 / EVQ 85	NOR 000 005 110 901
KEY. EV	Lamp key	EV ...	NOR 000 005 110 886
CEV/AB	Eye bolt	EV ...	NOR 000 005 110 852
AS. EV	Ceiling bracket, adjustable	EV ...	NOR 000 005 110 951
SPU. EV	Wall mounting barcket	EV ...	NOR 000 005 110 828
BC. EV	Pole mounting bracket	EV ...	NOR 000 005 110 836
SP. EV 200	Wall mounting bracket	EVQ 55	NOR 000 005 110 935
SP. EV 500	Wall mounting bracket	EVQ 85	NOR 000 005 110 943

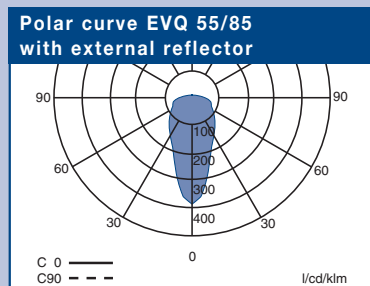
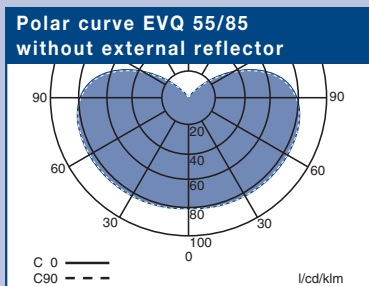
Metal cable glands see page 8.10...

Dimensions drawing | Polar curve

EVQ 55 UD
 ▴ entry
 ▽ optional entry, on request

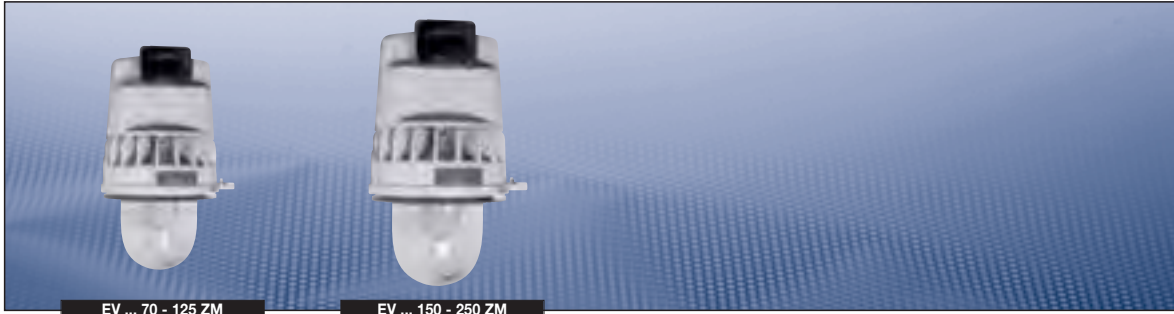
EVQ 55 XM **EVQ 85 UD** **EVQ 85 XM**

Dimensions for Accessories see page 5.17



Dimensions in mm

Ex-Pendant light fitting



Technical data

EVM | EVS | EVH	
Marking to 94/9/EC (new standard – applied for)	⊕ II 2 G Ex de IIC T ¹⁾ ⊕ II 2 D Ex tD A21 IP66 T ¹⁾ °C
EC-Type Examination Certificate	LOM 02 ATEX 2012 X
IECEX Certificate of Conformity	IECEX BK1 07.0031X
Marking acc. to IECEx	Ex de IIC T ¹⁾ Ex tD A21 IP67 T ¹⁾
Permissible ambient temperature	-20 °C to +55 °C -45 °C to +55 °C (option)
Rated voltage	230 V AC ²⁾
Rated current	¹⁾
Frequency	50 Hz ²⁾
Power factor cos φ	> 0.85
Circuit	electromagnetic circuit
Connecting terminals	3 x (2 x 2.5 mm ²); PE extern. 2 x 6 mm ²
Insulation class	I
Lamp cap	E 27 (EV. 70 ... 125), E 40 (EV 150 ... 250)
Light efficiency in operation	76 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x M25 threads (Ex-e), one plugged
Dimensions (L x W x H)	480 mm x Ø 245 mm (EV.. 70-125 ZM) 560 mm x Ø 300 mm (EV.. 150-250 ZM)
Weight	see ordering information
Type of mounting	ceiling mounting
Enclosure material	light alloy
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

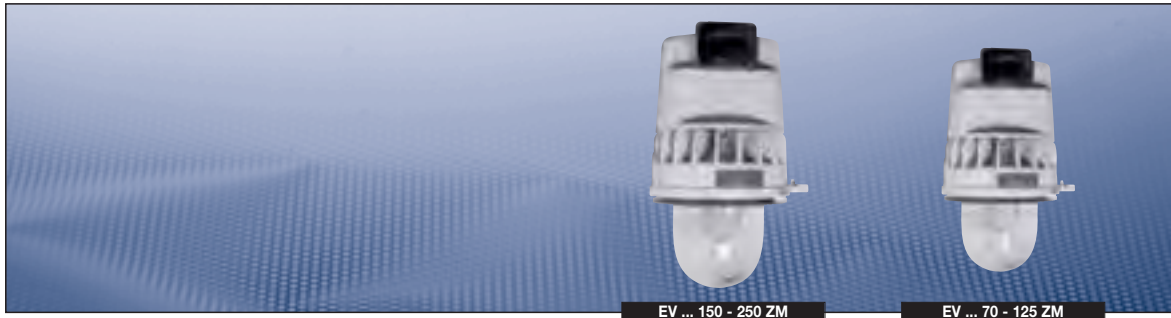
¹⁾ see ordering details

²⁾ other voltages or frequencies on request

Additional lamp data

Lamp	Luminous flux ³⁾	Power	Type	Temperature class II 2 G		Max. surface temp. II 2 D	
				T _{ambient ≤ 40 °C}	T _{ambient > 40 °C}	T _{ambient ≤ 40 °C}	T _{ambient > 40 °C}
High pressure mercury vapor HME	6300 lm	125 W	EVM 125 ZM	T4	T4	T115°C	T130°C
High pressure mercury vapor HME	13000 lm	250 W	EVM 250 ZM	T4	T3	T125°C	T140°C
High pressure sodium lamp HSE	5600 lm	70 W	EVS 70 ZM	T5	T4	T95°C	T110°C
High pressure sodium lamp HSE	14000 lm	150 W	EVS 150 ZM	T5	T4	T90°C	T105°C
High pressure sodium lamp HSE	25000 lm	250 W	EVS 250 ZM	T4	T4	T115°C	T130°C
High pressure Metal Halide HIE	17000 lm	250 W	EVH 250 ZM	T4	T3	T125°C	T140°C

³⁾ depends on used lamps



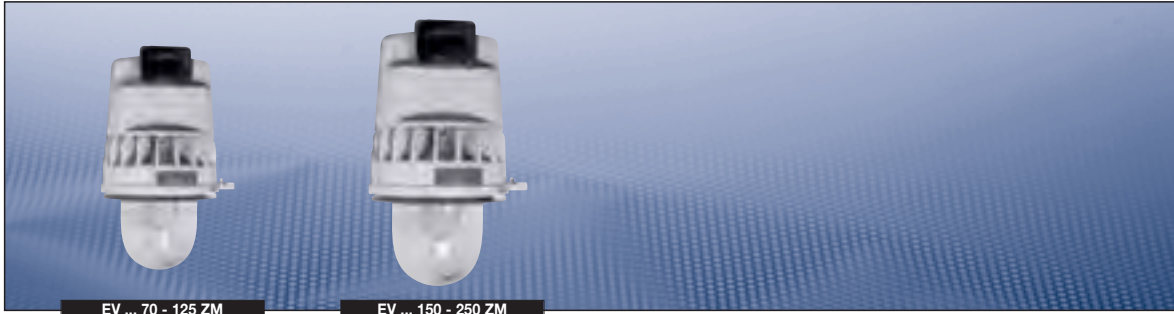
Ordering details

Type	Lamp	Rated current	Cable gland Ex-e for cable Ø	Weight kg	Order No.
(T ambient -20 °C to +55 °C)					
EVM 125 ZM	HME 125W	1.10 A	9 -14 mm	14.1	NOR 000 115 110 079
EVM 125 ZM	HME 125W	1.10 A	-	14.0	NOR 000 115 110 879
EVM 250 ZM	HME 250W	2.10 A	9 -14 mm	22.4	NOR 000 115 110 080
EVM 250 ZM	HME 250W	2.10 A	-	22.5	NOR 000 115 110 881
EVS 70 ZM	HSE 70W	0.35 A	9 -14 mm	14.1	NOR 000 115 110 086
EVS 70 ZM	HSE 70W	0.35 A	-	14.0	NOR 000 115 110 880
EVS 150 ZM	HSE 150W	0.96 A	9 -14 mm	22.4	NOR 000 115 110 087
EVS 150 ZM	HSE 150W	0.96 A	-	22.4	NOR 000 115 110 883
EVS 250 ZM	HSE 250W	1.70 A	9 -14 mm	22.4	NOR 000 115 110 088
EVS 250 ZM	HSE 250W	1.70 A	-	22.4	NOR 000 115 110 882
EVH 250 ZM	HIT 250W	1.80 A	9 -14 mm	22.4	NOR 000 115 110 046
EVH 250 ZM	HIT 250W	1.80 A	-	22.4	NOR 000 115 110 945

(T ambient -45 °C to +55 °C)					
EVM 125 ZM	HME 125 W	0.96 A	-	14.0	NOR 000 115 110 884
EVM 250 ZM	HME 250 W	0.96 A	-	22.4	NOR 000 115 110 885
EVS 70 ZM	HSE 70 W	1.70 A	-	14.0	NOR 000 115 110 886
EVS 150 ZM	HSE 150 W	1.70 A	-	22.4	NOR 000 115 110 887
EVS 250 ZM	HSE 250 W	1.80 A	-	22.4	NOR 000 115 110 888
EVH 250 ZM	HIT 250 W	1.80 A	-	22.4	NOR 000 115 110 889

Lamps and fixing accessories are not included

Ex-Pendant light fitting



EV ... 70 - 125 ZM

EV ... 150 - 250 ZM

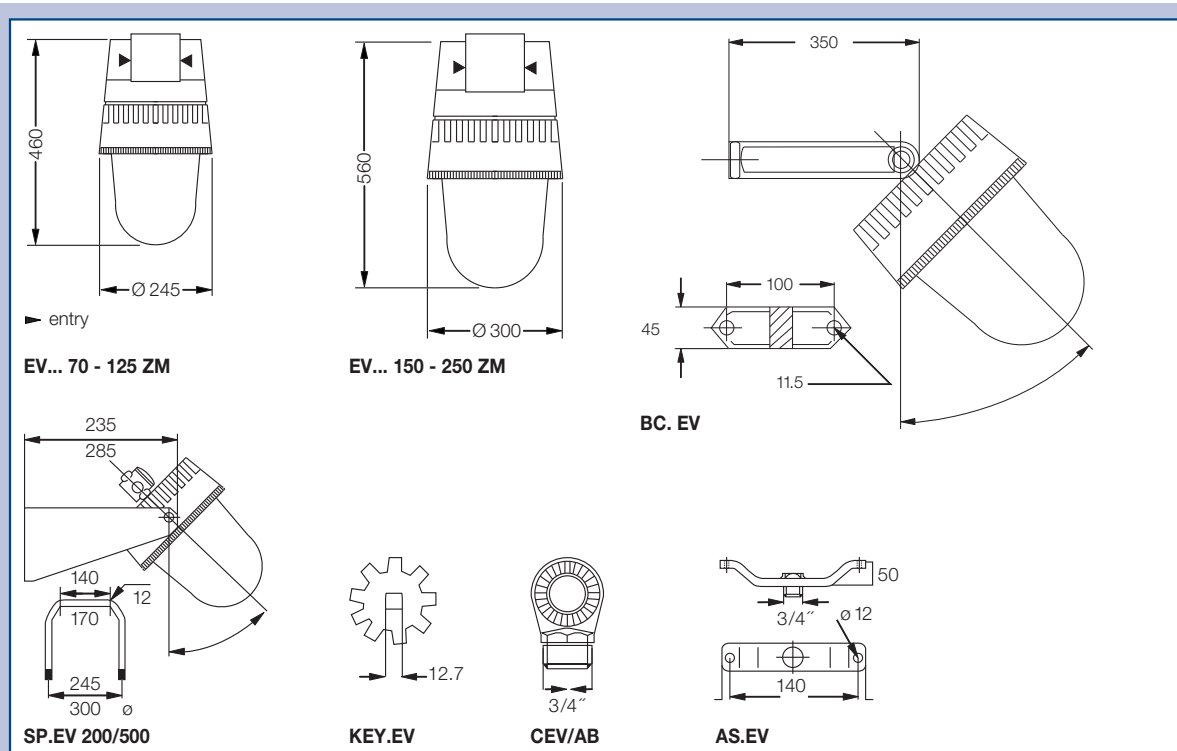
Accessories

EVM, EVS, EVH

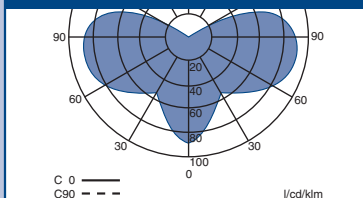
Type	Content	Application	Order No.
REP 200	Space glass	EV.. 70-125 ..	NOR 000 005 110 969
REP 500	Spare glass	EV.. 150-250 ..	NOR 000 005 110 977
G. EV 200	Wire guard	EV.. 70-125 ..	NOR 000 005 110 860
G. EV 500	Wire guard	EV.. 150-250 ..	NOR 000 005 110 878
PC. EV 200	External reflector	EV.. 70-125 ..	NOR 000 005 110 894
PC. EV 500	External reflector	EV.. 150-250 ..	NOR 000 005 110 901
KEY, EV	Lamp key	EV..	NOR 000 005 110 886
CEV/AB	Eye bolt	EV..	NOR 000 005 110 852
AS. EV	Ceiling bracket, adjustable	EV..	NOR 000 005 110 951
SPU. EV Ø 44 – 64 mm	Wall mounting barcket	EV..	NOR 000 005 110 828
BC. EV	Pole mounting bracket	EV..	NOR 000 005 110 836
SP. EV 200	Wall mounting bracket	EV 70..-125 ..	NOR 000 005 110 935
SP. EV 500	Wall mounting bracket	EV 150..-250 ..	NOR 000 005 110 943

Metal cable glands see page 8.10...

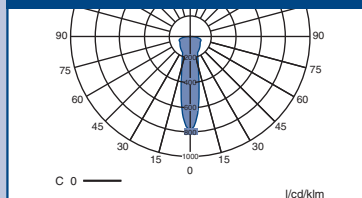
Dimensions drawing



Polar curve EV 200/500 without external reflector



Polar curve EV 200/500 with external reflector



Dimensions in mm

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EX - PENDANT LIGHT FITTINGS

dHLS 85... for high pressure discharge lamps Metal version for Zone 1/2

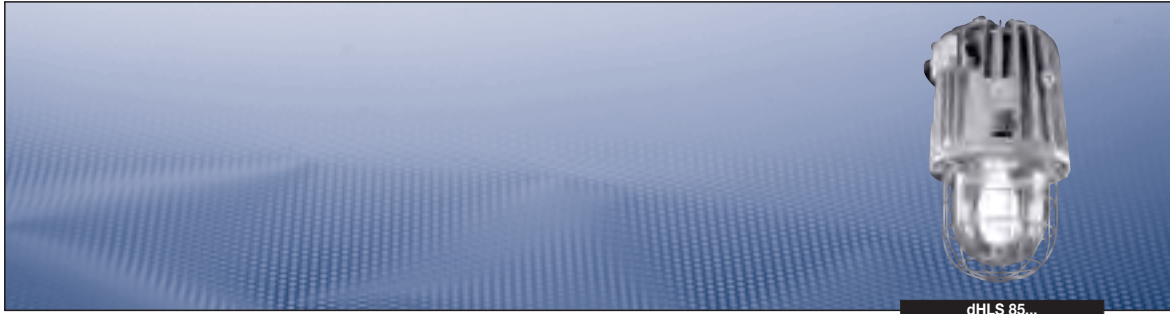
The explosion-protected pendant light fittings dHLS 85... for high pressure discharge lamps are in accordance to the ATEX-Directive 94/9/EG. They are certified for use in the Zones 1 and 2.

The housing is made of a light alloy with a powdered coating. The pressed-in thread-ring for the flameproof thread gap is made of brass. This provides for an easy lamp replacement even after a longer operating periods.

The pendant light fitting is designed for outdoor use. Due to the high safety standard it has more than proven its reliability in chemical factories and offshore platforms for illuminating large areas and selective large objects. The light fitting is fitted with a dome-shaped glass cover and can also be fitted with an external reflector.



- **Cost-effective illumination of large objects**
- **For use in chemical factories and offshore platforms**
- **Robust light alloy housing with a powdered coating**
- **Easy lamp replacement even after extended time of operation**
- **Or with an external reflector**



dHLS 85...

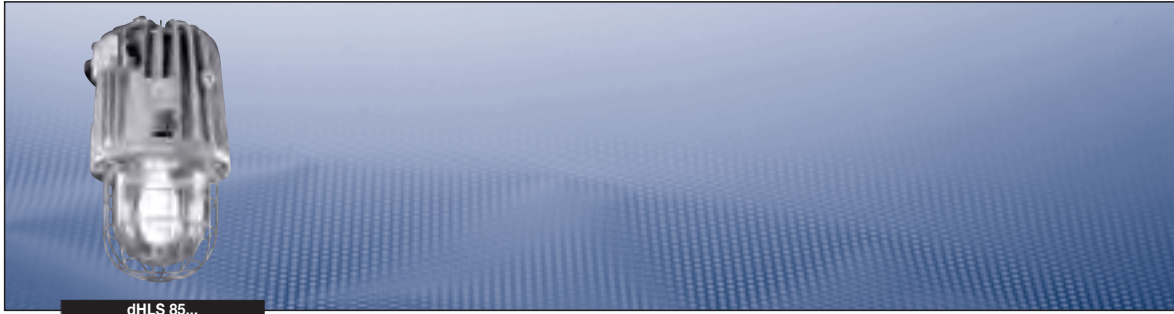
Technical data

dHLS 85250 | dHLS 85400	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T3
EC-Type Examination Certificate	DMT 03 ATEX E 039
IECEX Certificate of Conformity	IECEX BKI 08.0006
Marking accd. to IECEx	Ex de IIC T3
Permissible ambient temperature	-20 °C to +50 °C / -20 °C to +55 °C (250 W) -45 °C to +55 °C (option)
Rated voltage	230 V AC
Rated current	¹⁾
Frequency	50 Hz
Power factor cos φ	0.5 ind. / 0.9 comp.
Circuit	inductive circuit / compensated circuit
Connecting terminals	L + N + PE; 2 x 2.5 mm ²
Insulation class	I
Lamp/Illuminant	high pressure mercury vapour lamp HME 250 W / 400 W high pressure sodium lamp HSE 250 W / 400 W
Lamp cap	E 40 acc. IEC 60238
Light efficiency in operation	77 % 55 % (AR) ²⁾
Degree of protection accd. EN 60529	IP65
Cable glands/Gland plates/Enclosure drilling	1 x M25 x 1.5 for cables from Ø 8 - 17 mm 1 x M25 x 1.5 with blanking plug
Dimensions (L x W x H)	570 x Ø 320 mm (without compensation box) 780 x Ø 320 mm (with compensation box)
Weight	approx. 30 kg approx. 37 kg with compensation box
Enclosure material	light alloy with powder coating, grey
Protective cover/protective bowl	borosilicate glass

¹⁾ see table

²⁾ AR = external reflector

Ex-Pendant light fittings



dHLS 85...

Ordering details

Type	Lamp	Rated luminous flux ²⁾	Rated current	Power factor cos	Order No.
dHLS 85250	250 W HME	13000 lm	2.2 A	0,5 ind.	CGS 123 8688 P0001
	250 W HME	13000 lm	1.1 A	0,9 comp.	CGS 123 8688 P1001
	250 W HSE	25000 lm	3.0 A	0,5 ind.	CGS 123 8688 P2001
	250 W HSE	25000 lm	1.5 A	0,9 comp.	CGS 123 8688 P3001
dHLS 85400	400 W HME	22000 lm	3.25 A	0,5 ind.	CGS 123 8788 P0001
	400 W HME	22000 lm	2.5 A	0,9 comp.	CGS 123 8788 P1001
	400 W HSE	47000 lm	4.4 A	0,5 ind.	CGS 123 8788 P2001
	400 W HSE	47000 lm	3.0 A	0,9 comp.	CGS 123 8788 P3001

Lamps and fixing accessories are not included

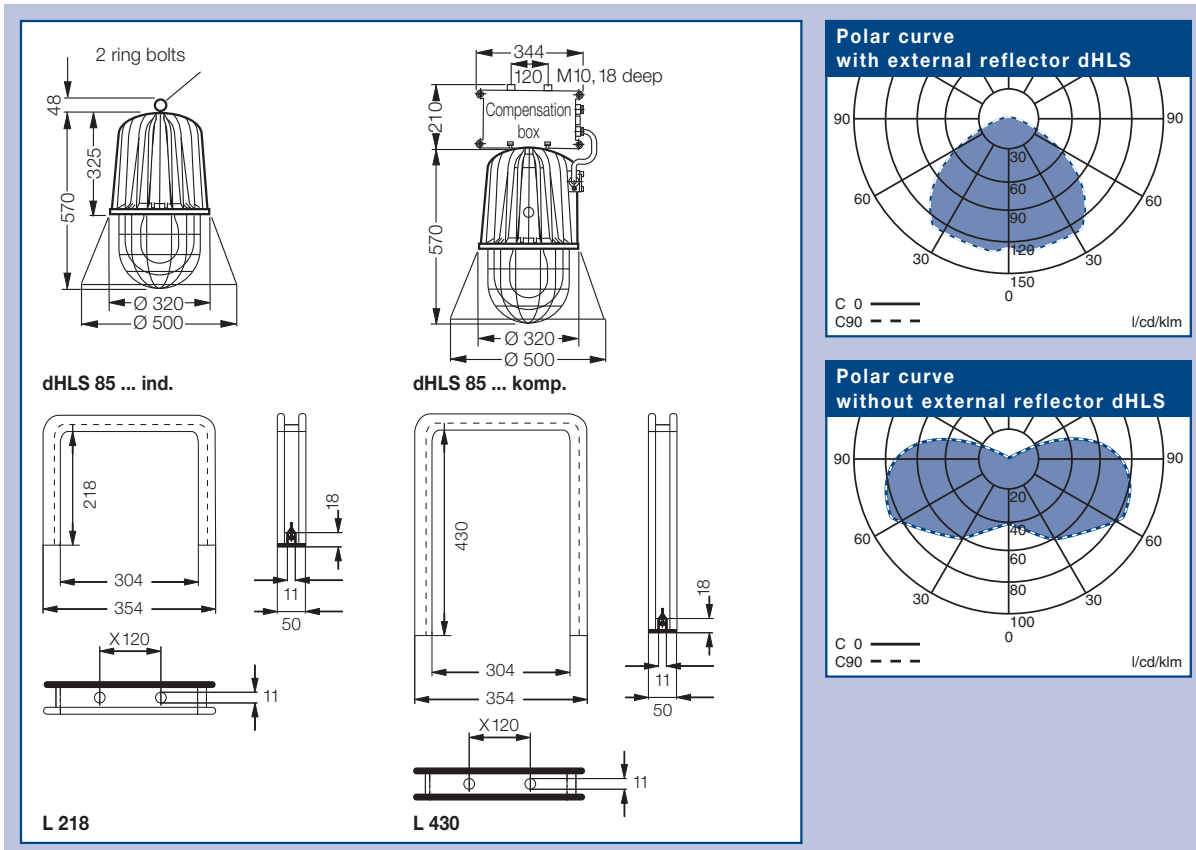
²⁾ depends on used lamps

Accessories

dHLS 85250 | dHLS 85400

Type	Content	Order No.
EB	Eye bolt, M10 (10 pcs.) galvanized	GHG 690 1921 R0003
L 218	Mounting bracket for inductive version	GHG 690 1913 R0001
L 430	Mounting bracket for compensated version	GHG 690 1913 R0002
AR	External reflector, metal, white powder coated	CGS 223 7990 P1000

Dimensions drawing



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E X - F L O O D L I G H T S

FZD 04 and FZD EN for High Pressure Discharge Lamps Metal Design for Zone 1/21

The explosion-protected floodlight **FZD 04** for high-pressure discharge lamps meets the requirements of the ATEX directive 94/9/EC. The modular floodlight FZD 04 comprises an Ex-e housing for the starter and a separate mounted Ex-e enclosure with ballast and the p.f. correction capacitor. The floodlight enclosure made of high grade aluminium and stainless steel components is a light weight, which can be installed easily by a single electrician without need of a crane or other heavers.

All main components are certified separately as components. The flameproof lamp module can easily be separated from the housing once a screw has been loosened. Two sealing systems of degree of protection IP66 ensure permanently protected Ex-d contacts.

There is no need to switch off the mains voltage to separate the module from the luminaire.

This means that a simple lamp change and easy cleaning of the lamp modules possible, even outside the potentially explosive atmospheres. Optionally, the module can be used with narrow-angle and wide-angle reflectors – even retrospectively and without any complicated installation.

By simply and quickly exchanging the lamp-module, changing the lamp is not a problem, even in extreme weather or climate conditions.

The **FZD EN** combines the easy lamp replacement with a compact enclosure. All components are protected in one Ex-d enclosure. All advantages of easy re-lamping and easy maintenance are same with FZD 04.

- Simple lamp change by the Ex-d lamp module
- Modular Ex-e/Ex-d housing
- High degree of protection IP66
- Internal wide-angle- or, optionally, narrow-angle reflector
- For low ambient temperatures of up to -45 °C





Ballast enclosure

Floodlight enclosure

Technical data

FZD 04

Marking to 94/9/EC	Ⓔ II 2 G Ex demq IIC T ¹⁾ Ⓔ II 2 D Ex tD A21 IP66 T ¹⁾
EC-Type Examination Certificate	PTB 02 ATEX 1158
IECEX Certificate of Conformity	IECEX BKI 07.0002
Marking accd. to IECEx	Ex de IIC T3 or T4 Ex tD A21 IP66 T ¹⁾ °C
Permissible ambient temperature	-45 °C to +60 °C ¹⁾
Rated voltage	230 V AC ²⁾
Rated current	¹⁾
Frequency	50 Hz ²⁾
Power factor cos φ	> 0.9
Circuit	compensated circuit
Insulation class	I
Degree of protection accd. EN 60529	IP66

Lamp module | Floodlight enclosure

Type of protection	Lamp module: Ex d IIC Floodlight enclosure: Ex em IIC
Connecting terminals	2 x (2 x 2.5 mm ²) + 2.5 mm ² PE
Lamp/Illuminant	High pressure sodium lamp – tubular (HST) Metal halide lamp – tubular (HIT)
Lamp cap	E 40 acc. EN 60061-1
Light efficiency in operation	66 %
Cable glands/Gland plates/Enclosure drilling	1 x M25 x 1.5 with plastic cable glands Ex-e M25 for non-armoured cable Ø 8 - 17 mm ³⁾ option with metal thread M20, without cable gland
Weight	Lamp module lamp: approx. 10.6 kg Floodlight enclosure: approx. 4.3 kg
Enclosure earth	2.5 mm ² PE

Ballast enclosure

Type of protection	Ex emq IIC
Connecting terminals	3 x (2 x 4 mm ²) + 4 mm ² PE
Cable glands/Gland plates/Enclosure drilling	3 x M25 x 1.5, 2 x M25 plastic cable grand Ex-e for cable Ø 8 - 17 mm M25 for one plugged ⁴⁾
Weight	approx. 9 kg (polyester fiberglass) approx. 10 kg (stainless steel)
Enclosure material	Polyester reinforced fiber glass, or stainless steel ¹⁾

¹⁾ see table

²⁾ other voltages or frequencies on request

³⁾ Connection to the ballast enclosure

⁴⁾ One to connect to the floodlight enclosure, the others for the mains connection

⁵⁾ mounting position ± 135°, see instruction

Additional lamp data

Lamp	Rated current	Temperature class II 2 G			Max. surface temp. II 2 D		
		T _{amb. ≤ +40 °C}	T _{amb. ≤ +50 °C}	T _{amb. ≤ +60 °C}	T _{amb. ≤ +40 °C}	T _{amb. ≤ +50 °C}	T _{amb. ≤ +60 °C}
HST / HIT 150 W	0,8 A	T4	T4	T3	T 120 °C	T 130 °C	T 140 °C
HST / HIT 250 W	1,3 A	T4 ⁵⁾ / T3	T3	–	T 130 °C ⁵⁾ / T 150 °C	T 160 °C	–
HST / HIT 400 W	2,1 A	T3	–	–	T 180 °C	–	–

Ex-Floodlight



Floodlight enclosure

Ballast enclosure

Ordering details FZD 04

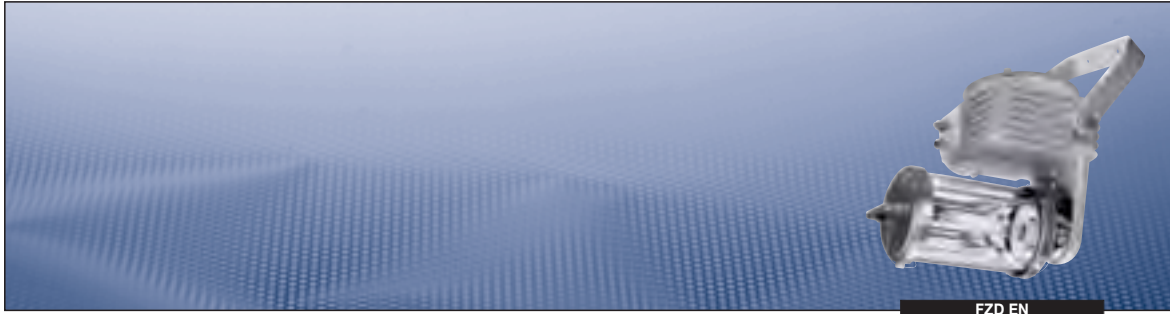
Lamp	Rated luminous flux ¹⁾	Light distribution	Order No.
Ballast enclosure made of polyester with cable gland for mains connection			
250 W HIT/HST	19000 lm / 25000 lm	narrow beam	NOR 000 005 192 505
250 W HIT/HST	19000 lm / 25000 lm	wide beam	NOR 000 005 192 506
400 W HIT	35000 lm	narrow beam	NOR 000 005 194 105
400 W HIT	35000 lm	wide beam	NOR 000 005 194 106
400 W HST	48000 lm	narrow beam	NOR 000 005 194 005
400 W HST	48000 lm	wide beam	NOR 000 005 194 006

Ballast enclosure made of stainless steel with cable gland for mains connection			
250 W HIT/HST	19000 lm / 25000 lm	narrow beam	NOR 000 005 192 501
250 W HIT/HST	19000 lm / 25000 lm	wide beam	NOR 000 005 192 502
400 W HIT	35000 lm	narrow beam	NOR 000 005 194 101
400 W HIT	35000 lm	wide beam	NOR 000 005 194 102
400 W HST	48000 lm	narrow beam	NOR 000 005 194 001
400 W HST	48000 lm	wide beam	NOR 000 005 194 002

Ballast enclosure made of polyester without cable gland for mains connection			
250 W HIT/HST	19000 lm / 25000 lm	narrow beam	NOR 000 005 192 507
250 W HIT/HST	19000 lm / 25000 lm	wide beam	NOR 000 005 192 508
400 W HIT	35000 lm	narrow beam	NOR 000 005 194 107
400 W HIT	35000 lm	wide beam	NOR 000 005 194 108
400 W HST	48000 lm	narrow beam	NOR 000 005 194 007
400 W HST	48000 lm	wide beam	NOR 000 005 194 008

Ballast enclosure made of steel without cable gland for mains connection			
250 W HIT/HST	19000 lm / 25000 lm	narrow beam	NOR 000 005 192 503
250 W HIT/HST	19000 lm / 25000 lm	wide beam	NOR 000 005 192 504
400 W HIT	35000 lm	narrow beam	NOR 000 005 194 103
400 W HIT	35000 lm	wide beam	NOR 000 005 194 104
400 W HST	48000 lm	narrow beam	NOR 000 005 194 003
400 W HST	48000 lm	wide beam	NOR 000 005 194 004

¹⁾ depends on used lamps



FZD EN

Technical data

FZD EN	
Marking to 94/9/EC	Ⓜ II 2 G Ex demq IIC T ¹⁾ Ⓜ II 2 D IP66 T ¹⁾
EC-Type Examination Certificate	PTB 02 ATEX 1158
IECEX Certificate of Conformity	IECEX BKI 07.0002
Marking accd. to IECEx	Ex de IIC T3 or T4 Ex tD A21 IP66 T ¹⁾ °C
Permissible ambient temperature	-45 °C to +50 °C ¹⁾
Rated voltage	230 V AC ²⁾
Rated current	250 W: 1.3 A / 400 W: 2.1 A
Frequency	50 Hz ²⁾
Power factor cos φ	> 0.9
Circuit	compensated circuit
Insulation class	I
Lamp/Illuminant	High pressure sodium lamp - tubular (HST) Metal halide lamp - tubular (HIT) 250 W or 400 W
Lamp cap	E 40 acc. EN 60061-1
Light efficiency in operation	66 %
Degree of protection accd. EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	2 x M25 x 1.5 with plastic cable gland Ex-e M25 for non-armoured cable Ø 8 - 17 mm, other plugged; option: with metal thread M20, without cable gland
Dimensions (L x W x H)	573 x 390 x 570 mm
Weight	28 kg (enclosure); 11 kg lamp module
Enclosure material	light alloy
Enclosure colour	grey
Protective cover/Protective bowl	die-cast light alloy
Options	tempered safety glass
Enclosure earth	2.5 mm ² PE

¹⁾ see table ²⁾ other voltages or frequencies on request

Additional lamp data

Lamp	Temperature class II 2 G		Max. surface temp. II 2 D	
	T _{ambient up to +40 °C}	T _{ambient up to +50 °C}	T _{ambient up to +40 °C}	T _{ambient up to +50 °C}
HST / HIT 250 W	T4 ⁵⁾ / T3	T3	T 130 °C ⁵⁾ / T 150 °C	T 160 °C
HST / HIT 400 W	T3	-	T 180 °C	-

⁵⁾ mounting position ± 135°, see instruction

Ordering details

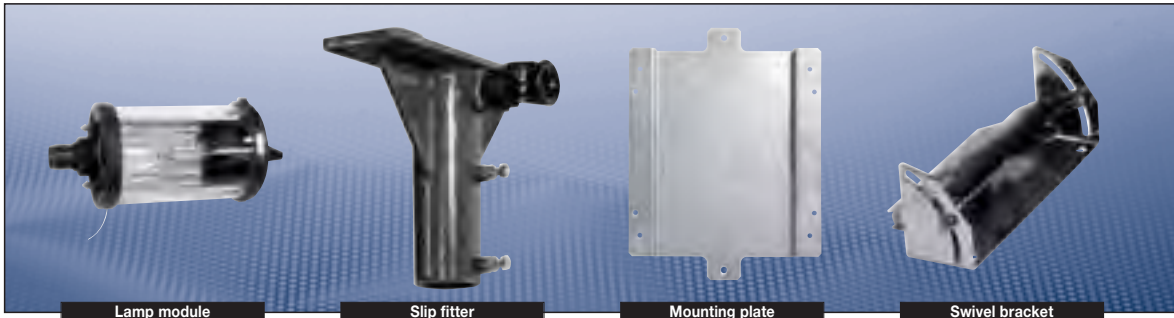
Lamp	Rated luminous flux ³⁾	Reflector	Order No.
FZD EN			
250 W HIT / HST	19000 lm / 25000 lm	wide-angle	1 3041 200 012
400 W HIT	35000 lm	wide-angle	1 3041 210 012
400 W HST	48000 lm	wide-angle	1 3041 205 012
250 W HIT / HST	19000 lm / 25000 lm	narrow-angle	1 3041 200 011
400 W HIT	35000 lm	narrow-angle	1 3041 210 011
400 W HST	48000 lm	narrow-angle	1 3041 205 011

³⁾ depends on lamp

Delivery without lamp, incl. mounting bracket

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Ex-Floodlight



Lamp module

Slip fitter

Mounting plate

Swivel bracket

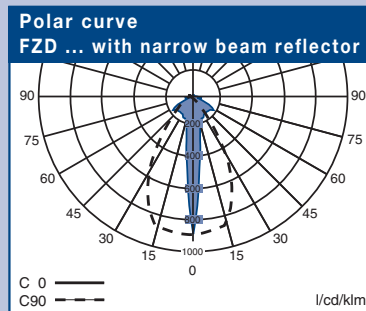
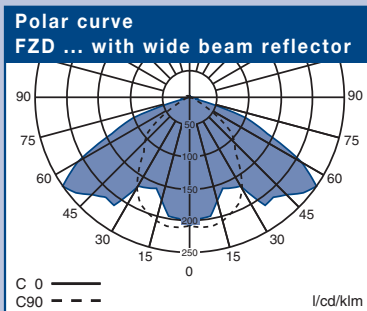
Accessories

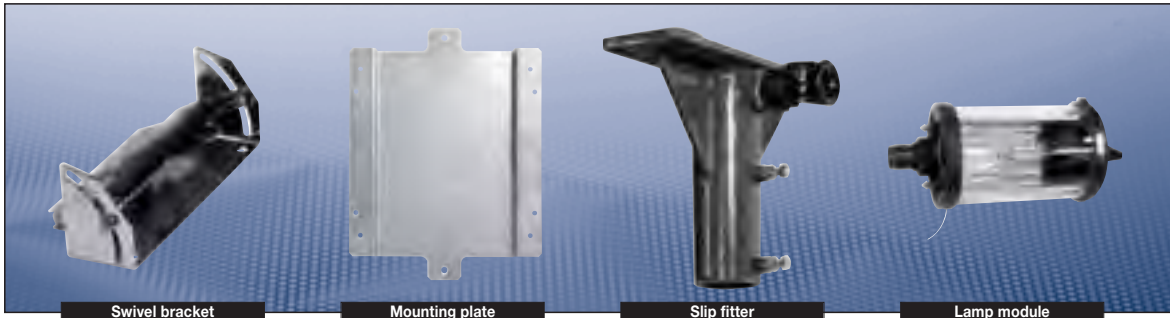
FZD 04				
Type	Content	FZD 04	FZD EN	Order No.
Lamp module	Lamp module 250 W/400 W complete with internal reflector, narrow-angle reflector	X	X	1 3041 000 011
	wide-angle reflector	X	X	1 3041 000 012
Slip fitter	fitter for pole 1 1/4" mounting complete with fixing screws	X	-	NOR 000 005 190 021
Slip fitter	fitter for pole 2" mounting complete with fixing screws	X	-	NOR 000 005 190 022
Swivel bracket	Ajustable hinge for wall/pole mounting	X	-	NOR 000 005 190 023
Mounting plate	Stainless steel plate for wall or pole installation (using pipe clamps, not incl.)	X	-	NOR 000 005 190 026
		X	-	2 2480 462 000
Pipe clamp	1 1/4" pipe clamp (1 pcs) galvanized Ø 38 - 42 mm ²	X	-	2 2480 464 000
Pipe clamp	1 1/4" pipe clamp (1 pcs) stainless steel Ø 38 - 42 mm ²	X	-	2 2480 472 000
Pipe clamp	1 1/2" pipe clamp (1 pcs) galvanized Ø 47 - 51 mm ²	X	-	2 2480 482 000
Pipe clamp	2" pipe clamp (1 pcs) galvanized Ø 56 - 60 mm ²	X	-	2 2480 482 000

Lamps and fixing accessories are not included

Metal cable glands see page 8.10...

Polar curve





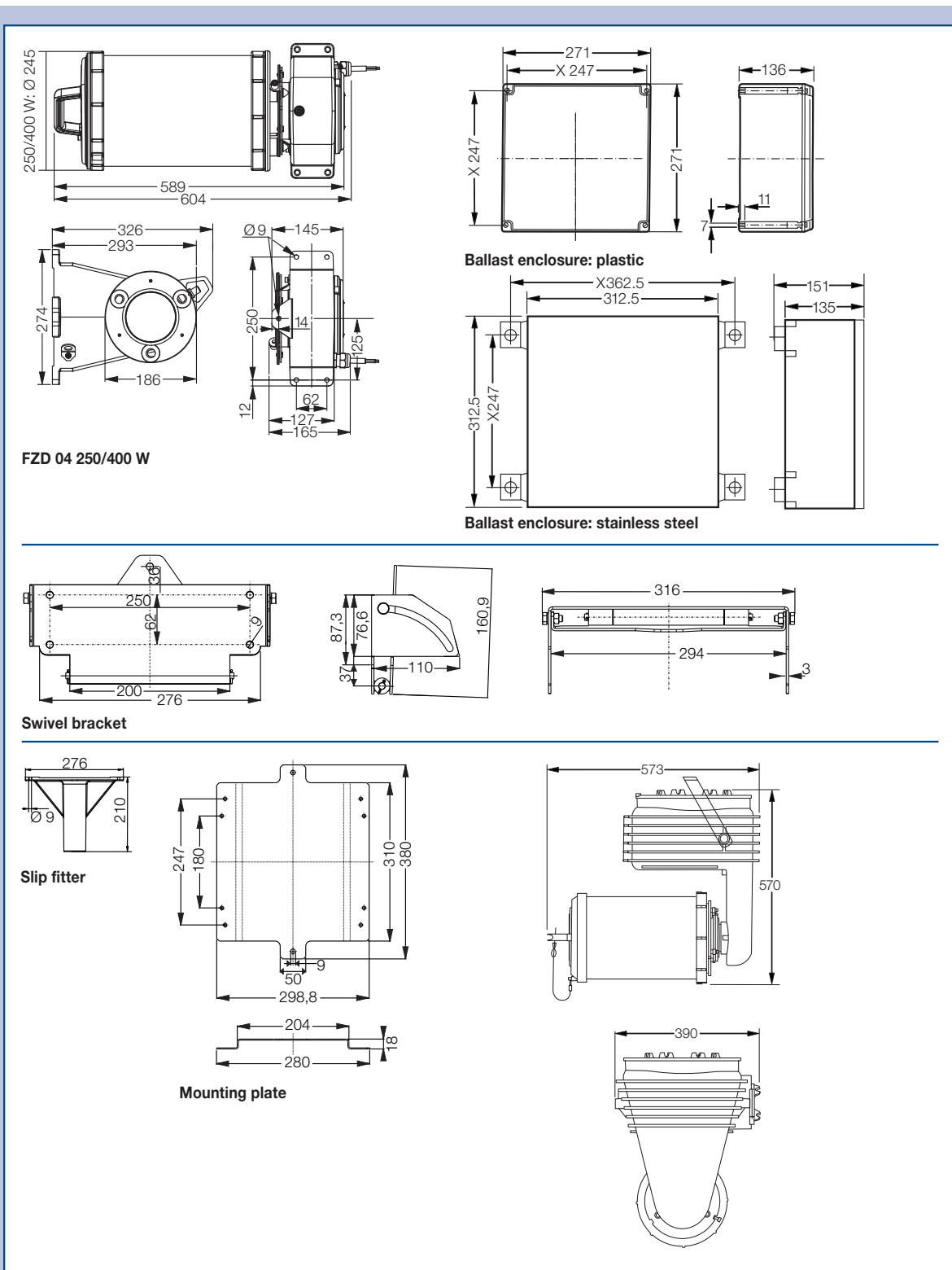
Swivel bracket

Mounting plate

Slip fitter

Lamp module

Dimensions drawing



E X - F L O O D L I G H T

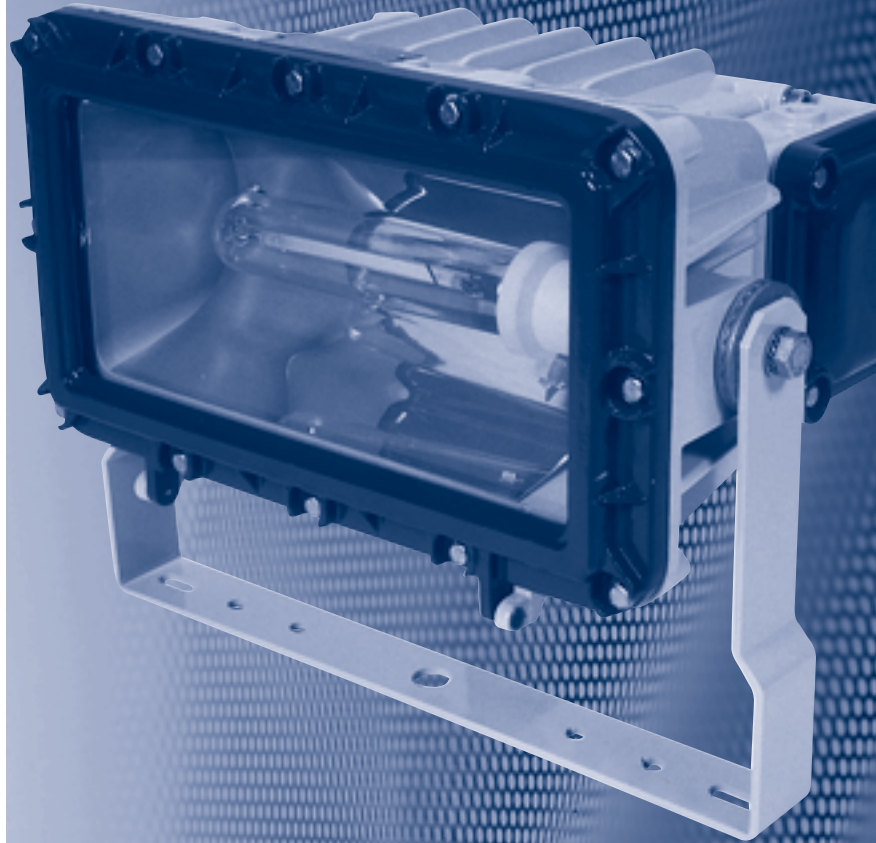
PX 04 for high pressure discharge lamps Metal version for Zone 1/21

The explosion-protected floodlight PX 04 for high pressure discharge and halogen lamps are in accordance to the ATEX-Directive 94/9/EG. They are certified for use in the Zones 1, 21, 2 and 22.

The light fitting housing is made of copper-free aluminium, the glass cover of a mechanical and thermal resistant borosilicate glass. All external screws are made of stainless steel.

The electrical components are thermally separated in their own compartment and have a separate Ex-e maintenance-friendly connection compartment.

With the adjustable mounting frame an optimum on light guidance is reached. Due to the robust architecture it has more than proven its reliability in chemical factories and offshore platforms for illuminating large areas and selective large objects.



**For environmental temperatures
of up to + 55° C**

Degree of protection IP67

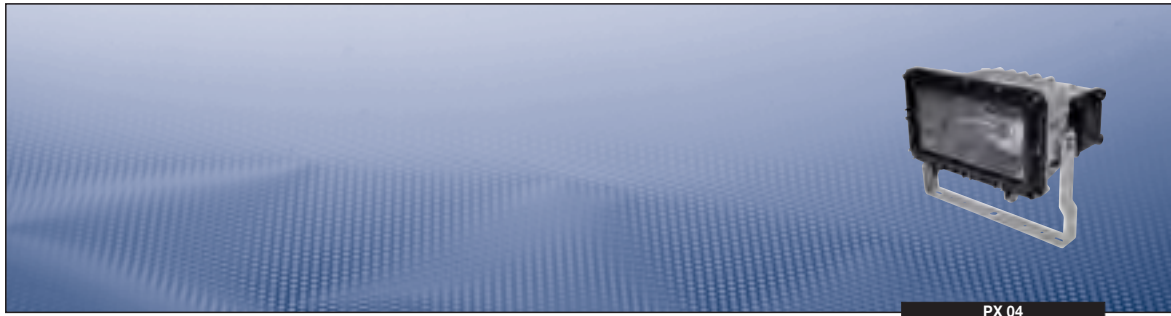
Robust light alloy housing

Captive screws made of stainless steel

Large Ex-e connection compartment

Easy to maintain

Easy to install



PX 04

Technical data

PX 04...	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIB T ¹⁾ Ⓔ II 2 D Ex tD A21 IP67 T ¹⁾ °C
EC-Type Examination Certificate	BVS 09 ATEX E 50 X
IECEX Certificate of Conformity	IECEX BKI 07.0041
Marking accd. to IECEx	Ex de IIB T2-T4 Ex tD A21 IP66 T85 °C - 210 °C
Permissible ambient temperature	-20 °C to +55 °C (-55 °C up to +55 °C optional)
Rated voltage	with control gear 230 V AC ²⁾ without control gear ≤ 250 V AC
Rated current	¹⁾
Frequency	50 Hz ²⁾
Power factor cos φ	> 0.85
Circuit	compensated circuit
Connecting terminals	L1, N: 2 x 4 mm ² ; PE: 2 X 6 mm ²
Insulation class	I
Lamp/Illuminant	¹⁾
Lamp cap	E 40 (E27 for 70 W HIT and HST, 150 HIT) acc. IEC 60238
Light efficiency in operation	62 %
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	Indirect entries: 2 x M25 x 1.5 with or without cableglands (see table), one plugged
Dimensions (L x W x H)	546 x 443 x 396 mm (with control gear) 546 x 443 x 340 mm (without control gear)
Weight	approx. 31 kg (with control gear) approx. 23 kg (without control gear)
Type of mounting	mounting bracket
Enclosure material	light alloy
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass
Reflector	polished aluminium reflector
Enclosure earth	2 x 6 mm ²

¹⁾ see table

²⁾ other voltages or frequencies on request

³⁾ depends on lamp

Additional lamp data

Type	Rated luminous flux ³⁾	Temperature class II 2 G		Max. surface temp. II 2 D	
		T _{ambient} ≤ +40 °C	T _{ambient} ≤ +55 °C	T _{ambient} ≤ +40 °C	T _{ambient} ≤ +55 °C
HS_ - 70 W	6000 lm	T4	T4	T85 °C	T100 °C
HL_ - 70 W	6300 lm	T4	T4	T90 °C	T105 °C
HS_ - 150 W	17000 lm	T4	T4	T115 °C	T130 °C
HL_ - 150 W	14000 lm	T4	T4	T105 °C	T120 °C
HS_ - 250 W	33000 lm	T4	T3	T130 °C	T145 °C
HL_ - 250 W	20000 lm	T4	T3	T130 °C	T145 °C
HME - 250 W	13000 lm	T3	T3	T150 °C	T165 °C
HST - 400 W	55500 lm	T3	T3	T175 °C	T190 °C
HIT - 400 W	35000 lm	T3	T3	T170 °C	T185 °C
HME - 400 W	22000 lm	T3	T2	T186 °C	T201 °C
HST - 600 W	90000 lm	T3	T2	T195 °C	T210 °C
IQT - 500 W	10000 lm	T3	T2	T185 °C	T200 °C

Ex-Floodlight



PX 04

Ordering details

Type	Reflector	Lamp	Lamp	Rated current	Ex-e metal cable gland for cable	Order No.
PX 0460	narrow beam	High pressure sodium lamp	HST 600 W	3.13 A	Ø 9 - 14 mm	NOR 000 115 170 243
PX 0460	narrow beam	High pressure sodium lamp	HST 600 W	3.13 A	–	NOR 000 115 170 215
PX 0460	wide beam	High pressure sodium lamp	HST 600 W	3.13 A	Ø 9 - 14 mm	NOR 000 115 170 343
PX 0460	wide beam	High pressure sodium lamp	HST 600 W	3.13 A	–	NOR 000 115 170 315
PX 0440S	narrow beam	High pressure sodium lamp	HS_ 400 W ¹⁾	2.02 A	Ø 9 - 14 mm	NOR 000 115 170 244
PX 0440S	narrow beam	High pressure sodium lamp	HS_ 400 W ¹⁾	2.02 A	–	NOR 000 115 170 221
PX 0440S	wide beam	High pressure sodium lamp	HS_ 400 W ¹⁾	2.02 A	Ø 9 - 14 mm	NOR 000 115 170 344
PX 0440S	wide beam	High pressure sodium lamp	HS_ 400 W ¹⁾	2.02 A	–	NOR 000 115 170 321
PX 0440H	narrow beam	High pressure metal halide	HI_ 400 W ²⁾	1.98 A	Ø 9 - 14 mm	NOR 000 115 170 149
PX 0440H	narrow beam	High pressure metal halide	HI_ 400 W ²⁾	1.98 A	–	NOR 000 115 170 222
PX 0440H	wide beam	High pressure metal halide	HI_ 400 W ²⁾	1.98 A	Ø 9 - 14 mm	NOR 000 115 170 349
PX 0440H	wide beam	High pressure metal halide	HI_ 400 W ²⁾	1.98 A	–	NOR 000 115 170 322
PX 0440M	narrow beam	Mercury vapor	HME 400 W	–	–	NOR 000 115 170 251
PX 0425	narrow beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 250 W	1.35 A	Ø 9 - 14 mm	NOR 000 115 170 245
PX 0425	narrow beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 250 W	1.35 A	–	NOR 000 115 170 227
PX 0425	wide beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 250 W	1.35 A	Ø 9 - 14 mm	NOR 000 115 170 345
PX 0425	wide beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 250 W	1.35 A	–	NOR 000 115 170 327
PX 0425M	narrow beam	Mercury vapor	HME 250 W	–	–	NOR 000 115 170 257
PX 0415	narrow beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 150 W	1.05 A	Ø 9 - 14 mm	NOR 000 115 170 246
PX 0415	narrow beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 150 W	1.05 A	–	NOR 000 115 170 233
PX 0415	wide beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 150 W	1.05 A	Ø 9 - 14 mm	NOR 000 115 170 346
PX 0415	wide beam	H.P. sodium lamp/Metal halide	HS_ / HI_ 150 W	1.05 A	–	NOR 000 115 170 333
PX 0407	narrow beam	High pressure sodium lamp	HS_ 70 W	0.35 A	Ø 9 - 14 mm	NOR 000 115 170 230
PX 0407	narrow beam	High pressure sodium lamp	HS_ 70 W	0.35 A	–	NOR 000 115 170 229
PX 0405	narrow beam	Halogen IQT	500 W	2.17 A	Ø 9 - 14 mm	NOR 000 115 170 248
PX 0405	narrow beam	Halogen IQT	500 W	2.17 A	–	NOR 000 115 170 209
PX 0405	wide beam	Halogen IQT	500 W	2.17 A	Ø 9 - 14 mm	NOR 000 115 170 348
PX 0405	wide beam	Halogen IQT	500 W	2.17 A	–	NOR 000 115 170 309

¹⁾ Valid for lamps HI_ 400 W (4.2 A)

²⁾ Valid for lamps HI_ 400 W (3.5 A)

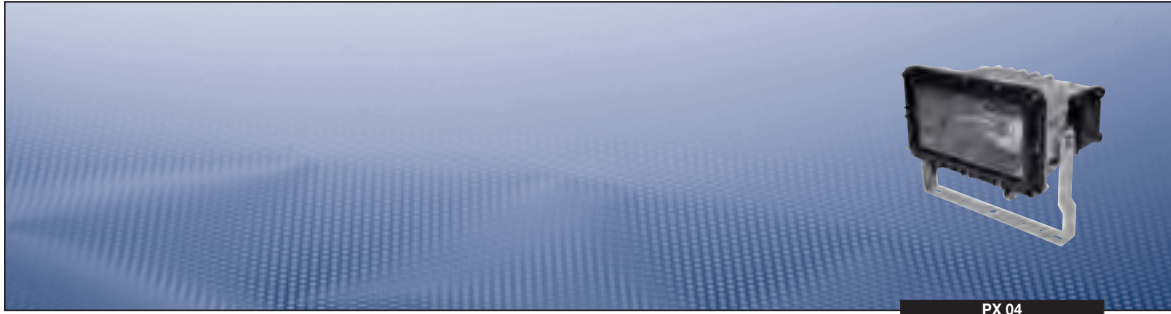
Lamps and fixing accessories are not included

Accessories

PX 04

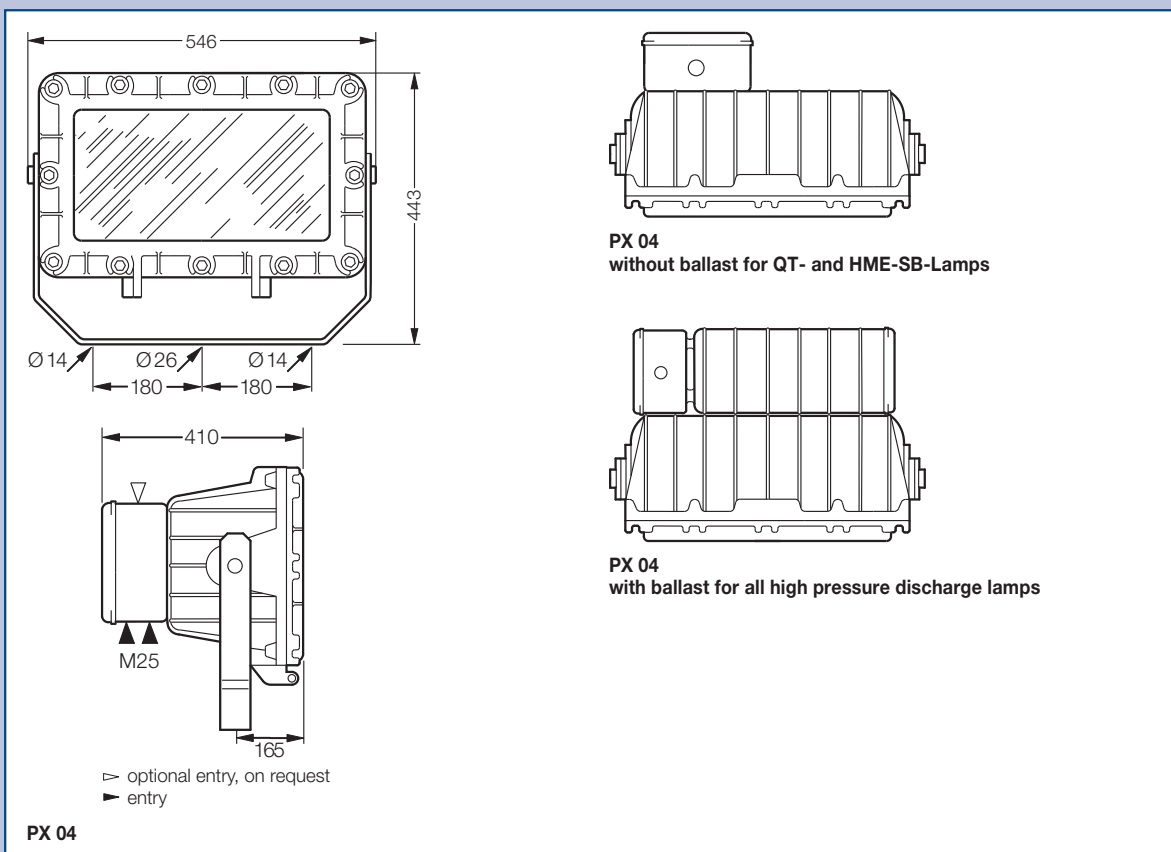
Type	Content	Order No.
SB	Pipe fixing Ø 48 mm to Ø 64 mm	NOR 000 005 170 583
ATP	Portable stand, painted steel	NOR 000 005 170 715
PAH	Horizontal steel shade, painted steel	NOR 000 005 170 608
PAV	Vertical steel shade, painted steel	NOR 000 005 170 591

Metal cable glands see page 8.10...

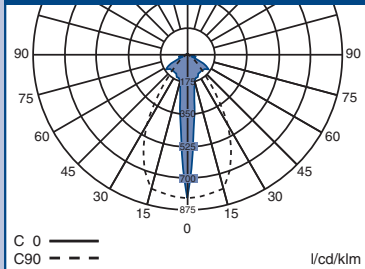


PX 04

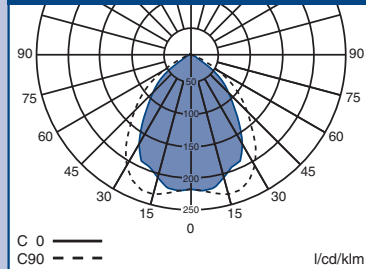
Dimensions drawing



Polar curve
PX 04 with narrow beam reflector



Polar curve
PX 04 with wide beam reflector



Dimensions in mm

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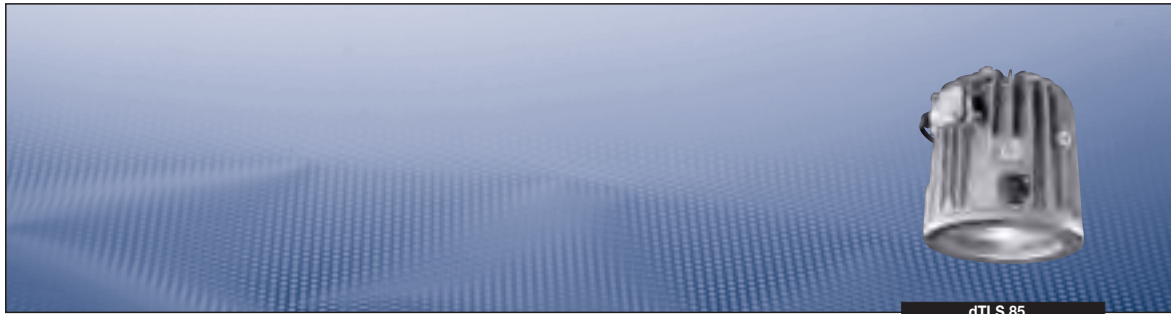
E X - F L O O D L I G H T

dTLS 85... for high pressure discharge lamps Metal version for Zone 1/2

The explosion-protected floodlight dTLS 85... for high pressure discharge lamps is in accordance to the ATEX-Directive 94/9/EG. They are certified for use in the Zones 1 and 2. The housing is made of a light alloy with a powdered coating. The pressed-in thread-ring for the flameproof thread gap is made of brass. This provides for an easy lamp replacement even after a longer operating periods. The floodlight is designed for outdoor use. Due to the high safety standard it has more than proven its reliability in chemical factories and offshore platforms for illuminating large areas and selective large objects. The vaporized reflectors are designed for various angles of dispersion.



- **Cost-effective illumination of large objects**
- **For use in chemical factories and offshore platforms**
- **Robust light alloy housing with a powdered coating**
- **Easy lamp replacement even after extended time of operation**
- **Vaporized reflector for various angles of dispersion**



dTLS 85...

Technical data

dTLS 85250 / dTLS 85070

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T3/T4
EC-Type Examination Certificate	DMT 03 ATEX E 039
IECEX Certificate of Conformity	IECEX BK1 08.0006
Marking accd. to IECEx	Ex de IIC T4 (70 W) Ex de IIC T3 (250 W)
Permissible ambient temperature	-20 °C to +50 °C
Permissible ambient temperature (option)	-45 °C to +50 °C (option)
Rated voltage	230 V AC ¹⁾
Rated current	²⁾
Frequency	50 Hz ¹⁾
Power factor cos φ	²⁾
Circuit	inductive circuit / compensated circuit
Connecting terminals	L + N + PE; 2 x 2.5 mm ²
Insulation class	I
Lamp/Illuminant	high pressure metal-halide lamp HIT-DE high pressure sodium vapour lamp HST-DE
Lamp cap	Fc2 / Rx 7s
Rated luminous flux ¹⁾	HIT-DE 250 W: 19000 lm HST-DE 250 W: 25000 lm HST-DE 70 W: 6800 lm
Light efficiency in operation	72 % 46 % with diffuser lens
Degree of protection accd. EN 60529	IP65
Cable glands/Gland plates/Enclosure drilling ¹⁾	1 x M25 x 1.5 for cables from Ø 8 - 17 mm 1 x M25 x 1.5 with blanking plug
Weight	approx. 25 kg approx. 32 kg with compensation box
Enclosure material	light alloy with powder coating, grey
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

¹⁾ Other voltages, frequencies or entries on request

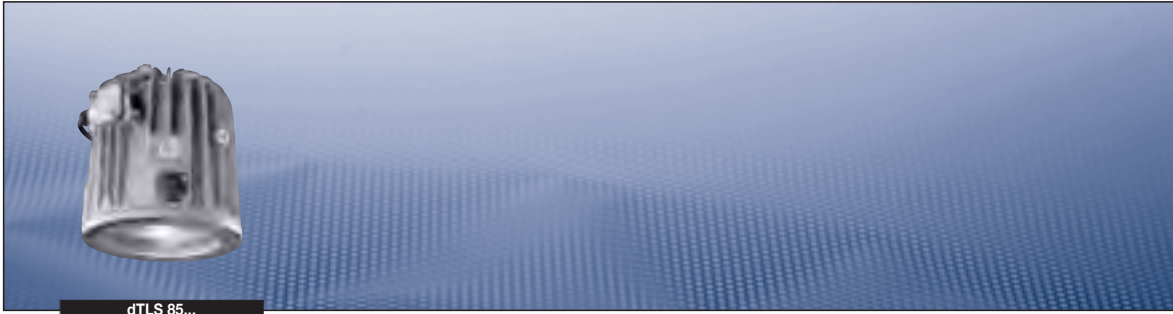
²⁾ see ordering details

Ordering details

Type	Lamp	Rated current	Power factor cos φ	Temperature class	Order No.
dTLS 85250 S with diffuser lens	250 W HIT/HST	3.0 A	0.4 ind.	T3	CGS 123 8588 P0001
	250 W HIT/HST	1.5 A	0.9 comp.	T3	CGS 123 8588 P1001
dTLS 85250 P with parabolic-reflector	250 W HIT/HST	3.0 A	0.4 ind.	T3	CGS 123 8588 P0002
	250 W HIT/HST	1.5 A	0.9 comp.	T3	CGS 123 8588 P1002
dTLS 85070 P with reflector	70 W HST	0.35 A	0.95 comp.	T4	CGS 123 8588 P0003

Lamps and fixing accessories are not included

Ex-Floodlights



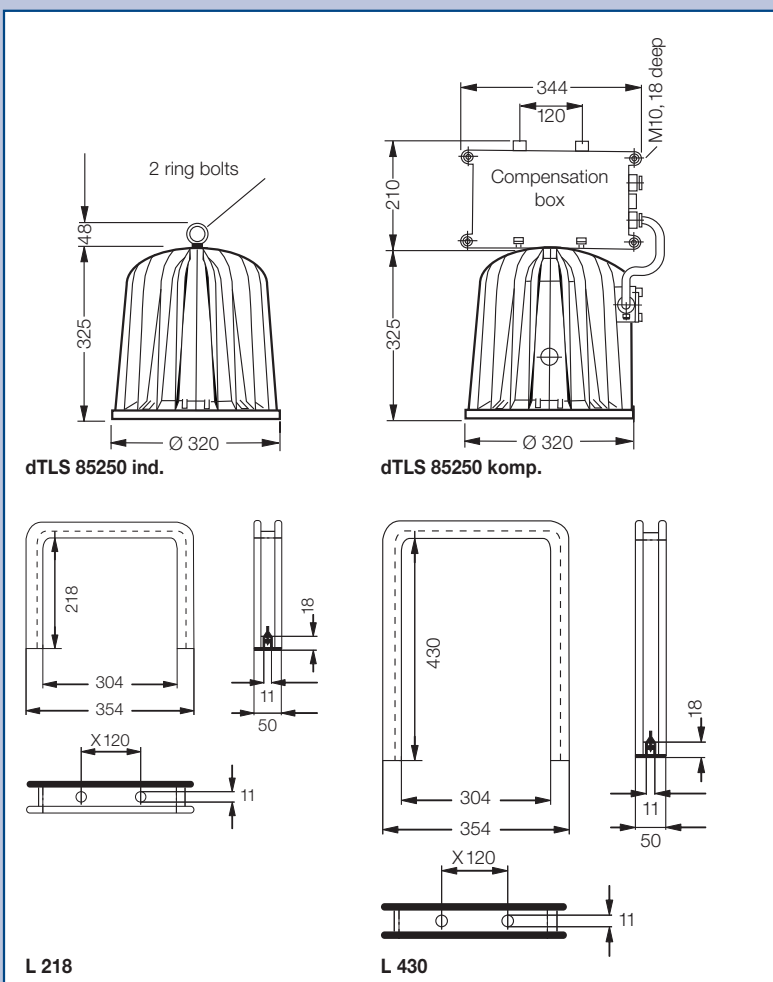
dTLS 85...

Accessories

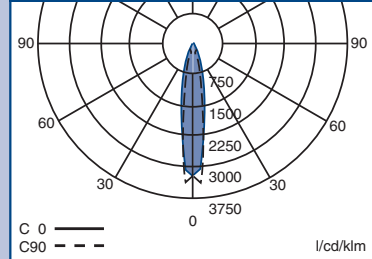
dTLS 85250

Type	Application	Order No.
EB	Eye bolt, M10 (10 St.) galvanized	GHG 690 1921 R0003
L 218	Mounting bracket, for inductive version	GHG 690 1913 R0001
L 430	Mounting bracket, for compensated version	GHG 690 1913 R0002

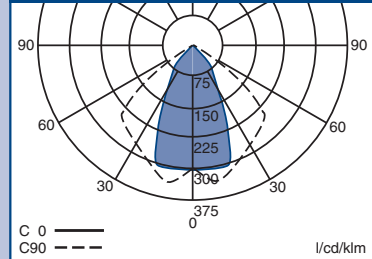
Dimensions drawing



Polar curve with parabolic reflector dTLS



Polar curve with diffuser lens dTLS



Dimensions in mm

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E m e r g e n c y U n i t

Explosion-protected, modular GHG 664 emergency lighting supply unit with explosion-protected dTLS 85070 P floodlight for high-pressure lamp

Safety for escape routes and evacuation equipment in the event of an emergency and power failure

In the event of a power failure, the new explosion-protected **GHG 664 emergency pack** enables the battery-supported operation of a 70 W sodium high-pressure lamp for the duration of 1.5 hours. When used in combination with the powerful explosion-protected **dTLS 85070 P** floodlight, escape routes and evacuation equipment (life boats, life rafts, ab-seiling equipment or rescue cushions, etc.) can be safely illuminated, even from larger distances. They have been designed especially for offshore use on platforms and ships.

Both the **GHG 664 emergency pack** and the **dTLS 85070 P** floodlight are in explosion-protected design in accordance with the ATEX Directive 94/9/EC and have been approved for use in Zones 1 and 2.

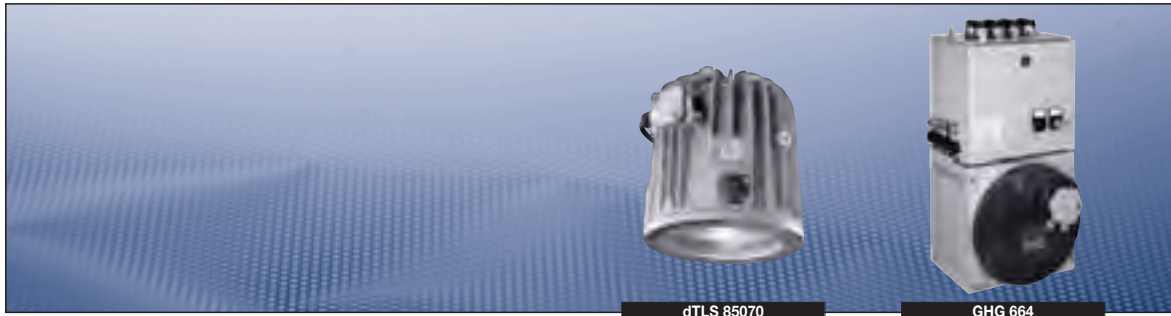
The **emergency pack GHG 664** features a flameproof enclosure for the electronic components and a flanged-on box in the type of protection "increased safety" that accommodates the battery and the connection terminals.

The **dTLS 85070 P** floodlight, which is mounted separately from the emergency pack, features a robust enclosure made of powder-coated aluminium with a borosilicate glass lens, a parabolic reflector for the 70 W sodium vapour high-pressure lamp.

Thus, for example, with a luminous spot height of 9 m, it is possible to illuminate an area measuring 15 x 15 m with 1 lx.

- **Suited for use on offshore platforms and ships**
- **Safe light for evacuation equipment in hazardous areas**
- **Emergency lighting duration of 1.5 hours in the event of a power failure**
- **Large Ex-e connection box to facilitate installation**
- **Maintenance-friendly due to simple replacement of lamps and batteries**
- **Continuous and standby light with switching-off device (only 220 – 240 V)**





dTLS 85070

GHG 664

Technical data

GHG 664

Marking to 94/9/EC	⊕ II 2 G Ex de IIC T6
EC-Type Examination Certificate	PTB 07 ATEX 2002 X
Permissible ambient temperature	-5 °C to +40 °C
Rated voltage	220 - 240 V AC / Option: 120 V AC
Rated frequency	50 - 60 Hz
Output voltage	230 V AC
Power consumption (charging operation)	< 40 VA
Nominal output	max. 80 VA
Circuit	electronic converter
Insulation class	I
Battery	2 x 12 V, 12 Ah
Rated operating duration (emergency operation)	1.5 h
Charging duration (> 90 % C)	< 24 h
Degree of protection acc. to EN 60529	IP66
Weight	approx. 48 kg (incl. battery)
Enclosure material	light alloy with powder coating, grey

Floodlight dTLS 85070 P

Marking to 94/9/EC	⊕ II 2 G Ex de IIC T4
EC-Type Examination Certificate	DMT 03 ATEX E 039
Permissible ambient temperature	-20 °C to +50 °C
Rated voltage	220 - 240 V, 50 - 60 Hz
Connecting terminals	L + N + PE; max. 2.5 mm ²
Insulation class	I
Lamp/Illuminant	High pressure sodium lamp HST-DE 70 W
Lamp cap	RX7s
Rated luminous flux ¹⁾	6800 lm
Light efficiency in operation	72 %
Degree of protection acc. to EN 60529	IP65
Cable glands	1 x M25 x 1.5 for cables from Ø 8 - 17 mm 1 x M25 x 1.5 with blanking plug
Weight	approx. 18 kg
Enclosure material	light alloy with powder coating, grey
Light transmitting cover	Borosilicate glass

¹⁾ depends on lamp

Ordering details

Type	Application	Order No.
Emergency Unit GHG 664	230 - 240 V AC incl. battery plus dTLS 85070 P	GHG 660 1915 R0001
Emergency Unit GHG 664	120 V AC incl. battery plus dTLS 85070 P	GHG 660 1915 R0002

Lamps and fixing accessories are not included

Accessories

Mounting bracket L218

Type	Content	Application	Order No.
L218	Mounting bracket	dTLS 85070 P	GHG 690 1913 R0001

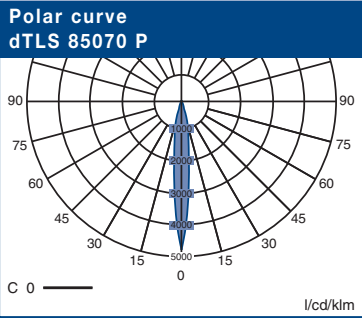
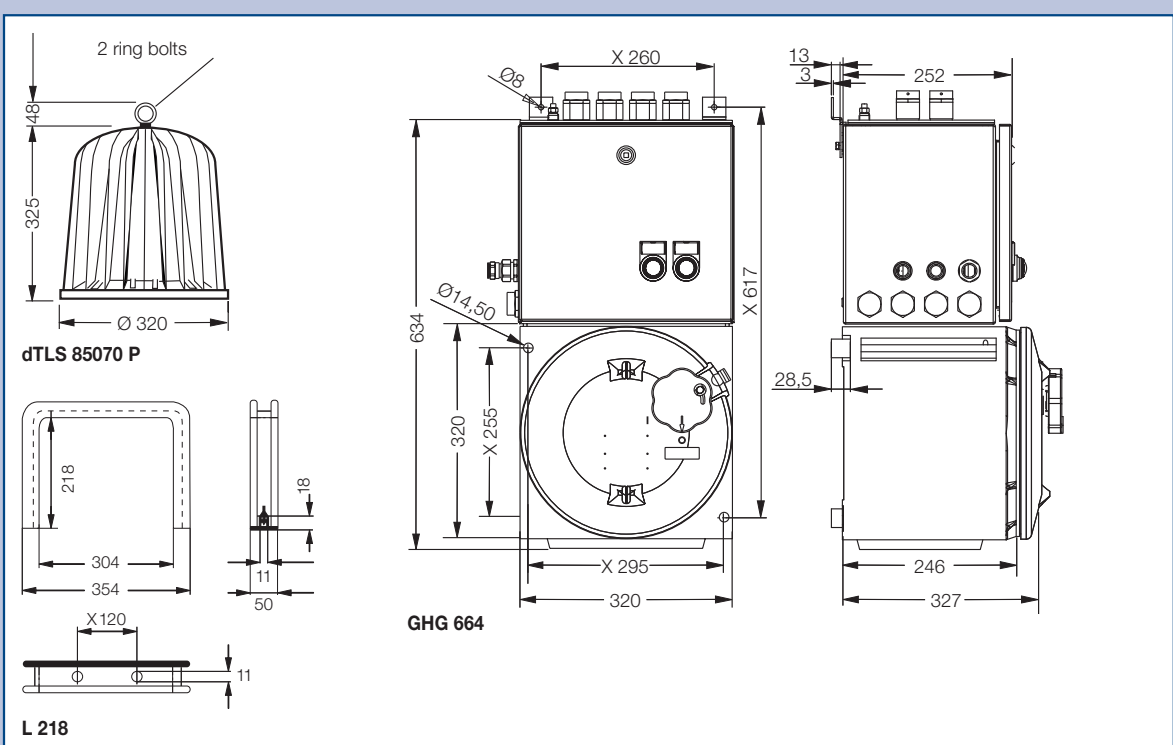
| Emergency Unit |



GHG 664

dTLS 85070

Dimension drawing | Polar curve



Dimensions in mm

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EX - V E S S E L L I G H T F I T T I N G

KFL with halogen reflector lamp or 7 W LED Metal version for Zone 1

This explosion-protected tank light fitting KFL ... is in accordance to the ATEX-Directive 94/9/EG. It has been certified for use in the Zones 1, 21 2 and 22 areas. This powerful tank light fitting is equipped with a high output LED lamp 230 - 240 V/7 W or a high-voltage halogen reflector lamp 230 V/50 W and is especially for use as an inspection lighting at inspection windows of mixers from size DN40 up to DN200. The housing is made of a copper-free aluminium. The aluminium collar has a PTFE (Teflon) coating, additionally it has a viton sealant. Equipped with a special transporting handle the KFL 7 LED can also be used as a maintenance light fixture.

With the light fitting holder PR it can be mounted on inspection windows according to DIN 28120.



- **Compact architecture**
- **Connection ready for 230 V AC**
- **With halogen reflector incandescent lamp with 50 W or high-power LED 7 W**
- **High illumination**
- **Generously dimensioned terminal compartment**
- **Mounting onto inspection windows according to DIN 28120**



Technical data

	KFL 50	KFL 7 W LED
Marking to 94/9/EC (new standard – applied for)	⊕ II 2 G Ex de IIC T3 ⊕ II 2 D Ex tD A21 IP66 T140 °C	⊕ II 2 G Ex de IIC T6 ⊕ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	LOM 02 ATEX 2035	
IECEX Certificate of Conformity	IECEX BKI 07.0009	
Marking acc. to IECEx	Ex de IIC T3 Ex tD A21 IP67 T140 °C	
Permissible ambient temperature	-20 °C to +55 °C	-20 °C to +55 °C
Permissible ambient temperature (option)	-50 °C to +55 °C	-50 °C to +40 °C
Rated voltage	230 V, 50/60 Hz	230 - 240 V, 50/60 Hz
Rated current	0.25 A	0.065 A
Power consumption	50 VA	10 VA
Connecting terminals	2 x 2.5 mm ² ; PE internal and external 6 mm ²	
Insulation class	I	
Lamp/Illuminant	50 W high voltage (halogen lamp type Sylvania included, others on request)	7 W PHILIPS MASTER LED
Lamp cap	GZ 10	
Degree of protection accd. EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 x 1.5, one plugged	
Weight	3 kg	
Enclosure material	light alloy with powder coating	
Enclosure colour	grey	
Protective cover/protective bowl	borosilicate glass	
Options	20 W lamp (T4 / T120 °C)	

Ordering details

Type	Entry thread	Cable entry Exe for cable Ø	Blanking plug	Order No.
(T_{ambient} -20 °C to +55 °C)				
KFL 50 W	M25	9 - 14 mm Ex-e	1 x M25	NOR 000 005 140 015
KFL 50 W	M25	–	1 x M25	NOR 000 005 140 010
KFL 50 W TIM 230 V - 12 V	M25	9 - 14 mm Ex-e	1 x M25	NOR 000 005 140 701
KFL 50 W TIM 230 V - 12 V	M25	–	1 x M25	NOR 000 005 140 897
KFL 7 LED	M25	–	1 x M25	NOR 000 005 140 011
(T_{ambient} -50 °C to +55 °C)				
KFL 50 W	M25	–	1 x M25	NOR 000 005 140 900
KFL 50 W TIM 230 V - 12 V	M25	–	1 x M25	NOR 000 005 140 919
(T_{ambient} -50 °C to +40 °C)				
KFL 7 LED	M25	–	1 x M25	NOR 000 005 140 906

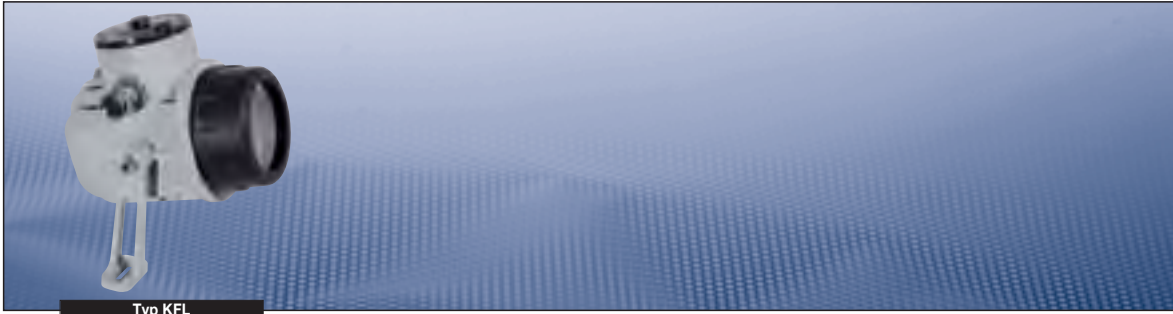
Supply with support device as standard (lamp holder PR).

Metal cable glands see page 8.10...

Accessories

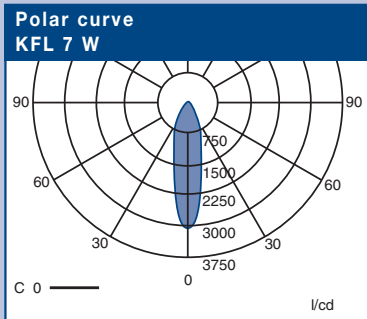
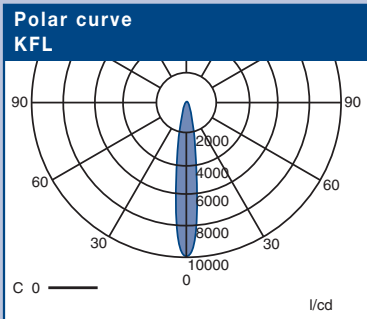
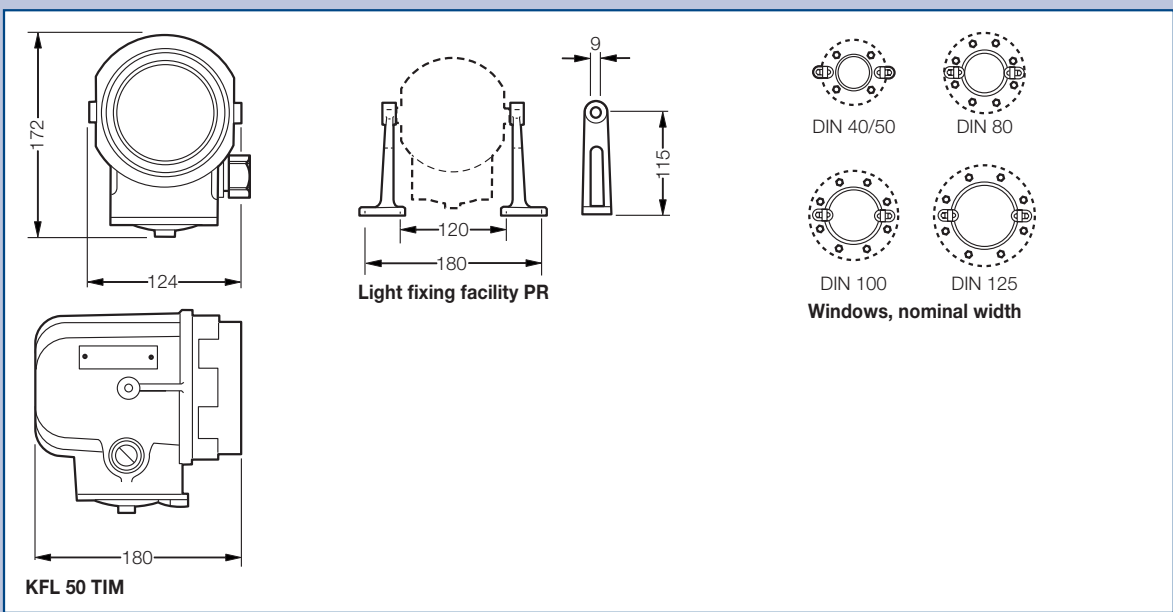
KFL 50			
Type	Content	Application	Order No.
Lamp	Halogene reflector lamp 230 V/50 W	KFL 50	NOR 000 000 514 529
Lamp	Halogene reflector lamp 12 V/50 W	KFL 50 TIM	NOR 000 000 514 687
AT	transport grip	KFL..	NOR 000 005 140 809
PAD	antiglare shield	KFL..	NOR 000 005 140 700
PI	mounting legs out of center	KFL..	NOR 000 005 140 776
PI	mounting legs bended	KFL..	NOR 000 005 140 776
LED-lamp	Philips Master LED 7 W	KFL 7 W LED	NOR 000 000 514 530

Ex-Tank inspection luminaires KFL 50



Typ KFL

Dimensions drawing



Dimensions in mm

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EX - P E N D A N T L I G H T F I T T I N G

**NVMV for high pressure discharge lamps of up to 400 W
Metal version for Zone 2/22**

The explosion-protected light fittings of the NVMV series are in accordance to the ATEX-Directive 94/9/EG.

They have been built and tested according to the European Standard for Gas-Ex-Areas of Zone 2 classification as well as to EN 61241-1 for use in Dust-Ex-Areas of Zone 22.

The light fittings series NVMV with the small housing is designed for lamps with a rating of 70 W up to 150 W. The large housing is designed for lamps with a rating of 250 W up to 400 W.

The transparent part consists of a temperature stable, impact resistant glass globe that refracts the light and which is protected with a safety-guard.

The modular architecture allows for a quick and cost-effective installation of the light fittings. For pole mounting, a thread of 1 1/4" BSP is integrated in the light fitting.

Apart from ceiling mounting, there are versions available for pole mounting (25° angle) and wall mounting.

A particularly durable sealing system for use under extreme climatic conditions brings additional reliability. The restricted breathing version allows a high illumination combined with a high temperature classification.



— Ideal for installation at low or medium heights, for wall, ceiling or pole mounting

— Compact and light-weight

— Degree of protection IP66/67

— High corrosion resistance

— Restricted breathing version for temperature classes up to T4

— Environmental temperatures up to +55 °C



Technical data

NVMV CHAMP for high pressure discharge lamps up to 400 W

Marking to 94/9/EC	Ⓔ II 3 G Ex nR IIC T ¹⁾ Ⓔ II 3 D Ex tD A22 IP6X T ¹⁾
Type Examination Certificate	applied for
Permissible ambient temperature	-20 °C up to +55 °C
Rated voltage	240 V/50 Hz (other voltage and frequencies on request)
Power factor cos	> 0.9
Connecting terminals	L, N and PE; max. 2 x 2.5 mm ²
Insulation class	I
Lamp cap	E 27 (70 W HSE, 125 W HME, 150 HIE) E 40 (150 HSE - 400 W HSE/HME)
Light efficiency in operation	74 % (70 - 150 W) 78 % (250 - 400 W)
Degree of protection accd. EN 60529	IP67/66
Cable glands/Gland plates)Enclosure drilling	Drilling 4 x M25 x 1.5 with blanking plug
Dimensions (L x W x H)	420 x 294 x 318 mm (70 - 150 W) 555 x 294 x 318 mm (250 - 400 W)
Weight	see ordering details
Enclosure material	light alloy with epoxy powder coating
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

Additional lamp data

Lamp	Power	Rated luminous flux ²⁾	Temperature class II 3 G -20 °C up to +55 °C	Surface temperature II 3 D -20 °C up to +55 °C
NVMV (smalling housing)				
HSE ³⁾	70 W	5.600 lm	T4	130 °C
HSE ³⁾	150 W	14.000 lm	T3	195 °C
HME ⁴⁾	125 W	6.300 lm	T3	195 °C
HIE ⁵⁾	70 W	5.100 lm	T4	130 °C
HIE ⁵⁾	150 W	11.500 lm	T3	195 °C
NVMV (large housing)				
HSE ³⁾	250 W	25.000 lm	T3	195 °C
HSE ³⁾	400 W	47.000 lm	T3	195 °C
HME ⁴⁾	250 W	13.000 lm	T3	195 °C
HIE ⁵⁾	250 W	17.000 lm	T3	195 °C
HIE ⁵⁾	400 W	31.000 lm	T2	290 °C

¹⁾ see table

²⁾ depends on used lamps

³⁾ HSE = High pressure sodium lamp

⁴⁾ HME = High pressure mercury vapor

⁵⁾ HIE = High pressure metal halide lamp

Ex-Pendant light fitting



Ordering details

Type	Mounting	HSE	HME	HIE	Weight (approx. kg)	Order No.
NVMV... (small enclosure)						
S2MC076P000	Ceiling	70 W			6.6	1 2341 000 001
S2MC156P000	Ceiling	150 W			7.0	1 2341 000 002
H2MC126P000	Ceiling		125 W		7.0	1 2341 000 003
M2MC076P000	Ceiling			70 W	6.6	1 2341 000 004
M2MC156P000	Ceiling			150 W	7.0	1 2341 000 005
S2MW076P000	Wall	70 W			6.6	1 2341 000 051
S2MW156P000	Wall	150 W			7.0	1 2341 000 052
H2MW126P000	Wall		125 W		7.0	1 2341 000 053
M2MW076P000	Wall			70 W	6.6	1 2341 000 054
M2MW156P000	Wall			150 W	7.0	1 2341 000 055
S4BJ076P000	Thread* 1 1/4", BSP	70 W			6.6	1 2341 000 101
S4BJ156P000	Thread* 1 1/4", BSP	150 W			7.0	1 2341 000 102
H4BJ126P000	Thread* 1 1/4", BSP		125 W		7.0	1 2341 000 103
M4BJ076P000	Thread* 1 1/4", BSP			70 W	6.6	1 2341 000 104
M4BJ156P000	Thread* 1 1/4", BSP			150 W	7.0	1 2341 000 105

NVMV... (large enclosure)						
S2MC256PL00	Ceiling	250 W			14.2	1 2342 000 001
S2MC406PL00	Ceiling	400 W			17.5	1 2342 000 002
H2MC256PL00	Ceiling		250 W		14.2	1 2342 000 003
M2MC256PL00	Ceiling			250 W	14.2	1 2342 000 004
M2MC406PL00	Ceiling			400 W	17.5	1 2342 000 005
S2MW256PL00	Wall	250 W			15.5	1 2342 000 051
S2MW406PL00	Wall	400 W			17.6	1 2342 000 052
H2MW256PL00	Wall		250 W		15.5	1 2342 000 053
M2MW256PL00	Wall			250 W	15.5	1 2342 000 054
M2MW406PL00	Wall			400 W	17.6	1 2342 000 055
S4BJ256PL00	Pole	250 W			14.4	1 2342 000 101
S4BJ406PL00	Pole	400 W			17.6	1 2342 000 102
H4BJ256PL00	Pole		250 W		14.4	1 2342 000 103
M4BJ256PL00	Pole			250 W	14.4	1 2342 000 104
M4BJ406PL00	Pole			400 W	17.6	1 2342 000 105

*Thread for 1 1/4" BSP pole mounting

Lamps and fixing accessories are not included

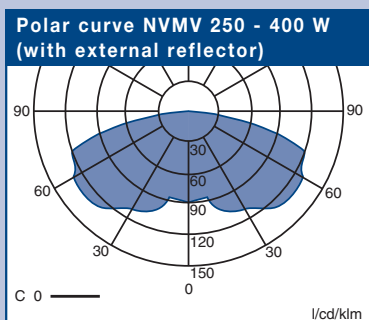
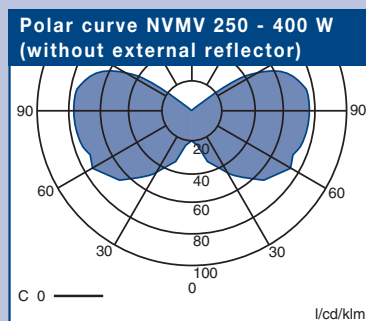
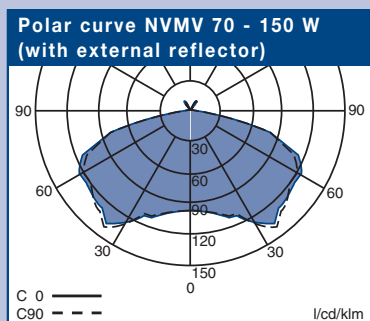
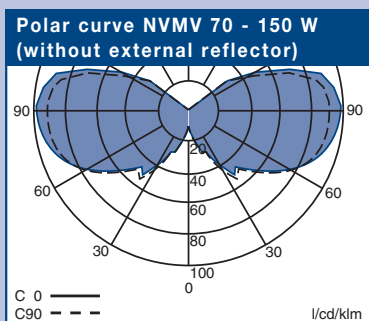
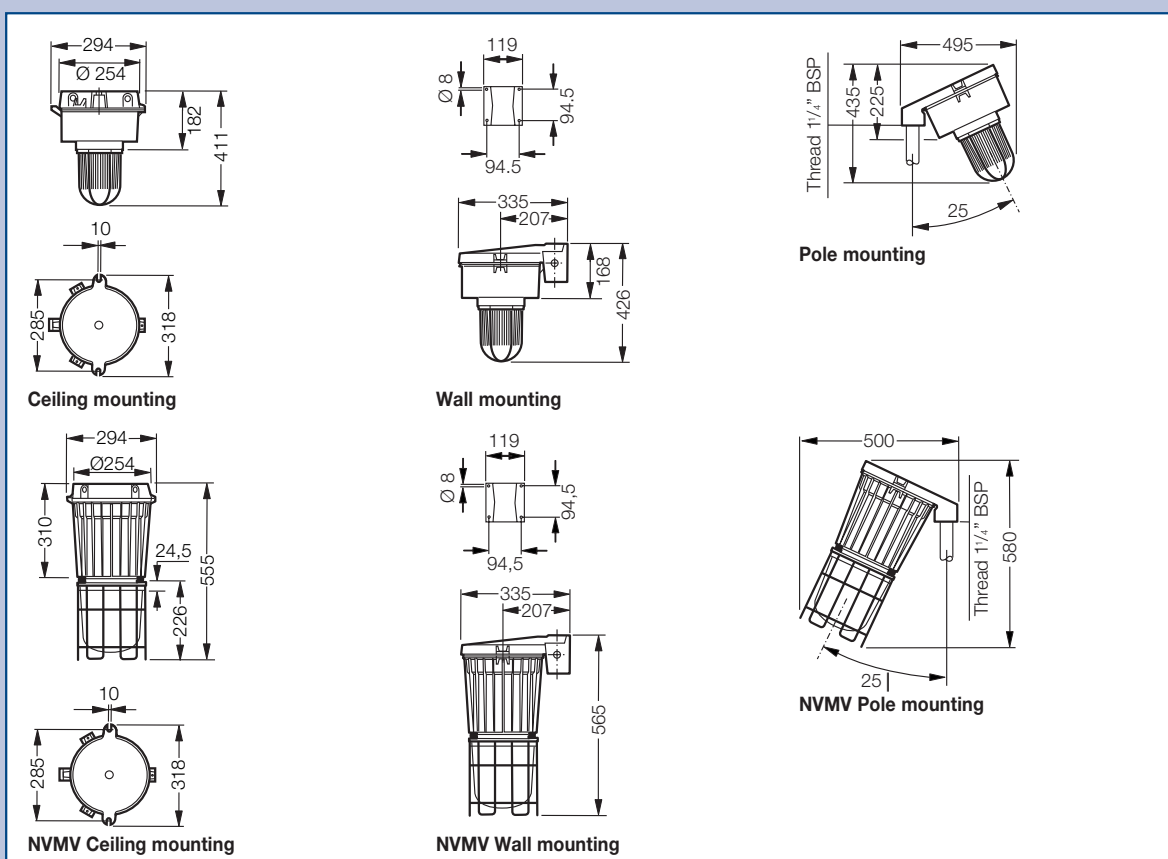
Accessories

NVMV CHAMP		
Type	Content	Order No.
RD 70	External reflector (70 - 150 W)	3 2341 001 001
RD 47	External reflector (250 - 400 W)	3 2342 001 001

Metal cable glands see page 8.10...



Dimensions drawing



Dimensions in mm

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E X - F L O O D L I G H T

NFMV and NSSFMV for high pressure discharge lamps Metal version for Zone 2/22

The floodlights NFMV and NSSFMV in accordance to the ATEX-Directive 94/9/EG. They have been built and tested according to the European Standard for Gas-Ex-Areas of Zone 2 classification as well as for use in Dust-Ex-Areas of Zone 22.

The light fitting series NFMV and NSSFMV for lamps with a rating of 250 W up to 400 W and have a high quality built-in reflector. The enclosure of the NFMV is made of light alloy with epoxy powder coating. The NSSFMV has a stainless steel enclosure. The transparent part consists of a temperature stable, impact resistant glass.

The modular architecture allows for a quick and cost-effective installation of the light fittings. Apart from the direct mounting per swivel bracket there is also a pole version available. A particularly durable sealing system for use under extreme climatic conditions brings additional reliability.

The restricted breathing version allows a high illumination combined with a high temperature classification.



Rotate und swivel light fitting housing, also for pole mounting

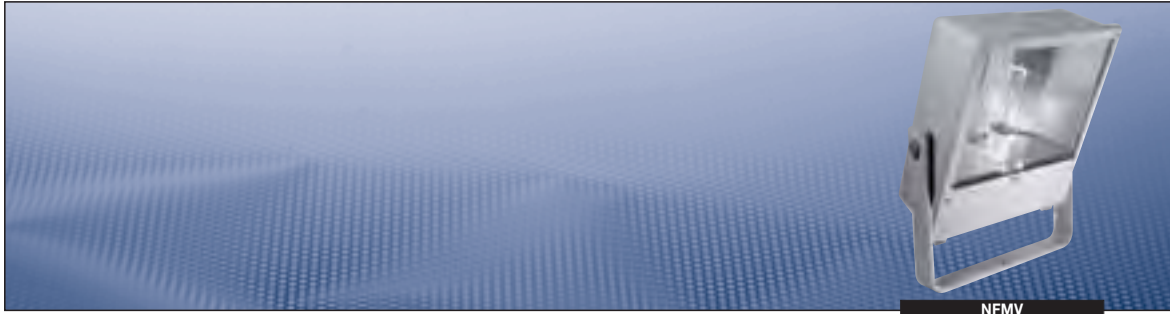
Ideal for illumination of large areas and selective individual objects

Degree of protection IP66

High corrosion resistance

Restricted breathing version

For environmental temperatures up to +55° C



NFMV

Technical data

NFMV	
Marking to 94/9/EC	⚠ II 3 G Ex nR II T ¹⁾ ⚠ II 3 Ex tD A22 IP66 T ¹⁾
Type Examination Certificate	PTB 09 ATEX 2000
Permissible ambient temperature	-20 °C to +55 °C ¹⁾
Rated voltage	240 V (other voltage on request)
Frequency	50 Hz (other frequencies on request)
Power factor cos	> 0.9
Connecting terminals	L, N and PE; 2 x 4 mm ²
Insulation class	I
Lamp cap	E 40 acc. IEC 60238
Light efficiency in operation	45 %
Degree of protection accd. EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	2 x M20 x 1.5; 1 plugged
Dimensions (L x W x H)	660 x 430 x 175 mm
Weight	¹⁾
Enclosure material	light alloy with epoxy powder coating
Enclosure colour	grey
Protective cover/protective bowl	borosilicate glass

¹⁾ see table

Ordering details

Type	Lamps		Rated luminous flux ²⁾	Ta	Temperature class	Max. surface temperature	Weightt (approx. kg)	Order No.
	HSE	HIE						
NFMV...								
HSE 150 W	150 W		14000 lm	55 °C	T4	115 °C	15.5	NOR 000 005 180 013
HSE 250 W	250 W		25000 lm	50 °C	T3	150 °C	16.9	NOR 000 005 180 014
HSE 400 W	400 W		47000 lm	45 °C	T3	160 °C	18.6	NOR 000 005 180 015
HIE 250 W		250 W	17000 lm	50 °C	T3	150 °C	16.9	NOR 000 005 180 014
HIE 400 W		400 W	30000 lm	45 °C	T3	160 °C	18.6	NOR 000 005 180 015

²⁾ depends on used lamps

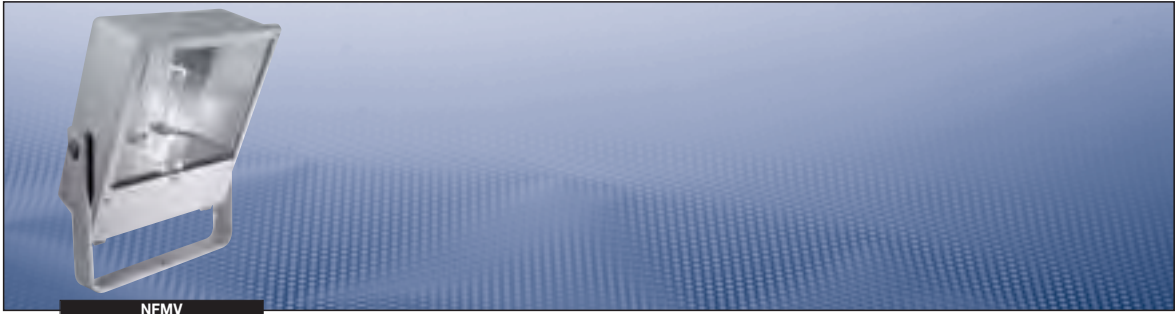
Lamps and fixing accessories are not included

Accessories

NFMV...		
Type	Qty.	Order No.
Slipfitter adapter 2" for pole mounting	1	3 2346 001 002

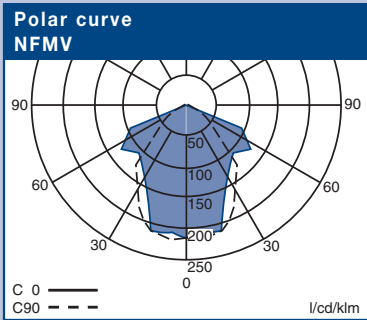
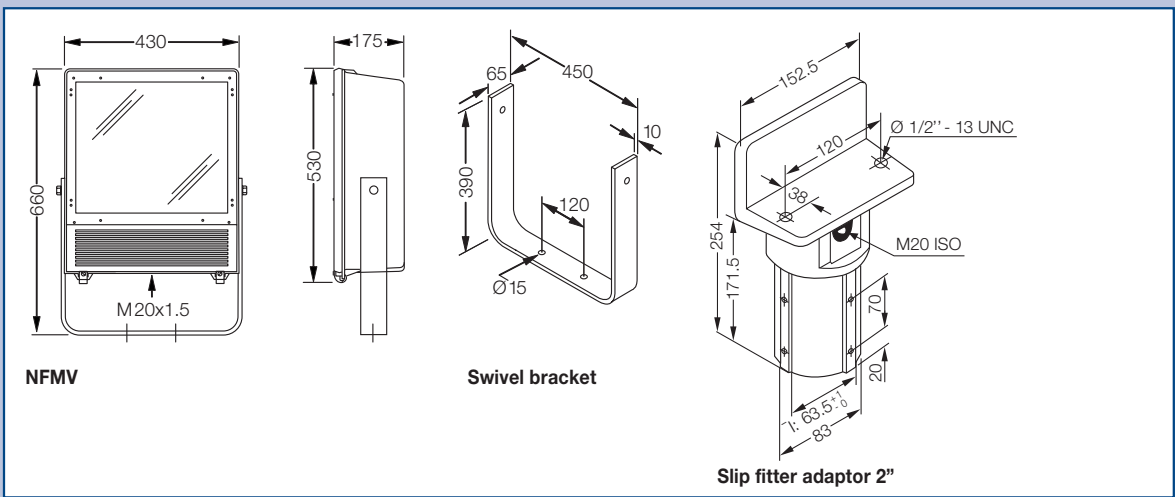
Metal cable glands see page 8.10...

| Ex-Floodlight |

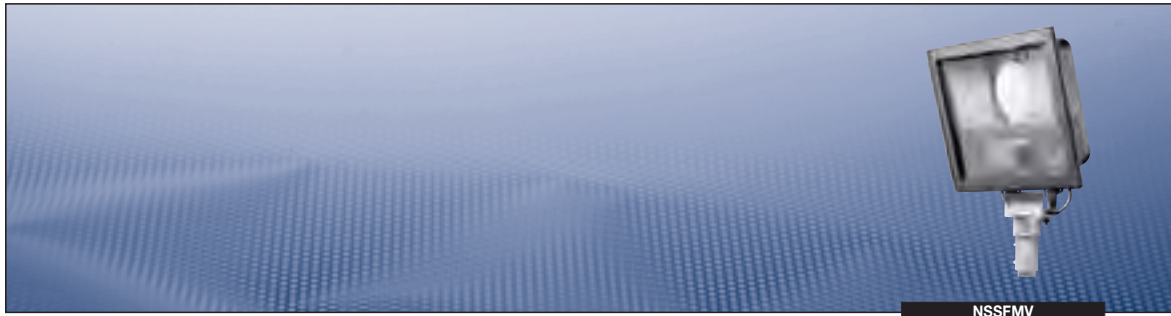


NFMV

Dimensions drawing



Dimensions in mm



NSSFMV

Technical data

NSSFMV Stainless Steel Version

Marking to 94/9/EC	Ⓔ II 3 G Ex nR II T3/T4 Ⓔ II 3 D Ex tD A22 IP66 T ¹⁾
Declaration of conformity	PTB 09 ATEX 2030
Permissible ambient temperature	-20 °C to max. +55 °C
Rated voltage	230 V ²⁾
Frequency	50 Hz ²⁾
Power factor cos	> 0.9
Connecting terminals	L, N and PE; 2 x 2.5 mm ²
Insulation class	I
Lamp cap	E 40 acc. IEC 60238
Light efficiency in operation	68 %
Degree of protection accd. EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	2 x M25 x 1.5, 1 plugged ²⁾
Dimensions (L x W x H)	536 x 592 x 195.5 mm
Weight	¹⁾
Type of mounting	mounting bracket, stainless steel 316
Enclosure material	stainless steel 316
Enclosure colour	natural
Protective cover/protective bowl	borosilicate glass

¹⁾ see table

²⁾ other voltages, frequencies and cable glands on request

Ordering details

Type	Lamps		Rated luminous flux ³⁾	TA	Temp. class	Max. surface temperature	Weight (approx. kg)	Order No.
	HSE	HIE						
NSSFMV								
SY150	150 W		14000 lm	+40 °C/+55 °C	T4	130 °C	16.9	CCL0907005
SY250	250 W		25000 lm	+50 °C	T3	180 °C	17.5	CCL0907021
SY250		250 W	17000 lm	+50 °C	T3	180 °C	17.5	CCL0907021
SY400	400 W		47000 lm		T3	195 °C	18.6	on request
SY400		400 W	30000 lm		T3	195 °C	18.6	on request

³⁾ depend on oused lamps

⁴⁾ at ta max. +40 °C

Lamps and fixing accessories are not included

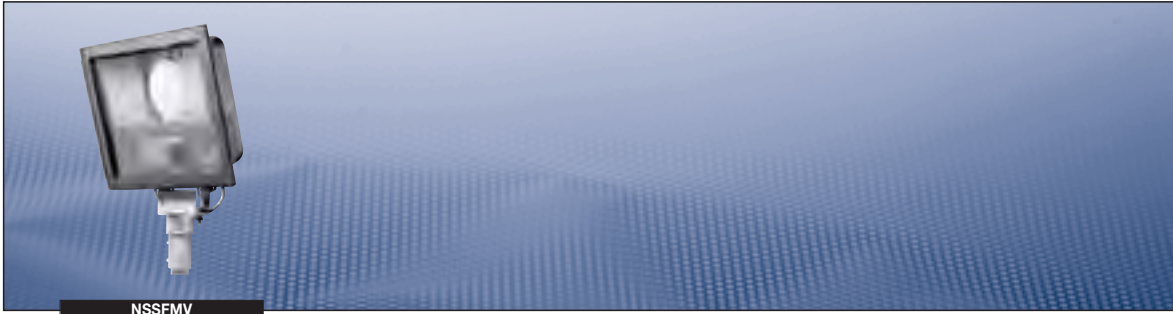
Accessories

NSSFMV

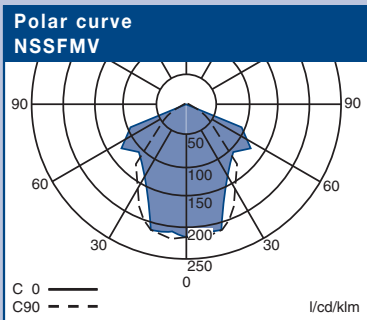
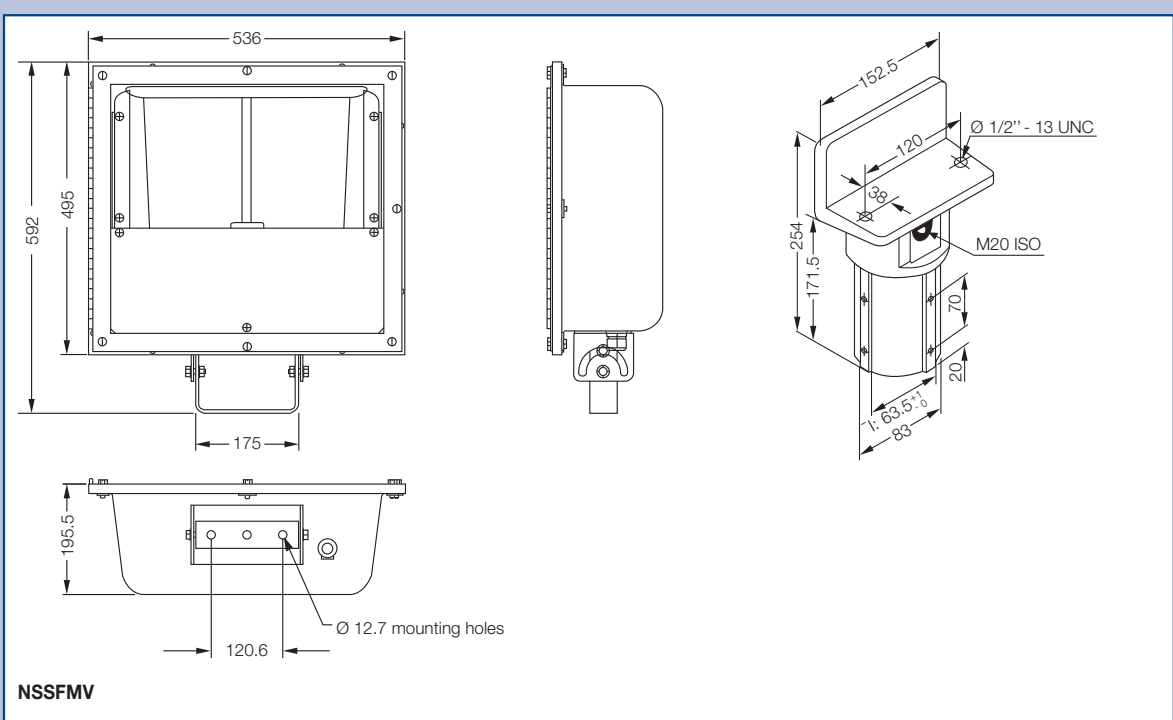
Type	Order No.
Slipfitter adapter 2"	3 2346 001 002

Metal cable glands see page 8.10...

| Ex-Floodlight |



Dimensions drawing | Polar curve



Dimensions in mm

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**Fittings and Ex-Floodlights
Lamps for Ex-Pendant Light Fittings and Ex-Floodlights****Lamps for Use in Ex-Pendant Light Fittings and Floodlights**

Lamps for Ex-Pendant Light Fittings and Floodlights are normally not part of the delivery. The lamps are specified by IEC Standards and described by different Lamp Designation Systems. In Europe a standardized system was developed and introduced by the German ZVEI. This system (LBS) allows easily to name a lamp independent from the different manufacturers.

In the following table all lamps used in the Ex-pendant light fittings and floodlight are shown with the relevant short description and LBS-name.

Spare Parts

As well as the above, there is also a large amount of spare parts available for maintenance and repair work. If required, please contact us, you will find that we will be more than pleased to help you.

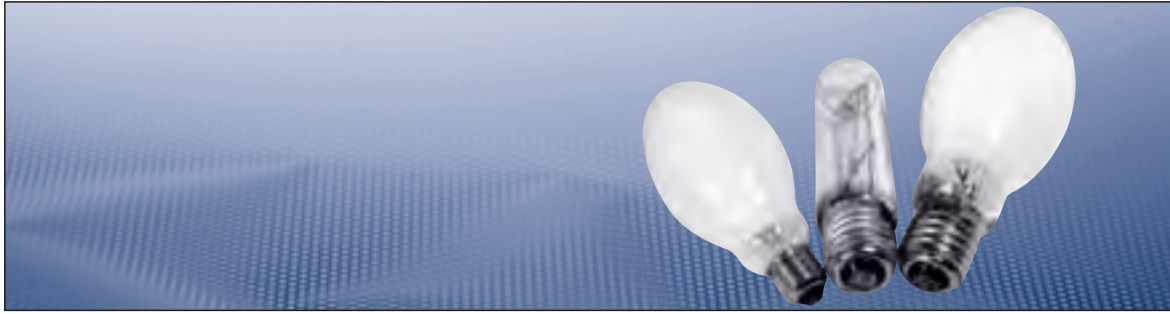
We must point your attention to the fact that repair work done on explosive-protected products must be carried out with original spare parts only! If this is not the case and third-party parts are used, the Certification and Approval for the product will be forfeited and a possible reduction of the explosion-protection may be achieved.

Repair Service

Of course Cooper Crouse-Hinds GmbH upholds its own Repair Department where customer repairs are carried out. Our qualified and schooled personnel carry out repairs and overhauling using original spare parts, quickly and efficiently. This service also includes the end quality testing needed for explosion protected products.

With this service you have an "assured safety" as do all overhauled Ex-Lamps and products by Cooper Crouse-Hinds GmbH.





Accessories

Lamps for pendant light fittings and floodlights

For fitting	Lamp type	Lamp cap	Power	Luminous flux ¹⁰⁾ approx. lm	Order No.
AB 05 Ex e	Incandescent IGA 60	E 27	60 W	710 lm	on request
AB 05 Ex d	HSE ⁵⁾	E 27	70 W	5600 lm	3 2475 900 012
AB 05 nR	Incandescent IGA 60	E 27	60 W/100 W	710/1360 lm	on request
AB 05 nR	TC-DSE 15 W	E 27	15 W	900 lm	on request
AB 05 nR	TC-DSE 20 W	E 27	20 W	1200 lm	on request
AB 05 nR	HSE ⁵⁾	E 27	70 W	5600 lm	3 2475 900 012
AB 80	Incandescent IGA 60	E 27	60 W/100 W	710/1360 lm	on request
AB 50/SPG 1N	Incandescent IGA 60	E 27	60 W/100 W	710/1360 lm	on request
AB 80	TC-DSE 11 W	E 27	11 W	660 lm	on request
AB 51	TC-DSE 15 W	E 27	15 W	900 lm	on request
AB 51	TC-DSE 20 W	E 27	20 W	1200 lm	on request
EVI AB 51	Incandescent IGA 65	E 27	150 W	2200 lm	on request
EVI / AB 51	Incandescent IGA 80	E 27	200 W	3100 lm	on request
EVI	Incandescent IGA 90	E 40	300 W	5000 lm	on request
EVI	Incandescent IGA 110	E 40	500 W	8400 lm	on request
AB 51	Halogene lamp IQT	E 27	75 W	1100 lm	on request
AB 51	Halogene lamp IQT	E 27	150 W	2500 lm	on request
AB 51	HME-SB ³⁾	E 27	100 W	1100 lm	on request
EVI	HME-SB ³⁾	E 27	160 W	3100 lm	on request
EVI	HME-SB ³⁾	E 40	250 W	5600 lm	on request
EVI	HME ⁴⁾	E 27	80 W	3800 lm	on request
EVI	HME ⁴⁾	E 27	125 W	6300 lm	on request
EVI	HME ⁴⁾	E 40	250 W	13000 lm	CGS 323 7990 P1010
AB 51	HSE ⁵⁾	E 27	50 W	3400 lm	on request
EVI	HSE ⁵⁾	E 27	70 W	5600 lm	3 2475 900 012
EVI	HSE ⁵⁾	E 40	150 W	14000 lm	3 2475 900 014
EVI	HSE ⁵⁾	E 40	250 W	25000 lm	CGS 323 8600 P1009
EVI	HIE ⁶⁾	E 40	250 W	17000 lm	3 2475 900 017
EVM	HME ⁴⁾	E 27	125 W	6300 lm	on request
EVM	HME ⁴⁾	E 40	250 W	13000 lm	CGS 323 7990 P1010
EVS	HSE ⁵⁾	E 27	70 W	5600 lm	3 2475 900 012
EVS	HSE ⁵⁾	E 40	150 W	14000 lm	3 2475 900 014
EVS	HSE ⁵⁾	E 40	250 W	25000 lm	CGS 323 8600 P1009
EVH	HIE ⁶⁾	E 40	250 W	17000 lm	3 2475 900 017
EVQ 55	Master QL ⁷⁾	-	55 W	3500 lm	on request
EVQ 85	Master QL ⁷⁾	-	85 W	6000 lm	on request

³⁾ HME-SB = mixed light high pressure mercury vapour lamp

⁴⁾ HME = high pressure mercury vapour lamp

⁵⁾ HSE/HST = high pressure sodium vapour lamp

⁶⁾ HIE/HIT = High-pressure metal halide lamp

⁷⁾ Trade mark of Philips company

⁸⁾ Single components of this system as spare parts available

- Lamp QL (55 W/85 W)

- Power Coupler QL (55 W/85 W)

- HF-generator QL (55 W/85 W)

⁹⁾ QT = halogene lamp with protective bulb

¹⁰⁾ Deviations of lamp rated luminous flux possible depending to used product



Accessories

Lamps for pendant light fittings and floodlights

For fitting	Lamp type	Lamp cap	Power	Luminous flux ⁽¹⁰⁾ approx. lm	Order No.
FZD	HIT ⁽⁶⁾	E 40	250 W	19000 lm	CGS 323 7990 P1007
FZD	HIT ⁽⁶⁾	E 40	400 W	35000 lm	CGS 323 7990 P1008
FZD	HST ⁽⁹⁾	E 40	250 W	27000 lm	3 2475 900 016
FZD	HST ⁽⁹⁾	E 40	400 W	48000 lm	3 2475 900 015
dHLS 85	HME ⁽⁴⁾	E 40	250 W	13000 lm	CGS 323 7990 P1010
dHLS 85	HME ⁽⁴⁾	E 40	400 W	22000 lm	CGS 323 7990 P1011
dHLS 85	HSE ⁽⁵⁾	E 40	250 W	25000 lm	CGS 323 8600 P1009
dHLS 85	HSE ⁽⁵⁾	E 40	400 W	47000 lm	CGS 323 8700 P1009
dTLS 85	HIT-DE ⁽⁶⁾	Fc2	250 W	19000 lm	CGS 323 7990 P1009
dTLS 85	HST-DE ⁽⁵⁾	Fc2	250 W	25000 lm	CGS 323 8500 P1009
dTLS 85	HST-DE ⁽⁵⁾	RX7s	70 W	6800 lm	GHG 690 9216 P0001
PX	HIT ⁽⁶⁾	E 27	150 W	14000 lm	on request
PX	HIT ⁽⁶⁾	E 40	250 W	20000 lm	CGS 323 7990 P1007
PX	HIT ⁽⁶⁾	E 40	400 W	35000 lm	CGS 323 7990 P1008
PX	HST ⁽⁹⁾	E 40	150 W	17000 lm	on request
PX	HST ⁽⁹⁾	E 40	250 W	33000 lm	3 2475 900 016
PX	HST ⁽⁹⁾	E 40	400 W	55500 lm	3 2475 900 015
PX	HST ⁽⁹⁾	E 40	600 W	90000 lm	on request
PX	HME-SB ⁽³⁾	E 40	500 W	14000 lm	on request
PX	IQT ⁽⁹⁾	E 40	500 W	10000 lm	on request
KFL	Halogene reflector lamp type Sylvania-	GZ10	230 V/50 W	680 lm	NOR 000 000 514 529
NVMV Champ 70 - 150 W	HSE ⁽⁵⁾	E 27	70 W	5600 lm	3 2475 900 012
NVMV Champ 70 - 150 W	HSE ⁽⁵⁾	E 40	150 W	14000 lm	3 2475 900 014
NVMV Champ 70 - 150 W	HME ⁽⁴⁾	E 27	125 W	6300 lm	on request
NVMV Champ 70 - 150 W	HIE ⁽⁶⁾	E 27	70 W	5900 lm	3 2475 900 010
NVMV Champ 70 - 150 W	HIE ⁽⁶⁾	E 27	150 W	13000 lm	on request
NVMV Champ 250 - 400 W	HSE ⁽⁵⁾	E 40	250 W	25000 lm	CGS 323 8600 P1009
NVMV Champ 250 - 400 W	HSE ⁽⁵⁾	E 40	400 W	47000 lm	CGS 323 8700 P1009
NVMV Champ 250 - 400 W	HME ⁽⁴⁾	E 40	250 W	13000 lm	CGS 323 7990 P1010
NVMV Champ 250 - 400 W	HIE ⁽⁶⁾	E 40	250 W	17000 lm	3 2475 900 017
NVMV Champ 250 - 400 W	HIE ⁽⁶⁾	E 40	400 W	30000 lm	3 2475 900 018
NFMV	HSE ⁽⁵⁾	E 40	150 W	14000 lm	3 2475 900 014
NFMV	HSE ⁽⁵⁾	E 40	250 W	25000 lm	CGS 323 8600 P1009
NFMV	HSE ⁽⁵⁾	E 40	400 W	47000 lm	CGS 323 8700 P1009
NFMV	HME ⁽⁴⁾	E 40	250 W	13000 lm	CGS 323 7990 P1010
NFMV	HME ⁽⁴⁾	E 40	400 W	22000 lm	CGS 323 7990 P1011
NFMV	HIE ⁽⁶⁾	E 40	250 W	17000 lm	3 2475 900 017
NFMV	HIE ⁽⁶⁾	E 40	400 W	30000 lm	3 2475 900 018

³⁾ HME-SB = mixed light high pressure mercury vapour lamp

⁴⁾ HME = high pressure mercury vapour lamp

⁵⁾ HSE/HST = high pressure sodium vapour lamp

⁶⁾ HIE/HIT = High-pressure metal halide lamp

⁷⁾ Trade mark of Philips company

⁸⁾ Single components of this system as spare parts available

– Lamp QL (55 W/85 W)

– Power Coupler QL (55 W/85 W)

– HF-generator QL (55 W/85 W)

⁹⁾ IQT = halogene lamp with protective bulb

¹⁰⁾ Diviations of lamp rated luminous flux possible depending to used product

EX-AUDIO/VISUAL-SIGNALLING EQUIPMENT

SIGNALLING IN HAZARDOUS AREAS

5.2

EX-MANUAL CALL POINTS

5.4

EX-STATUS LAMPS

5.12

EX-BEACONS AND STROBES

5.20

EX-SOUNDERS AND HORNS

5.50

EX-SPEAKERS

5.60

EX-HEAT DETECTORS

5.68

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Visual and Audible Signalling Devices as tough as your environment.

Why Cooper Products?

- The broadest line of harsh and hazardous signalling, alarm and communication products available in both IEC and NEC designs and certifications.
- A new line of hazardous area call points (fire alarm or emergency notification devices) provides you a unique product offering unequalled by any other manufacturer of hazardous location signalling products.
- Worldwide listings with UL, cUL, ATEX, GOST, CSA and CQST (Chinese) approvals provide customer solutions that the competition can't match.
- Superior enclosure materials providing unmatched ingress protection



and corrosion resistance from the harshest conditions.

- A unique signalling product offering integral visual and audible signalling capability pre-wired for simultaneous output activation.
- A new line of heat detectors for early indication of potential processing problems.

Applications Include:

- Petrochemical Facilities
- Manufacturing Areas
- Waste Water Treatment
- Food Processing Facilities
- Paper and Pulp Operations
- Pharmaceutical Manufacturing

ALARM, SIGNAL AND CONTROL EQUIPMENT FOR HAZARDOUS AREAS

A powerful Member of the Cooper Group: MEDC Ltd.



Designers and manufacturers of Alarm, Signal and Control Equipment since 1975, MEDC have developed a range of products specifically designed for use in areas where **harsh environmental conditions** prevail and where there is a **risk of explosion** due to the presence of flammable atmospheres.

MEDC are renowned throughout the world for their exacting quality standards and reliability as **a leading manufacturer of Explosion Proof Equipment**.

MEDC has also recently developed a range of equipment for use in industrial, marine, commercial and leisure applications.

MEDC specialises in custom finished products to specific requirements. The full product range totals over 100 items, all of which are appropriately certified to internationally recognised standards, eg **ATEX/CENELEC, UL, CSA, FM, SGS, GOST R & K, SAA, Chinese (CQST), PTB**.

MEDC holds the **International Quality Assurance Standard, ISO9001**, which covers all company activities from design and development, to manufacture, sales and after sales service.

In addition to the above certification, MEDC products have **approval from The Ministry of Defence, British Gas and UK Coal Mining**.

- International Certifications
ATEX/CENELEC, UL, CSA, FM, GOST R & K, SAA, Chinese (CQST), PTB
- Highest degree of protection
IP66/IP67

For more detailed information please visit the web-side: **www.medc.com** or contact your local MEDC representative.

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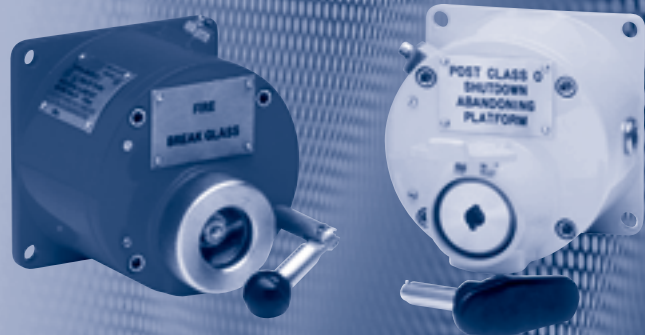
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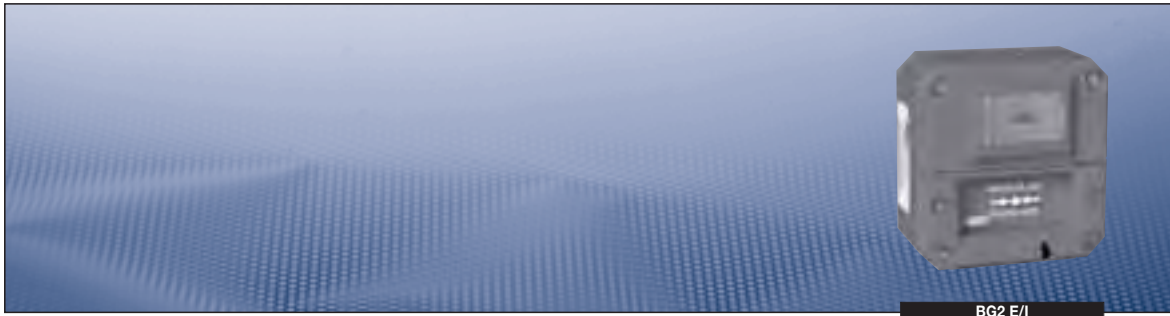
EX - MANUAL CALL POINTS

Explosion protected units for Zone 0, 1, 2, 22, Class I and Div 1 & 2

The BG3 manual fire alarm call point is designed in accordance with the latest draft European Call Point Standard (EN54-11). Weatherproof to IP66 and IP67 and available certified intrinsically safe, simple apparatus or uncertified, the units are manufactured from glass reinforced polyester (GRP) which provides a robust, corrosion free construction and ensures effective and reliable operation in harsh industrial and offshore environments. Units are supplied in self coloured GRP or painted to customer specification. The BG3 'Burning House' duty label is provided as standard, other duty and tag labels may be supplied to customer specification.



- Zone 0, 1, 2, 21 and Zone 22 use
- Chinese (CQST) certified
- Designed in accordance with EN54-11
- IP66 and IP67
- Certified temperature -55°C to +55°C
- Corrosion free GRP
- Optional in line/end of line resistors/diodes
- Optional LED indicator
- Optional lift flap
- Optional flush installation
- Optional glass substitute element
- Key operated test facility
- Various body colours available



BG2 E/I

Technical data

Type BG2 E/I

EC-Type Examination Certificate	BG2 E	BAS 02 ATEX 2105 X
	BG2 I	Baseefa 03 ATEX 0084 X
Marking to 94/9/EC	BG2 E	II 2G/D Ex edm IIC T4 T135 °C
		II 2G/D Ex ed IIC T6 T85 °C
	BG2 I	II 1G/D Ex ia IIC T4 T135 °C
Enclosure material	U.V. resistant glass-fibre reinforced polyester	
Finish	Self coloured red	
Optional indicator	A red high intensity LED can be fitted for alarm indication	
Rated voltage	BG2 E	up to 250 V (switch only)/up to 24 V (resist. + switch)
	BG2 I	up to 28 V (IS)
Rated current only BG 2E	DC 0- 30 V: 5 A (resistive)/3 A (inductive)	
	DC 30- 50 V: 1 A	
	AC 0-250 V: 5 A	
Circuits	Switch only / End of Line Resistor/Diode	
	In Line Resistor/Diode / In Line & End of Line Resistor/Diode	
Entries	2 x M20 bottom	
Weight	1.2 kg	
Rated terminal cross section	6 x 2.5 mm ²	
Protection category to EN 60529	IP66/IP67	
Permissible ambient temperature	-20 °C to +50 °C (BG2 E) / -40 °C to +50 °C (BG2 I)	
Resistor values	470 Ω min./39 kΩ max. (DC and IS only)	

Ordering details

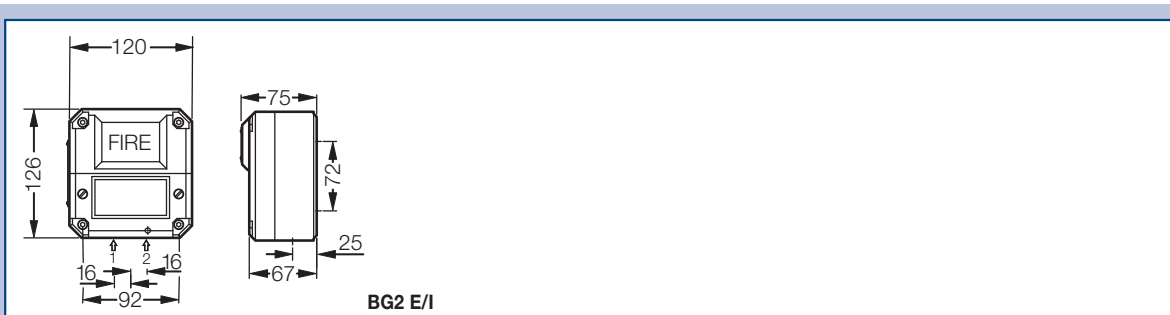
Catalogue No.	Certification	Description	Ordering Code
BG2EDC1N	ATEX Ex II 2GD	Explosion protected, Zone 0, 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, red finish	PX 800004
BG2INN1N	ATEX Ex II 1GD	Explosion protected, Zone 0, 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, red finish	PX 800005

Ordering options*

Unit Type	Model	Code	Wiring Diagram	Code	Lift Flap	Code	Finish	Code
BG2	BG2W – AC or DC	BG2WNN	Switch only	1	Fitted	F	Natural red	N
	BG2I – Up to 28 V (I.S.)	BG2INN	End of line resistor	2	Not fitted	N	Red Painted	R
	BG2E – DC	BG2EDC	In line resistor	3				
	BG2E – AC	BG2EAC	In line and end of line resistor	4				
			Diode (specify location & value)	5				

* For more options see www.medc.com or contact your local representative

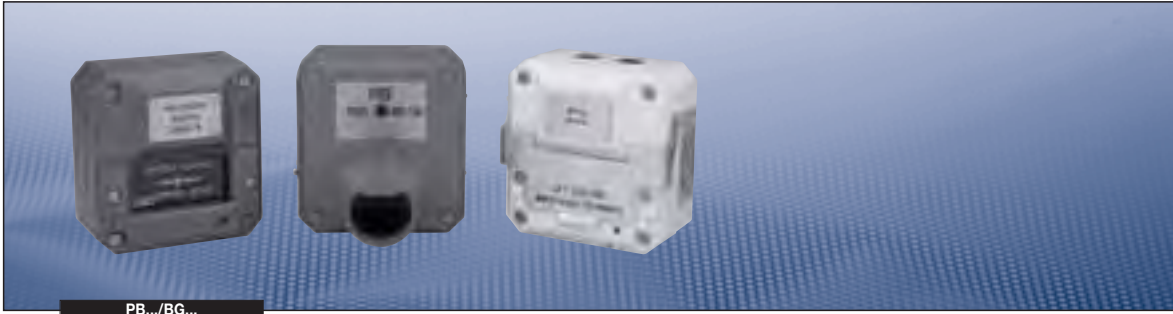
Dimension drawing



BG2 E/I

Dimensions in mm

| BGI, PBI, BGE, PBE, BGUL, PBUL |



PB.../BG...

Technical data

Type BGE, PBE, BGI, PBI, BGUL, PBUL

Enclosure material	anti static U.V. resistant glass reinforced polyester
Finish	Red epoxy painted finish as standard
Optional indicator	A red high intensity LED can be fitted to indicate operation on versions up to 24 V and all "IS" versions
Rated current only BG/PB E	DC 0- 30 V: 5 A (resistive)/3 A (inductive) DC 30- 50 V: 1 A / AC 0-250 V: 5 A
Circuits	single changeover or double changeover
Entries	Up to 4 entries, M16 or M20 top and bottom / 1/2" NPT
Weight	1.2 kg (varies with model & entries)
Rated terminal cross section	7 x 2.5 mm ² /9 x 2.5 mm ² optional u to 60 V only
Protection category to EN 60529	IP66/IP67
Resistor values	Various configurations available on versions up to 24 V and all "IS" versions (min. value 470 Ω)

Type BGE, PBE

EC-Type Examination Certificate	BAS 02 ATEX 2105 X
Marking to 94/9/EC	⊕ II 2G/D Ex edm IIC T4 T135 °C (switch only) ⊕ II 2G/D Ex ed IIC T6 T85 °C (other versions)
GOST 'R' Certification	Ex edm IIC T6 (switch only) / Ex edm IIC T4 (other version) Russian Fire Approved (VNIIPO)
Chinese Certification	CQST Ex ed IIC T6 (switch only) / CQST Ex edm IIC T4 (other versions)
Rated voltage	up to 250 V
Permissible ambient temperature	-20 °C to +50 °C

Type BGI, PBI

EC-Type Examination Certificate	BAS 03 ATEX 0084 X
Marking to 94/9/EC	⊕ II 1G/D Ex ia IIC T4 T135 °C
CSA Certification to C22.2 (PBI only)	Nos. 0-M, 0.4-M, 25, 30-M, 94, 142-M1987, 157-M1987, 157-92, Enclosure Type 4. T4A Class I Groups A, B, C & D
Cert. No.	79120
GOST 'R' Certification (PBI & BGI)	Ex ia IIC Russian Fire Approved (VNIIPO)
GOST 'K' Certification (PBI only)	Ex ia IIC T4
Chinese Certification (PBI & BGI)	CQST - Ex ia IIC T4
Rated voltage	up to 28 V (IS)
Permissible ambient temperature	ATEX -40 °C to +70 °C (PBI) Z ATEX -40 °C to +50 °C (BGI) CSA -50 °C to +40 °C (PBI only)

Type BGUL, PBUL

UL-Listed	Class I, Div 2, Groups A-D
Listing No.	E186629
Rated voltage	up to 240 V
Permissible ambient temperature	-25 °C to +55 °C



PB.../BG...

Ordering details

Catalogue No.	Certification	Description	Ordering Code
BGEB4B6B1DSN6R	ATEX Ex II 2GD	Explosion protected Ex II 2GD, Exed, IIC, T6, Zone 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, red finish	PX 800003
BGIB4B6B1DSN6R	ATEX Ex II 1GD	Explosion protected, Zone 0, 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, single switch, red finish	PX 800002
BGUL4C6C1DSN6R	UL Listed, Class I, Div 2, Groups A, B, C, D, Zone 2	Explosion protected, 2 x 1/2" NPT bottom entries, single break glass switch latching, painted red GRP finish	PX 869101

Ordering options*

Unit Type	Certification	Code	Entries	Code	Labels	Code	Switches	Code	Features	Code	Terminals	Code	Finish	Code
BG	ATEX – Exe	EB	16 mm	A³⁾	None	0	Single		None	N	7 x 2.5 mm ²	7	Red	
PB	ATEX – Exi	IB	20 mm	B³⁾	Glass label	1	change-over		LED	A	9 x 2.5 mm ²	9	(Standard)	R
	CSA – Exi (PBI only)	IC	1/2" NPT	C³⁾	Glass label	2	over	S³⁾	Lift flap (BG only)	B			Natural	
	UL – Class I, Div 2	UL			Duty label	3	Double change-over		Resistor Series	C⁴⁾			Black	N
	GOST 'R' ¹⁾ – Exi	IG			reqd.	4			Resistor EOL	D⁴⁾			Blue	B
	GOST 'R' ¹⁾ – Exe	EG			Tag label	5			Diode†	E			Yellow	Y
	GOST 'K' – Exi (PBI only)	IK							Earth Continuity	F			Grey	G
	Chinese – Exe	EQ							Turn & Push (PB only)	T			Yellow/Black Stripes	X
	Chinese – Exi	IQ							Self reset (PB only)	M			Other specify	S
									Resistor Series & EOL †	S⁴⁾				
									Plastic element replaces Break glass	P				

* For more options see www.medc.com or contact your local representative

¹⁾ VNIPO approved as standard.

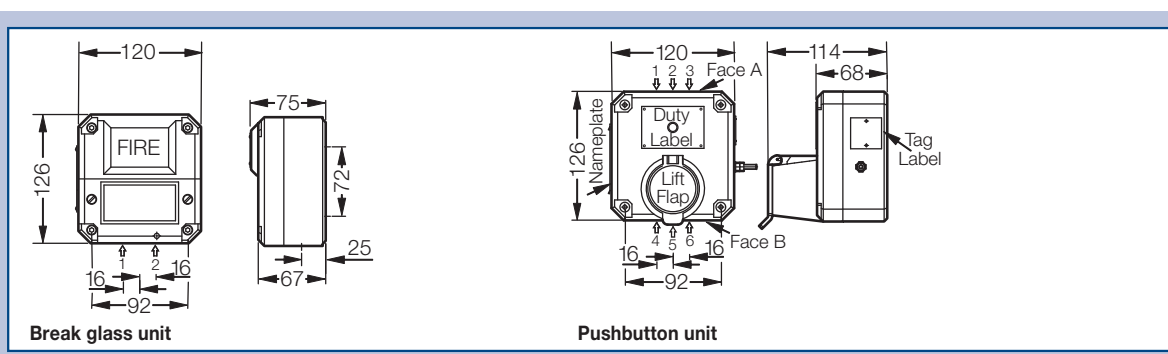
²⁾ Prefix entry size (see diagram above) with entry position code e.g. 1A, 2A. UL & CSA versions only available with 1/2" NPT entries.

³⁾ Prefix with voltage A for A.C. – D for D.C. except for BGI.

⁴⁾ Specify values

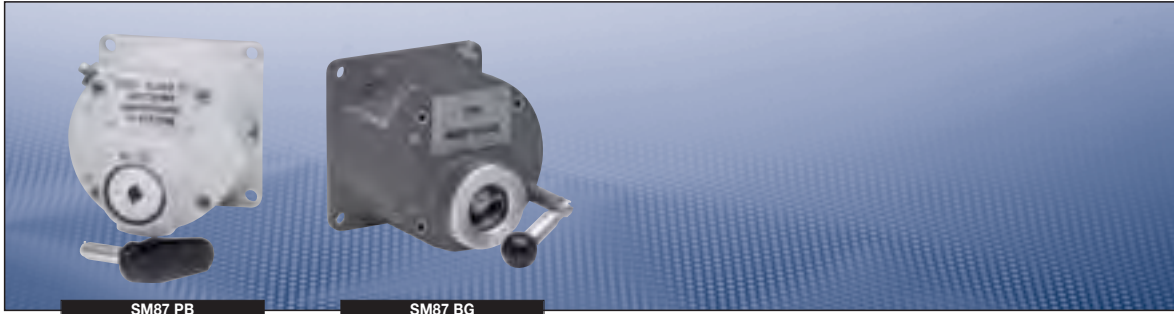
† Not available for UL/CSA

Dimension drawing



Dimensions in mm

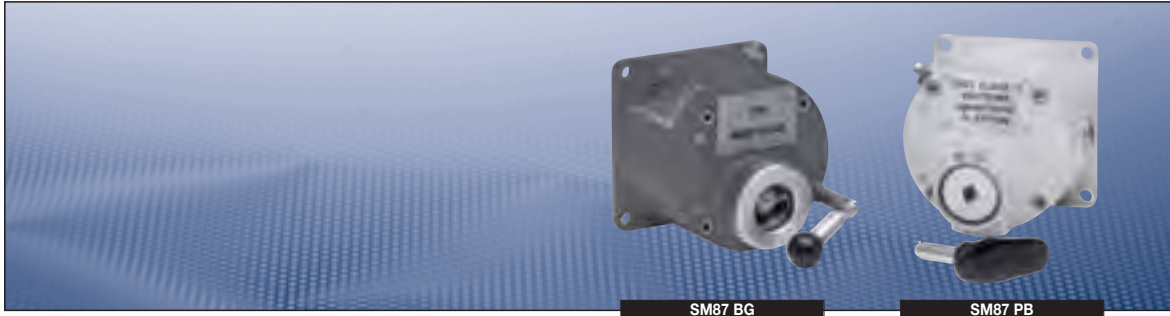
Ex-Break glass/PB call point



Technical data

SM87 BG | SM87 PB	
EC-Type Examination Certificate	Ex "i" Baseefa 02 ATEX 0152 X Ex "d" Baseefa 03 ATEX 0075
Marking to 94/9/EC	Ex "i" $\text{Ex} \text{ II 1G Ex ia IIC T4}$ Ex "d" $\text{Ex} \text{ II 2G/D Ex d IIC T5/T6}$
UL listed	Class I, Div 1 Groups C & D (PBL only)
Listing No.	186629
CSA Certification	Class I Groups A-D (I.S. version only PBI) Class I, Div 1 & 2, Group D (Ex-d PB, BG only)
GOST 'R' Certification	1 Ex ib IIC T4 / 1 Ex d IIC T4 / Russian Fire Approved (VNIPO)
GOST 'K' Certification	Ex ib IIC T4
Chinese Certification CQST	Ex ia IIC T4 / Ex d IIC T5/T6
Enclosure material	Grade 316 ANC4B Stainless Steel or LM 25 TF Marine Grade Alloy
Finish	Epoxy paint finish as standard or to customer's specification
Optional indicator	A red high intensity LED can be fitted for alarm indication
Rated voltage	Ex d: 24 V AC/DC / Ex i: 28 V
Rated current	2 A
Switches	2 pole c/o wired to terminals, optional up to 4 pole
Entries	up to 4 x 20 mm or 25 mm ISO / up to 4 x 1/2" or 3/4" NPT
Weight	3.8 kg (steel) / 2.5 kg (alloy)
Rated terminal cross section	2 – 5 mm ²
Protection category to EN 60529	IP66/IP67/IP68 (SM87 PB)
Insulation class	I
Permissible ambient temperature	Ex d/Ex-i* -55 °C to +70 °C LED version* -20 °C to +55 °C UL -55 °C to +70 °C UL LED version -20 °C to +55 °C CSA Exd -50 °C to +55 °C CSA Exe -50 °C to +40 °C
Resistor values	470 Ω minimum (DC and IS only)

* includes ATEX, GOST and Chinese



SM87 BG

SM87 PB

Ordering details

Catalogue No.	Certification	Description	Ordering Code
SM87BGLAD1B1NNR	ATEX Ex II 2GD	Break glass call point, Ex II 2GD, Exd IIC T6, IP66 & 67, 1 x M20 bottom entries, duty label, "Fire Breakglass", alloy material, red finish	PX 562444
SM87PBLAUL3T3B3NNR	UL, CSA, Class I, Div 1, Groups C & D, Zone 1	Explosion protected, 2 x 1/2" NPT entries, duty label "Fire-Press Here", single push button switch-latching, marine grade alloy, red finish	PX 36200102

Ordering options*

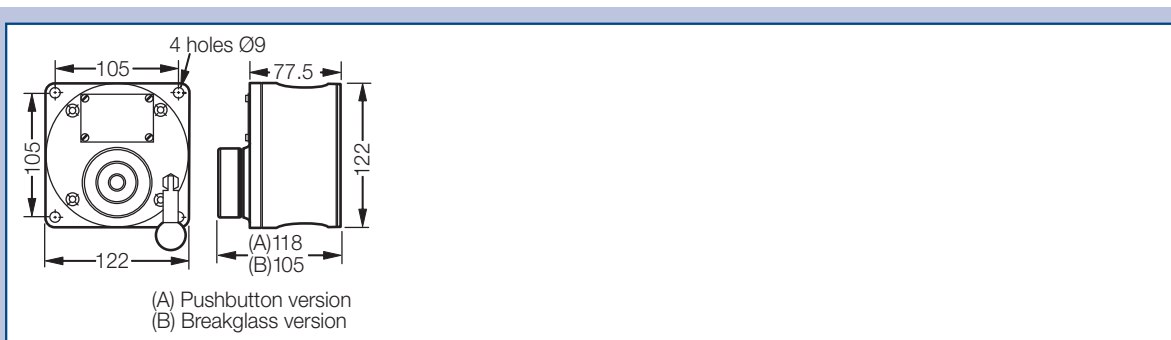
Unit Type	Model	Code	Material Code	Cert.	Code	Entries	Code	Duty label	Code	Tag label	Code	Features Code	Finish	Code		
SM 87	Breakglass unit, latching	BGL	SS 316 Alloy	S	A	20 mm	1	Fire-Break-glass	1	required	Y	Not required	N	Red	R	
	Lift flap					25 mm	2	Push-button	2	not required	N	LED	A	Blue	B	
	Breakglass latching	LBGL				1/2" NPT	3	Push-button	3	required	N	Resistor		Yellow	Y	
	Push Button					3/4" NPT	4	Button	2			Series	G	Yellow/Black		
	Latching key reset	PBL				Top	T ¹⁾	Button	3			Resistor		Stripes	X	
	Push Button self reset	PBM				Bottom	B ¹⁾	Fire-push				Resistor		Special		
								RHS	R ¹⁾	Button	4		EOL	H	Special	
								LHS	L ¹⁾	Other	O		Diode	D ²⁾	Finish	S

¹⁾ prefix position with size code (1T, 1B, 1R, 1L) e.g. 1T 1B = 20 mm Top and Bottom

²⁾ Specify values

* For more options see www.medc.com or contact your local representative

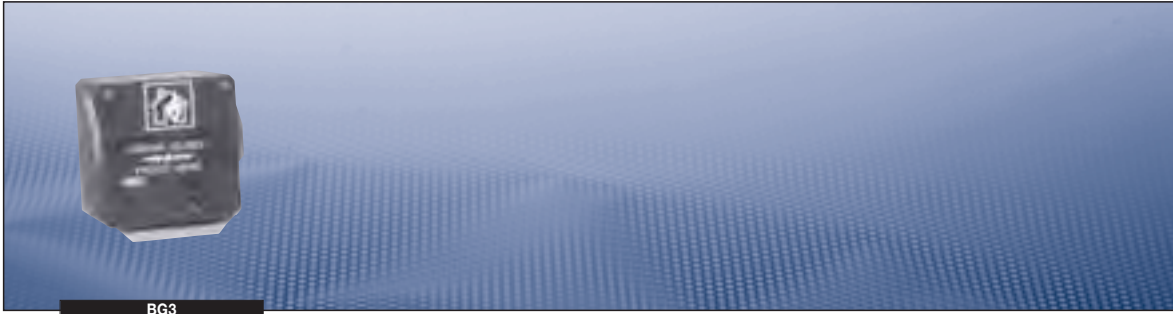
Dimension drawing



Dimensions in mm

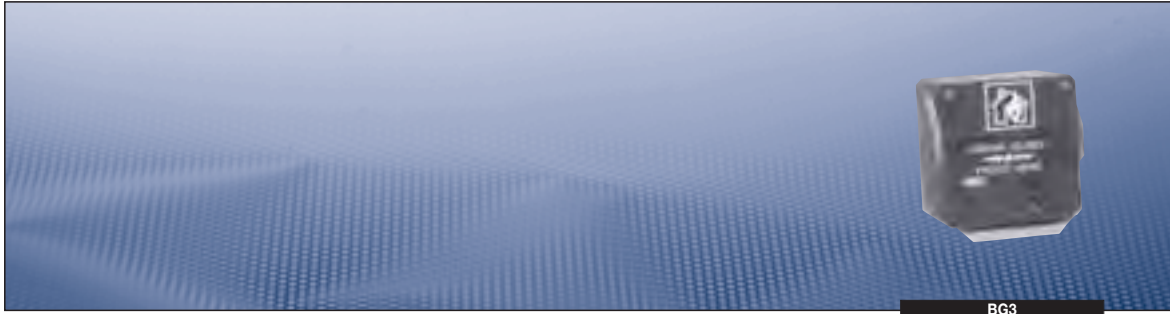
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Ex-Break glass call point



Technical data

BG3	
EC-Type Examination Certificate	BAS 00 ATEX 1067X
Marking to 94/9/EC	II 1G Ex ia IIC T4
Chinese Certification	CQST Ex ia IIC T4
Enclosure material	UV resistant glass reinforced polyester
Finish	Natural Red GRP or painted*
Optional indicator	A red high intensity LED can be fitted to indicate operation on versions up to 24 V and all "IS" versions
Rated voltage	up to 28 V (IS)
Entries	2 x M20 bottom
Weight	0.5 kg
Rated terminal cross section	6 x 4.0 mm ²
Protection category to EN 60529	IP66/IP67
Permissible ambient temperature	-55 °C to +55 °C (BGE)
Resistor values	470 Ω min.



BG3

Ordering details

Catalogue No.	Certification	Description	Ordering Code
BG3I1NBN	ATEX Ex II 1G	Explosion protected, Zone 0, 1 & 2, DC, standard models are surface mount version, have 2 x M20 bottom entries, single break glass switch latching, duty label "Burning House", red GRP finish	PX 800007

Ordering options*

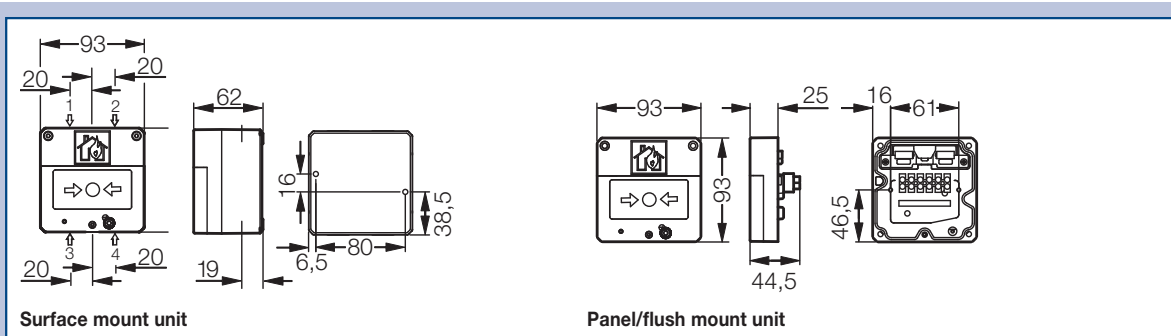
Model	Certification	Code	Label type ¹⁾	Code	Features	Code	Entries	Code	Body colour	Code
BG3I	Ex ia CQST	I Q	Fire break glass		None	N	2 x 20 mm (bottom)	B ²⁾	Natural red*	N
			"Press here"	1	Resistor series	S			Red paint	R
			Break glass		Resistor EOL	E	2 x 20 mm (top)	T ²⁾	Blue	B
			"Press here"	2	Diode	D			Green	G
			Special	3	Polycarbonat lift flap	F	White	W		
			European		Stainless steel lift flap	C	Yellow	Y		
			Standard (draft)		LED	L	Special	S		
			⇔○⇔	4	Double changeover	T				
			Duty label (special) (Burning house )		Flush Mounting (weatherproof only)	M				
			as standard)	5	Plastic element (replaces break glass)	P				
Tag label	6									

³⁾ Specify wording on '3', '5' & '6'

²⁾ For blanking plugs add "P" to code.

* For more options see www.mec.com or contact your local representative

Dimension drawing



Dimensions in mm

E X - S T A T U S L A M P S

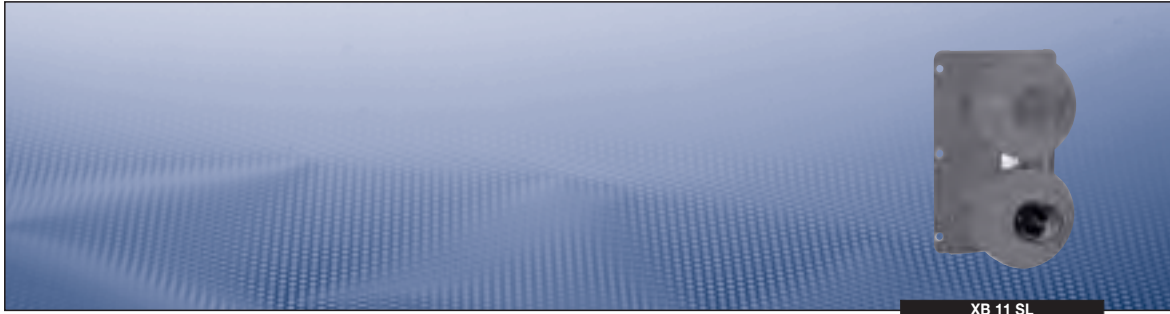
Explosion protected units for Zone 0, 1, 2 and 22

These ranges of versatile status lights have been designed to suit various offshore and onshore applications. Available as LED, xenon, filament and fluorescent beacons. The SM87 SL range is manufactured in marine grade alloy and the XB11/XB 12 SL in corrosion-free GRP to provide a wide range of status lights to suit clients' requirements. All units can be supplied as 1, 2, 3, 4 or 5 way.

A long life, high intensity, LED version is now available.



- Zone 1 and Zone 2 use
- BASEEFA certified
- UL listed for USA and Canada –
Class I, Div. 1 & 2, Groups C & D. –
Class I, Zone 1, AExd IIB T6
- CSA certified
- GOST 'R' & 'K' certified
- Chinese (CQST) certified
- IP66 & 67
- Certified temperature -55°C to $+70^{\circ}\text{C}$
- LED, xenon, fluorescent, filament
- Marine grade alloy or GRP
- Close-coupled and pre-wired to
customer's requirements



XB 11 SL

Technical data

XB 11 SL Range

EC-Type Examination Certificate	BAS 99 ATEX 2195X
Marking to 94/9/EC	⊕ II 2G/D Ex d IIB T*
UL Listed for USA and Canada	Class I, Div 2, Groups C & D / Class I, Zones 1 & 2
Listing No.	E187894
Chinese Certified	Ex d IIB T5/T6
Enclosure material	UV stable, glass reinforced polyester
Finish	Natural Black or Epoxy paint to customers specification
Lens	Glass
Lamp types	Xenon 5 joules maximum Fluorescent 10 W or 5 W Filament 10 W maximum
Rated voltage	Xenon 24 V DC/110, 240 V AC Filament Voltages 24, 48 V DC/110, 220, 240, 254 V AC Fluorescent Voltages 24 V DC, 240 V AC
Lamp Colours	Red, amber, yellow, green, blue or clear
Light module	1 to 5 ways
Entries	1 x M20
Rated terminal cross section	max. 2.5 mm ²
Protection category to EN 60529	IP66/IP67
Insulation class	I
Permissible ambient temperature	-55 °C to +70 °C

* see table below

Ordering details

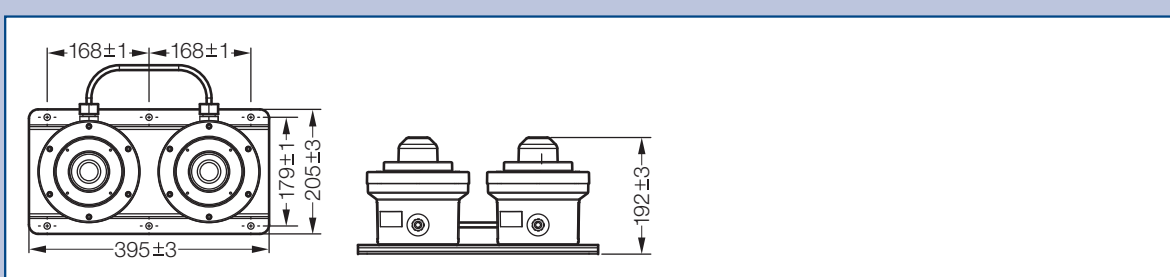
Catalogue No.	Certification	Description	Ordering Code
XB11SL3	UL Listed, Class I, Div 2, Groups C & D	Explosion protected, 3 stack, one 1/2" NPT entry on bottom, 24V DC, green incandescent on top, yellow xenon flashing in middle, red xenon flashing on bottom, no lens guards, red finish	PX 42500005

Temperature classifications

Type ...	Lamp	Ambient temperature		Temperature Classification (G/D) at Tamb.		
		-55 °C	-20 °C	+40 °C	+55 °C	+70 °C
XB11SL	Filament	X	X	T6/T 85 °C	T5/T 100 °C	-
XB11SL	Fluorescent	-	X	T5/T 100 °C	T4/T 135 °C	-
XB11SL	Xenon	X	X	T6/T 85 °C	T5/T 100 °C	T4/T 135 °C

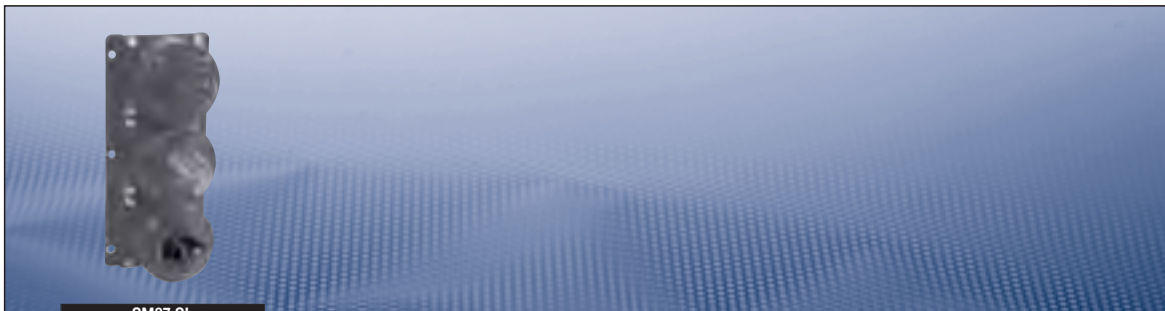
* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-Status lamps



SM87 SL

Technical data

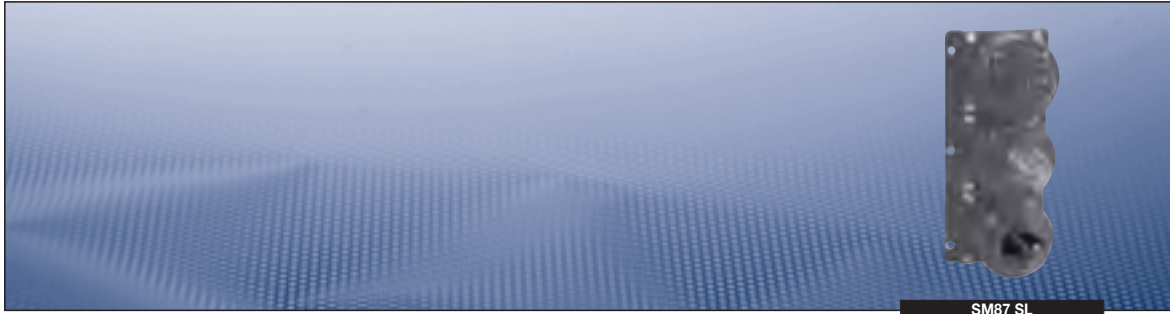
SM87 SL

EC-Type Examination Certificate	Baseefa 03 ATEX 0222X
Marking to 94/9/EC	⊕ II 2G/D Ex d IIC T*
UL Listed	Class I, Div 1, Groups C & D Class I, Zone 1, AExd IIB T6
Listing No.	E187894
CSA Certified	Class I, Div 1
GOST 'R' & 'K'	Certified – Zones 1 & 2 IP66 & 67
NEMA	4 x 6
Enclosure material	LM 25 TF Marine Grade Alloy
Finish	Epoxy paint finish as standard or to customer's specification
Lens	Glass
Lamp types	Xenon 5 joules maximum Fluorescent 10 W or 5 W Filament 40 W maximum
Rated voltage	Xenon 24, 48 V DC/110, 120, 240, 254 V AC
	Filament Voltages 12, 24, 48 V DC/110, 220, 240, 254 V AC
	Fluorescent Voltages 12, 24, 48 V, 220, 240, 254 V AC
Lamp Colours	Red, amber, yellow, green, blue or clear
Light module	1 to 5 ways
Entries	Up to 3 x M20 or M25 / 3 x 1/2" or 3/4" NPT
Rated terminal cross section	max. 2.5 mm ²
Protection category to EN 60529	IP66/IP67
Permissible ambient temperature	LED and fluorescent -25 °C to +55 °C*
	Xenon & filament -55 °C to +70 °C

* see table below

Temperature classifications

Type	Lamp	Voltage	Watts	Temperature Classification (G/D) at Tamb. -25 °C to +... °C			
				+40 °C	+55 °C	+70 °C	
SM 87 SL	Filament	240 AC	48	T4/T 135 °C	T3/T 200 °C	–	
SM 87 SL	Fluorescent	254 AC	10	T5/T 100 °C T6/T 85 °C	T4/T 135 °C	–	
		110/120 AC			T5/T 100 °C	–	
SM 87 SL	Xenon	12, 24, 48 DC	5	T6/T 85 °C	T6/T 85 °C	–	
		110, 240, 254 AC	11		T6/T 85 °C	T4/T 135 °C	T4/T 135 °C
		12, 24, 30, 48 DC				T4/T 135 °C	T4/T 135 °C



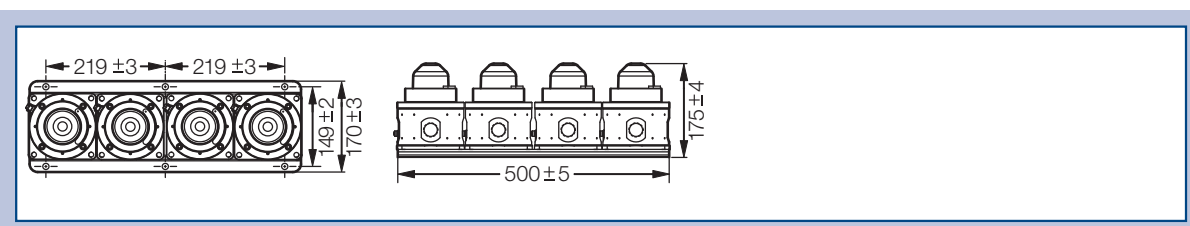
SM87 SL

Ordering details

Catalogue No.	Certification	Description	Ordering Code
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, two stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200055
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Incandescent status lamp, two stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200056
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Fluorescent status lamp, two stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200057
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, two stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200058
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Explosion protected, 3 stack, one 1/2" NPT entry on bottom, no lens guards, xenon strobe with red, green, and clear lens	PX 26200043
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, three stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200059
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Incandescent status lamp, three stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200060
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Fluorescent status lamp, three stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200061
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, three stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200062
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Fluorescent status lamp, three stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200063

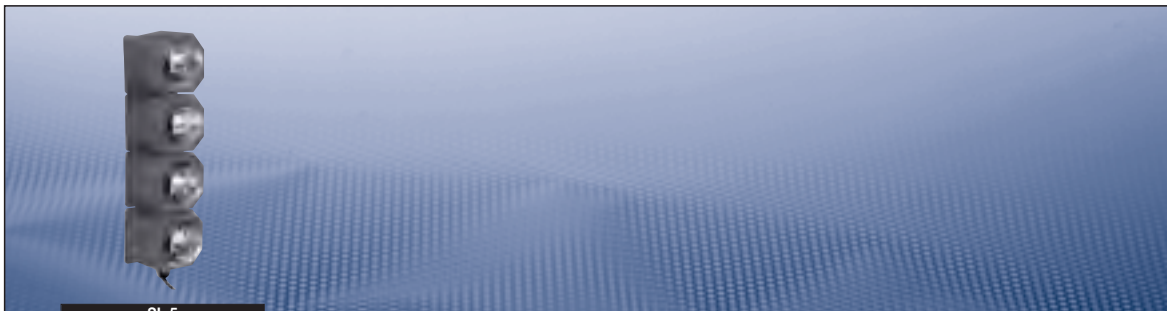
* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-Status lamps

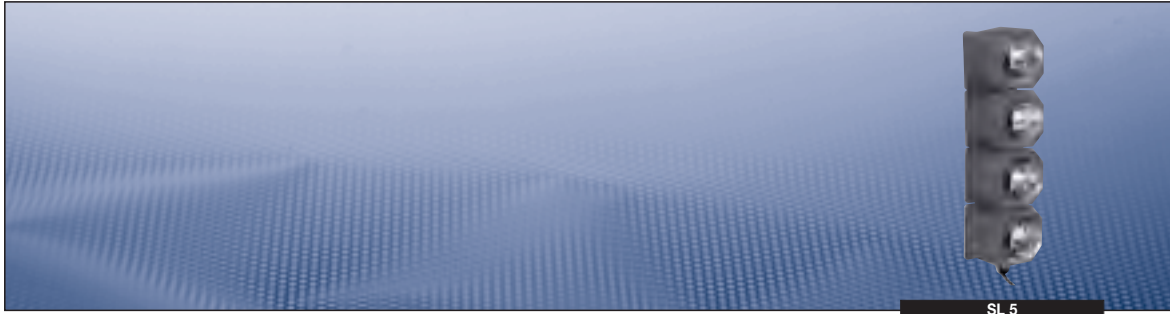


SL 5

Technical data

SL 5	
EC-Type Examination Certificate	BAS 02 ATEX 2108X
Marking to 94/9/EC	II 2G Ex e*
Chinese (CQST)	Exem II T4, LED Exe II T3, Filament Exem II T4, Xenon
Enclosure material	UV stable, glass reinforced polyester
Finish	Body natural black or painted to client specifications
Lens	Polycarbonate
Lamp types	Xenon 1 joules maximum / Fluorescent 2 x 5 W Filament 400 W maximum
Rated voltage	Xenon 24, 48 V DC
	Filament Voltages 12, 24, 48 V DC/110, 220, 240, 254, 260 V AC
	LED 12, 24 V AC
Lamp Colours	Filament and Xenon Red, amber, yellow, green, blue or clear
	LED Red, amber or green
Light module	1 to 5 ways
Entries	max. 2 x M16 or M20/max. 1 x M20/M32
Rated terminal cross section	max. 12 x 4 mm ² /16 x 2.5 mm ²
Protection category to EN 60529	IP66/IP67
Insulation class	I
Permissible ambient temperature	LED -40 °C to +45 °C*
	Xenon & filament -40 °C to +55 °C

* see table temperature classifications page 5.17



Temperature classifications

Type	Lamp	Voltage	Watts	Temperature Classification (G/D) at Tamb. -25 °C to +... °C		
				+40 °C	+55 °C	+70 °C
SL 5	Filament	240 AC	48	T4/T 135 °C	T3/T 200 °C	-
SL 5	Fluorescent	254 AC	10	T5/T 100 °C	T4/T 135 °C	-
		240 AC				
		110/120 AC				
	Xenon	12, 24, 48 DC	5	T6/T 85 °C	T5/T 100 °C	-
SL 5		24, 48 DC	11	T6/T 85 °C	T4/T 135 °C	T4/T 135 °C
SL 5	LED		4			
SL 5	LED blue	24, 48 DC	5, 6	T6/T 85 °C	T4/T 135 °C	-

Ordering options*

Unit	Type	Code	Lamp Type Position ¹⁾	Code	Voltage	Code	Cable entries	Code	Duty/Tag label	Code	Finish	Code
			V W X Y V Z									
SL5	Exe(m)	E	Filament	1	12 V DC	012	M16	A ²⁾	Duty label	D ³⁾	Natural Black	N
	Chinese		Xenon	2	24 V DC	024	M20	B ²⁾	Tag	T ³⁾	Special	S ⁴⁾
	(CQST)	Q	LED	3	48 V DC	048	M25	C ²⁾	None	N ³⁾		
			LED flashing	4	110 V DC	110	M32	D ²⁾				
			Suffixed by colour required		220 V DC	220						
			Red	R	240 V AC	240						
			Amber	A	254 V AC	254						
			Yellow	Y	260 V AC	260						
			Blue	B								
			Green	G								
	Clear	C										

¹⁾ Select lamp type and lens colour for each position e.g. V W X Y V Z

2R 2G 2Y -- --

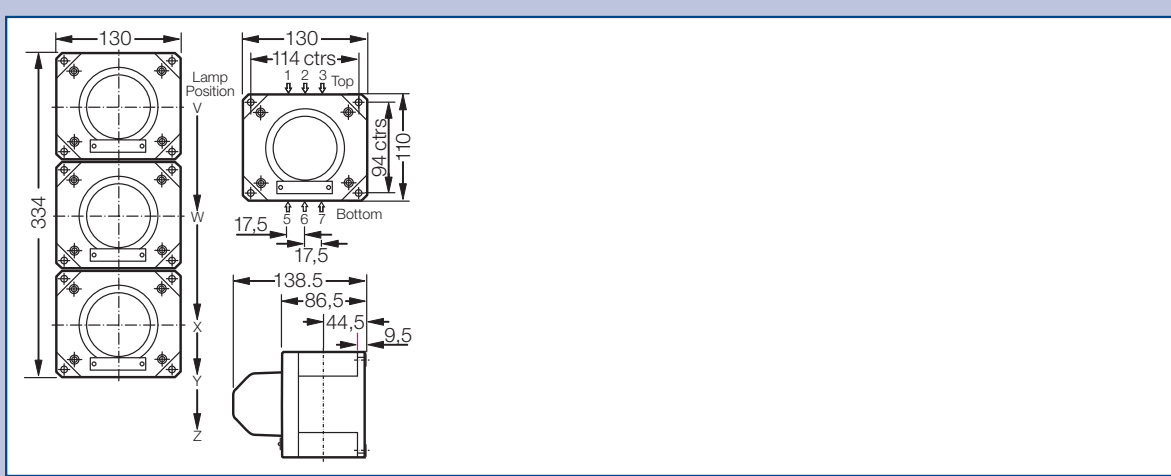
²⁾ Prefix with cable entry position

³⁾ Specify wording

⁴⁾ Please specify

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-Status lamps



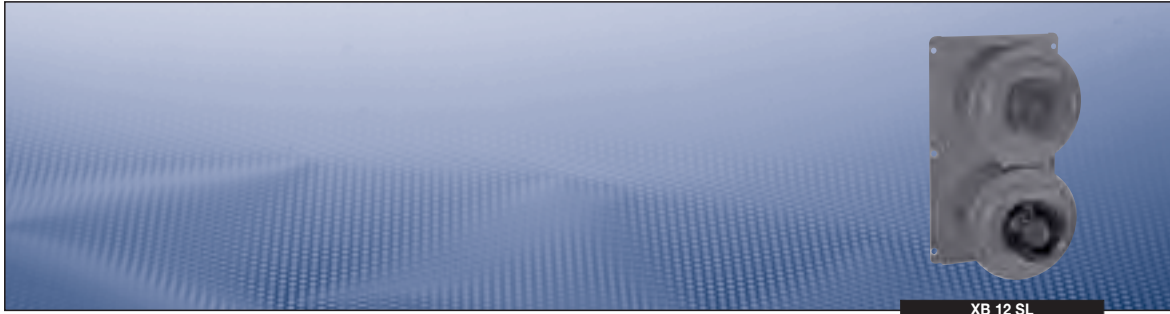
XB 12 SL

Technical data

XB 12 SL Range

EC-Type Examination Certificate		BAS 99 ATEX 2196
Marking to 94/9/EC		II 2G Ex d IIB T*
UL Listed for USA and Canada		Class I, Div 2, Groups C & D Class I, Zones 1 & 2 AExd IIB T4/T5
Listing No.		E187894
Enclosure material		UV stable, glass reinforced polyester
Finish		Natural Black or Epoxy paint to customers specification
Lens		Glass
Lamp types		Xenon 21 joules maximum Filament 60 W maximum
Rated voltage	Xenon	24 V DC/110, 240 V AC
	Filament Voltages	110, 240 V AC
Lamp Colours		Red, amber, yellow, green, blue or clear
Light module		1 to 5 ways
Entries		2 x M20 / 1 x 1/2" NPT
Rated terminal cross section		max. 2.5 mm ²
Protection category to EN 60529		IP66/IP67
Insulation class		I
Permissible ambient temperature		-55 °C to +70 °C

* see table below



XB 12 SL

Ordering details

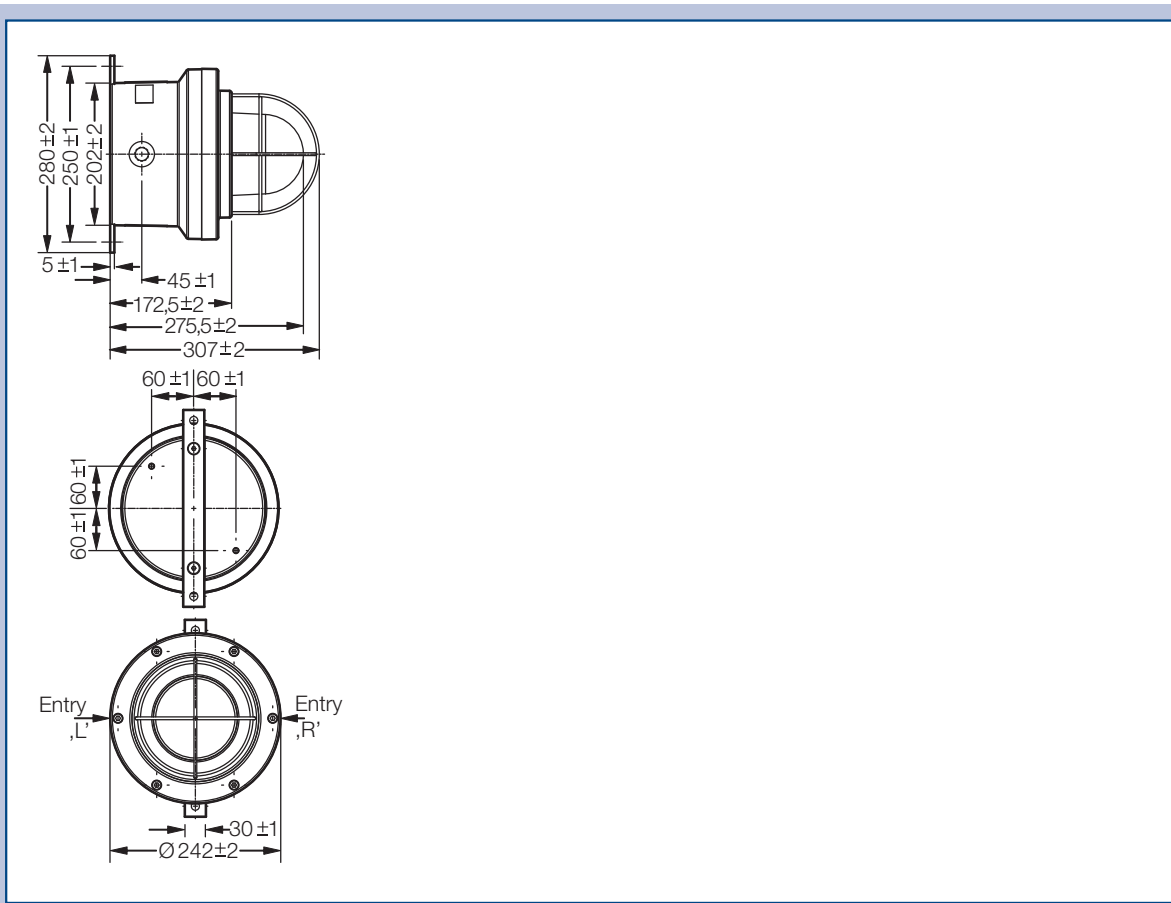
Catalogue No.	Certification	Description	Ordering Code
XB12SL2	UL Listed, Class I, Div 2, Groups C & D	24V DC xenon status lamp, two stack 21 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry	PX 42600007
XB12SL3	UL Listed, Class I, Div 2, Groups C & D	110V AC, explosion protected, three stack, one 1/2" NPT entries, red xenon flashing on top, amber xenon flashing in middle, clear xenon flashing on bottom; no lens guards, red finish	PX 42600001
XB12SL3	UL Listed, Class I, Div 2, Groups C & D	24V DC xenon status lamp, three stack 21 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT	PX 42600009

Temperature classifications

Type ...	Lamp	Ambient temperature		Temperature Classification (G/D) at Tamb.		
		-55 °C	-20 °C	+40 °C	+55 °C	+70 °C
XB12SL	Filament	X	X	T5	T4	-
XB12SL	Xenon	X	X	T5	T5	T4

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

EX - BEACONS AND STROBES

Explosion protected units for Zone 0, 1, 2, 22, Class I and Div 1 & 2

These certified beacons have been designed for use in harsh environmental conditions. The stainless steel or marine grade alloy enclosures are suitable for use offshore or onshore, where light weight combined with corrosion resistance and strength is required.

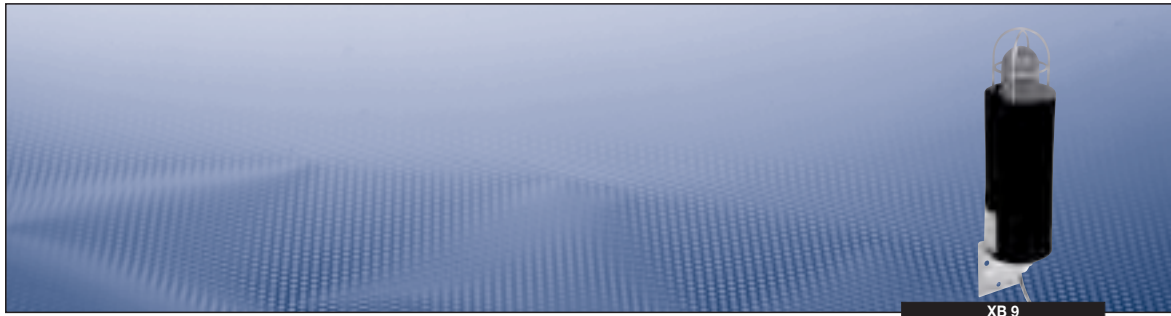
The glass reinforced polyester enclosures are suitable for use offshore or onshore, where light weight combined with corrosion resistance is required.

Units can be painted to customer specification and fitted with identification labels. LED version available, offering extended lifetimes.

Stainless Steel screws and mounting bracket are incorporated ensuring a totally corrosion free unit. Units can be painted to customer specification and supplied with identification labels.



- IP66 and IP67
- Certified Temperature -55°C to +55°C
- Corrosion Free GRP
- UL Listed for USA and Canada –
Hazardous locations: Class I, Div 1 & 2,
Groups C & D. Class I, Zones 1 & 2,
AExd IIB T4/T5. – Ordinary locations:
Visual-Signal Device
- Australian (SAA) certified
- Chinese (CQST) certified
- NEMA 4x, & 6
- Various lens colours
- Optional lens guard
- Optional gland plus cable tail
- Stainless steel mounting
bracket on request
- Replaceable tube



XB 9

Technical data

XB 9	
EC-Type Examination Certificate	BAS 00 ATEX 2031
Marking to 94/9/EC	Ex II 2G/D Ex d IIC T5/T6 T100 °C/T 135 °C
Enclosure material	Corrosion-free GRP
Lens material	Toughened glass
Finish	Natural black or painted to customer specification
Rated voltage	12 - 48 V DC/110 - 254 V AC 50/60 Hz
Power consumption	DC 12 V 9 mA / DC 24 V 8 mA / DC 48 V 9 mA AC 110 V 11 mA / AC 240 V 15 mA / AC 254 V 15 mA
Flash rate	1 Hz
Entries	1 entry, M20
Weight	1.6 kg
Rated terminal cross section	3 x 2.5 mm ²
Protection category to EN 60529	IP66/IP67
Insulation class	I
Permissible ambient temperature	from -55 °C to +55 °C

Ordering details

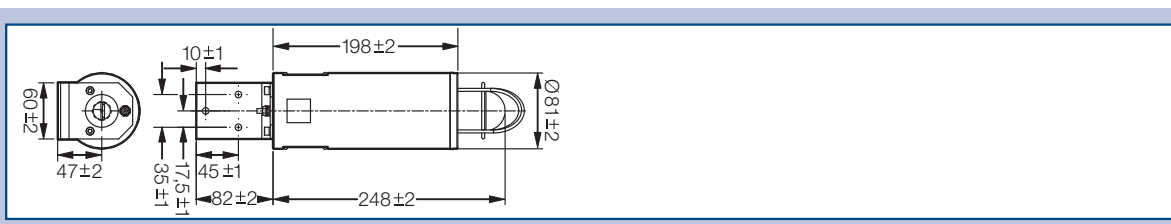
Catalogue No.	Certification	Description	Ordering Code
XB9D02406RYNCBN	ATEX Approved Ex II 2G, Exd, IIC, T5	5 joules, 24 V DC, red lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819105
XB9D02406AYNCBN	ATEX Approved Ex II 2G, Exd, IIC, T5	5 joules, 24 V DC, amber lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819106
XB9D24006RYNCBN	ATEX Approved Ex II 2G, Exd, IIC, T5	5 joules, 240 V AC, red lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819107
XB9D24006AYNCBN	ATEX Approved Ex II 2G, Exd, IIC, T5	5 joules, 240 V AC, amber lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819108

Ordering options*

Model	Voltage	Code	Flash rate	Code	Lens colour	Code	Lens guard	Code	Tag/Duty label	Code	Entries/cable tail	Code	Finish	Code
XB9D	DC 12 V	012	60/min.	06	Red	R	None	N	None	N	1 x M20	1B	Natural Black	N
	DC 24 V	024			Blue	B	Yes	Y	Yes	Y	1 x PG 13.5	1P	Red	R
	DC 48 V	048			Green	G					3 m cable	CB	Blue	B
	AC 110 V	110			Yellow	Y							Yellow	Y
	AC 240 V	240			Amber	A							Grey	G
	AC 254 V	254			Clear	C							White	W
														Special finish	S

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-5 joule flashing xenon



SM 87

SM 87 with eXLink

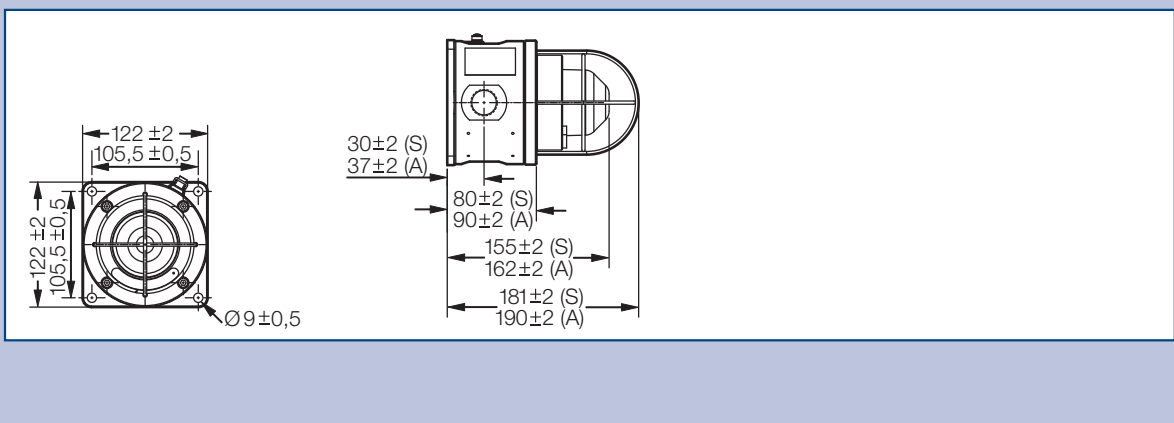
Technical data

SM 87

EC-Type Examination Certificate	Baseefa 03 ATEX 0222		
Marking to 94/9/EC	II 2G/D Ex d IIC T4/T6 T85 °C/T 135 °C		
CSA Certification to	C22.2 Nos. 0, 0.4, 0.5, 9, 30-M1986, 94-M91, 137-M-1981		
	Class I, Div 1, Group D, Enclosure 3/4		
Cert. No.	96406 (HXB only)		
UL Listed for USA & Canada	Class I, Div 1, Groups C & D		
	Class I, Zone 1 (HXB & XBT only)		
Listing No.	E187894		
GOST 'R' Certification	1Exd IIC T4 (HXB only)		
	Russian Fire Approved (VNIIPO)		
GOST 'K' Certification	Exd IIC T4		
Chinese (CQST) Certification	Exd IIC T4/T6 (HXB only)		
Enclosure material	Marine Grade Alloy or Stainless Steel		
Lens material	Glass*		
Finish	Red epoxy painted finish as standard		
Rated voltage	24 V - 48 V DC/110 - 254 V AC 50/60 Hz		
Power consumption	DC 24 V 7.2 W / DC 48 V 7.6 W		
tube 5 joule	AC 110 V 25 W / AC 120 V 27 W / AC 220 V 25 W		
	AC 240 V 27 W / AC 254 V 35 W		
Initiation	Telephone or relays initiated		
Entries	up to 4 entries, M20 or M25 / up to 4 x 1/2" or 3/4" NPP		
Rated terminal cross section	6 x 2.5 mm ²		
Protection category to EN 60529	IP66/IP67		
Insulation class	I		
Permissible ambient temperature	ATEX	HXB	-55 °C to +70 °C
		LED	-20 °C to +40 °C
		XBT (High temp.)	-40 °C to +85 °C
	CSA Certified		-50 °C to +40 °C
		UL	HXB	-55 °C to +70 °C
		XBT (High temp.)	-40 °C to +85 °C
	GOST 'R'	HXB	-55 °C to +55 °C

* Optional with lens guard

Dimension drawing





SM 87 with eXLink

SM 87

Ordering details

Catalogue No.	Certification	Description	Ordering Code
SM87HXBAB024AN1R1LNNR	ATEX EX II 2GD Ex d IIC	5 joules, 24 V DC, amber lens, 2 x M20 Entries, 29 Cd	PX 813006
SM87HXBAB024RN1R1LNNR	ATEX EX II 2GD Ex d IIC	5 joules, 24 V DC, red lens, 2 x M20 Entries, 29 Cd	PX 813005
SM87HXBAB240AN1R1LNNR	ATEX EX II 2GD Ex d IIC	7 joules, 240 V AC, amber lens, 2 x M20 Entries, 39 Cd	PX 813008
SM87HXBAB240RN1R1LNNR	ATEX EX II 2GD Ex d IIC	7 joules, 240 V AC, red lens, 2 x M20 Entries, 39 Cd	PX 813007
SM87LEDAB024RN1R1LNNR SM87HXBAUL024AN3R3LNNR	ATEX EX II 2GD UL, cUL Listed, Class I, Div 1, Groups C & D	24 V DC, red lens, 2 x M20 entries, 192 Cd Standard models are in alloy, red body color, no tag or duty labels, 2 x 1/2" NPT entries, 29 Cd	PX 813009 PX 869162
SM87HXBAUL024RN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 24 V DC, red lens, 2 x 1/2" NPT entries, 29 Cd, 60 flashes per minute	PX 869161
SM87HXBAUL110AN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 110 V AC, amber lens, 2 x 1/2" NPT entries, 32 Cd, AExd IIB	PX 869166
SM87HXBAUL110RN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 110 V AC, red lens, 2 x 1/2" NPT entries, 32 Cd, AExd IIB	PX 869165

Ordering options*

Model	Code	Certi- fication	Code	Voltage	Code	Lens colour	Code	Lens guard	Code	Entries	Code	Tag/ duty label	Code	Initiate Option	Code	Finish	Code	
Xenon (stainless steel)	HXBS	ATEX UL CSA	B UL C	DC 24 V DC 48 V AC 110 V	024 048 110	Red Blue Green	R B G	None Yes	N Y	20 mm 25 mm 1/2" NPT	1 2 3	None Yes	N Y	Telephone Relay EOL	T R	Red Blue Yellow	R B Y	
Xenon (alloy)	HXBA	GOST 'R' ¹⁾	G	AC 120 V	120	Amber	A			3/4" NPT	4			Resistor	E	Yellow/ Black	Y N	
Xenon High Temp. (alloy)	XBTA	GOST 'K' Chinese	K	AC 230 V AC 240 V	230 240	Yellow (not LED)	Y			Top Bottom	T ²⁾ B ²⁾			None	N	Black stripe	N X	
Xenon High Temp. (stainless steel)	XBTS	(CQST)	Q	AC 254 V	254	Clear (not LED)	C			RHS LHS	R ²⁾ L ²⁾					Grey White Special finish	G W S	
LED Ex d (stainless steel)	LEDS																	
LED Ex d (alloy)	LEDA																	

¹⁾ Only HXBS is available CSA certified. Only HXBA & XBTA is available UL certified.

²⁾ Prefix position with entry size code. e.g. 1R1B = 20 mm Right and Bottom entries.

* For more options see www.medc.com or contact your local representative

Ex-5 joule flashing xenon



XB 11

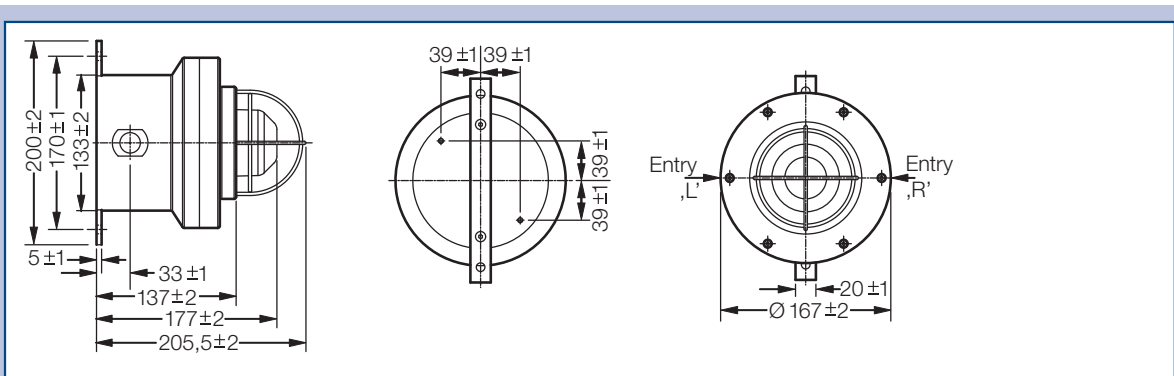
XB 11 with eXLink

Technical data

XB 11

EC-Type Examination Certificate	BAS 99 ATEX 2195X/3
Marking to 94/9/EC	II 2G/D Ex d IIB T4*
UL Listed for USA and Canada	Class I, Div 2, Groups C & D Class I, Zones 1 & 2 AExd IIB T4/T5
UL Listing No	E187894
GOST 'R' Certification	1Exd IIB T4/T5//T6
Chinese (CSQT) Certification	Exd IIB T5/T6
Enclosure material	Corrosion-free GRP
Lens material	Glass
Finish	Natural black or painted to customer specification
Rated voltage	24 V DC/110 - 240 V AC 50/60 Hz
Power consumption tube 5 joule	DC 24 V 8 W / AC 110 V 11 W / AC 240 V 18 W
Initiation	Optional telephone or relays initiated
Entries	up to 2 x M20 / up to 2 x 1/2" NPT
Weight	2.5 kg
Rated terminal cross section	6 x 2.5 mm ²
Protection category to EN 60529	IP66/IP67
Permissible ambient temperature*	T6 T85 °C: -55 °C to +40 °C T5 T100 °C: -55 °C to +55 °C T4 T135 °C: -55 °C to +70 °C

Dimension drawing



Dimensions in mm



XB 11 with eXLink

XB 11

Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB11B02406ANBNNNN	ATEX EX II 2GD Ex d IIB	GRP, natural black body, no tag or duty labels, backstrap mounting, 24 V DC, amber lens 2 x M20 entries, 60 flashes per minute	PX 811102
XB11B02406RNBNNNN	ATEX EX II 2GD Ex d IIB	GRP, natural black body, no tag or duty labels, backstrap mounting, 240 AC, red lens, 2 x M20 entries, 60 flashes per minute	PX 811101
XB11B24006ANBNNNN	ATEX EX II 2GD Ex d IIB	GRP, natural black body, no tag or duty labels, backstrap mounting, 240 V AC, amber lens, 2 x M20 entries, 60 flashes per minute	PX 811104
XB11UL02406ANBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, , 24 V DC, amber lens, 2 x 1/2" NPT entries, 60 flashes per minute, black finish	PX 869172
XB11UL02406CNBNNNN	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 24 V DC, clear lens, 2 x 1/2" NPT entries, 60 flashes per minute, black finish	PX 869173
XB11UL02406CNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 24 V DC, clear lens, 2 x 1/2" NPT entries, 60 flashes per minute, red finish	PX 869174
XB11UL02406RNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 24 V DC, red lens, 2 x 1/2" NPT entries, 60 flashes per minute, red finish	PX 869171
XB11UL11006RNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 110 V AC, red lens, 2 x 1/2" NPT entries, 60 flashes per minute, red finish	PX 869175

Ordering options*

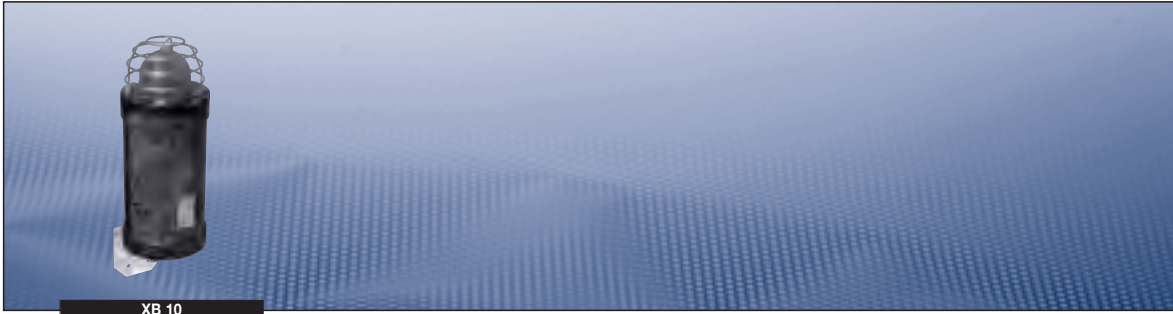
Model	Certification	Code	Voltage	Code	Flash rate	Code	Lens colour	Code	Lens guard	Code
XB11	ATEX	B	DC 24 V	024	60/min.	06	Red	R	None	N
	UL	UL	DC 48 V	048			Blue	B	Yes	Y
	ATEX/UL		AC 110 V	110			Green	G		
	Dual Listed	AU	AC 230 V	230			Amber	A		
	GOST 'R'	G	AC 240 V	240			Yellow	Y		
	Chinese (CQST)	Q					Clear	C		

Ordering options*

Unit fixing	Code	Earth continuity	Code	Tag/Duty label	Code	Options	Code	Finish	Code
Direct mounting	D	None	N	None	N	Telephone initiate	T	Natural Black	N
Backstrap	B	Yes	Y	Yes	Y	Blanking plug	P	Red	R
						None	N	Blue	B
								Yellow	Y
								Grey	G
								White	W
								Special finish	S

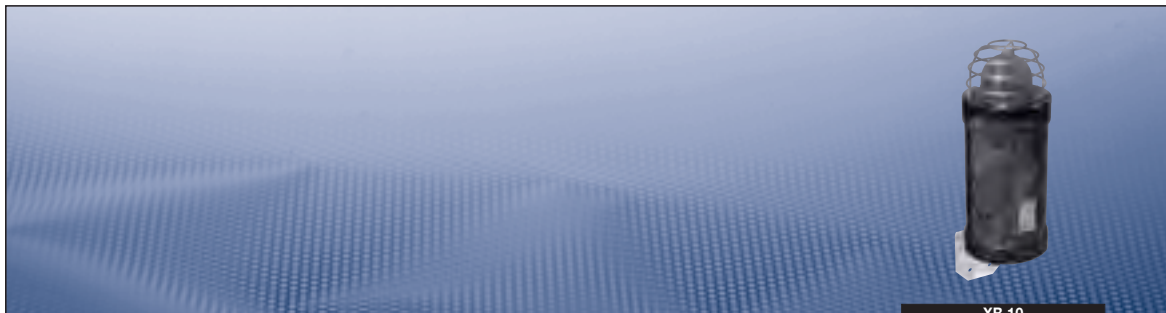
* For more options see www.medc.com or contact your local representative

| Ex-10/15 Joule flashing xenon |



Technical data

XB 10	
Marking to 94/9/EC	II 2G Ex d IIB T4 II 2G Ex de IIB T4
EC-Type Examination Certificate	BAS 00 ATEX 2204X (Ex d) BAS 00 ATEX 2226X (Ex ed)
GOST 'R' Certification	1Exd IIB T4/2Exde IIB T4 Russian Fire Alarm Approved (VNIIPO)
Permissible ambient temperature	from -55 °C to +40 °C (Ex d)/from -50 °C to +40 °C (Ex de)
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz
Power consumption (tube energy 15 joule)	DC 24 V 16.8 mA / DC 48 V 26.8 mA AC 110 V 33 mADC / AC 220 - 254 V 34.8 mA
Flash rate	1 Hz
Entries	2 entries, M20 (Ex d)/3 entries, M20 (Ex de)
Rated terminal cross section	4 x 2.5 mm ² (DC)/6 x 2.5 mm ² (AC)
Protection category to EN 60529	IP66/IP67
Weight	2.8 kg (Ex d)/3.6 kg (Ex de)
Enclosure material	Corrosion-free GRP
Lens material	Toughened glass with lens guard
Finish	Natural black or painted to customer specification
Initiation	Optional telephone or relays initiated



XB 10

Ordering details

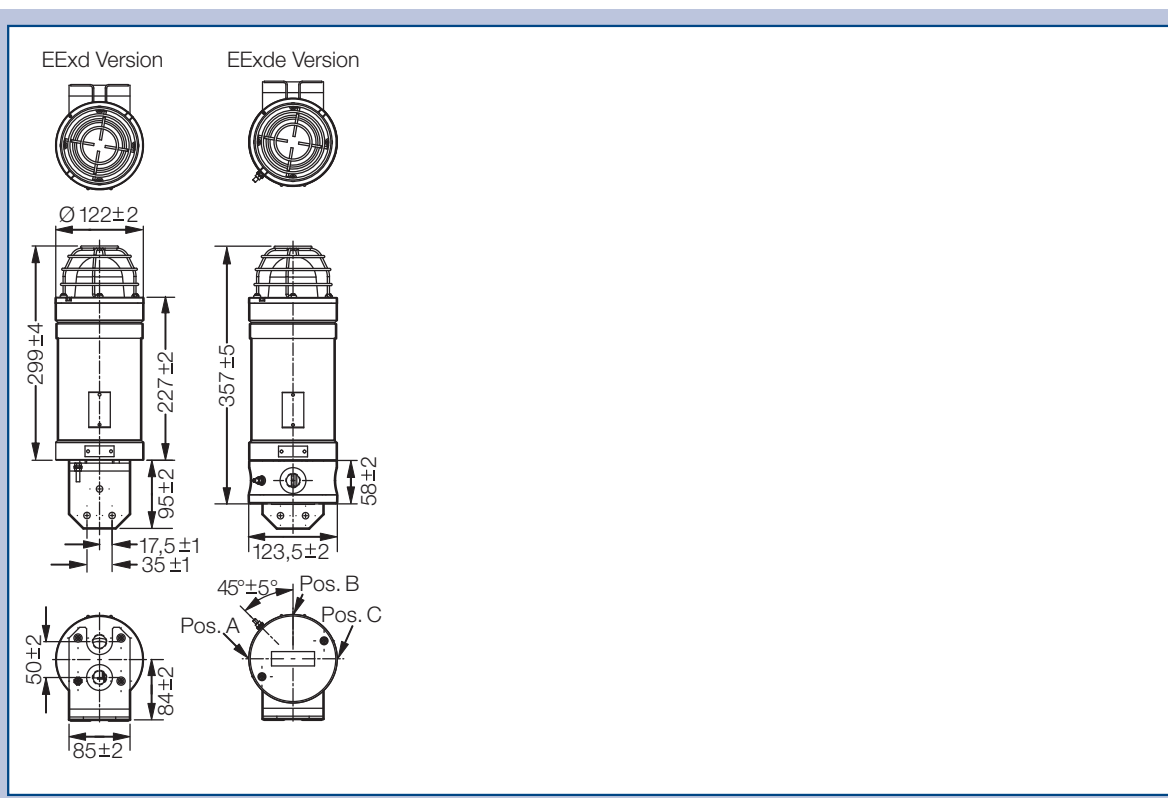
Catalogue No.	Certification	Description	Ordering Code
XB10D024FRNN2BN	ATEX Approved Ex II 2G, Exd, IIB, T5	15 joules, 24 V DC, red lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811050
XB10D024FANN2BN	ATEX Approved Ex II 2G, Exd, IIB, T5	15 joules, 24 V DC, amber lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811051
XB10D240FRNN2BN	ATEX Approved Ex II 2G, Exd, IIB, T5	15 joules, 240 V DC, red lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811052
XB10D240FANN2BN	ATEX Approved Ex II 2G, Exd, IIB, T5	15 joules, 240 V DC, amber lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811053

Ordering options*

Model	Certification	Code	Voltage	Code	Power	Code	Lens	Code	Labels	Code	Options	Code	Entries	Code	Finish	Code	
XB10	Ex d	D	DC 24 V	024	10J	T	Red	R	None	N	Telephone		1 x M20	1B	Natural Black	N	
	Ex de	E	DC 48 V	048	15J	F	Blue	B	Yes	Y	Initiate	T	1 x PG13.5	1P	Red	R	
	GOST 'R' Exd	DG*	AC 110 V	110			Green	G			Earth		2 x M20	2B	Blue	B	
	GOST 'R' Exe	EG*	AC 220 V	220			Yellow	Y			continuity	E	3 x M20	3B	Yellow	Y	
				AC 240 V	240			Amber	A			3 m cable				Grey	G
				AC 254 V	254			Clear	C			tail	G			White	W
												None	N			Special finish	S

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-15 joule flashing xenon



Pole mounting

Direct mounting

XB 15 with eXLink

Technical data

XB 15	
Marking to 94/9/EC	⊕ II 2G/D Ex d IIC T*
EC-Type Examination Certificate	Baseefa 04 ATEX 0009X
UL Listed for USA and Canada	Class I, Div 2, Groups A, B, C & D Class I, Zone 1, AExd IIC T4/T5
UL listing No.	E187894
Permissible ambient temperature*	T6 T85 °C: -55 °C to +40 °C
	T5 T100 °C: -55 °C to +55 °C
	T4 T135 °C: -55 °C to +70 °C
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz
Rated current (tube energy 15 joule)	DC 12 V 1.4 A
	DC 24 V 1.1 A
	DC 48 V 0.4 A
	AC 110 - 120 V 0.4 A
	AC 230 - 240 V 0.2 A
	AC 254 V 0.17 A
Flash rate	60 fpm, 80 fpm, 120 fpm
Insulation class	I
Protection category to EN 60529	IP66/IP67
Weight	3.0 kg
Enclosure material	Corrosion-free GRP
Lens material	Glass
Entries	2 entries M20 (standard) / up to 2 x 1/2" or 3/4" NPT
Finish	Natural black or painted to customer specification
Initiation	Optional telephone or relays initiated
Rated terminal cross section	12 x 2.5 mm ² (direct mount)/8 x 2.5 mm ² (pipe mount)

Ordering options*

Model	Certi- fication	Code	Voltage	Code	Lens flashrate	Code	Lens colour	Code	Unit guard	Code	Fixing	Code	Unit options	Code	Finish	Code
XB 15	ATEX	B	DC 12 V	012	60	06	Red	R	None	N	Pipe mount	P	None	N	Natural black	N
	UL	UL	DC 24 V	024	80	08	Blue	B	Cast	C	Direct mount	D	Tag label	T	Red	R
			DC 48 V	048	120	12	Green	G	Wire	W	Direct w. backstrap	B	Duty label	D	Blue	B
			AC 110 V	110			Amber	A					Relay initiate	R	Yellow	Y
			AC 120 V	120			Yellow	Y					Telephone		Green	G
			AC 230 V	230			Clear	C					initiate	I	White	W
			AC 240 V	240									Blanking		Special finish	S
			AC 254 V	254									plug	P		

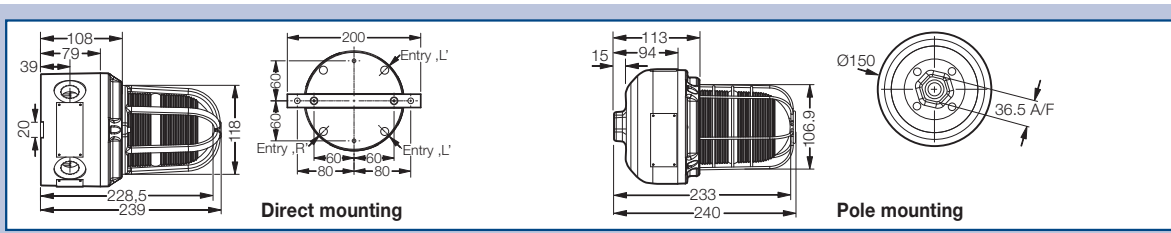
* For more options see www.medic.com or contact your local representative



Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB15UL02406AWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, amber lens	PX 27600046
XB15UL02406AWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, amber lens	PX 27600051
XB15UL02406BWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, blue lens	PX 27600044
XB15UL02406BWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, blue lens	PX 27600049
XB15UL02406CWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, clear lens	PX 27600042
XB15UL02406CWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, clear lens	PX 27600047
XB15UL02406GWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, green lens	PX 27600043
XB15UL02406GWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, green lens	PX 27600048
XB15UL02406RWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, red lens	PX 27600045
XB15UL02406RWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, red lens	PX 27600050
XB15UL12006AWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, amber lens	PX 27600056
XB15UL12006AWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, amber lens	PX 27600060
XB15UL12006BWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, blue lens	PX 27600054
XB15UL12006BWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, blue lens	PX 27600059
XB15UL12006CWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, clear lens	PX 27600052
XB15UL12006CWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, clear lens	PX 27600057
XB15UL12006GWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, green lens	PX 27600053
XB15UL12006GWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, green lens	PX 27600058
XB15UL12006RWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, red lens	PX 27600055
XB15UL12006RWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, red lens	PX 27600029

Dimension drawing



Dimensions in mm

Ex-21 joule flashing xenon



XB 4

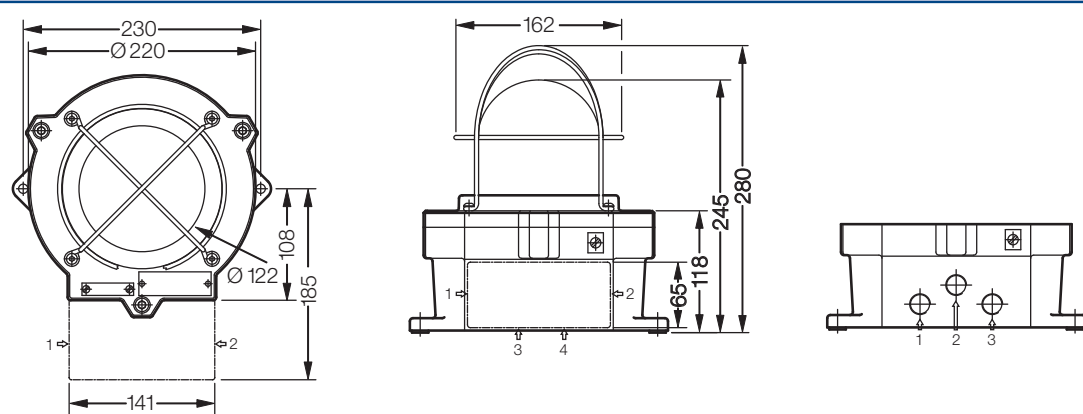
Technical data

XB 4

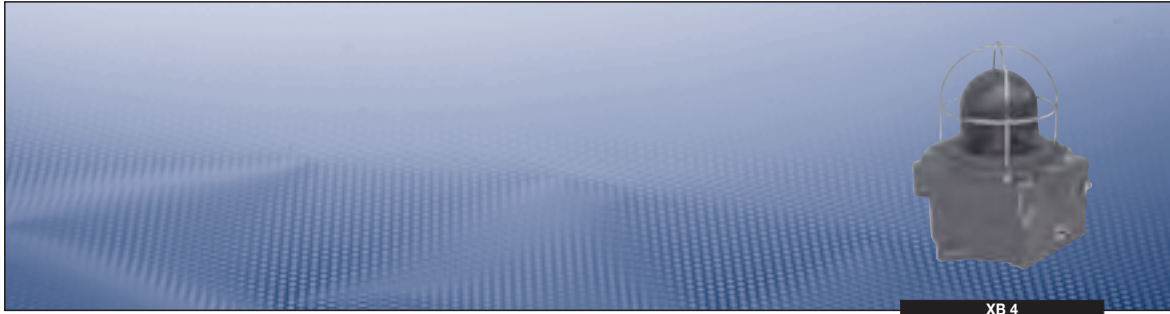
Marking to 94/9/EC	Ex II 2G Ex d IIC T5
EC-Type Examination Certificate	Baseefa 02 ATEX 0224X
UL Listed for USA and Canada	Class I, Div 1, Groups C-D Class I, Zone 1
Listing No.	E187894
GOST 'R' Certification	1 Exd IIC T4 Russian Fire Approved (VNIIPO)
Permissible ambient temperature	UL -25 °C to +70 °C ATEX & GOST -50 °C to +55 °C (Exde) -55 °C to +55 °C (Exd)
Rated voltage	24 - 110 V DC/110 - 254 V AC 50/60 Hz
Rated current	DC 24 V 1.4 A
(tube energy 21 joule)	DC 48 V 0.54 A DC 110 V 0.24 A AC 110 V 0.35 A AC 120 V 0.45 A AC 220 V 0.24 A AC 240 V 0.185 A AC 254 V 0.21 A
Protection category to EN 60529	IP66/IP67
Finish	Red epoxy painted finish as standard
Initiation	Optional telephone or relays initiated
Flash rate	60 fpm, 120 fpm, 240 fpm
Entries	up to 3 entries, M20 or 2 entries M25 / 1/2" or 3/4" NPT
Weight	6.6 kg
Enclosure material	Marine grade alloy or stainless steel
Lens material	Toughened glass
Rated terminal cross section	8 x 10 mm ²

* Optional with lens guard

Dimension drawing



Dimensions in mm



XB 4

Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB4BB8D2B3B06AN0RN1R	ATEX Approved Ex II 2G	21 joules, 24 V DC, red lens, 2 x M20 entries, 355Cd, 60 flashes per minute, no labels, red finish	PX 814001
XB4BH8D2B3B06AN0RN1R	ATEX Approved Ex II 2G	21 joules, 240 V AC, red lens, 2 x M20 entries, 355Cd, 60 flashes per minute, no labels, red finish	PX 814002
XB4ULB8D2E3E06ANAN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 24 V DC, amber lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869122
XB4ULB8D2E3E06ANRN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 24 V DC, red lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869121
XB4ULE8D2E3E06ANAN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 110 V AC, amber lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869126
XB4ULE8D2E3E06ANRN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 110 V AC, red lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869125

Ordering options*

Model	Certification	Code	Voltage	Code	Terminals	Code	Cable entries	Code	Lens flashrate	Code
XB 04	ATEX	B	DC 24 V	B	6 x 6 mm ²	6E	20 mm	B	60	06
	UL	UL¹⁾	DC 48 V	C	8 x 10 mm ²	8D	25 mm		80	08
	GOST 'R'	G	DC 110 V	D			1/2" NPT	D²⁾	120	12
			AC 110 V	E			3/4" NPT	E²⁾		
			AC 120 V	F						
			AC 230 V	G						
			AC 240 V	H						
			AC 254 V	J						

Ordering options*

Initiate options	Code	Lens colour	Code	Tag/Duty label	Code	Material	Code	Finish	Code
None	A	Red	R	None	N	Stainless steel	0	Red	R
Telephone	B	Blue	B	Yes	Y	Alloy	1	Blue	B
Telephone &		Green	G					Yellow	Y
2. beacon Relay	D	Amber	A					Green	G
Relay & 2. beacon	E	Yellow	Y					White	W
		Clear	C					Special finish	S

* For more options see www.medic.com or contact your local representative

¹⁾ UL – available alloy or stainless steel. 24V DC, 110 V AC; 240 V AC only.

²⁾ Prefix entry size with entry position code e.g. 1B2B.

Ex-21 joule flashing xenon



XB 12

XB 12 with eXLink

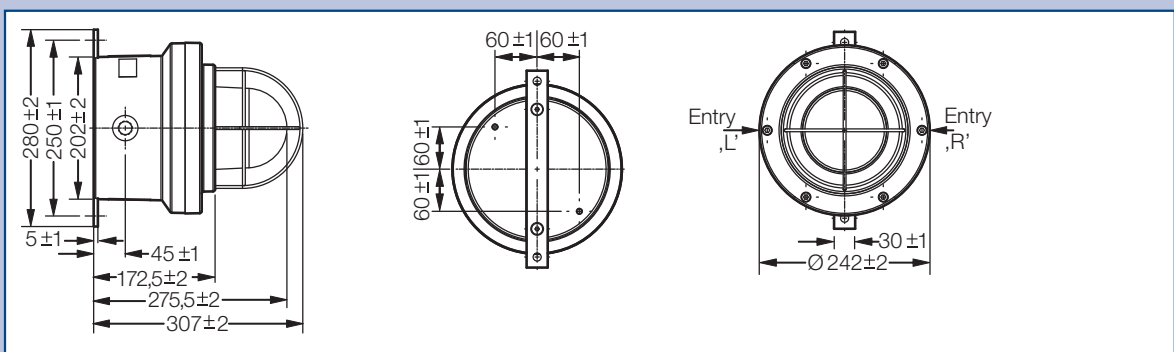
Technical data

XB 12

Marking to 94/9/EC	⊕ II 2G Ex d IIB T4/T5 T135 °C/T100 °C
EC-Type Examination Certificate	BAS 99 ATEX 2196/3
UL Listed for USA and Canada	Class I, Div 2, Groups C & D Class I, Zones 1 & 2 AExd IIB T4 & T5
UL Listing No.	E187894
GOST 'R' Certification	1Exd IIB T4/T5
GOST 'K' Certification	Ex d IIB T4/T5
Chinese (CQST) Certification	Ex d IIB T4/T5
Permissible ambient temperature	Certified Exd -55 °C to +70 °C (T4) -55 °C to +40 °C (T5) Temperature UL -55 °C to +70 °C
Rated voltage	24 V DC/110 - 240 V AC 50/60 Hz
Rated current tube 21 joule	DC 24 V 1.4 A AC 48 V 0.35 A AC 240 V 0.185 A
Protection category to EN 60529	IP66/IP67
Weight	7 kg
Enclosure material	Corrosion-free GRP
Lens material	Glass
Finish	Natural black or painted to customer specification
Initiation	Optional telephone or relays initiated
Flash rate	60 fpm
Entries	up to 2 entries M20 / 1/2" NPT
Rated terminal cross section	6 x 6 mm ²

¹⁾ Optional with lens guard

Dimension drawing



Dimensions in mm



Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB12B02406ANBNNNN	ATEX Approved Ex II 2G	24 V DC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, black body	PX 812102
XB12B02406RNBNNNN	ATEX Approved Ex II 2G	24 V CD, 60 flashes per minute, red lens, no wire guard, backstrap mounting, no labels, black body	PX 812101
XB12B24006ANBNNNN	ATEX Approved Ex II 2G	240 V AC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, black body	PX 812104
XB12B24006RNBNNNN	ATEX Approved Ex II 2G	240 V AC, 60 flashes per minute, red lens, no wire guard, backstrap mounting, no labels, black body	PX 812103
XB12UL02406ANBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24 V DC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869182
XB12UL02406RNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24 V DC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869181
XB12UL11006ANBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	110 V AC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869186
XB12UL11006RNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	110 V AC, 60 flashes per minute, red lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869185

Ordering options*

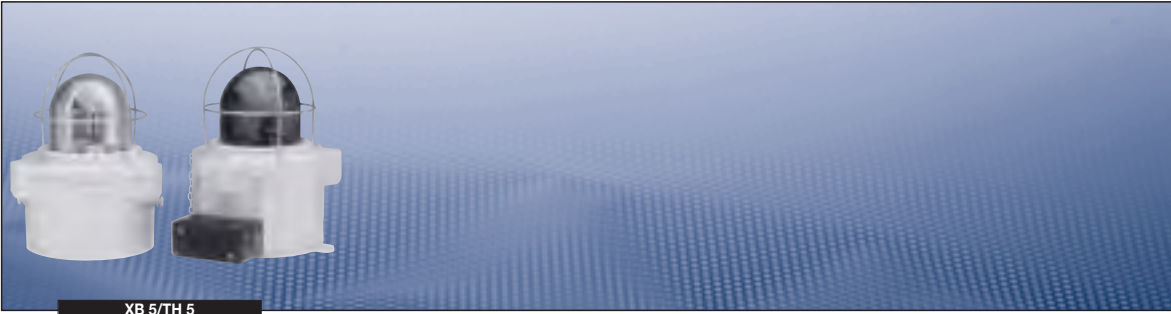
Model	Certification	Code	Voltage	Code	Lens flashrate	Code	Lens colour	Code	Lens guard	Code
XB 12	ATEX	B	DC 24 V	24	60	06	Red	R	None	N
	UL	UL	AC 110 V	110			Blue	B	Yes	Y
	GOST 'R'	G	AC 240 V	240			Green	G		
	GOST 'K'	K					Amber	A		
	Chinese (CQST)	Q					Yellow	Y		
							Clear	C		

Ordering options*

Unit fixing	Code	Earth continuity	Code	Tag/Duty label	Code	Options	Code	Finish	Code
Direct mounting	D	None	N	None	N	Telephone	T	Natural black	N
Backstrap	B	Yes	Y	Yes	Y	Blanking plug	P	Red	R
						None	N	Blue	B
								Yellow	Y
								Green	G
								White	W
								Special finish	S

* For more options see www.medc.com or contact your local representative

Ex-5 joule sequenced and 70 W rotating



XB 5/TH 5

Technical data

XB 5 | TH 5

Marking to 94/9/EC	Ⓔ II 2G Ex d IIB T* / Ⓔ II 2G Ex de IIB T*	
EC-Type Examination Certificate	Baseefa 00 ATEX 0225X	
Permissible ambient temperature*	XB5 T6	-20 °C to +40 °C
	TH5 T4	-20 °C to +55 °C
Rated voltage		
XB 5 (5 W flashing Xenon tubes)	24 - 110 V DC; 110 - 254 V AC 50/60 Hz	
TH 5 (55/70 W rotating mirror)	12 - 24 V DC; 110 - 240 V AC 50/60 Hz	
Peak current consumption XB 5 (5 W flashing Xenon tube)	DC 24 V	1.3 A / DC 48 V 0.65 A
	DC 110 V	0.3 A / AC 110 V 0.5 A
	AC 120 V	0.45 A / AC 220 V 0.24 A
	AC 240 V	0.23 A / AC 254 V 0.21 A
Insulation class	I	
Rated terminal cross section	6 x 6 mm ² (Ex e & Ex d)	
Protection category to EN 60529	IP66/IP67/IP68	
Enclosure material	Marine grade alloy and GRP (Ex e terminal chamber)	
Lens material	Toughened glass ¹⁾	
Weight	XB 5 (Ex d)	14.6 kg / XB 5 (Ex de) 15.6 kg
	TH 5 (Ex d)	14.9 kg / TH 5 (Ex de) 15.9 kg
Finish	Epoxy paint finish as standard or specified	
Power consumption TH 5	DC 12 V 55 W	
Rotating mirror	DC 24 V	70 W
	DC 110 - 240 V	70 W
Entries	up to 3 x M20 or 2 x M25 (Ex d) or up to 4 x M20 or M25 (Ex e)	

¹⁾ Optional with lens guard

Ordering options*

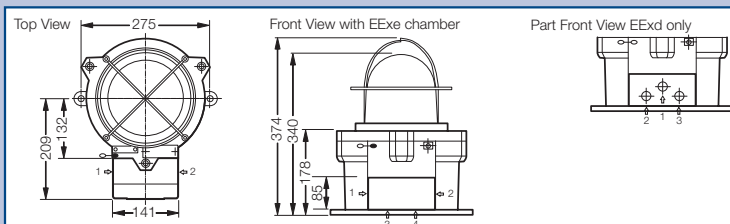
Model	Speed	Code	Terminal chamber	Code	Voltage	Code	Cable entries	Code	Lens colour	Code	Tag label	Code	Guard	Code	Finish	Code
XB 5	60 rpm	1	Ex d	D	12 V DC	A	20 mm	B	Red	R	None	N	None	0	Grey	G
TH 5	120 rpm 180 rpm ³⁾	2	Ex e	E	24 V DC	B	25 mm	C	Blue	B	Yes	Y	Guard	1	Red	R
					48 V DC	C			Green	G					Blue	B
					110 V DC	D			Yellow	Y					Yellow	Y
					110 V AC	E			Amber	A					White	W
					120 V AC	F			Clear	C					Special finish	S
					220 V AC	G										
					240 V AC	H										
254 V AC	J ²⁾															

* For more options see www.medc.com or contact your local representative

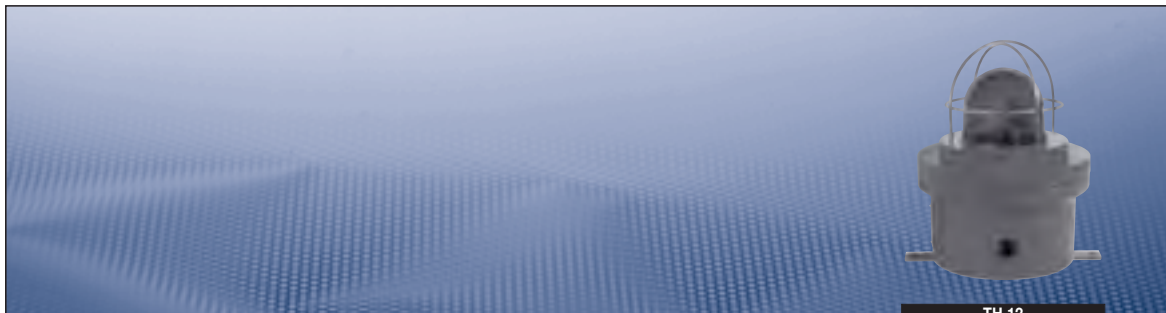
¹⁾ not for 110 V

²⁾ not for TH 5

Dimension drawing



Dimensions in mm



TH 12

Technical data

TH 12	
Marking to 94/9/EC	Ex II 2G Ex d IIB T4/T5 T135 °C/T100 °C*
EC-Type Examination Certificate	Baseefa 99 ATEX 2196/3
GOST 'R' Certified	1Exd IIB T4/T5
Permissible ambient temperature*	T4: from -55 °C to +70 °C / T5: from -55 °C to +40 °C
Rated voltage	12 - 24 V DC/110 - 240 V AC 50/60 Hz
Rated wattage	DC 12 V 55 W H1 tungsten halogen bulb DC 24 V 70 W H1 tungsten halogen bulb AC 110 V 70 W H1 tungsten halogen bulb AC 240 V 70 W H1 tungsten halogen bulb
Protection category to EN 60529	IP66/IP67
Rated terminal cross section	6 x 6 mm ²
Enclosure material	Corrosion-free GRP
Lens material	Glass ¹⁾
Finish	Natural black or painted to customer specification
Rotating beacon speed	60 r.p.m., 120 r.p.m., 180 r.p.m.
Entries	up to 2 x M20
Weight	7.6 kg

¹⁾ Optional with lens guard

Ordering details

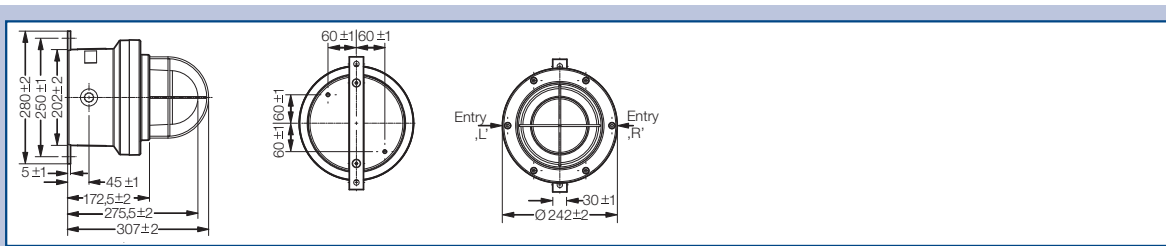
Catalogue No.	Certification	Description	Ordering Code
TH12B024RNBN	ATEX Approved Ex II 2G, Ex d IIB T4/T5, Zone 1 & 2	GRP Body black, 70W Rotating Tungsten Halogen Lamp, 60 rpm., 24V DC, 503 Cd, Red lens, no lens guard Backstrap mounting	PX 815010

Ordering options*

Model	Certification Code	Speed Code	Voltage Code	Lens colour Code	Lens guard Code	Unit fixing Code	Options Code	Finish Code
TH 12	ATEX B GOST 'R' G	60 rpm A	DC 12 V 012	Red R	None N	Direct mounting D	Tag label T	Natural black N
		120 rpm B	DC 24 V 024	Blue B	Yes Y	Backstrap B	Duty label D	Red R
		180 rpm C	AC 110 V 110	Green G			Earth continuity E	Blue B
			AC 240 V 240	Amber A			Yellow Y	Green G
			Yellow Y	None N			White W	
			Clear C				Special finish S	

* For more options see www.mec.com or contact your local representative

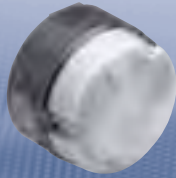
Dimension drawing



Dimensions in mm

1
2
3
4
5
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10
11
12

Ex-0.5 joule flashing xenon



XB 8

Technical data

XB 8	
Marking to 94/9/EC	⊕ II 1G Ex ia IIB or Ex II 1G Ex ia IIC T4
EC-Type Examination Certificate	BAS 00 ATEX 1258X
GOST 'R' Certification	0EX ia IIB T4 0Ex ia IIC T4
Cert. No.	A-0757
Permissible ambient temperature	from -55 °C to +60 °C
Rated voltage	12 - 24 V DC via suitable barrier
Power consumption	DC 12 V 52 mA max. nom. (IIB & IIC)
(tube energy 0.5 joule)	DC 24 V 55 mA max. nom. (IIC)/71 mA max. nom. (IIB)
Insulation class	
Protection category to EN 60529	IP66/IP67
Weight	1.4 kg
Enclosure material	Corrosion-free GRP
Lens material	Polycarbonate, clear
Finish	Natural red
Flash rate	1 Hz
Entries	3 entries, M20 via knockouts
Rated terminal cross section	8 x 2.5 mm ²

Ordering details

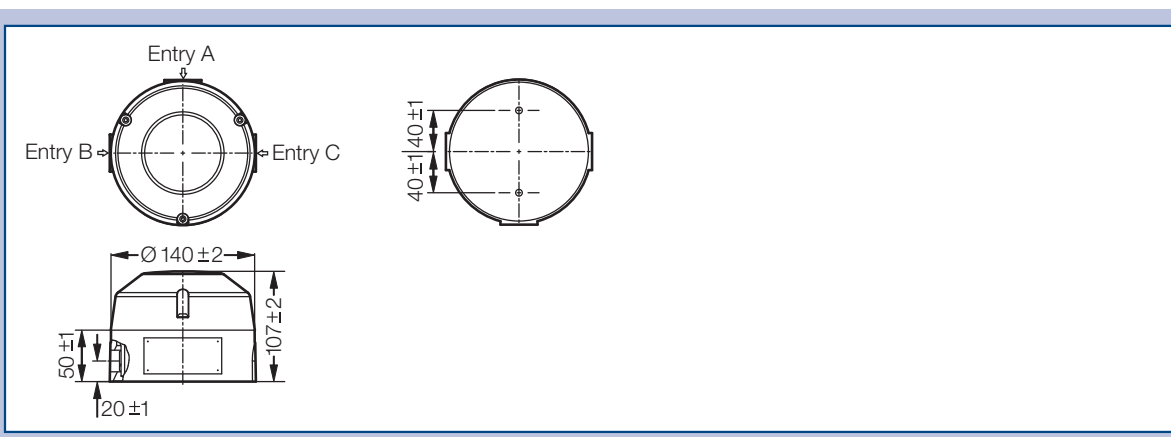
Catalogue No.	Description	Ordering Code
XB8CNR	Intrinsic safe IIB, 24 V DC, lens colour clear	818002

Ordering options*

Model	Certification	Code	Voltage	Code	Lens colour	Code	Tag/duty label	Code	Finish	Code
XB 8	ATEX IIB	BB	12 V	12	Clear	C	Duty	D	Natural red	N
	ATEX IIC	BC	24 V	24	Special	S	Tag	T	Special	S
	GOST 'R' IIB	GB					None	N		
	GOST 'R' IIC	GC								

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

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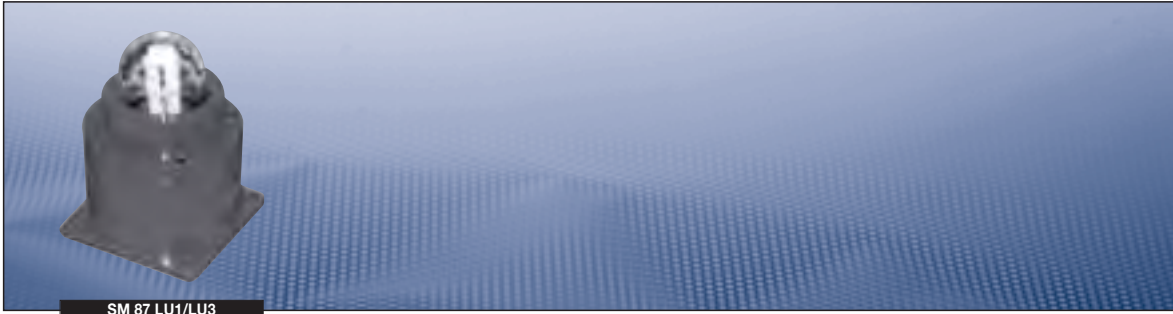
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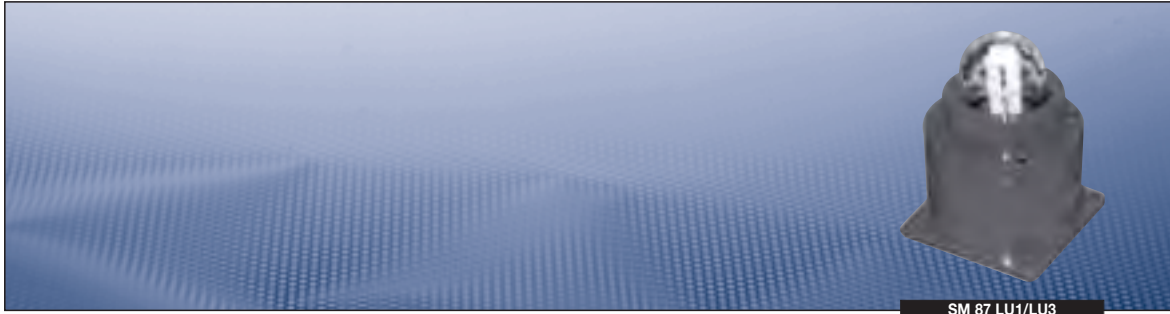
12

Ex-10 W steady filament/fluorescent



Technical data

SM 87 LU1/LU3			
Marking to 94/9/EC			Ex II 2G/D Ex d IIC ¹⁾
EC-Type Examination Certificate			Baseefa 03 ATEX 0222
UL Listed for USA & Canada			Class I, Div. 1, Groups C & D Class I, Zone 1
Listing No.			E187894
SM87LU1 & LU3 – CSA Certified			Class 1, Div. 1 & 2, Group D
Certification No.			96406
CSA Certification to C22.2			Nos. 0, 0.4, 0.5, 9, 30–M1986, 94–M91, 137–M1981, Class 1, Group D, Enclosure 3/4
Cert. No.			96406
GOST 'R' Certification			1 Exd IIC T4
Certification No.			A-0756 (SM87 Alloy only)
Chinese (CQST) Certification			Exd IIC T4/T5/T6 (LU1 & LU3 only)
Permissible ambient temperature	LU3	T4 (135 °C)	-55 °C to +40 °C
		T3 (200 °C)	-55 °C to +55 °C
	LU1	T6 (85 °C)	-55 °C to +40 °C
		T5 (5 W)	-55 °C to +55 °C
		T4 (10 W)	-55 °C to +55 °C
Rated voltage			24 - 48 V DC/110 - 254 V AC 50/60 Hz
Rated terminal cross section			4 x 2.5 mm ²
Power consumption	LU3		10 W (Filament lamp)
Power consumption	LU1		DC 24 V - 110 V 5 W (Fluorescent lamp)
			AC 240 V - 254 V 10 W (Fluorescent lamp)
Protection category to EN 60529			IP66/IP67
Entries			LU3: up to 4 x M20 or M25/LU1: up to 3 x M20 or M25
Weight			Alloy: 2.5 kg / Stainless steel: 3.8 kg
Enclosure material			Marine grade alloy or stainless steel
Lens material			Glass
Finish			Red epoxy painted finish as standard
Initiation			Telephone or relays initiated



SM 87 LU1/LU3

Ordering details

Catalogue No.	Certification	Description	Ordering Code
SM87LU1AUL024GN4T4BNR	UL, cUL Listed, Class I, Div 1, Groups C & D	24V DC, green lens, 10 W fluorescent bulb, marine grade alloy, red finish	PX 46200052
SM87LU1AUL024RN4T4BNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24V DC, red lens, 2 x 3/4" NPT entries, no labels, red finish	PX 46200054
SM87LU3AUL024GN3T3BNR	UL, cUL Listed, Class I, Div 1, Groups C & D	24V DC, green lens, 10 W incandescent bulb, marine grade alloy, red finish	PX 46200096
SM87LU3AUL024RN3R3LNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24V DC, red lens, 2 x 1/2" NPT entries, no labels, red finish	PX 762311

Ordering options*

Model	Code	Certification	Code	Voltage	Code	Lens colour	Code	Lens guard	Code	Cable entries	Code	Tag/duty label	Code	Finish	Code
SM 87... Fluorescent Ex d	LU1A	ATEX	B	DC 24 V	024	Red	R	None	N	20 mm	1	None	N	Red	R
Fluorescent Ex d (Stainless steel)	LU1S²⁾	UL Listed	UL	DC 48 V	048	Blue	B	Yes	Y	25 mm	2	Yes	Y	Blue	B
Filament Ex d (Alloy)	LU3A³⁾	CSA Certified	C	AC 110 V	120	Green	G			Other	3			Yellow	Y
Filament Ex d (Stainless steel)	LU3S²⁾	GOST 'R'		AC 220 V	220	Amber	A			Top	T			Yellow/ black	
		Certified	G	AC 240 V	240	Yellow	Y			Bottom	B			stripes	X
		Chinese (CQST)	Q	AC 254 V	254	Clear	C			RHS	R¹⁾			Green	G
										LHS	L			White	W
														Special finish	S

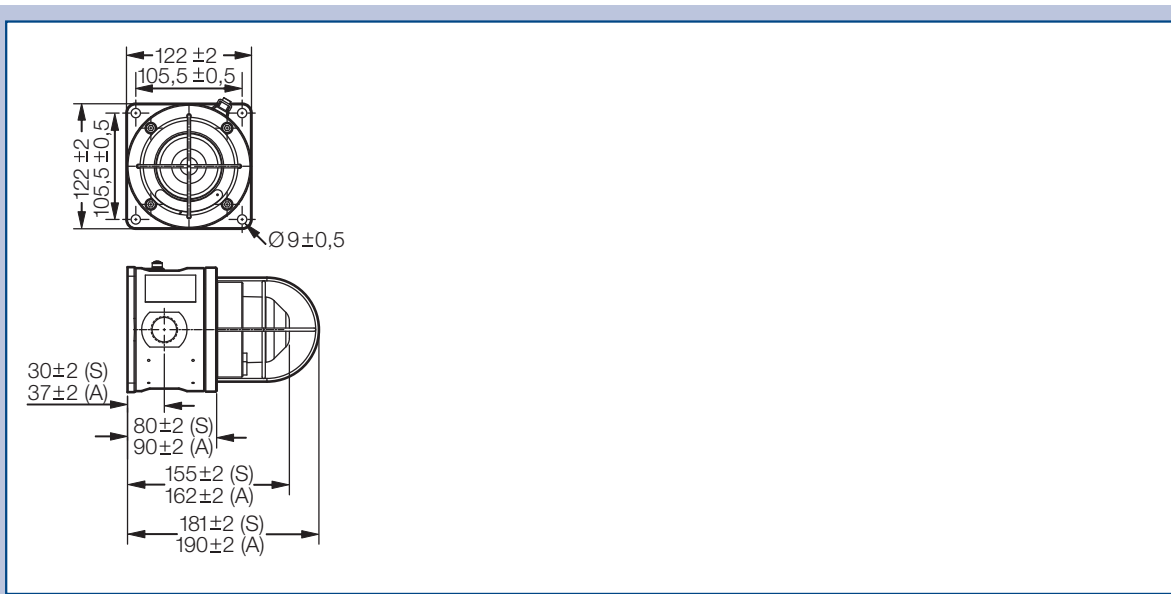
* For more options see www.medc.com or contact your local representative

¹⁾ not available on SM 87 LU1

²⁾ not available UL or GOST certified

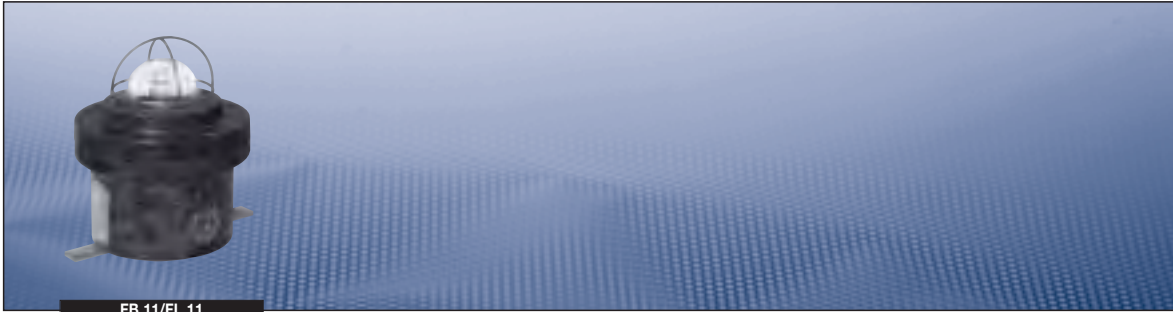
³⁾ not available CSA certified

Dimension drawing



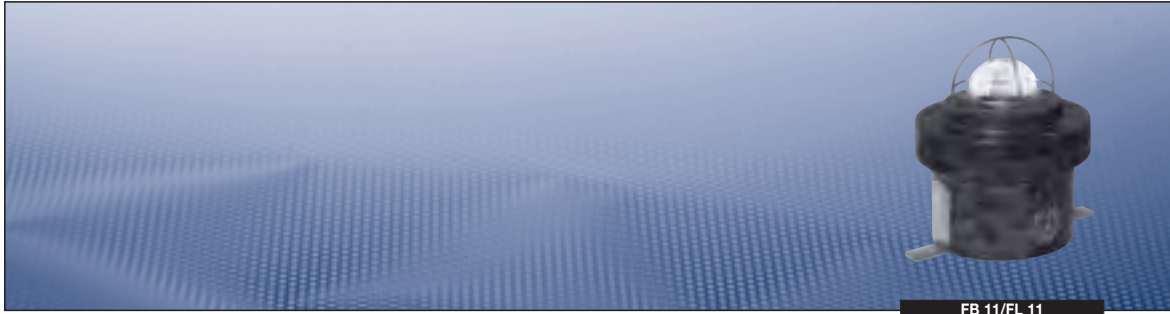
Dimensions in mm

Ex-10 W steady filament/fluorescent



Technical data

FB 11 | FL 11		
Marking to 94/9/EC		Ex II 2G/D Ex d IIB T ¹⁾
EC-Type Examination Certificate		BAS 99 ATEX 2195X
UL Listed for USA and Canada (FB only)		Class I, Div. 2, Groups C & D and Class I, Zone 1, AExd IIB T4/T5
UL Listing No.		E187814
GOST 'R'		1Ex d IIB (for T ratings see table)
Permissible ambient temperature ¹⁾	FB 11 (T100 °C)	T5 -55 °C to +40 °C
		(T135 °C) T4 -55 °C to +55 °C
	FL 11 (T100 °C)	T5 -20 °C to +40 °C
		(T135 °C) T4 -20 °C to +55 °C
Rated voltage		24 - 48 V DC/110 - 240 V AC 50/60 Hz
Rated lamp type	FB 11	10 W (Filament lamp)
Rated lamp type	FL 11	DC 24 V 5 W lamp
		AC 254 V 10 W lamp
Protection category to EN 60529		IP66/IP67
Weight		2.5 kg
Enclosure material		Corrosion-free GRP
Lens material		Glass
Finish		Natural black or painted to customer specification
Entries		up to 2 x M20 / 2 x 1/2" NPT
Rated terminal cross section		4 x 2.5 mm ² (FL 11 AC)/6 x 2.5 mm ² (FL 11 DC & FB 11)



FB 11/FL 11

Ordering details

Catalogue No.	Certification	Description	Ordering Code
FB11B02410RNBNNN	ATEX	24 V DC, 10 W incandescent beacon, red lens, mounting bracket, natural black finish	PX 32500004
FB11UL02410GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	10 W incandescent beacon, 24 V DC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32500028
FB11UL11010GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	10 W incandescent beacon, 110 V AC, green lens, no lens guard, 2 x 1/2" NPT, painted red enclosure	PX 32500029

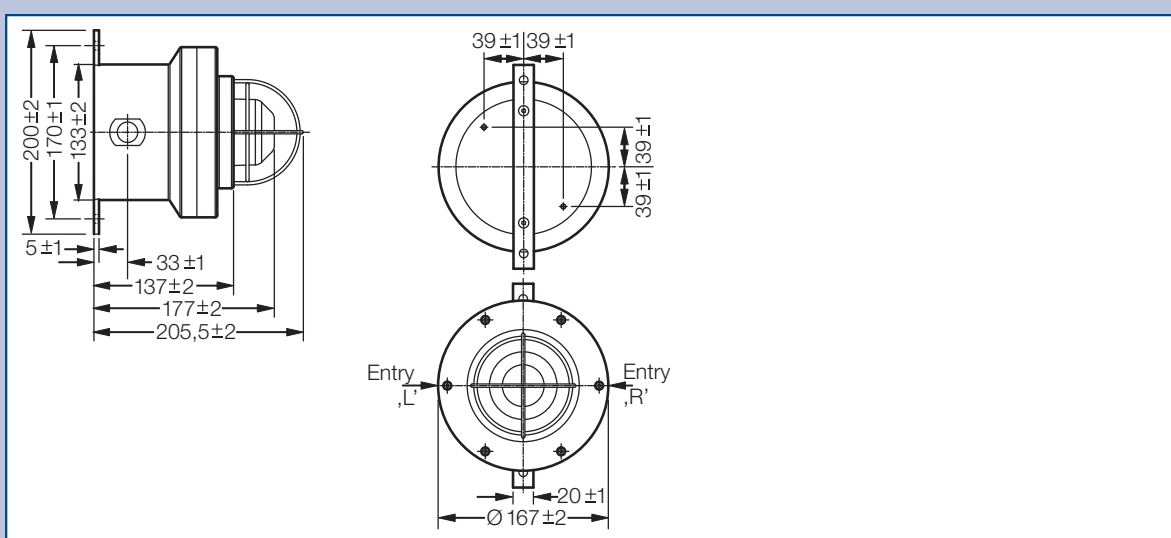
Ordering options*

Model	Certi- fication	Code	Voltage	Code	Lamp wattage	Code	Lens colour	Code	Lens guard	Code	Unit fixing	Code	Earth continuity	Code	Tag/ duty label	Code	Finish	Code
FB 11	ATEX	B	DC 24 V	024	FL 5 W DC	5	Red	R	None	N	Direct		None	N	None	N	Red	R
FL 11	UL		DC 48 V	048	FL 10 W AC	10	Blue	B	Yes	Y	mounting	D	Yes	Y	Yes	Y	Blue	B
	Listed ¹⁾	UL	AC 110 V	110	FB 10 W AC	10	Green	G			Backstrap	B					Yellow	Y
	GOST		AC 120 V	120			Amber	A									Yellow/black stripes	X
	"R"	R	AC 220 V	220			Yellow	Y									Green	G
			AC 240 V	240			Clear	C									White	W
			AC 254 V	254													Special finish	S

* For more options see www.mec.com or contact your local representative

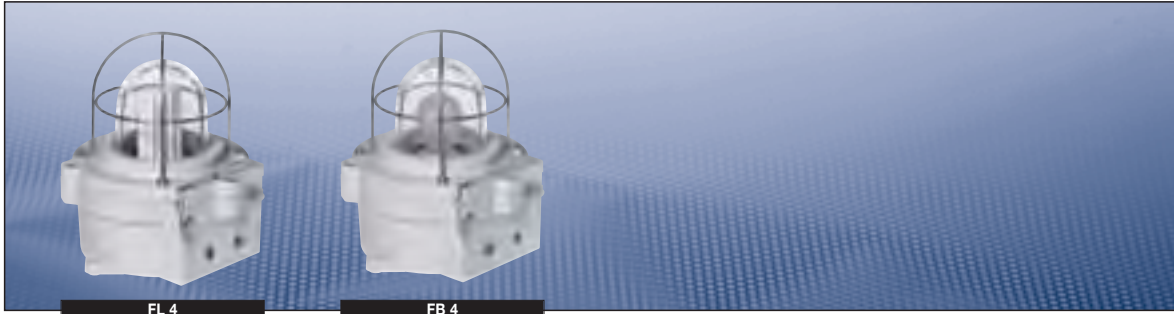
¹⁾ UL listed only available FB11

Dimension drawing





Dimensions in mm

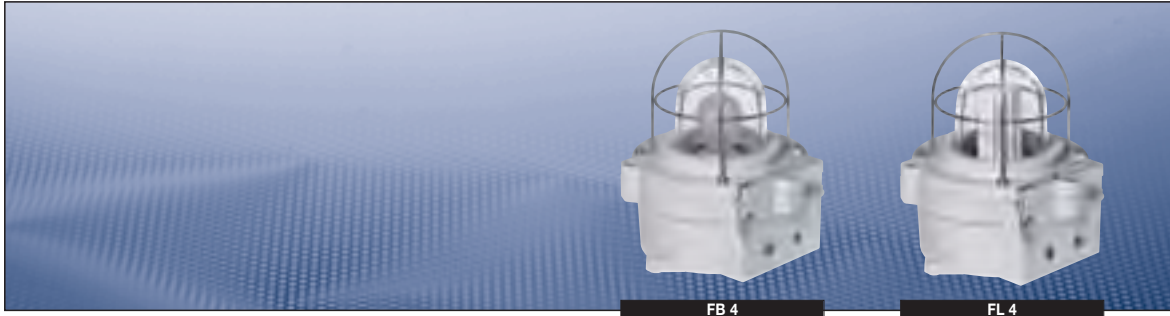
Ex-100 W steady filament and 39 W fluorescent



Technical data

FB 4 | FL 4			
EC-Type Examination Certificate		Baseefa 02 ATEX 0224X	
Marking to 94/9/EC		 	
UL Listed for USA and Canada		Class I, Div. 1, Groups C & D Class I, Zone 1 AExd IIB T4/T5	
Listing No.		E187894	
GOST 'R' Certified		1Ex d IIC T3/T4/T5	
Enclosure material		Marine grade alloy or stainless steel and GRP (Ex e terminal chamber)	
Lens material		Toughened glass	
Finish		Grey epoxy paint finish as standard	
Rated voltage		24 - 110 V DC/110 - 254 V AC 50/60 Hz	
Lamps	FL 4	up to 3 x 13 W PL compact fluorescent lamps	
	FB 4	up to 100 W GLS filament lamps, E 27 holder as standard	
	Entries	up to 3 x M20 (Ex d) or up to 4 x M20 (Ex e)	
Weight	FL 4 (Ex d)	Alloy: 6.5 - 7.9 kg / Stainless steel: approx. 8.4 kg	
	FL 4 (Ex de)	Alloy: 7.5 - 8.9 kg / Stainless steel: approx. 8.4 kg	
	FB 4 (Ex d)	Alloy: 6.4 kg / Stainless steel: approx. 8.4 kg	
	FB 4 (Ex de)	Alloy: 7.4 kg / Stainless steel: approx. 8.4 kg	
Rated terminal cross section		6 x 6 mm ² or 10 x 2.5 mm ² (Ex e), 8 x 10 mm ² (Ex d)	
Protection category to EN 60529		IP66/IP67	
Permissible ambient temperature ¹⁾	FL 4	DC T5	-20 °C to +55 °C
		AC T4	-20 °C to +55 °C
	FB 4	60 W T4	-55 °C to +40 °C (Ex d) / -50 °C to +40 °C (Ex e)
		100 W T3	-55 °C to +55 °C (Ex d) / -50 °C to +40 °C (Ex e)

| Ex-100 W steady filament and 39 W fluorescent |



Ordering details

Catalogue No.	Certification	Description	Ordering Code
FB4EUL8U1N100B1N1G	UL, cUL Listed, Class I, Div 2, Groups C & D	Marine grade alloy, 120 V AC, 100 W bulb (not included), blue lens, lens guard, no labels, gray finish	PX 17800002
FL4BUL8U2M3M13R1N1RZ	UL Listed, Class I, Div 2, Groups C & D	Marine grade alloy, 24 V DC, 2 x 1/2" NPT entries, 13W tube (not included), red lens, lens guard, red finish, one certified plug	PX 27800006

Ordering options*

Model	Certi- Code	Voltage Code	Terminals Code	Cable Code	Lamp Code	Lens Code	Guard Code	Options Code	Material Code	Finish Code
	fication			entries	wattage	colour				
FB 4	ATEX B	DC 24 V BB	6 x 6 mm ² 6E	20 mm B	FL 4	Red R	None 0	Duty D	Stainless	Grey G
FL 4	UL UL	DC 48 V CB	8 x 10 mm ² 8D	25 mm C	1 x 13 W 13	Blue B	Guard Y	Tag T	steel 0	Red R
	GOST	DC 110 V DB		1/2" NPT M¹⁾	2 x 13 W 26	Green G		None N	Alloy 1	Blue B
	'R' G	AC 110 V EB		3/4" NPT N¹⁾	3 x 13 W 39	Amber A				Yellow Y
		AC 120 V FB			FB 4	Yellow Y				White W
		AC 230 V GB			60 W 60	Clear C				Special finish S
		AC 240 V HB			100 W 100					
		AC 254 V IB								

* For more options see www.medc.com or contact your local representative

¹⁾ UL certified only

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Ex-100 W steady filament and 39 W Fluorescent



Technical data

FB 12 FL 12	
Marking to 94/9/EC	Ⓔ II 2G/D Ex d IIB T
EC-Type Examination Certificate	BAS 99 ATEX 2196
UL Listed for USA and Canada	Class I, Div. 2, Groups C & D and
(FB12 only)	Class I, Zone 1, AExd IIB T4/T5
UL Listing No.	E187814
GOST 'R'	1Exd IIB (for T ratings see table)
Permissible ambient temperature	
FB 12	60 W T5: -55 °C to +40 °C
	T4: -55 °C to +55 °C
	100 W T3: -55 °C to +30 °C
FL 12	13 W AC/DC T6: -20 °C to +40 °C
	13 W AC T5: -20 °C to +55 °C
	26 W AC T5: -20 °C to +40 °C
	16 W AC T4: -20 °C to +55 °C
	39 W AC T4: -20 °C to +40 °C
Rated voltage	24 V DC/110 - 240 V AC 50/60 Hz
Rated lamp type	FB 12 60 W filament lamp 100 W filament lamp
Rated lamp type	FL 12 13 W fluorescent lamp
Rated terminal cross section	6 x 6 mm ²
Enclosure material	Corrosion-free GRP
Protection category to EN 60529	IP66/IP67
Weight	7.2 kg (FL 12) / 7.6 kg (FB 12)
Lens material	Glass
Finish	Natural black or painted to customer specification
Entries	up to 2 entries, M20 / 2 x 1/2" NPT



Ordering details

Catalogue No.	Certification	Description	Ordering Code
FB12UL02460GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	60W incandescent beacon, 24V DC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32600036
FB12UL120100GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	100W incandescent beacon, 24V DC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32600037
FB12UL12060CNBNNN	UL, cUL Listed, Class I, Div 2, Groups C & D	120V AC, 60W incandescent beacon, clear lens, mounting bracket, no labels, natural black finish	PX 326023
FB12UL12060GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	60W incandescent beacon, 120V AC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32600035

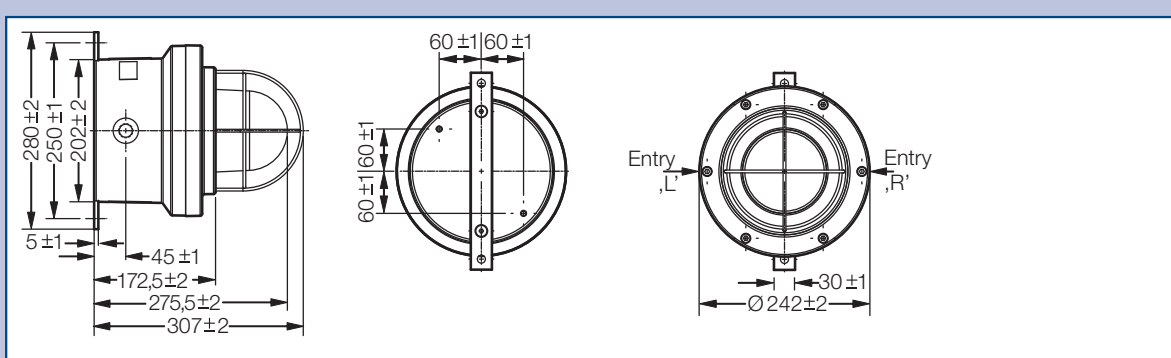
Ordering options*

Model	Certi- Code	Voltage	Code	Lamp Code	Code	Lens Code	Code	Unit Code	Code	Earth Code	Code	Tag/ Code	Code	Finish Code
	fication			wattage		colour	guard	fixing		conti- nuity		duty label		
FB 12	ATEX B	DC 24 V	024	FL 1 x 13 W	13	Red R	None N	Direct		None N		None N		Red R
FL 12	UL	DC 48 V	048	FL 2 x 13 W	26	Blue B	Yes Y	mounting D		Yes Y		Yes Y		Blue B
	Listed ¹⁾ UL	AC 110 V	110	FL 3 x 13 W	39	Green G		Backstrap B						Yellow Y
	GOST	AC 120 V	120	FB 60 W	60	Amber A								Yellow/black stripes X
	"R" R	AC 220 V	220	FB 100 W	100	Yellow Y								Green G
		AC 240 V	240			Clear C								White W
		AC 254 V	254											Special finish S

* For more options see www.medc.com or contact your local representative

¹⁾ UL listed only available FB11

Dimension drawing



Dimensions in mm

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Ex-60/100 W steady filament



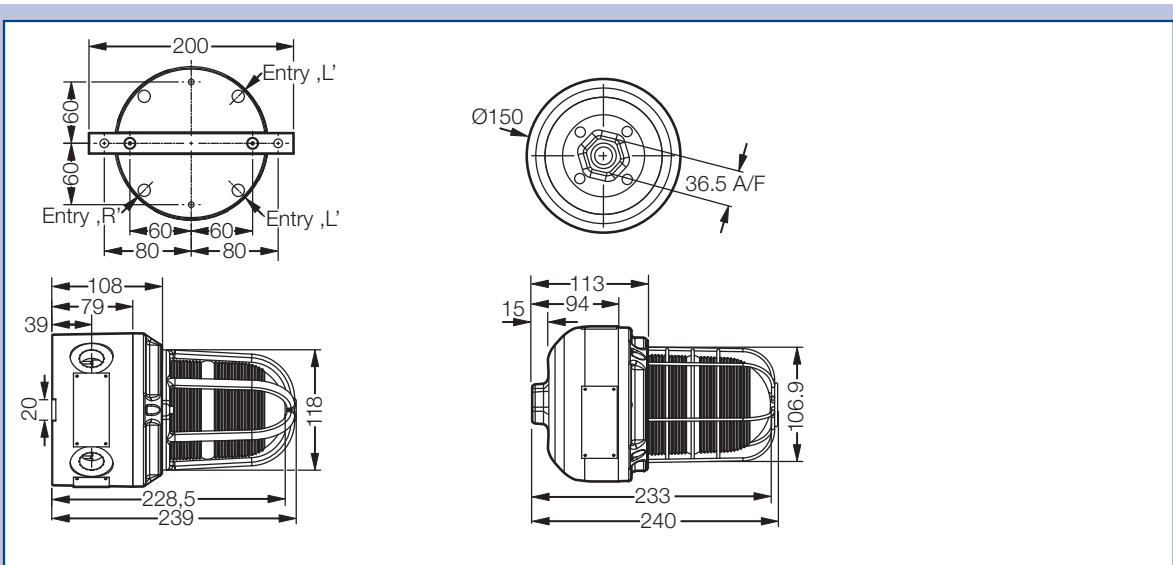
Technical data

FB 15

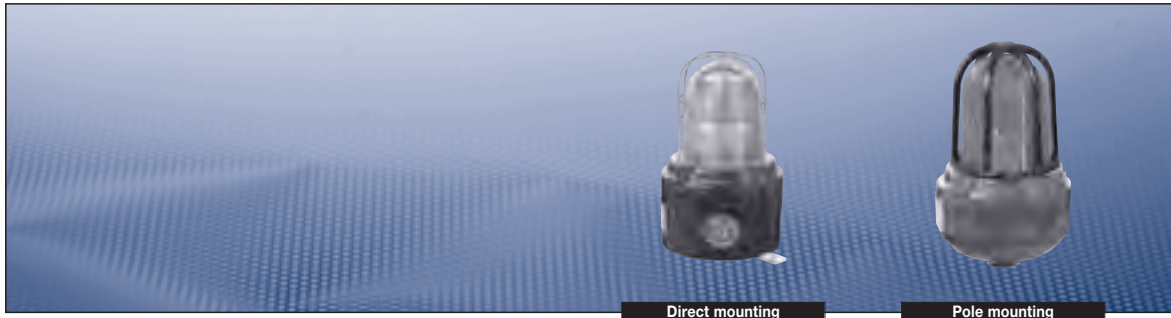
Marking to 94/9/EC	⊕ II 2G/D Ex d IIC T ¹⁾	
EC-Type Examination Certificate	BAS 04 ATEX 0009X	
UL Listed for USA and Canada	Class I, Div 2, Groups A, B, C & D Class I, Zone 1 AExd IIC T3/T4	
UL listing No.	E187894	
Permissible ambient temperature	60 W (T135 °C)	T4 -55 °C to +55 °C
	60 W (T200 °C)	T3 -55 °C to +70 °C
	100 W (T135 °C)	T4 -55 °C to +40 °C
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz	
Power consumption	60 W/100 W filament	
Rated terminal cross section	12 x 2.5 mm ²	
Protection category to EN 60529	IP66/IP67	
Entries	up to 3 x M20 or M25 (standard = 2 x M20)	
Weight	3.0 kg	
Enclosure material	Corrosion-free GRP	
Lens material	Glass ¹⁾	
Finish	Natural black or painted to customer specification	

¹⁾ Optional with lens guard

Dimension drawing



Dimensions in mm



Direct mounting

Pole mounting

Ordering details

Catalogue No.	Certification	Description	Ordering Code
FB15UL024100ANPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, amber lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600025
FB15UL024100BNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, blue lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600029
FB15UL024100CNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, clear lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600028
FB15UL024100GNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, green lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600027
FB15UL024100RNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, red lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600026
FB15UL120100ANPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, amber lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600020
FB15UL120100BNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, blue lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600024
FB15UL120100CNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, clear lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600023
FB15UL120100GNANR	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 100W incandescent beacon, green lens, mounting bracket, no labels, red finish	PX 47600001
FB15UL120100GNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, green lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600022
FB15UL120100RNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, red lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600021

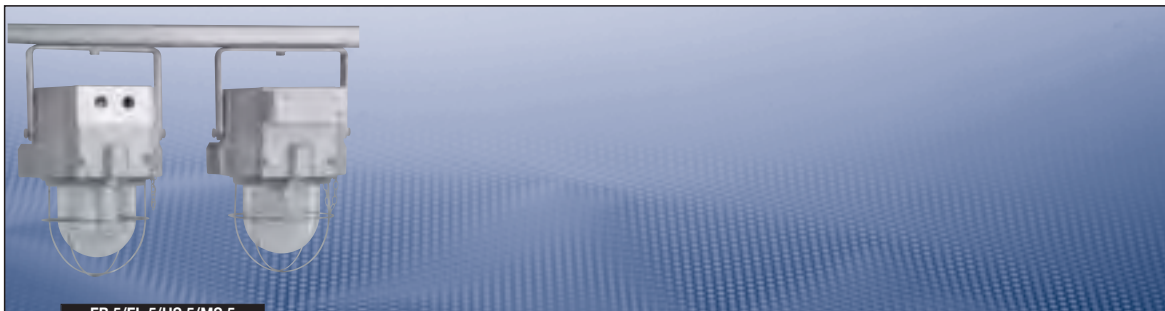
Ordering options*

Model	Certi- fication	Code	Voltage	Code	Lamp wattage	Code	Lens colour	Code	Lens guard	Code	Unit fixing	Code	Tag/duty label	Code	Finish	Code
FB 15	ATEX UL	B UL	DC 24 V	024	60 W	60	Red	R	None	N	Pipe mount	P ¹⁾	None	N	Natural	
			DC 48 V	048	100 W	100	Blue	B	Cast	C	Wire	W	Tag label	T	black	N
			AC 110 V	110			Green	G			Direct		Duty label	D	Red	R
			AC 120 V	120			Amber	A			mount	D	Blanking		Blue	B
			AC 220 V	220			Yellow	Y			Direct w/ backstrap	B	plug	P	Yellow	Y
			AC 240 V	240			Clear	C							Green	G
			AC 254 V	254											White	W
													Special finish	S		

* For more options see www.medc.com or contact your local representative

¹⁾ Not available on ATEX version

Ex-200 W steady filament and 52 W fluorescent



FB 5/FL 5/HS 5/MS 5

Technical data

FB 5 | FL 5 | HS 5 | MS 5

Marking to 94/9/EC	II 2G Ex d IIB ¹⁾ II 2G Ex de IIB ¹⁾	
EC-Type Examination Certificate	Baseefa 02 ATEX 0225X	
CSA certified	Class I, Zone 1 Ex d IIB T4	
CSA certification to	E79-0-95, E-79-1-95, C22.2 Nos. 9.0-96	
Certification No.	LR96406 (HS5 only)	
Permissible ambient temperature	FL5 T4:	-20 °C to +50 °C
	FB5 T3:	-20 °C to +30 °C
	MF5 T3:	-20 °C to +40 °C
	HS5 T4:	-20 °C to +40 °C
Rated voltage	220 - 254 V AC 50/60 Hz	
Rated terminal cross section	6 x 6 mm ² (Ex de), 8 x 10 mm ² (Ex d)	
Lamps	FL 5	up to 4 x 13 W PL compact fluorescent lamps
	FB 5	up to 200 W GLS filament lamps, E 27 cap as standard
	MF 5	up to 80 W mercury fluorescent lamp
	HS 5	up to 70 W high pressure sodium lamp
Protection category to EN 60529	IP66/IP67	
Entries	up to 3 x M20 or M25 (Ex d) or up to 4 x M20 or M25 (Ex e)	
Weight	FL 4 (Ex d)	Alloy: 6.5 - 7.9 kg / Stainless steel: add. 8.4 kg
	FL 4 (Ex de)	Alloy: 7.5 - 8.9 kg / Stainless steel: add. 8.4 kg
	FB 4 (Ex d)	Alloy: 6.4 kg / Stainless steel: add. 8.4 kg
	FB 4 (Ex de)	Alloy: 7.4 kg / Stainless steel: add. 8.4 kg
Enclosure material	Marine grade alloy or stainless steel and GRP (Ex e terminal chamber)	
Lens material	Toughened glass (coloured if required)	
Finish	Grey epoxy paint finish as standard	

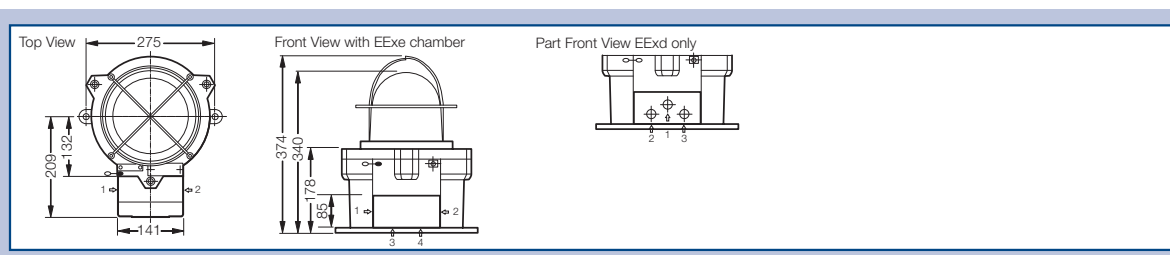
¹⁾ Optional with lens guard

Ordering options*

Model	Terminal Code chamber	Voltage Code	Fixing Code	Cable Code entries	Lens Code guard	Tag Code label	Material Code	Finish Code
FB 5	Ex d D	220 V AC G	Backstrap B	20 mm B	None 0	None N	Stainless steel 0	Grey G
FL 5	Ex de E	240 V AC H	Stirrup S	25 mm C	Guard 1	Yes Y	Alloy 1	Red R
MF 5		254 V AC J						Blue B
HS 5								Yellow Y
								White W
								Special finish S

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

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EX - SOUNDERS AND HORNS

Explosion protected units for Zone 0, 1, 2, 22, Class I, Div 1 & 2, GOST 'R' & 'K'

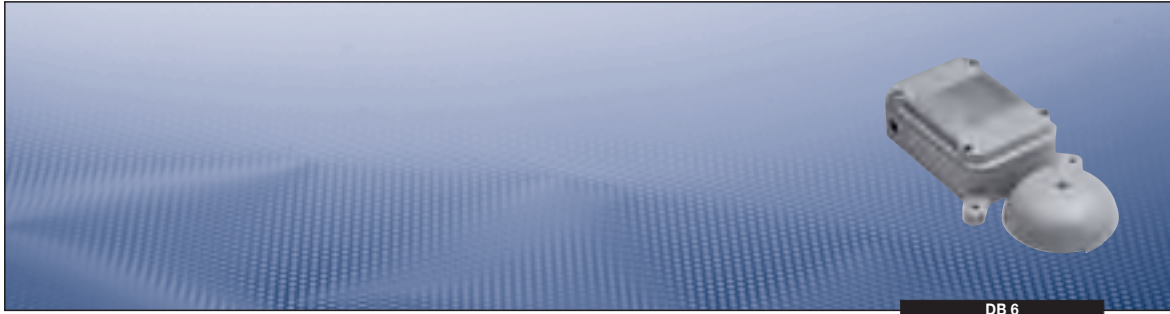
This range of light weight, flameproof Sounders has been designed with a high weatherproof rating to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

New electronic circuitry allows the DB1P and DB1HP to be switched between two selectable tones by either reversing the supply polarity, or connecting a second voltage supply. The higher output DB1H and DB1HP are particularly suitable for noisy environments.

The flamepaths, flare and the body, are manufactured completely from a UV stable glass reinforced polyester. Stainless steel screws and sinter are incorporated thus ensuring a corrosion free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths. An optional Ex e terminal chamber is available.



- Optional Ex e terminal chamber
- UL Listed for USA and Canada – Hazardous locations: Class I, Div 2, Groups A-D. Class I, Zones 1 & 2, AExd IIC T4. – Ordinary locations: Audible-Signal Device.
- GOST 'R' & 'K' certified
- Chinese (CQST) certified
- Australian (SAA) certified
- IP66 and IP67
- Certified temperature -55°C to $+70^{\circ}\text{C}$
- All GRP corrosion free flamepaths
- Up to 118dBA output



DB 6

Technical data

DB 6	
Marking to 94/9/EC	II 2G Ex d IIB T5
EC-Type Examination Certificate	Baseefa 03 ATEX 0257
Permissible ambient temperature	-20 °C to +55 °C
Rated voltage and Rated current	24 V DC 8 mA
	200/254 V AC 3/5 mA 40 Hz/60 Hz
Contact spring	Phosphor bronze
Contacts	Silver
Coil	Bakelite former
Magnet	Laminated iron
Finish	Grey epoxy paint finish as standard or to customer's specification
Max. sound levels	24 V DC 98 ± 3 db(A)
	200/254 V AC 106 ± 3 db(A)
Protection category to EN 60529	IP65
Entries	2 x M20 mm ISO with one Ex d blank fitted
Weight	11 kg
Enclosure material	Cast iron
Rated terminal cross section	4 x 4 mm ²

Ordering details

Catalogue No.	Description	Ordering Code
DB6BNR	Cast iron 98 dB(A) output, red	PX806003

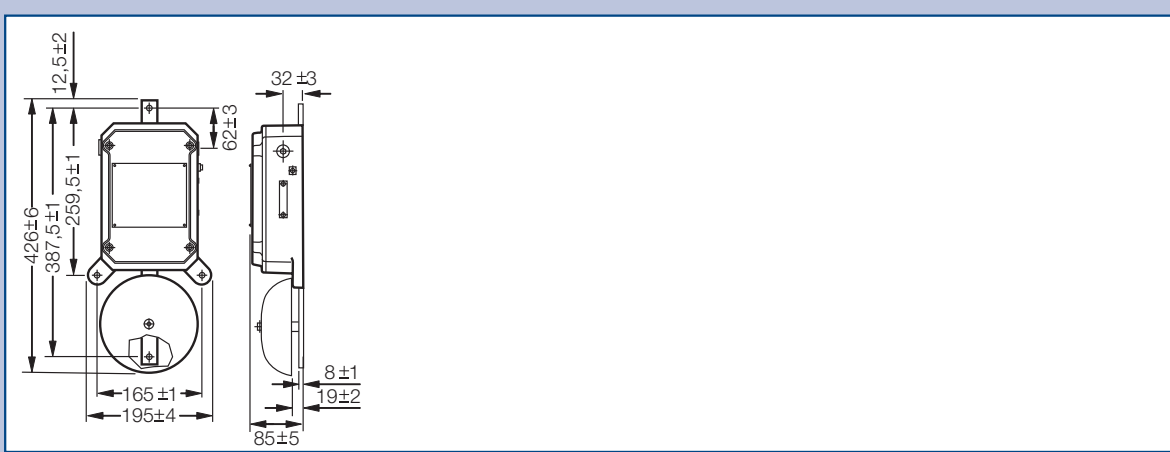
Ordering options*

Unit Type	Voltage	Code	Label	Code	Finish	Code
DB 6	24 V DC	B	None	N	Red	R
	240 V AC	H	Yes	Y	Grey	G
					Special finish	S ¹⁾

¹⁾ Please specify

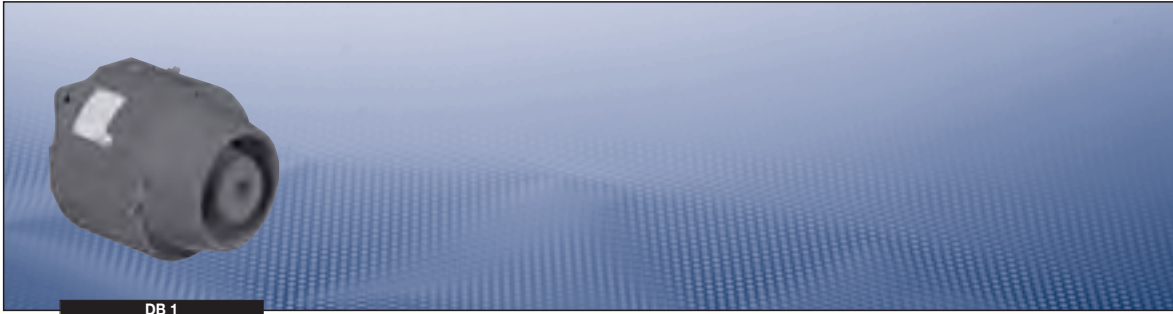
* For more options see www.mec.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-113 dB(A) sounder

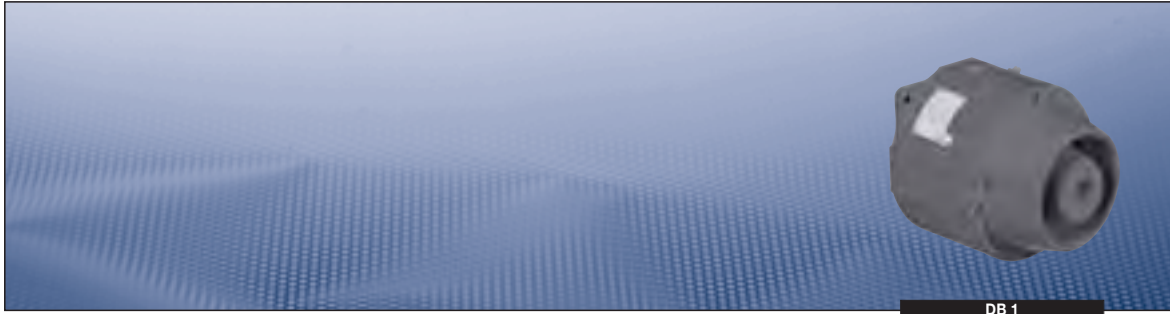


DB 1

Technical data

DB 1						
Marking to 94/9/EC		Ⓔ II 2G Ex d IIB T3				
EC-Type Examination Certificate	DB 1 (P)	Baseefa 02 ATEX 0207				
	DB 1 H (P)	Baseefa 02 ATEX 0209				
UL Listing		Class I, Div. 1, Groups C & D				
Listing No.		E187688				
GOST 'R' Certification		1Exd IIB T4 (DB1 & DB1P only)				
Permissible ambient temperature	DB1 & DB1P	-20 °C to +55 °C				
	DB1 H & DB1HP	-20 °C to +70 °C				
Rated voltage and Rated current		DC		AC		
	DB 1 (P)	12 V	24 V	48 V	120 V	240 V
	DB 1 H (P)	125 mA	250 mA	250 mA	60 mA	50 mA
		900 mA	700 mA	–	200 mA	100 mA
Resistor values		470 Ω minimum (DC only)				
Max. sound levels		103 ± 3 db(A) DB1 (P)				
		96 ± 3 db(A) DB1 (P) 12 V				
		110 ± 3 db(A) at 1 m. ¹⁾ DB1 H (P)				
Protection category to EN 60529		IP66				
Weight	DB1 & DB1P	3.5 kg (alloy), 8.3 kg (stainless)				
	DB1 H & DB1HP	5.6 kg (alloy), 12.7 kg (stainless)				
Enclosure material		Stainless Steel or corrosion resistant alloy, ABS flare				
Finish		Epoxy paint finish as standard or to customer's specification				
Entries		up to 3 x 20 mm or 25 mm ISO				
Rated terminal cross section		up to 4 mm ²				

¹⁾ Sound level is dependent upon the tone selection



DB 1

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB1BA024A1A3NNNR	ATEX approved Ex II 2GD	103 dB(A), 24 V DC, 2 x M20 entries, choice of 6 tones, red body finish	PX 801001
DB1HPULA024D1D2NNNR	UL Listed, Class I, Div 2, Groups C & D	Up to 103dB(A) at 10ft., two-stage alarms, with 26 tones, 24 V DC, alloy, red body finish, no tag or duty labels, 2 x 3/4" NPT entries	PX 869115
DB1PULA024D1D2NNNR	UL Listed, Class I, Div 2, Groups C & D	Up to 96dB(A) at 10ft., two-stage alarms, with 26 tones, 24 V DC, alloy, red body finish, no tag or duty labels, 2 x 3/4" NPT entries	PX 869111
DB1PULA110C1C3NNNR	UL Listed, Class I, Div 2, Groups C & D	Up to 96 dB(A) at 10ft., sounder, 110 V AC, 2 x 1/2" NPT entries, red body finish	PX 17300108

Ordering options*

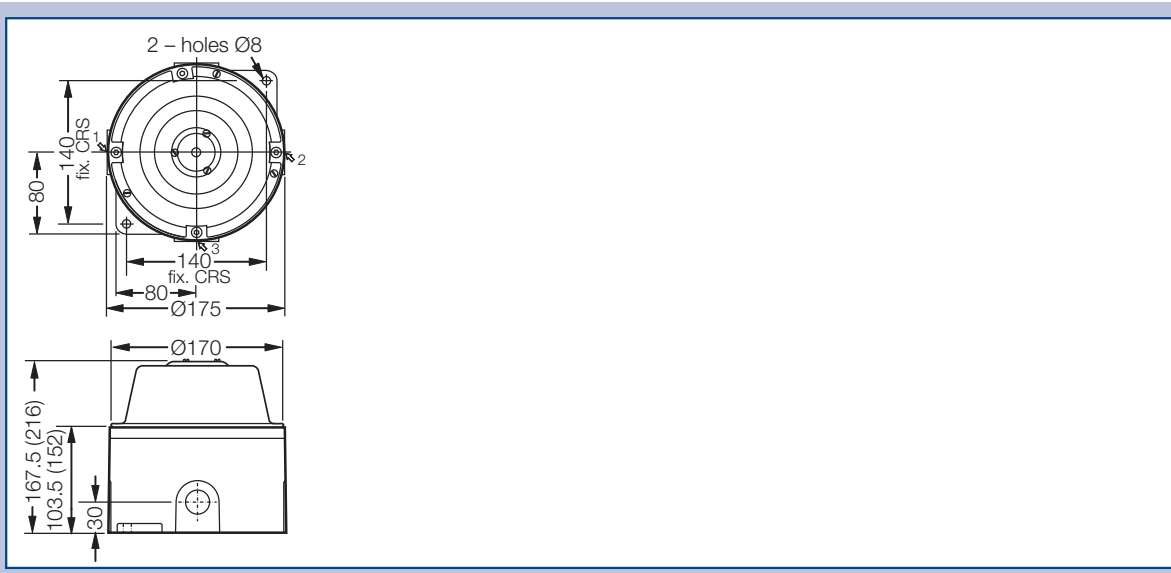
Unit Type	Certification	Code	Material Code	Voltage Code	Entries ²⁾ Code	Duty label Code	Tag label Code	Features Code	Finish Code
DB 1	ATEX/CENELEX	B	SS 316 S	12 V DC 012	20 mm A	None N	Required T	Not required N	Red R
DB 1 H	UL		Alloy A	24 V DC 024	25 mm B	Required D	Not required N	Telephone initiate T	Grey G
DB 1 P	(DBIP & IHP only)	UL		48 V DC 048	1/2" NPT (UL only) C		required N	Relay initiate R	Special finish S
DB 1 P2	GOST 'R'			110 V DC 110	3/4" NPT (UL only) D			Remote S	
DB 1 HP	(DBI & DBIP only)	G		240 V DC 240	LHS 1 RHS 2 Bottom 3			End of line resistor E³⁾	

¹⁾ UL – Available Alloy only

²⁾ Features not available on DB1P and DB1 HP

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm



Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB3D048N2BNRZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 12-48 V DC, 2 x M20 entries with one certified plug fitted, red finish	PX 803123
DB3PD048N2BNNZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 12-48 V DC, 2 x M20 entries with one certified plug fitted, black finish	PX 803121
DB3D240N2BNNZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 240 V AC, 2 x M20 entries with one certified plug fitted, black finish	PX 803122
DB3D240N2BNRZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 240 V AC, 2 x M20 entries with one certified plug fitted, red finish	PX 803124
DB3PUL048N2CNRZ	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	27 tones, two stage, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 12-48 V DC, 2 x 1/2" NPT entries with certified plug, red finish	PX 869132
DB3UL048N2CNRZ	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	27 tones, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 12-48 V DC, 2 x 1/2" NPT entries with certified plug, red finish	PX 869131
DB3UL110N2CNRZ	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	27 tones, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 110 V AC, 2 x 1/2" NPT entries with certified plug, red finish	PX 869135

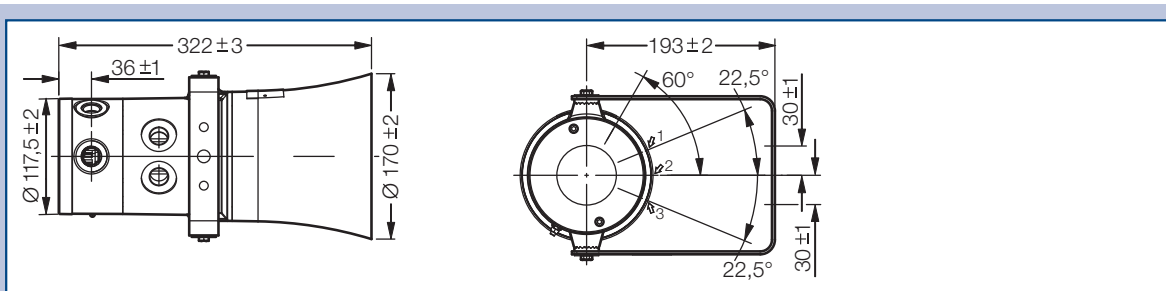
Ordering options*

Unit Type Details	Certification	Code	Voltage	Code	Label Code	Entries	Code	Features	Code	Finish	Code
DB 3 Standard unit	Ex d	D	12 - 48 V DC	048	Duty D	1 x 20 mm		Not required	N	Natural	
DB 3 P Two stage (DC only)	Ex de	E	110 V AC	110	Tag T	(Ex d)	1B	End of line		Black	N
DB 3 L* Low temp. standard unit	UL Listed	UL	120 V AC	120	None N	2 x 20 mm		resistor	E	Red	R
DB 3 LP* Low temp. two stage (DC only)	ATEX/UL		220 V AC	220		(Ex d/Ex de)	2B	Special tone	S	Special finish	S¹⁾
	Dual Listed	AU	230 V AC	230		1 x 1/2" NPT					
	GOST 'R' Exd	DG	240 V AC	240		(UL only)	1C				
	GOST 'R' Exde	EG	254 V AC	254		2 x 1/2" NPT					
	GOST 'K' Exd	DK				(UL only)	2C				
	Chinese (CQST)	Q									

¹⁾ Customer to specify

* For more options see www.mec.com or contact your local representative

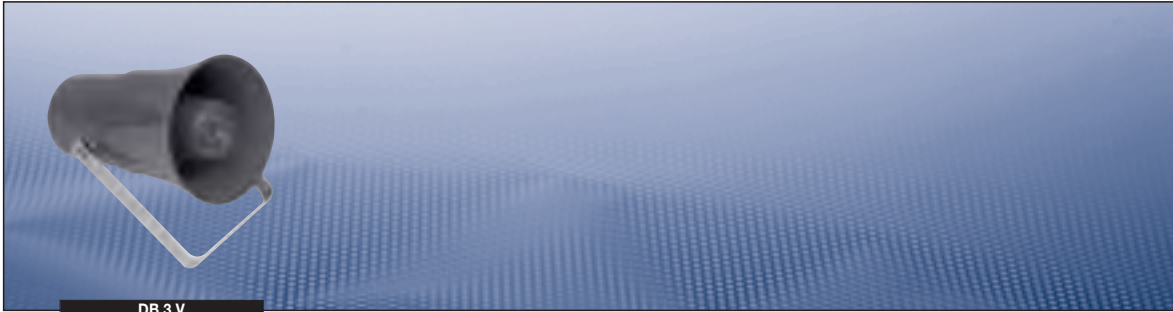
Dimension drawing



Dimensions in mm

1
2
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11
12

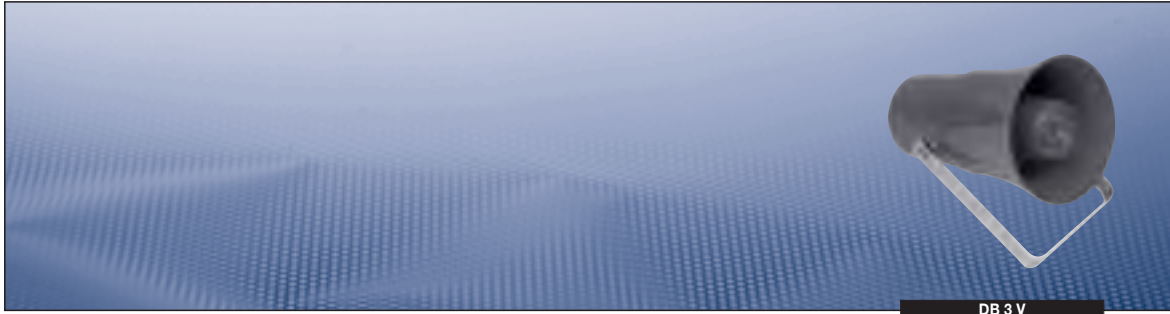
Ex-110 dB(A) voice sounder



DB 3 V

Technical data

DB 3 V			
Marking to 94/9/EC		II 2G/D Ex d IIC T ¹⁾ II 2G Ex de IIC T ¹⁾	
EC-Type Examination Certificate			
	Type DB 3/DB 4 Ex d IIC	Baseefa 00 ATEX 2097X	
	Type DB 3/DB 4 Ex de IIC	Baseefa 00 ATEX 2098X	
GOST 'R' Certification		1Ex d IIC T4 & 1Ex de IIC T4 Russian Fire Alarm (VNIIPO) Approved	
GOST 'K' Certification		Ex d IIC T4	
Chinese (CQST) Certification		Ex d IIC T4	
Permissible ambient temperature ¹⁾		Ex d	Ex de
	DB3 V	-20 °C to +70 °C (T4)	-20 °C to +45 °C (T5/T100 °C)
	DB3 LV	-55 °C to +55 °C (T5)	-55 °C to +70 °C (T4/T135 °C)
		GOST 'R' & 'K' Exd	GOST 'R' Exde
	DB3 V	-20 °C to +55 °C	-20 °C to +40 °C
	DB3 LV	-55 °C to +55 °C	-55 °C to +55 °C
		Chinese Exd	
	DB3 V	-20 °C to +55 °C	
	DB3 LV	n/a	
Rated voltage and Rated current		12 V DC 1200 mA	
		24 V DC 600 mA	
		48 V DC 300 mA	
Rated terminal cross section		6 x 2.5 mm ² (DC)	
Voice recording		up to 20 sec.	
Max. sound levels		= 110 ± 3 db(A) (tone dependant) (controlled by potentiometer)	
Protection category to EN 60529		IP66 and IP67	
Entries		up to 2 x 20 mm	
Weight		6.0 kg	
Enclosure material	Body and horn	glass reinforced polyester	
	Swivel bracket	stainless steel	
Finish		Epoxy paint finish as standard or to customer's specification	



Ordering options*

Unit Type	Details	Certification	Code	Label	Code	Entries	Code	Finish	Code
DB 3 V	Voice unit	ATEX Ex d	D	Duty	D ²⁾	1 x 20 mm (Ex d)	1B	Natural Black	N
DB 3 LV ¹⁾	Low temp. voice unit	ATEX Ex de	E	Tag	T ²⁾	2 x 20 mm (Ex d/Ex de)	2B	Red	R
		GOST 'R'	DG	End of resistor	E ³⁾			Special finish	S ⁴⁾
		GOST 'K'	DK	Message	M				
		Chinese (CQST)	Q	Bell tone	O				
				None	N				

¹⁾ Available unpainted only

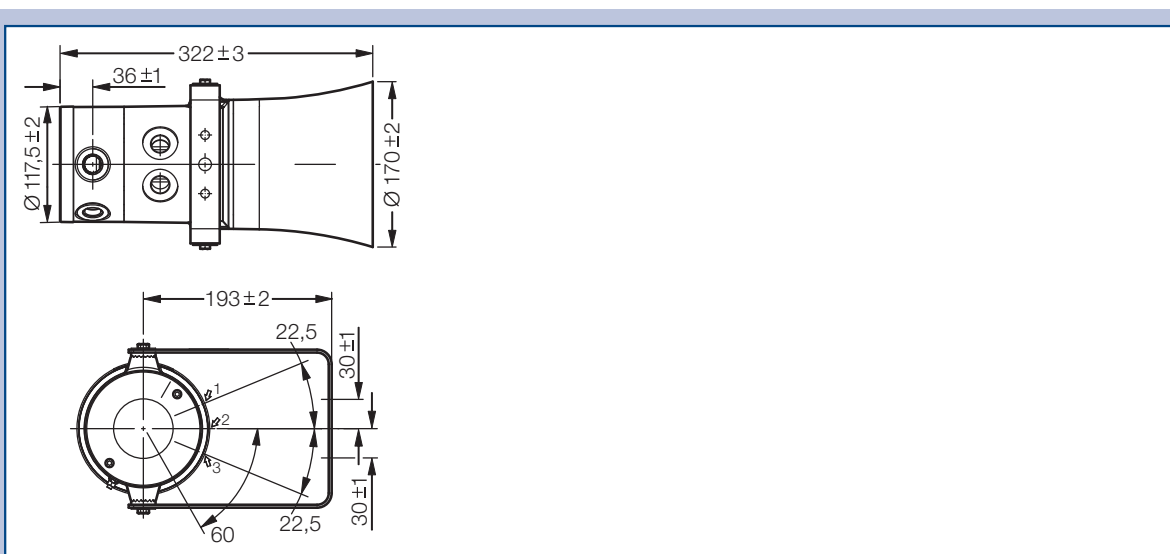
²⁾ Please specify wording

³⁾ _ state value

⁴⁾ Please specify

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-103 dB(A) sounder



DB 5

Technical data

DB 5

Marking to 94/9/EC	Ⓔ II 1G Ex ia IIC T4		
EC-Type Examination Certificate	Baseefa 00 ATEX 1259		
HSE(M) to EN50014, EN50020 and EN50303	Ex ia 1		
Cert. No.	MECS01ATEX4260 (unit) and 94Y7095 (system)		
FM Approved	Class I, Div. 1 groups A, B, C, and D. J.I. 3008604		
CSA to	C22.2 Nos. 0, 0.4, 0.5, 25, 30, 205		
	Class 1, Groups A, B, C and D		
Permissible ambient temperature	-20 °C to +55 °C		
Rated voltage and Rated current	DB5B012NR	12 V DC	12 mA
	DB5B024NR	24 V DC	14 mA
Max. sound levels	100 ± 3 db(A) (tone dependant)		
Rated terminal cross section	6 x 2.5 mm ² (DC)		
Protection category to EN 60529	IP65		
Entries	up to 1 x 21 mm each side or 1 x 21 mm rear		
Weight	0.3 kg		
Enclosure material	Acrylonitrile butadiene styrene		
Finish	Red as standard		

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB5B012NR	ATEX Approved Ex II 1G	Intrinsically safe, 26 tones, 93 dB(A) output, 12 V DC, up to 3 x M20 entries via knockouts, no labels, natural red finish	PX 805001
DB5B024NR	ATEX Approved Ex II 1G	Intrinsically safe, up to 3 x M20 entries via knockouts, 24 V DC up to 3 x M20 entries via knockouts, no labels, natural red finish	PX 805002
DB5FM024NR	FM Approved for Class I, Div 1 & 2, Groups A, B, C, D	Intrinsically safe, 26 tones, 93 dB(A) output, no tag or duty labels, 24 V DC, 2 x 13/16" entries via knockouts, natural red finish	PX 869150

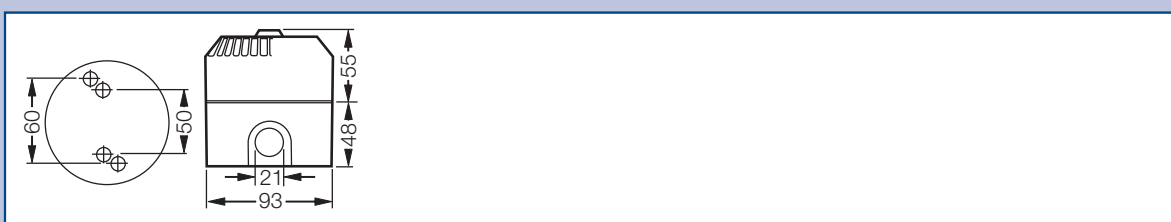
Ordering options*

Unit Type	Certification	Code	Voltage	Code	Label	Code	Finish	Code
DB 5	BASEEFA GP 1 (12 V only)	M	12 V	012	None	N	Red	R
	BASEEFA GP 2	B	24 V	024	Yes	Y	Special finish	S¹⁾
	FM	FM						

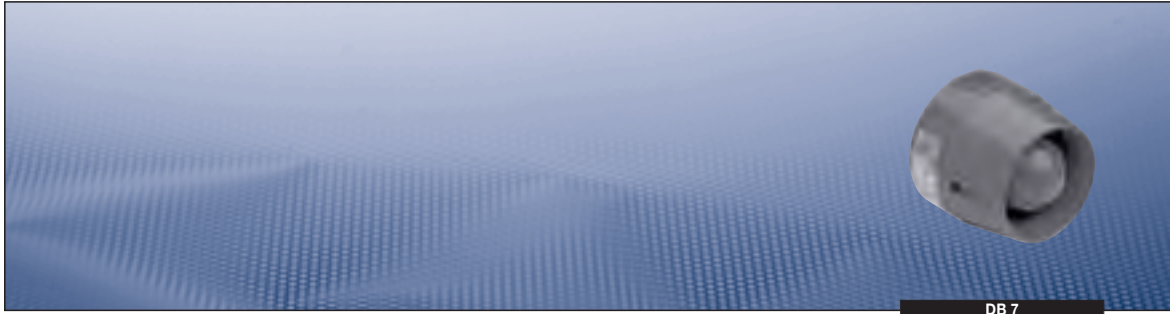
¹⁾ Please specify

* For more options see www.mec.com or contact your local representative

Dimension drawing



Dimensions in mm



Technical data

DB 7	
Marking to 94/9/EC	Ⓔ II 1G Ex ia IIB T4 Ⓔ II 1G Ex ia IIC T4
EC-Type Examination Certificate	Baseefa 00 ATEX 1260
GOST 'R' Certification	0Exia IIC T4, 0Exia IIB T4
Permissible ambient temperature	-55 °C to +70 °C
Rated voltage and Rated current	12 V DC 25 mA to 55 mA
	24 V DC 34 mA to 68 mA
Rated terminal cross section	8 x 2.5 mm ²
Max. sound levels	12 V/24 V IIB 107 ± 3 db(A) at 1 metre
	12 V/24 V IIC 103 ± 3 db(A) at 1 metre
Protection category to EN 60529	IP65
Entries	up to 3 x M20
Weight	1.0 kg
Enclosure material	Glass reinforced polyester
Finish	Self coloured red as standard or epoxy coated to customer's specification

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB7PBB024NR	ATEX Approved Ex II 1G, Exia, IIB & IIC, T4	110 dB(A) output, GRP, 24 V DC, up to 3 x M20 entries via knockouts, no labels, choice of 26 tones, natural red	PX 807006

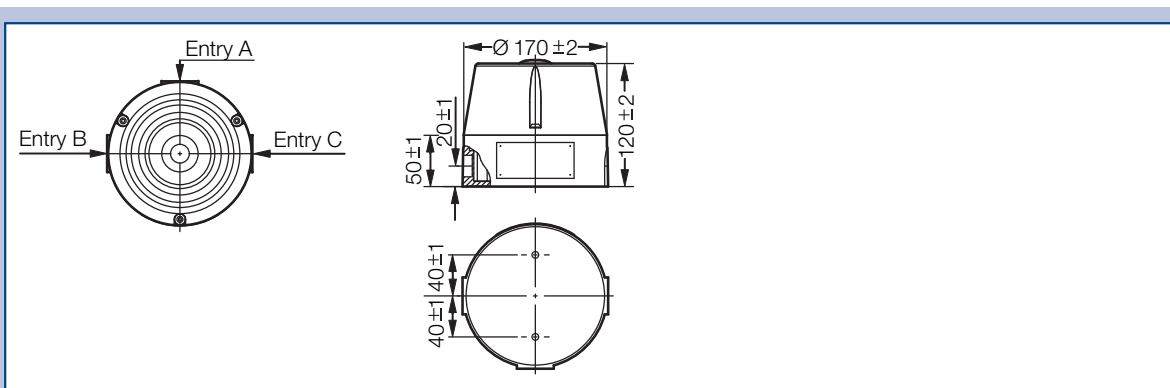
Ordering options*

Unit Type	Certification	Code	Voltage	Code	Label	Code	Finish	Code
DB 7P	ATEX IIB	BB	12 V	012	Duty	D ¹⁾	Red	N
	ATEX IIC	BC	24 V	024	Tag	T ¹⁾	Special finish	S
	GOST 'R' IIB	GB			None	N		
	GOST 'R' IIC	GC						

¹⁾ Please specify

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

E X - S P E A K E R S

Explosion protected units for Zone 0, 1, 2, 22, Class I, Div 2, GOST

This range of loudspeakers, intended for use in potentially explosive gas and dust atmospheres, can here a power rating of up to 30 watts and is suitable for use in all gas groups including hydrogen. The flamepaths, are and the body, are manufactured completely from a UV stable glass reinforced polyester. Stainless steel screws and sinter are incorporated thus ensuring a corrosion free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths. An optional Ex-e terminal chamber is available on some units. An uncertified version is available for use in non-explosive atmospheres. Models compliant to BS 5839, part 8 are available.



UL listed for USA and Canada:

- Class I, Div 2, Groups A-D -
Class I, Zones 1 & 2, AECd IIC, T4
GOST 'R' & 'K' certified.

Australian (SAA) certified.

Optional Ex-e terminal chamber

IP66 and IP67

Certified temperature -55 °C to +70 °C

GRP corrosion-free flamepaths

Up to 122 dBA at 30 watts at 1 metre

BS 5839, part 8 compliant versions available

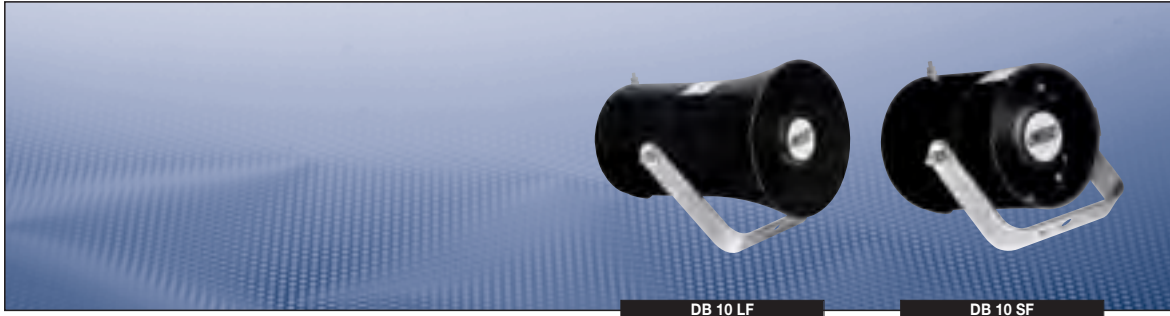
Addressable capability

Power tapings, via integral transformer

Ratcheted swivel bracket

Stainless steel sinter

Stainless steel mounting bracket



Technical data

DB 10									
Marking to 94/9/EC	Ⓔ II 2G Ex d IIB +H2 T ¹⁾								
EC-Type Examination Certificate	BAS 02 ATEX 2086X								
GOST 'R' Certification	2 Exde IIB + H2 T4/T5/T6								
GOST 'K' Certification	Exde IIB + H2 T4/T5/T6								
Chinese (CQST) Certification	Exde IIB + H2 T4/T5/T6								
Permissible ambient temperature ¹⁾	T6: -55 °C to +40 °C T5: -55 °C to +55 °C T4: -55 °C to +70 °C								
Rated power	8 or 15 W RMS continuous at +25 °C								
Rated terminal cross section	8 x 2.5 mm ² or 4 x 2.5 mm ²								
Output	<table border="0"> <tr> <td>long flare (15 W)</td> <td>maximum output at 1 W/1 m at 2 kHz is 105 dBA</td> </tr> <tr> <td></td> <td>maximum output at 15 W/1 m at 2 kHz is 115 dBA</td> </tr> <tr> <td>short flare (8 W)</td> <td>maximum output at 1 W/1 m at 2 kHz is 98 dBA</td> </tr> <tr> <td></td> <td>maximum output at 8 W/1 m at 2 kHz is 107 dBA</td> </tr> </table>	long flare (15 W)	maximum output at 1 W/1 m at 2 kHz is 105 dBA		maximum output at 15 W/1 m at 2 kHz is 115 dBA	short flare (8 W)	maximum output at 1 W/1 m at 2 kHz is 98 dBA		maximum output at 8 W/1 m at 2 kHz is 107 dBA
long flare (15 W)	maximum output at 1 W/1 m at 2 kHz is 105 dBA								
	maximum output at 15 W/1 m at 2 kHz is 115 dBA								
short flare (8 W)	maximum output at 1 W/1 m at 2 kHz is 98 dBA								
	maximum output at 8 W/1 m at 2 kHz is 107 dBA								
Frequency range	400 Hz to 8 kHz								
Voice coil impedance	8 Ω								
Transformer	100 V line as standard								
Protection category to EN 60529	IP66/IP67								
Entries	1 x M20 Ex d/2 x M20 ISO Ex e								
Weight	15 W 3.0 kg / 8 W 2.5 kg								
Enclosure material	Anti-static, UV stable, glass reinforced polyester, mounting stirrup and fixtures in stainless steel								
Finish	All natural or body and horn can be painted to client's requirements								

Ordering details

Type	Description	Ordering Code
DB10B8XN2BPN	8 Watt (short flare), 100 V transformer, 2 x M20 entries with 1 certified plug fitted, natural black	PX 807908
DB10B15XN2BPN	15 Watt (short flare), 100 V transformer, 2 x M20 entries with 1 certified plug fitted, natural black	PX 807915

Ordering options*

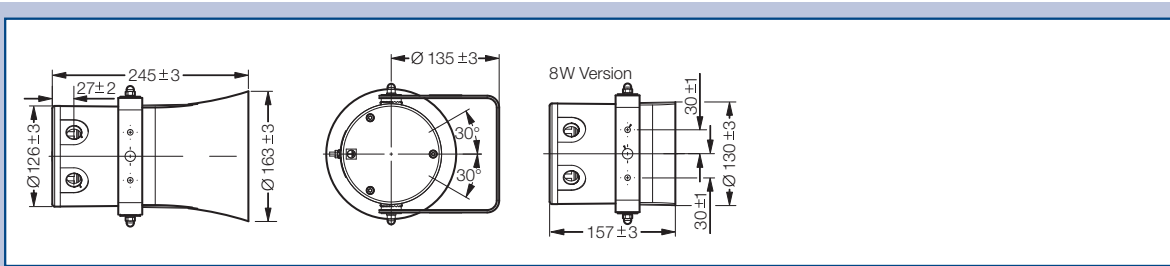
Unit Type	Certification	Code	max. rated Power	Code	Transformer Code	Options Code	Entries	Code	Colour	Code		
DB 10 ¹⁾	ATEX	B	8 W	8	Yes	X ²⁾	Duty	D	1 x M20	1B	Natural black	N
	GOST 'R'	R	15 W	15	8 Ω version	N	Tag	T	2 x M20	2B	Red	R
	GOST 'K'	K					None	N	2 x M20 entries	2BP ³⁾	Special	S
	Chinese (CQST)	Q										

¹⁾ For more options see www.medic.com or contact your local representative.

²⁾ Std. 100 V, other values are available

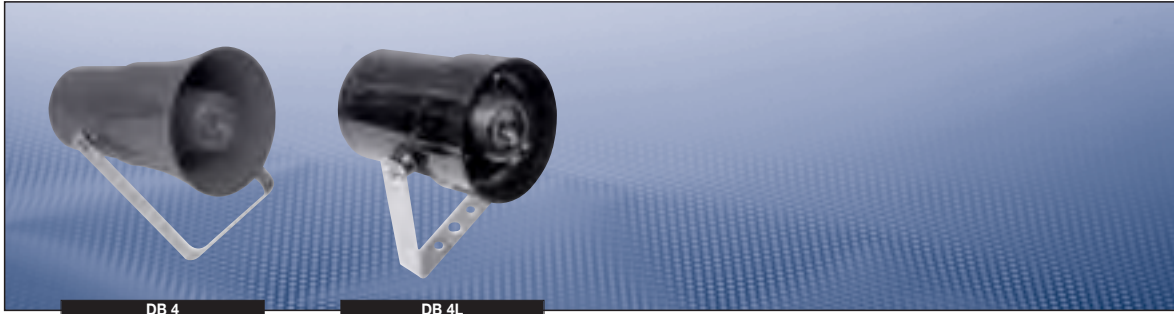
³⁾ With one certified plug fitted.

Dimension drawing



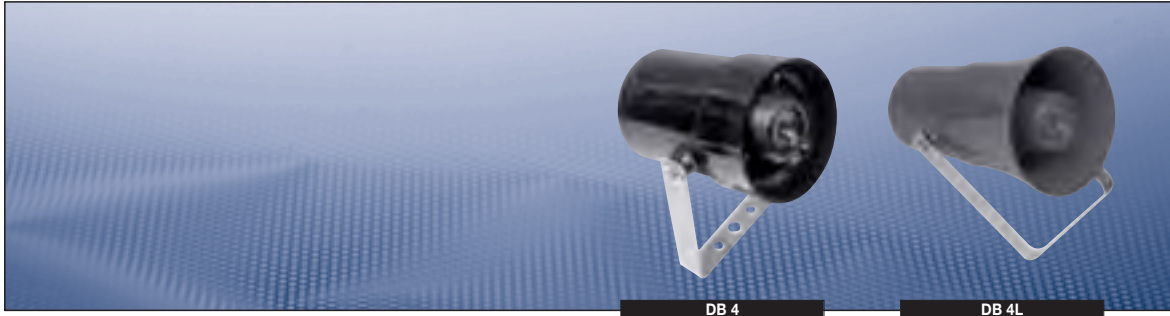
Dimensions in mm

Ex-8/25 watt speaker



Technical data

DB 4 | DB 4L		
Marking to 94/9/EC		⊕ II 2G/D Ex d IIC T4 T135 °C
EC-Type Examination		Ex d BAS 00 ATEX 2097X
Certificate		Ex ed BAS 00 ATEX 2098X
UL listed for USA and Canada		Class I, Div 2, Groups A-D Class I, Zones 1 & 2, AExd IIC T4
GOST 'R' Certification		1Exd IIC T4 & 1Exde IIC T4 Russian Fire Alarm (VNIIPO) approved
GOST 'K' Certification		Exd IIC T4
Permissible ambient temperature	DB 4 ≤ 15 W	-20 °C to +70 °C
	DB 4 > 15 W	-20 °C to +55 °C
	DB 4L ≤ 15 W	-55 °C to +70 °C
	DB 4L > 15 W	-55 °C to +55 °C
Rated power		8 W, 15 W, 20 W or 25 W RMS continuous at +25 °C
Rated terminal cross section		8 x 2.5 mm ²
Frequency range		400 Hz to 8 kHz
Voice coil impedance		8 Ω
Transformer		100 V line as standard
Protection category to EN 60529		IP66/IP67
Entries		max. 2 x M20 Ex d/2 x M20 into Ex e chamber
Weight	Ex d	5.0 kg, depends on model
	Ex de	+0.5 kg
Enclosure material		Anti-static, UV stable, glass reinforced polyester; swivel bracket in stainless steel; captive cover screws in stainless steel
Finish		All natural or body and horn can be painted to client's requirements
Output	long flare (>8 W)	maximum output at 1 W/1 m is 107 dBA maximum output at 25 W/1 m is 119 dBA
	short flare (8 W)	maximum output at 1 W/1 m is 100 dBA maximum output at 8 W/1 m is 109 dBA



Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB415DXN2BNZ	ATEX Approved Ex II 1G	15 watt 100 V line transformer, no labels, 2 x M20, one certified plug, flameproof enclosure, natural black finish	PX 804215
DB425DXN2BNZ	ATEX Approved Ex II 1G	25 watt 100 V line transformer, no labels, 2 x M20, one certified plug, flameproof enclosure, natural black finish	PX 804225
DB425ULNT2CRZ	UL, cUL Listed Class I, Div 2, Groups A, B, C, D	25 watt high-output version, direct connection 8 Ohm, Label = ABS Approved, 2 x 1/2" NPT entries, red finish	PX 869145
DB425ULXN2CR	UL, cUL Listed Class I, Div 2, Groups A, B, C, D	25 watt 100 V line transformer, no labels, 2 x 1/2" NPT entries, red finish	PX 869142
DB425ULXN2CR	UL, cUL Listed Class I, Div 2, Groups A, B, C, D	25 watt 70 V line transformer, no labels, 2 x 1/2" NPT entries, red finish	PX 869144

Ordering options*

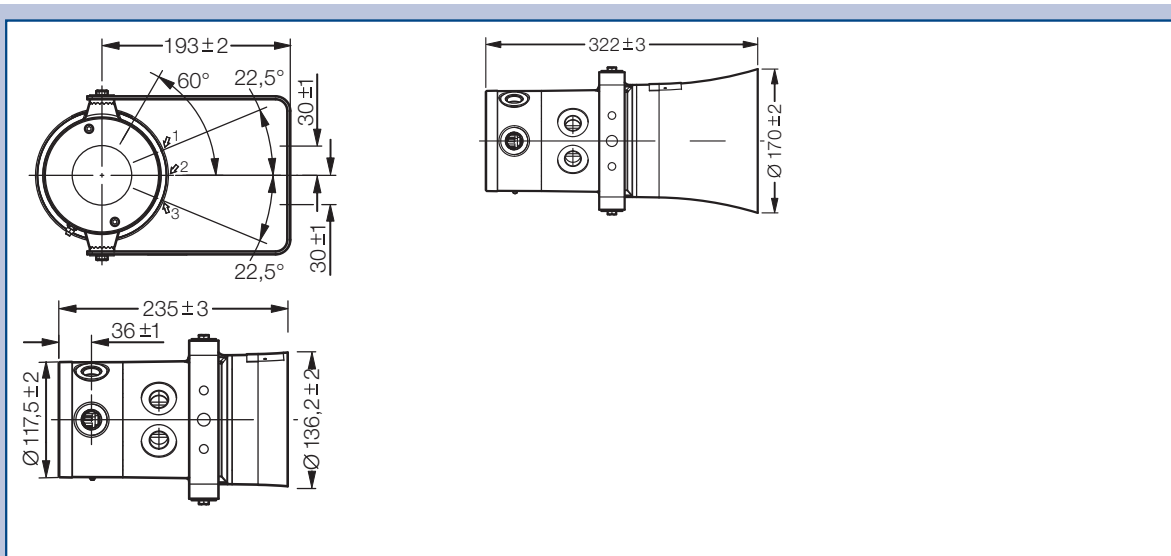
Unit Type	max. rated Power	Code	Certification	Code	Transformer Code	Options	Code	Entries	Code	Colour	Code	
DB 4	8 W	8	Ex d	D	Yes	X ¹⁾	Duty	D	1 x M20 Ex d	1B	Natural Black	N
DB 4L	15 W	15	Ex de	E	8 Ω version	N	Tag	T	2 x M20 Ex d/		Red	R
	20 W	20	UL listed	UL			Earth continuity	E	Ex e	2B	Special	S ²⁾
	25 W	25	Exd BS 5839 part 8	D8			None	N				
			GOST 'R' Exd	GD								
			GOST 'R' Exde	GE								
			GOST 'K' Exd	KD								

¹⁾ Std. 100 V, other values are available

²⁾ Please specify

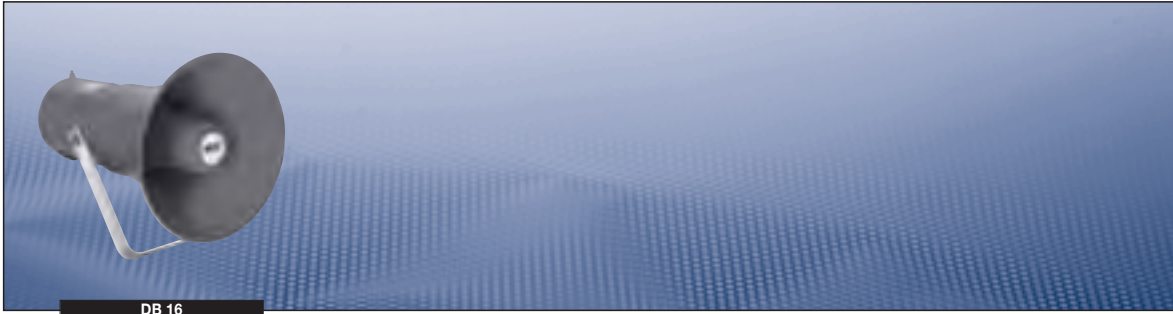
* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

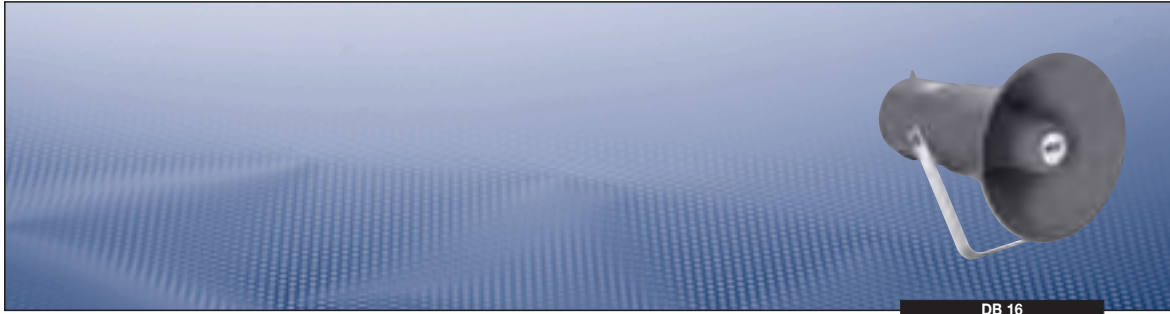
Ex-25/30 watt speaker



Technical data

DB 16

Marking to 94/9/EC	Ex IIB	⊕ II 2G Ex de IIB T3
	Ex IIC	⊕ II 2G/D Ex de IIC T4 T110 °C IP6X
EC-Type Examination	Ex IIB	Baseefa 04 ATEX 0167X
Certificate	Ex IIC	Baseefa 04 ATEX 0166X
UL Listed for USA and Canada		Class I, Div 2, Groups C & D
		Class I, Zone 1
		AExde IIB T3
		Class I, Div 2, Groups A-D
GOST 'K' Certification		Class I, Zone 1
		AExde IIC T110 °C
		1Exde IIC T4/IIB T3
Permissible ambient temperature	30 W version	-50 °C to +40 °C
	25 W version	-50 °C to +65 °C
Rated power		30 W RMS continuous at +25 °C
Frequency range		370 Hz to 8 kHz
Voice coil impedance		8 Ω
Transformer		100 V line as standard
Protection category to EN 60529		IP66/IP67
Entries		max. 2 x M20/2 x M25 into Ex e chamber
Weight		5.5 kg approx.
Enclosure material		Body & horn in anti-static, UV stable, glass reinforced polyester
		Mounting stirrup and fixtures in stainless steel
Finish		All natural or body and horn can be painted to client's requirements
Output	IIB version	maximum output at 1 W/1 m is 117 dBA
		maximum output at 25 W/1 m is 121 dBA
		maximum output at 30 W/1 m is 122 dBA
	IIC version	maximum output at 1 W/1 m is 107 dBA
		maximum output at 25 W/1 m is 118 dBA
		maximum output at 30 W/1 m is 119 dBA
Rated terminal cross section		8 x 2.5 mm ²



Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB16UCXN2MPN	UL, cUL Listed, Class I, Div 2, Groups C & D	Unit suitable for gas Groups A, B, C, D, 70V line transformer, 2 x 1/2" NPT, one certified plug, natural black finish	PX 28600006

Ordering options*

Unit Type	Certification	Code	max. rated Power	Code	Transformer	Code	Options	Code	Entries	Code	Colour	Code
DB 16	ATEX IIB	BB	25 W	25	Yes	X³⁾	Duty	D	1 x M20	1B⁴⁾	Natural black	N
	ATEX IIC	BC	30 W	30	8 Ω version	N	Tag	T	2 x M20	2B⁴⁾	Red	R
	UL (C & D)1)	UB					Earth continuity	E	1 x M25	1C⁴⁾	Special	S⁵⁾
	UL (A-D)2)	UC					Earth stud	B	2 x M25	2C⁴⁾		
	GOST 'K' IIB	KB					None	N				
	GOST 'K' IIC	KC										

¹⁾ Suitable for gas groups C & D

²⁾ Suitable for gas groups A – D

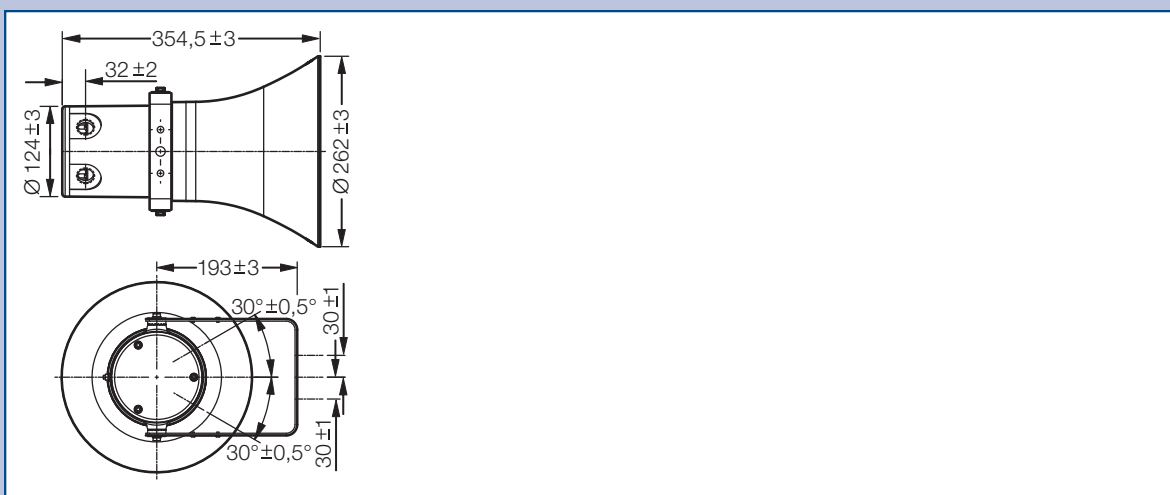
³⁾ Std. 100 V, other values are available

⁴⁾ To specify certified plug, suffix appropriate code with "P"

⁵⁾ Please specify

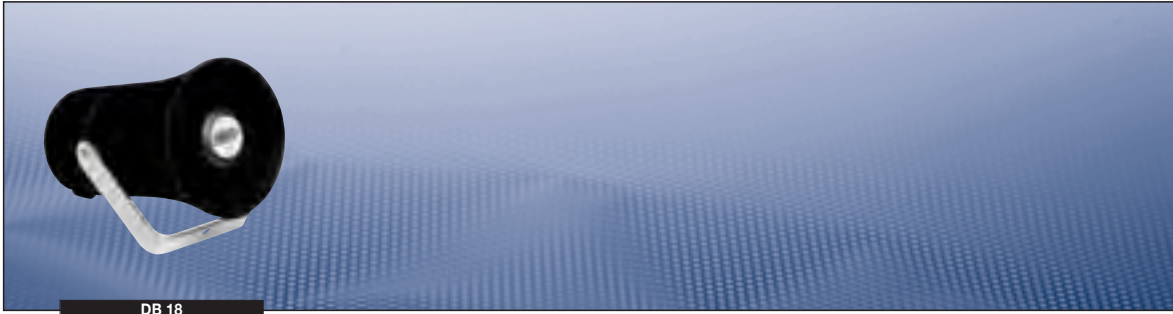
* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm

Ex-15 watt speaker



DB 18

Technical data

DB 18	
Marking to 94/9/EC	⊕ II 3G/D Ex nA II T135 °C
Compliance	CENELEC EN 50014, EN 50021
Permissible ambient temperature	-55 °C to +55 °C
Rated power	15 W RMS continuous at +25 °C
Rated terminal cross section	8 x 2.5 mm ²
Frequency range	400 Hz to 7 kHz
Voice coil impedance	8 Ω
Transformer	100 V line as standard
Protection category to EN 60529	IP66/IP67
Entries	max. 2 x M20 Ex d/1 x M20 into Ex e chamber
Weight	2.6 kg
Enclosure material	Anti-static, UV stable, glass reinforced polyester; swivel bracket in stainless steel; captive cover screws in stainless steel
Finish	All natural or body and horn can be painted to client's requirements
Output	maximum output at 1 W/1 m at 900 Hz is 107 dBA maximum output at 15 W/1 m at 900 Hz is 117 dBA

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB18XNN	ATEX approved Ex II 3G/D	15 Watt, 100 V line transformer, 2 x M20 entries, natural black finish	PX 808401

Ordering options*

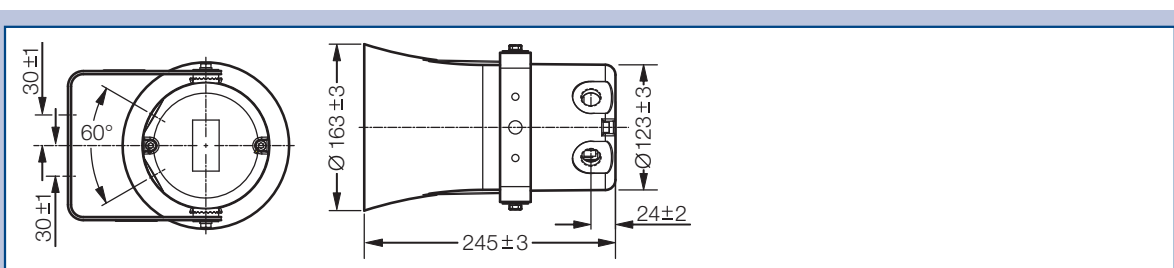
Unit Type	Transformer	Code	Options	Code	Entries	Code	Colour	Code
DB 18	Yes	X ¹⁾	Duty	D	1 x M20 Ex d	1B	Natural black	N
	Transf. and 8 Ω terminals	X8	Tag	T	2 x M20 Ex d/Ex e	2B	Red	R
	8 Ω version	N	Earth continuity	E			Special	S ²⁾
			Blanking plug	P				
			None	N				

¹⁾ Std. 100 V, other values are available

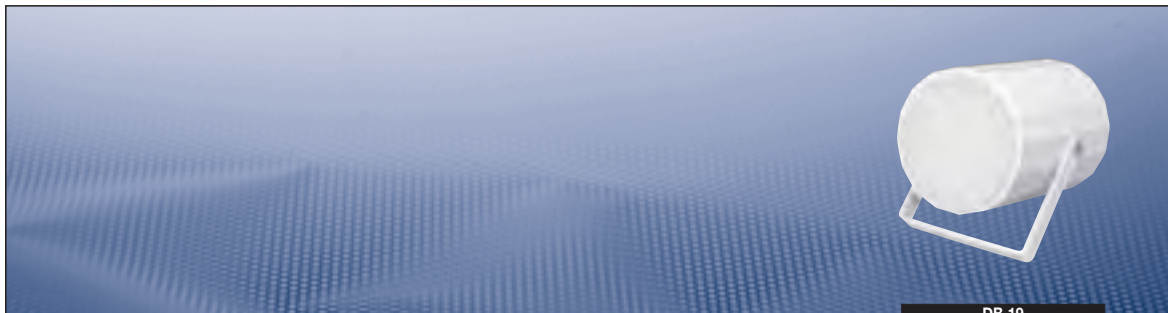
²⁾ Please specify

* For more options see www.medc.com or contact your local representative

Dimension drawing



Dimensions in mm



DB 19

Technical data

DB 19	
Marking to 94/9/EC	II 3G/D Ex nA II T135 °C
Compliance	CENELEC EN 50014, EN 50021
Permissible ambient temperature	-55 °C to +55 °C
Rated power	15 W RMS continuous at +25 °C
Frequency range	120 Hz to 20 kHz
Voice coil impedance	12.5 k, 7.7 k, 3.7 k, 2.5 k, 1.3 kΩ, 666 Ω
Transformer	100 V line as standard
Protection category to EN 60529	IP54
Entries	M20 gland
Weight	2.6 kg
Enclosure material	Body in aluminium Mounting stirrup and fixtures in stainless steel
Finish	Powder coated white to RAL 9010 as standard – can be painted to clients requirements
Output	maximum output at 1 W/1 m at 900 Hz is 92 dBA maximum output at 15 W/1 m at 900 Hz is 104 dBA
Rated terminal cross section	4 x 2.5 mm ²

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB19XNN	ATEX approved Ex II 3G/D	15 Watt, 100 V line transformer, white to RAL 9010	PX 808501

Ordering options*

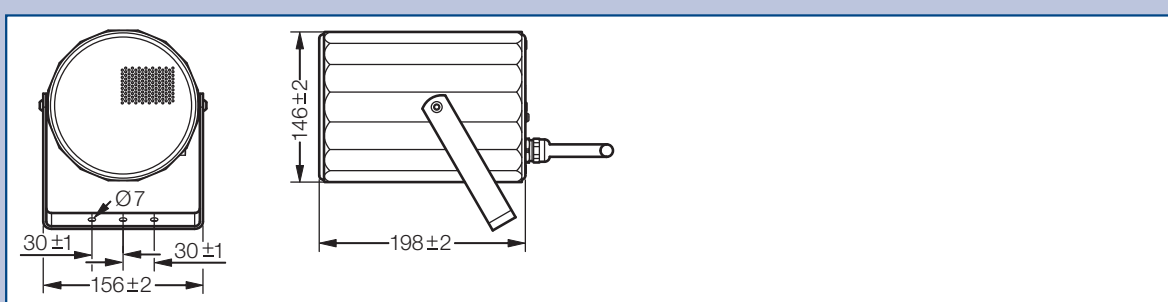
Unit Type	Transformer	Code	Colour	Code
DB 19	Yes	X ¹⁾	Natural black	N
	8 Ω version	N	Red	R
			Special	S ²⁾

¹⁾ Std. 100 V, other values are available

²⁾ Please specify

* For more options see www.medc.com or contact your local representative

Dimension drawing

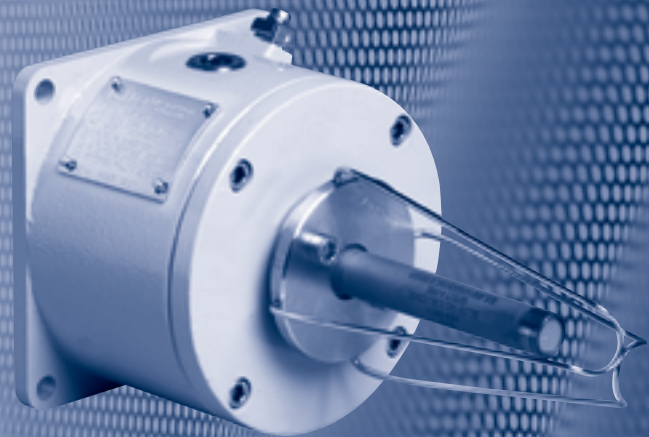
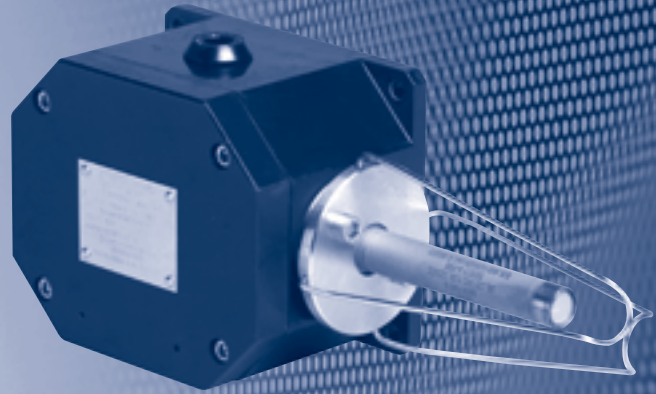


Dimensions in mm

E X - H E A T D E T E C T O R

Explosion protected units for Zone 0, 1, 2 and 22

The MEDC-Hawco heat detector has been designed for use in hazardous environments. These units are suitable for fire alarm and/or suppression systems in offshore and onshore applications including paint spray booths, flammable material stores, turbine rooms, extract ductwork and other hazardous areas throughout the oil & gas, petrochemical and process industries. Comprising a Fenwal rate-compensated detector with all-stainless steel external construction, mounted to either a type SM87 marine grade alloy enclosure (Ex d version) or JB10 corrosion-free GRP enclosure (Ex ia, Ex em/UL versions). The contact in the detector CLOSSES at alarm temperature.



UL listed for USA and Canada

- Class I, Div 2, Groups A-D

GOST 'R' & 'K' certified.

Chinese (CQST) certified.

IP66 & IP67

Certified temperature:

-20°C to +125°C (Exd).

-20°C to +55°C (Exem/UL).

-55°C to +55°C (Exia)

Stainless steel probe

Detector temperature settings:

60°C to 385°C, (140°F to 725°F)*

Marine grade alloy or GRP enclosure

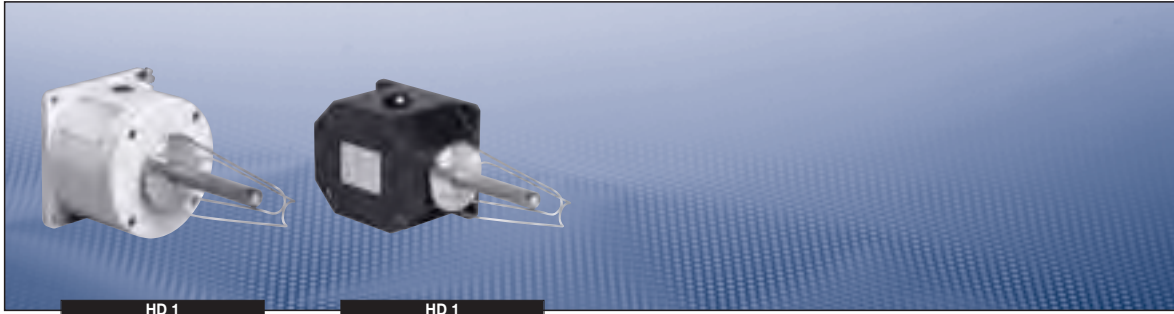
Optional guard



Technical data

HD 1		
Marking to 94/9/EC		⚠ II 2G Ex em II T6 ⚠ II 1G Ex ia II T6 ⚠ II 2G Ex d IIB T6
Listed temperature settings/Colour Code ¹⁾		60 ± 4 °C (140 °F) black / 71 ± 4 °C (160 °F) black 88 ± 4 °C (190 °F) white / 107 ± 4 °C (225 °F) white 135 ± 6 °C (275 °F) blue / 163 ± 6 °C (325 °F) red 182 ± 6 °C (360 °F) red / 232 ± 8 °C (450 °F) green 316 ± 11 °C (600 °F) orange / 385 ± 14 °C (725 °F) orange
EC-Type Examination Certificate		Baseefa 03 ATEX 0447
UL listed for USA and Canada		Class I, Div 2, Groups A, B, C & D
UL Listing No.		E252920
GOST 'R' & 'K' Certification		Exd, Exi & Exem versions Russian Fire Alarm (VNIPO) approved
Chinese Certification CQST		Exd, Exi & Exem versions
Permissible ambient temperature	Ex d T3	-20 °C to +125 °C
	T6	-20 °C to +55 °C
	T4	-55 °C to +55 °C
Rated terminal cross section		6 x 4 mm ²
Operation		NO contact – CLOSES on alarm temperature
Contact rating	Ex d/Ex em	125 V AC – 5A, 125 V DC – 0.5A, 48 V DC – 1A
	Ex ia	30 V – 300 mA
Resistor		Series & EOL resistor (Maximum total 2) minimum value (Each) 470 Ω – only available in Exd, Exi & UL versions
Protection category to EN 60529		IP66/IP67
Entries		2 x M20
Weight		Ex d: 2.0 kg / Ex ia/Ex em: 1.1 kg
Detector material		316 stainless steel
Enclosure material		Ex d: LM25 marine grade alloy Ex ia/Ex em/UL – GRP (anti static); stainless steel cover screws
Finish	Detector	Sand blasted
	Enclosures	Ex d - Epoxy painted grey as standard or to customer's specification Ex ia/Ex em/UL – Self coloured black or epoxy painted to customer's specification

Ex-heat detector



Ordering details

Catalogue No.	Certification	Description	Ordering Code
HD1ULE140GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 140° F, 60° C, black detector tip, tolerance +7/-8° F, ±4° C	PX 46500152
HD1ULE160GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 160° F, 71° C, black detector tip, tolerance +7/-8° F, ±4° C	PX 46500153
HD1ULE190GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 190° F, 88° C, white detector tip, tolerance +7/-8° F, ±4° C	PX 46500154
HD1ULE225GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 225° F, 107° C, white detector tip, tolerance +7/-8° F, ±4° C	PX 46500155
HD1ULE275GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 275° F, 135° C, blue detector tip, tolerance ±10° F, ±6° C	PX 46500156
HD1ULE325GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 325° F, 163° C, red detector tip, tolerance ±10° F, ±6° C	PX 46500157
HD1ULE360GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 360° F, 182° C, red detector tip, tolerance ±10° F, ±6° C	PX 46500158
HD1ULE450GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 450° F, 232° C, green detector tip, tolerance ±15° F, ±8° C	PX 46500159

Ordering options*

Model	Certification	Code	Cert. Type	Code	Temperatur settings ¹⁾	Code	Options	Code	Enclosure Finish	Code
HD 1	ATEX	B	Ex d	D³⁾	140 °F	140	Duty label	D	Natural black	N
	UL listed	UL	Ex em	E	.	.	Tag label	T	Grey	G
	ATEX/UL dual listed	AU	Ex i	I	.	.	Guard	G	Red	R
	GOST 'R' ²⁾	G	UL	U	.	.	Resistor EOL	E	Blue	B
	GOST 'K'	K	.	.	.	.	Resistor series	S	Yellow	Y
	Chinese (CGST)	Q	.	.	.	.	Diode(s)	I⁴⁾	Special finish	S
					725 °F	725	Blanking plug	P		
							None	N		

¹⁾ See technical data

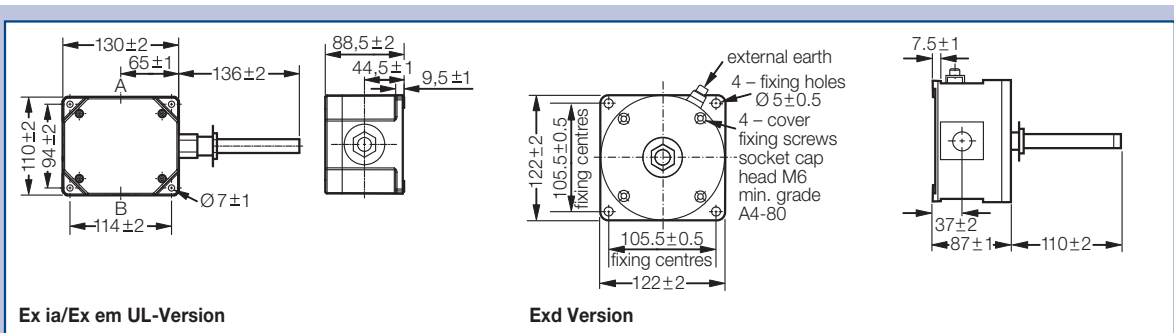
²⁾ VNIIPPO approved as standard

³⁾ Not available UL or ATEX/UL dual listed

⁴⁾ Only available in ATEX/Exd

* For more options see www.medc.com or contact your local representative

Dimension drawing



ELECTRICAL CONNECTIVITY

EXLINK 4-POLE/4-POLE + PE

6.6

EXLINK ETHERNET/USB

6.24

EXLINK 6-POLE+PE

6.28

MULTI-PURPOSE TERMINAL

6.52

PLUGS AND RECEPTACLES FOR ZONE 1 10 - 125 A

6.58

PLUGS AND RECEPTACLES FOR ZONE 2 16 - 125 A

6.86

PLUGS AND RECEPTACLES FOR INDUSTRIAL APPLICATION

6.102

EX-REPAIR AND MAINTENANCE SOCKETS

6.118

EX-REPAIR AND MAINTENANCE SOCKET DISTRIBUTIONS

6.126

EX-PORTABLE MULTI-OUTLET DISTRIBUTIONS AND CABLE REELS

6.128

1

2

3

4

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10

11

12



From Ethernet connection to 125 A 3-phase Motors

Connectivity solutions needs various requirements:

- high-frequency low current for BUS or Ethernet connections
- low voltage with rated current up to 16 A
- rated voltage from 250 V to 750 V and rated current up to 125 A

these are only the most visible differences in product design.

Even more requirements have been taken into account while designing and manufacturing connectivity products for use in hazardous areas.

Chemical resistance as well as mechanical strength – thermal behaviour and extended lifetime – products with the trade mark “CEAG” will adhere to this challenges. Product families like **eXLink®, Ex-Therm and plugs & receptacles GHG 5...** will serve most of the upcoming market requirements.

Cooper Crouse-Hinds: Always a reliable contact



The principal feature is the pin and sleeve contact point. It determines the overall quality of the plug and receptacle system; special designed contacts mean low insertion and withdrawal forces, reliable contact-making, low

transition resistances and low thermal loads. The explosion protection stands and falls with these features. The self-cleaning Ex-e multicontact connections are made of louver-like punched and specially treated copper beryllium band. A large number of contact points ensure a perfect and durable electrical con-

nection with low insertion and withdrawal forces – and this has been the case for decades, since this kind of contact technique has been standard at CEAG products since 1985.

Corrosion, no thank you!

Electrical equipment in the offshore area is often strongly attacked by aggressive chemicals or salt water. In order to ensure that our plugs and receptacles remain in good working order, even after long-term use in an aggressive atmosphere, we have provided the plug pins with a high-grade nickel plating. All other exterior metal parts are made of high quality stainless steel. It goes without saying that the enclosures are made of corrosion-free, extreme temperature conditions and impact resistant plastics.

Short circuit protection

It's better to be on the safe side – should a fault occur in the connected electrical apparatus, the plug and socket must maintain the explosion protection. No problem, because, in conjunction with an external back-up fuse that can be so generously rated that during the normal start-up of a three-phase current motor with separate thermal protection no tripping occurs, the explosion protection and the function of the switch are not affected, even in the event of a direct short-circuit.

Switching under full capacity

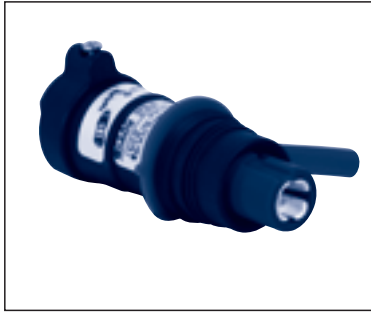
Functionality even at the top-end. The integrated interlocked switch warrants not only a voltage free connection of the contacts but also an AC-3 motor switching capability. Meaning even when you plug in an appliance that is switched on, you have no problems. This means that even electric motors can be switched on and off and up to full capacity without damaging the interlock switch.

Well connected

Practice shows that a hundred percent electrical connection is not the only feature marking a high-quality plug and socket system. In particular, in the often very harsh industrial environments mechanical strength is of great importance. In addition to a good electrical connection, the patented plug-in-and-turn switching of the plug and socket also guarantees a rugged mechanical connection. Even if you pull hard, it won't come apart. The integrated switch is giving an easy to clean design too and offers the possibility to design and integrate the 16A & 32A receptacle into nearly any ex-e enclosure.

On request with auxiliary contacts

Auxiliary contacts are a fine thing. With them, you can hand-on selective messages. For example during a routine maintenance, when you want to know which plug sockets are momentarily in use. The auxiliary contact can be fitted in all 4- and 5-pole wall sockets, also at a later date.



What is eXLink?



eXLink is a complete system for connecting and disconnecting products electrically. This system is available in different versions for different applications: 4-pole, 4-pole + PE, 6-pole + PE and 7-pole.

It is necessary to distinguish between active components (couplers/receptacles) that, due to the design of the live parts (contact sockets in IP 30), can also be live when open, and passive components (plugs/inlets) that, due to the exposed plug pins, must not be live.

A solution for every environment

Depending upon the field of application, the components of the **eXLink connector system** are available in different versions:

• **Moulded plastic**



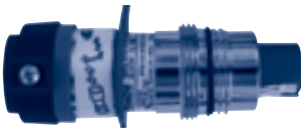
The material used is a heavy-duty, impact resistant polyamide that, even in the event of extreme fluctuations in temperature, retains its high material properties.

• **Nickel-plated brass**



The use of this material has been proven very successful for inlets and receptacles in flameproof apparatus. Thanks to its insensitivity to severe ambient conditions, it is particularly well suited for use in atmospheres with a particularly high content of harmful and aggressive substances.

• **AISI 316L stainless steel**



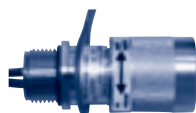
This material is used if aggressive environmental influences, such as salt water, acids, alkalis, place particularly high demands on the corrosion resistance and mechanical stress of a component. Stainless steel receptacles and inlets are also used for the connection of flameproof apparatus.

• **Option for the connection of armoured cables:**



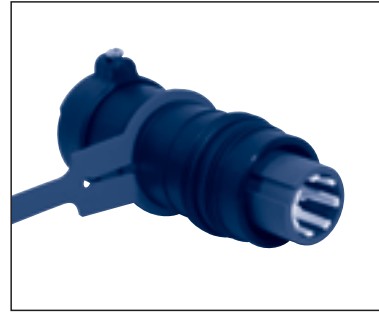
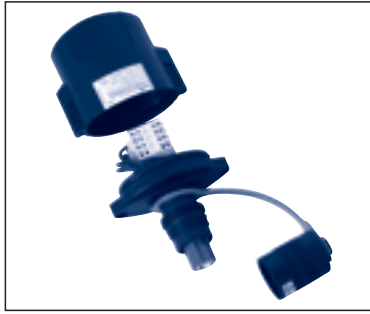
In order to be able to provide a solution for the connection of armoured, braided or screened cables, we have developed a metal version with a universal armouring clamp. This allows the use of many commonly used armoured cables. An external strain relief provides protection against strong external forces. This solution is available in nickel-plated brass and stainless steel for plugs and couplers.

• **Threads:**



The 4-pole and 4-pole + PE inlets and receptacles feature an integral M20 or NPT 1/2" thread.
The 6-pole + PE and 7-pole inlets and receptacles have an integral M25 or NPT 3/4" thread. NPT-metallic only.

What is eXLink?



Components

Different applications need individual solutions, who can be reached by the combination of well-suited components.

- **Plug:**



Suitable as a cable end – with plug pins (in line male cable connector), must not be live when disconnected (**passive component**).

- **Connector:**



Suitable as a cable end – with contact sockets (in line female cable connector), can be live when disconnected (**active component**).

- **Receptacle:**



Suitable for installation with thread in products – with contact sockets (female), can be live when disconnected (**active component**).

- **Inlet:**



Suitable for installation with thread in products – with plug pins (male), must not be live when disconnected (**passive component**).

- **Y-adaptor Junction-box:**



Suitable for connecting field devices to a data line – two cable entries and optional one eXLink receptacle or inlet with contact sockets (**active component**) or inlet with plug pins (**passive component**).

- **Y-adaptor Junction-unit:**



Suitable for connecting field devices to a data line – 3 eXLink, optional receptacle with contact sockets (**active component**) or inlet with plug pins (**passive component**).

- **Elbow:**

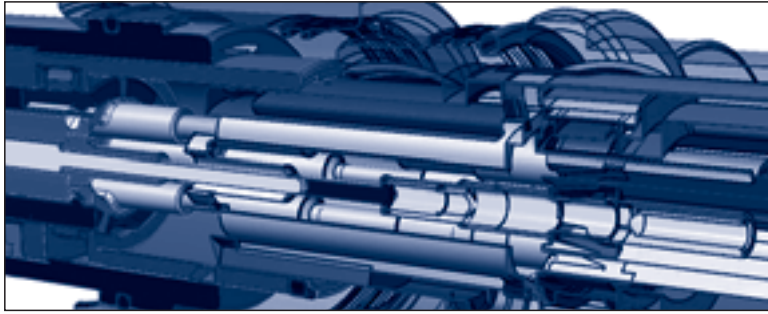


90° elbow to facilitate installation of an inlet or a receptacle into a device when it is not possible to lay the cables in a straight line. The direction of the elbow can be aligned in 12 directions (30° turns).

- **Locking device:**



A two-part system which, when eXLink is installed on the connector/inlet, plug/receptacle or connector/plug, allows a padlock to be attached to prevent eXLink from being disconnected by unauthorised person.



Function

The self-cleaning Ex-e multi-contact conducting pins provide permanent faultless electrical connection. To ensure that the contact system remains fully functional even during long-term use in aggressive environments all conducting pins are silver-plated. The quality of the connection means that the system is suitable for current in the mA range up to 16 A continuously.

Coding

Male and female connectors are coded using a similar timetable according IEC 60309 standard, where voltage and current types have their own „time of day“ to ensure that the correct connection is made.

3-/4-pole:

- 2 h Bus connections
- 4 h 110 V AC 2-pole + PE
- 5 h 24 V AC 4-pole + PE
- 6 h 230 V AC 2-pole + PE
- 8 h 24 V DC 4-pole
- 10 h 230 V AC 4-pole + PE
- 12 h 24 V AC 2-pole + PE

6+1-pole:

- 4 h 110 V AC 6-pole + PE
- 6 h 230 V AC 6-pole + PE
- 8 h 24 V DC 7-pole
- 10 h 400 V AC 6-pole + PE
- 12 h 24 V AC 6-pole + PE

However, individual combinations can also be coded if required by customers. The time code can be read on the connector. The location of PE/PA in relation to the keyway determines the name (e.g. 6 h = PE/PA bottom). By the time-setup it is protected to connect apparatus to the wrong outlet.

Connection types

The eXLink is available in two connection types:

• Crimp connection

The conductors are crimped directly into the contact pins. The crimp connection is suitable for all cables from 0.25 mm² - 0.5 mm², 0.75 mm² - 1.5 mm² or in a third version for 2.5 mm².

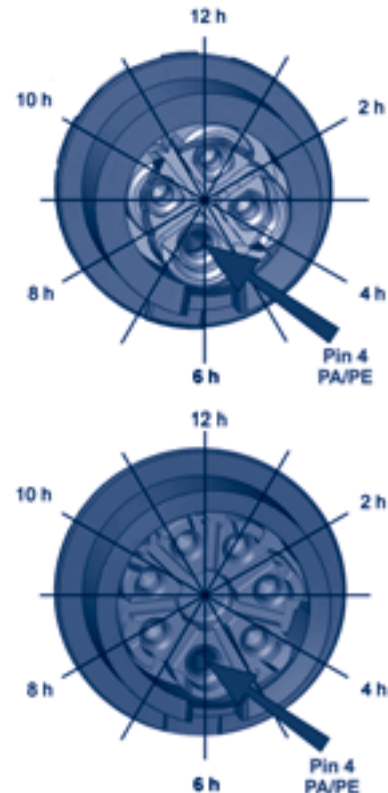
Smaller cables can be soldered.

• Cage clamp terminal

This solution allows conductors between 0.5 and 1.0 mm² to be installed easily as the conductors do not have to be crimped into the contact pins. All plugs and couplers up to and including the 4-pole version can be delivered with cage clamp terminals. The 6-pole+PE and the 7-pole versions are available as cage clamp versions too.

Extended ambient temperature range

The system is approved for a standard ambient temperature range of -55 °C to +75 °C. The use of moulded plastic versions is restricted in mechanical strength from -55 °C to -25 °C. Above +40 °C up to +75 °C the rated current have to be decreased.



e X L i n k

eXLink 4-pole/4-pole + PE for Zone 1 and Zone 21

Providing flexible power supply and BUS-connection there, where it is needed – even in hazardous areas for the Zones 1, 2, 21 and 22.

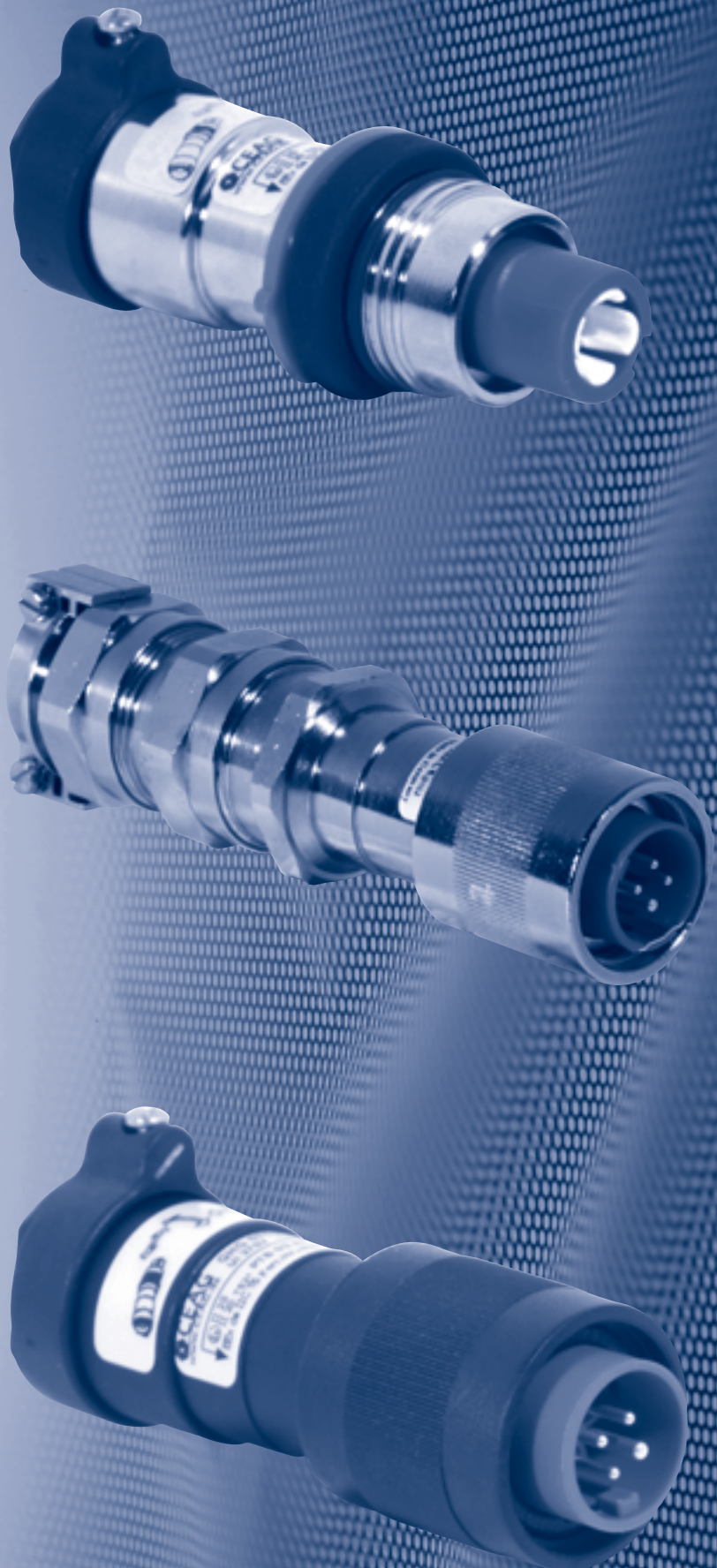
The eXLink 4-pole/4+1 pole is a complete system for connecting and disconnecting products electrically. Supplying from low voltage BUS signals up to 250 V AC / 10 A electrical power the full range of connectors and receptacles are available with moulded plastic enclosure as well as nickel-plated brass or stainless steel enclosures.

A time coding, following the IEC 60309 system secures from misconnections of non-compatible voltage levels. Only connectors and plugs with the same voltage level can be plugged together.

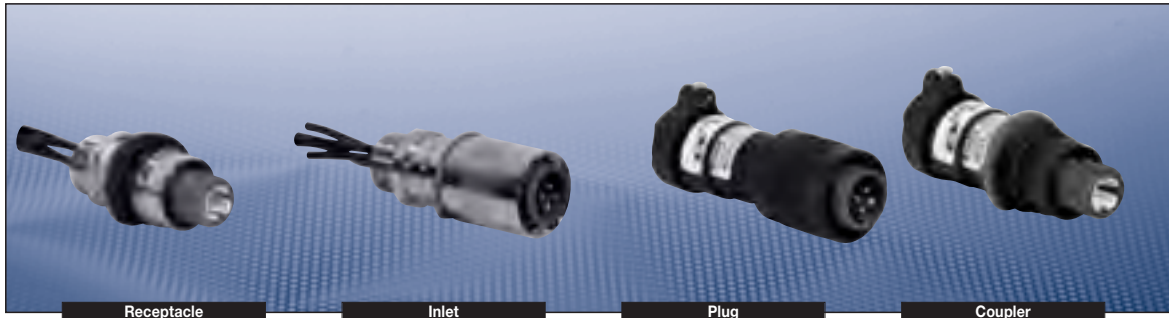
The well-known and reliable bonding technique “crimp connection” for wire size of 0.25 mm² up to 0.5 mm², 0.75 mm² up to 1.5 mm² and optional 2.5 mm² is used for wire connection to the pins. Additionally a screw-less technique “cage clamp” can be used for selected types. A special plug and connector for the use of armoured cable with armouring diameter up to 1.5 mm is available.

The Receptacle and the Inlet are equipped with metric thread M20 x 1.5 or 1/2" NPT thread to screw directly into electrical apparatus. The factory potted metal versions can be used directly into Ex-d enclosures without additionally certification to be applied.

All eXLink plugs, inlets, receptacle and connectors are designed for hot swapping of apparatus in hazardous areas without disconnecting terminals, without shutting down circuits and without a “hot work permit”!



- Hot swap
- Standard IP protection IP66/IP68
- Permissible ambient temperature form -55 to +70 °C
- Up to 250 V 10 A
- Stainless steel or nickel plated brass enclosures for highest mechanical protection
- Max. 4 pole + PE connections
- World wide certifications
- Mining (EX I M2) certified



Technical data

eXLink 4-pole / 4-pole + PE	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 Ⓔ II 2 D tD A21 IP66 T52 °C
EC-Type Examination Certificate	PTB 03 ATEX 1016 X
IECEX Certification of Conformity	IECEX BKI 06.0005X
Type of protection (IECEX)	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T52 °C
Permissible ambient temperature	-55 °C up to +40 °C (Rated current 10 A) -55 °C up to +75 °C (Rated current 2 A) -20 °C up to +40 °C (Elbow, plastic)
Store temperature in original wrapping	-55 °C up to +80 °C
Frequency range	0-100 MHz, fast Ethernet compatible
Transmission performance acc. to TIA/EIA-568-B.2	Category 5e up to 100 Mbaud
Rated voltage	AC up to 250 V, 50/60 Hz / DC up to 60 V
Rated current	max. 10 A
Switching capacity acc. EN 61 984	AC: 250 V / 10 A DC: 60 V / 2.5 A
Rated making-/rated breaking capacity	AC-3: U _e 250 V / I _e 1 A DC-3: U _e 60 V / I _e 0,5 A
External back-up fuse max. without thermal protection	10 A
External back-up fuse max. with thermal protection	20 A gL
Insulation class acc. EN 60598	II: plastic / I: metal
Terminal cross section	
Plug, coupler	Crimp 0.5 mm ² : 0.25 - 0.5 mm ² Crimp 1.5 mm ² : 0.75 - 1.5 mm ² / Solder: 0.34 - 1.0 mm ² Crimp 2.5 mm ² : 2.5 mm ² Cage clamp ¹⁾ : 0.5 - 1.0 mm ² multi wire, 0.5 - 1.5 mm ² single wire
Inlet, receptacle in plastic	Crimp 0.5 mm ² : 0.25 - 0.5 mm ² Crimp 1.5 mm ² : 0.75 - 1.5 mm ² / Solder: 0.34 - 1.0 mm ² Crimp 2.5 mm ² : 2.5 mm ² / 30 cm multi wire 1.5 mm ² /2.5 mm ²
Inlet, receptacle in metal	30 cm multi wire ²⁾ : 1.5 mm ² / 2.5 mm ²
Cable entry plug and coupler	Ø 4 - 7.5 mm / Ø 7.5 - 11.0 mm
Cable entry plug and coupler for armoured cables	external isol. Ø 12 - 21 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm
Mounting thread inlet and receptacle	M20 x 1.5 / 1/2" NPT ³⁾
Degree of protection EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	
Plug, coupler, inlet < 2000 cm ³ and receptacle	Polyamide, nickel plated brass or stainless steel AISI 316L
Inlet > 2000 cm ³ and plug/coupler for armoured cables	Nickel plated brass or stainless steel AISI 316L

¹⁾ not for 4-pole + PE

²⁾ other length on request

³⁾ NPT for metal versions only

Ordering key eXLink 4-pole/4-pole + PE

1. Version	2. Type	3. Connection technology	4. Coding
1 = 4-pole 4 = 4-pole + PE ¹⁾	1 = Elbow 3 = Coupler 6 = Inlet > 2000 cm ³ 7 = Plug 8 = Receptacle 9 = Inlet	1 = Crimp up to 1.5 mm ² 2 = Crimp up to 2.5 mm ² 6 = Cage clamp Option: Crimp up to 0.5 mm ²	01 = 1 h / Ethernet ¹⁾ 02 = 2 h / Bus 03 = 3 h / Special code ¹⁾ 04 = 4 h / 110 V AC 2p + PE 05 = 5 h / 24 V DC 4p + PE ¹⁾ 06 = 6 h / 230 V AC 2p + PE 07 = 7 h / Special code ¹⁾ 08 = 8 h / 24 V DC 4p 09 = 9 h / Special code ¹⁾ 10 = 10 h / 230 V AC 4p + PE ¹⁾ 11 = 11 h / Special code ¹⁾ 12 = 12 h / 24 V AC 2p + PE

¹⁾ only crimp version

GHG 57X XXXX RXXOX

5. Material	6. Accessories	7. Diameter of connection cable (plug and coupler)
0 = Plastic 1 = Stainless steel AISI 316L 2 = Stainless steel AISI 316L for armoured cables 3 = Nickel-plated brass 4 = Nickel-plated brass for armoured cables 5 = Stainless steel AISI 316L NPT 6 = Nickel-plated brass NPT	0 = without locking device 8 = Protection cap for plug 9 = with locking device	1 = 4 – 7,5 mm/12 – 21 mm ²⁾ 2 = 7,5 – 11 mm ²⁾ Version for armoured cables

8. Connection (inlet and receptacle)			
Connecting wire	Plastic	Nickel plate brass	Stainless steel
Crimp	...R0XX1	n.a.	n.a.
30 cm	...R0XX2	...R3XX1	...R1XX1
50 cm	...R0XX3	...R3XX2	...R1XX2
75 cm	...R0XX4	...R3XX3	...R1XX3
150 cm	...R0XX5	...R3XX4	...R1XX4

Version for possible configurations

	Plastic	Nickel-plated brass	Stainless steel	Crimp 0.5 mm ²	Crimp 1.5 mm ²	Crimp 2.5 mm ²	Solder	Cage clamp	15 cm multi wire 1.5 mm ²	15 cm multi wire 2.5 mm ²	30 cm multi wire 1.5 mm ²	30 cm multi wire 2.5 mm ²	xx cm multi wire ³⁾	Cable entries Ø 4 - 7.5 mm	Cable entries Ø 7.5 - 11 mm	Cable entries Ø 12 - 21 mm	M20 x 1.5	1/2" NPT
Plug 4-pole	x	x	x	x	x	x	x	x						x	x			
Plug 4-pole + PE	x	x	x	x	x	x	x							x	x			
Coupler 4-pole	x	x	x	x	x	x	x	x						x	x			
Coupler 4-pole + PE	x	x	x	x	x	x	x							x	x			
Plug for armoured cables 4-pole		x	x	x	x	x	x	x								x		
Plug for armoured cables 4-pole + PE		x	x	x	x	x	x									x		
Coupler for armoured cables 4-pole		x	x	x	x	x	x	x								x		
Coupler for armoured cables 4-pole + PE		x	x	x	x	x	x									x		
Inlet for Ex e enclosure	x	x	x	x	x	x	x		x	x	x	x	x				x	
Inlet for Ex d enclosure < 2000 cm ³		x	x						x	x	x	x	x				x	x
Inlet for Ex d enclosure > 2000 cm ³		x	x						x	x	x	x	x				x	x
Receptacle for Ex e enclosure	x	x	x	x	x	x	x		x	x	x	x	x				x	
Receptacle for Ex d enclosure (no restriction on free volume)		x	x						x	x	x	x	x				x	x
Elbow for Ex e enclosure	x	x	x														x	
Elbow for Ex d enclosure		x	x														x	x

³⁾ on customers request

For customers who wants to configure the needed eXLink easily and fast Cooper Crouse-Hinds offers via the Internet separate tool to select the right type and order No.: http://www.internezzo.de/sd_ceag/index.html

CONFIGURATOR

From a selection of nearly 2000 variants of eXLink connector products you will find **YOUR eXLink** product fast, reliable and easy using our new product configurator.

Click [here](#) try and use the new tool

eXLink 4/4+PE-pole eXLink 7/6+PE-pole Y-Adaptor © 2007 internezzo

Type: plug male - for passive cable connection

Material: plastic

Clock Setting / Voltage: 6 h: 2-pol + PE - 230 V AC

Connection Technology: 1.5 mm² Crimp

Accessories: without locking device

Connector cable: cable diameter 4 - 7.5 mm

GHG 571 7106 R0001



eXLink 4/4+PE-pole eXLink 7/6+PE-pole Y-Adaptor © 2007 internezzo

Type: inlet male - for passive enclosure

Material: nickel plated brass

Clock Setting / Voltage: 1 h: 4-pol + PE - BUS

Connection Technology: configured with 1.5mm², potted

Accessories: without locking device

Connector cable: 300 mm flying leads

GHG 574 9101 R3001

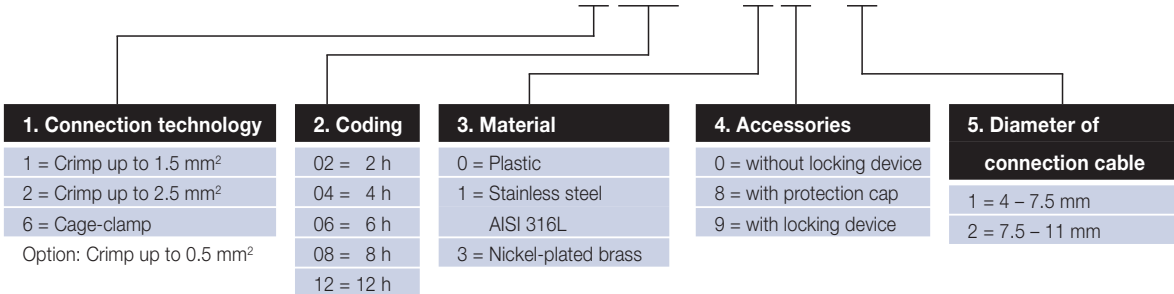


| eXLink 4-pole |



Ordering key eXLink plug 4-pole

GHG 571 7XXX RXX0X



Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Plug made of plastic					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 7102 R0001	GHG 571 7102 R0002
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 7602 R0001	GHG 571 7602 R0002
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 7104 R0001	GHG 571 7104 R0002
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 7204 R0001	GHG 571 7204 R0002
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 7604 R0001	GHG 571 7604 R0002
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 7106 R0001	GHG 571 7106 R0002
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 7206 R0001	GHG 571 7206 R0002
230 V AC	2-pol + PE	6 h	Cage clamp	GHG 571 7606 R0001	GHG 571 7606 R0002
24 V DC	4-pol	2 h	Crimp up to 1.5 mm ²	GHG 571 7108 R0001	GHG 571 7108 R0002
24 V DC	4-pol	2 h	Crimp up to 2.5 mm ²	GHG 571 7208 R0001	GHG 571 7208 R0002
Plug made of nickel-plated brass					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 7102 R3001	GHG 571 7102 R3002
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 7602 R3001	GHG 571 7602 R3002
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 7104 R3001	GHG 571 7104 R3002
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 7204 R3001	GHG 571 7204 R3002
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 7604 R3001	GHG 571 7604 R3002
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 7106 R3001	GHG 571 7106 R3002
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 7206 R3001	GHG 571 7206 R3002
230 V AC	2-pol + PE	6 h	Cage clamp	GHG 571 7606 R3001	GHG 571 7606 R3002
Plug made of stainless steel					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 7102 R1001	GHG 571 7102 R1002
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 7602 R1001	GHG 571 7602 R1002
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 7104 R1001	GHG 571 7104 R1002
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 7204 R1001	GHG 571 7204 R1002
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 7604 R1001	GHG 571 7604 R1002
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 7106 R1001	GHG 571 7106 R1002
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 7206 R1001	GHG 571 7206 R1002



Ordering key eXLink plug 4-pole + PE

GHG 574 7XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Diameter of connection cable
1 = Crimp up to 1.5 mm ² 2 = Crimp up to 2.5 mm ² Option: Crimp up to 0.5 mm ²	01 = 1 h 05 = 5 h 10 = 10 h	0 = Plastic 1 = Stainless steel AISI 316L 3 = Nickel-plated brass	0 = without locking device 8 = with protection cap 9 = with locking device	1 = 4 – 7.5 mm 2 = 7.5 – 11 mm

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				4 – 7,5 mm Order No.	7,5 – 11 mm Order No.
Plug made of plastic version					
Ethernet/Bus	4 pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 7101 R0001	GHG 574 7101 R0002
24 V DC	4 pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 7105 R0001	GHG 574 7105 R0002
24 V DC	4 pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 7205 R0001	GHG 574 7205 R0002
230 V AC	4 pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 7110 R0001	GHG 574 7110 R0002
230 V AC	4 pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 7210 R0001	GHG 574 7210 R0002
Plug made of nickel-plated brass					
Ethernet/Bus	4 pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 7101 R3001	GHG 574 7101 R3002
24 V DC	4 pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 7105 R3001	GHG 574 7105 R3002
24 V DC	4 pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 7205 R3001	GHG 574 7205 R3002
230 V AC	4 pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 7110 R3001	GHG 574 7110 R3002
230 V AC	4 pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 7210 R3001	GHG 574 7210 R3002
Plug made of stainless steel					
Ethernet/Bus	4 pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 7101 R1001	GHG 574 7101 R1002
24 V DC	4 pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 7105 R1001	GHG 574 7105 R1002
24 V DC	4 pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 7205 R1001	GHG 574 7205 R1002
230 V AC	4 pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 7110 R1001	GHG 574 7110 R1002
230 V AC	4 pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 7210 R1001	GHG 574 7210 R1002

| eXLink 4-pole |



Plastic

Metal

with locking device

Ordering key eXLink coupler 4-pole

GHG 571 3XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Diameter of connection cable
1 = Crimp up to 1.5 mm ²	02 = 2 h	0 = Plastic	0 = without locking device	1 = 4 – 7.5 mm
2 = Crimp up to 2.5 mm ²	04 = 4 h	1 = Stainless steel AISI 316L	9 = with locking device	2 = 7.5 – 11 mm
6 = Cage-clamp	06 = 6 h	3 = Nickel-plated brass		
Option: Crimp up to 0.5 mm ²	08 = 8 h			
	12 = 12 h			

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Coupler made of plastic					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 3102 R0001	GHG 571 3102 R0002
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 3602 R0001	GHG 571 3602 R0002
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 3104 R0001	GHG 571 3104 R0002
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 3204 R0001	GHG 571 3204 R0002
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 3604 R0001	GHG 571 3604 R0002
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 3106 R0001	GHG 571 3106 R0002
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 3206 R0001	GHG 571 3206 R0002
230 V AC	2-pol + PE	6 h	Cage clamp	GHG 571 3606 R0001	GHG 571 3606 R0002
24 V DC	4-pol	8 h	Crimp up to 1.5 mm ²	GHG 571 3108 R0001	GHG 571 3108 R0002
24 V DC	4-pol	8 h	Crimp up to 2.5 mm ²	GHG 571 3208 R0001	GHG 571 3208 R0002
Coupler made of nickel-plated brass					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 3102 R3001	GHG 571 3102 R3002
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 3602 R3001	GHG 571 3602 R3002
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 3104 R3001	GHG 571 3104 R3002
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 3204 R3001	GHG 571 3204 R3002
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 3604 R3001	GHG 571 3604 R3002
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 3106 R3001	GHG 571 3106 R3002
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 3206 R3001	GHG 571 3206 R3002
230 V AC	2-pol + PE	6 h	Cage clamp	GHG 571 3606 R3001	GHG 571 3606 R3002
24 V DC	4-pol	8 h	Crimp up to 1.5 mm ²	GHG 571 3108 R3001	GHG 571 3108 R3002
24 V DC	4-pol	8 h	Crimp up to 2.5 mm ²	GHG 571 3208 R3001	GHG 571 3208 R3002
Coupler made of stainless-steel					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 3102 R1001	GHG 571 3102 R1002
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 3602 R1001	GHG 571 3602 R1002
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 3104 R1001	GHG 571 3104 R1002
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 3204 R1001	GHG 571 3204 R1002
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 3604 R1001	GHG 571 3604 R1002
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 3106 R1001	GHG 571 3106 R1002
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 3206 R1001	GHG 571 3206 R1002



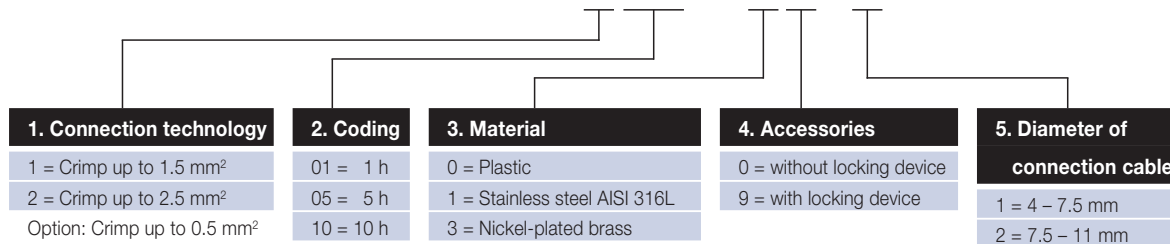
with locking device

Plastic

Metal

Ordering key eXLink coupler 4-pole + PE

GHG 574 3XXX RXX0X



All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Coupler made of plastic					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 3101 R0001	GHG 574 3101 R0002
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 3105 R0001	GHG 574 3105 R0002
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 3205 R0001	GHG 574 3205 R0002
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 3110 R0001	GHG 574 3110 R0002
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 3210 R0001	GHG 574 3210 R0002
Coupler made of nickel-plated brass					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 3101 R3001	GHG 574 3101 R3002
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 3105 R3001	GHG 574 3105 R3002
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 3205 R3001	GHG 574 3205 R3002
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 3110 R3001	GHG 574 3110 R3002
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 3210 R3001	GHG 574 3210 R3002
Coupler made of stainless steel					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 3101 R1001	GHG 574 3101 R1002
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 3105 R1001	GHG 574 3105 R1002
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 3205 R1001	GHG 574 3205 R1002
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 3110 R1001	GHG 574 3110 R1002
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 3210 R1001	GHG 574 3210 R1002

1
2
3
4
5
6
7
8
9
10
11
12

| eXLink 4-pole |



Plastic

Metal

Ordering key eXLink receptacle 4-pole

Metal version also for Ex-d applications without restriction of volume

GHG 571 8XXX RXX0X — X = Count No.

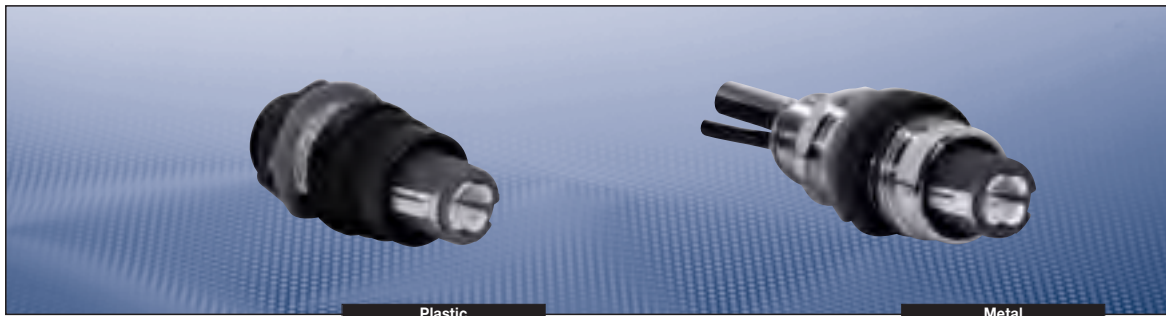
1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp ¹⁾ /30 cm multi wire up to 1.5 mm ²	02 = 2 h	0 = Plastic	0 = without locking device
2 = Crimp ¹⁾ /30 cm multi wire up to 2.5 mm ²	04 = 4 h	1 = Stainless steel AISI 316L with M20 thread	9 = with locking device
¹⁾ Crimp only plastic version	06 = 6 h	3 = Nickel-plated brass with M20 thread	
Option: Crimp 0.5 mm ²	08 = 8 h	5 = Stainless steel AISI 316L with 1/2" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire.

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M20 x 1.5 Order No.	1/2" NPT Order No.
Receptacle made of plastic					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 8102 R0001	Only available in metal version!
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 8104 R0001	
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 8204 R0001	
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 8106 R0001	
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 8206 R0001	
24 V DC	4-pol	8 h	Crimp up to 1.5 mm ²	GHG 571 8108 R0001	
24 V DC	4-pol	8 h	Crimp up to 2.5 mm ²	GHG 571 8208 R0001	
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 571 8112 R0001	
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 571 8212 R0001	
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 8102 R0002		Only available in metal version!
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 8104 R0002	
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 8204 R0002	
230 V AC	2-pol + PE	6 h	11 cm multi wire 1.5 mm ²	GHG 571 8106 R0002	
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 571 8106 R0003	
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 571 8206 R0002	
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 571 8108 R0002	
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 571 8208 R0002	
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm ²	GHG 571 8112 R0002	
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm ²	GHG 571 8212 R0002	
Receptacle made of nickel-plated brass					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 8102 R3001	GHG 571 8102 R6001
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 8104 R3001	GHG 571 8104 R6001
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 8204 R3001	GHG 571 8204 R6001
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 571 8106 R3001	GHG 571 8106 R6001
Receptacle made of stainless steel					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 8102 R1001	GHG 571 8102 R5001
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 8104 R1001	GHG 571 8104 R5001
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 8204 R1001	GHG 571 8204 R5001



Plastic

Metal

Ordering key eXLink receptacle 4-pole + PE

Metal version also for Ex-d applications without restriction of volume

GHG 574 8XXX RXX0X

X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp ¹⁾ /30 cm multi wire up to 1.5 mm ²	01 = 1 h	0 = Plastic	0 = without locking device
2 = Crimp ¹⁾ /30 cm multi wire up to 2.5 mm ²	05 = 5 h	1 = Stainless steel AISI 316L with M20 thread	9 = with locking device
¹⁾ Crimp only plastic version Option: Crimp 0.5 mm ²	10 = 10 h	3 = Nickel-plated brass with M20 thread	
		5 = Stainless steel AISI 316L with 1/2" NPT thread	
		6 = Nickel-plated brass with 1/2" NPT thread	

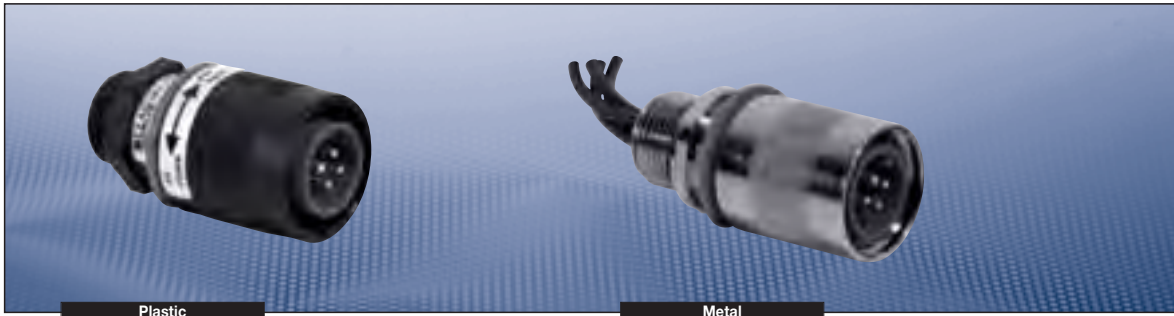
Metal version only potted with multi-wire.
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M20 x 1.5 Order No.	1/2" NPT Order No.
Receptacle made of plastic					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 8101 R0001	Only available in metal version!
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 8105 R0001	
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 8205 R0001	
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 8110 R0001	
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 8210 R0001	
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 8101 R0002	Only available in metal version!
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 8105 R0002	
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 8205 R0002	
230 V AC	4-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 574 8106 R0002	
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 8110 R0002	
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 8210 R0002	
Receptacle made of nickel-plated brass					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 8101 R3001	GHG 574 8101 R6001
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 8105 R3001	GHG 574 8105 R6001
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 8205 R3001	GHG 574 8205 R6001
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 8110 R3001	GHG 574 8110 R6001
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 8210 R3001	GHG 574 8210 R6001
Receptacle made of stainless steel					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 8101 R1001	GHG 574 8101 R5001
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 8105 R1001	GHG 574 8105 R5001
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 8205 R1001	GHG 574 8205 R5001
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 8110 R1001	GHG 574 8110 R5001
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 8210 R1001	GHG 574 8210 R5001

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| eXLink 4-pole |



Plastic

Metal

Ordering key eXLink inlet 4-pole

Metal version also for Ex-d applications with free volume < 2000 cm³

GHG 571 9XXX RXX0X

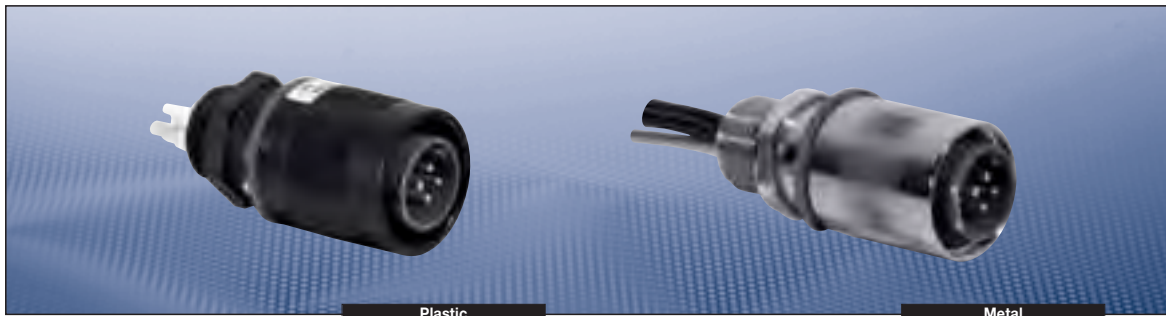
X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp ¹⁾ /30 cm multi wire up to 1.5 mm ²	02 = 2 h	0 = Plastic	0 = without locking device
2 = Crimp ¹⁾ /30 cm multi wire up to 2.5 mm ²	04 = 4 h	1 = Stainless steel AISI 316L with M20 thread	9 = with locking device
¹⁾ Crimp only in plastic version	06 = 6 h	3 = Nickel-plated brass with M20 thread	
Option: Crimp 0.5 mm ²	08 = 8 h	5 = Stainless steel AISI 316L with 1/2" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire. All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M20 x 1.5 Order No.	1/2" NPT Order No.
Inlet made of plastic					
Ethernet/Bus	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 9102 R0001	Only available in metal version!
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 9104 R0001	
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 9204 R0001	
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 9106 R0001	
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 9206 R0001	
24 V DC	4-pol	8 h	Crimp up to 1.5 mm ²	GHG 571 9108 R0001	
24 V DC	4-pol	8 h	Crimp up to 2.5 mm ²	GHG 571 9208 R0001	
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 571 9112 R0001	
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 571 9212 R0001	
Ethernet/Bus	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 9102 R0002		Only available in metal version!
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 9104 R0002	
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 9204 R0001	
230 V AC	2-pol + PE	6 h	15 cm multi wire 1.5 mm ²	GHG 571 9106 R0003	
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 571 9106 R0002	
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 571 9206 R0002	
24 V DC	4-pol	8 h	21 cm multi wire 1.5 mm ²	GHG 571 9108 R0002	
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 571 9108 R0003	
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 571 9208 R0002	
24 V AC	2-pol + PE	12 h	11 cm multi wire 0.75 mm ²	GHG 571 9112 R0002	
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.0 mm ²	GHG 571 9112 R0003	
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm ²	GHG 571 9112 R0004	
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm ²	GHG 571 9212 R0002	
Inlet made of nickel-plated brass V < 2000 cm³					
Ethernet/Bus	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 9102 R3001	GHG 571 9102 R6001
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 9104 R3001	GHG 571 9104 R6001
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 9204 R3001	GHG 571 9204 R6001
Inlet made of stainless steel V < 2000 cm³					
Ethernet/Bus	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 9102 R1001	GHG 571 9102 R5001
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 9104 R1001	GHG 571 9104 R5001
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 9204 R1001	GHG 571 9204 R5001



Plastic

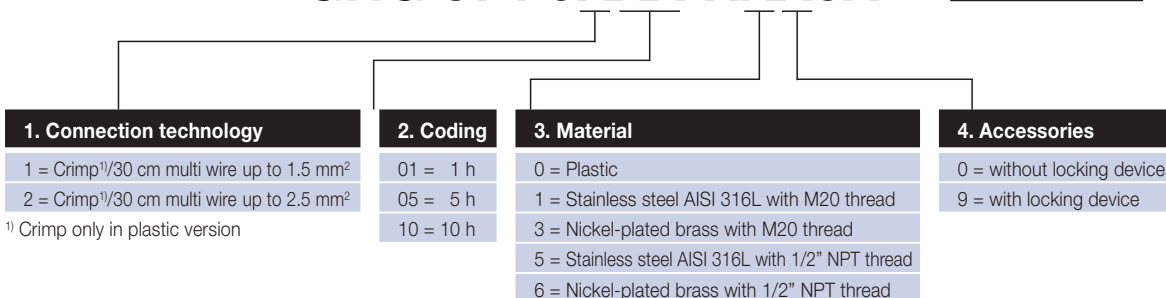
Metal

Ordering key eXLink inlet 4-pole + PE

Metal version for Ex-d applications with free volume < 2000 cm³

GHG 574 9XXX RXX0X

X = Count No.



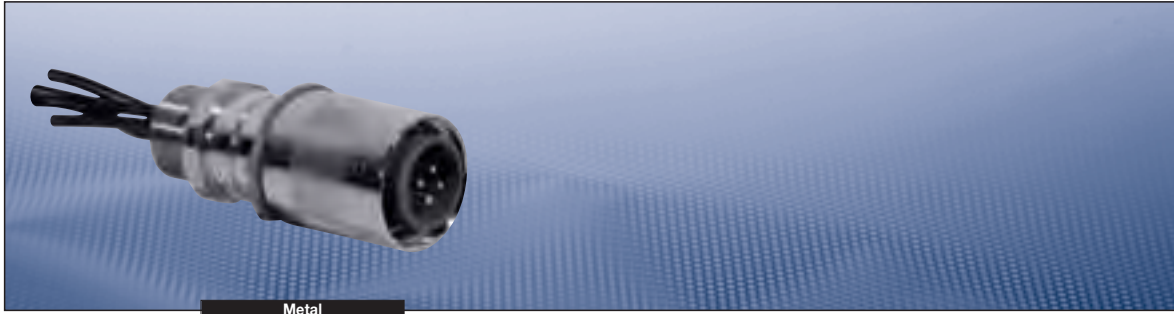
Metal version only potted with multi-wire. All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M20 x 1.5 Order No.	1/2" NPT Order No.
Inlet made of plastic					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 9101 R0001	<i>Only available in metal version!</i>
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 9105 R0001	
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 9205 R0001	
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 9110 R0001	
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 9210 R0001	
Ethernet	4-pol + PE	1 h	30 cm multi wire 1.5 mm ²	GHG 574 9101 R0002	<i>Only available in metal version!</i>
24 V AC	4-pol + PE	5 h	30 cm multi wire 1.0 mm ²	GHG 574 9105 R0002	
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 9110 R0002	
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 9210 R0002	
Inlet made of nickel-plated brass V < 2000 cm³					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 9101 R3001	GHG 574 9101 R6001
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 9105 R3001	GHG 574 9105 R6001
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 9205 R3001	GHG 574 9205 R6001
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 9110 R3001	GHG 574 9110 R6001
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 9210 R3001	GHG 574 9210 R6001
Inlet made of stainless steel V < 2000 cm³					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 9101 R1001	GHG 574 9101 R5001
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 9105 R1001	GHG 574 9105 R5001
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 9205 R1001	GHG 574 9205 R5001
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 9110 R1001	GHG 574 9110 R5001
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 9210 R1001	GHG 574 9210 R5001

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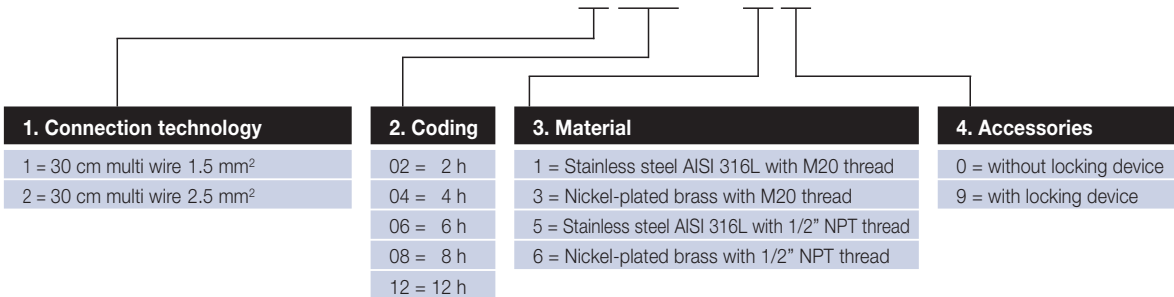
| eXLink 4-pole |



Ordering key eXLink inlet 4-pole

Metal version for Ex-d applications with free volume > 2000 cm³

GHG 571 6XXX RXX01



Metal version only potted with multi-wire.

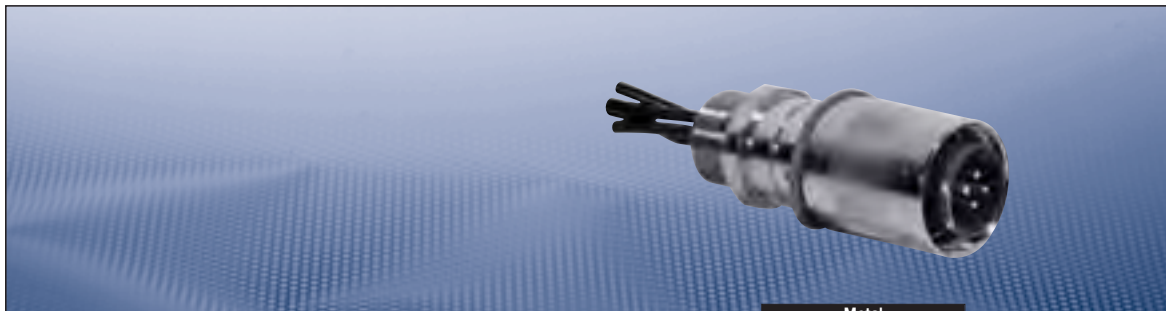
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M20 x 1.5 Order No.	1/2" NPT Order No.

Receptacle made of stainless steel for V > 2000 cm ³					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 6102 R1001	GHG 571 6102 R5001
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 6104 R1001	GHG 571 6104 R5001
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 6204 R1001	GHG 571 6204 R5001
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 571 6106 R1001	GHG 571 6106 R5001
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 571 6206 R1001	GHG 571 6206 R5001
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 571 6108 R1001	GHG 571 6108 R5001
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 571 6208 R1001	GHG 571 6208 R5001
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm ²	GHG 571 6112 R1001	GHG 571 6112 R5001
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm ²	GHG 571 6212 R1001	GHG 571 6212 R5001

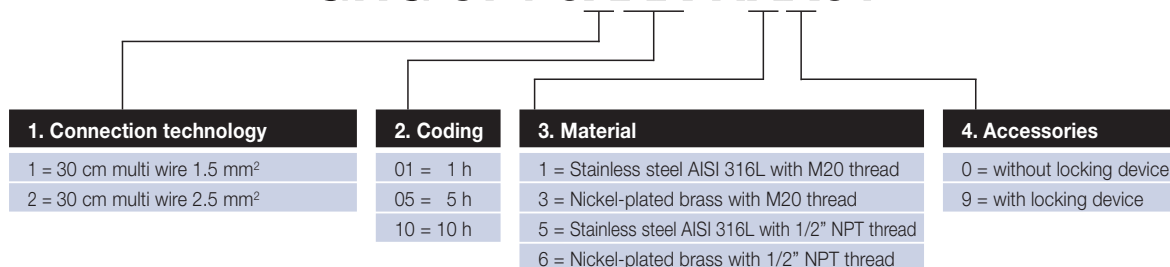
Inlet made of nickel-plated brass V > 2000 cm ³					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm ²	GHG 571 6102 R3001	GHG 571 6102 R6001
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 571 6104 R3001	GHG 571 6104 R6001
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 571 6204 R3001	GHG 571 6204 R6001
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 571 6106 R3001	GHG 571 6106 R6001
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 571 6206 R3001	GHG 571 6206 R6001
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 571 6108 R3001	GHG 571 6108 R6001
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 571 6208 R3001	GHG 571 6208 R6001
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm ²	GHG 571 6112 R3001	GHG 571 6112 R6001
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm ²	GHG 571 6212 R3001	GHG 571 6212 R6001



Ordering key eXLink inlet 4-pole + PE

Metal version for Ex-d applications with free volume > 2000 cm³

GHG 574 6XXX RXX01

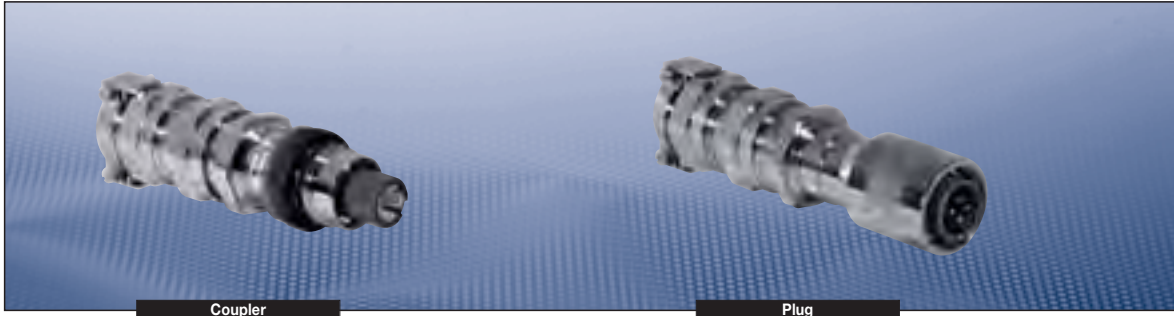


Metal version only potted with multi-wire.
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M20 x 1.5 Order No.	1/2" NPT Order No.
Inlet made of stainless steel for V > 2000 cm³					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 6101 R1001	GHG 574 6101 R5001
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 6105 R1001	GHG 574 6105 R5001
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 6205 R1001	GHG 574 6205 R5001
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 6110 R1001	GHG 574 6110 R5001
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 6210 R1001	GHG 574 6210 R5001
Inlet made of nickel-plated brass V > 2000 cm³					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm ²	GHG 574 6101 R3001	GHG 574 6101 R6001
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm ²	GHG 574 6105 R3001	GHG 574 6105 R6001
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm ²	GHG 574 6205 R3001	GHG 574 6205 R6001
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 574 6110 R3001	GHG 574 6110 R6001
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 574 6210 R3001	GHG 574 6210 R6001

| eXLink 4-pole |



Coupler

Plug

Ordering key eXLink plug/coupler for armoured cables 4-pole

GHG 571 XXXX RXX01

1. Version	2. Connection technology	3. Coding	4. Material	5. Accessories
3 = Coupler 7 = Plug	1 = Crimp up to 1.5 mm ² 2 = Crimp up to 2.5 mm ²	02 = 2 h 04 = 4 h 06 = 6 h 08 = 8 h 12 = 12 h	2 = Stainless steel AISI 316L ¹⁾ 4 = Nickel-plated brass	0 = without locking device 8 = Plug with protection cap 9 = with locking device

¹⁾ Strain relief in nickel-plated brass

Coupler including protective cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable 12 - 21 mm	
				Plug Order No.	Coupler Order No.
Plug/coupler made of stainless steel for armoured cables ¹⁾					
Bus	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 7102 R2001	GHG 571 3102 R2001
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 7104 R2001	GHG 571 3104 R2001
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 7204 R2001	GHG 571 3204 R2001
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 7106 R2001	GHG 571 3106 R2001
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 7206 R2001	GHG 571 3206 R2001
24 V DC	4-pol	8 h	Crimp up to 1.5 mm ²	GHG 571 7108 R2001	GHG 571 3108 R2001
24 V DC	4-pol	8 h	Crimp up to 2.5 mm ²	GHG 571 7208 R2001	GHG 571 3208 R2001
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 571 7112 R2001	GHG 571 3112 R2001
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 571 7212 R2001	GHG 571 3212 R2001
Plug/coupler made of nickel-plated brass for armoured cables					
Bus	3-pol + PA	2 h	Crimp up to 1.5 mm ²	GHG 571 7102 R4001	GHG 571 3102 R4001
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 571 7104 R4001	GHG 571 3104 R4001
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 571 7204 R4001	GHG 571 3204 R4001
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 571 7106 R4001	GHG 571 3106 R4001
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 571 7206 R4001	GHG 571 3206 R4001
24 V DC	4-pol	8 h	Crimp up to 1.5 mm ²	GHG 571 7108 R4001	GHG 571 3108 R4001
24 V DC	4-pol	8 h	Crimp up to 2.5 mm ²	GHG 571 7208 R4001	GHG 571 3208 R4001
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 571 7112 R4001	GHG 571 3112 R4001
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 571 7212 R4001	GHG 571 3212 R4001

¹⁾ Strain relief in nickel-plated brass

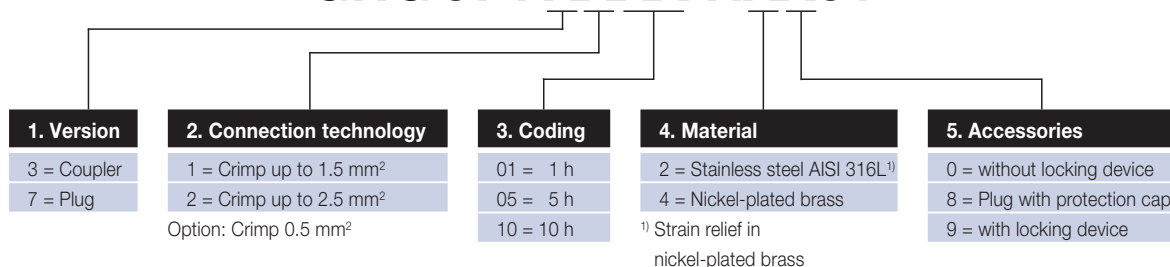


Plug

Coupler

Ordering key eXLink plug/coupler for armoured cables 4-pole + PE

GHG 574 XXXX RXX01



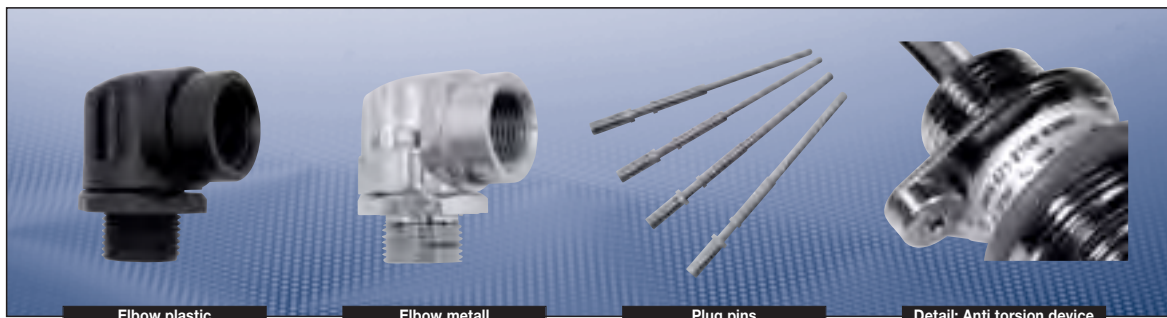
Coupler including protective cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable 12 - 21 mm	
				Plug Order No.	Coupler Order No.
Plug/coupler made of stainless steel for armoured cables ¹⁾					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 7101 R2001	GHG 574 3101 R2001
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 7105 R2001	GHG 574 3105 R2001
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 7205 R2001	GHG 574 3205 R2001
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 7110 R2001	GHG 574 3110 R2001
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 7210 R2001	GHG 574 3210 R2001
Plug/coupler made of nickel-plated brass for armoured cables					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm ²	GHG 574 7101 R4001	GHG 574 3101 R4001
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm ²	GHG 574 7105 R4001	GHG 574 3105 R4001
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm ²	GHG 574 7205 R4001	GHG 574 3205 R4001
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 574 7110 R4001	GHG 574 3110 R4001
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 574 7210 R4001	GHG 574 3210 R4001

¹⁾ Strain relief in nickel-plated brass

■ eXLink 4-pole/4-pole + PE ■



Ordering key eXLink elbow

GHG 571 1000 RX001

Material

0 = Plastic

1 = Stainless steel AISI 316L

3 = Nickel-plated brass

Ordering details

Type	Material	Order No.
Elbow M20 ¹⁾	Plastic	GHG 571 1000 R0001
Elbow M20 ¹⁾	Stainless steel AISI 316L	GHG 571 1000 R1001
Elbow M20 ¹⁾	Nickel-plated brass	GHG 571 1000 R3001

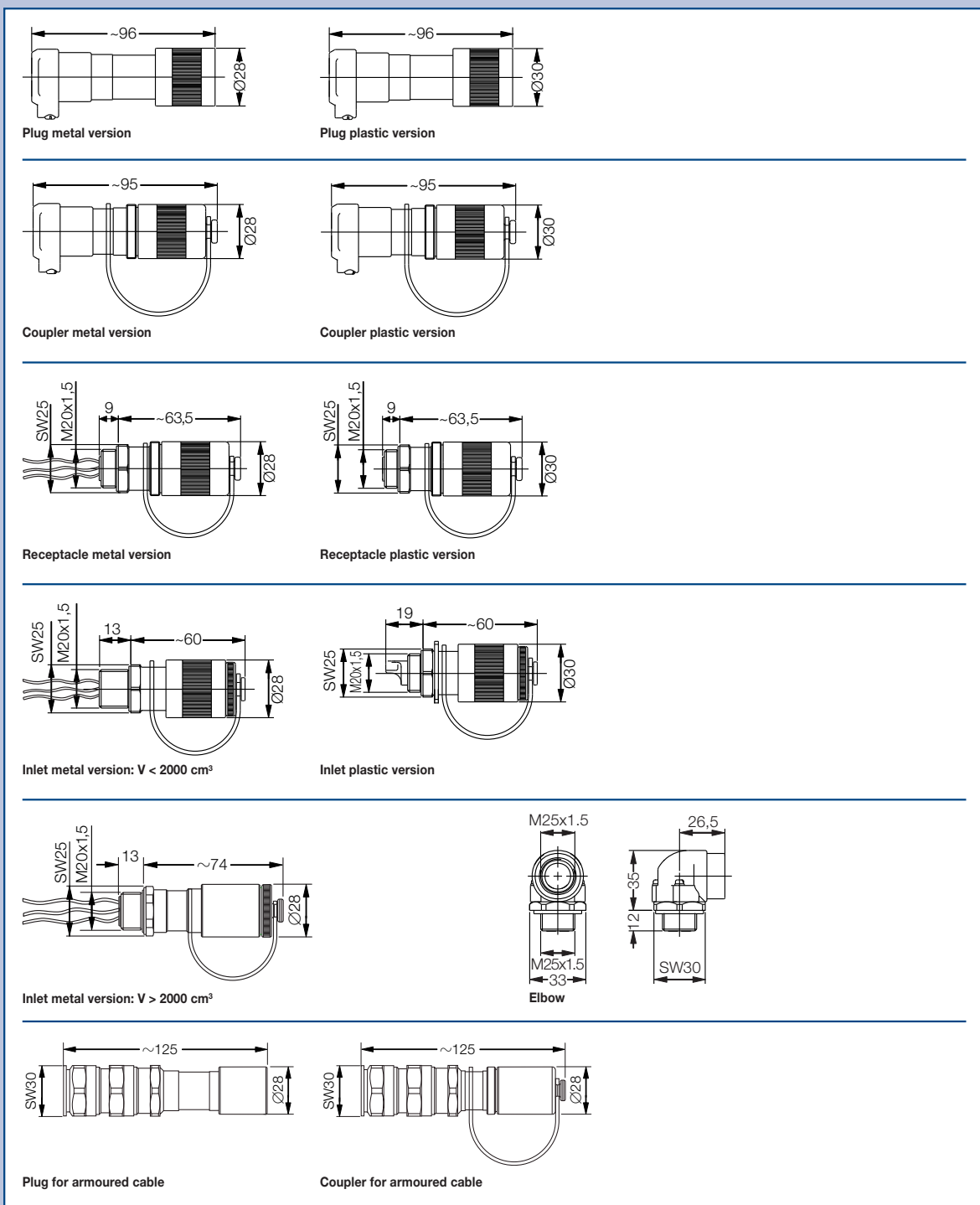
¹⁾ Usage depends on wire cross section and number of wires

Accessories

Type	BE	Version			Order No.
		3+PE	4 pol.	4+PE	
Set of socket contacts 0.5 mm ² , 4-pole	1	X	X	–	GHG 570 1905 R0007
Set of socket contacts 1.5 mm ² , 4-pole	1	X	X	–	GHG 570 1905 R0001
Set of socket contacts 2.5 mm ² , 4-pole	1	X	X	–	GHG 570 1905 R0002
Set of socket contacts 1.5 mm ² , 4-pole + PE contact	1	–	–	X	GHG 570 1905 R0003
Set of socket contacts 2.5 mm ² , 4-pole + PE contact	1	–	–	X	GHG 570 1905 R0004
Crimp tool for eXLink	1	X	X	X	GHG 570 1902 R0001
Plastic protection cap connector/receptacle	1	X	X	X	GHG 570 1903 R0001
Plastic protection cap plug/inlet	1	X	X	X	GHG 570 1903 R0002
Brass protection cap connector/receptacle	1	X	X	X	GHG 570 1903 R0003
Brass protection cap plug/inlet	1	X	X	X	GHG 570 1903 R0004
Set of plug pins 0.5 mm ² , 3-pole + PE (PE leading AC)	1	X	–	–	GHG 570 1904 R0012
Set of plug pins 0.5 mm ² , 4-pole (lagging DC)	1	–	X	–	GHG 570 1904 R0011
Set of plug pins 1.5 mm ² , 3-pole + PE (PE leading AC)	1	X	–	–	GHG 570 1904 R0003
Set of plug pins 1.5 mm ² , 4-pole (lagging DC)	1	–	X	–	GHG 570 1904 R0001
Set of plug pins 2.5 mm ² , 3-pole + PE (PE leading AC)	1	X	–	–	GHG 570 1904 R0004
Set of plug pins 2.5 mm ² , 4-pole (lagging DC)	1	–	X	–	GHG 570 1904 R0002
Set of plug pins 1.5 mm ² , 4-pole + PE-spring clip	1	–	–	X	GHG 570 1904 R0005
Set of plug pins 2.5 mm ² , 4-pole + PE-spring clip	1	–	–	X	GHG 570 1904 R0006
ScREW driver for cage clamp	1	X	X	–	GHG 570 1908 R0001
Strain relief and seal 4 - 7.5 mm	1	X	X	X	GHG 570 1907 R0001
Strain relief and seal 7.5 - 11 mm	1	X	X	X	GHG 570 1907 R0002
Anti torsion device M20	1	X	X	X	GHG 570 1901 R0001



Dimension drawing eXLink



Dimensions in mm

1
2
3
4
5
6
7
8
9
10
11
12

eXLink 4-pole + PA for Zone 1 and Zone 21

The inlets and receptacles **eXLink Ethernet** and **eXLink USB** extend the proven connector series **eXLink** for hazardous areas. They can be used for plug-in connection for industrial LAN/Ethernet and USB applications with each other in areas with an explosion hazard. The normally used electrical isolation of an intrinsically safe interface is no longer necessary. The Ex-de technology of the connectors allows the use of full industrial Ethernet power without barriers. This increases the efficiency of the bus architecture and reduces the susceptibility to faults and therefore the costs.

The sockets of the inlets and receptacles designed with Ex-de degree of protection have the proven CEAG contacts of shutter-like, punched and specially treated copper-beryllium band which provides a perfect electrical connection continuously with its large number of contact points. An Ex-d space around each plug pin provides a reliable ex-d chamber for explosion protection during connection and disconnection of the connectors in zones 1, 2, 21 and 22. To rule out incorrect assignment, the inlets and receptacles are coded according to time similar to the IEC 60309 system.

In accordance with the requirements of a contemporary, safe and time-saving assembly, all the components are equipped with earthing cables, cable stub and pre-assembled RJ plug male/female or USB plug male/female.

With the M20 screw-in thread the nickel-plated brass components (optionally stainless steel) can be integrated in all flameproof design enclosures, allowing the use of industrial Ethernet cards/instruments inside without limits.

- Hot swap
- Compact design
- High degree of protection IP66 / IP68
- Simple assembly
- Frequency range up to 100 MHz or USB 2.0
- Transfer rate up to 100 MBaud (Ethernet)
- Available for 10 BASE-T, 100 BASE-T





Innovative connectors for Ethernet systems

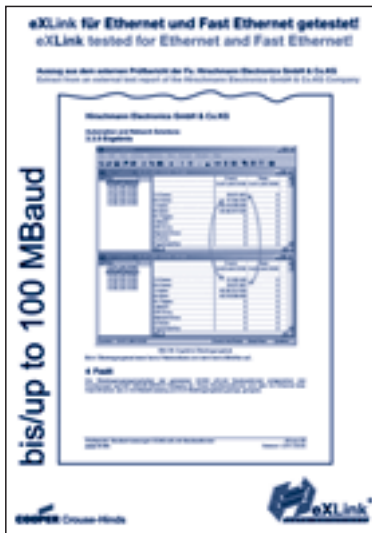
Combine the safety of an innovative explosion-protected connector system with the advantages of a homogeneous communication structure between the host, control and process level! With **eXLink Ethernet** and **eXLink USB** you can also use efficient, Ethernet-based communication systems in the hazardous areas. This enables you to use a modern information architecture at the same time as efficiently satisfying all criteria for explosion protection.

Conventional field bus systems are designed exclusively for data communication with the process and production

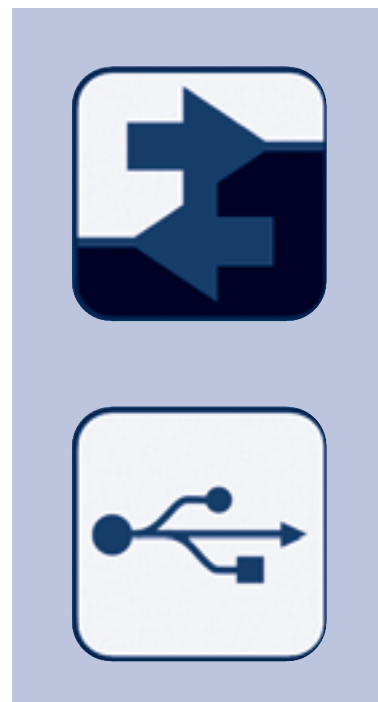
control. With Ethernet as a communication medium you can implement a homogeneous infrastructure from the host level via the control level to the process level. In the industrial environment, **eXLink** connector systems replace the familiar connectors of the IT office world. Therefore this systems also offers you the real time performance of Ethernet networks – hot swap – in addition to high safety standards in areas with an explosion hazard.

Adapt your control to the changing production processes. Child's play with **eXLink** connectors because Ethernet components and explosion protection have a modular structure. This means that you can update your information architecture without having to change your explosion-protected installation by simply changing the components in their pressurised enclosures. You can use conventional industrial components because the explosion-protected connection to your network is provided by the **eXLink** installed in the enclosure which also enables hot swapping of your terminating equipment without isolating and without hot work permit.

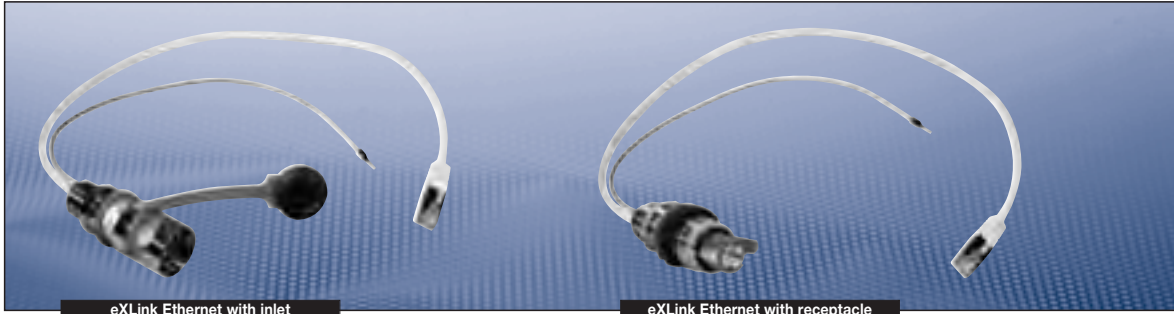
The **eXLink** also put your data transmission on the safe side. Independent measurements of a well-known laboratory have classified the use of the **eXLink 4-pole + PA** up to 100 MHz and with transfer rates up to 100 Mbaud according to the requirements layed out in TIA/EIA-568-B.2 Category 5e as safe. The **eXLink 4-pole + PA** system can therefore be used in **Fast Ethernet®** or **Ethernet®** networks as well as for the implementation of explosion-protected USB interfaces such as hard disk driver.



Advanced technology with eXLink available by now



| eXLink Ethernet 4-pole + PA |



Technical data

eXLink Ethernet 4-pole + PA

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 03 ATEX 1016 X
IECEX-Certificate of Conformity	IECEX BK1 06.0005X
Marking accd. to IECEx	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T52 °C
Permissible ambient temperature	-55 °C up to +40 °C
Store temperature in original wrapping	-55 °C up to +80 °C
Rated voltage	BUS
Rated current	max. 1 A
Frequency range	0 - 100 MHz, Fast Ethernet® compatible
Terminal cross section	Ethernet-cable 300 mm CAT 5e with plug RJ 45 male/female ¹⁾
Insulation class acc. EN 60598	I
Transmission performance acc. to TIA/EIA-568-B.2	Category 5e up to 100 Mbaud
Degree of protection EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	Nickel plated brass / stainless steel 316L
Coding	1 h
Cable entry inlet and receptacle	M20 x 1.5 / 1/2" NPT
Accessories (option)	Locking device

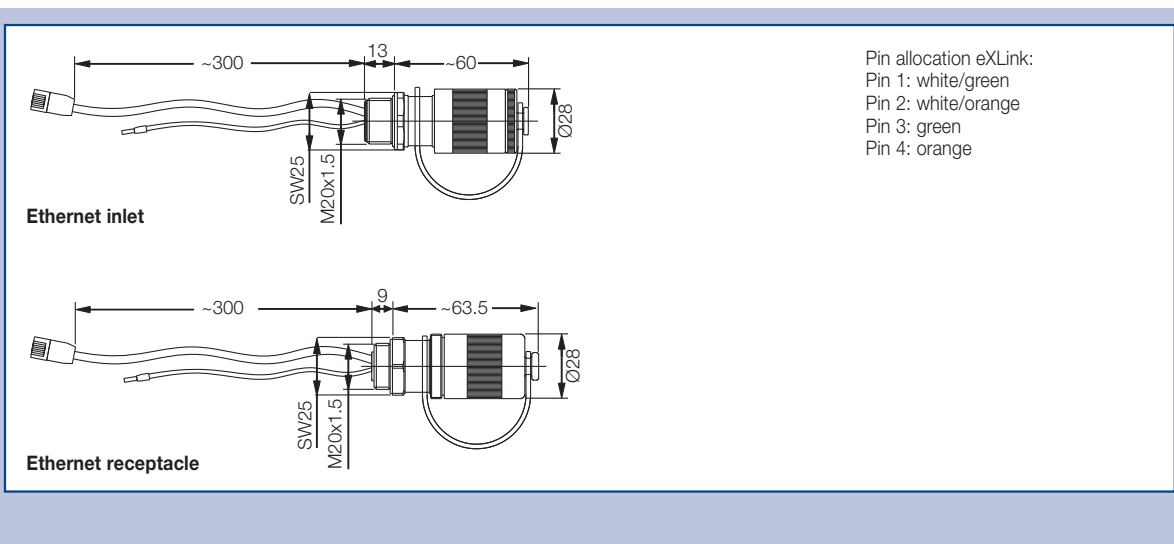
Ordering details

Scope of delivery	Order No.
eXLink Ethernet inlet with cable and RJ plug male (nickel plated brass)	GHG 574 9101 R3002
eXLink Ethernet inlet with cable and RJ plug female (nickel plated brass)	GHG 574 9101 R3004
eXLink Ethernet receptacle with cable and RJ plug male (nickel plated brass)	GHG 574 8101 R3002
eXLink Ethernet receptacle with cable and RJ plug female (nickel plated brass)	GHG 574 8101 R3004

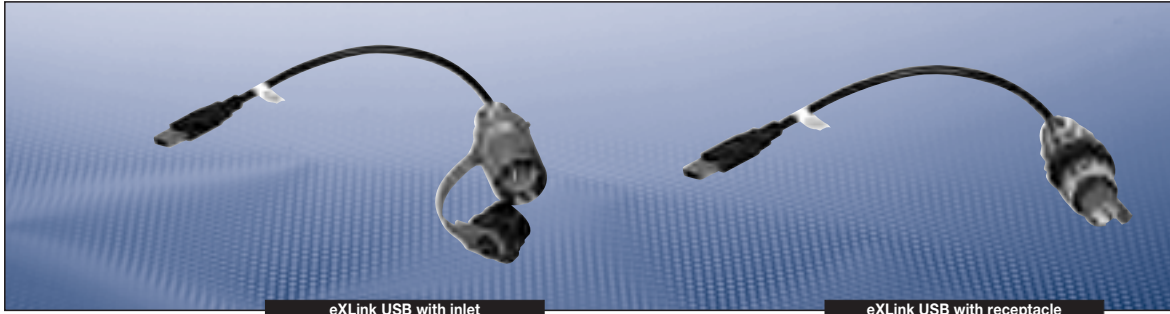
¹⁾ other cable length on request

all versions including protective caps

Dimension drawing



Dimensions in mm



Technical data

eXLink USB 4-pole

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 03 ATEX 1016 X
IECEX-Certificate of Conformity	IECEX BK1 06.0005X
Marking accd. to IECEx	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T52 °C
Permissible ambient temperature	-55 °C up to +40 °C
Store temperature in original wrapping	-55 °C up to +80 °C
Rated voltage	BUS
Rated current	max. 1 A
Frequency range	USB 2.0
Terminal cross section	data cable 200 mm with USB plug/coupler male/female ¹⁾
Insulation class acc. EN 60598	I
Degree of protection EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	Nickel plated brass / stainless steel 316L
Coding	2 h
Cable entry inlet and receptacle	M20 x 1,5 / 1/2" NPT
Accessories (option)	locking device

Ordering details

Scope of delivery

- eXLink Inlet with cable and USB plug male (nickel plated brass)
- eXLink Inlet with cable and USB coupler female (nickel plated brass)
- eXLink Receptacle with cable and USB plug female (nickel plated brass)
- eXLink Receptacle with cable and USB plug male (nickel plated brass)

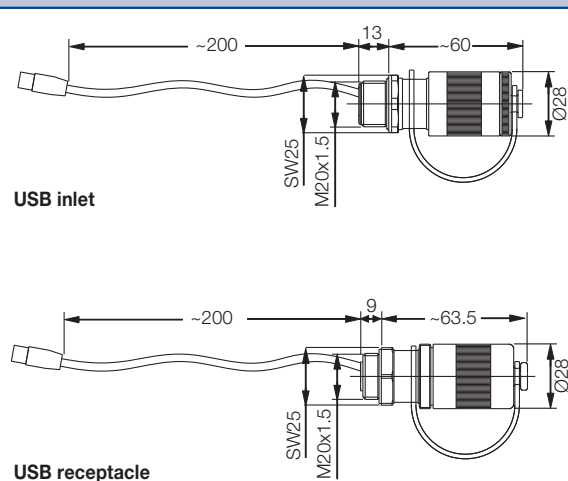
Order No.

- GHG 571 9102 R3003**
- GHG 571 9102 R3004**
- GHG 571 8102 R3003**
- GHG 571 8102 R3004**

¹⁾ other cable length on request

all versions including protective caps

Dimension drawing



Pin allocation eXLink:
Pin 1: white/green
Pin 2: white/orange
Pin 3: green
Pin 4: orange

Dimensions in mm

eXLink

eXLink 7-pole / 6-pole + PE for Zone 1 and Zone 2 I

Providing flexible power supply and signal – connection there, where it is needed – even in hazardous areas for the Zones 1 and 2.

The eXLink 7 pole / 6- pole + PE is a complete system for connecting and disconnecting product electrically. Supplying from low voltage BUS signals up to 400 V AC / 16 A electrical power the full range of connectors and receptacles are available with moulded plastic enclosures as well as nickel-plated brass or stainless steel enclosures materials.

A coding system following to IEC 60309 system secures from misconnections of non-compatible voltage levels. Only connectors and plugs with the same voltage level can be plugged into.

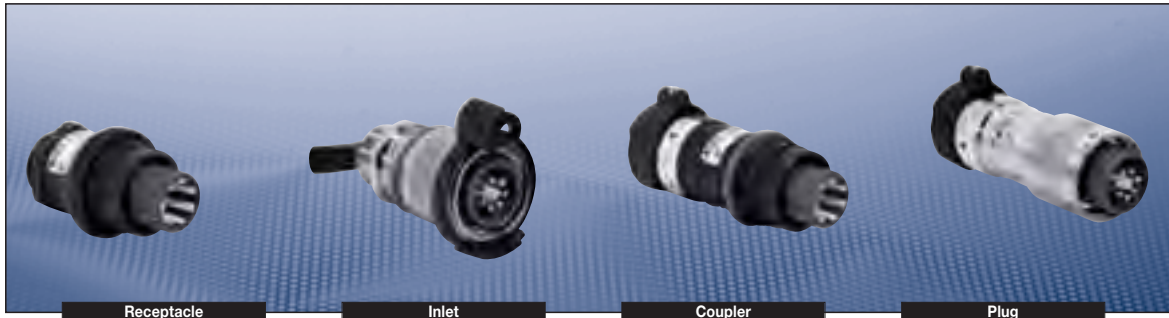
The well-known and reliable bonding technique “crimp connection” for wire size of 0.75 mm² up to 1.5 mm² and optional 2.5 mm² is used for wire connection to the pins. Additionally a screw-less technique “cage clamp” can be used for selected types. A special plug and connector for the use of armoured cable is available.

The Receptacle and the Inlet are equipped with metric thread M25 x 1.5 or 3/4” NPT thread to screw directly into electrical apparatus. The factory potted metal versions can be used directly into Ex-d enclosures without additionally certification to be applied.

All eXLink plugs, inlets, receptacle and connectors are designed for hot swapping of apparatus in hazardous areas without disconnecting terminals, without shutting down circuits and without a “hot work permit”!



- Hot swap
- Standard IP protection IP66/IP68
- Permissible ambient temperature from -55 to +70 °C
- Up to 400 V 16 A
- Stainless steel or nickel plated brass enclosures for highest mechanical protection
- Max. 7-pole (6-pole + PE) connections
- Mining (EX I M2) certified



Technical data

eXLink 6+1-pole / 7-pole	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 Ex ia/ib IIC T6 / Ⓔ II 3 D Ex tD A22 IP 5x T80 °C
EC-Type Examination Certificate	PTB 06 ATEX 1031 X
IECEX-Certificate of Conformity	IECEX BKI 06.0005X
Marking accd. to IECEx	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T52 °C
Permissible ambient temperature	-20 °C up to +40 °C (Rated current 16 A)
Extended temperature range	-55 °C up to +75 °C (Metal version, rated current 1 A)
Store temperature in original wrapping	-55 °C up to +80 °C
Rated voltage	AC up to 400 V, 50/60 Hz / DC up to 60 V
Rated current	max. 3 x 16 A
Rated making/rated breaking capacity	AC-3: U _e 400 V / I _e 1 A
acc. EN 60 947-4	DC-3: U _e 60 V / I _e 0.5 A
External back-up fuse max. without thermal protection	16 A
External back-up fuse max. with thermal protection	20 A gL
Insulation class acc. EN 60598	II: plastic / I: metal
Terminal cross section	
Plug, coupler	Crimp 1.5 mm ² : 0.75 - 1.5 mm ² / Solder: 0.34 - 1.0 mm ² Crimp 2.5 mm ² : 2.5 mm ² Cage clamp: 0.5 - 1.0 mm ² multi wire, 0.5 - 1.5 mm ² single wire
Inlet, receptacle in plastic	Crimp 1.5 mm ² : 0.75 - 1.5 mm ² / Solder: 0.34 - 1.0 mm ² Crimp 2.5 mm ² : 2.5 mm ²
Inlet, receptacle in metal	30 cm multi wire ¹⁾ : 1.5 mm ² / 2.5 mm ²
Cable entry plug and coupler	Ø 7 - 11 mm / Ø 11 - 15 mm
Cable entry plug and coupler for armoured cables	external isol. Ø 16- 26 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm
Cable entry inlet and receptacle	M25 x 1.5 / 3/4" NPT
Degree of protection EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	
Plug, coupler, inlet < 2000 cm ³ and receptacle	Polyamide, nickel plated brass or stainless steel AISI 316L
Inlet > 2000 cm ³ and plug/coupler for armoured cables	Nickel plated brass or stainless steel AISI 316L

¹⁾ other length on request

Ordering key eXLink 6+1-pole

1. Type

- 1 = Elbow
- 3 = Coupler
- 6 = Inlet > 2000 cm³
- 7 = Plug
- 8 = Receptacle
- 9 = Inlet

2. Connection technology

- 1 = Crimp up to 1.5 mm²
- 2 = Crimp up to 2.5 mm²
- 6 = Cage clamp

3. Coding

- 04 = 4 h / 110 V AC 6p + PE
- 06 = 6 h / 230 V AC 6p + PE
- 08 = 8 h / 24 V DC 7p
- 10 = 10 h / 400 V AC 6p + PE
- 12 = 12 h / 24 V AC 6p + PE

GHG 572 XXXX RXX0X

4. Material

- 0 = Plastic
- 1 = Stainless steel AISI 316L
- 2 = Stainless steel AISI 316L for armoured cables
- 3 = Nickel-plated brass
- 4 = Brass for armoured cables
- 5 = Stainless steel AISI 316L NPT
- 6 = Nickel-plated brass NPT

5. Accessories

- 0 = without locking device
- 8 = Protection cap for plug
- 9 = with locking device

6. Diameter of connection cable (plug and coupler)

- 1 = 7 - 11 mm/16 - 26 mm¹⁾
 - 2 = 11 - 15 mm
- ¹⁾ Version for armoured cables

7. Connection (inlet and receptacle)

Connecting wire	Plastic	Nickel plate brass	Stainless steel
Crimp	...R0XX1	n.A.	n.A.
30 cm	...R0XX2	...R3XX1	...R1XX1
50 cm	...R0XX3	...R3XX2	...R1XX2
75 cm	...R0XX4	...R3XX3	...R1XX3
150 cm	...R0XX5	...R3XX4	...R1XX4

Overview for possible configurations

	Plastic	Nickel-plated brass	Stainless steel	Crimp 1.5 mm ²	Crimp 2.5 mm ²	Solder	Cage clamp	30 cm multi wire 1.5 mm ²	30 cm multi wire 2.5 mm ²	Cable entries Ø 7 - 11 mm	Cable entries Ø 11 - 15 mm	Cable entries Ø 16 - 26 mm	M25 x 1.5	3/4" NPT
Plug	x	x	x	x	x	x	x			x	x			
Coupler	x	x	x	x	x	x	x			x	x			
Plug for armoured cables		x	x	x	x	x	x					x		
Coupler for armoured cables		x	x	x	x	x	x					x		
Inlet for Ex e enclosure	x	x	x	x	x			x ²⁾	x ²⁾				x	x
Info for Ex d enclosure < 2000 cm ³		x	x					x ²⁾	x ²⁾				x	x
Info for Ex d enclosure > 2000 cm ³		x	x					x ²⁾	x ²⁾				x	x
Receptacle for Ex e enclosure	x	x	x	x	x			x ²⁾	x ²⁾				x	x
Receptacle for Ex d enclosure (no restriction on free volume)		x	x					x ²⁾	x ²⁾				x	x
Elbow for Ex e enclosure	x	x	x										x	x
Elbow for Ex d enclosure		x	x										x	x

²⁾ on customers request available with cable length 500/750/1500 mm

For customers who wants to configure the needed eXLink easily and fast
Cooper Crouse-Hinds offers via the Internet separate tool to select the right type
and order No.: http://www.internezzo.de/sd_ceag/index.html

CONFIGURATOR

From a selection of nearly 2000 variants of eXLink connector products you will find **YOUR eXLink** product fast, reliable and easy using our new product configurator.

Click [here](#) try and use the new tool



eXLink 4/4 + PE-pole eXLink 7/6 + PE-pole Y-Adaptor © 2007 internezzo

Type: plug male - for passive cable connection

Material: nickel plated brass

Clock Setting / Voltage: 04 h: 6-pol + PE - 110 V AC

Connection Technology: 1.5 mm² Crimp

Accessories: without locking device

Connector cable: cable diameter 7.0 - 11.0 mm

GHG 572 7104 R3001



eXLink 4/4 + PE-pole eXLink 7/6 + PE-pole Y-Adaptor © 2007 internezzo

Type: coupler female - for active cable connection

Material: stainless steel 316L for armoured cable

Clock Setting / Voltage: 04 h: 6-pol + PE - 110 V AC

Connection Technology: 1.5 mm² Crimp

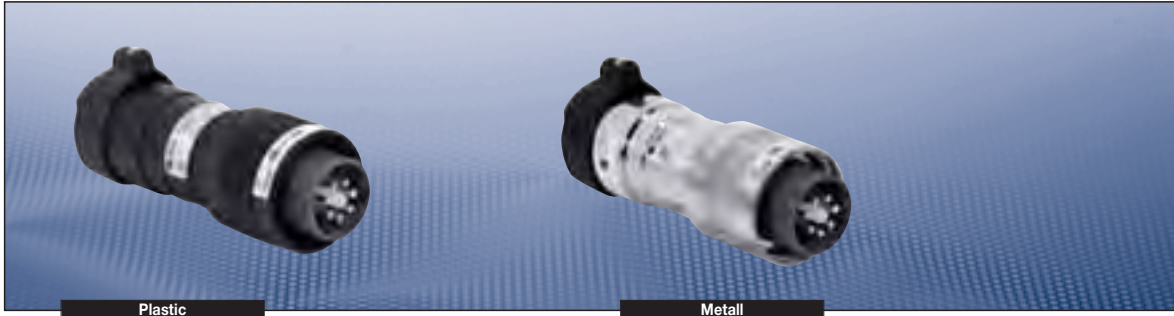
Accessories: without locking device

Connector cable: cable diameter 16-26 mm

GHG 572 3104 R2001



| eXLink 7-pole/6-pole + PE |



Ordering key eXLink Plug 6+1-pole/7-pole

GHG 572 7XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Diameter of connection cable
1 = Crimp up to 1.5 mm ²	04 = 4 h	0 = Plastic	0 = without locking device	1 = 7 – 11 mm
2 = Crimp up to 2.5 mm ²	08 = 8 h	1 = Stainless steel AISI 316L	8 = with protection cap	2 = 11 – 15 mm
6 = Cage-clamp	10 = 10 h	3 = Nickel-plated brass	9 = with locking device	
	12 = 12 h			

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				7 - 11 mm Order No.	11 - 15 mm Order No.
Plug made of plastic					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 7104 R0001	GHG 572 7104 R0002
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 7204 R0001	GHG 572 7204 R0002
110 V AC	6-pol + PE	4 h	Cage clamp	GHG 572 7604 R0001	GHG 572 7604 R0002
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 7106 R0001	GHG 572 7106 R0002
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 7206 R0001	GHG 572 7206 R0002
230 V AC	6-pol + PE	6 h	Cage clamp	GHG 572 7606 R0001	GHG 572 7606 R0002
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 7108 R0001	GHG 572 7108 R0002
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 7208 R0001	GHG 572 7208 R0002
Plug made of nickel-plated brass					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 7104 R3001	GHG 572 7104 R3002
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 7204 R3001	GHG 572 7204 R3002
110 V AC	6-pol + PE	4 h	Cage clamp	GHG 572 7604 R3001	GHG 572 7604 R3002
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 7106 R3001	GHG 572 7106 R3002
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 7206 R3001	GHG 572 7206 R3002
230 V AC	6-pol + PE	6 h	Cage clamp	GHG 572 7606 R3001	GHG 572 7606 R3002
Plug made of stainless steel					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 7104 R1001	GHG 572 7104 R1002
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 7204 R1001	GHG 572 7204 R1002
110 V AC	6-pol + PE	4 h	Cage clamp	GHG 572 7604 R1001	GHG 572 7604 R1002
230 V AC	6 pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 7106 R1001	GHG 572 7106 R1002
230 V AC	6 pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 7206 R1001	GHG 572 7206 R1002
230 V AC	2-pol + PE	6 h	Cage clamp	GHG 572 7606 R1001	GHG 572 7606 R1002
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 7108 R1001	GHG 572 7108 R1002
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 7208 R1001	GHG 572 7208 R1002
24 V DC	7-pol.	8 h	Cage clamp	GHG 572 7608 R1001	GHG 572 7608 R1002
400 V AC	6-p + PE	10 h	Crimp up to 1.5 mm ²	GHG 572 7110 R1001	GHG 572 7110 R1002
400 V AC	6-p + PE	10 h	Crimp up to 2.5 mm ²	GHG 572 7210 R1001	GHG 572 7210 R1002
24 V AC	6-p + PE	12 h	Crimp up to 1.5 mm ²	GHG 572 7112 R1001	GHG 572 7112 R1002
24 V AC	6-p + PE	12 h	Crimp up to 2.5 mm ²	GHG 572 7212 R1001	GHG 572 7212 R1002



Ordering key eXLink coupler 6+1-pole/7-pole

GHG 572 3XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Diameter of connection cable
1 = Crimp up to 1.5 mm ²	04 = 1 h	0 = Plastic	0 = without locking device	1 = 7 – 11 mm
2 = Crimp up to 2.5 mm ²	06 = 5 h	1 = Stainless steel AISI 316L	9 = with locking device	2 = 11 – 15 mm
6 = Cage-clamp	08 = 6 h	3 = Nickel-plated brass		
	10 = 10 h			
	12 = 12 h			

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				7 – 11 mm Order No.	11 – 15 mm Order No.
Coupler made of plastic version					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 3104 R0001	GHG 572 3104 R0002
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 3204 R0001	GHG 572 3204 R0002
110 V AC	6-pol + PE	4 h	Cage clamp	GHG 572 3604 R0001	GHG 572 3604 R0002
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 3106 R0001	GHG 572 3106 R0002
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 3206 R0001	GHG 572 3206 R0002
230 V AC	6-pol + PE	6 h	Cage clamp	GHG 572 3606 R0001	GHG 572 3606 R0002
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 3108 R0001	GHG 572 3108 R0002
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 3208 R0001	GHG 572 3208 R0002
Coupler made of nickel-plated brass					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 3104 R3001	GHG 572 3104 R3002
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 3204 R3001	GHG 572 3204 R3002
110 V AC	6-pol + PE	4 h	Cage clamp	GHG 572 3604 R3001	GHG 572 3604 R3002
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 3106 R3001	GHG 572 3106 R3002
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 3206 R3001	GHG 572 3206 R3002
230 V AC	6-pol + PE	6 h	Cage clamp	GHG 572 3606 R3001	GHG 572 3606 R3002
Coupler made of stainless steel					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 3104 R1001	GHG 572 3104 R1002
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 3204 R1001	GHG 572 3204 R1002
110 V AC	6-pol + PE	4 h	Cage clamp	GHG 572 3604 R1001	GHG 572 3604 R1002
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 3106 R1001	GHG 572 3106 R1002
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 3206 R1001	GHG 572 3206 R1002
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 3108 R1001	GHG 572 3108 R1002
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 3208 R1001	GHG 572 3208 R1002
400 V AC	6p + PE	10 h	Crimp up to 1.5 mm ²	GHG 572 3110 R1001	GHG 572 3110 R1002
400 V AC	6p + PE	10 h	Crimp up to 2.5 mm ²	GHG 572 3210 R1001	GHG 572 3210 R1002
24 V AC	6p + PE	12 h	Crimp up to 1.5 mm ²	GHG 572 3112 R1001	GHG 572 3112 R1002
24 V AC	6p + PE	12 h	Crimp up to 2.5 mm ²	GHG 572 3212 R1001	GHG 572 3212 R1002

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| eXLink 7-pole/6-pole + PE |



Plastic

Metal

Ordering key eXLink receptacle 6+1-pole/7-pole

Metal version for Ex-d application for volume >2000 cm³

GHG 572 8XXX RXX0X — X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp ¹⁾ /30 cm multi wire up to 1.5 mm ²	04 = 4 h	0 = Plastic	0 = without locking device
2 = Crimp ¹⁾ /30 cm multi wire up to 2.5 mm ²	06 = 6 h	1 = Stainless steel AISI 316L with M25 thread	9 = with locking device
¹⁾ Crimp only in plastic version	08 = 8 h	3 = Nickel-plated brass with M25 thread	
	10 = 10 h	5 = Stainless steel AISI 316L with 3/4" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 3/4" NPT thread	

Metal version only potted with multi-wire.

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread		
				M25 x 1.5 Order No.	3/4" NPT Order No.	
Receptacle made of plastic version						
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 8104 R0001	Only available in metal version!	
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 8204 R0001		
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 8106 R0001		
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 8206 R0001		
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 8108 R0001		
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 8208 R0001		
400 V AC	6p + PE	10 h	Crimp up to 1.5 mm ²	GHG 572 8110 R0001		
400 V AC	6p + PE	10 h	Crimp up to 2.5 mm ²	GHG 572 8210 R0001		
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 572 8112 R0001		
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 572 8212 R0001		
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 8104 R0002		Only available in metal version!
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 8204 R0002		
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 8106 R0002		
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 8206 R0002		
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 572 8108 R0002		
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 572 8208 R0002		
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 572 8208 R0002		
Receptacle made of nickel-plated brass						
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 8104 R3001	GHG 572 8104 R6001	
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 8204 R3001	GHG 572 8204 R6001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 8106 R3001	GHG 572 8106 R6001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 8206 R3001	GHG 572 8206 R6001	
Receptacle made of stainless steel						
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 8104 R1001	GHG 572 8104 R5001	
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 8204 R1001	GHG 572 8204 R5001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 8106 R1001	GHG 572 8106 R5001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 8206 R1001	GHG 572 8206 R5001	



Locking device

Metall

Plastic

Ordering key eXLink inlet 6+1-pole/7-pole < 2000 cm³

Metal version also for Ex-d application with free volume < 2000 cm³

GHG 572 9XXX RXX0X

X = Count No.

see page 6.30 point 7

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp ¹⁾ /30 cm multi wire up to 1.5 mm ²	04 = 4 h	0 = Plastic	0 = without locking device
2 = Crimp ¹⁾ /30 cm multi wire up to 2.5 mm ²	06 = 6 h	1 = Stainless steel AISI 316L with M25 thread	9 = with locking device
¹⁾ Crimp only in plastic version	08 = 8 h	3 = Nickel-plated brass with M25 thread	
	10 = 10 h	5 = Stainless steel AISI 316L with 3/4" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 3/4" NPT thread	

Metal version only potted with multi-wire.

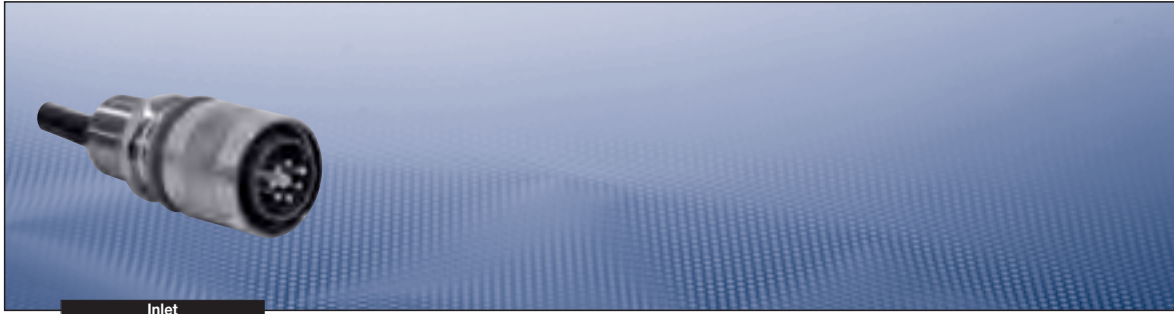
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Connection	Thread		
				M25 x 1.5 Order No.	3/4" NPT Order No.	
Inlet made of plastic						
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 9104 R0001	<i>Only available in metal version!</i>	
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 9204 R0001		
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 9106 R0001		
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 9206 R0001		
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 9108 R0001		
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 9208 R0001		
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 572 9110 R0001		
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 572 9210 R0001		
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 572 9112 R0001		
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 572 9212 R0001		
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 9104 R0002		<i>Only available in metal version!</i>
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 9204 R0002		
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 9106 R0002		
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 9206 R0002		
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 572 9108 R0002		
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 572 9208 R0002		
Inlet made of nickel-plated brass						
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 9104 R3001	GHG 572 9104 R6001	
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 9204 R3001	GHG 572 9204 R6001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 9106 R3001	GHG 572 9106 R6001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 9206 R3001	GHG 572 9206 R6001	
Inlet made of stainless steel						
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 9104 R1001	GHG 572 9104 R5001	
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 9204 R1001	GHG 572 9204 R5001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 9106 R1001	GHG 572 9106 R5001	
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 9206 R1001	GHG 572 9206 R5001	

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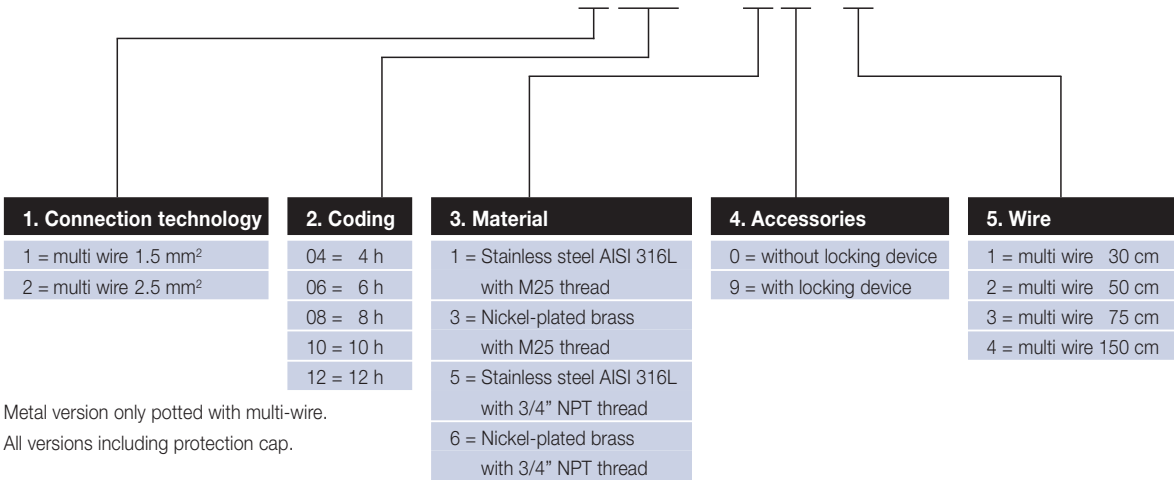
| eXLink 7-pole/6-pole + PE |



Ordering key eXLink inlet 6+1-pole/7-pole > 2000 cm³

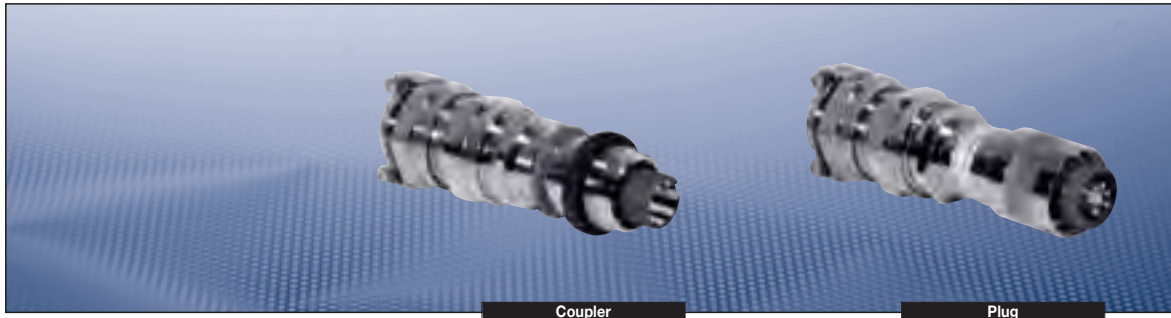
Metal version for Ex-d application with free volume > 2000 cm³

GHG 572 6XXX RXX0X



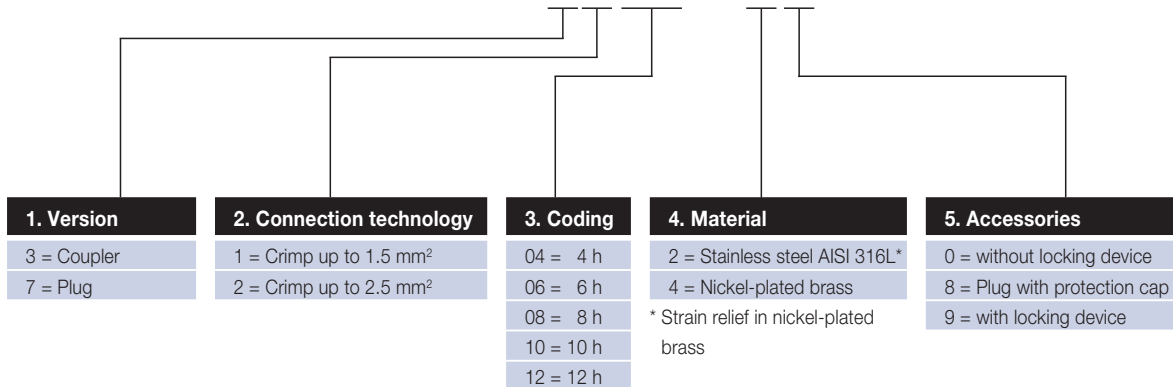
Ordering details

Voltage	No. of poles	Coding	Connection	Thread	
				M25 x 1.5 Order No.	3/4" NPT Order No.
Inlet made of stainless steel for V > 2000 cm³					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 6104 R1001	GHG 572 6104 R5001
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 6204 R1001	GHG 572 6204 R5001
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 6106 R1001	GHG 572 6106 R5001
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 6206 R1001	GHG 572 6206 R5001
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 572 6108 R1001	GHG 572 6108 R5001
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 572 6208 R1001	GHG 572 6208 R5001
400 V AC	6-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 572 6110 R1001	GHG 572 6110 R5001
400 V AC	6-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 572 6210 R1001	GHG 572 6210 R5001
24 V AC	6-pol + PE	12 h	30 cm multi wire 1.5 mm ²	GHG 572 6112 R1001	GHG 572 6112 R5001
24 V AC	6-pol + PE	12 h	30 cm multi wire 2.5 mm ²	GHG 572 6212 R1001	GHG 572 6212 R5001
Inlet made of nickel-plated brass V > 2000 cm³					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm ²	GHG 572 6104 R3001	GHG 572 6104 R6001
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm ²	GHG 572 6204 R3001	GHG 572 6204 R6001
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm ²	GHG 572 6106 R3001	GHG 572 6106 R6001
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm ²	GHG 572 6206 R3001	GHG 572 6206 R6001
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm ²	GHG 572 6108 R3001	GHG 572 6108 R6001
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm ²	GHG 572 6208 R3001	GHG 572 6208 R6001
400 V AC	6-pol + PE	10 h	30 cm multi wire 1.5 mm ²	GHG 572 6110 R1001	GHG 572 6110 R6001
400 V AC	6-pol + PE	10 h	30 cm multi wire 2.5 mm ²	GHG 572 6210 R1001	GHG 572 6210 R6001
24 V AC	6-pol + PE	12 h	30 cm multi wire 1.5 mm ²	GHG 572 6112 R3001	GHG 572 6112 R6001
24 V AC	6-pol + PE	12 h	30 cm multi wire 2.5 mm ²	GHG 572 6212 R3001	GHG 572 6212 R6001



Ordering key eXLink plug/coupler for armored cables

GHG 572 XXXX RXX01



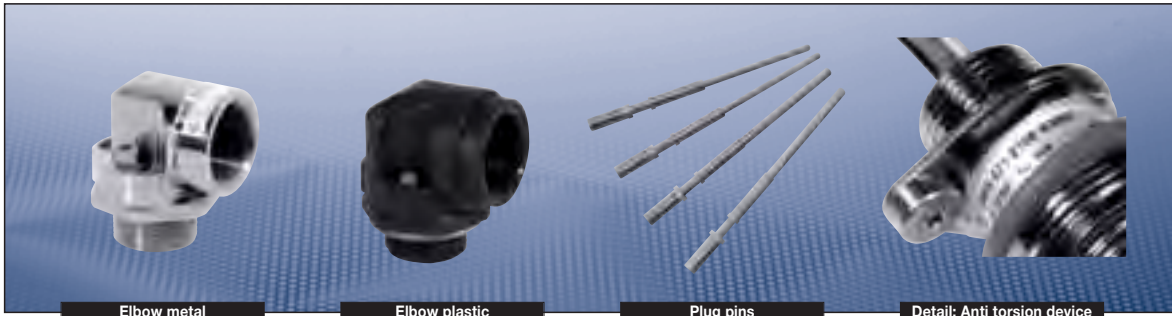
Coupler including protective cap

Ordering details

Voltage	No. of poles	Coding	Connection	Diameter of connection cable 16 - 26 mm	
				Plug Order No.	Coupler Order No.
Plug/coupler made of stainless steel for armored cables					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 7104 R2001	GHG 572 3104 R2001
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 7204 R2001	GHG 572 3204 R2001
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 7106 R2001	GHG 572 3106 R2001
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 7206 R2001	GHG 572 3206 R2001
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 7108 R2001	GHG 572 3108 R2001
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 7208 R2001	GHG 572 3208 R2001
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 572 7110 R2001	GHG 572 3110 R2001
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 572 7210 R2001	GHG 572 3210 R2001
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 572 7112 R2001	GHG 572 3112 R2001
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 572 7212 R2001	GHG 572 3212 R2001

Plug/coupler made of nickel-plated brass for armored cables					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm ²	GHG 572 7104 R4001	GHG 572 3104 R4001
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm ²	GHG 572 7204 R4001	GHG 572 3204 R4001
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm ²	GHG 572 7106 R4001	GHG 572 3106 R4001
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm ²	GHG 572 7206 R4001	GHG 572 3206 R4001
24 V DC	7-pol	8 h	Crimp up to 1.5 mm ²	GHG 572 7108 R4001	GHG 572 3108 R4001
24 V DC	7-pol	8 h	Crimp up to 2.5 mm ²	GHG 572 7208 R4001	GHG 572 3208 R4001
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm ²	GHG 572 7110 R4001	GHG 572 3110 R4001
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm ²	GHG 572 7210 R4001	GHG 572 3210 R4001
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm ²	GHG 572 7112 R4001	GHG 572 3112 R4001
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm ²	GHG 572 7212 R4001	GHG 572 3212 R4001

■ eXLink 7-pole/6-pole + PE ■



Ordering key eXLink elbow

GHG 572 1000 RX001

Material
0 = Plastic
1 = Stainless steel AISI 316L
3 = Nickel-plated brass

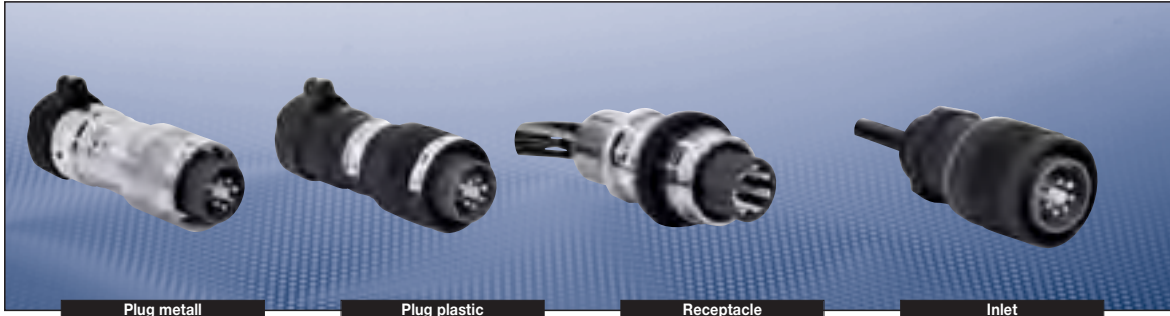
Ordering details

Type	Material	Order No.
Elbow M25 ¹⁾	Plastic	GHG 572 1000 R0001
Elbow M25 ¹⁾	Stainless steel AISI 316L	GHG 572 1000 R1001
Elbow M25 ¹⁾	Nickel-plated brass	GHG 572 1000 R3001

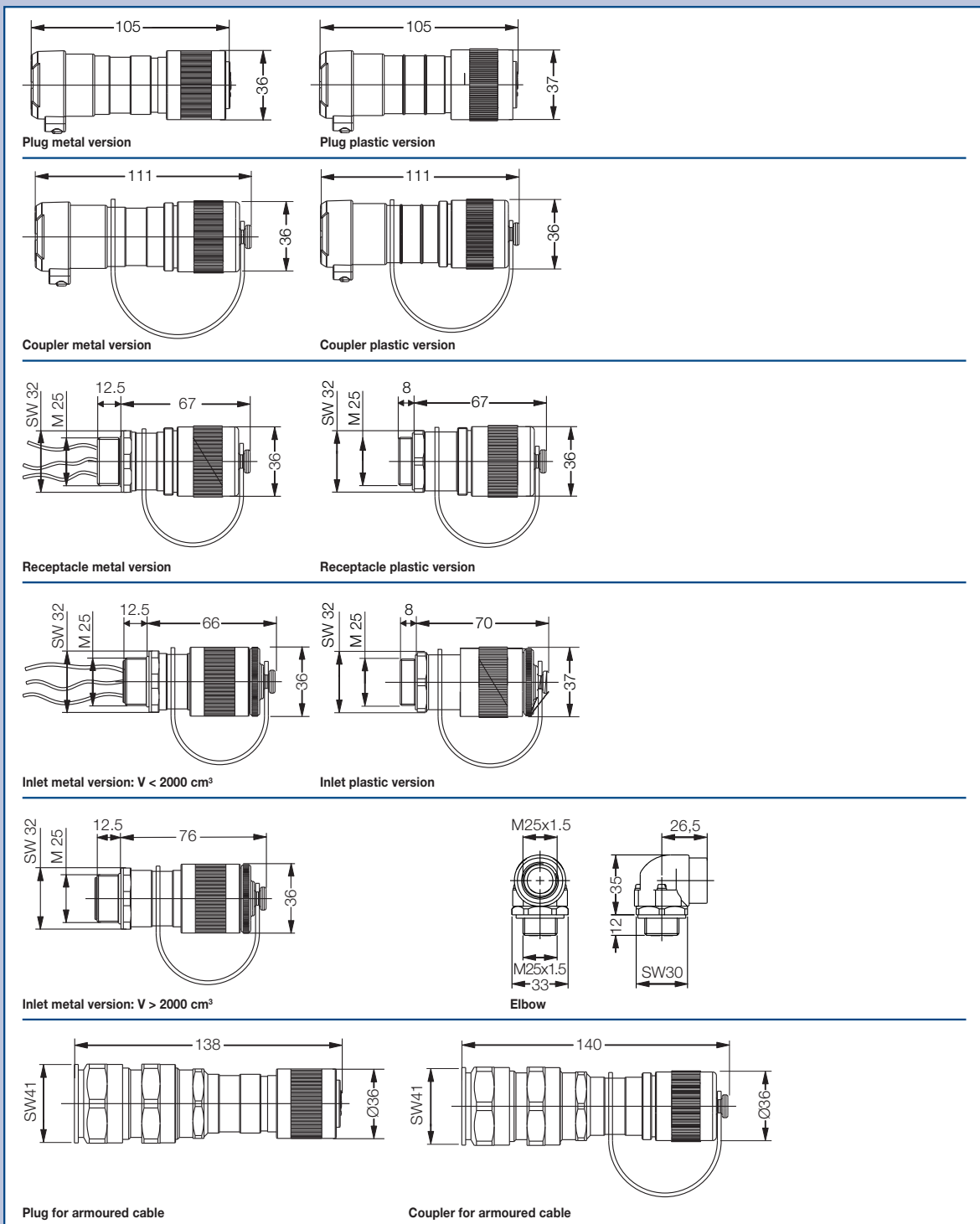
¹⁾ Usage depends on wire cross section and number of wires

Accessories

Type	BE	Order No.
Set of socket contacts 0.5 mm ² , 7-pole	1	GHG 570 1905 R0008
Set of socket contacts 1.5 mm ² , 7-pole	1	GHG 570 1905 R0005
Set of socket contacts 2.5 mm ² , 7-pole	1	GHG 570 1905 R0006
Crimp tool for eXLink	1	GHG 570 1902 R0001
Plastic protection cap connector/receptacle 7-pole	1	GHG 570 1903 R0005
Plastic protection cap plug/inlet 7-pole	1	GHG 570 1903 R0006
Brass protection cap connector/receptacle 7-pole	1	GHG 570 1903 R0007
Brass protection cap plug/inlet 7-pole	1	GHG 570 1903 R0008
Set of plug pins 0.5 mm ² , 6-pole + PE (PE leading AC)	1	GHG 570 1904 R0013
Set of plug pins 0.5 mm ² , 7-pole (lagging DC)	1	GHG 570 1904 R0014
Set of plug pins 1.5 mm ² , 6-pole + PE (PE leading AC)	1	GHG 570 1904 R0007
Set of plug pins 1.5 mm ² , 7-pole (lagging DC)	1	GHG 570 1904 R0008
Set of plug pins 2.5 mm ² , 6-pole + PE (PE leading AC)	1	GHG 570 1904 R0009
Set of plug pins 2.5 mm ² , 7-pole (lagging DC)	1	GHG 570 1904 R0010
Screw driver for cage clamp	1	GHG 570 1908 R0001
Strain relief and seal 7 - 11 mm	1	GHG 570 1907 R0003
Strain relief and seal 11 - 15 mm	1	GHG 570 1907 R0004
Strain relief and seal + PE connection 7 - 11	1	GHG 570 1907 R0005
Strain relief and seal + PE connection 11-15	1	GHG 570 1907 R0006
Anti torsion device M25	1	GHG 570 1901 R0002



Dimension drawings eXLink 6+1-pole



Dimensions in mm

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Ex-protected connectors eXLink



Y-Junction-box

Y-Adaptor

Technical data

Y-Junction-box / Y-Adaptor	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6/T5 / Ⓔ II 2D Ex tD A21 T80 °C/ T95 °C
EC-Type Examination Certificate	PTB 05 ATEX 1084
IECEX-Certificate of Conformity	IECEX BK1 06.0005X
Marking accd. to IECEx	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T52 °C
Permissible ambient temperature	- 20 °C up to + 40 °C
Store temperature in original wrapping	- 55 °C up to + 80 °C
Rated voltage	AC up to 250 V, 50/60 Hz / DC up to 60 V
Rated current	
with terminal block	AC - max. 9.3 A DC - max. 2.5 A
without terminal block	AC - max. 10.0 A DC - max. 2.5 A
Frequency range	0-100 MHz, fast Ethernet compatible
Transmission performance acc. to TIA/EIA-568-B.2	Category 5e up to 100 Mbaud
External back-up fuse max. without thermal protection	10 A
External back-up fuse max. with thermal protection	20 A gL
Breaking capacity acc. to EN 61 984:	AC - 250 V / 10.0 A DC - 60 V/ 2.5 A
Rated making/rated breaking capacity acc. to EN 60 947-4	AC-3 U _e 250 V / I _e 1.0 A DC-3 U _e 60 V / I _e 0.5 A
Insulation class acc. EN 60598	II / I
Wire cross section Y-junction box	
multi wire	0.34 mm ² - 1.5 mm ²
extra fine wire	0.34 mm ² - 0.75 mm ²
Cable entry Y-adaptor	Ø 4 - 7.5 mm / Ø 7.5 - 11 mm
Degree of protection EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	Polyamide (PA)

Ex-protected connectors eXLink

Y-junction-box

2 x cable glands



Inlet or receptacle

Y-Adaptor

3 x Inlet or receptacle



Pos. A

Pos. B

Pos. C

Ordering key Y-junction-box

7. Diameter of connection cable¹⁾

1 = 4.0 – 7.5 mm

2 = 7.5 – 11 mm

GHG 57X X6XX RXX0X

1. Pole No.	2. Type	4. Coding	5. Material ¹⁾	6. Locking device
5 = 4-pole 6 = 4-pole + PE	1 = Y-junction box inlet with cable entry 2 = Y-junction box receptacle with cable entry	01 = 1 h 02 = 2 h 04 = 4 h 05 = 5 h 06 = 6 h 08 = 8 h 10 = 10 h 12 = 12 h	0 = eXLink in plastic version 1 = eXLink in stainless steel version 3 = eXLink in nickel-plated brass version ¹⁾ Enclosure material made of plastic (PA)	0 = without 9 = with

Ordering key Y-Adaptor

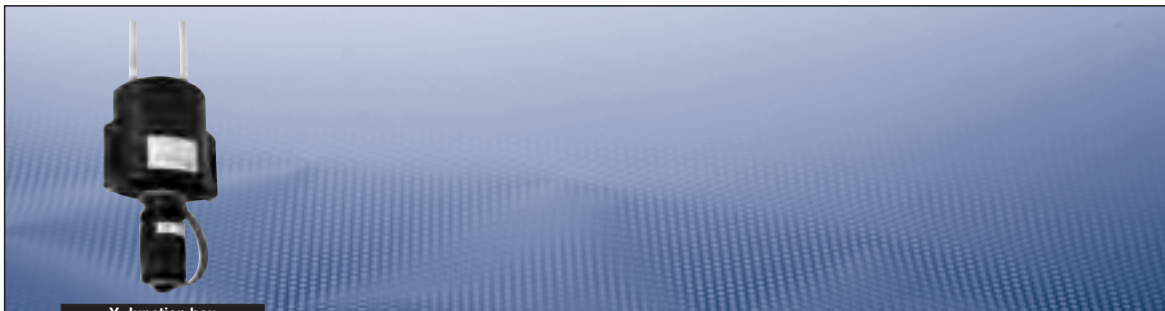
GHG 57X XXXXX RXXXX

1. Pole No.	2. Type	3. Coding	4. Material ¹⁾	5. Locking device
5 = 4-pole 6 = 4-pole + PE	8 = Y-Adaptor Inlet (A) Receptacle (B) Receptacle (C) 9 = Y-Adaptor Receptacle (A) Inlet (B) Receptacle (C)	Pos. A - B - C: 01 = 1 h Pos. A - B - C: 02 = 2 h Pos. A - B - C: 04 = 4 h Pos. A - B - C: 05 = 5 h Pos. A - B - C: 06 = 6 h Pos. A - B - C: 08 = 8 h Pos. A - B - C: 10 = 10 h Pos. A - B - C: 12 = 12 h	0 = eXLink in plastic version 1 = eXLink in stainless steel version 3 = eXLink in nickel-plated version	0 = without 1 = A / - / - 2 = - / B / - 3 = - / - / C 4 = A / B / C 5 = A / B / - 6 = A / - / C 7 = - / B / C

¹⁾ Enclosure material made of plastic (PA)

All versions with protective caps

Ex-protected connectors eXLink



Y-Junction box

7. Diameter of connection cable¹⁾

1 = 4.0 – 7,5 mm

2 = 7,5 – 11 mm

GHG 57X X6XX RXX0X

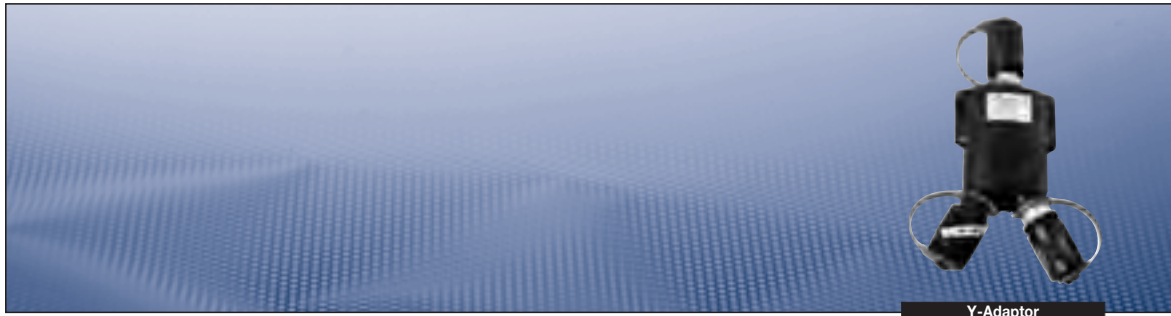
1. Pole No.	2. Type	4. Coding	5. Material ¹⁾	6. Locking device
5 = 4-pole	1 = Y-Junction box inlet with cable entry	01 = 1 h	0 = eXLink in plastic version	0 = without
6 = 4-pole + PE	2 = Y-Junction box receptacle with cable entry	02 = 2 h	1 = eXLink in stainless steel version	9 = with
		04 = 4 h	3 = eXLink in nickel-plated brass version	
		05 = 5 h		
		06 = 6 h		
		08 = 8 h		
		10 = 10 h		
		12 = 12 h		

¹⁾ Enclosure material made of plastic (PA)

All versions with protective caps

Ordering details Y-Junction-box

Voltage	No. of poles	Coding	Connection	Diameter of connection cable	
				4.0 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Y-Junction-box with eXLink inlet made of plastic version					
Ethernet/Bus	4-pol + PA	1 h	Cage clamp 1.5 mm ²	GHG 576 1601 R0001	GHG 576 1601 R0002
110 V AC	2-pol + PE	4 h	Cage clamp 1.5 mm ²	GHG 575 1604 R0001	GHG 575 1604 R0002
110 V AC	2-pol + PE	4 h	Cage clamp 2.5 mm ²	GHG 575 1604 R0001	GHG 575 1604 R0002
24 V DC	4-pol + PA	5 h	Cage clamp 1.5 mm ²	GHG 576 1605 R0001	GHG 576 1605 R0002
24 V DC	4-pol + PA	5 h	Cage clamp 2.5 mm ²	GHG 576 1605 R0001	GHG 576 1605 R0002
230 V AC	2-pol + PE	6 h	Cage clamp 1.5 mm ²	GHG 575 1606 R0001	GHG 575 1606 R0002
230 V AC	2-pol + PE	6 h	Cage clamp 2.5 mm ²	GHG 575 1606 R0001	GHG 575 1606 R0002
24 V DC	4-pol	8 h	Cage clamp 1.5 mm ²	GHG 575 1608 R0001	GHG 575 1608 R0002
24 V DC	4-pol	8 h	Cage clamp 2.5 mm ²	GHG 575 1608 R0001	GHG 575 1608 R0002
230 V AC	4-pol + PE	10 h	Cage clamp 1.5 mm ²	GHG 576 1610 R0001	GHG 576 1610 R0002
230 V AC	4-pol + PE	10 h	Cage clamp 2.5 mm ²	GHG 576 1610 R0001	GHG 576 1610 R0002
24 V AC	2-pol + PE	12 h	Cage clamp 1.5 mm ²	GHG 575 1612 R0001	GHG 575 1612 R0002
24 V AC	2-pol + PE	12 h	Cage clamp 2.5 mm ²	GHG 575 1612 R0001	GHG 575 1612 R0002
Y-Junction-box with eXLink inlet made of stainless steel version					
Ethernet/Bus	4-pol + PA	1 h	Cage clamp 1.5 mm ²	GHG 576 1601 R1001	GHG 576 1601 R1002
110 V AC	2-pol + PE	4 h	Cage clamp 1.5 mm ²	GHG 575 1604 R1001	GHG 575 1604 R1002
110 V AC	2-pol + PE	4 h	Cage clamp 2.5 mm ²	GHG 575 1604 R1001	GHG 575 1604 R1002
24 V DC	4-pol + PA	5 h	Cage clamp 1.5 mm ²	GHG 576 1605 R1001	GHG 576 1605 R1002
24 V DC	4-pol + PA	5 h	Cage clamp 2.5 mm ²	GHG 576 1605 R1001	GHG 576 1605 R1002
230 V AC	2-pol + PE	6 h	Cage clamp 1.5 mm ²	GHG 575 1606 R1001	GHG 575 1606 R1002
Y-Junction-box receptacle made of plastic version					
Ethernet/Bus	4-pol + PA	1 h	Cage clamp 1.5 mm ²	GHG 576 2601 R0001	GHG 576 2601 R0002
110 V AC	2-pol + PE	4 h	Cage clamp 1.5 mm ²	GHG 575 2604 R0001	GHG 575 2604 R0002
110 V AC	2-pol + PE	4 h	Cage clamp 2.5 mm ²	GHG 575 2604 R0001	GHG 575 2604 R0002
24 V DC	4-pol + PA	5 h	Cage clamp 1.5 mm ²	GHG 576 2605 R0001	GHG 576 2605 R0002
24 V DC	4-pol + PA	5 h	Cage clamp 2.5 mm ²	GHG 576 2605 R0001	GHG 576 2605 R0002
230 V AC	2-pol + PE	6 h	Cage clamp 1.5 mm ²	GHG 575 2606 R0001	GHG 575 2606 R0002



Y-Adaptor

GHG 57X XXXXX RXXXX

1. Pole No.	2. Type	3. Coding	4. Material	5. Locking device
5 = 4-pole 6 = 4-pole + PE	8 = Y-Adaptor with Inlet (A) Receptacle (B) Receptacle (C)	Pos. A - B - C: 01 = 1 h Pos. A - B - C: 02 = 2 h Pos. A - B - C: 04 = 4 h Pos. A - B - C: 05 = 5 h	0 = eXLink in plastic version 1 = eXLink in stainless steel version	0 = without 1 = A / - / - 2 = - / B / - 3 = - / - / C 4 = A / B / C 5 = A / B / - 6 = A / - / C 7 = - / B / C
	9 = Y-Adaptor with Receptacle (A) Inlet (B) Receptacle (C)	Pos. A - B - C: 06 = 6 h Pos. A - B - C: 08 = 8 h Pos. A - B - C: 10 = 10 h Pos. A - B - C: 12 = 12 h	3 = eXLink in nickel-plated version	

All versions with protective caps

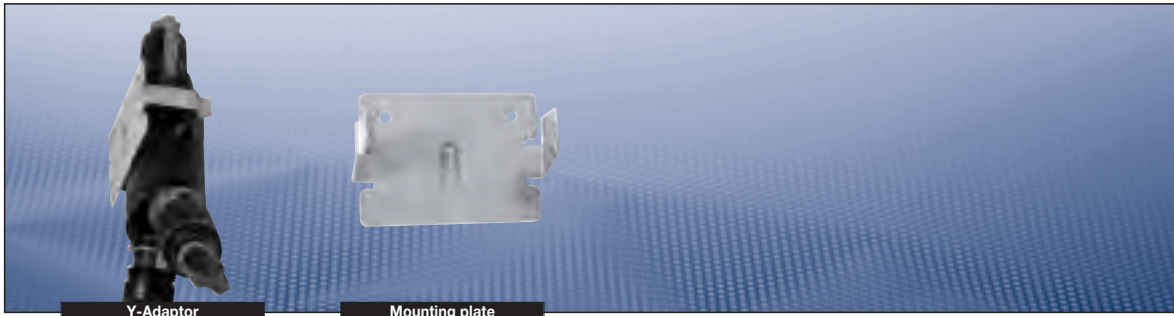
Ordering details Y-Adaptor

Voltage	No. of poles	Coding	Pos. A/Pos. B – Pos. C Inlet/receptacle-receptacle Order No.	Pos. A/Pos. B – Pos. C Receptacle/inlet-receptacle Order No.
Y-adaptor with eXLink 4-pole/4-pole + PE components made of plastic				
Ethernet/Bus	4-pol. + PA	1 h	GHG 576 80101 R0100	GHG 576 90101 R0100
110 V AC	2-pol. + PE	4 h	GHG 575 80404 R0400	GHG 575 90404 R0400
24 V DC	4-pol. + PA	5 h	GHG 576 80505 R0500	GHG 576 90505 R0500
230 V AC	2-pol. + PE	6 h	GHG 575 80606 R0600	GHG 575 90606 R0600
24 V DC	4-pol.	8 h	GHG 575 80808 R0800	GHG 575 90808 R0800
230 V AC	4-pol. + PE	10 h	GHG 576 81010 R1000	GHG 576 91010 R1000
24 V AC			GHG 576 81210 R1200	GHG 576 91210 R1200

Voltage	No. of poles	Coding	Pos. A/Pos. B – Pos. C Inlet/receptacle-receptacle Order No.	Pos. A/Pos. B – Pos. C Receptacle/inlet-receptacle Order No.
Y-adaptor with eXLink 4-pole/4-pole + PE components made of stainless steel				
Ethernet/Bus	4-pol. + PA	1 h	GHG 576 80101 R0110	GHG 576 90101 R0110
110 V AC	2-pol. + PE	4 h	GHG 575 80404 R0410	GHG 575 90404 R0410
24 V DC	4-pol. + PA	5 h	GHG 576 80505 R0510	GHG 576 90505 R0510
230 V AC	2-pol. + PE	6 h	GHG 575 80606 R0610	GHG 575 90606 R0610
24 V DC	4-pol.	8 h	GHG 575 80808 R0810	GHG 575 90808 R0810
230 V AC	4-pol. + PE	10 h	GHG 576 81010 R1110	GHG 576 91010 R1110
24 V AC			GHG 576 81210 R1210	GHG 576 91210 R1210

Voltage	No. of poles	Coding	Pos. A/Pos. B – Pos. C Inlet/receptacle-receptacle Order No.	Pos. A/Pos. B – Pos. C Receptacle/inlet-receptacle Order No.
Y-Adapter with eXLink 4-pole/4-pole + PE components made of nickel-plated brass				
Ethernet/Bus	4-pol. + PA	1 h	GHG 576 80301 R0130	GHG 576 90301 R0130
110 V AC	2-pol. + PE	4 h	GHG 575 80404 R0430	GHG 575 90404 R0430
24 V DC	4-pol. + PA	5 h	GHG 576 80505 R0530	GHG 576 90505 R0530
230 V AC	2-pol. + PE	6 h	GHG 575 80606 R0630	GHG 575 90606 R0630
24 V DC	4-pol.	8 h	GHG 575 80808 R0830	GHG 575 90808 R0830
230 V AC	4-pol. + PE	10 h	GHG 576 83030 R1130	GHG 576 93030 R1130
24 V AC			GHG 576 83230 R1230	GHG 576 93230 R1230

Ex-protected connectors eXLink



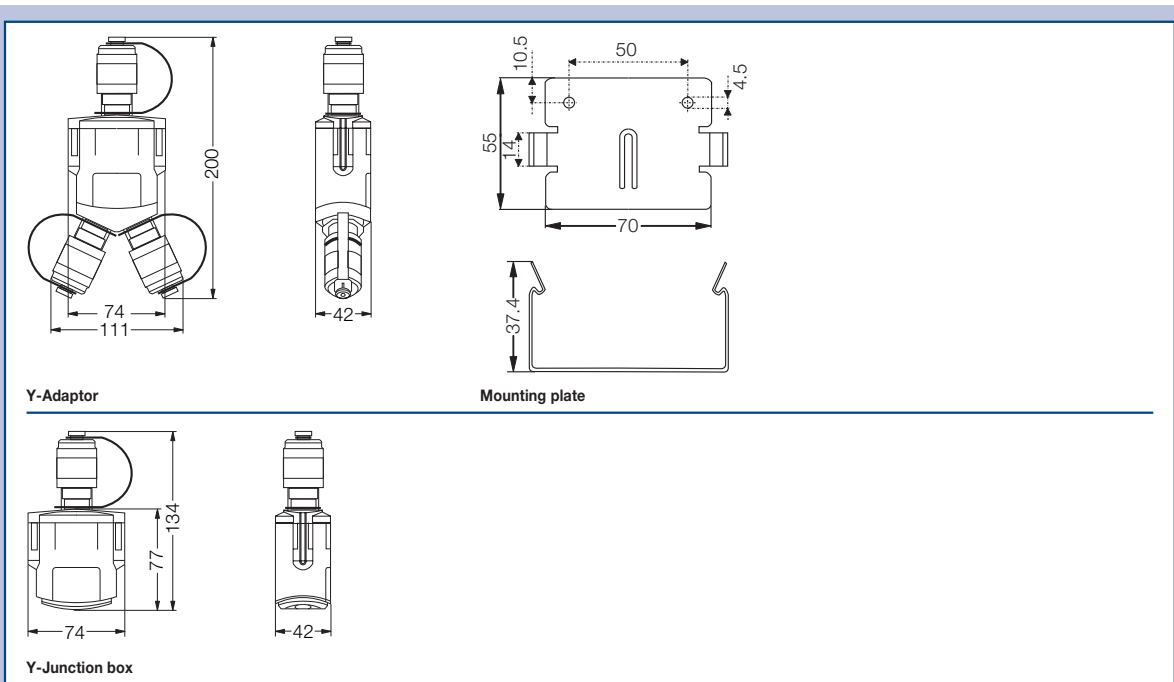
Y-Adaptor

Mounting plate

Accessories

Type	OU	Version			Order No.
		3+PE	4 pol.	4+PE	
Plastic protection cap connector/receptacle	1	X	X	X	GHG 570 1903 R0001
Plastic protection cap plug/inlet	1	X	X	X	GHG 570 1903 R0002
Brass protection cap connector/receptacle	1	X	X	X	GHG 570 1903 R0003
Brass protection cap plug/inlet	1	X	X	X	GHG 570 1903 R0004
Strain relief and seal 4 - 7.5 mm	1	X	X	X	GHG 570 1907 R0001
Strain relief and seal 7.5 - 11 mm	1	X	X	X	GHG 570 1907 R0002
Mounting plate	1	X	X	X	GHG 570 1914 R0001

Dimension drawings



Dimensions in mm



INSTALLATION TECHNOLOGY MADE EASY -

Pre-assembled branching/terminal boxes for Zone 1 and Zone 21

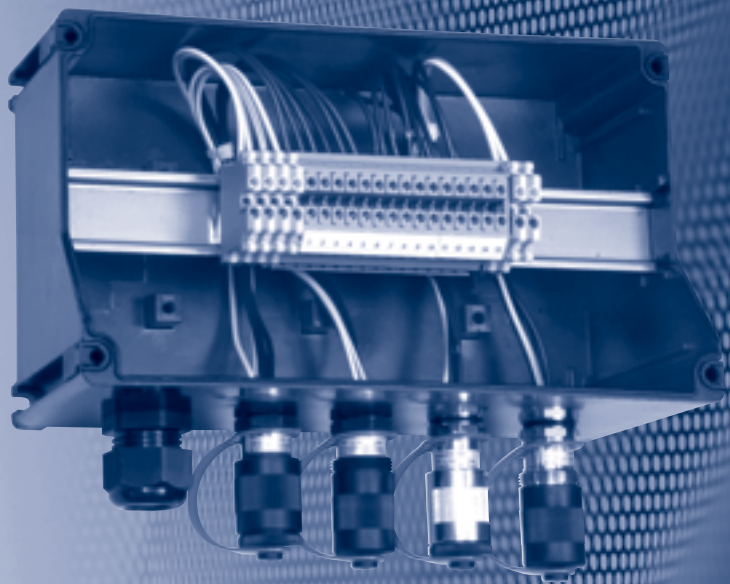
Each user can enjoy the benefits of the **eXLink** with the pre-assembled branching boxes without having to first perform additional wiring work.

Typical applications such as energy distribution, power supply for modules or bus technology can be performed at a reasonable price. For example, a control unit can be quickly and safely connected to a pre-assembled **eXLink** branching box and disconnected using **eXLink** plugs, leading to cost and time savings during service- and repair work. An additional switch is no longer required.

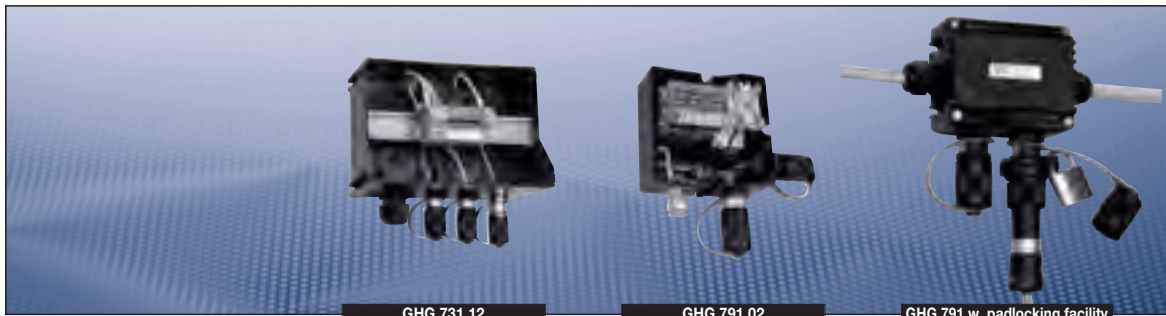
All connectors can be plugged or disconnect during operation ("hot swap").

If terminal boxes are used for distributing bus cables, these can also be plugged during operation "hot swap" with **eXLink**. No re-boot or shut-down of the system is necessary. This makes diagnosis or re-configuration much easier. There is no need to waste time isolating devices, and possibly having to shut down a machine in the process.

Cables with **eXLink** plugs and coupler can be ordered ready made according your requirements in different lengths and versions. This is a tremendous cost reduction factor for your commissioning of the system. You can plug together all necessary bus lines, power supply systems and monitoring lines without commissioning of cables, terminals and connectors. No additional cost for re-assembling of cables, re-wiring of connections and testing procedures will arise.



- Hot swap
- Customized solutions
- Pre-assembled **eXLink** connectors wired on terminals
- for all standard connection types up to 7-pole
- Nominal current up to 16 A per connector
- Compatible with Ethernet® and Fast Ethernet®-Bus



Technical data

Type 791 01 | Type 791 02

Marking to 94/9/EC	Ⓔ II 2 G Ex dem ia IIC T6 Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3108
Permissible ambient temperatur	-20 °C to +40 °C -55 °C to +40 °C (option)
Rated voltage	690 V / 250 V eXLink
Rated current	limited by terminal arrangement and eXLink
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Polyamide

Type 791 01

Connecting terminals	up to 4 mm ²
Cable glands/enclosure drilling	max. 2 x M25 or 1 x M25 + 2 x M12
Dimensions (L x W x H)	81.5 x 100 x 61 mm
Weight	approx. 0.5 kg

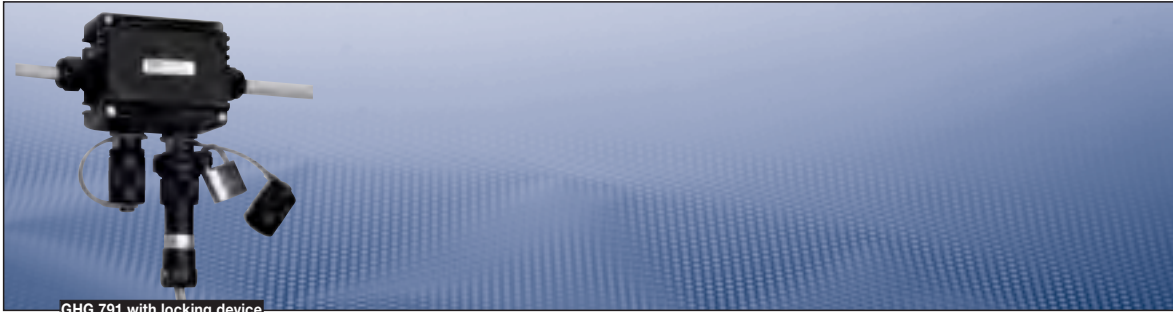
Type 791 02

Connecting terminals	up to 6 mm ²
Cable glands/enclosure drilling	max. 2 x M25 or 1 x M32 + 1 x M25 or 1 x M25 + 4 x M12
Dimensions (L x W x H)	117.5 x 113.5 x 73.5 mm
Weight	approx. 0.7 kg

Type 731 11

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib [ia/ib] m IIC T4 Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V / 250 V eXLink
Rated current	limited by terminal arrangement and eXLink
Connecting terminals	up to 16 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Dimensions (L x W x H)	140 x 120 x 95 mm
Weight	approx. 1.2 kg

| Explosion protected terminal boxes eXLink |



GHG 791 with locking device

Ordering details

Coding Hour	Components	Cable gland	Terminals	Order No.
Ordering details for ready made, prewired terminal boxes GHG 791 01				
230 V AC 10h	2 x Receptacle GHG 574 8110 R000x	2 x M20	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5006
230 V AC 10h	2 x Receptacle GHG 574 8110 R300x	2 x M20	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5106
24 V DC 08h	1 x Receptacle GHG 571 8108 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5201
24 V DC 08h	1 x Receptacle GHG 571 8108 R000x	1 x M20	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5202
230 V AC 10h	1 x Receptacle GHG 574 8110 R000x	1 x M25	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5203
24 V AC 12h	1 x Receptacle GHG 571 8212 R000x	1 x M20	2 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5204
230 V AC 06h	1 x Receptacle GHG 571 8106 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5206
24 V DC 08h	1 x Receptacle GHG 571 8208 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5208
230 V AC 10h	1 x Receptacle lockable GHG 574 8110 R090x	1 x M25	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5210
24 V AC 12h	1 x Receptacle GHG 571 8112 R000x	1 x M20 1 x M20 screw plug	2 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5212
24 V DC 08h	1 x Receptacle GHG 571 8108 R000x	1 x M20	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5213
230 V AC 06h	1 x Receptacle GHG 571 8106 R000x	1 x M20	2 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5214
24 V DC 05h	1 x Receptacle GHG 574 8105 R000x	1 x M25	6 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5215
230 V AC 06h	1 x Receptacle GHG 571 8106 R000x	1 x M20	2 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5216
24 V DC 08h	1 x Receptacle GHG 571 8208 R000x	1 x M25	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5217
24 V DC 08h	1 x Inlet GHG 571 9108 R300x	2 x M12	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5218
230V AC 06h	1 x Inlet GHG 571 9106 R000x	1 x M20	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5219
BUS Ex-i 02h	1 x Receptacle GHG 571 8102 R300x	1 x M20 Ex-i	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5220
BUS Ex-i 08	1 x Receptacle GHG 571 8108 R300x	1 x M20 Ex-i	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5221
24V DC 08h	1 x Inlet GHG 571 9108 R000x	1 x M20	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5222
24V DC 05h	1 x Inlet GHG 574 9105 R000x	2 x M16	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5223
BUS Ex-i 08	1 x Receptacle GHG 571 8108 R000x	1 x M20 Ex-i	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5224

Other types on request



GHG 731 12

GHG 791 02

Ordering details

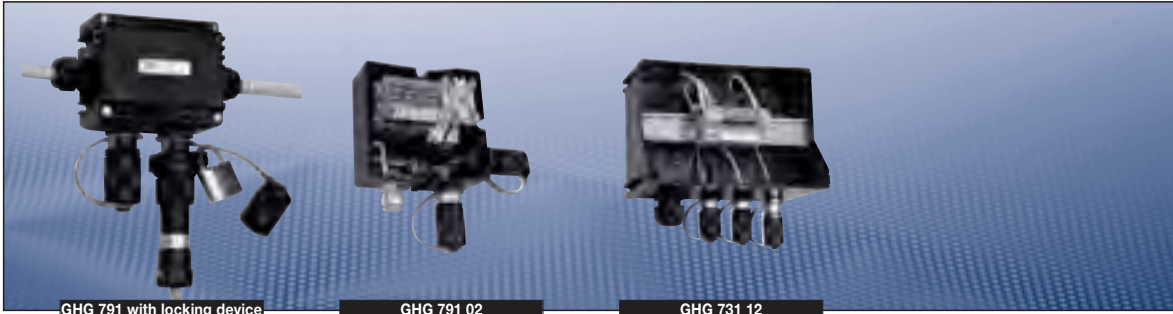
Coding Hour	Components	Cable gland	Terminals	Order No.
Ordering details for ready made, prewired terminal boxes GHG 791 01				
02h / 08h	1 x Receptacle GHG 571 8102 R300x			
	1 x Receptacle GHG 571 8108 R300x	2 x M20	8 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5226
BUS 02h	1 x Receptacle GHG 571 8102 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5227
BUS Ethernet 01h	1 x Receptacle GHG 574 8101 R000x 1 x plug (enclosed) GHG5747101R0001	1 x M12	2 x 2.5 mm ² 1 x PE/PA	GHG 791 0101 R5228

Ordering details for ready made, prewired terminal boxes GHG 791 02				
230 V AC 06h	3 x Receptacle GHG 571 8106 R 000x	1 x M25	5 x 2.5 mm ² 2 x PE/PA	GHG 791 0201 R5001
24 V DC 08h	1 x Receptacle GHG 571 8108 R000x	1 x M20 Ex-i	12 x 2.5 mm ² 1 x PE/PA	
24 V DC 12h	1 x Receptacle GHG 571 8112 R000x			GHG 791 0201 R5002
230 V AC 10h	1 x Receptacle GHG 574 8210 R000x	3 x M25	12 x 2.5 mm ² 2 x PE/PA	GHG 791 0201 R5003
230 V AC 10h	1 x Receptacle GHG 574 8210 R000x	1 x M25 1 x M25 screw plug	4 x 2.5 mm ² 1 x PE/PA	GHG 791 0201 R5004
230 V AC 06h	2 x Receptacle GHG 571 8106 R000x	2 x M20 trumpet shape 2 x M20 screw plug	6 x 2.5 mm ² 2 x PE/PA	GHG 791 0201 R5005
230 V AC 10h	2 x Receptacle GHG 574 8110 R300x	2 x M25	8 x 2.5 mm ² 2 x PE/PA	GHG 791 0201 R5006
230 V AC 06h	2 x Receptacle GHG 571 8206 R000x	2 x M25	4 x 2.5 mm ² 2 x PE/PA	GHG 791 0201 R5007
24 V DC 08h	1 x Receptacle GHG 572 8108 R300x	2 x M16	12 x 2.5 mm ² 2 x PE/PA	GHG 791 0201 R5008
24V AC 12h	1 x Receptacle GHG 571 8112 R000x 1 x Receptacle GHG 572 8112 R000x	1 x M20 1 x M25	8 x 2.5 mm ² 1 x PE/PA	GHG 791 0201 R5009
24V DC 08h	1 x Receptacle GHG 571 8108 R000x	1 x M16 Ex-i 1 x M16 screw plug 1 x M20 Ex-i	6 x 2.5 mm ² 1 x PE/PA	GHG 791 0201 R5011

Ordering details for ready made, prewired terminal boxes GHG 731 12				
24 V DC 8h	3 x Receptacle GHG 571 8108 R000x	1 x M25 Ex-i	12 x 2.5 mm ²	GHG 731 1201 R5001
230 V AC 6h	1 x Inlet GHG 574 9103 R000x			
230 V AC 10h	1 x Inlet GHG 574 9110 R000x	2 x M20	8 x 2.5 mm ² 2 x PE/PA	GHG 731 1201 R5002

Other types and sizes on request

| Explosion protected terminal boxes eXLink |

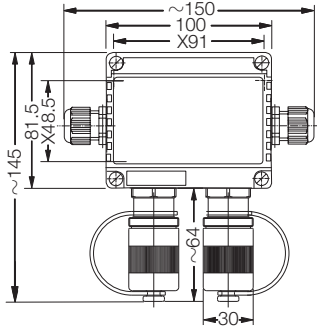


GHG 791 with locking device

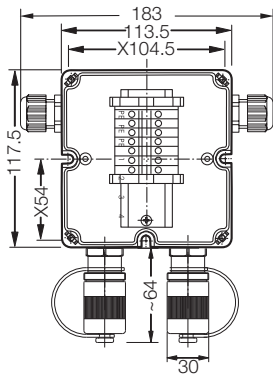
GHG 791 02

GHG 731 12

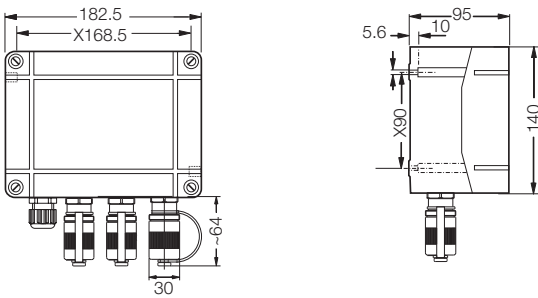
Dimension drawings eXLink



Type 791 01



Type 791 02



Type 731 12

X = fixing dimensions

Dimensions in mm



MULTI PURPOSE TERMINAL

Multi Purpose Terminal more power for Zone 1

Neither sparks nor hot surfaces may cause explosion hazards in areas where flammable gases, vapours, or mists may occasionally exist. Electrical apparatus for use in these areas must contain protection methods to prevent this. In the past this meant that you had to obtain a hot work permit when you wanted to carry out maintenance work on these circuits. Alternatively the circuits would have to be intrinsically safe. The new multi purpose terminal employs a 2-step removal process to ensure that possible high energy sparks will be kept inside the flame proof enclosure of the terminals. The red removal lever of the terminals (see photo) separates the electrical circuits. The metal pins of the module remain within the flame proof area until the module is removed manually. At this point sparks will have been extinguished already and the module will be volt free.

Common Data

maximum voltage 400 V

maximum current 6.3 A

permissible wire diameter 0.8 ... 2.5 mm²



Hot Swap in Zone 1 or Zone 2

More power without hot work permits

Applications:

fusing of Ex-d valves, signal lamps, sounders etc.

can be fitted with simple 2-pole or 4-pole components such as resistors, fuses, relays etc.

diode separation of supply circuits

simple OR gate for Zone 1 mounting

visible disconnect of field devices

relay switch for power circuits

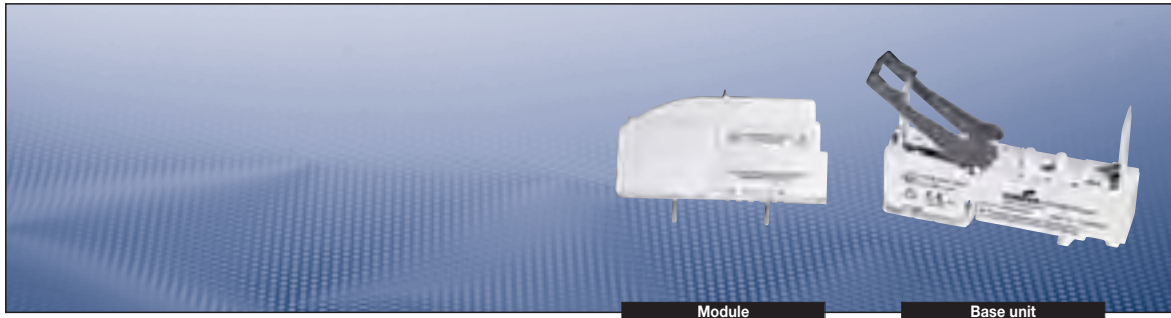
Bus termination

current limitation

opto coupler etc.

Time savings during maintenance

International approvals



Technical data

Model ExTerm

Marking to 94/9/EC	Ⓔ II G Ex de IIC
EC-Type Examination Certificate	PTB 04 ATEX 1007 U
Application temperature ¹⁾	-55 °C up to +55 °C
Rated voltage	400 V
Rated current	6.3 A
Rated cross section	max. 2.5 mm ²
Dimensions (L x W x H)	93 x 17.5 x 80 mm
Weight	115 g
Contact material	gold-plated silver alloy nickel plated brass

Model ExTerm - R | ExTerm - 2R Resistor

Resistance range	1 Ω ... 22 MΩ 0.5 W
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Model ExTerm - T-Terminator for foundation Fieldbus or Profibus PA

Fieldbus	Foundation Fieldbus (Profibus PA) IEC 1158-2 (Profibus MBP)
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Model ExTerm - K Relays

Rated switching capability (ohmic load)	6 A, 250 V AC
Max. switched load	1500 VA
Max. switched voltage	400 V AC 300 V DC
Max. switched current	6 A (AC)
Contact resistance at 6 V - 1 A	100 mΩ
Coil turn on power (at 25 °C, 50 % humidity)	170 mW
Isolation resistance	min. 1000 mΩ at 500 V DC
Isolation voltage	1000 Vms between contacts 4000 Vms between contacts and coil
Response time	ca. 5 ms, max. 8 ms
Off delay	ca. 2.5 ms, max. 4 ms
Life expectancy mechachical	5 x 10 ⁶
Life expectancy electrical	Normally open contact: 5 x 10 ⁴ Normally closed contact: 3 x 10 ⁴
Contact material	Silver alloy

Model ExTerm - F Fuse

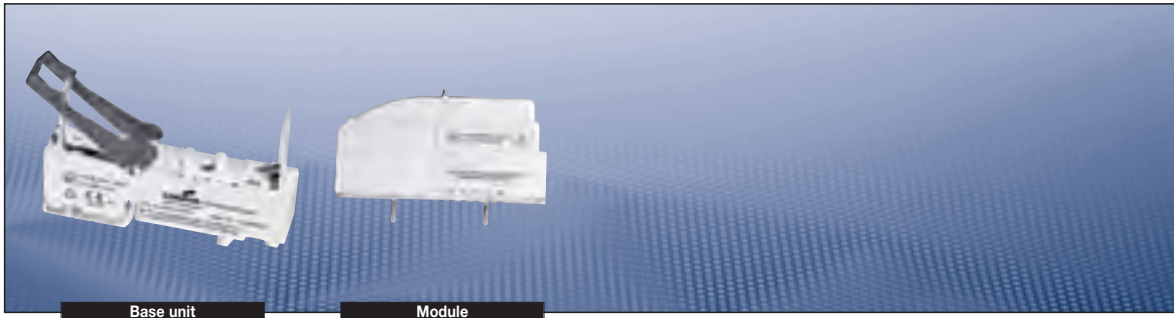
Fuse rating	see table
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Model ExTerm - D Diode

Diode rating	1 A, 250 V
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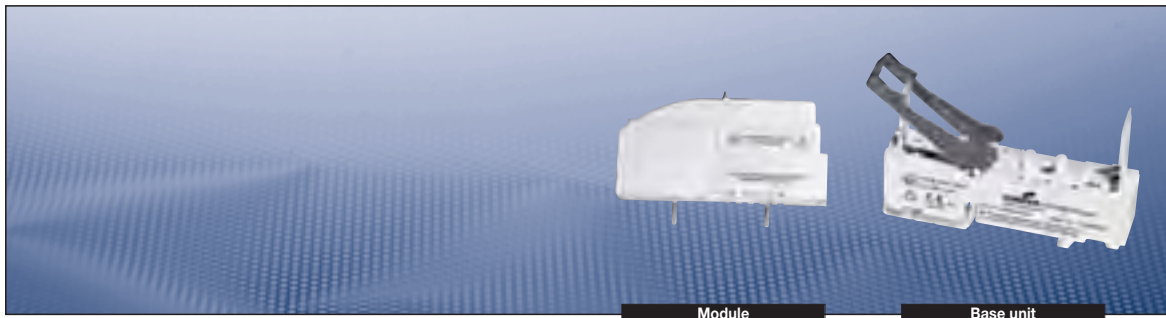
¹⁾ depends on installation conditions

| Model ExTerm - R |



Ordering details

Resistor values	Module	Base unit	Min. order quantity	Order No.
1 x 1 R 00	X		25	GHG 101 0031 R1001
1 x 1 R 5	X		25	GHG 101 0031 R1501
1 x 2 R 21	X		25	GHG 101 0031 R2211
1 x 3 R 32	X		25	GHG 101 0031 R3321
1 x 4 R 75	X		25	GHG 101 0031 R4751
1 x 6 R 81	X		25	GHG 101 0031 R6811
1 x 10 R 0	X		25	GHG 101 0031 R1002
1 x 15 R 0	X		25	GHG 101 0031 R1502
1 x 22 R 1	X		25	GHG 101 0031 R2212
1 x 33 R 2	X		25	GHG 101 0031 R3322
1 x 47 R 5	X		25	GHG 101 0031 R4752
1 x 68 R 1	X		25	GHG 101 0031 R6812
1 x 100 R	X		1	GHG 101 0031 R1003
1 x 150 R	X		25	GHG 101 0031 R1503
1 x 221 R	X		25	GHG 101 0031 R2213
1 x 332 R	X		25	GHG 101 0031 R3323
1 x 475 R	X		25	GHG 101 0031 R4753
1 x 681 R	X		25	GHG 101 0031 R6813
1 x 1 K 0	X		25	GHG 101 0031 R1004
1 x 1 K 50	X		25	GHG 101 0031 R1504
1 x 2 K 21	X		25	GHG 101 0031 R2214
1 x 3 K 32	X		25	GHG 101 0031 R3324
1 x 4 K 75	X		25	GHG 101 0031 R4754
1 x 6 K 81	X		25	GHG 101 0031 R6814
1 x 10 K	X		1	GHG 101 0031 R1005
1 x 15 K	X		25	GHG 101 0031 R1505
1 x 22 K 1	X		25	GHG 101 0031 R2215
1 x 33 K 2	X		25	GHG 101 0031 R3325
1 x 47 K 5	X		25	GHG 101 0031 R4755
1 x 68 K 1	X		25	GHG 101 0031 R6815
1 x 100 K	X		25	GHG 101 0031 R1006
1 x 150 K	X		25	GHG 101 0031 R1506
1 x 221 K	X		25	GHG 101 0031 R2216
1 x 332 K	X		25	GHG 101 0031 R3326
1 x 475 K	X		25	GHG 101 0031 R4756
1 x 681 K	X		25	GHG 101 0031 R6816
1 x 1 M	X		25	GHG 101 0031 R1007
1 x 1 M 50	X		25	GHG 101 0031 R1507
1 x 2 M 21	X		25	GHG 101 0031 R2217
1 x 3 M 32	X		25	GHG 101 0031 R3327
1 x 4 M 75	X		25	GHG 101 0031 R4757
1 x 6 M 81	X		25	GHG 101 0031 R6817
1 x 10 M	X		25	GHG 101 0031 R1008
1 x 22 M 1	X		25	GHG 101 0031 R2218
Accessories: 2 pole base unit		X	25	GHG 101 0002 R0001

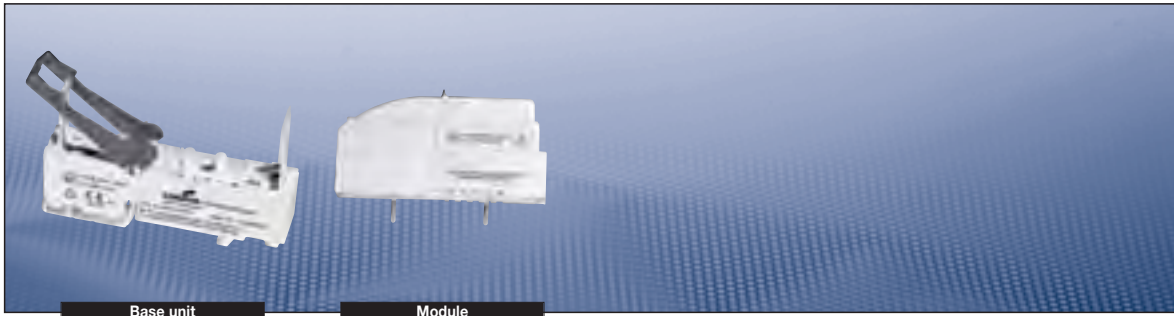


Module

Base unit

Ordering details

Resistor values	Module	Base unit	Min. order quantity	Order No.
2 x 1 R 00	X		1	GHG 101 0032 R1001
2 x 1 R 5	X		25	GHG 101 0032 R1501
2 x 2 R 21	X		25	GHG 101 0032 R2211
2 x 3 R 32	X		25	GHG 101 0032 R3321
2 x 4 R 75	X		25	GHG 101 0032 R4751
2 x 6 R 81	X		25	GHG 101 0032 R6811
2 x 10 R 0	X		25	GHG 101 0032 R1002
2 x 15 R 0	X		25	GHG 101 0032 R1502
2 x 22 R 1	X		25	GHG 101 0032 R2212
2 x 33 R 2	X		25	GHG 101 0032 R3322
2 x 47 R 5	X		25	GHG 101 0032 R4572
2 x 68 R 1	X		25	GHG 101 0032 R6812
2 x 100 R	X		1	GHG 101 0032 R1003
2 x 150 R	X		25	GHG 101 0032 R1503
2 x 221 R	X		25	GHG 101 0032 R2213
2 x 332 R	X		25	GHG 101 0032 R3323
2 x 475 R	X		25	GHG 101 0032 R4753
2 x 681 R	X		1	GHG 101 0032 R6813
2 x 1 K 0	X		25	GHG 101 0032 R1004
2 x 1 K 50	X		25	GHG 101 0032 R1504
2 x 2 K 21	X		25	GHG 101 0032 R2214
2 x 3 K 32	X		1	GHG 101 0032 R3324
2 x 4 K 75	X		25	GHG 101 0032 R4754
2 x 6 K 81	X		25	GHG 101 0032 R6814
2 x 10 K	X		1	GHG 101 0032 R1005
2 x 15 K	X		25	GHG 101 0032 R1505
2 x 22 K 1	X		25	GHG 101 0032 R2215
2 x 33 K 2	X		25	GHG 101 0032 R3325
2 x 47 K 5	X		25	GHG 101 0032 R4755
2 x 68 K 1	X		25	GHG 101 0032 R6815
2 x 100 K	X		25	GHG 101 0032 R1006
2 x 150 K	X		25	GHG 101 0032 R1506
2 x 221 K	X		25	GHG 101 0032 R2216
2 x 332 K	X		25	GHG 101 0032 R3326
2 x 475 K	X		25	GHG 101 0032 R4756
2 x 681 K	X		25	GHG 101 0032 R6816
2 x 1 M	X		25	GHG 101 0032 R1007
2 x 1 M 50	X		25	GHG 101 0032 R1507
2 x 2 M 21	X		25	GHG 101 0032 R2217
2 x 3 M 32	X		25	GHG 101 0032 R3327
2 x 4 M 75	X		25	GHG 101 0032 R4757
2 x 6 M 81	X		25	GHG 101 0032 R6817
2 x 10 M	X		25	GHG 101 0032 R1008
2 x 22 M 1	X		25	GHG 101 0032 R2218
Accessories: 4 pole base unit		X	1	GHG 101 0004 R0001



Ordering details

Function	Min. order quantity	Order No.
Model ExTerm – T Terminator for foundation fieldbus or profibus PA for Zone 1 or Zone 2 mounting		
ExTerm – T Bus Terminator	1	GHG 101 0005 R0000
Accessories: 4 pole base unit	1	GHG 101 0004 R0001

Model ExTerm – K relay-component		
1 NO contact	1	GHG 101 0041 R0000
1 NC contact	1	GHG 101 0042 R0000
Accessories: 4 pole base unit	1	GHG 101 0004 R0001

Model ExTerm – F 1 fuse (slow)					
1 x 0.032 A 2-pole	2 x 0.032 A 4-pole	1 x 0.032 A / 1 x wire 4-pole	25		GHG 101 001_ R0032
1 x 0.050 A 2-pole	2 x 0.050 A 4-pole	1 x 0.050 A / 1 x wire 4-pole	25		GHG 101 001_ R0050
1 x 0.063 A 2-pole	2 x 0.063 A 4-pole	1 x 0.063 A / 1 x wire 4-pole	25		GHG 101 001_ R0063
1 x 0.080 A 2-pole	2 x 0.080 A 4-pole	1 x 0.080 A / 1 x wire 4-pole	25		GHG 101 001_ R0080
1 x 0.100 A 2-pole	2 x 0.100 A 4-pole	1 x 0.100 A / 1 x wire 4-pole	25		GHG 101 001_ R0100
1 x 0.125 A 2-pole	2 x 0.125 A 4-pole	1 x 0.125 A / 1 x wire 4-pole	25		GHG 101 001_ R0125
1 x 0.160 A 2-pole	2 x 0.160 A 4-pole	1 x 0.160 A / 1 x wire 4-pole	25		GHG 101 001_ R0160
1 x 0.200 A 2-pole	2 x 0.200 A 4-pole	1 x 0.200 A / 1 x wire 4-pole	25		GHG 101 001_ R0200
1 x 0.250 A 2-pole	2 x 0.250 A 4-pole	1 x 0.250 A / 1 x wire 4-pole	25		GHG 101 001_ R0250
1 x 0.315 A 2-pole	2 x 0.315 A 4-pole	1 x 0.315 A / 1 x wire 4-pole	1		GHG 101 001_ R0315
1 x 0.400 A 2-pole	2 x 0.400 A 4-pole	1 x 0.400 A / 1 x wire 4-pole	25		GHG 101 001_ R0400
1 x 0.500 A 2-pole	2 x 0.500 A 4-pole	1 x 0.500 A / 1 x wire 4-pole	1		GHG 101 001_ R0500
1 x 0.630 A 2-pole	2 x 0.630 A 4-pole	1 x 0.630 A / 1 x wire 4-pole	25		GHG 101 001_ R0630
1 x 0.800 A 2-pole	2 x 0.800 A 4-pole	1 x 0.800 A / 1 x wire 4-pole	1		GHG 101 001_ R0800
1 x 1.000 A 2-pole	2 x 1.000 A 4-pole	1 x 1.000 A / 1 x wire 4-pole	1		GHG 101 001_ R1000
1 x 1.250 A 2-pole	2 x 1.250 A 4-pole	1 x 1.250 A / 1 x wire 4-pole	25		GHG 101 001_ R1250
1 x 1.600 A 2-pole	2 x 1.600 A 4-pole	1 x 1.600 A / 1 x wire 4-pole	25		GHG 101 001_ R1600
1 x 2.000 A 2-pole	2 x 2.000 A 4-pole	1 x 2.000 A / 1 x wire 4-pole	1		GHG 101 001_ R2000
1 x 2.500 A 2-pole	2 x 2.500 A 4-pole	1 x 2.500 A / 1 x wire 4-pole	1		GHG 101 001_ R2500
1 x 3.150 A 2-pole	2 x 3.150 A 4-pole	1 x 3.150 A / 1 x wire 4-pole	1		GHG 101 001_ R3150
1 x 4.000 A 2-pole	1 x 4.000 A / 1 x wire 4-pole		1		GHG 101 001_ R4000¹⁾
1 x 5.000 A 2-pole	1 x 5.000 A / 1 x wire 4-pole		1		GHG 101 001_ R5000¹⁾
1 x 6.300 A 2-pole	1 x 6.300 A / 1 x wire 4-pole		1		GHG 101 001_ R6300¹⁾

1 = 1 x Fuse
 2 = 2 x Fuse
 3 = 1 x Fuse, 1 x Wire

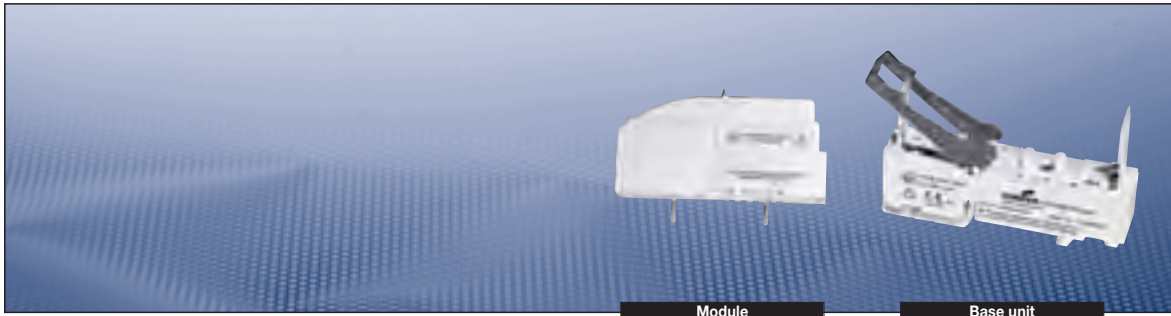
Accessories					
2-pole base unit	1 fuse		1		GHG 101 0002 R0001
4-pole base unit	2 fuse, 1 fuse, 1 wire		1		GHG 101 0004 R0001

Model ExTerm – D					
1 Diode			1		GHG 101 0021 R0000
Accessories: 2 pole base unit			1		GHG 101 0002 R0001
2 Diodes			1		GHG 101 0022 R0000
Accessories: 4 pole base unit			1		GHG 101 0004 R0001

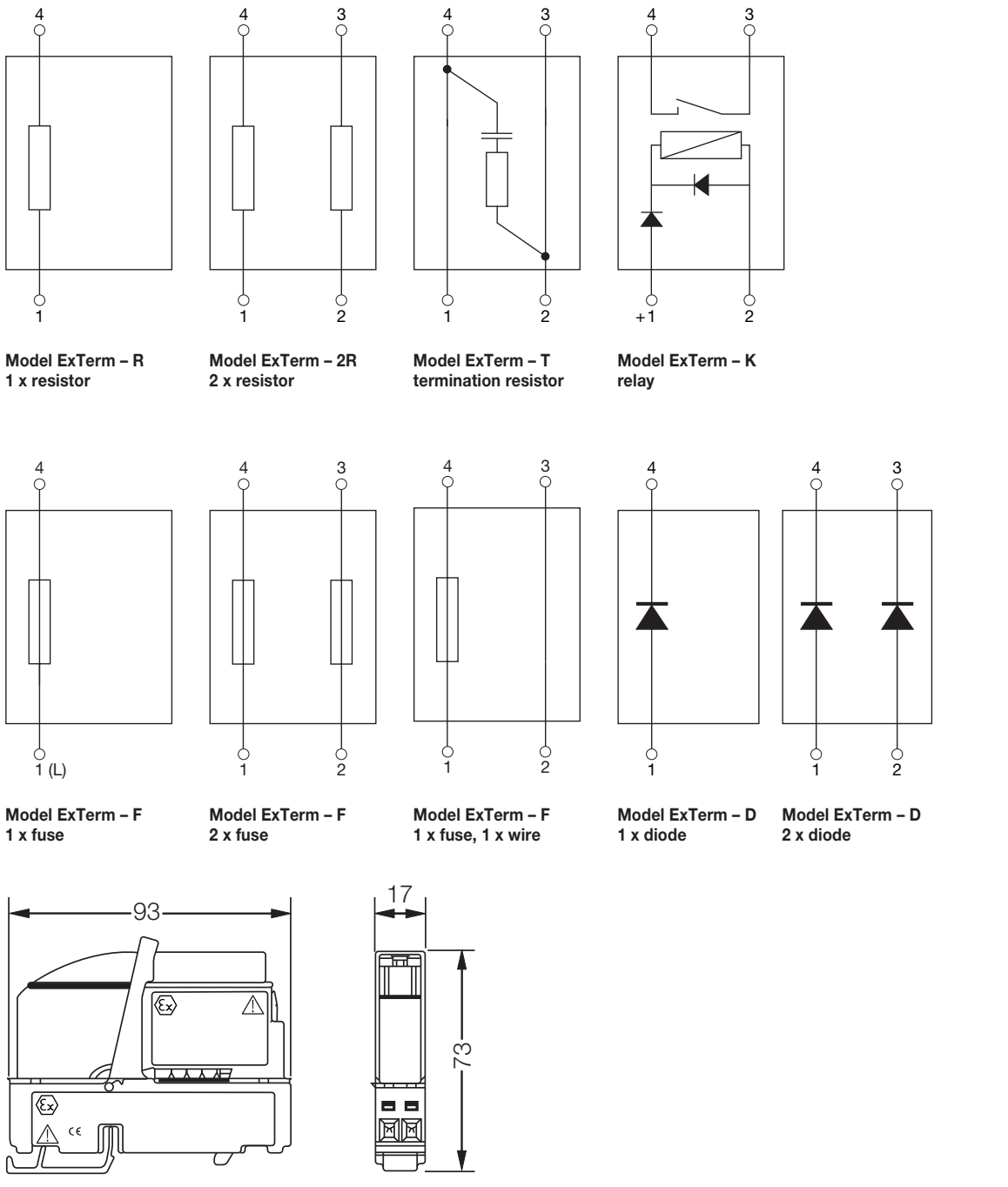
Note: Modules will be supplied without base unit.

Please order separately.

¹⁾ not for 4.0 A, 5.0 A, 6.3 A



Internal wiring / Dimension drawing



Dimensions in mm

1
2
3
4
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9
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12

EX - PLUGS AND RECEPTACLES

10 A to 125 A
Plastic version for Zone 1 and Zone 21

A good connection

Providing electrical energy there, where it is most needed – even in hazardous areas for the Zones 1, 2, 21 and 22.

Non-stationary electrical apparatus have generally high requirements on the energy/power supply. Robust plugs and receptacles as well as a high chemical resistance are at the first glance very important. Electrical reliability is a must not only for all connectivity products.

A high safety standard, a steady hold and faultless contacting even under vibration or the effects of an aggressive atmospheric environment are the basis for a secure and reliable utilisation

CEAG plugs and receptacles offer more, apart from the proven technology, this product series is defined by its innovative details. For example, the very efficient cable strain relief or the new coding system of the various versions offers different solutions for a secure and problem free utilization in all areas. Just to round the product off, the user in the normal industrial sector becomes exactly the same product advantages. Robust industrial versions fulfil all requirements appertaining to mechanical and chemical durability. For the stationary repair power supplying in hazardous explosive areas, there is a specially conceived version available that fulfils all the necessary safety requirements. Used in a module sense, individual solutions are no problem at all.

The CEAG wall socket for instance can be mounted on to the pre-installed mounting frame without having to use tools – installation without a hot work permit.

Apart from the plugs and receptacles for the European market, we also have plugs and sockets extra for the US market, which are in accordance to all of the necessary standards UL and safety protection systems used there. The available standard range used here, are the 20 A, 30 A, 60 A and 100 A.

International approvals.

- Nickel-plated contacts
- Low insertion force
- Safety standard IP66 applies also in the plugged-in state
- Full AC-3 switching ability
- Self-cleaning lamellar contacts, low transition resistance
- All-pole on/off switching
- Easy plugging





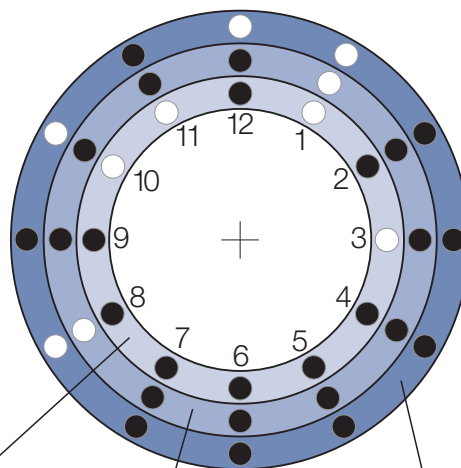
High ingress protection

The new plugs and receptacles reliably supply electrical power, even under the most difficult circumstances. From minus 20°C to plus 55°C there are no problems due to the ingress of water or dirt, because when the plug has

been withdrawn, the sockets and couplers fulfil the requirements for the degree of protection IP66; and thanks to the type of bayonet ring, the degree of protection IP66 is also ensured when the plug is inserted and energized – we have tested it!

CEE plugs and receptacles

A first step towards creating an international standard for industrial plugs and receptacles was taken with the IEC 60309 and CEE Publication 17, "Requirements for Plugs and Receptacles for Industrial Use". "IEC" stands for "INTERNATIONAL ELECTRICAL COMMISSION". When selecting plugs and receptacles from the existing ranges for standardization, preference was given to round plugs and receptacles, as the contact-making insert can be arranged in various positions (hours of day). This allows a high degree of differentiation of plugs and receptacles with regard to the various types of currents, voltages, frequencies, etc.



Ground pin location	Number of pins (P = Power, N = Neutral, PE = Earth or Ground)		
	2 P + PE P + N + PE	3 P + PE	3 P + N + PE
2h	>50 V, 300 - 500 Hz, only 16 A/32 A green housing	>50 V, 300 - 500 Hz, only 16 A/32 A green housing	>50 V, 300 - 500 Hz, only 16 A/32 A green housing
3h	–	380 V, 50 Hz, nur 16 A/32 A 440 V, 60 Hz, nur 16 A/32 A ¹⁾ red housing	220/380 V, 50 Hz, only 16 A/32 A 250/440 V, 60 Hz, only 16 A/32 A ¹⁾ red housing
4h	100 - 130 V, 50–60 Hz yellow housing	100 - 130 V, 50–60 Hz yellow housing	57/100 - 75/130 V, 50–60 Hz yellow housing
5h	277 V, 60 Hz grey housing	600 - 690 V, 50/60 Hz black housing	347/600 - 400/690 V, 50/60 Hz black housing
6h	200 - 250 V, 50–60 Hz blaues Gehäuse	380 - 415 V, 50/60 Hz red housing	200/346 - 240/415 V, 50/60 Hz red housing
7h	480 - 500 V, 50–60 Hz grey housing	480 - 500 V, 50/60 Hz grey housing	277/480 - 288/500 V, 50/60 Hz grey housing
8h	> 250 V Gleichspannung grey housing	–	–
9h	380 - 415 V, 50–60 Hz red housing	200 - 250 V, 50/60 Hz blue housing	120/208 - 144/250 V, 50/60 Hz blue housing
10h	–	> 50 V, 100 - 300 Hz green housing	–
11h	–	440 - 460 V, 60 Hz ²⁾ red housing	250/400 - 265/460 V, 60 Hz ²⁾ red housing
12h	50 - 60 Hz ³⁾ grey housing	50/60 Hz ³⁾ grey housing	–

¹⁾ for reefer container; ²⁾ for ships; ³⁾ Output of an isolation transformer with more than 50V

Ex-Plugs and Receptacles

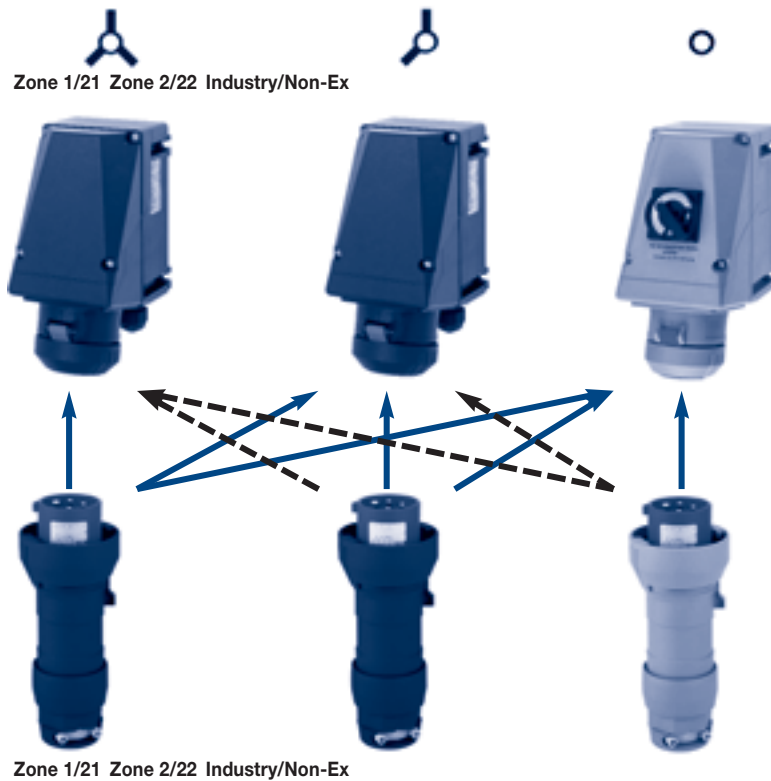


The key to safety

Plugs and receptacles with a cleverness: The innovative coding of apparatus allows plugs used for Zone 1 to be used in receptacles for Zone 2 and/or for usage with industrial receptacles as well. Hence, plugs and receptacles for Zone 1 can be used anywhere. However, by the same token, the coding ensures that Zone 2 plugs cannot be operated in sockets with Zone 1 coding. That guarantees safety with an enormous flexibility in their usage. Speaking of flexibility: It goes without saying that the plugs of the existing range also fit into the new receptacles.

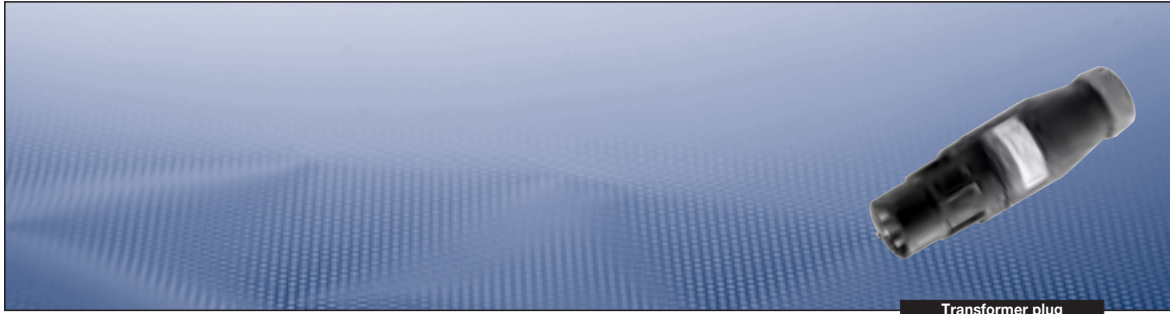
Zone 1	Zone 2	Industry

Coding of the plugs and receptacles



↑ possible
 ↑ not possible
 Combination of possible/not possible connections of plug/wall socket

**16A 4-/5-pole transf. plug |
| Plug with fuse |**



Transformer plug

Technical data

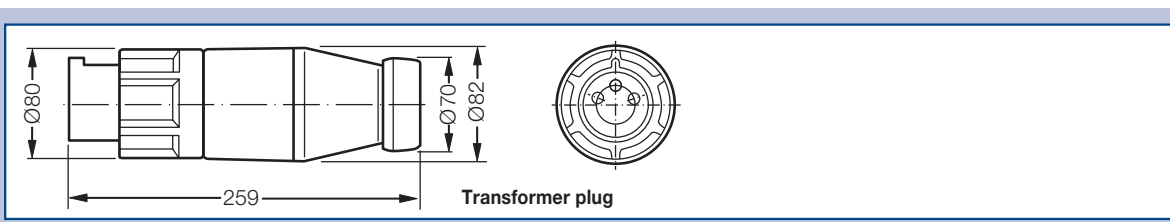
Ex-transformer plug acc. to IEC 60309-1/2, up to 415 V

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T5
EC-Type Examination Certificate	PTB 99 ATEX 1039
IECEX type of protection	Ex ed [ia] IIC T6/T5
IECEX certification of conformity	IECEX BKI 04.0002
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage primary	415 V AC
Rated voltage secondary	12 V, 24 V, 36 V, 42 V or 230 V~
Frequency	50 - 60 Hz
Power consumption	max. 65 VA
Back up fuse, internal	0.5 A mT, replaceable
Connecting terminals	1 x 1 - 4 mm ²
Insulation class	I
Degree of protection to EN 60529	IP54
Cable glands	Ø 10 - 20 mm
Enclosure material	Glass-fibre reinforced polyester, polyamide

Ordering details

Voltage	h	Type	Weight approx.	Sec voltage	Order No.
16 A transformer plug 4-pole					
200-250 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 531 6469 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 531 6469 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 531 6469 V5025
16 A transformer plug 5-pole					
380-415 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 531 6566 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 531 6566 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 531 6566 V5025
		Transformer plug 65 VA	2.3 kg	230 V	GHG 531 6566 V5023
Plug with fuse					
200-250 V		Plug with fuse max. 6.3 A	1.3 kg	-	GHG 531 7536 V0000
Accessories					
Plug cap 3/4 pole					GHG 530 1935 R0002
Plug cap 5 pole					GHG 530 1935 R0005

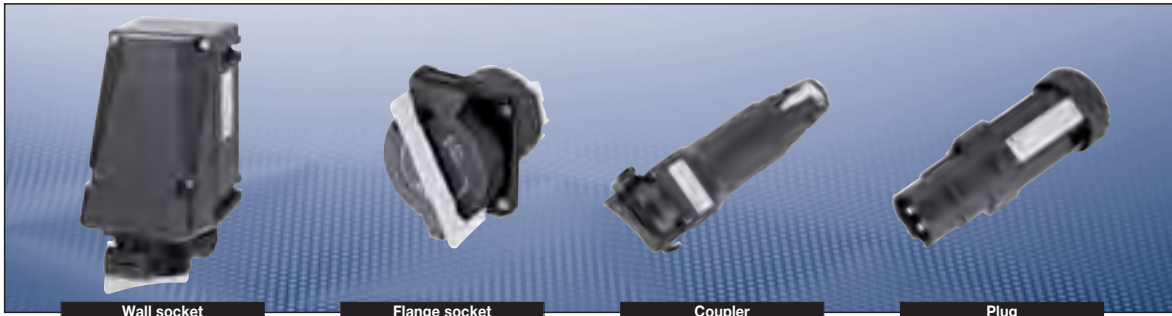
Dimension drawing



Dimensions in mm

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16A 2-pole up to 50 V
16A 3-pole up to 50 V



Wall socket

Flange socket

Coupler

Plug

Technical data

Ex-plugs and receptacles for low voltage, 2- and 3-pole acc. to IEC 60309-1/2

Marking to 94/9/EC	Ⓔ II 2 G Ex de [ia] IIC T6/T5
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: PTB 99 ATEX 1063 U
IECEx certification of conformity	IECEx BKI 04.0002
IECEx type of protection	Ex ed [ia] IIC T6/T5
Permissible ambient temperature	-55 °C to +55 °C
Rated voltage	up to 50 V
Rated current	16 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 50 V / I _e 16 A
External back-up fuse, max.	without therm. protection: 16 A / with therm. protection: 35 A
Degree of protection to EN 60529	IP54 (IP 66 optional)

Wall socket

Cable glands	1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic (bottom) or 2 x metal thread M20 with Ex-screw plug plastic
Connecting terminals	2 x 1.5 - 4 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cabel glands	Ø 9 - 17 mm
Connecting terminals	1.0 - 4 mm ²
Enclosure material	Polyamide

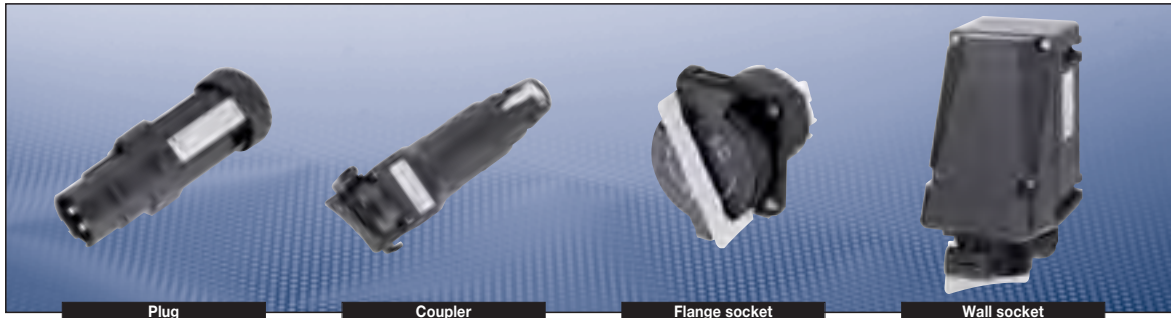
Coupler

Cabel glands	Ø 9 - 17 mm
Connecting terminals	1.5 - 4 mm ²
Enclosure material	Polyamide

Flange socket

Connecting terminals	1.5 - 4 mm ²
Enclosure material	Polyamide

16A 2-pole up to 50 V
16A 3-pole up to 50 V



Ordering details

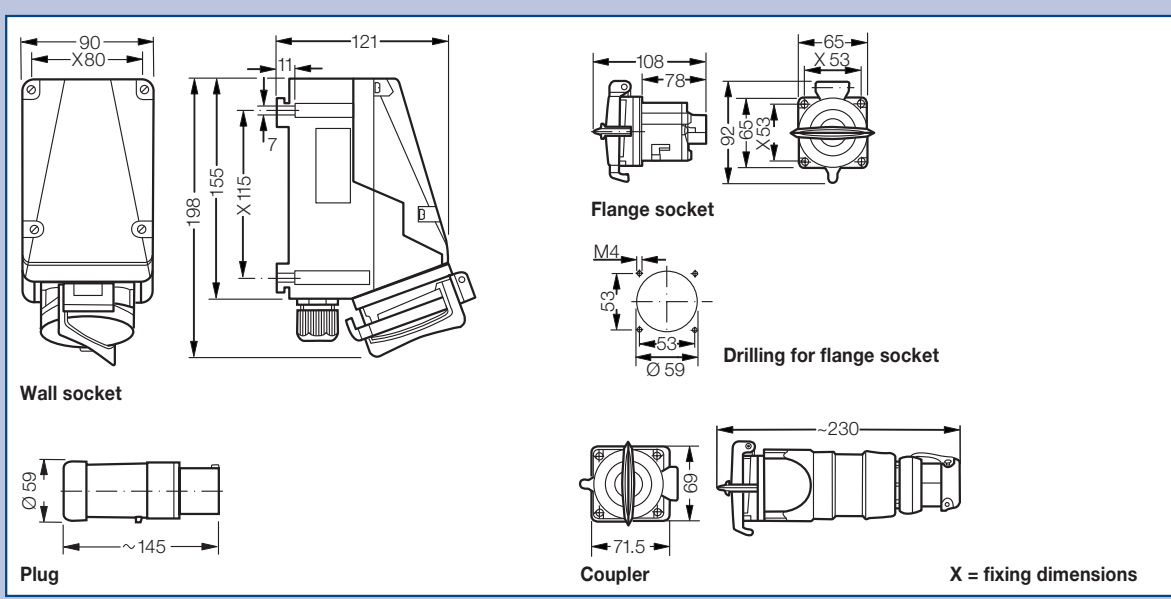
Voltage	h	Type	Cable entries	Weight approx.	Order No.
Type 2-pole low voltage					
≤ 24 V		Wall socket	M25 KU	1.2 kg	GHG 513 4200 R0001
		Flange socket		0.4 kg	GHG 542 5200 V0000
		Coupler		0.7 kg	GHG 513 3200 R0001
		Plug		0.35 kg	GHG 542 2200 V0000
42 V		Wall socket	M25 KU	1.2 kg	GHG 513 4212 R0001
		Flange socket		0.4 kg	GHG 542 5212 V0000
		Coupler		0.7 kg	GHG 513 3212 R0001
		Plug		0.35 kg	GHG 542 2212 V0000
Type 3-pole low voltage					
≤ 24 V		Wall socket	M25 KU	1.2 kg	GHG 513 4300 R0001
		Flange socket		0.4 kg	GHG 542 5300 V0000
		Coupler		0.7 kg	GHG 513 3300 R0001
		Plug		0.35 kg	GHG 542 2300 V0000
42 V		Wall socket	M25 KU	1.2 kg	GHG 513 4312 R0001
		Flange socket		0.4 kg	GHG 542 5312 V0000
		Coupler		0.7 kg	GHG 513 3312 R0001
		Plug		0.35 kg	GHG 542 2312 V0000

Other voltage ranges and versions available on request

Accessories

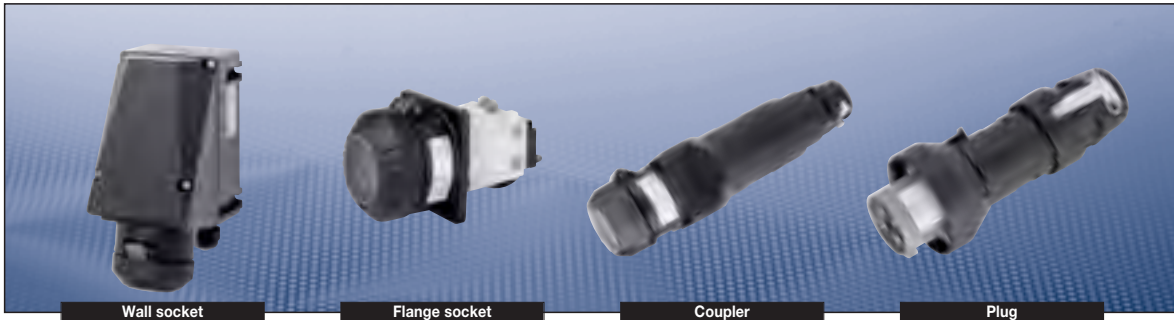
Type	Application	Fixing method	Order No.
Mounting plate size 4	wall mounting	snap on for GHG 531 4/5 pole	GHG 610 1953 R0151
Mounting plate size 4	wall mounting	snap on for GHG 531 3 pole	GHG 610 1953 R0152
Protective canopy size 4		puggable	GHG 610 1955 R0107

Dimension drawing



Dimensions in mm

16 A 3-pole, 4-pole and 5-pole up to 690 V



Technical data

Ex-plugs and receptacles acc. to IEC 60309-1/2 16A	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: PTB 99 ATEX 1040 U
IECEX certification of conformity	IECEX BKI 04.0002
IECEX type of protection	Ex ed [ia] IIC T6/T5
Permissible ambient temperature	-20°C to +40°C ¹⁾
Rated voltage	up to 400 V (3-pole) / 690 V (4-pole) / 500 V (5-pole) AC
Rated current	16 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 16 A
External back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Insulation class	I
Degree of protection to EN 60529	IP66

Wall socket	
Cable glands	1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 with Ex-screw plug plastic
Connecting terminals	2 x 1 - 4 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug	
Cable glands	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x 1.0 - 2.5 mm ²
Enclosure material	polyamide

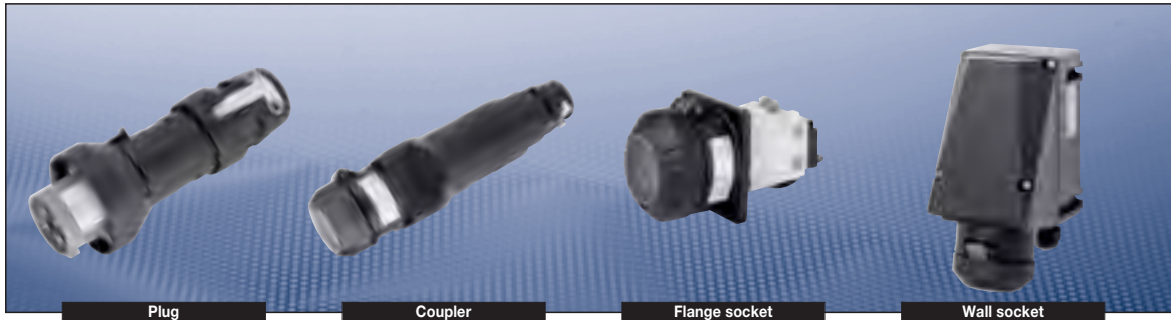
Coupler	
Cable glands	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	2 x 1 - 4 mm ²
Enclosure material	polyamide

Flange socket	
Connecting terminals	2 x 1 - 4 mm ²
Enclosure material	polyamide

¹⁾ extended temperature range on request

Ordering details

Voltage	h	Type	Auxiliary contact	Cable entries	Weight approx.	Order No.
110-130 V		Wall socket	-	M25 KU	1.2 kg	GHG 511 4304 R0001
		Wall socket	-	M20 GE	1.2 kg	GHG 511 4304 R0002
		Wall socket	-	M20 ME	1.3 kg	GHG 511 4304 R3001
		Wall socket	-	M20 GM	1.3 kg	GHG 511 4304 R3003
	4	Flange socket			0.4 kg	GHG 511 8304 R0001
		Coupler			0.7 kg	GHG 511 3304 R0001
		Plug			0.35 kg	GHG 511 7304 R0001



Ordering details

Voltage	h	Type	Auxiliary contact	Cable entries	Weight approx.	Order No.
Type 16 A 3-pole						
200-250 V		Wall socket	–	M25 KU	1.2 kg	GHG 511 4306 R0001
		Wall socket	–	M20 GE	1.2 kg	GHG 511 4306 R0002
		Wall socket	–	M20 ME	1.3 kg	GHG 511 4306 R3001
	6	Wall socket	–	M20 GM	1.3 kg	GHG 511 4306 R3003
		Flange socket			0.4 kg	GHG 511 8306 R0001
		Coupler			0.7 kg	GHG 511 3306 R0001
		Plug			0.35 kg	GHG 511 7306 R0001
Type 16 A 4-pole						
200-250 V		Wall socket	–	M25 KU	1.8 kg	GHG 511 4409 R0001
		Wall socket	–	M20 ME	1.9 kg	GHG 511 4409 R3001
		Flange socket			1.0 kg	GHG 511 8409 R0001
	9	Coupler			1.7 kg	GHG 511 3409 R0001
		Plug			0.7 kg	GHG 511 7409 R0001
380-415 V		Wall socket	–	M25 KU	1.8 kg	GHG 511 4406 R0001
		Wall socket	–	M20 ME	1.9 kg	GHG 511 4406 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4406 R0501
	6	Flange socket			1.0 kg	GHG 511 8406 R0001
		Coupler			1.7 kg	GHG 511 3406 R0001
		Plug			0.7 kg	GHG 511 7406 R0001
480-500 V		Wall socket	–	M25 KU	1.8 kg	GHG 511 4407 R0001
		Wall socket	–	M20 ME	1.9 kg	GHG 511 4407 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4407 R0501
	7	Flange socket			1.0 kg	GHG 511 8407 R0001
		Coupler			1.7 kg	GHG 511 3407 R0001
600-690 V		Wall socket	–	M25 KU	1.8 kg	GHG 511 4405 R0001
		Wall socket	–	M20 ME	1.9 kg	GHG 511 4405 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4405 R0501
	5	Flange socket			1.0 kg	GHG 511 8405 R0001
		Coupler			1.7 kg	GHG 511 3405 R0001
		Plug			0.7 kg	GHG 511 7405 R0001
Type 16 A 5-pole						
200-250 V		Wall socket	–	M25 KU	1.8 kg	GHG 511 4506 R0001
380-415 V		Wall socket	–	M20 ME	1.9 kg	GHG 511 4506 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4506 R0501
		Flange socket			1.0 kg	GHG 511 8506 R0001
		Coupler			1.7 kg	GHG 511 3506 R0001
6	Plug			0.7 kg	GHG 511 7506 R0001	

Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M25 for Ø 8 -17 mm, 1 x M25 Ex-screw plug plastic

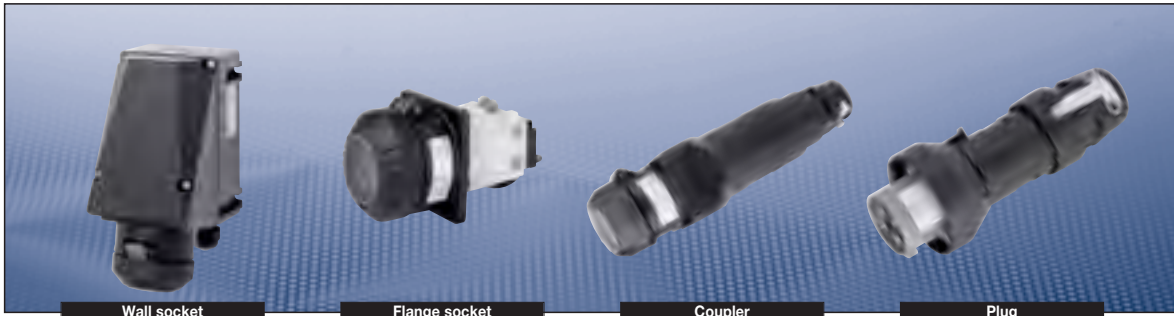
KH = 2 x plastic cable glands M25 for Ø 8 - 17 mm, auxiliary contact, 1 NO

ME = 2 x metal thread M20 with Ex-screw plug plastic

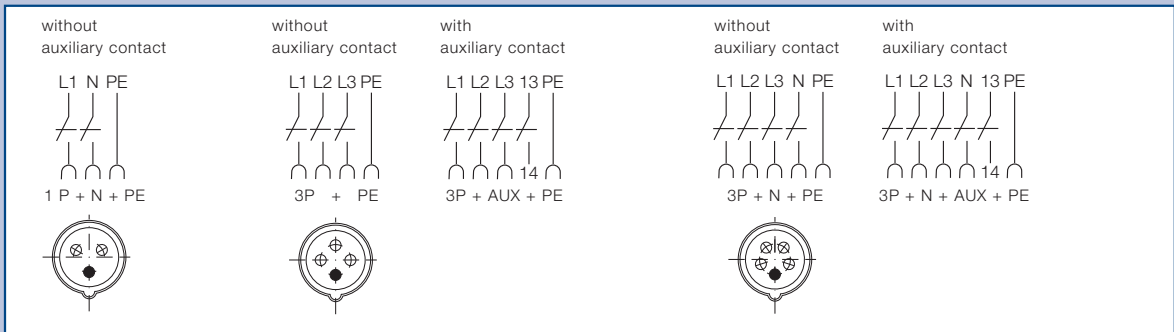
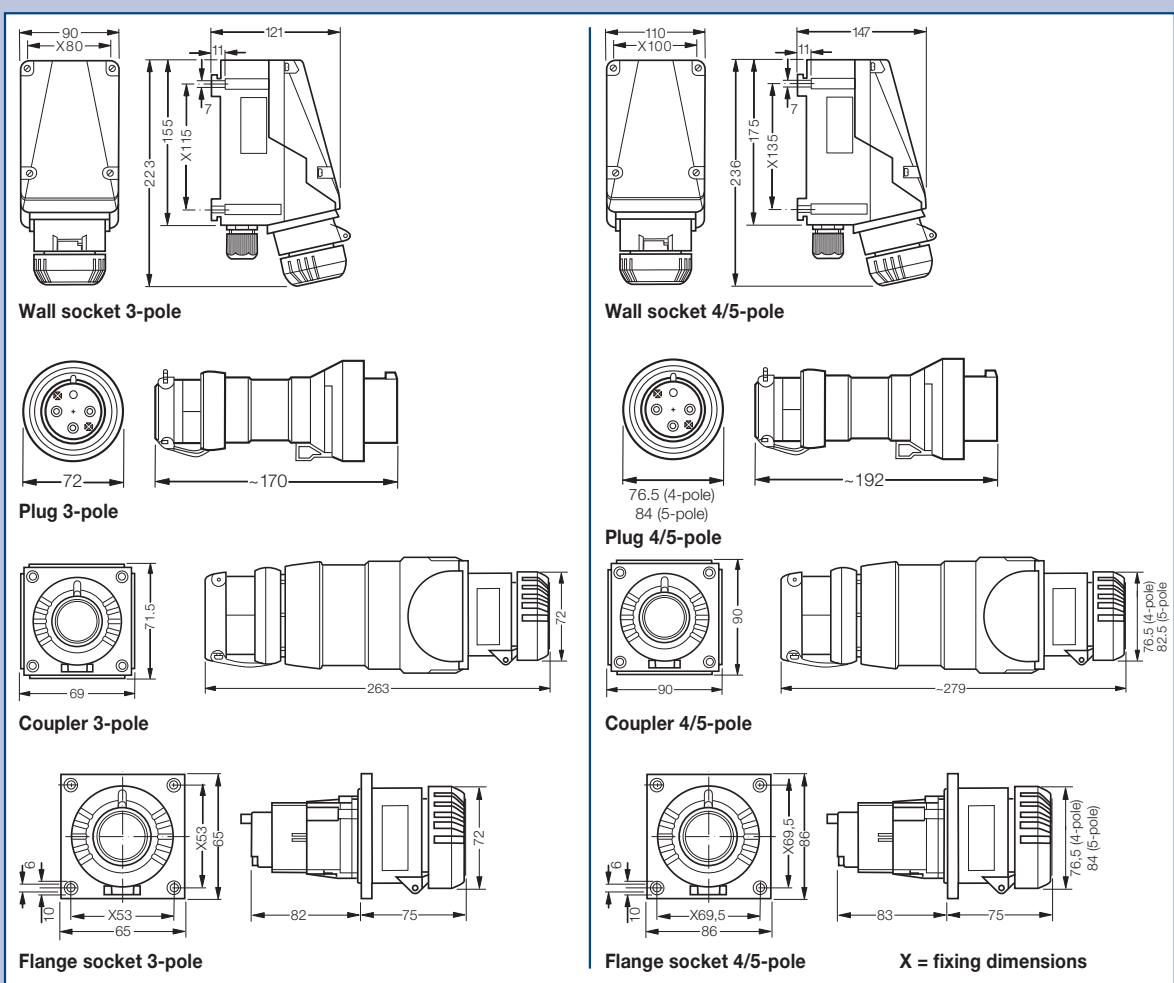
GE = 2 x plastic thread M20 without cable gland/screw plug

GM = 2 x metal thread M20 without cable gland/screw plug

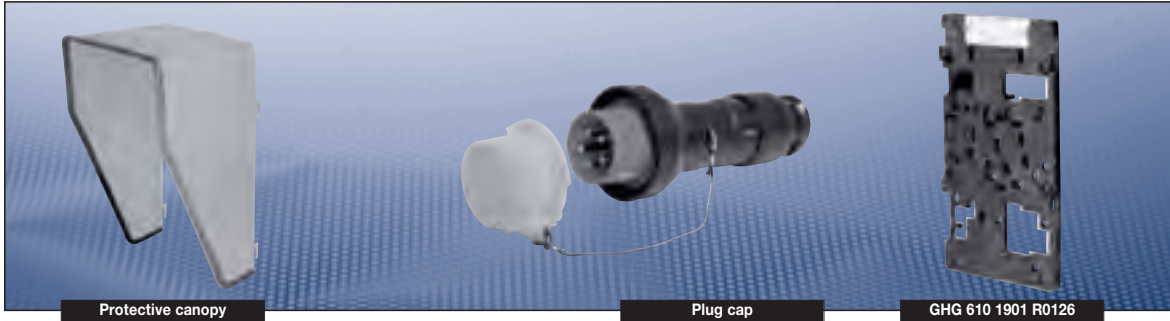
16A 3-pole, 4-pole and 5-pole up to 690 V



Dimension drawing | Wiring diagram



Dimensions in mm



Accessories

Mounting plates for wall sockets 16 A

Type	Application	Fixing method	Order No.
Size 4	for wall mounting	snapped on	GHG 610 1953 R0126
Size 4	for trellis mounting	snapped on	GHG 610 1953 R0126
Size 4	for pipe mounting	snapped on	GHG 610 1953 R0130

Plug cap for plugs 16 A

Type	Order No.
Plug 16 A 3-pole	GHG 510 1901 R0001
Plug 16 A 4-pole	GHG 510 1901 R0002
Plug 16 A 5-pole	GHG 510 1901 R0003

Accessories for mounting plates

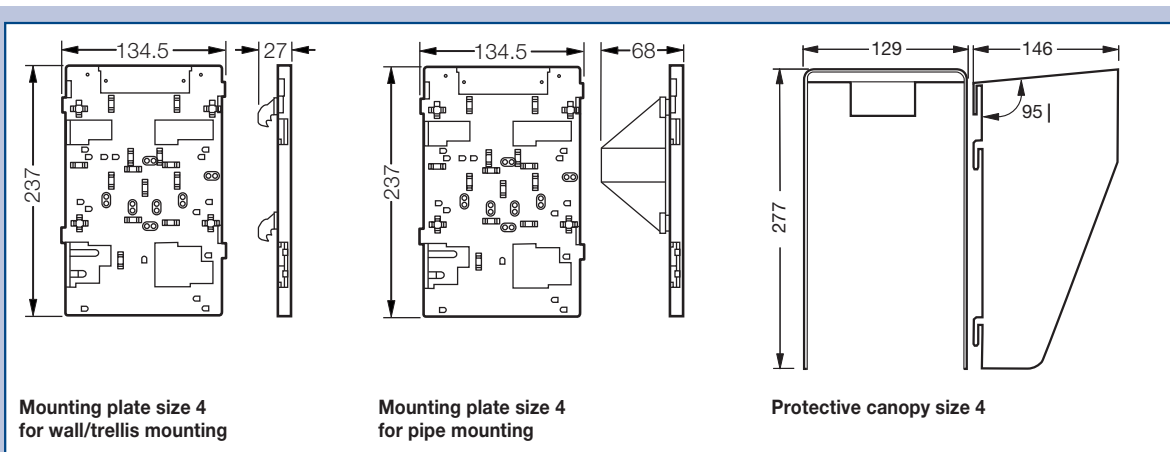
Type	OU	Order No.
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

Please pay attention to that only order units (OU) according to the ordering details can be delivered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 4	for mounting plate size 4 plugable	GHG 610 1955 R0107

Dimension drawing



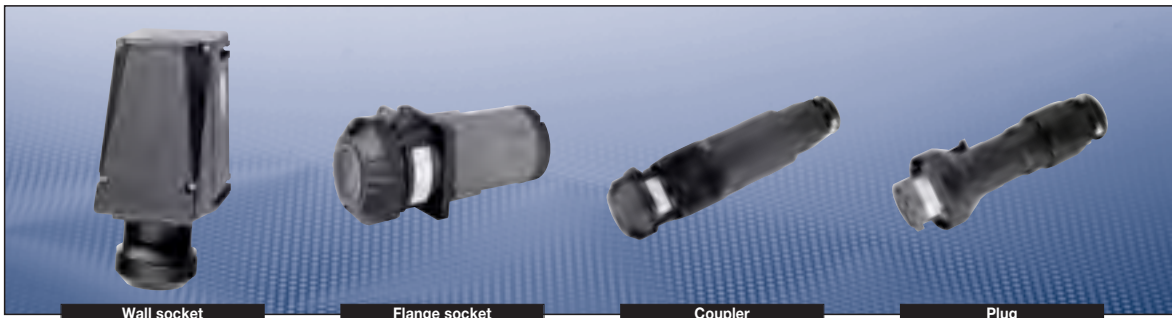
Mounting plate size 4 for wall/trellis mounting

Mounting plate size 4 for pipe mounting

Protective canopy size 4

Dimensions in mm

32A 4-pole up to 690 V
32A 5-pole up to 415 V



Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2	
Marking to 94/9/EC	⊕ II 2 G Ex de (ia) IIC T6 / ⊕ II 2 D Ex tD A21 IP66 T60 °C
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1041 Flange socket: PTB 99 ATEX 1042 U
IECEx certification of conformity	IECEx BKI 04.0006
IECEx type of protection	Ex ed [ia] IIC T6/T5
Permissible ambient temperature	-20 °C to +40 °C ¹⁾
Rated voltage	up to 750 V (AC)
Rated current	32 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 32 A
External back-up fuse	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	black

Wall socket

Cable glands/enclosure drilling	1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-screw plug plastic or 2 x M32 metal thread with 2 Ex-screw plug plastic
Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cabel glands	Ø 17 - 28 mm
Connecting terminals	1.0 - 6 mm ²
Enclosure material	Polyamide

Coupler

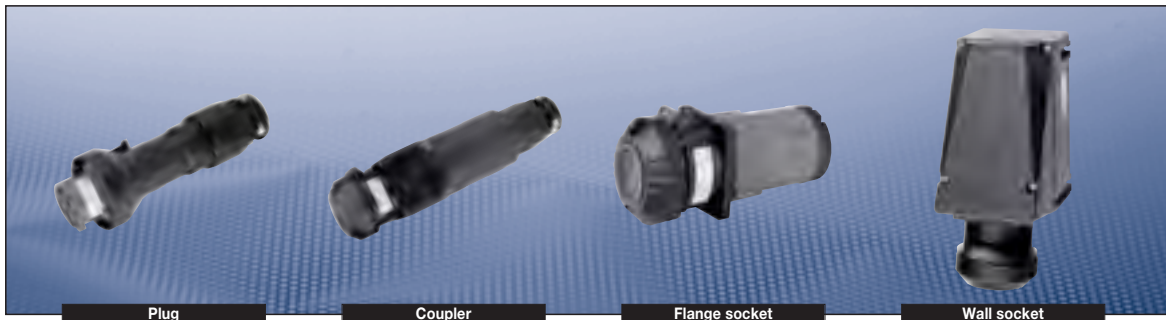
Cabel glands	Ø 17 - 28 mm
Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Polyamide

Flange socket

Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

| 32A 4-pole up to 690 V |
| 32A 5-pole up to 415 V |



Ordering details

Voltage	h	Type	Auxiliary contact	Cable entries	Weight approx.	Order No.
Type 32 A 4-pole						
200-250 V		Wall socket	–	KU	1.8 kg	GHG 512 4409 R0001
		Wall socket	–	ME	1.9 kg	GHG 512 4409 R3001
		Flange socket			1.0 kg	GHG 512 8409 R0001
		Coupler			1.7 kg	GHG 512 3409 R0001
		Plug			0.7 kg	GHG 512 7409 R0001
380-415 V		Wall socket	–	KU	1.8 kg	GHG 512 4406 R0001
		Wall socket	–	ME	1.9 kg	GHG 512 4406 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4406 R0501
		Flange socket			1.0 kg	GHG 512 8406 R0001
		Coupler			1.7 kg	GHG 512 3406 R0001
480-500 V		Wall socket	–	KU	1.8 kg	GHG 512 4407 R0001
		Wall socket	–	ME	1.9 kg	GHG 512 4407 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4407 R0501
		Flange socket			1.0 kg	GHG 512 8407 R0001
		Coupler			1.7 kg	GHG 512 3407 R0001
600-690 V		Wall socket	–	KU	1.8 kg	GHG 512 4405 R0001
		Wall socket	–	ME	1.9 kg	GHG 512 4405 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4405 R0501
		Flange socket			1.0 kg	GHG 512 8405 R0001
		Coupler			1.7 kg	GHG 512 3405 R0001
200-250 V 380-415 V		Wall socket	–	KU	1.8 kg	GHG 512 4506 R0001
		Wall socket	–	ME	1.9 kg	GHG 512 4506 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4506 R0501
		Flange socket			1.0 kg	GHG 512 8506 R0001
		Coupler			1.7 kg	GHG 512 3506 R0001
		Plug			0.7 kg	GHG 512 7506 R0001

Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M40 for Ø 17-28 mm, 1 x M40 Ex-screw plug plastic

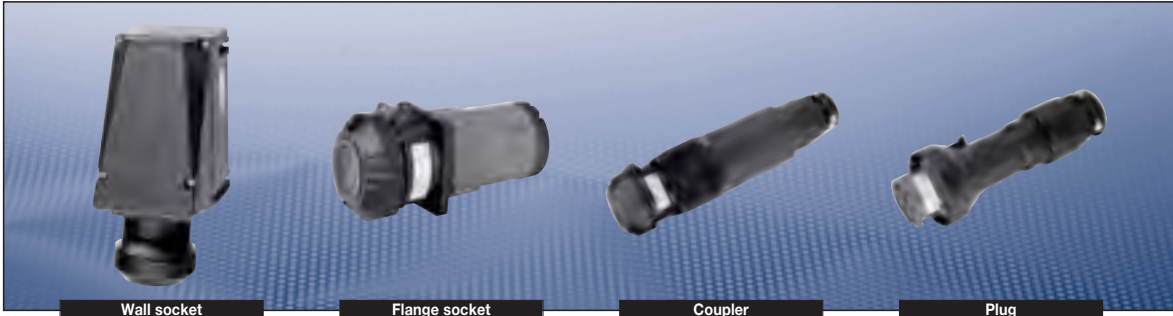
KH = 1 x plastic cable glands M40 for Ø 16-28 mm,

1 x plastic cable glands M25 for Ø 8 - 17 mm, with auxiliary contact

ME = 2 x metal thread M32 with Ex-screw plug plastic

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| 32A 4-pole up to 690 V |
| 32A 5-pole up to 415 V |



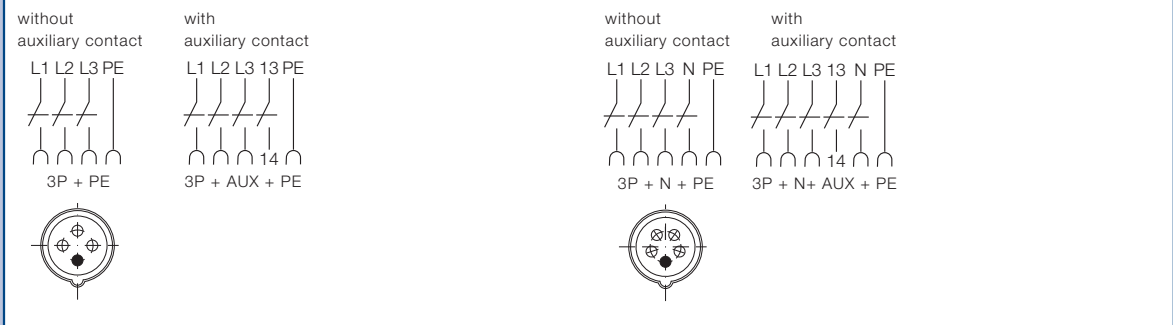
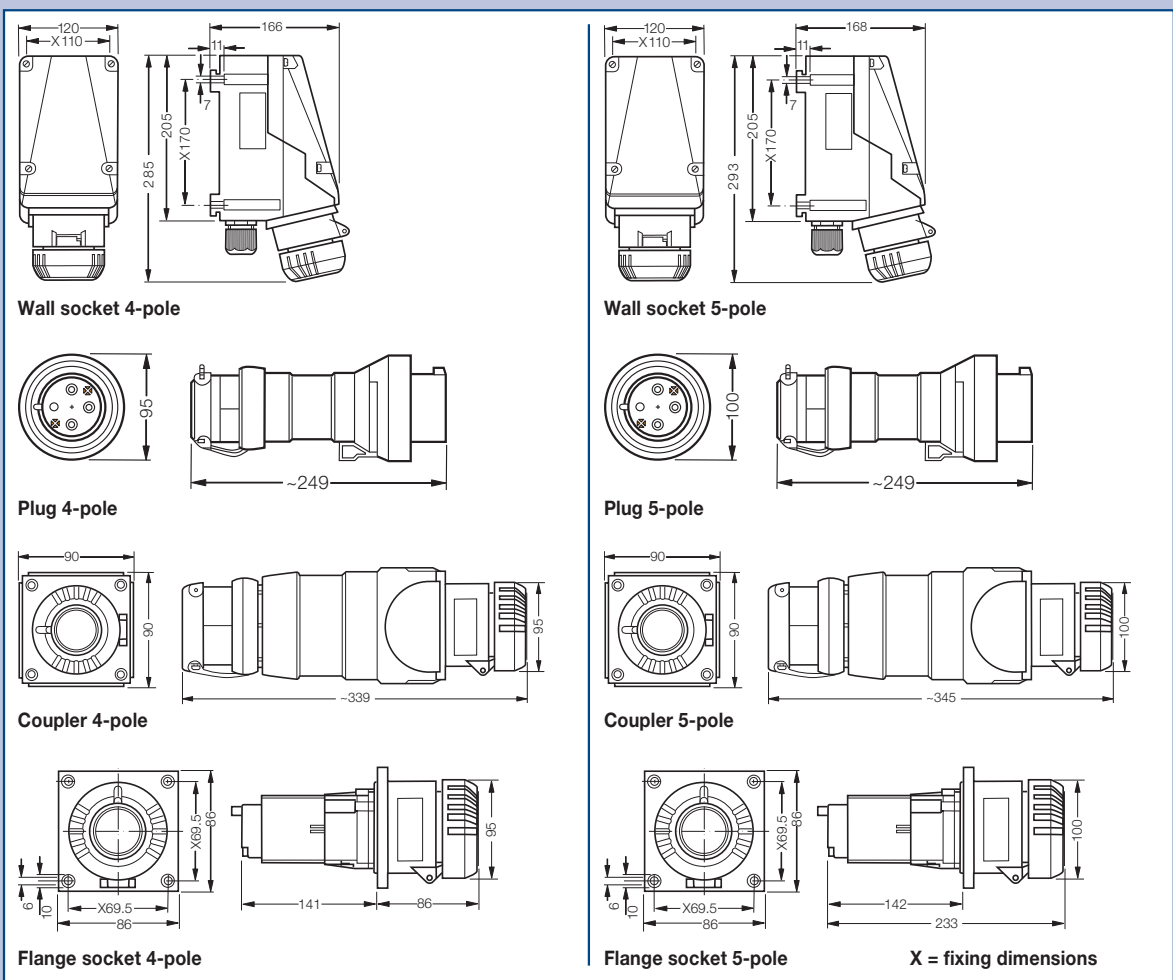
Wall socket

Flange socket

Coupler

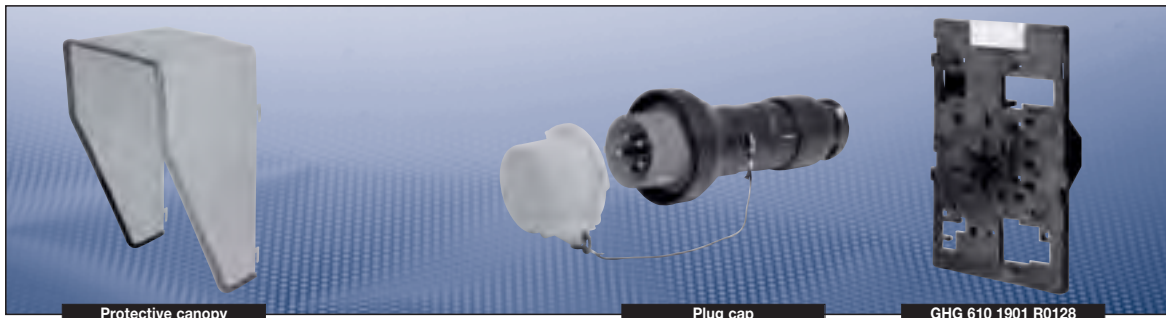
Plug

Dimension drawing | Wiring diagram



Dimensions in mm

32A 4-pole up to 690 V |
32A 5-pole up to 415 V |



Accessories

Mounting plates for wall sockets 32 A

Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snapped on	GHG 610 1953 R0128
Size 5	for trellis mounting	snapped on	GHG 610 1953 R0128
Size 5	for pipe mounting	snapped on	GHG 610 1953 R0132

Plug cap for plugs 32 A

Type	Order No.
Plug 32 A 3-pole/4-pole	GHG 510 1901 R0004
Plug 32 A 5-pole	GHG 510 1901 R0005

Accessories for mounting plates

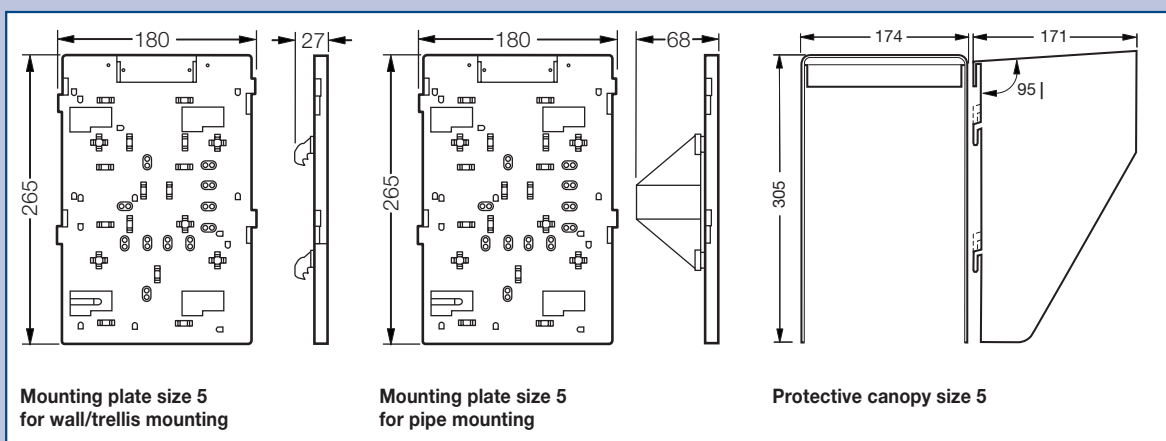
Type	OU	Order No.
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

Please pay attention to that only order units (OU) according to the ordering details can be delivered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 5	for mounting plate size 5, plugable	GHG 610 1955 R0108

Dimension drawing



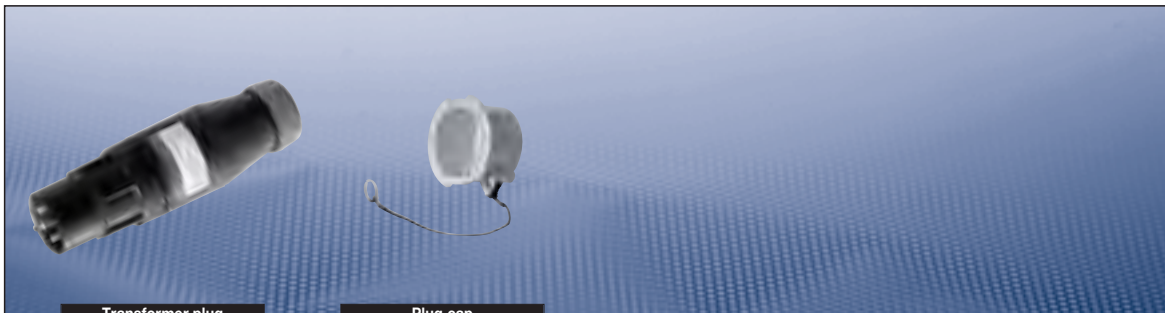
Mounting plate size 5
for wall/trellis mounting

Mounting plate size 5
for pipe mounting

Protective canopy size 5

Dimensions in mm

32A 4-/5-pole Transformer plug | Plug with fuse |






Transformer plug

Plug cap

Technical data

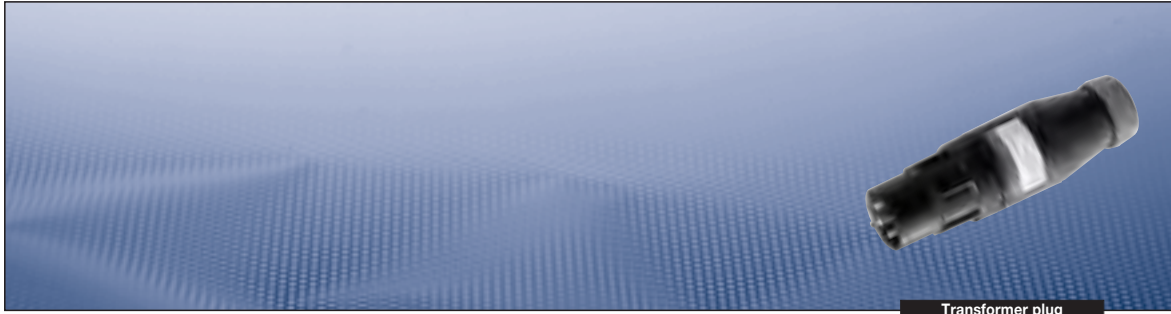
Ex-transformer plug accd. to IEC 60309-1/2, up to 415 V	
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T5
EC-Type Examination Certificate	PTB 99 ATEX 1041
IECEX certification of conformity	IECEX BK1 04.0006
IECEX type of protection	Ex ed [ia] IIC T6/T5
Permissible ambient temperature	-20 °C to + 40 °C ¹⁾
Rated voltage primary	250 V AC
Rated voltage secondary	24 V, 36 V or 42 V/230 V (AC)
Frequency	50/60 Hz
Power consumption	max. 65 VA
Back up fuse, internal	0.5 A mT, replaceable
Connecting terminals	1 x 1 - 4 mm ²
Insulation class	I
Degree of protection to EN 60529	IP54
Enclosure material	Glass-fibre reinforced polyester, polyamide

Ordering details

Voltage	h	Type	Weight approx.	Sec voltage	Order No.
32 A transformer plug 4-pole					
200-250 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 532 6469 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 532 6469 V5005
32 A transformer plug 5-pole					
380-415 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 532 6566 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 532 6566 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 532 6566 V5025
		Transformer plug 65 VA	2.3 kg	230 V	GHG 532 6566 V5023
Plug with fuse					
200-250 V		Plug with fuse max. 6.3 A	1.3 kg		GHG 532 7536 V0000
Accessories					
		Plug cap 4 pole			GHG 530 1935 R0002
		Plug cap 5 pole			GHG 530 1935 R0005

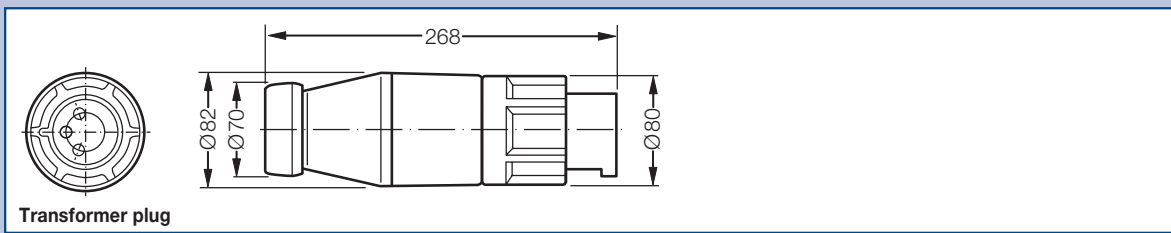
¹⁾ extended temperature range on request

32A 4-/5-pole Transformer plug
Plug with fuse



Transformer plug

Dimension drawing

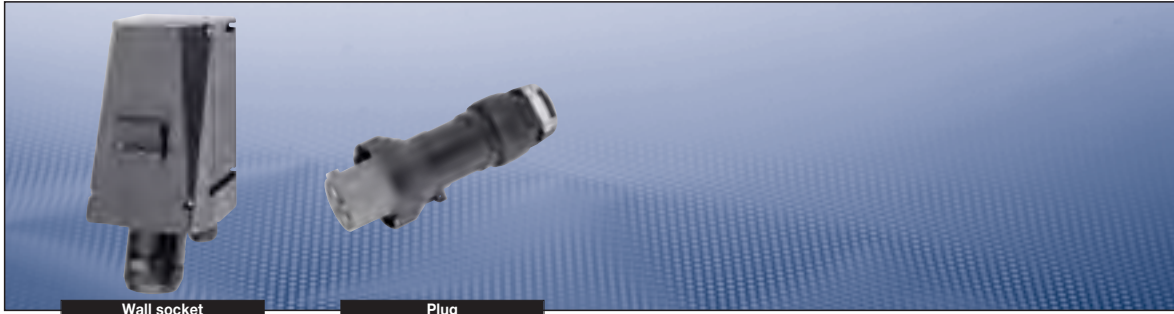


Transformer plug

Dimensions in mm

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| 63 A 4- and 5-pole up to 690 V |



Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T5/T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 1070
IECEX certification of conformity	IECEX BKI 04.0004
IECEX type of protection	Ex ed IIC T6
Permissible ambient temperature	-20 °C to + 40 °C ¹⁾
Rated voltage	690 V (AC)
Rated current	63 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 63 A
External back up fuse	without therm. protection: 63 A with therm. protection: 80 A gL (rated current 63 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	Black

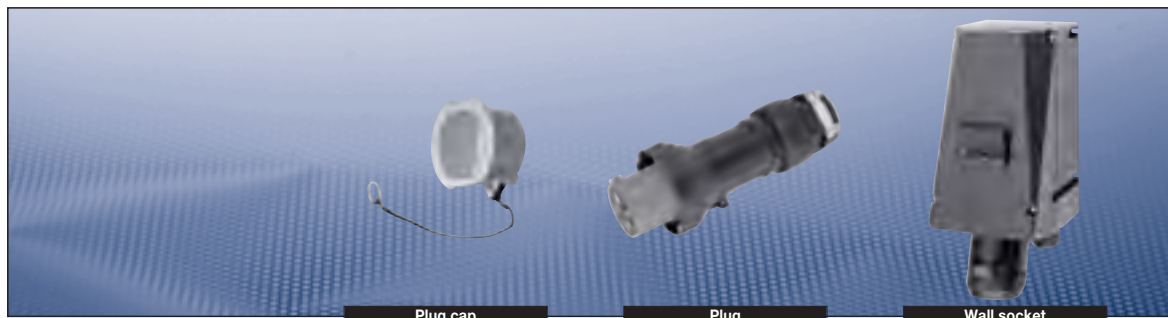
Wall socket

Cable glands/enclosure drilling	1 x M50 Ø 22 - 35 mm, 1 x M50 Ex-screw plug plastic or 2 x M40 metal thread with 2 Ex-screw plug plastic
Connecting terminals	2 x 4 - 25 mm ² / with cable lug 1 x 35 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cabel glands	Ø 19 - 34 mm
Connecting terminals	1 x 4 - 16 mm ² / pin-cable lug ²⁾ 1 x 25 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request



Plug cap

Plug

Wall socket

Ordering details

Voltage	h	Type	Auxiliary contact	Cable entries	Weight approx.	Order No.
Type 63 A 4-pole						
200-250 V		Wall socket	–	KU	8.1 kg	GHG 514 4409 R0001
		Wall socket	–	ME	8.2 kg	GHG 514 4409 R3001
		Plug	–	–	0.75 kg	GHG 514 7409 R0001
380-415 V		Wall socket	–	KU	8.1 kg	GHG 514 4406 R0001
		Wall socket	–	ME	8.2 kg	GHG 514 4406 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4406 R0501
		Plug	–	–	0.75 kg	GHG 514 7406 R0001
480-500 V		Wall socket	–	KU	8.1 kg	GHG 514 4407 R0001
		Wall socket	–	ME	8.2 kg	GHG 514 4407 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4407 R0501
		Plug	–	–	0.75 kg	GHG 514 7407 R0001
600-690 V		Wall socket	–	KU	8.1 kg	GHG 514 4405 R0001
		Wall socket	–	ME	8.1 kg	GHG 514 4405 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4405 R0501
		Plug	–	–	0.75 kg	GHG 514 7405 R0001

Type 63 A 5-pole						
200-250 V		Wall socket	–	KU	8.1 kg	GHG 514 4506 R0001
380-415 V		Wall socket	–	ME	8.1 kg	GHG 514 4506 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4506 R0501
		Plug	–	–	0.75 kg	GHG 514 7506 R0001

Accessories

Plug cap for plugs

Type	OU	Order No.
Plug cap 4-pole/5-pole	1	GHG 510 1901 R0006
Pin cable lug 25 mm ²	5	GHG 510 1916 R0001

Other voltage ranges and versions available on request.

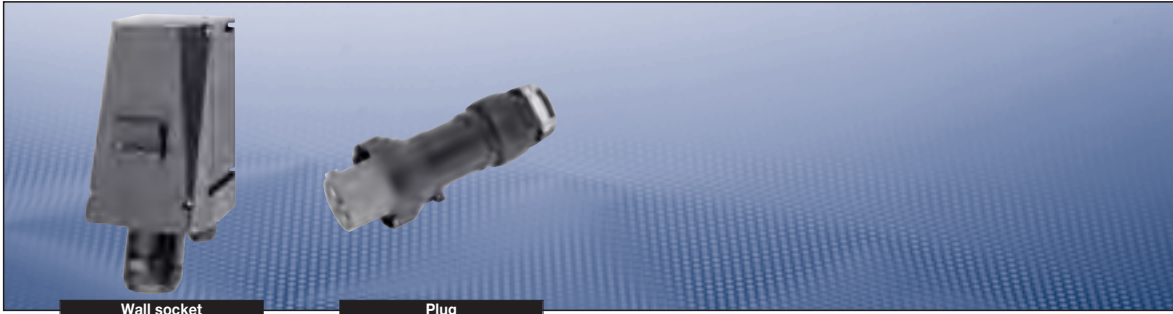
KU = 1 x plastic cable glands M40 for Ø 17-28 mm, 1 x M40 Ex-screw plug plastic

KH = 1 x plastic cable glands M40 for Ø 16-28 mm,

1 x plastic cable glands M25 for Ø 8 - 17 mm, with auxiliary contact

ME = 2 x metal thread M32 with Ex-screw plug plastic

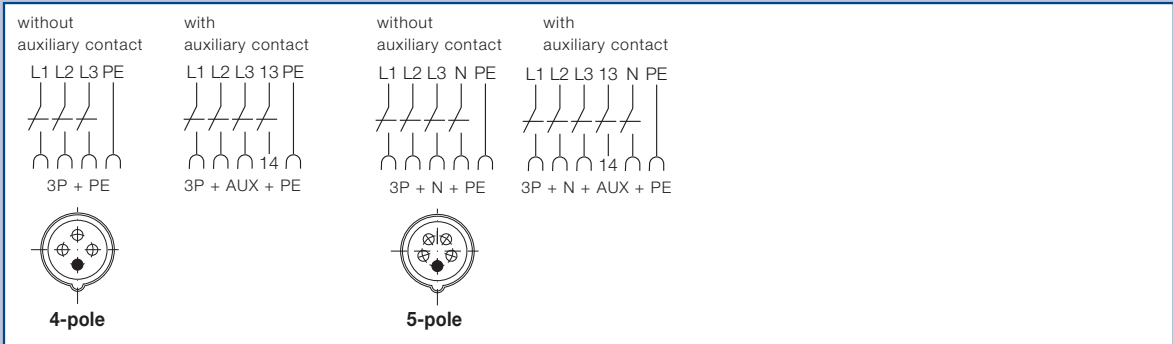
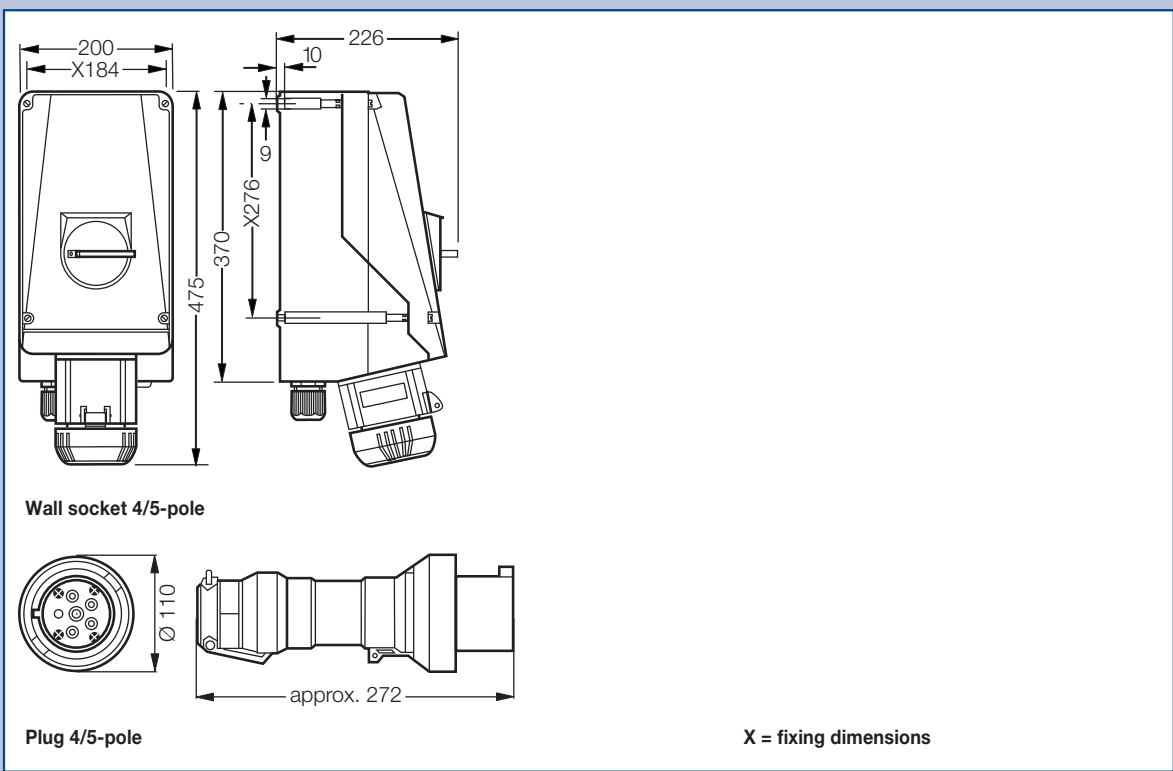
| 63 A 4- and 5-pole up to 690 V |



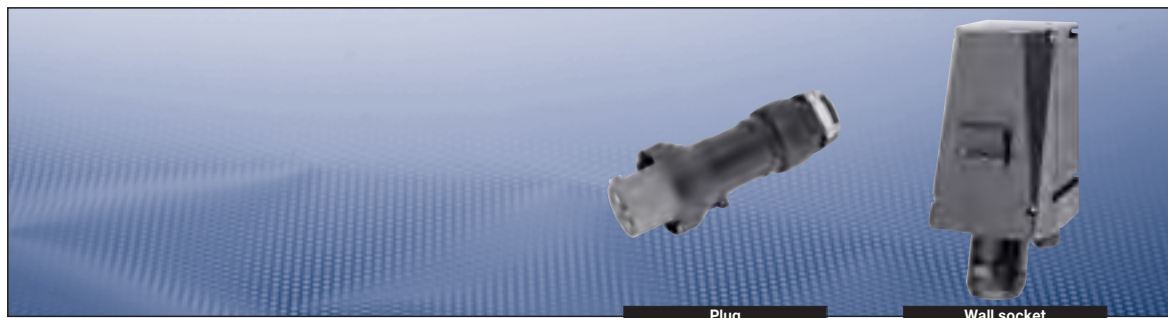
Wall socket

Plug

Dimension drawing | Wiring diagram



Dimensions in mm



Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 01 ATEX 1069
IECEX certification of conformity	IECEX BKI 04.0005
IECEX type of protection	Ex ed IIC T6
Permissible ambient temperature	-20 °C to + 40 °C ¹⁾
Rated voltage	690 V (AC)
Rated current	125 A (AC)
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 125 A
External back up fuse	without therm. protection: 125 A with therm. protection: 160 A gL (rated current 125 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	Black

Wall socket

Cable glands/enclosure drilling	1 x M63 Ø 27 - 48 mm, 1 x M63 Ex-screw plug plastic or 2 x M50 metal thread with 2 Ex-screw plug plastic
Connecting terminals	2 x 4 - 50 mm ² / with cable lug ¹⁾ 1 x 120 mm ²
Enclosure material	Glass-fibre reinforced polyester

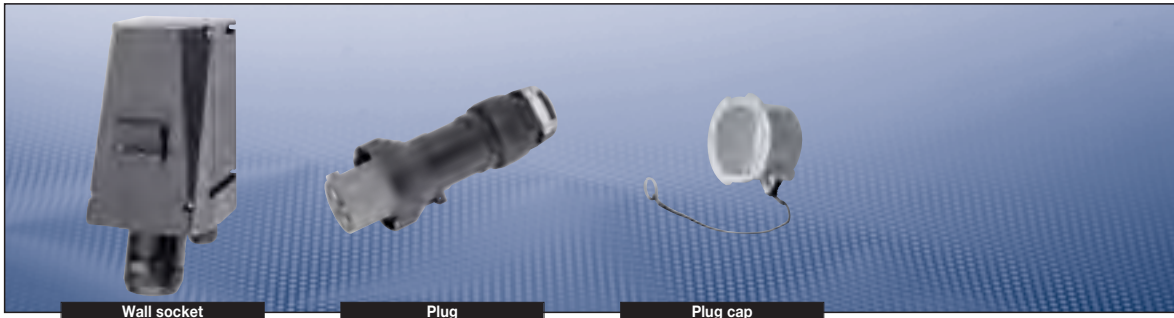
Plug

Cabel glands	Ø 31 - 55 mm
Connecting terminals	1 x 4 - 35 mm ² / with pin cable lug ²⁾ 1 x 50 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

²⁾ use only delivered cable lug

| 125A 4- and 5-pole up to 690 V |



Ordering details

Voltage	h	Type	Auxiliary contact	Cable entries	Weight approx.	Order No.
Type 125 A 4-pole						
200-250 V		Wall socket	-	KU	12.3 kg	GHG 515 4409 R0001
		Wall socket	-	ME	12.5 kg	GHG 515 4409 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4409 R0501
		Plug			0.9 kg	GHG 515 7409 R0001
380-415 V		Wall socket	-	KU	12.3 kg	GHG 515 4406 R0001
		Wall socket	-	ME	12.5 kg	GHG 515 4406 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4406 R0501
		Plug			0.9 kg	GHG 515 7406 R0001
480-500 V		Wall socket	-	KU	12.3 kg	GHG 515 4407 R0001
		Wall socket	-	ME	12.5 kg	GHG 515 4407 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4407 R0501
		Plug			0.9 kg	GHG 515 7407 R0001
600-690 V		Wall socket	-	KU	12.3 kg	GHG 515 4405 R0001
		Wall socket	-	ME	12.5 kg	GHG 515 4405 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4405 R0501
		Plug			0.9 kg	GHG 515 7405 R0001

Type 125 A 5-pole						
200-250 V		Wall socket	-	KU	13.0 kg	GHG 515 4506 R0001
380-415 V		Wall socket	-	ME	13.2 kg	GHG 515 4506 R3001
		Wall socket	yes	KH	13.2 kg	GHG 515 4506 R0501
		Plug			1.2 kg	GHG 515 7506 R0001

Accessories

Type	OU	Order No.
Plug cap 4-pole/5-pole	1	GHG 510 1901 R0007
Cable lug 50 mm ²	5	GHG 260 1911 R0004

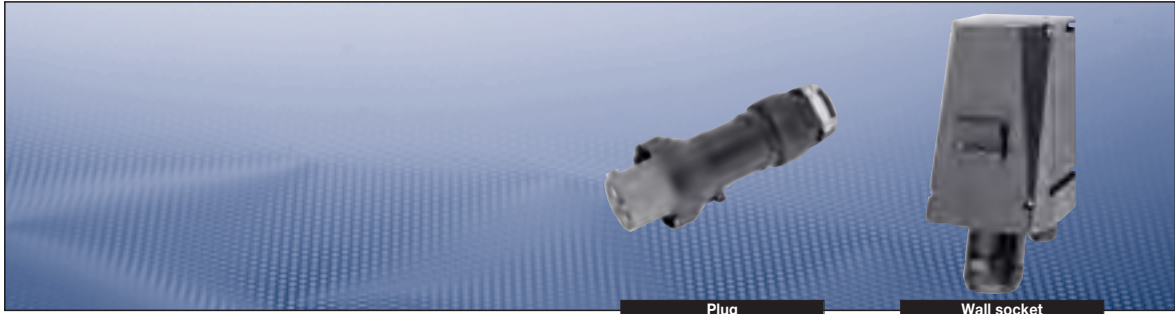
Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M40 for Ø 17-28 mm, 1 x M40 Ex-screw plug plastic

KH = 1 x plastic cable glands M40 for Ø 16-28 mm,

1 x plastic cable glands M25 for Ø 8 - 17 mm, with auxiliary contact

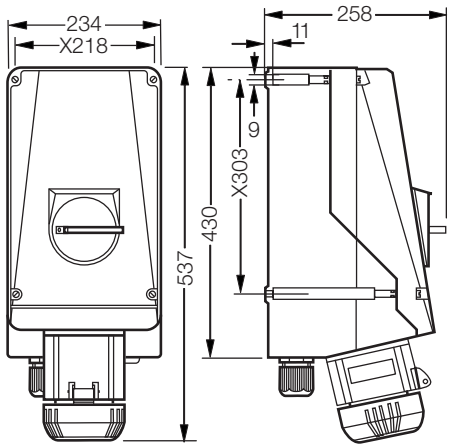
ME = 2 x metal thread M32 with Ex-screw plug plastic



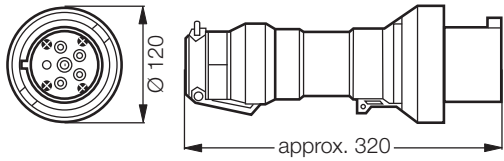
Plug

Wall socket

Dimension drawing | Wiring diagram

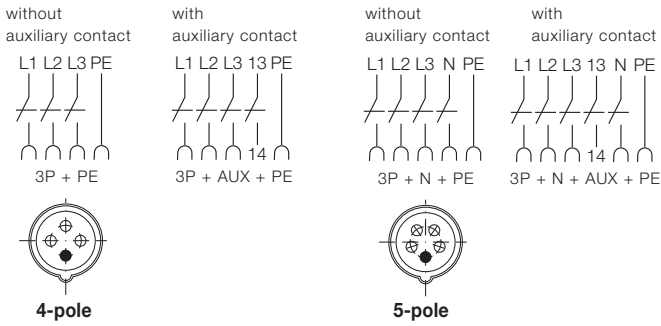


Wall socket 4/5-pole



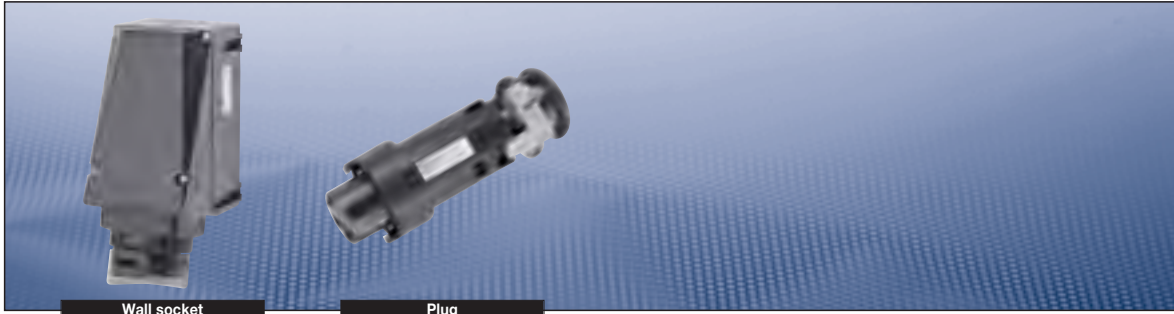
Plug 4/5-pole

X = fixing dimensions



Dimensions in mm

10A 21-pole up to 250 V



Technical data

Ex-plugs and receptacles, 21-pole

Marking to 94/9/EC	Ⓔ II 2 G Ex e II T6 / Ⓔ II 3 D Ex tD A22 IP54 T80 °C ¹⁾
EC-Type Examination Certificate	PTB 00 ATEX 1109
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage	250 V AC
Rated current	10 A
Frequency	up to 400 Hz
External back up fuse	without therm. protection: 10 A with therm. protection: 16 A gL (rated current 10 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP65
Enclosure colour	Black

Wall socket

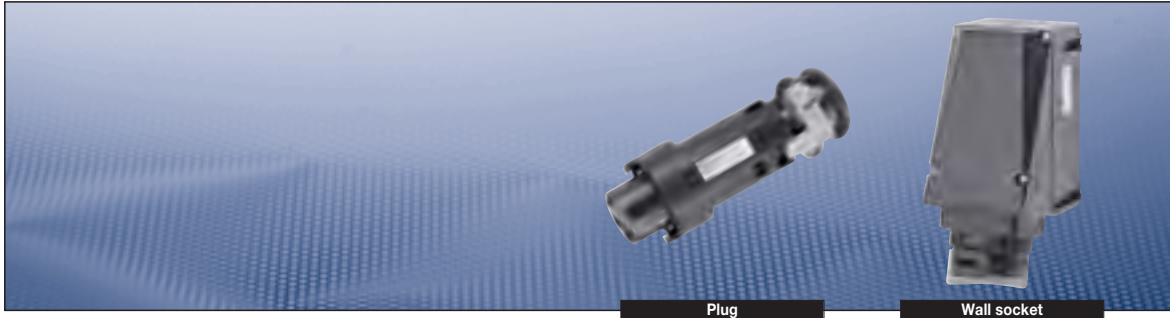
Cable glands/enclosure drilling	1 x M40 Ø 17 - 28 mm, 1 x M32 metal thread with Ex-screw plugs plastic
Connecting terminals	1 x 1.0 - 2.5 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cabel glands	Ø 19 - 28 mm
Connecting terminals	1 x 1.0 - 2.5 mm ² crimp or solder connection ²⁾
Enclosure material	Polyamide

¹⁾ See manufacturers declaration 091 for non conductive dusts

²⁾ Please use appropriate crimp tool



Plug

Wall socket

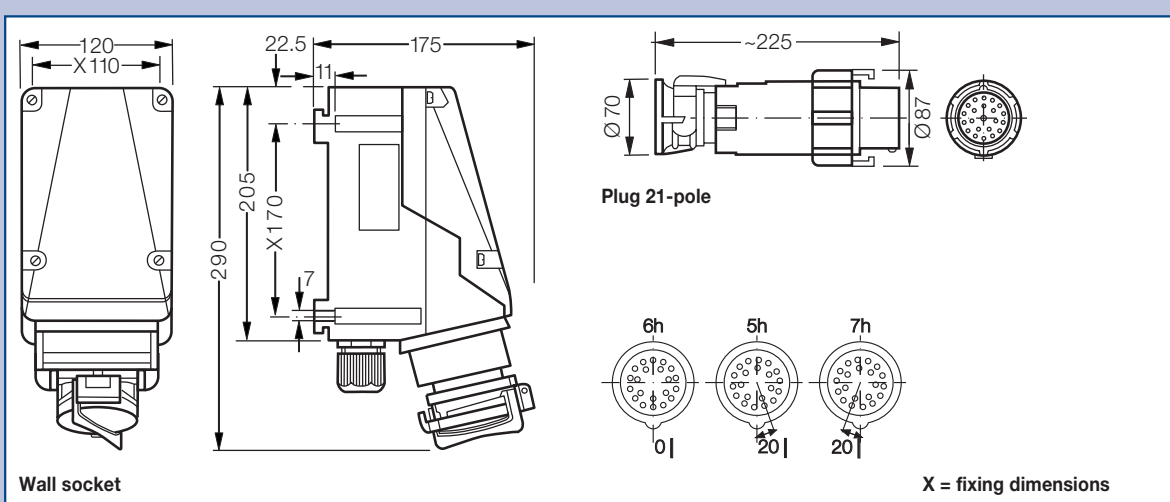
Ordering details

Type	h	Cable entry	Weight	Order No.
Type 10 A 21-pole				
Wall socket	5 h	KU	1.8 kg	GHG 511 4905 R0001
Wall socket	5 h	ME	1.9 kg	GHG 511 4905 R3001
Plug	5 h		0.7 kg	GHG 591 2201 R0001
Wall socket	6 h	KU	1.8 kg	GHG 511 4906 R0001
Wall socket	6 h	ME	1.9 kg	GHG 511 4906 R3001
Plug	6 h		0.7 kg	GHG 591 2201 R0002
Wall socket	7 h	KU	1.8 kg	GHG 511 4907 R0001
Wall socket	7 h	ME	1.9 kg	GHG 511 4907 R3001
Plug	7 h		0.7 kg	GHG 591 2201 R0003

Type	Application	Fixing method	Order No.
Accessories			
Plug cap 21-pole			GHG 530 1935 R0008
Mounting plate size 5	for wall mounting	snapp on	GHG 610 1953 R0128
Mounting plate size 5	for trellis mounting	snapp on	GHG 610 1953 R0128
Mounting plate size 5	for pipe mounting	snapp on	GHG 610 1953 R0132
Socket bushes 1 set = 7 pcs.			GHG 590 1301 R0102
Plug pins 1 set = 7 pcs.			GHG 590 1302 R0102
Ex-Crimping tool for sockets and pins			GHG 590 1902 R0001
Dismanteling tool for sockets and pins			GHG 590 1903 R0001

KU = 1 x plastic cable glands M40 for Ø 17-28 mm
 ME = 1 x metal thread M32 with Ex-screw plug plastic

Dimension drawing | Coding



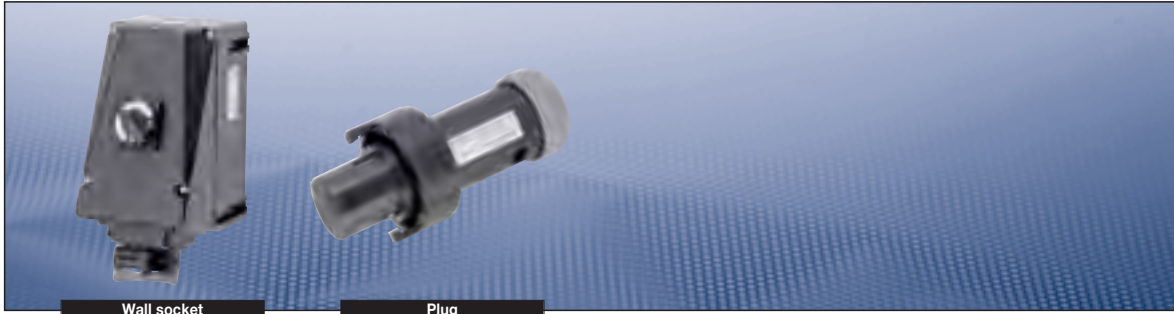
Wall socket

Plug 21-pole

X = fixing dimensions

Dimensions in mm

20A 7-pole up to 500 V



Technical data

Ex-plugs and receptacles, 7-pole

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6/T5 / ⊕ II 3 D Ex tD A22 IP54 T80 °C ¹⁾
EC-Type Examination Certificate	PTB 00 ATEX 1109
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage	500 V
Rated current	16 A (T6) / 20 A (T5)
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 500 V / I _e 10 A U _e 250 V / I _e 16 A
External back up fuse	without therm. protection: 16 A with therm. protection: 25 A gL (rated current 16/20 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	Black

Wall socket

Cable glands/enclosure drilling	2 x M40 Ø 17 - 28 mm, 1 Ex screw plugs plastic or 2 x M32 metal thread with 2 Ex screw plugs plastic
Connecting terminals	2 x 1.5 - 4 mm ²
Enclosure material	Glass-fibre reinforced polyester

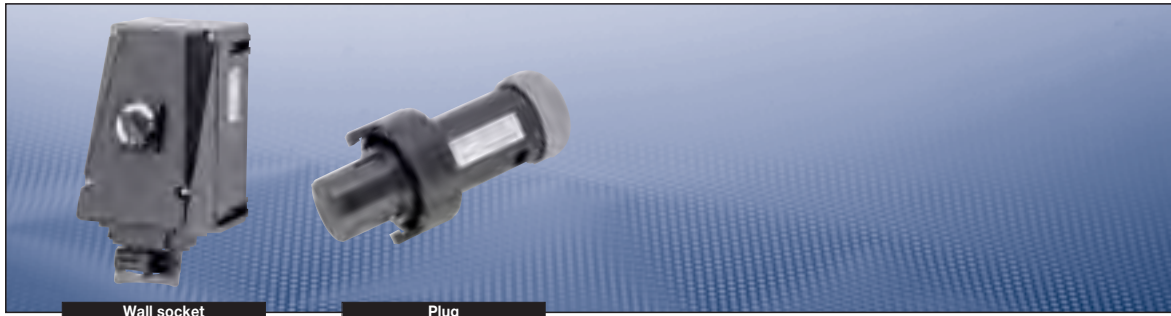
Plug

Cabel glands	Ø 9 - 17 mm
Connecting terminals	1 x 1.0 - 2.5 mm ² crimped or soldered connection ²⁾
Enclosure material	Polyamide

¹⁾ See manufacturers declaration 091 for non conductive dusts

²⁾ Please use appropriate crimp tool

| 20A 7-pole up to 500 V |



Wall socket

Plug

Ordering details

Type	h	Cable entry	Weight	Order No.
Type 20 A 7-pole				
Wall socket 7-pole	6 h	KU	2.2 kg	GHG 511 4706 R0001
Wall socket 7-pole	6 h	ME	2.3 kg	GHG 511 4706 R3001
Plug 7-pole	6 h		0.3 kg	GHG 592 2001 R0002
Wall socket 6-pole + PE	7 h	KU	2.2 kg	GHG 511 4707 R0003
Wall socket 6-pole + PE	7 h	ME	2.3 kg	GHG 511 4707 R3003
Plug 6-pole + PE	7 h		0.3 kg	GHG 592 2001 R0022

Type	Application	Fixing method	Order No.
Accessories			
Plug cap 7-pole			GHG 540 1935 R0002
Mounting plate size 5	for wall mounting	snapp on	GHG 610 1953 R0128
Mounting plate size 5	for trellis mounting	snapp on	GHG 610 1953 R0128
Mounting plate size 5	for pipe mounting	snapp on	GHG 610 1953 R0132
Socket bushes 1 set = 7 pcs.			GHG 590 1301 R0102
Plug ins 1 set = 7 pcs.			GHG 590 1302 R0102
Crimping tool for sockets and pins			GHG 590 1902 R0001
Dismanteling tool for sockets and pins			GHG 590 1903 R0001

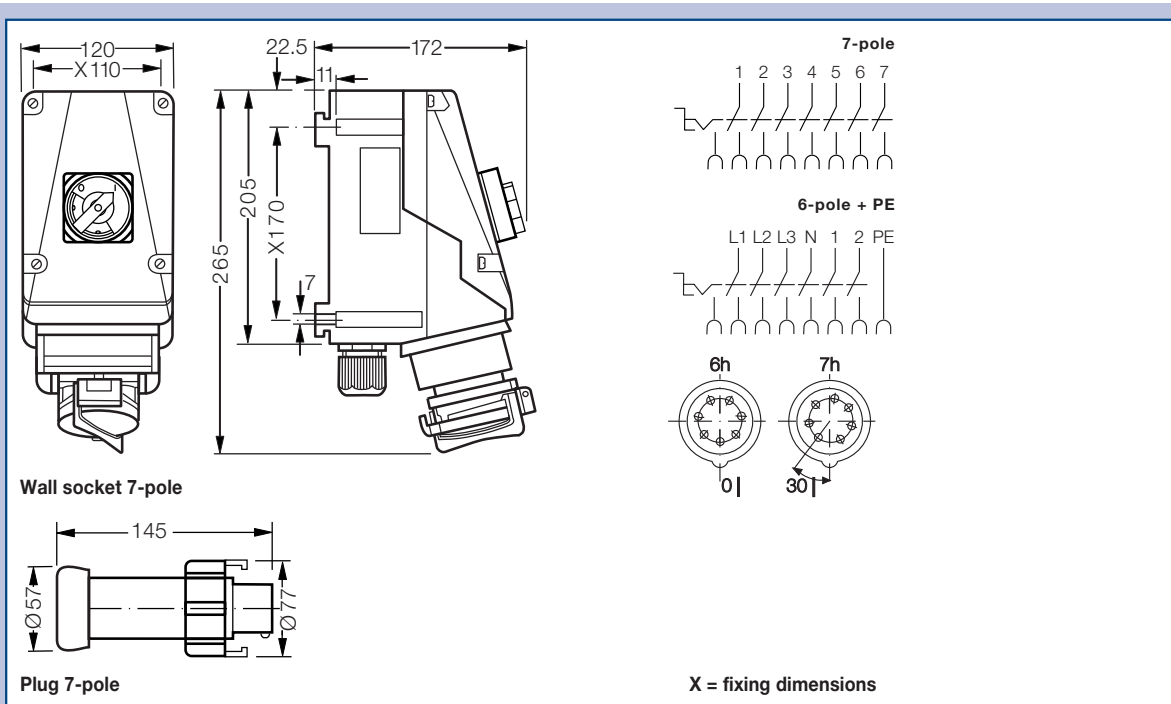
Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M40 Ø 17-28 mm, 1 x M40 with Ex-screw plug plastic

ME = 2 x metal thread M32 with Ex-screw plug plastic

Fixing material and accessories see page 6.94 pp.

Dimension drawing | Wiring diagram



Dimensions in mm

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EX - PLUG AND RECEPTACLE

16 A Metallic Design for Zone 1

The explosion-protected light metal plug and receptacle devices can be used in the areas of Zone 1 and Zone 2 at no risk of explosion. Extremely harsh conditions of use in the hazardous area requires the devices to have highest mechanical strength. The explosion-protected CEAG plug and socket devices can be used to supply the appropriate energy to portable electrical equipment in these harsh conditions.

The robust plug and receptacle devices with high-quality cast aluminium housings can be connected to a large connecting room via explosion-proof conduits or explosion-proof screwed connections.

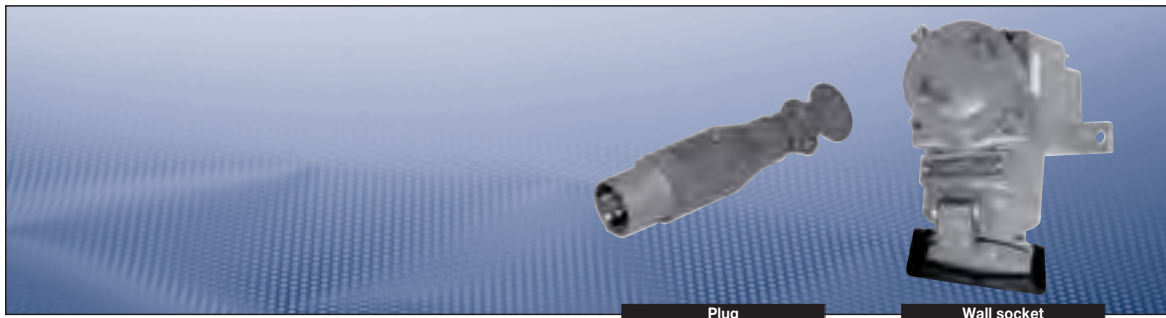
Unused flameproof threads for cable glands have to be closed with certified plugs.

The light metal plug and socket devices have an outside earthing connection.

The explosion-protected plug can be plugged into an industrial sockets if their contact disposability is acc. to IEC 60309 connecting terminals are in an Ex-e chamber, all other parts are Ex-d protected.



- Ex-d enclosure
- High mechanical, chemical and thermal resistance conduit
- Connecting technology



Plug

Wall socket

Technical data

Ex-protected plug and socket Ex d

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6
EC-Type Examination Certificate	LOM 03 ATEX 2019
Permissible ambient temperature	-20 °C up to +55 °C
Rated voltage	see ordering details
Rated current	16 A
Frequency	50/60 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 415 V / I _e 16 A
External back-up fuse, max.	without therm. protection: 16 A / with therm. protection: 35 A gL
Degree of protection to EN 60529	IP65
Enclosure material	Light alloy, polyester paint finish

Wall socket

Cable glands	2 x 3/4", ISO 7/1, one plugged
Connecting terminals	2 x 1.0 - 2.5 mm ²

Plug

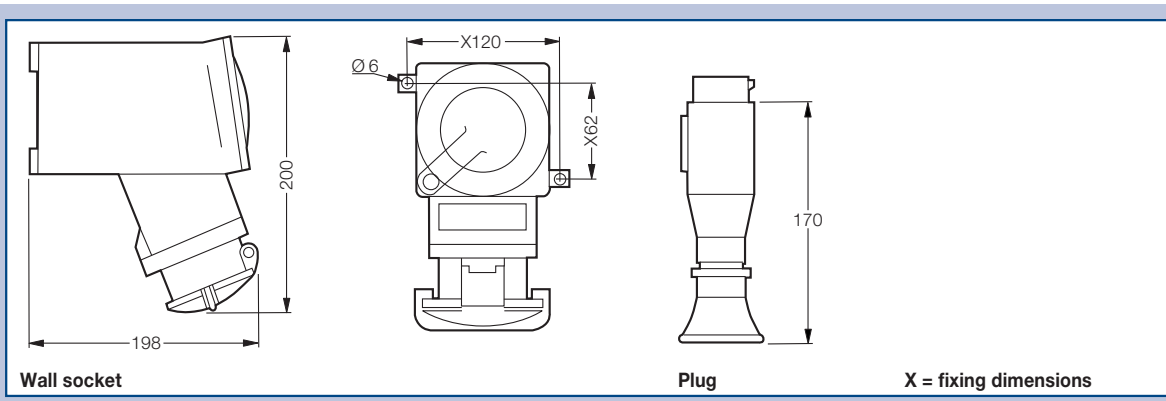
Cabel glands	Ø 8.5 - 13.5 mm
Connecting terminals	1 x 1.0 - 2.5 mm ² / PE: 1 x 1.5 - 6 mm ²

Ordering details

Voltage ¹⁾	h	Type	Weight approx.	Order No.
Type 16 A 3-pole				
220 - 250 V	6	Wall socket	2.7 kg	NOR 000 003 230 016
	6	Plug	0.55 kg	NOR 000 003 230 058
Type 16 A 4-pole				
380 - 415 V	6	Wall socket	2.7 kg	NOR 000 003 230 024
	6	Plug	0.55 kg	NOR 000 003 230 066
Type 16 A 5-pole				
380 - 415 V	6	Wall socket	2.7 kg	NOR 000 003 230 032
	6	Plug	0.7 kg	NOR 000 003 230 074

¹⁾ Other voltages on request

Dimension drawing



Wall socket

Plug

X = fixing dimensions

Dimensions in mm

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EX - PLUGS AND RECEPTACLES

16 A to 125 A
Plastic version for Zone 2

A good connection

Providing electrical energy there, where it is most needed – even in hazardous areas for Zone 2 and Zone 22.

Non-stationary electrical apparatus have generally high requirements on the energy/power supply. Robust plugs and receptacles as well as a high chemical resistance are at the first glance very important. Electrical reliability is a must not only for all connectivity products.

A high safety standard, a steady hold and faultless contacting even under vibration or the effects of an aggressive atmospheric environment are the basis for a secure and reliable utilisation

CEAG plugs and receptacles offer more, apart from the proven technology, this product series is defined by its innovative details. For example, the very efficient cable strain relief or the new coding system of the various versions offers different solutions for a secure and problem free utilization in all areas. Just to round the product off, the user in the normal industrial sector becomes exactly the same product advantages. Robust industrial versions fulfil all requirements appertaining to mechanical and chemical durability. For the stationary repair power supplying in hazardous explosive areas, there is a specially conceived version available that fulfils all the necessary safety requirements. Used in a module sense, individual solutions are no problem at all.

The CEAG wall socket for instance can be mounted on to the pre-installed mounting frame without having to use tools – installation without a hot work permit.

Apart from the plugs and receptacles for the European market, we also have plugs and sockets extra for the US market, which are in accordance to all of the necessary standards UL and safety protection systems used there. The available standard range used here, are the 20 A, 30 A, 60 A and 100 A.

International approvals.

Safety standard IP66 applies also in the plugged-in state

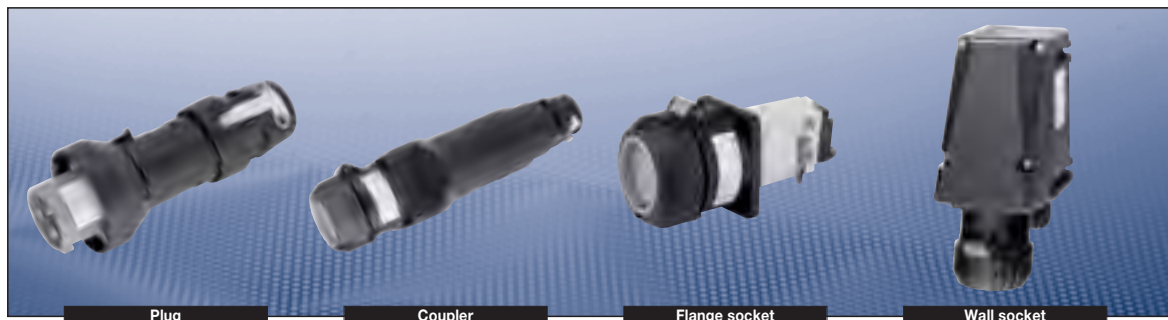
Full AC-3 switching ability

Self-cleaning lamellar contacts, low transition resistance

All-pole on/off switching

Easy plugging





Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2 16A

Marking to 94/9/EC	II 3 G Ex nC IIC T5/T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20°C to +40°C ¹⁾
Rated voltage	up to 400 V (3-pole) / 750 V (4-pole) / 500 V (5-pole) (AC)
Rated current	up to 16 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U_e 400 V / I_e 16 A
External back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Insulation class	I
Degree of protection to EN 60529	IP66

Wall socket

Cable glands	1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 with Ex-screw plug plastic
Connecting terminals	2 x 1.5 - 4 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cable glands	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x 1.0 - 2.5 mm ²
Enclosure material	Polyamide

Coupler

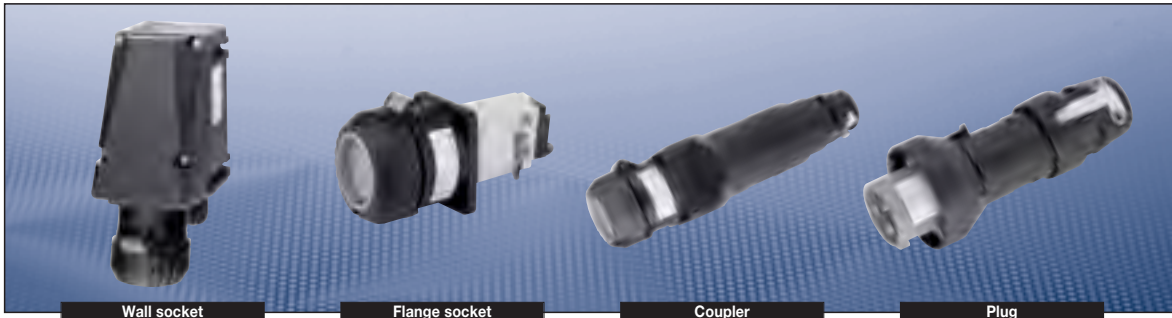
Cable glands	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	2 x 1.5 - 4 mm ²
Enclosure material	Polyamide

Flange socket

Connecting terminals	2 x 1 - 4 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

| Zone 2: 16A 3-pole, 4-pole and 5-pole up to 690 V |



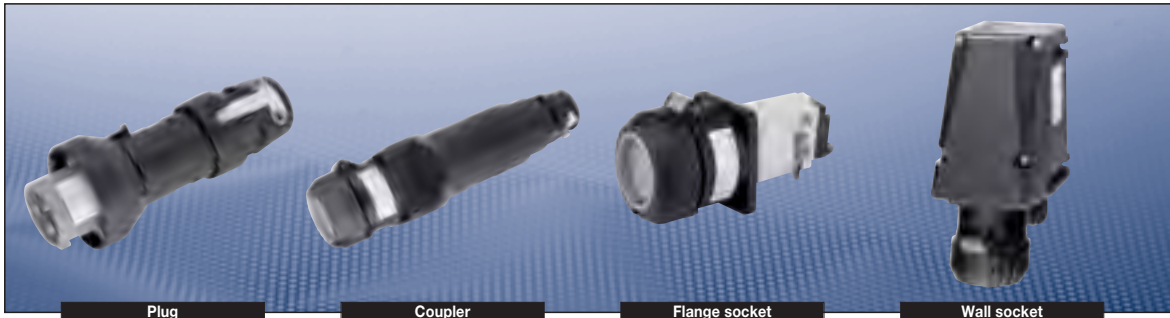
Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type 16 A 3-pole					
110-130 V		Wall socket	KU	1.2 kg	GHG 516 4304 R0001
		Wall socket	ME	1.3 kg	GHG 516 4304 R3001
		Flange socket		0.4 kg	GHG 516 8304 R0001
		Coupler		0.7 kg	GHG 516 3304 R0001
		Plug		0.35 kg	GHG 516 7304 R0001
200-250 V		Wall socket	KU	1.2 kg	GHG 516 4306 R0001
		Wall socket	ME	1.3 kg	GHG 516 4306 R3001
		Flange socket		0.4 kg	GHG 516 8306 R0001
		Coupler		0.7 kg	GHG 516 3306 R0001
		Plug		0.35 kg	GHG 516 7306 R0001
Type 16 A 4-pole					
200-250 V		Wall socket	KU	1.8 kg	GHG 516 4409 R0001
		Wall socket	ME	1.9 kg	GHG 516 4409 R3001
		Flange socket		1.0 kg	GHG 516 8409 R0001
		Coupler		1.7 kg	GHG 516 3409 R0001
		Plug		0.7 kg	GHG 516 7409 R0001
380-415 V		Wall socket	KU	1.8 kg	GHG 516 4406 R0001
		Wall socket	ME	1.9 kg	GHG 516 4406 R3001
		Flange socket		1.0 kg	GHG 516 8406 R0001
		Coupler		1.7 kg	GHG 516 3406 R0001
		Plug		0.7 kg	GHG 516 7406 R0001
480-500 V		Wall socket	KU	1.8 kg	GHG 516 4407 R0001
		Wall socket	ME	1.9 kg	GHG 516 4407 R3001
		Flange socket		1.0 kg	GHG 516 8407 R0001
		Coupler		1.7 kg	GHG 516 3407 R0001
		Plug		0.7 kg	GHG 516 7407 R0001
600-690 V		Wall socket	KU	1.8 kg	GHG 516 4405 R0001
		Wall socket	ME	1.9 kg	GHG 516 4405 R3001
		Flange socket		1.0 kg	GHG 516 8405 R0001
		Coupler		1.7 kg	GHG 516 3405 R0001
		Plug		0.7 kg	GHG 516 7405 R0001
Type 16 A 5-pole					
200-250 V		Wall socket	KU	1.8 kg	GHG 516 4506 R0001
380-415 V		Wall socket	ME	1.9 kg	GHG 516 4506 R3001
		Flange socket		1.0 kg	GHG 516 8506 R0001
		Coupler		1.7 kg	GHG 516 3506 R0001
		Plug		0.7 kg	GHG 516 7506 R0001

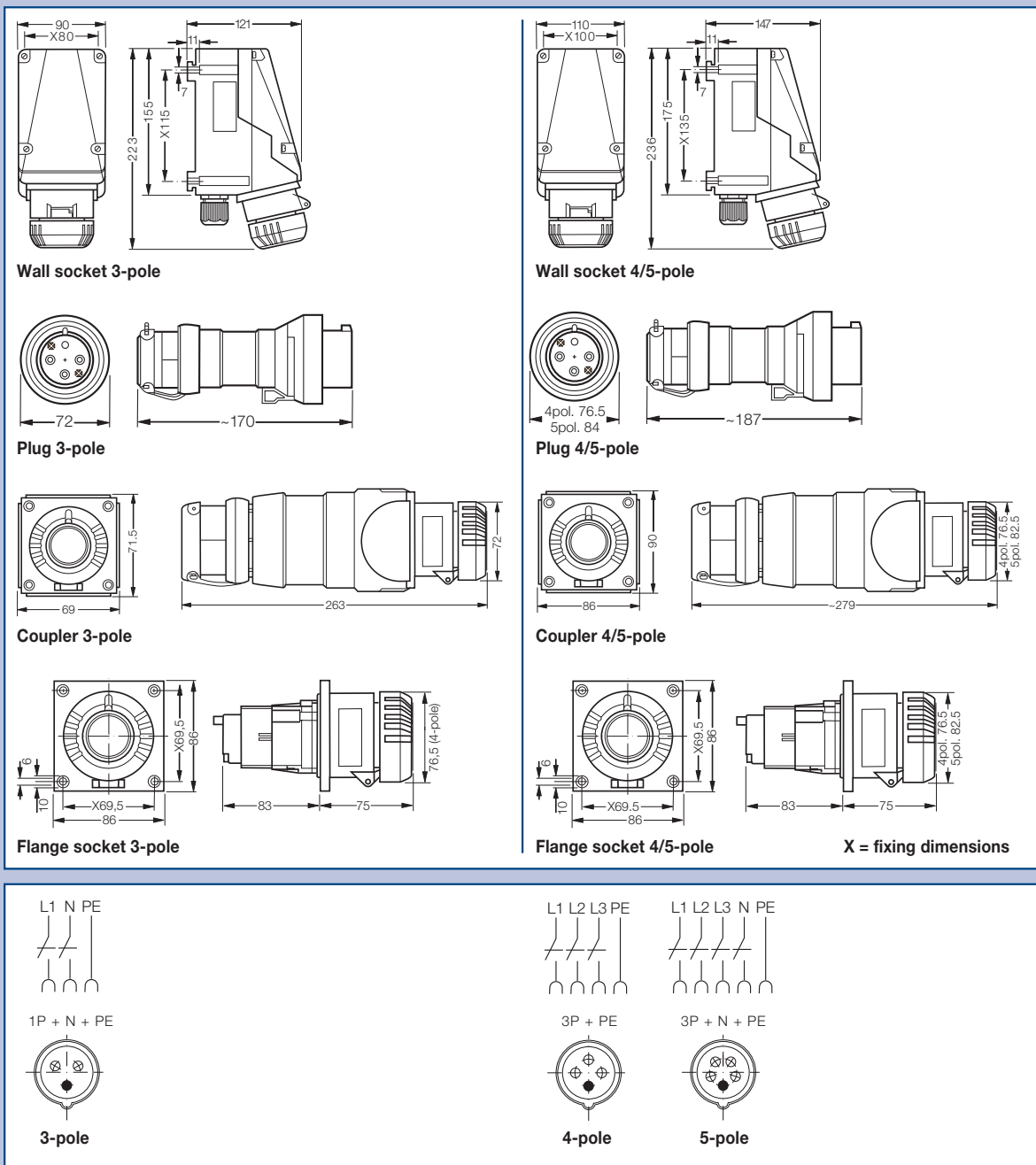
Other voltage ranges and versions for example with auxiliary contact available on request

KU = 1 x plastic cable glands M25 Ø 8-17 mm, 1 x M25 Ex-screw plug plastic

ME = 2 x metal thread M20 with Ex-screw plug plastic



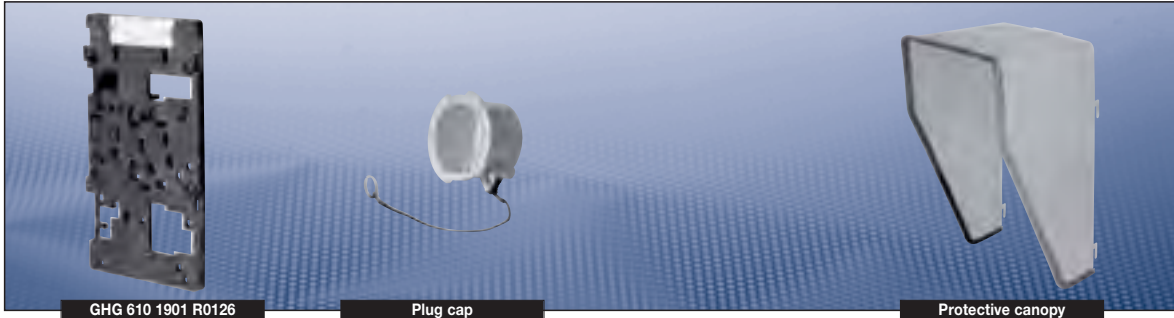
Dimension drawing | Wiring diagram



Dimensions in mm

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| Zone 2: 16A 3-pole, 4-pole and 5-pole up to 690 V |



GHG 610 1901 R0126

Plug cap

Protective canopy

Accessories

Mounting plates for wall sockets 16 A

Type	Application	Fixing method	Order No.
Size 4	for wall mounting	snap on	GHG 610 1953 R0126
Size 4	for trellis mounting	snap on	GHG 610 1953 R0126
Size 4	for pipe mounting	snap on	GHG 610 1953 R0130

Plug cap for plugs 16 A

Type	Order No.
Plug 16 A 3-pole	GHG 510 1901 R0001
Plug 16 A 4-pole	GHG 510 1901 R0002
Plug 16 A 5-pole	GHG 510 1901 R0003

Accessories for mounting plates

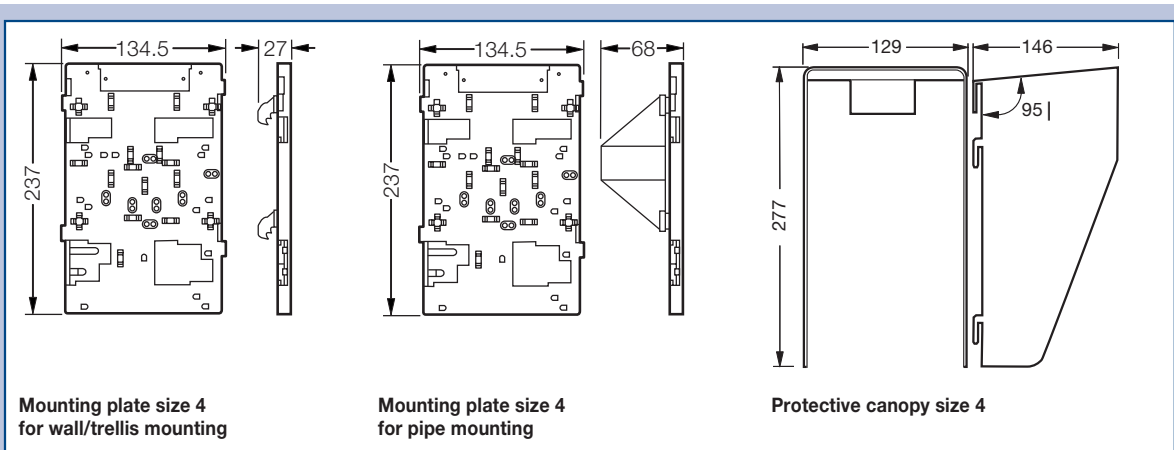
Type	OU	Order No.
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 4	for mounting plate size 4, plugable	GHG 610 1955 R0107

Dimension drawing

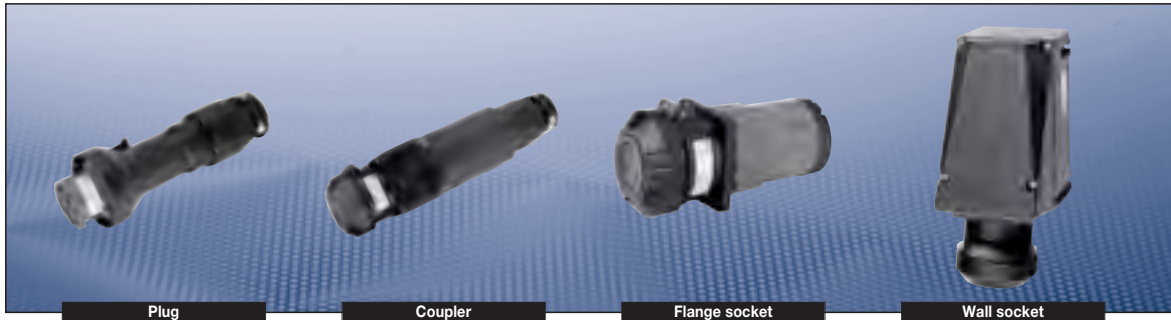


Mounting plate size 4 for wall/trellis mounting

Mounting plate size 4 for pipe mounting

Protective canopy size 4

Dimensions in mm



Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2

Marking to 94/9/EC	Ⓔ II 3 G Ex nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20 °C to +40 °C ¹⁾
Rated voltage	690 V (AC)
Rated current	up to 32 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 32 A
External back-up fuse	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	Black

Wall socket

Cable glands/enclosure drilling	1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-screw plug plastic or 2 x M32 metal thread with 2 Ex-screw plug plastic
Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cable glands	Ø 17 - 28 mm
Connecting terminals	1 x 1.0 - 6 mm ²
Enclosure material	Polyamide

Coupler

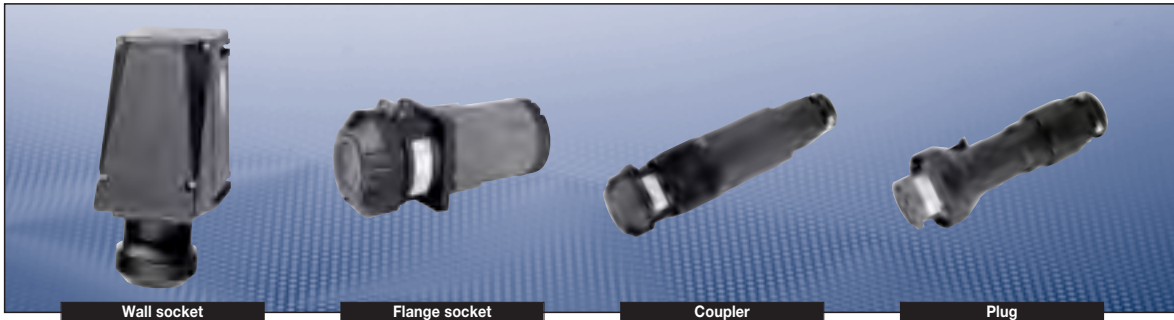
Cable glands	Ø 17 - 28 mm
Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Polyamide

Flange socket

Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

| Zone 2: 32A 4-pole and 5-pole up to 690 V |



Ordering details

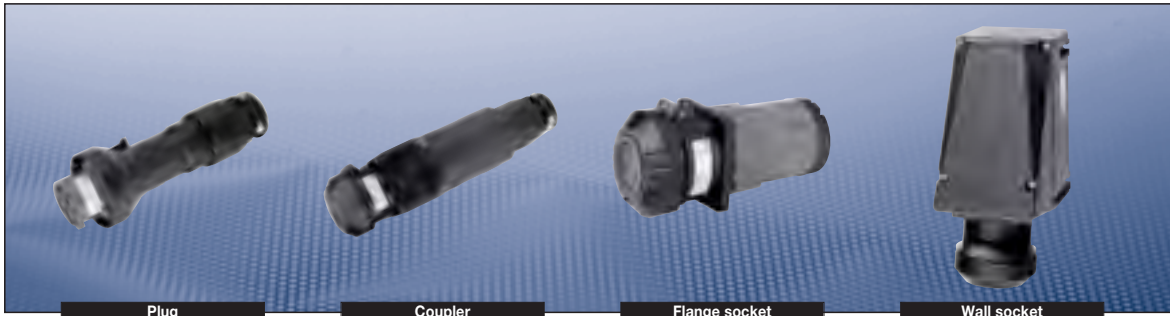
Voltage	h	Type	Cable entries	Weight approx.	Order No.
Type 32 A 4-pole					
200-250 V		Wall socket	KU	1.8 kg	GHG 517 4409 R0001
		Wall socket	ME	1.9 kg	GHG 517 4409 R3001
		Flange socket		1.0 kg	GHG 517 8409 R0001
		Coupler		1.7 kg	GHG 517 3409 R0001
		Plug		0.7 kg	GHG 517 7409 R0001
380-415 V		Wall socket	KU	1.8 kg	GHG 517 4406 R0001
		Wall socket	ME	1.9 kg	GHG 517 4406 R3001
		Flange socket		1.0 kg	GHG 517 8406 R0001
		Coupler		1.7 kg	GHG 517 3406 R0001
		Plug		0.7 kg	GHG 517 7406 R0001
480-500 V		Wall socket	KU	1.8 kg	GHG 517 4407 R0001
		Wall socket	ME	1.9 kg	GHG 517 4407 R3001
		Flange socket		1.0 kg	GHG 517 8407 R0001
		Coupler		1.7 kg	GHG 517 3407 R0001
		Plug		0.7 kg	GHG 517 7407 R0001
600-690 V		Wall socket	KU	1.8 kg	GHG 517 4405 R0001
		Wall socket	ME	1.9 kg	GHG 517 4405 R3001
		Flange socket		1.0 kg	GHG 517 8405 R0001
		Coupler		1.7 kg	GHG 517 3405 R0001
		Plug		0.7 kg	GHG 517 7405 R0001

Type 32 A 5-pole					
200-250 V		Wall socket	KU	1.8 kg	GHG 517 4506 R0001
380-415 V		Wall socket	ME	1.9 kg	GHG 517 4506 R3001
		Flange socket		1.0 kg	GHG 517 8506 R0001
		Coupler		1.7 kg	GHG 517 3506 R0001
		Plug		0.7 kg	GHG 517 7506 R0001

Other voltage ranges and versions with auxiliary contact available on request

KU = 1 x plastic cable glands M40 Ø 17-28 mm, 1 x M40 Ex-screw plug plastic

ME = 2 x metal thread M32 with Ex-screw plug plastic



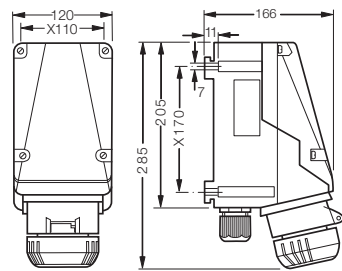
Plug

Coupler

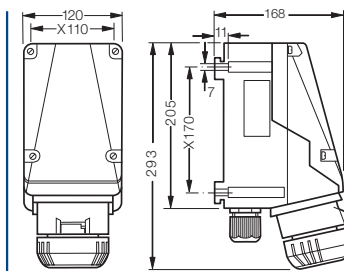
Flange socket

Wall socket

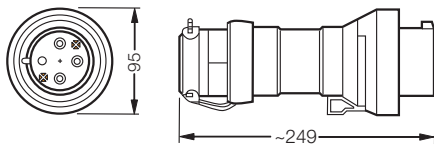
Dimension drawing | Wiring diagram



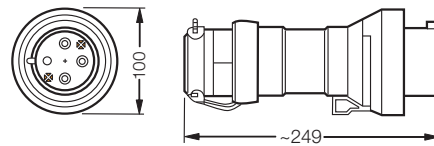
Wall socket 4-pole



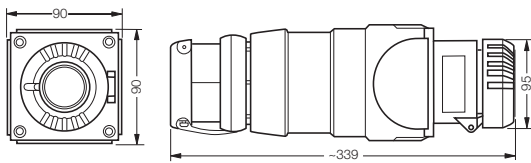
Wall socket 5-pole



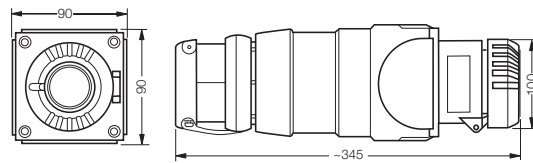
Plug 4-pole



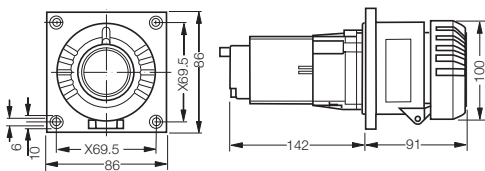
Plug 5-pole



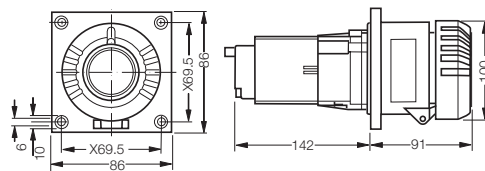
Coupler 4-pole



Coupler 5-pole

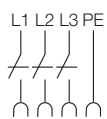


Flange socket 4-pole

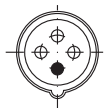


Flange socket 5-pole

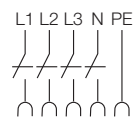
X = fixing dimensions



3P + PE



4-pole



3P + N + PE

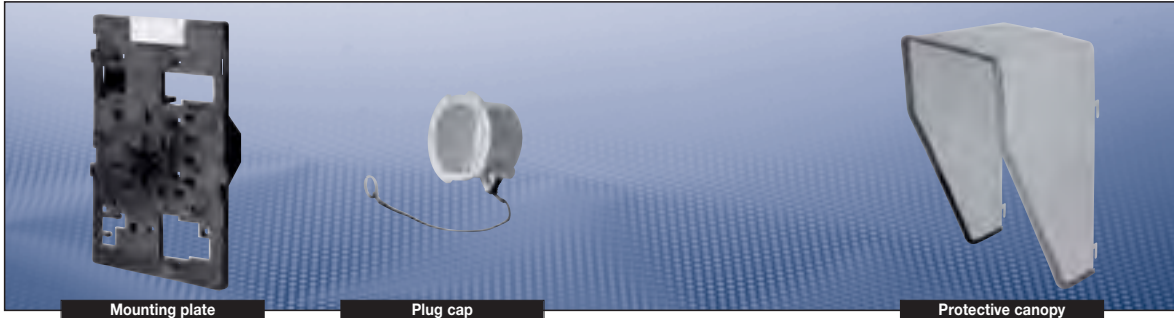


5-pole

Dimensions in mm

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Zone 2: 32A 4-pole and 5-pole up to 690 V



Mounting plate

Plug cap

Protective canopy

Accessories

Mounting plates for wall sockets 32 A

Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snap on	GHG 610 1953 R0128
Size 5	for trellis mounting	snap on	GHG 610 1953 R0128
Size 5	for pipe mounting	snap on	GHG 610 1953 R0132

Plug cap for plugs 32 A

Type	Order No.
Plug 32 A 3-pole/4-pole	GHG 510 1901 R0004
Plug 32 A 5-pole	GHG 510 1901 R0005

Accessories for mounting plates

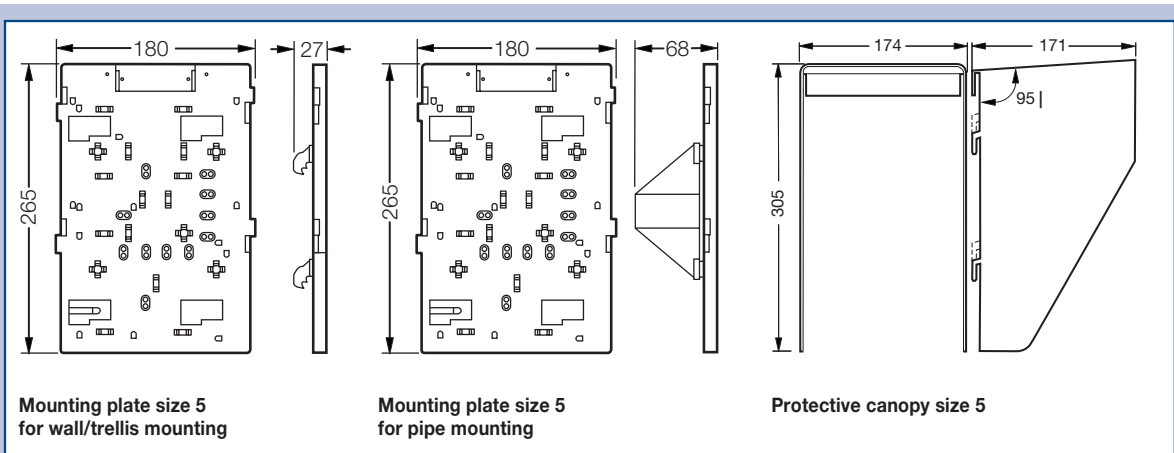
Type	OU	Order No.
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 5	for mounting plate size 5 plugable	GHG 610 1955 R0108

Dimension drawing

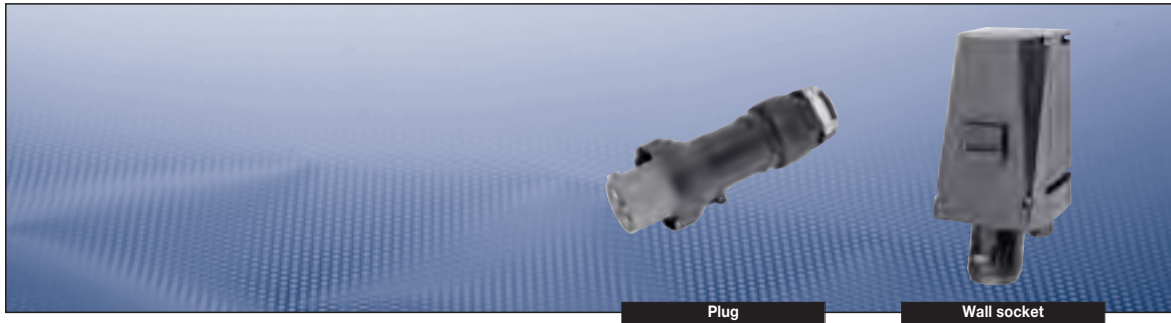


Mounting plate size 5 for wall/trellis mounting

Mounting plate size 5 for pipe mounting

Protective canopy size 5

Dimensions in mm



Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2 up to 690 V

Marking to 94/9/EC	Ⓔ II 3 G Ex nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20 °C to + 40 °C ¹⁾
Rated voltage	690 V
Rated current	63 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 63 A
External back up fuse	without therm. protection: 63 A with therm. protection: 80 A gL (rated current 63 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	Black

Wall socket

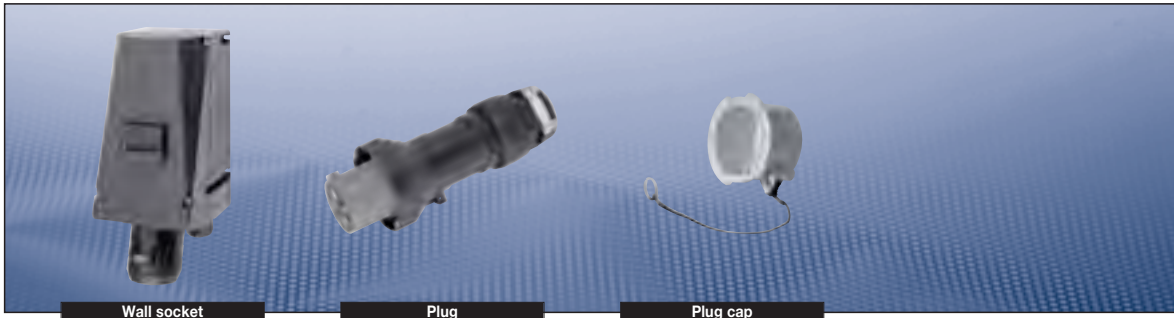
Cable glands/enclosure drilling	1 x M50 Ø 22 - 35 mm, 1 x M50 Ex-screw plug plastic or 2 x M40 metal thread with Ex-screw plug plastic
Connecting terminals	2 x 4 - 25 mm ² / with cable lug ¹⁾ 1 x 35 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cabel glands	Ø 19 - 34 mm
Connecting terminals	1 x 4 - 16 mm ² / with cable lug 1 x 25 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

| Zone 2: 63 A 4- and 5-pole up to 690 V |



Ordering details

Voltage	h	Type	Cable entries	Weight approx.	Order No.
Type 63 A 4-pole					
200-250 V		Wall socket	KU	8.1 kg	GHG 518 4409 R0001
		Wall socket	ME	8.2 kg	GHG 518 4409 R3001
		Plug		0.75 kg	GHG 518 7409 R0001
380-415 V		Wall socket	KU	8.1 kg	GHG 518 4406 R0001
		Wall socket	ME	8.2 kg	GHG 518 4406 R3001
		Plug		0.75 kg	GHG 518 7406 R0001
480-500 V		Wall socket	KU	8.1 kg	GHG 518 4407 R0001
		Wall socket	ME	8.2 kg	GHG 518 4407 R3001
		Plug		0.75 kg	GHG 518 7407 R0001
600-690 V		Wall socket	KU	8.1 kg	GHG 518 4405 R0001
		Wall socket	ME	8.2 kg	GHG 518 4405 R3001
		Plug		0.75 kg	GHG 518 7405 R0001
Type 63 A 5-pole					
200-250 V		Wall socket	KU	8.15 kg	GHG 518 4506 R0001
380-415 V		Wall socket	ME	8.25 kg	GHG 518 4506 R3001
		Plug		0.75 kg	GHG 518 7506 R0001

Accessories

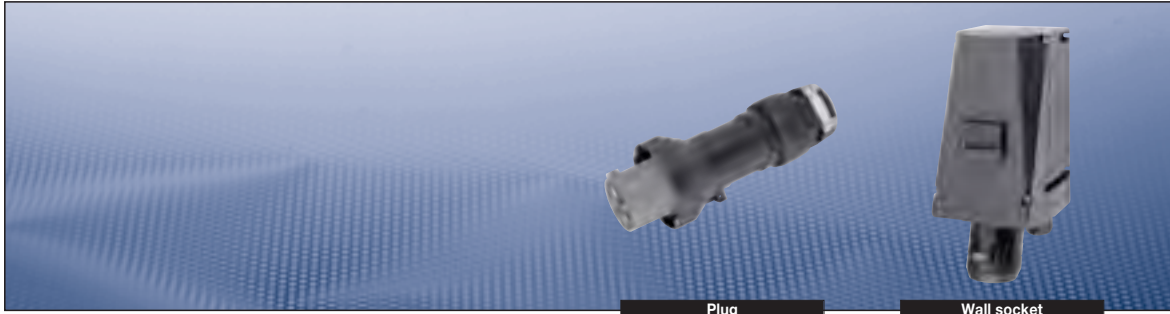
Plug cap for plugs

Type	OU	Order No.
Plug cap 4-pole/5-pole	1	GHG 510 1901 R0006
Pin cable lug 25 mm ²	5	GHG 510 1916 R0001

Other voltage ranges and versions with auxiliary contact available on request

KU = 1 x plastic cable glands M40 Ø 17-28 mm, 1 x M40 Ex-screw plug plastic

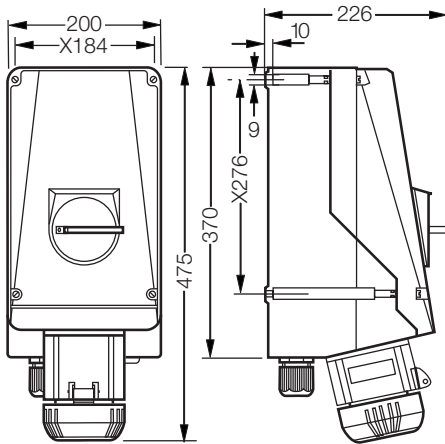
ME = 2 x metal thread M32 with Ex-screw plug plastic



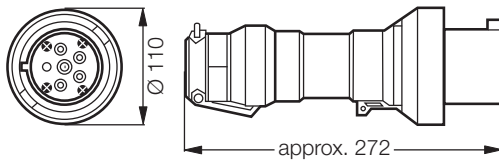
Plug

Wall socket

Dimension drawing | Wiring diagram

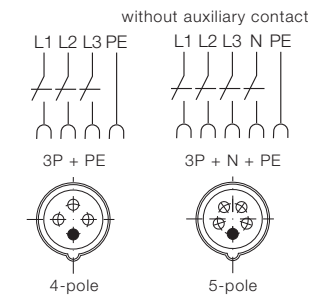


Wall socket 4/5-pole



Plug 4/5-pole

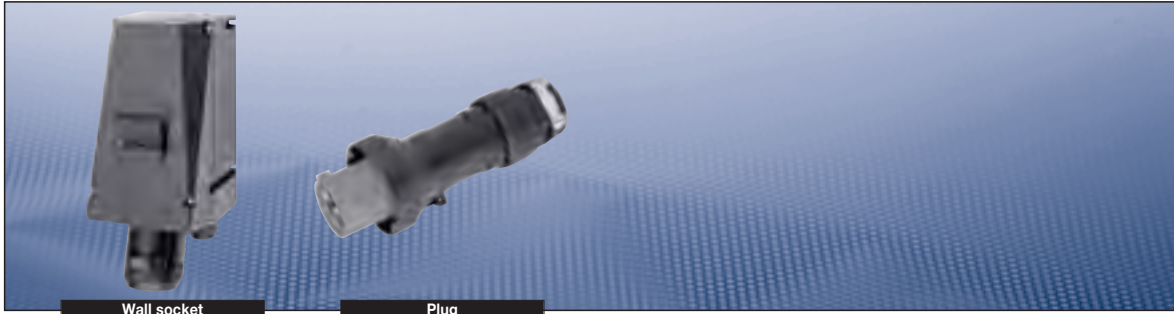
X = mounting dimensions



Dimensions in mm

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| Zone 2: 125A 4- and 5-pole up to 690 V |



Technical data

Ex-plugs and receptacles accd. to IEC 60309-1/2 to 690 V

Marking to 94/9/EC	Ⓔ II 3 G EX de IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20 °C to + 40 °C ¹⁾
Rated voltage	690 V
Rated current	125 A
Frequency	up to 400 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 125 A
External back up fuse	without therm. protection: 125 A with therm. protection: 160 A gL (rated current 125 A set to)
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure colour	Black

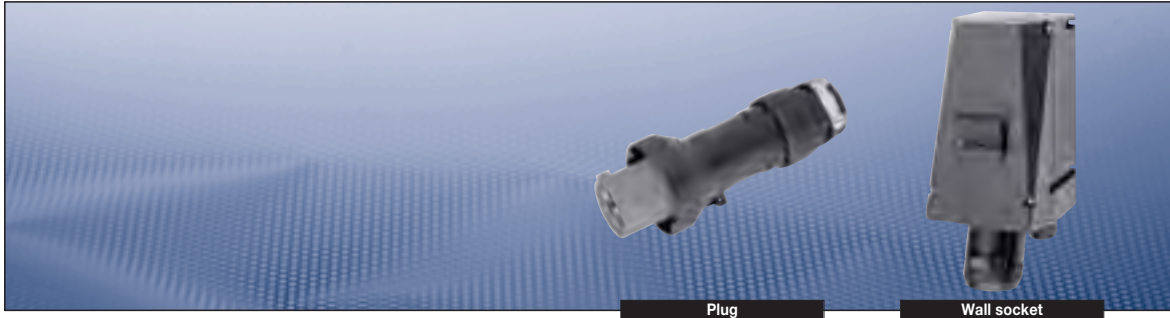
Wall socket

Cable glands/enclosure drilling	1 x M63 Ø 27 - 48 mm, 1 x M63 Ex-screw plug plastic or 1 x M50 Ø 21 - 35 mm, 1 x M50 Ex-screw plug plastic
Connecting terminals	2 x 4 - 50 mm ² / with cable lug ¹⁾ 1 x 120 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cabel glands	Ø 31 - 58 mm
Connecting terminals	1 x 4 - 35 mm ² / with pin cable lug 1 x 50 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request



Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type 125 A 4-pole					
200-250 V		Wall socket	KU	12.3 kg	GHG 519 4409 R0001
		Wall socket	ME	12.5 kg	GHG 519 4409 R3001
		Plug		0.9 kg	GHG 519 7409 R0001
380-415 V		Wall socket	KU	12.3 kg	GHG 519 4406 R0001
		Wall socket	ME	12.5 kg	GHG 519 4406 R3001
		Plug		0.9 kg	GHG 519 7406 R0001
480-500 V		Wall socket	KU	12.3 kg	GHG 519 4407 R0001
		Wall socket	ME	12.5 kg	GHG 519 4407 R3001
		Plug		0.9 kg	GHG 519 7407 R0001
600-690 V		Wall socket	KU	12.3 kg	GHG 519 4405 R0001
		Wall socket	ME	12.5 kg	GHG 519 4405 R3001
		Plug		0.9 kg	GHG 519 7405 R0001

Type 125 A 5-pole					
200-250 V		Wall socket	KU	13 kg	GHG 519 4506 R0001
380-415 V		Wall socket	ME	13.2 kg	GHG 519 4506 R3001
		Plug		1.2 kg	GHG 519 7506 R0001

Accessories

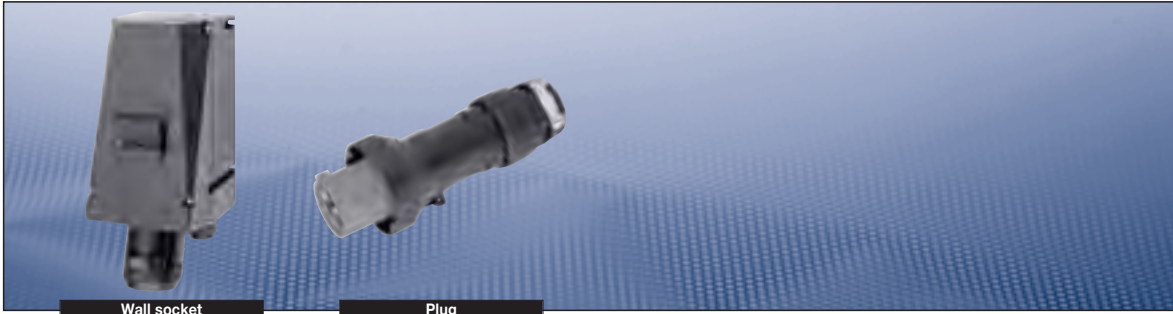
Type	OU	Order No.
Plug cap 4-pole/5-pole	1	GHG 510 1901 R0007
Cable lug 50 mm ²	5	GHG 260 1911 R0004

Other voltage ranges and versions with auxiliary contact available on request

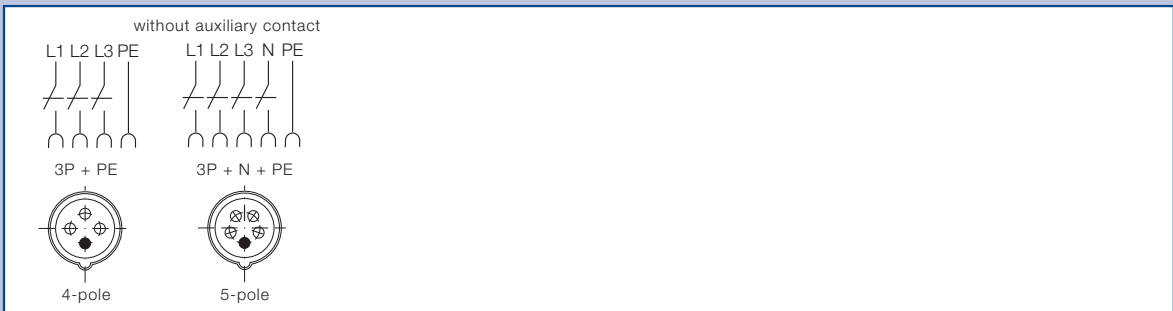
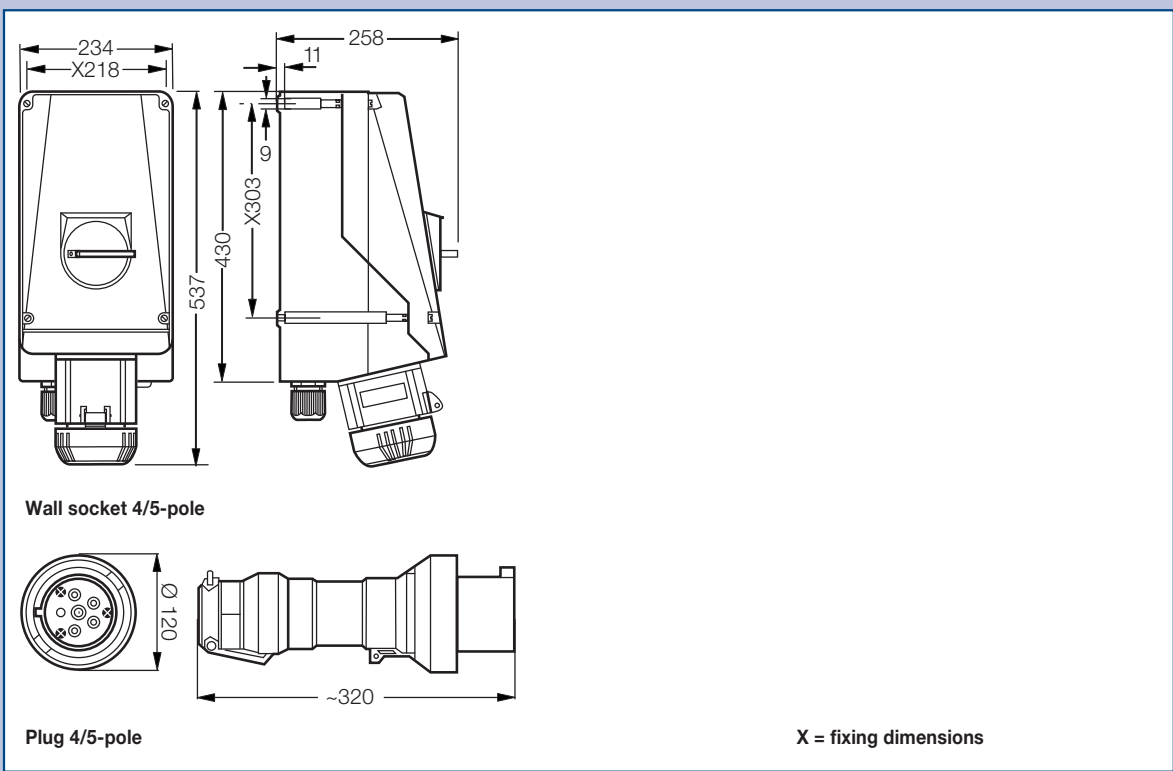
KU = 1 x plastic cable glands M40 Ø 17-28 mm, 1 x M40 Ex-screw plug plastic

ME = 2 x metal thread M32 with Ex-screw plug plastic

| Zone 2: 125A 4- and 5-pole up to 690 V |



Dimension drawing | Wiring diagram



Dimensions in mm

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PLUGS AND RECEPTACLES - INDUSTRY

16 A up to 125 A
Plastic version for industrial use

Not explosion-protected, but in CEAG quality

CEAG plugs and receptacles are not only robust, they are also very reliable. In the "normal" industrial environment plugs and receptacles are exposed to similar conditions (chemical and mechanical) as their explosion-protected counterparts. With the introduction of the new plug and receptacle generation Cooper Crouse-Hinds has now a complete program for industrial usage. The wall sockets can simply be clipped-onto pre-installed mounting plates without having to use tools. These high quality plugs and receptacles warrantee even in harsh industrial environments a safe and reliable utilization. The long years of experience in the explosion-protection field has naturally contributed to this new plug and receptacle generation.

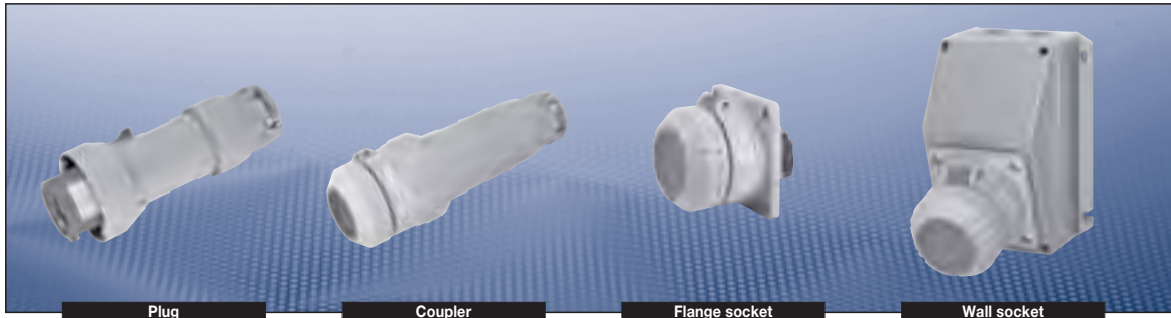
Plugs and receptacles of the 16 A to 125 A range fulfil (even when they are plugged-in) the high safety standard of IP66 and have as standard the maintenance-free and proven lamellar contacts. The variable cable entries in connection with the generously dimensioned connection terminals allow for an economical use.

Apart from the IEC 60309 Series I coded versions we also have coded versions of the Series II especially for the US and Nort American market.

International approvals

- **High impact resistant**
- **Low engaging force**
- **Safety standard IP66 applies also in plugged-in condition**
- **Self-cleaning lamellar contacts, low transition resistance**
- **Fibre-glass reinforced polyester housings**
- **Interlocking switch**





Technical data

Plugs and receptacles – Industry accd. to IEC 60309-1/2 up to 690 V

Permissible ambient temperature	-20°C to +40°C / -45 °C to +45 °C (optional) ¹⁾
Rated voltage	415 V (3-pole) / 690 V (4-/5-pole)
Rated current	16 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 16 A
Insulation class	I
Degree of protection to EN 60529	IP66

Wall socket with interlock switch

Rated making/rated breaking capacity AC-3 accd. EN 60947	
for wall socket with switch	U _e 500 V / I _e 20 A
Cable glands	1 x M25 Ø 8 - 17 mm, 1 x M25 thread plug plastic
Connecting terminals	2 x 1.5 – 4 mm ²
Enclosure material	Glass-fibre reinforced polyester

Wall socket without switch

Cable glands	2 x PG 16 top, 2 x PG 16 bottom
Connecting terminals	2 x 1.5 – 4.0 mm ²
Enclosure material	Polyamide

Plug

Cable glands	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x 1.0 – 2.5 mm ²
Enclosure material	Polyamide

Coupler

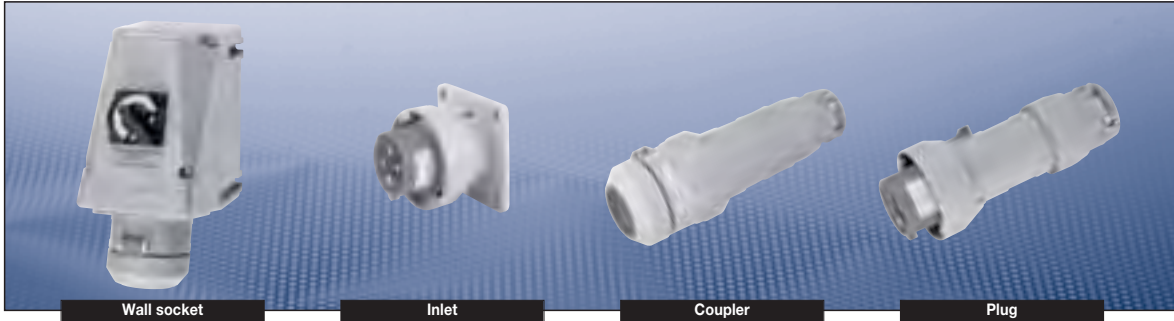
Cable glands	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	2 x 1.5 – 4 mm ²
Enclosure material	Polyamide

Flange socket/inlet

Connecting terminals	2 x 1.5 – 4 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

Industrial use: 16A 3-pole, 4-pole and 5-pole up to 415 V



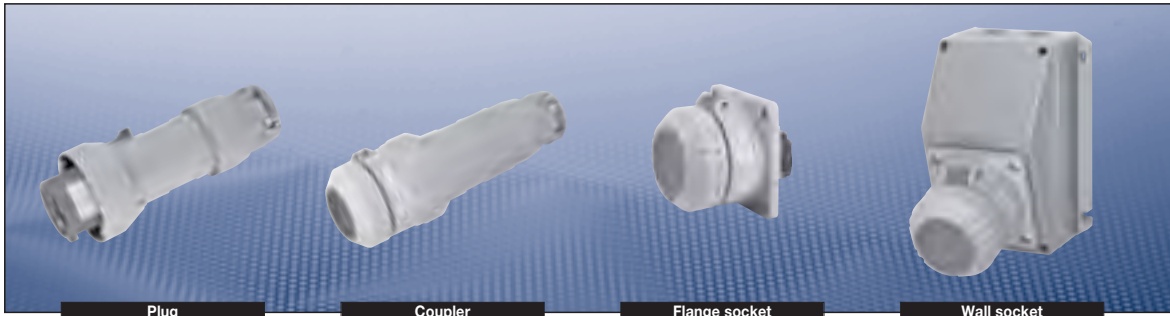
Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 16 A 3-pole				
110-130 V		Wall socket	0.8 kg	GHG 521 2304 R0001
		Plug	0.32 kg	GHG 521 7304 R0001
		Coupler	0.5 kg	GHG 521 3304 R0001
		Flange socket	0.37 kg	GHG 521 8304 R0001
		Inlet	0.26 kg	GHG 521 9304 R0001
200-250 V		Wall socket	0.8 kg	GHG 521 2306 R0001
		Plug	0.32 kg	GHG 521 7306 R0001
		Coupler	0.5 kg	GHG 521 3306 R0001
		Flange socket	0.37 kg	GHG 521 8306 R0001
		Inlet	0.26 kg	GHG 521 9306 R0001

Type 16 A 4-pole				
200-250 V		Wall socket	0.85 kg	GHG 521 2409 R0001
		Wall socket with interlock switch	1.60 kg	GHG 521 4409 R0001
		Plug	0.39 kg	GHG 521 7409 R0001
		Coupler	0.65 kg	GHG 521 3409 R0001
		Flange socket	0.42 kg	GHG 521 8409 R0001
		Inlet	0.31 kg	GHG 521 9409 R0001
380-415 V		Wall socket	0.85 kg	GHG 521 2406 R0001
		Wall socket with interlock switch	1.60 kg	GHG 521 4406 R0001
		Plug	0.39 kg	GHG 521 7406 R0001
		Coupler	0.65 kg	GHG 521 3406 R0001
		Flange socket	0.42 kg	GHG 521 8406 R0001
		Inlet	0.31 kg	GHG 521 9406 R0001
480-500 V		Wall socket	0.85 kg	GHG 521 2407 R0001
		Wall socket with interlock switch	1.60 kg	GHG 521 4407 R0001
		Plug	0.39 kg	GHG 521 7407 R0001
		Coupler	0.65 kg	GHG 521 3407 R0001
		Flange socket	0.42 kg	GHG 521 8407 R0001
		Inlet	0.31 kg	GHG 521 9407 R0001
600-690 V		Wall socket	0.85 kg	GHG 521 2405 R0001
		Wall socket with interlock switch	1.60 kg	GHG 521 4405 R0001
		Plug	0.39 kg	GHG 521 7405 R0001
		Coupler	0.65 kg	GHG 521 3405 R0001
		Flange socket	0.42 kg	GHG 521 8405 R0001
		Inlet	0.31 kg	GHG 521 9405 R0001

Type 16 A 5-pole				
200-250 V		Wall socket	0.90 kg	GHG 521 2506 R0001
380-415 V		Wall socket with interlock switch	1.65 kg	GHG 521 4506 R0001
		Plug	0.42 kg	GHG 521 7506 R0001
		Coupler	0.75 kg	GHG 521 3506 R0001
		Flange socket	0.47 kg	GHG 521 8506 R0001
		Inlet	0.34 kg	GHG 521 9506 R0001

Other voltage ranges and versions available on request



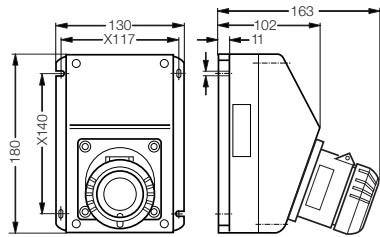
Plug

Coupler

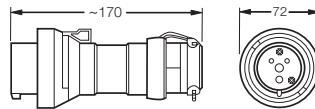
Flange socket

Wall socket

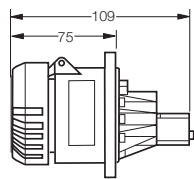
Dimension drawing



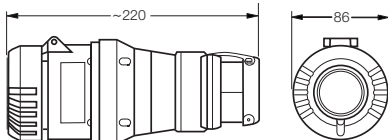
Wall socket 3-pole



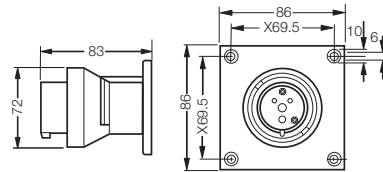
Plug 3-pole



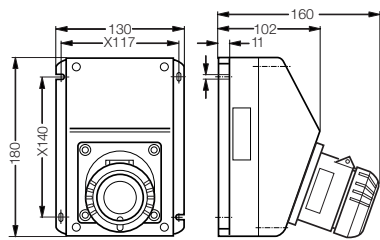
Flange socket 3-pole



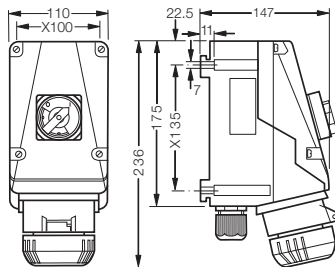
Coupler 3-pole



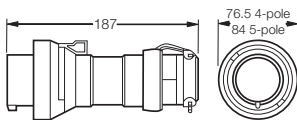
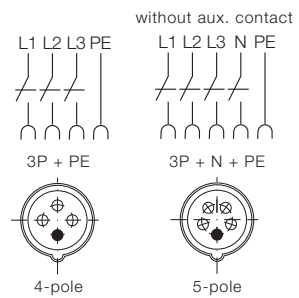
Inlet 3-pole



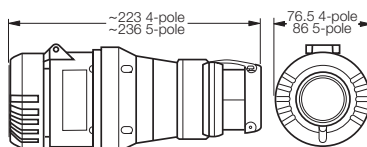
Wall socket 4-pole with switch



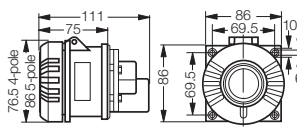
Wall socket 4-pole with switch



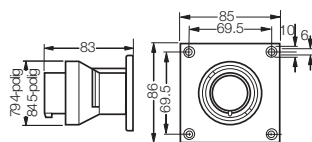
Plug 4/5-pole



Coupler 4/5-pole



Flange socket 4/5-pole



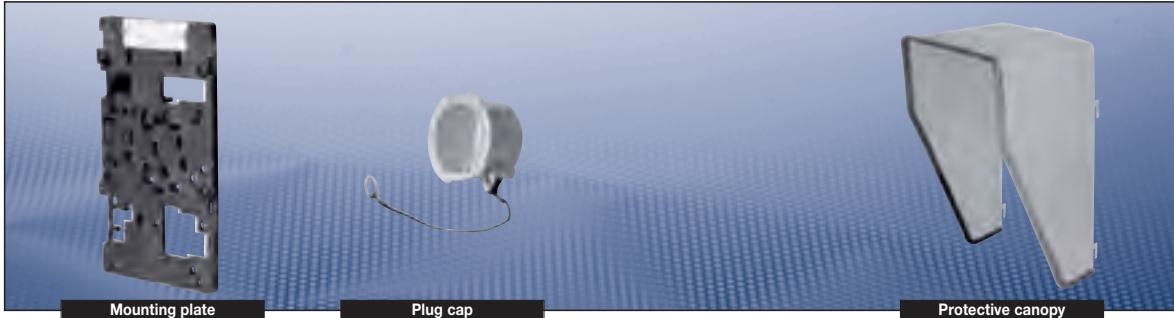
Plug 4/5-pole

X = fixing dimensions

Dimensions in mm

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Industrial use: 16A 3-pole, 4-pole and 5-pole up to 415 V



Mounting plate

Plug cap

Protective canopy

Accessories

Mounting plates for wall sockets 16 A

Type	Application	Fixing method	Order No.
Size 4	for wall mounting	snap on	GHG 610 1953 R0126
Size 4	for trellis mounting	snap on	GHG 610 1953 R0126
Size 4	for pipe mounting	snap on	GHG 610 1953 R0130

Plug cap for plugs 16 A

Type	Order No.
Plug 16 A 3-pole	GHG 510 1901 R0001
Plug 16 A 4-pole	GHG 510 1901 R0002
Plug 16 A 5-pole	GHG 510 1901 R0003

Accessories for mounting plates

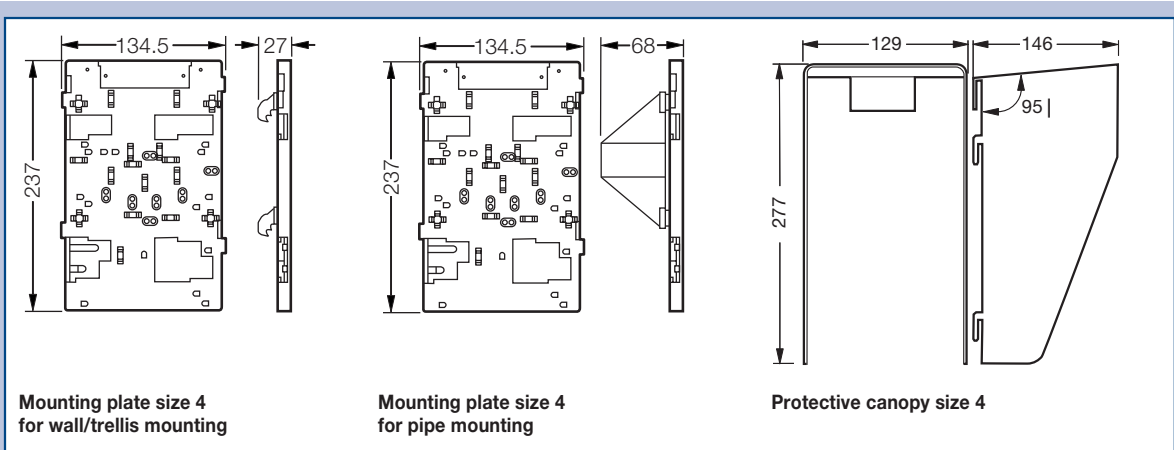
Type	OU	Order No.
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 4	for mounting plate size 4 plugable	GHG 610 1955 R0107

Dimension drawing

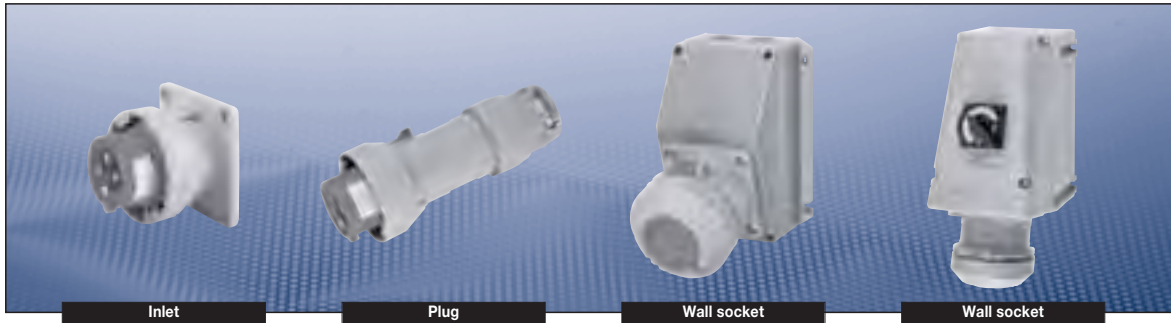


Mounting plate size 4 for wall/trellis mounting

Mounting plate size 4 for pipe mounting

Protective canopy size 4

Dimensions in mm



Technical data

Plugs and receptacles – Industry accd. to IEC 60309-1/2 up to 690 V

Permissible ambient temperature	-20°C to +40°C / -45 °C to +45 °C (optional) ¹⁾
Rated voltage	690 V
Rated current	32 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 32 A
Insulation class	I
Degree of protection to EN 60529	IP66

Wall socket with interlock switch

Rated making/rated breaking capacity AC-3 accd. EN 60947	
for wall socket with switch	U _e 500 V / I _e 20 A
Cable glands	1 x M40 Ø 17 - 28 mm, 1 x M40 thread plug plastic
Connecting terminals	2 x 4 – 10 mm ²
Enclosure material	Glass-fibre reinforced polyester

Wall socket without switch

Cable glands	2 x PG 21 top, 2 x PG 21 bottom
Connecting terminals	1 x 4 – 10 mm ²
Enclosure material	Polyamide

Plug

Cable glands	Ø 17 - 28 mm
Connecting terminals	1 x 1 – 6 mm ²
Enclosure material	Polyamide

Coupler

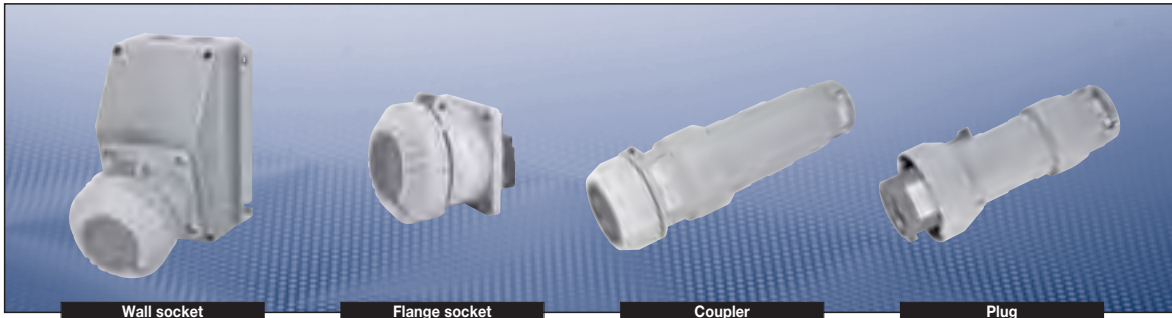
Cable glands	Ø 17 - 28 mm
Connecting terminals	2 x 4 – 10 mm ²
Enclosure material	Polyamide

Flange socket/inlet







Connecting terminals	2 x 4 – 10 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

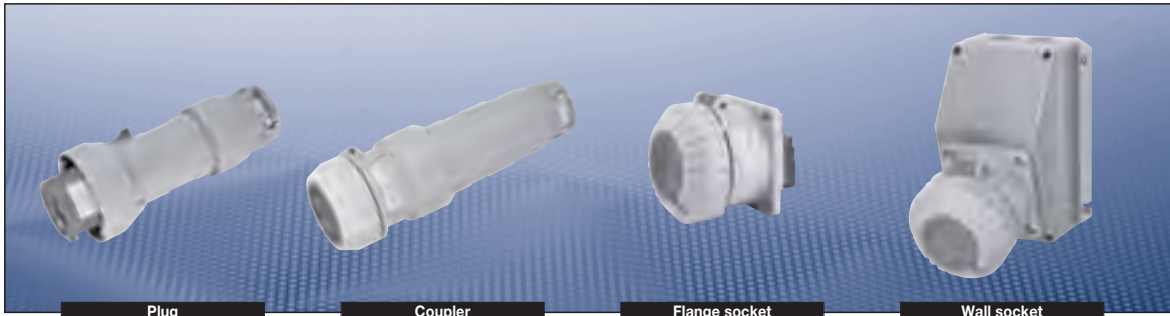
Industrial use: 32A 4-pole and 5-pole up to 415 V



Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 32 A 4-pole				
200-250 V		Wall socket	1.0 kg	GHG 522 2409 R0001
		Wall socket with interlock switch	2.15 kg	GHG 522 4409 R0001
		Plug	0.6 kg	GHG 522 7409 R0001
		Coupler	1.5 kg	GHG 522 3409 R0001
		9	Flange socket	0.5 kg	GHG 522 8409 R0001
380-415 V		Inlet	0.32 kg	GHG 522 9409 R0001
		Wall socket	1.0 kg	GHG 522 2406 R0001
		Wall socket with interlock switch	2.15 kg	GHG 522 4406 R0001
		Plug	0.6 kg	GHG 522 7406 R0001
		6	Coupler	1.5 kg	GHG 522 3406 R0001
480-500 V		Flange socket	0.5 kg	GHG 522 8406 R0001
		Inlet	0.32 kg	GHG 522 9406 R0001
		Wall socket	1.0 kg	GHG 522 2407 R0001
		Wall socket with interlock switch	2.15 kg	GHG 522 4407 R0001
		7	Plug	0.6 kg	GHG 522 7407 R0001
600-690 V		Coupler	1.5 kg	GHG 522 3407 R0001
		Flange socket	0.5 kg	GHG 522 8407 R0001
		Inlet	0.32 kg	GHG 522 9407 R0001
		Wall socket	1.0 kg	GHG 522 2405 R0001
		5	Wall socket with interlock switch	2.15 kg	GHG 522 4405 R0001
Type 32 A 5-pole		Plug	0.6 kg	GHG 522 7405 R0001
		Coupler	1.5 kg	GHG 522 3405 R0001
		Flange socket	0.5 kg	GHG 522 8405 R0001
		Inlet	0.32 kg	GHG 522 9405 R0001
		6	Wall socket	1.1 kg	GHG 522 2506 R0001
200-250 V		Wall socket with interlock switch	2.25 kg	GHG 522 4506 R0001
		Plug	0.65 kg	GHG 522 7506 R0001
		Coupler	1.6 kg	GHG 522 3506 R0001
		Flange socket	0.51 kg	GHG 522 8506 R0001
		6	Inlet	0.33 kg	GHG 522 9506 R0001

Other voltage ranges and versions available on request



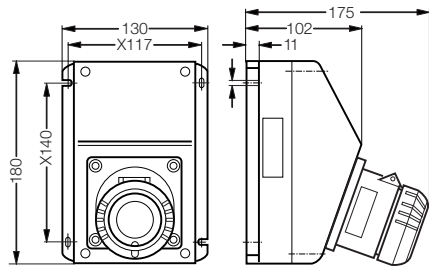
Plug

Coupler

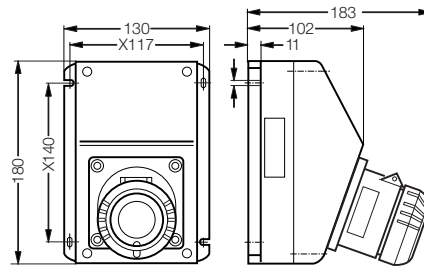
Flange socket

Wall socket

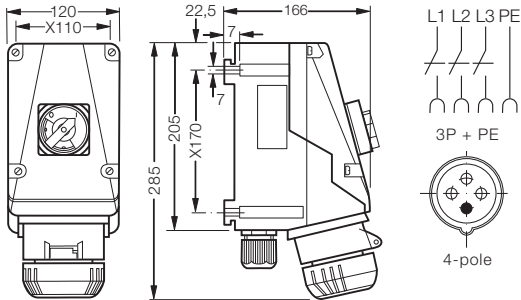
Dimension drawing



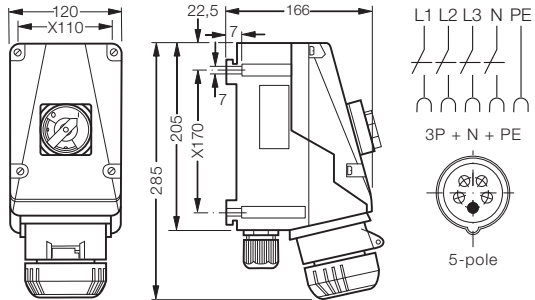
Wall socket 4-pole



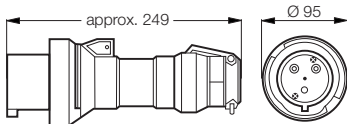
Wall socket 5-pole



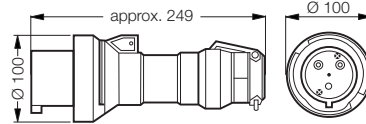
Wall socket with interlock switch 4-pole



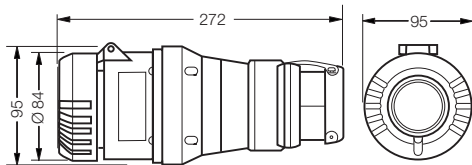
Wall socket with interlock switch 5-pole



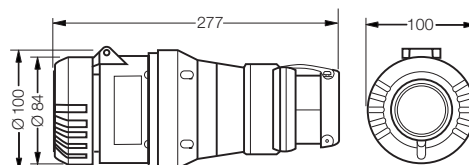
Plug 4-pole



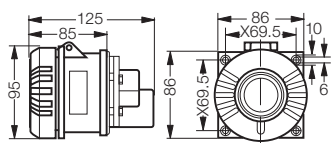
Plug 5-pole



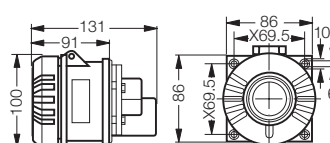
Coupler 4-pole



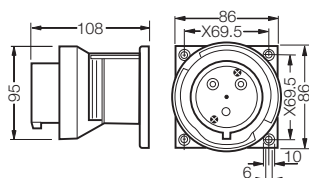
Coupler 5-pole



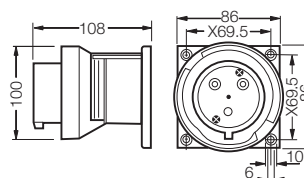
Flange socket 4-pole



Flange socket 5-pole



Inlet 4-pole



Inlet 5-pole

X = fixing dimensions

Dimensions in mm

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Industrial use: 32A 4-pole and 5-pole up to 415 V



Accessories

Mounting plates for wall sockets 32 A

Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snap on	GHG 610 1953 R0128
Size 5	for trellis mounting	snap on	GHG 610 1953 R0128
Size 5	for pipe mounting	snap on	GHG 610 1953 R0132

Plug cap for plugs 32 A

Type	Order No.
Plug 32 A 3-pole/4-pole	GHG 510 1901 R0004
Plug 32 A 5-pole	GHG 510 1901 R0005

Accessories for mounting plates

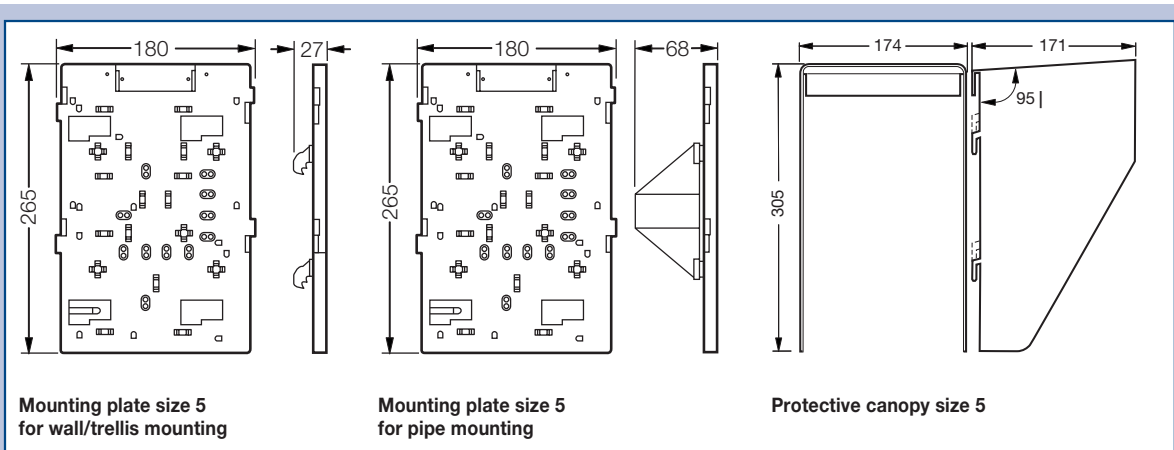
Type	OU	Order No.
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 5	for mounting plate size 5, plugable	GHG 610 1955 R0108

Dimension drawing

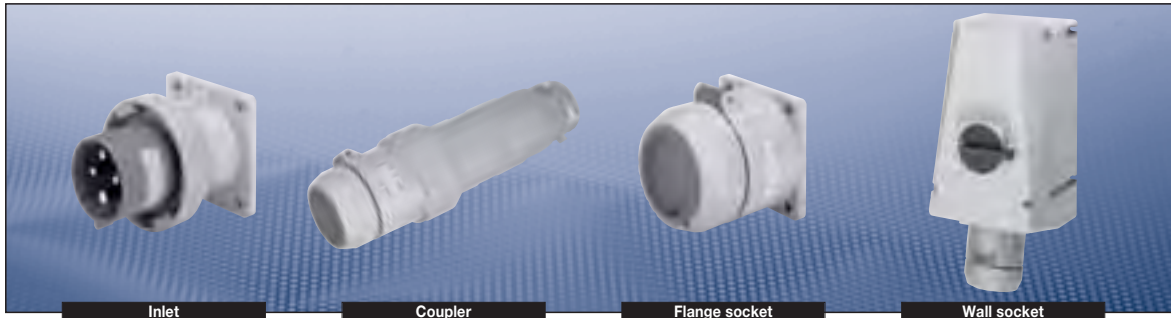


Mounting plate size 5 for wall/trellis mounting

Mounting plate size 5 for pipe mounting

Protective canopy size 5

Dimensions in mm



Technical data

Plugs and receptacles – Industry accd. to IEC 60309-1/2 up to 690 V

Permissible ambient temperature	-20°C to +40°C ¹⁾ / -40 °C to +40 °C (optional)
Rated voltage	690 V
Rated current	63 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 63 A
Insulation class	I
Degree of protection to EN 60529	IP66

Wall socket with interlock switch

Rated making/rated breaking capacity AC-3 accd. EN 60947	
for wall socket with switch	U _e 500 V / I _e 58 A
Cable glands	1 x M50 Ø 22 - 35 mm, 1 x M50 thread plug plastic
Connecting terminals	2 x 4 – 25 mm ² with switch 2 x 4 – 35 mm ² without switch
Enclosure material	Glass-fibre reinforced polyester

Plug

Cable glands	Ø 19 - 34 mm
Connecting terminals	1 x 4 – 16 mm ² / 1 x 25 mm ² with pin calbe lug
Enclosure material	Polyamide

Coupler

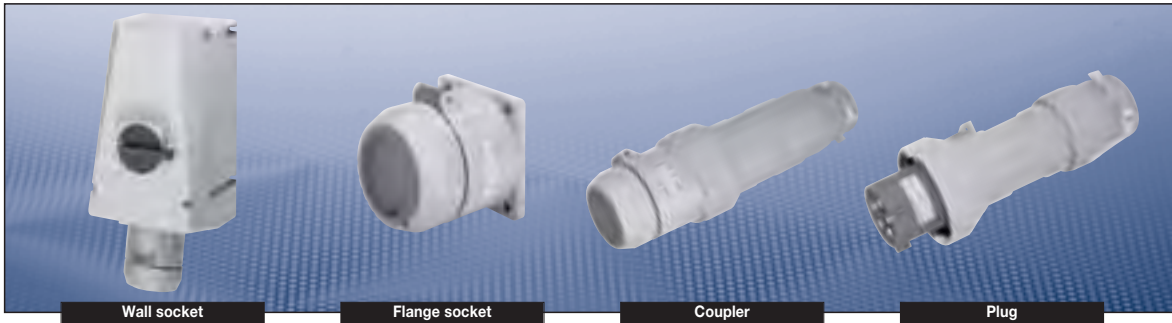
Cable glands	Ø 19 - 34 mm
Connecting terminals	1 x 2.5 – 35 mm ²
Enclosure material	Polyamide

Flange socket/inlet

Connecting terminals	1 x 2.5 – 35 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

Industrial use: 63A 4-pole and 5-pole up to 690 V



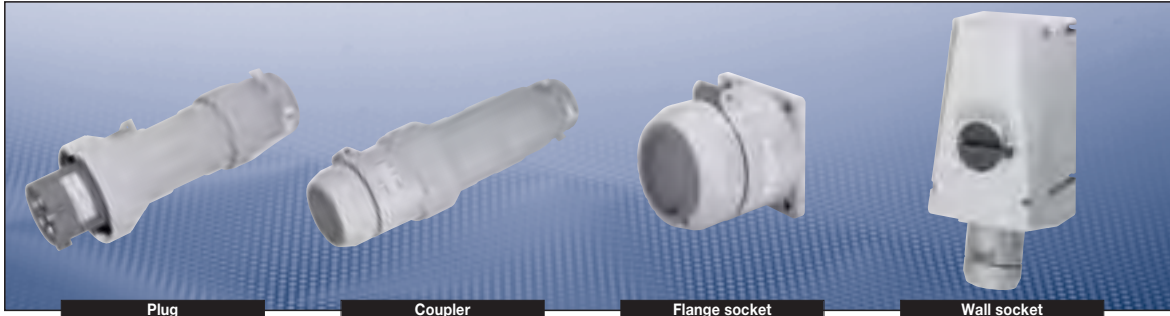
Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 63 A 4-pole				
200-250 V		Wall socket with interlock switch	5.5 kg	GHG 524 4409 R0001
		Plug	0.75 kg	GHG 524 7409 R0001
		Coupler	1.2 kg	GHG 524 3409 R0001
		Flange socket	1.3 kg	GHG 524 8409 R0001
		Inlet	0.9 kg	GHG 524 9409 R0001
380-415 V		Wall socket with interlock switch	5.5 kg	GHG 524 4406 R0001
		Plug	0.75 kg	GHG 524 7406 R0001
		Coupler	1.2 kg	GHG 524 3406 R0001
		Flange socket	1.3 kg	GHG 524 8406 R0001
		Inlet	0.9 kg	GHG 524 9406 R0001
480-500 V		Wall socket with interlock switch	5.5 kg	GHG 524 4407 R0001
		Plug	0.75 kg	GHG 524 7407 R0001
		Coupler	1.2 kg	GHG 524 3407 R0001
		Flange socket	1.3 kg	GHG 524 8407 R0001
		Inlet	0.9 kg	GHG 524 9407 R0001
600-690 V		Wall socket with interlock switch	5.5 kg	GHG 524 4405 R0001
		Plug	0.75 kg	GHG 524 7405 R0001
		Coupler	1.2 kg	GHG 524 3405 R0001
		Flange socket	1.3 kg	GHG 524 8405 R0001
		Inlet	0.9 kg	GHG 524 9405 R0001
Type 63 A 5-pole				
200/250 V up to 380/415 V		Wall socket with interlock switch	5.6 kg	GHG 524 4506 R0001
		Plug	0.8 kg	GHG 524 7506 R0001
		Coupler	1.3 kg	GHG 524 3506 R0001
		Flange socket	1.4 kg	GHG 524 8506 R0001
		Inlet	1.0 kg	GHG 524 9506 R0001

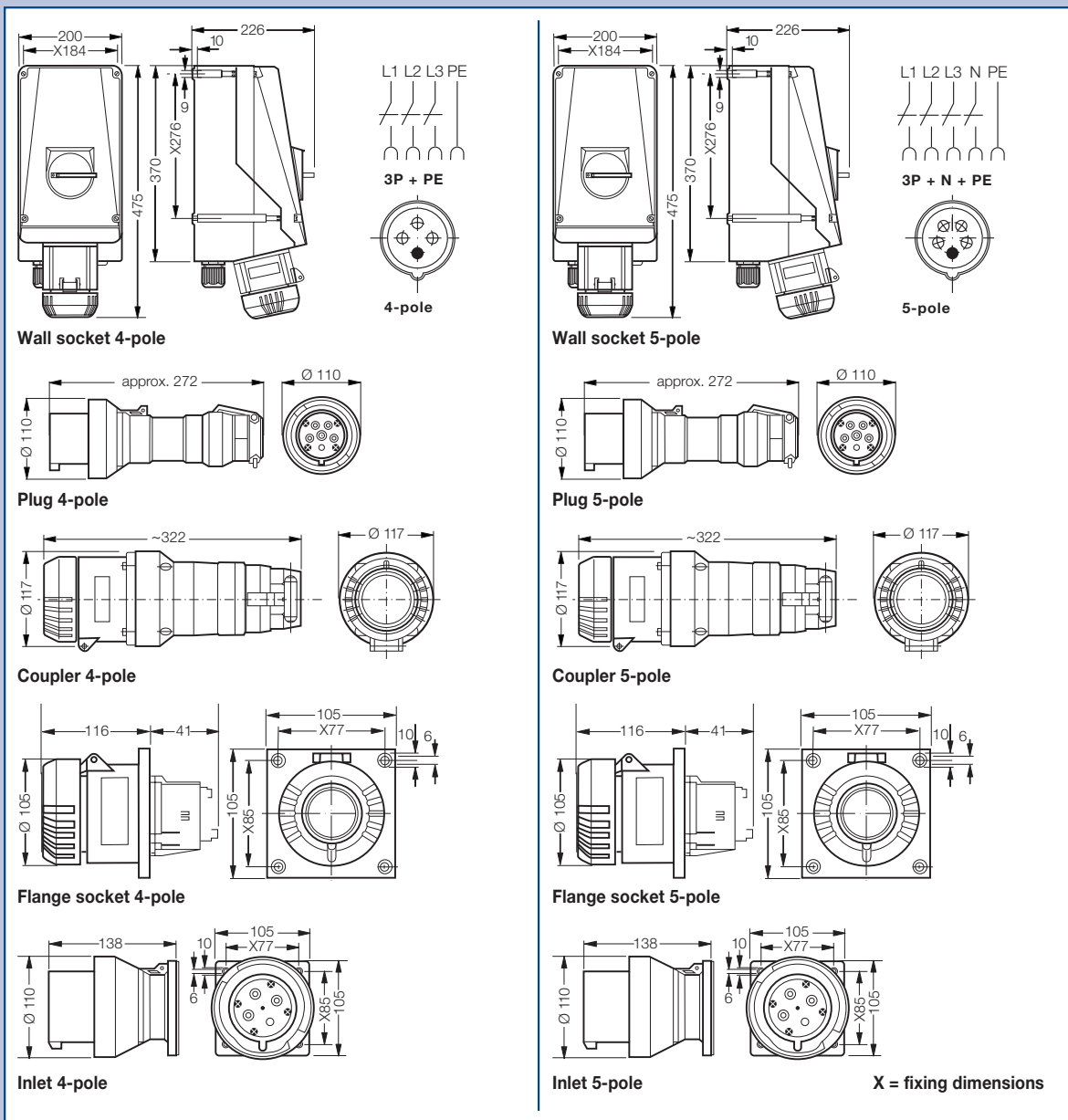
Other voltage ranges and versions available on request

Accessories

Plug cap for plugs		
Type	OU	Order No.
Plug cap 4-pole/5-pole	1	GHG 510 1901 R0006
Pin cable lug 25 mm ²	5	GHG 510 1916 R0001

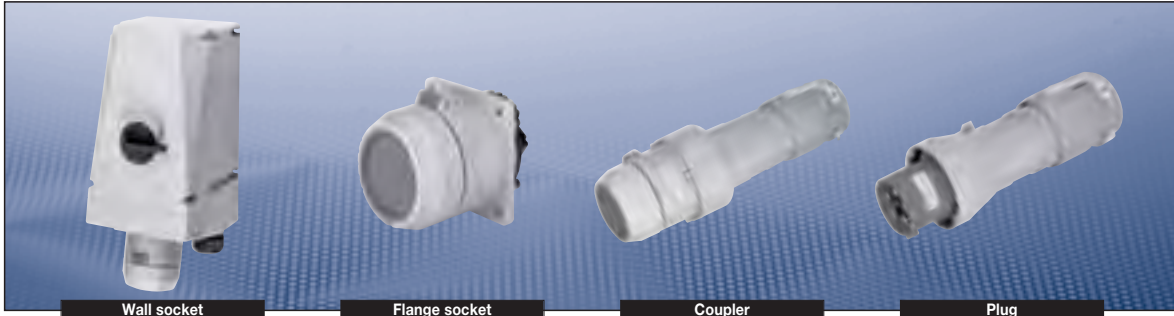


Dimension drawing | Wiring diagram



Dimensions in mm

Industrial use: 125A 4-pole and 5-pole up to 690 V



Wall socket

Flange socket

Coupler

Plug

Technical data

Plugs and receptacles – Industry accd. to IEC 60309-1/2 up to 690 V

Permissible ambient temperature	-20°C to +40°C / -40 °C to +40 °C (optional) ¹⁾
Rated voltage	690 V~
Rated current	125 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 125 A
Insulation class	I
Degree of protection to EN 60529	IP66

Wall socket with interlock switch

Rated making/rated breaking capacity AC-23 accd. EN 60947	
for wall socket with switch	U _e 500 V / I _e 70 A
Cable glands	1 x M63 Ø 27 - 48 mm, 1 x M63 thread plug plastic
Connecting terminals	2 x 10 – 70 mm ²
Enclosure material	Glass-fibre reinforced polyester

Plug

Cable glands	Ø 31 - 58 mm
Connecting terminals	1 x 2.5 – 35 mm ²
Enclosure material	Polyamide

Coupler

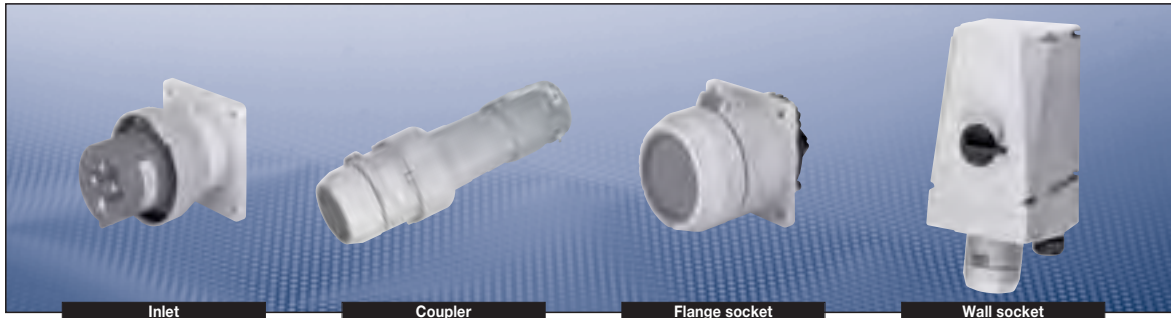
Cable glands	Ø 31 - 58 mm
Connecting terminals	1 x 16 – 35 mm ²
Enclosure material	Polyamide

Flange socket

Connecting terminals	1 x 2.5 – 35 mm ²
Enclosure material	Polyamide

¹⁾ extended temperature range on request

| Industrial use: 125A 4-pole and 5-pole up to 690 V |



Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 125 A 4-pole				
200-250 V		Wall socket with interlock switch	8.6 kg	GHG 525 4409 R0001
		Plug	1.3 kg	GHG 525 7409 R0001
		Coupler	2.1 kg	GHG 525 3409 R0001
		Flange socket	1.4 kg	GHG 525 8409 R0001
		Inlet	0.9 kg	GHG 525 9409 R0001
380-415 V		Wall socket with interlock switch	8.6 kg	GHG 525 4406 R0001
		Plug	1.3 kg	GHG 525 7406 R0001
		Coupler	2.1 kg	GHG 525 3406 R0001
		Flange socket	1.4 kg	GHG 525 8406 R0001
		Inlet	0.9 kg	GHG 525 9406 R0001
480-500 V		Wall socket with interlock switch	8.6 kg	GHG 525 4407 R0001
		Plug	1.3 kg	GHG 525 7407 R0001
		Coupler	2.1 kg	GHG 525 3407 R0001
		Flange socket	1.4 kg	GHG 525 8407 R0001
		Inlet	0.9 kg	GHG 525 9407 R0001
600-690 V		Wall socket with interlock switch	8.6 kg	GHG 525 4405 R0001
		Plug	1.3 kg	GHG 525 7405 R0001
		Coupler	2.1 kg	GHG 525 3405 R0001
		Flange socket	1.4 kg	GHG 525 8405 R0001
		Inlet	0.9 kg	GHG 525 9405 R0001
Type 125 A 5-pole				
200-250 V		Wall socket with interlock switch	8.8 kg	GHG 525 4506 R0001
380-415 V		Plug	1.4 kg	GHG 525 7506 R0001
		Coupler	2.2 kg	GHG 525 3506 R0001
		Flange socket	1.5 kg	GHG 525 8506 R0001
		Inlet	1.1 kg	GHG 525 9506 R0001

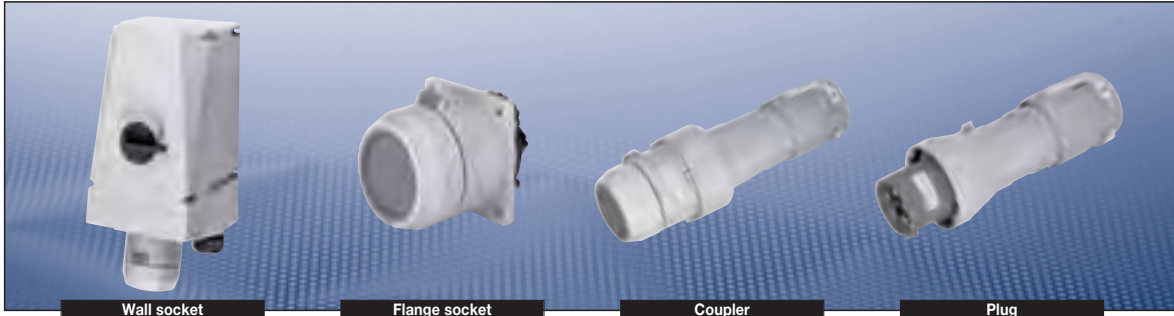
Other voltage ranges and versions available on request

Accessories

Plug cap for plugs

Type	Order No.
Plug cap 4-pole/5-pole	GHG 510 1901 R0007

Industrial use: 125A 4-pole and 5-pole up to 690 V



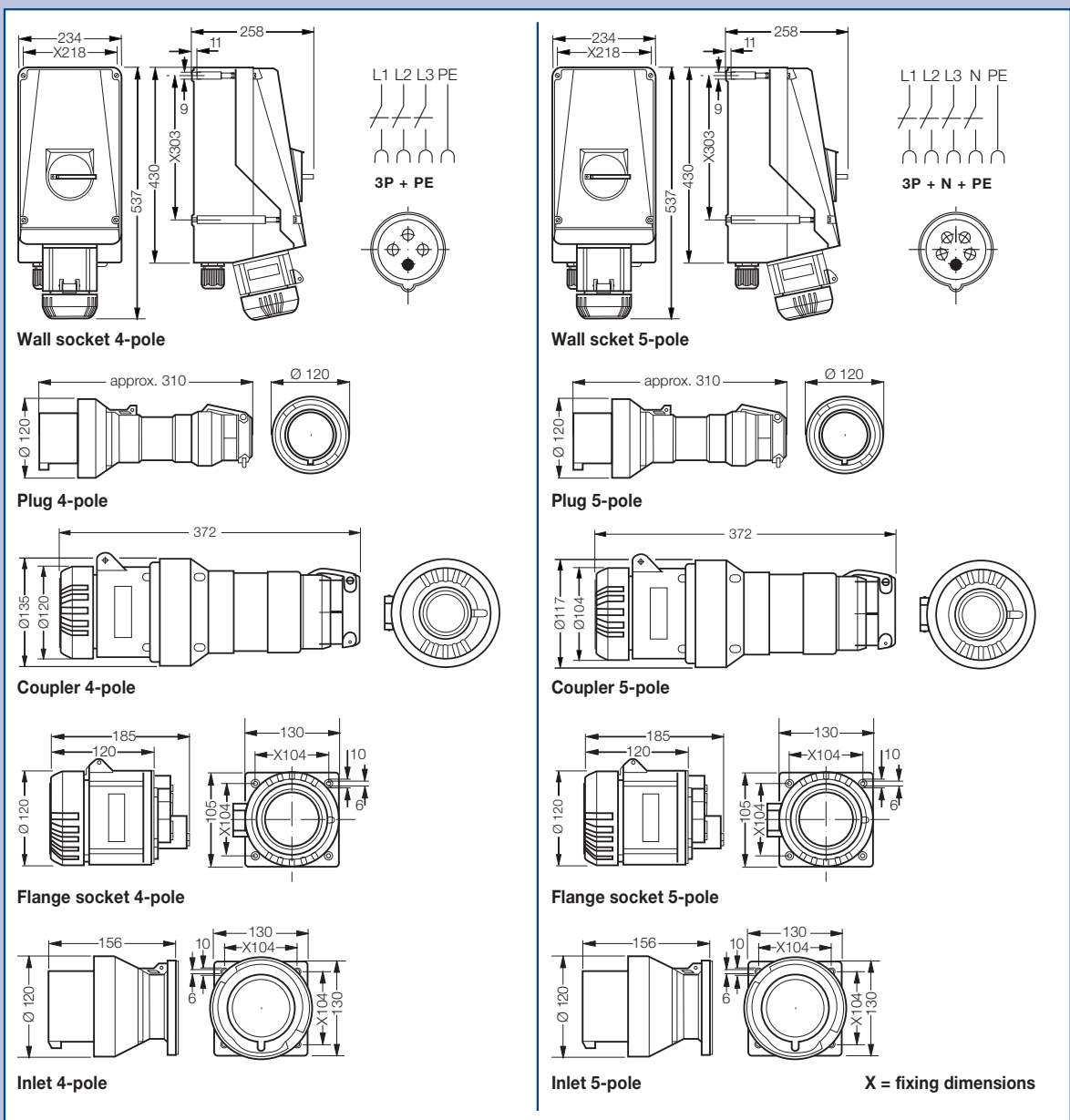
Wall socket

Flange socket

Coupler

Plug

Dimension drawing | Wiring diagram



Dimensions in mm

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EX-REPAIR AND MAINTENANCE RECEPTACLES

16 A - 63 A

Plastic version for Zone 1/2/1

For maintenance, repair and upgrading work, appliances such as drills, welding transformers, hand grinders and such are needed but are not in accordance to the explosion-protection regulations.

To be able to use these appliances in the Zone 1, Zone 2, Zone 21 or Zone 22 explosion-protected areas a hot work permit has to be issued. For the duration of the repair or maintenance work, the environment has to be free of all explosive hazardous atmospheres.

The CEAG explosion-protected repair and maintenance receptacles are in accordance to regulations that in parts require a stationary installation.

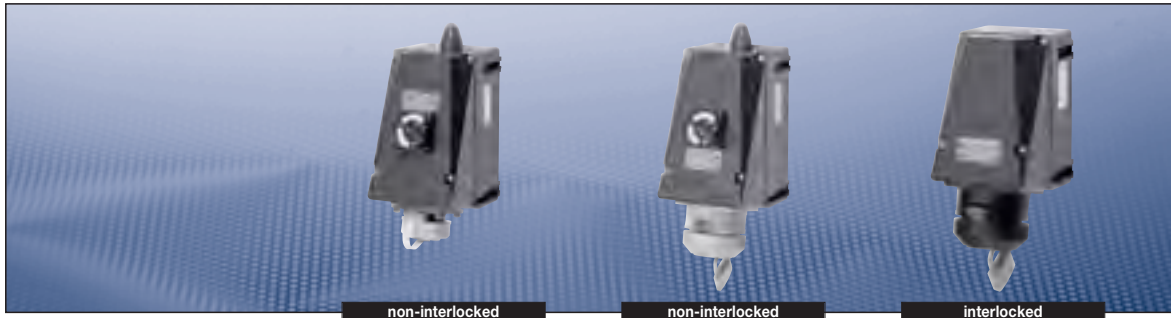
With the interlocking and lockable switch or the lockable cover the utilization of the repair and maintenance receptacles is selectively possible after a hot work permit has been issued. The CEAG repair and maintenance receptacles with and without an interlocking switch can be used with both industry and Ex-plugs. Interlocked repair and maintenance receptacles have an internal switch who prevents that a plug can be pulled out while power is on. The interlock is activated by turning the plug. Repair and maintenance sockets without an interlocking switch have a red signal lamp on the top side of the housing showing the actual state of power.

International approvals



- Commercially available industrial apparatus can be used with a "hot work permit"
- Sockets with lamellar contacts for a secure connection
- Switch and/or socket cover are lockable
- High mechanical, chemical and thermal stability

Ex-Repair- and Maintenance: 16A 3-pole and 5-pole up to 415 V

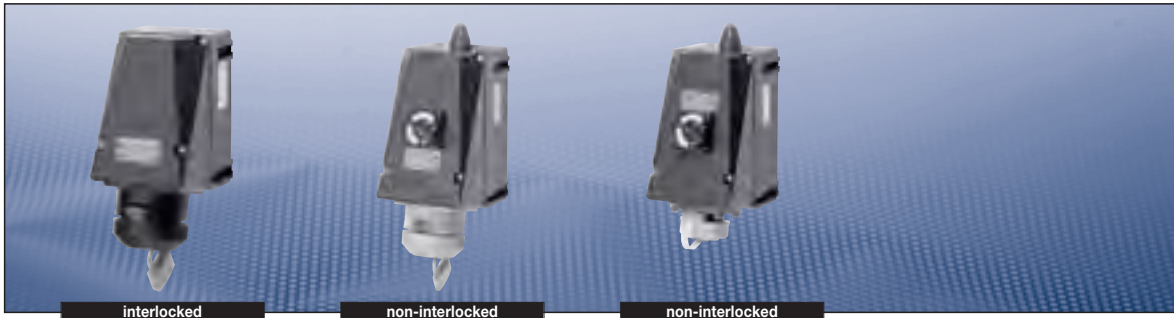


Technical data

Ex-receptacles accd. to IEC 60309-1/2	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C/T95 °C
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Permissible ambient temperature	-20°C to +40°C ¹⁾
Rated voltage	up to 440 V (AC)
Rated current	16 A (AC)
Frequency	50/60 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 415 V / I _e 16 A
External back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Insulation class	I
Degree of protection to EN 60529	IP66
Cable glands	1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-thread plug plastic or 2 x metal thread M20 with Ex-screw plug plastic
Connecting terminals	2 x 1.5 - 4 mm ²
Enclosure material	Glass-fibre reinforced polyester

¹⁾ extended temperature range on request

Ex-Repair- and Maintenance: 16A 3-pole and 5-pole up to 415 V



Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type CEE 16 A 3-pole, interlocked					
200-250 V		Wall socket	KU	1.1 kg	GHG 511 4306 R0901
		Wall socket	ME	1.2 kg	GHG 511 4306 R3901
		Wall socket	GM	1.2 kg	GHG 511 4306 R3902
		Plug			GHG 511 7306 R0001

Type CEE 16 A 3-pole, non-interlocked					
200-250 V		Wall socket	KU	1.2 kg	GHG 511 4306 R0903
		Wall socket	ME	1.3 kg	GHG 511 4306 R3905
		Wall socket	GM	1.3 kg	GHG 511 4306 R3906
		Plug			GHG 511 7306 R0001

Type 16 A 2-pole, non-interlocked „PE-contact“					
230 V		Wall socket ¹⁾	KU	1.2 kg	GHG 511 4306 R0902
		Wall socket ¹⁾	ME	1.3 kg	GHG 511 4306 R3903
		Wall socket ¹⁾	GM	1.3 kg	GHG 511 4306 R3904
		Plug with PE contact ¹⁾			

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type CEE 16 A 5-pole, interlocked						
380-415 V		Wall socket	–	KU	1.6 kg	GHG 511 4506 R0901
		Wall socket	–	ME	1.7 kg	GHG 511 4506 R3901
		Wall socket	yes	KH	1.6 kg	GHG 511 4506 R0903
		Plug				GHG 511 7506 R0001

Type CEE 16 A 5-pole, non-interlocked						
380-415 V		Wall socket	–	KU	1.8 kg	GHG 511 4506 R0902
		Wall socket	–	ME	1.9 kg	GHG 511 4506 R3902
		Wall socket	yes	KH	1.8 kg	GHG 511 4506 R0904
		Plug				GHG 511 7506 R0001

Other voltage ranges and versions available on request

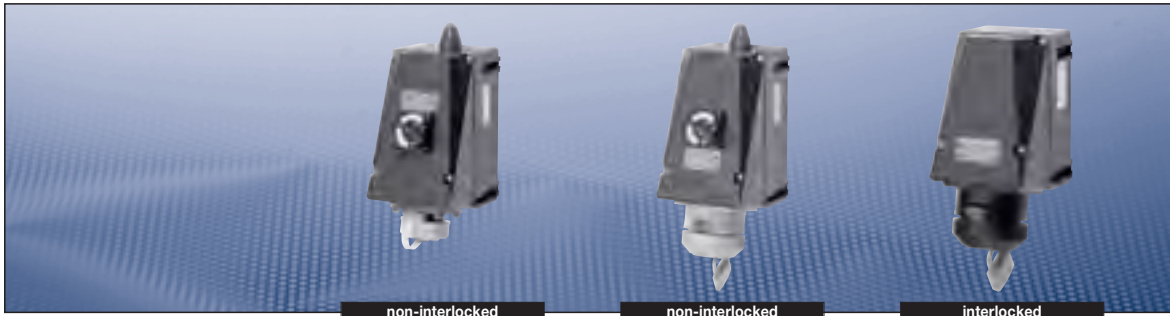
GM = 2 x metal thread M20 without cable gland/thread plug with protective earth

KU = 1 x plastic cable glands M25, 1 x M25 Ex-thread plug plastic

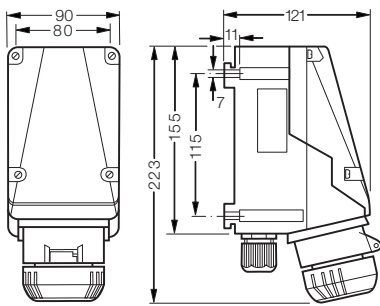
ME = 2 x metal thread M20 with Ex-thread plug plastic

KH = 2 x plastic cable glands M25 Ø 8 - 17 mm, with auxiliary contact, 1 x NO

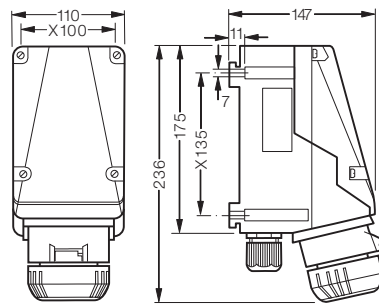
¹⁾ Not compatible with GHG 511 7306 R0001



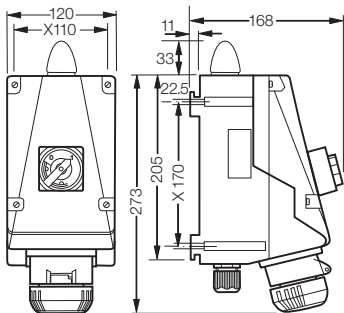
Dimension drawing | Wiring diagram



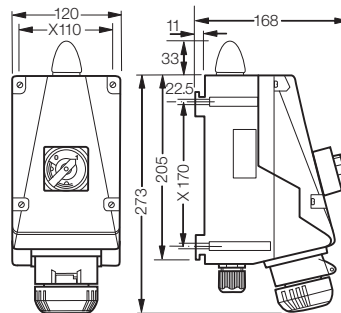
Wall socket interlocked 3-pole



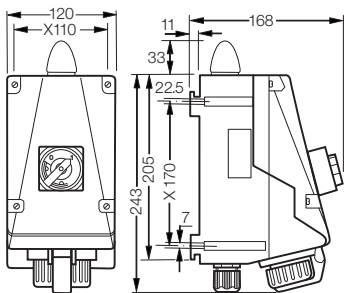
Wall socket interlocked 5-pole



Wall socket non-interlocked 3-pole



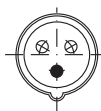
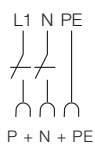
Wall socket non-interlocked 5-pole



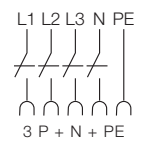
Wall socket non-interlocked with earthing contact 3-pole

X = fixing dimensions

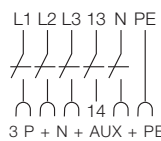
with earthing contact



without auxiliary contact



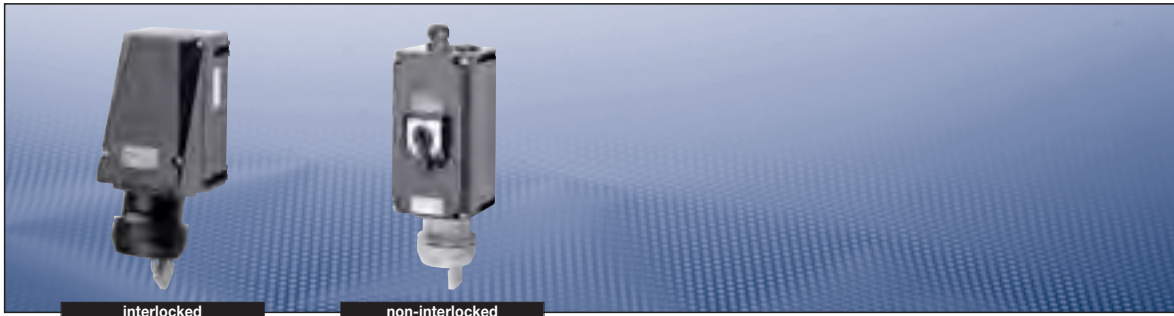
with auxiliary contact



Dimensions in mm

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Ex-Repair- and Maintenance: 32A 5-pole up to 415 V



Technical data

Ex-receptacles accd. to IEC 60309-1/2

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C/T95 °C
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Permissible ambient temperature	-20°C to +40°C ¹⁾
Rated voltage	690 V (AC)
Rated current	32 A
Frequency	50/60 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 32 A
External back-up fuse, max.	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to)
Insulation class	I
Degree of protection to EN 60529	IP66
Cable glands	1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-thread plug plastic or 2 x metal thread M32 with Ex-screw plug plastic
Connecting terminals	2 x 4 - 10 mm ²
Enclosure material	Glass-fibre reinforced polyester

¹⁾ extended temperature range on request

Ex-Repair- and Maintenance: 32A 5-pole up to 415 V



non-interlocked

interlocked

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 32 A 5-pole, interlocked						
380-415 V		Wall socket	–	KU	2.3 kg	GHG 512 4506 R0901
		Wall socket	–	ME	2.4 kg	GHG 512 4506 R3901
		Wall socket	yes	KH	2.3 kg	GHG 512 4506 R0903
Type 32 A 5-pole, non-interlocked						
380-415 V		Wall socket	–	KU	1.8 kg	GHG 512 4506 R0904
		Wall socket	–	ME	1.9 kg	GHG 512 4506 R3902
		Wall socket	yes	KH	1.8 kg	GHG 512 4506 R0905

Other voltage ranges and versions available on request

KU = 1 x plastic cable glands M40 Ø 17-28 mm, 1 x M40 Ex-thread plug plastic

ME = 2 x metal thread M32 with Ex-thread plug plastic

KH = 1 x plastic cable glands M40 Ø 17-28 mm,

1 x plastic cable glands M25 Ø 8-17 mm

Dimension drawing | Wiring diagram

Wall socket interlocked 5-pole

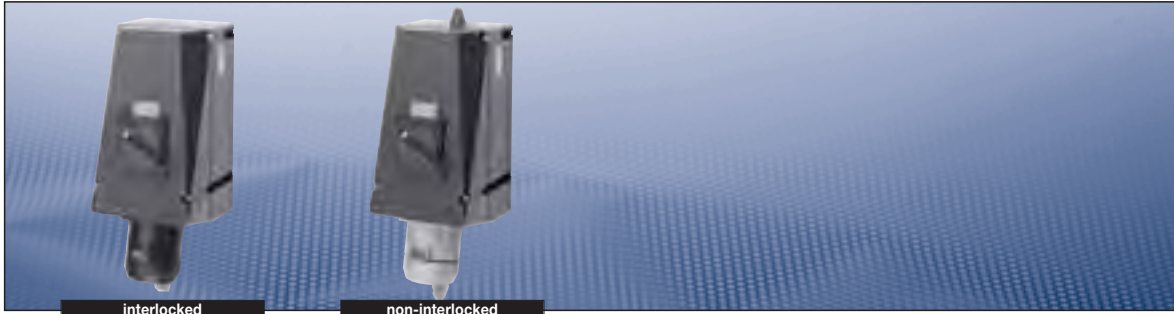
Wall socket non-interlocked 5-pole

X = fixing dimensions

<p>without auxiliary contact</p> <p>L1 L2 L3 N PE</p> <p>3 P + N + PE</p>	<p>with auxiliary contact</p> <p>L1 L2 L3 13 N PE</p> <p>3 P + N + AUX + PE</p>
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Dimensions in mm

Ex-Repair- and Maintenance: 63A 5-pole up to 415 V



Technical data

Ex-receptacles accd. to IEC 60309-1/2	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C/T95 °C
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Permissible ambient temperature	-20°C to +40°C ¹⁾
Rated voltage	440 V~ (AC)
Rated current	63 A (AC)
Frequency	50/60 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	U _e 690 V / I _e 63 A
External back-up fuse, max.	without therm. protection: 63 A with therm. protection: 80 A gL (rated current 63 A set to)
Insulation class	I
Degree of protection to EN 60529	IP66
Cable glands	1 x M50 Ø 22 - 35 mm, 1 x M50 Ex-thread plug plastic or 2 x metal thread M40 with Ex-thread plug plastic
Connecting terminals	2 x 4 - 25 mm ²
Enclosure material	Glass-fibre reinforced polyester

¹⁾ extended temperature range on request

Ex-Repair- and Maintenance: 63A 5-pole up to 415 V



Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 63 A 5-pole, interlocked						
380-415 V		Wall socket	–	KU	8.1 kg	GHG 514 4506 R0901
		Wall socket	–	ME	8.3 kg	GHG 514 4506 R3901
		Wall socket	yes	KH	8.1 kg	GHG 514 4506 R0903
Type 63 A 5-pole, non-interlocked						
380-415 V		Wall socket	–	KU	8.1 kg	GHG 514 4506 R0904
		Wall socket	–	ME	8.3 kg	GHG 514 4506 R3902
		Wall socket	yes	KH	8.1 kg	GHG 514 4506 R0905

125 A and other versions on request

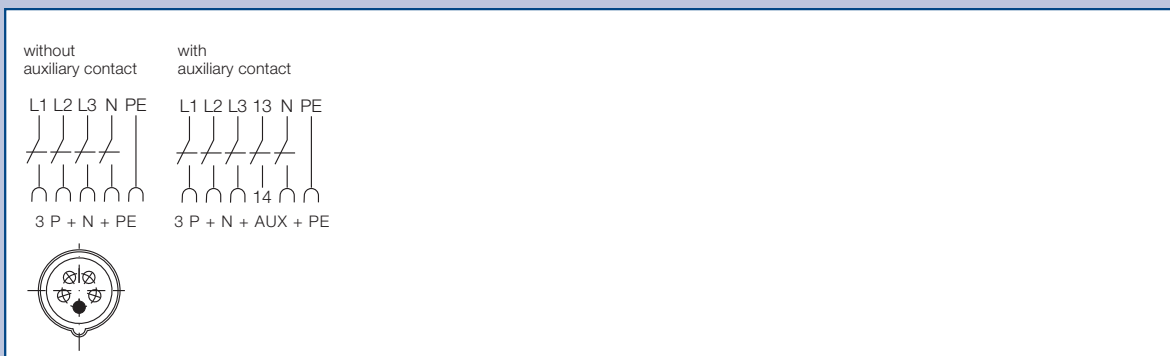
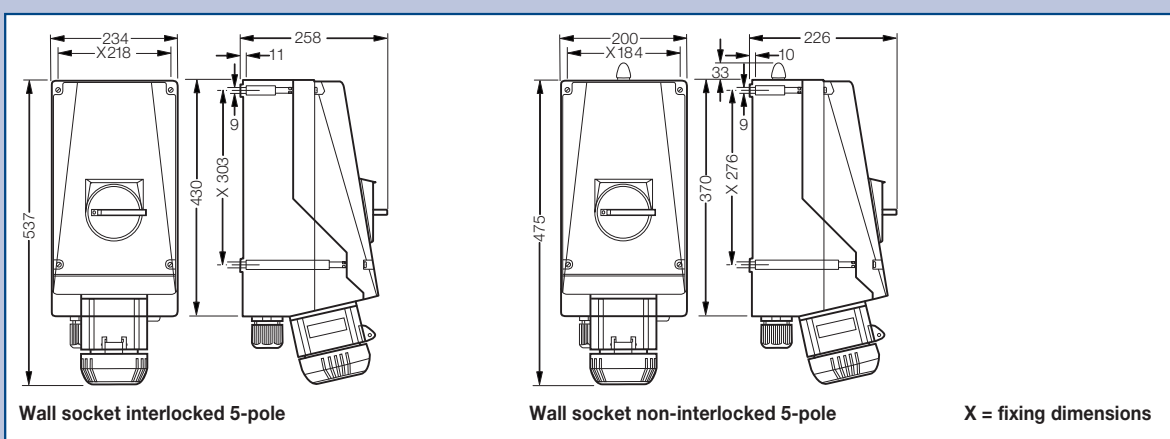
KU = 1 x plastic cable glands M50 Ø 22-35 mm, 1 x M50 Ex-thread plug plastic

ME = 2 x metal thread M40 with Ex-thread plug plastic

KH = 1 x plastic cable glands M50 Ø 22-35 mm,

1 x plastic cable glands M25 Ø 8-17 mm, with auxiliary contact, 1 x NO

Dimension drawing | Wiring diagram



Dimensions in mm

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EX-REPAIR AND MAINTENANCE RECEPTACLE DISTRIBUTION

40 A and 80 A Plastic version for Zone 1

For maintenance, repair and upgrading work, appliances such as drills, welding transformers, hand grinders and such are needed but are not in accordance to the explosion-protection regulations.

To be able to use these appliances in the Zone 1 or Zone 2 explosion-protected areas a hot work permit has to be issued. For the duration of the repair or maintenance work, the environment has to be free of all explosive hazardous atmospheres.

The CEAG explosion-protected repair and maintenance receptacle distributions are in accordance to regulations that in parts require a stationary installation. With the interlocking and lockable switch the utilization of the repair and maintenance receptacle distributions is selectively possible after a hot work permit has been issued.

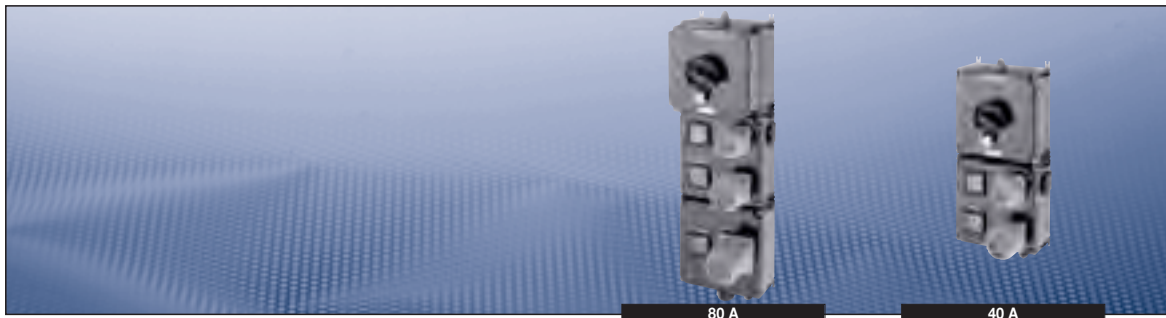
All sockets are equipped with high quality switches and have separate RCD's. Repair and maintenance sockets have a red signal lamp on the top side of the housing showing the actual state of connection.

International approvals

- Commercially available industrial apparatus can be used with a "hot work permit"
- Sockets with lamellar contacts for secure connection
- Lockable switch with all-pole switching and AC-3 motor switching capability
- High mechanical, chemical and thermal resistance
- Sockets can be locked separately



Repair receptacle distributions 40 A and 80 A



Technical data

Repair receptacle distributions

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1100 X
Permissible ambient temperature	-55 °C to +55 °C (40 A) / -36 °C to +55 °C (80 A) ¹⁾
Rated voltage	420 V (40 A) / 500 V (80 A)
Rated current	40 A / 80 A
Frequency	50 - 60 Hz
Rated making/rated breaking capacity AC-3 accd. EN 60947-3	40 A switch: U _e 420 V / I _e 40 A 80 A switch: U _e 500 V / I _e 80 A
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	Black

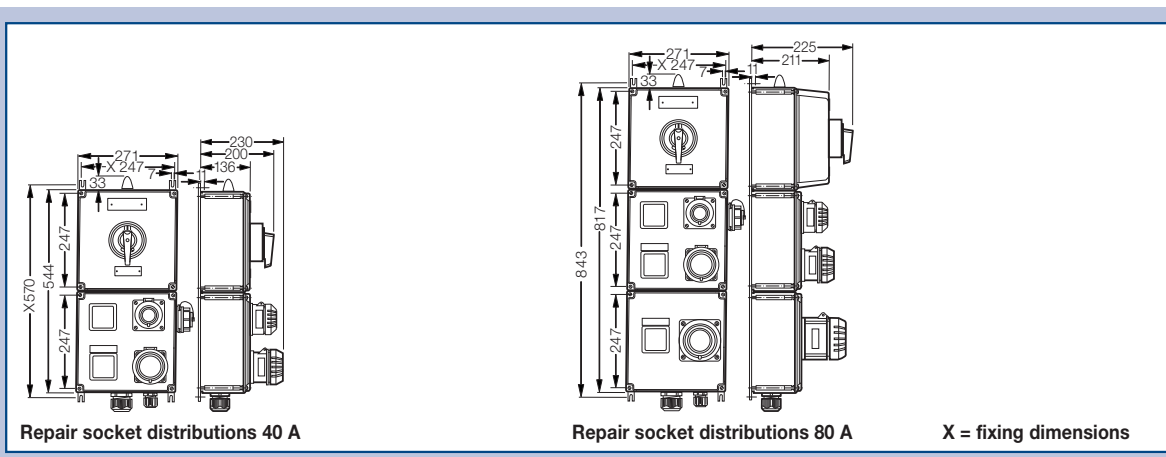
Ordering details

Number of components	Contact arrangement	Order No.
1 switch, 4-pole, 40 A; 1 IEC 60309-socket, 16 A 1 power circuit breaker, 3-pole, 16 A, 1 IEC 60309-socket, 32 A 1 power circuit breaker, 3-pole, 32 A, 1 earthed socket 16 A 1 power circuit breaker, 1-pole, 16 A, 1 signal lamp 1 Cable entry M40 Ø 17 - 28 mm 1 Cable entry M25 Ø 8 - 17 mm Weight: 8.5 kg		GHG 981 0042 R0001
1 switch, 4-pole, 80 A 1 Fi-earth leakage circuit breaker, 63 A, 1 IEC 60309-socket, 16 A 1 power circuit breaker, 3-pole, 16 A, 1 IEC 60309-socket, 32 A 1 power circuit breaker, 3-pole, 32 A, 1 signal lamp 1 IEC 60309-socket, 63 A; 1 earthed socket 16 A 1 power circuit breaker, 1-pole, 16 A 1 Cable entry M50 Ø 22 - 35 mm 1 Cable entry M25 Ø 8 - 17 mm Weight: 15 kg		GHG 981 0043 R0001

Other types on request / Customer specifications on request

¹⁾ extended temperature range on request

Dimension drawing | Wiring diagram



PORTABLE MULTI-OUTLET DISTRIBUTIONS AND CABLE REELS

16 A and 32 A for Zone 1 and Zone 21

Electrical equipment, such as pumps, scales, etc. can be used flexibly in areas of Zone 1 and Zone 2 that are at risk of explosions, they can be safely supplied with energy by means of portable CEAG multi-outlet distribution units or cable reels.

The multi-outlet distribution units are equipped with flange-mounting socket outlets that even comply with the high degree of protection IP66 when they are plugged in.

This means that this distribution units are also suitable for use in the harshest industrial conditions.

The portable, explosion-protected cable reels can be used to supply electricity flexibly to portable electrical equipment to areas of Zone 1 and Zone 2 that are at risk of explosions. Furthermore, the cable drum can be used as a multiple socket outlet. Different combinations of plugs and receptacles allow variable deployments. The cable drum with a stainless steel housing comprises up to three explosion-protected flange-mounting socket outlets as well as the wound cable with a plug. One bolt each for inner and outer connection to the side wall are also welded on for connection to the protective conductor or potential equalisation conductor. Optionally, the cable reel can also be supplied with conductive reels. A version of all-rubber design for use in harsh areas offers various applications. The small design gives best opportunities to be stored in operation vehicles or container.

All portable distributions are for use by:

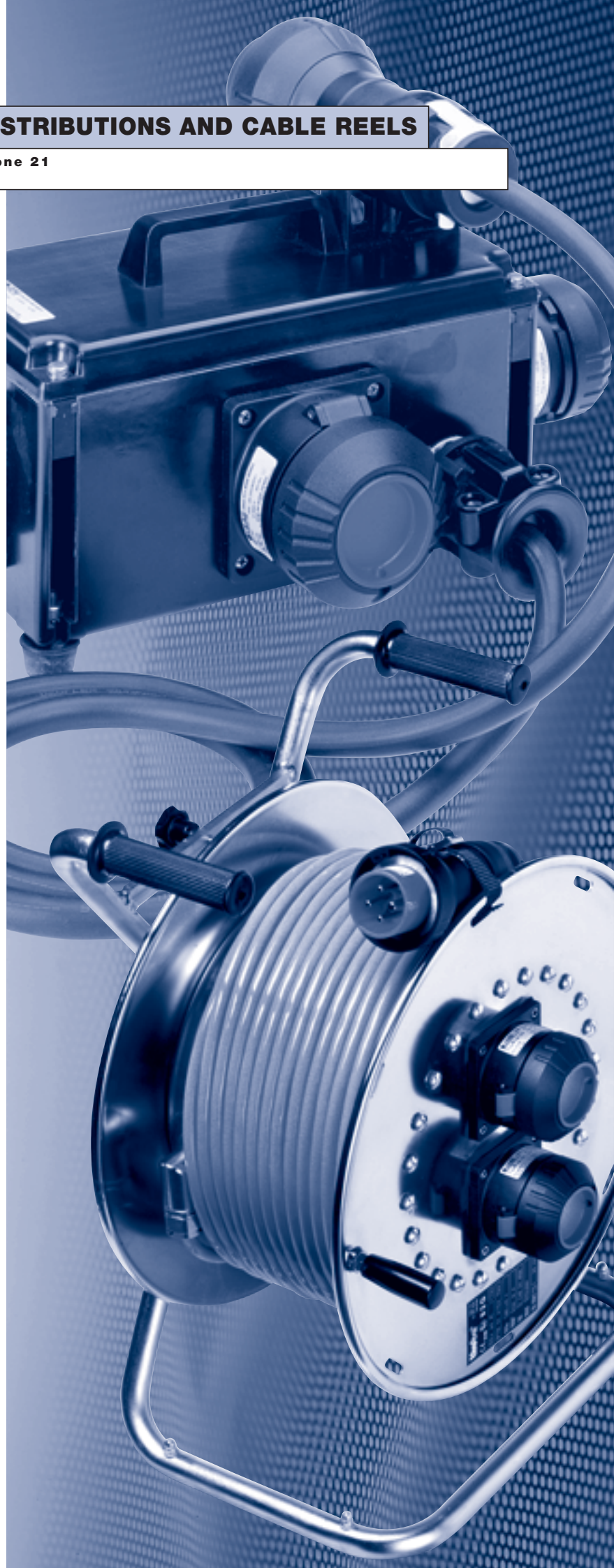
- fire brigades
- civil defence
- rescue services
- police
- maintenance operation

High IP 66 protection

Portable distribution of electricity via sockets in the area at risk of explosions

Mechanical, chemical and thermal resistance

Variable socket combinations



| Ex-Portable outlet distribution: 16A 3-pole, 5-pole |



Technical data

16A 3-pole | 16A 5-pole	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6
EC-Type Examination Certificate	PTB 02 ATEX 1035
Permissible ambient temperature	-20 °C to +40 °C ¹⁾
Rated voltage	3-pole 16 A: to 500 V / 5-pole 16 A: to 400 V
Rated current	16 A
Frequency	50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 690 V / I _e 16 A
External back up fuse	without thermal protection: 16 A with thermal protection: 25 A gL (rated current 16 A set to)
Degree of protection accd. EN 60529	IP66
Cable glands/enclosure drilling	Trumpet shaped cable gland M32
Weight	with 2 m connecting cable: 4.2 kg / with 5 m connecting cable 5.2 kg
Enclosure material	Socket distribution: Glass-fibre reinforced polyester Plug and flange socket: polyamide
Enclosure colour	Black

¹⁾ extended temperature range on request

Ex-Portable outlet distribution: 16A 3-pole, 5-pole

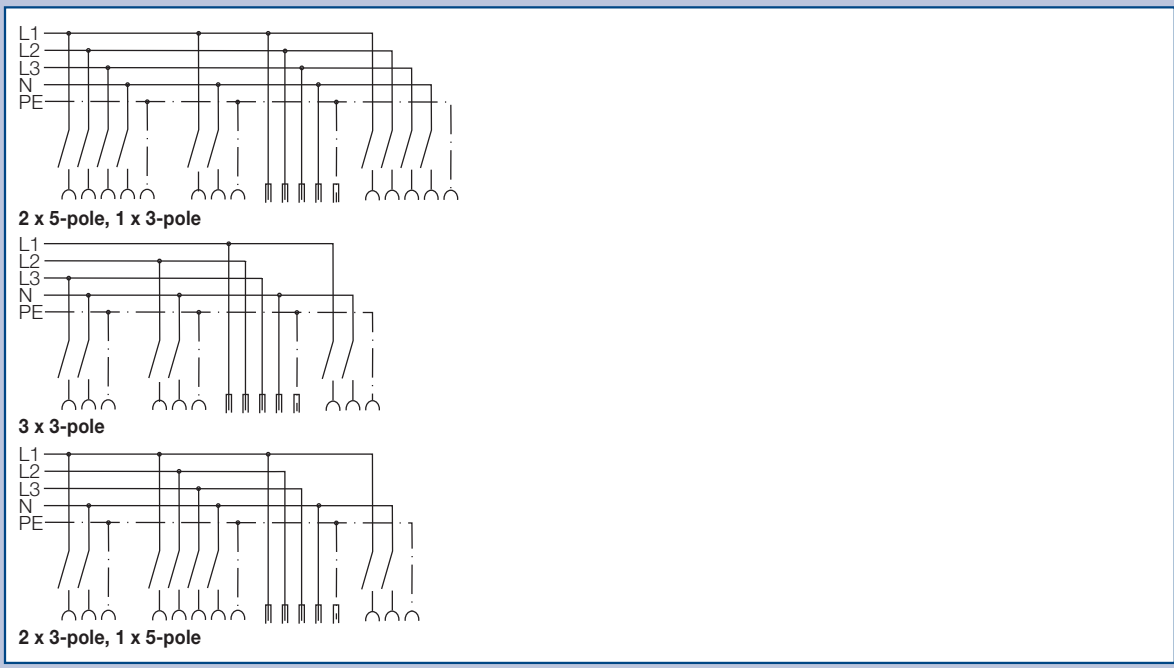
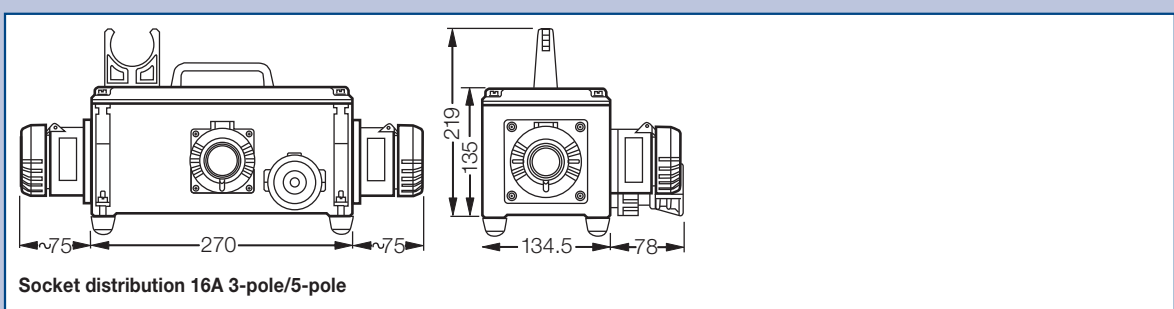


Ordering details

Design	Version	Order No.
Type design with 2 m connecting cable		
2 x socket 16 A	3-pole	GHG 931 0003 R0011
1 x socket 16 A	5-pole	
1 x socket 16 A	3-pole	GHG 931 0003 R0012
2 x socket 16 A	5-pole	
3 x socket 16 A	3-pole	GHG 931 0003 R0013
Type design with 5 m connecting cable		
2 x socket 16 A	3-pole	GHG 931 0003 R0021
1 x socket 16 A	5-pole	
1 x socket 16 A	3-pole	GHG 931 0003 R0022
2 x socket 16 A	5-pole	
3 x socket 16 A	3-pole	GHG 931 0003 R0023

Other configurations on request.

Dimension drawing | Wiring diagram



Dimensions in mm

| Ex-Cable reel: 16A 3- and 5-pole, 32A 4- and 5-pole |



Technical data

	Stainless steel	Ex 502
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6	Ⓔ II 2 G Ex ed IIC T6
EC-Type Examination Certificate	PTB 01 ATEX 1116	PTB 03 ATEX 1186
Permissible ambient temperature	-20 °C ... +55 °C ¹⁾	-20 °C ... +40 °C
Rated voltage	3-pole: 415 V 5-pole: 500 V (690 V to 5 h)	up to 690 V, dept. to version
Rated current	16 A/32 A	16 A
Frequency	50/60 Hz	50/60 Hz
Max. load		reeled: 3 x 2.5 mm ² max. 1000 W/230 V/ unreeled 3600 W/230 V reeled: 5 x 2.5 mm ² max. 4800 W/415 V/ unreeled 11000 W/415 V
External back up fuse	without thermal protection: 16 A with thermal protection: 25 A gL (rated current 16 A set to)	
Insulation class	I	II
Degree of protection accd. EN 60529	IP54	IP54
Weight	16 A with 20 m connecting cable approx. 22 - 30 kg design depending / 32 A with 20 m connecting cable approx. 28 - 50 kg design depending	approx. 13 kg depend on version
Enclosure material	Cable reel: enclosure stainless steel Plug and flange socket: polyamide	Cable reel: all rubber material Plug and flange socket: polyamide

¹⁾ extended temperature range on request

Ordering details

Design	Version	Order No.
Stainless steel 16 A design with 20 m connecting cable		
1 x Flange socket 16 A 3-pole		
1 x Flange socket 16 A 5-pole	5 x 2.5 mm ²	GHG 931 0003 R0031
3 x Flange socket 16 A 3-pole	3 x 2.5 mm ²	GHG 931 0003 R0032
2 x Flange socket 16 A 5-pole	5 x 2.5 mm ²	GHG 931 0003 R0033
Stainless steel 16 A design with 20 m connecting cable		
2 x Flange socket 32 A 4-pole	4 x 4 mm ²	GHG 931 0003 R0034
2 x Flange socket 32 A 5-pole	5 x 4 mm ²	GHG 931 0003 R0035
1 x Flange socket 16 A 5-pole		
1 x Flange socket 32 A 5-pole	5 x 4 mm ²	GHG 931 0003 R0036
All rubber type Ex 502		
502 Ex 200 - 250 V, 16 A 3-pole, 6 h (1P, N, PE)	50 m, 3 x 2.5 mm ²	GHG 931 0004 R0001
502 Ex 200 - 250 V, 16 A 3-pole, 6 h (1P, N, PE)	30 m, 3 x 2.5 mm ²	GHG 931 0005 R0001
502 Ex 380 - 415 V, 16 A, 5-pole, 6 h (3P, N, E)	30 m, 5 x 2.5 mm ²	GHG 931 0006 R0001
502 Ex 200 - 250 V, 16 A 3-pole, 6 h (1P, N, PE)	30 m, 3 x 2.5 mm ² with chassis	GHG 931 0008 R0001
502 Ex 380 - 415 V, 16 A, 5-pole, 6 h (3P, N, E)	30 m, 5 x 2.5 mm ² with chassis	GHG 931 0009 R0001
502 Ex 200 - 250 V, 16 A 3-pole, 6 h (1P, N, PE)	50 m, 3 x 2.5 mm ² with chassis	GHG 931 0010 R0001

Note: The cassis contains a rack for a portable distribution (page 6.130) which is not included in scope of delivery

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Ex-Cable reel: 16A 3- and 5-pole, 32A 4- and 5-pole

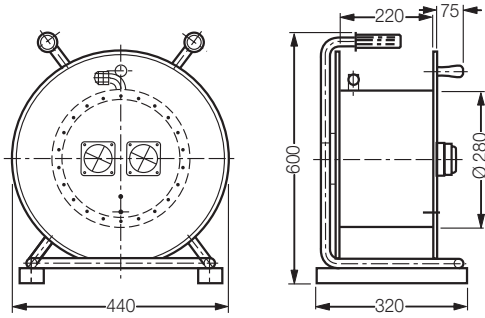


Stainless steel

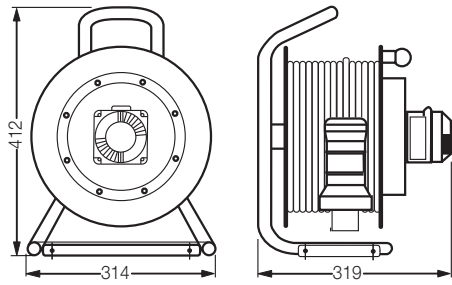
Ex 502

Chassis

Dimension drawing



Stainless steel



All rubber type 502

Dimensions in mm

EX-PROTECTED PORTABLE POWER SUPPLY UNITS

16 A – 125 A for Zone 1

Special requirements apply for power distributions for the use and operation of portable equipment in hazardous areas in Zones 1, 2, 21 and 22. It is necessary to ensure that any external mechanical influences are effectively kept away from the equipment.

CEAG explosion-protected power distributions fulfil these high mechanical explosion protection requirements by means of a high-strength protective framework made of stainless steel (1.4301) and enclosures that have been specially developed for this purpose.

Whether in accordance with customer requirements or as a series product, sizes 16 A – 125 A are possible. All the electrical outgoing circuits can be fitted with separate MCBs or ELCBs. Customized components, such as electronic subassemblies, can also be safely built into special, flameproof enclosures with the required Certificate of Conformity.

The power distributions are fitted with flange sockets that fulfil the high requirements of the degree of protection IP 66, even with plugs inserted.

Thus, these distributions are even suitable for use under most extreme industrial conditions.

For the additional connection to the protective conductor (PE) or equipotential bonding conductor (PA), there is a stud welded directly onto the framework.

International approvals.

Flexible power distribution in the hazardous area thanks to sockets with lamellar contacts for optimum contact safety

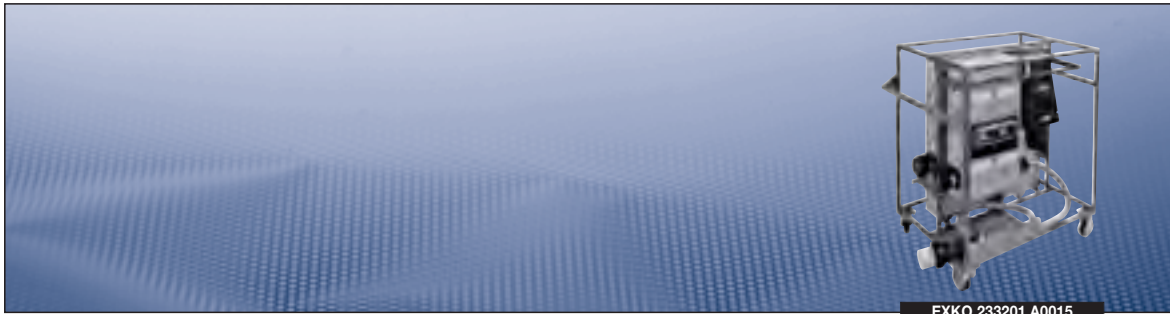
Padlocking of switch with all-pole disconnection and full AC3 switching capacity

High mechanical, chemical and thermal resistance

Customer specific design



Ex-protected portable power supply units



EXKO 233201 A0015

Technical data

Ex-protected portable power supply EXKO 233201 A0015

Marking accd. to 94/9/EC	Ⓔ II 2 G Ex de IIC T4 / Ⓔ II 2 D Ex tD A21 IP65 T95°C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	400 V / 230 V
Rated current	63 A
Frequency	50 - 60 Hz
External back up fuse	63A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1 x M50 trumpet shaped cable gland
Enclosure material	sheet steel, painted (option stainless steel AISI 316L) wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D) (H x B x T)	metal frame stainless steel, squared 20 x 20 x 2 including lockable wheels 968 x 800 x 600 mm
Enclosure colour	RAL 7032

Ordering details

Components	Components external	Order No.
1x MCB 4-pole - C40A, 10kA	1x plug 63A 5-pole, 06h (GHG5147506R0001)	EXKO 233201 A0015
1x RCD 4-pole - 40A 0,03A 10kA	1x wall socket 63A 5-pole, 06h (GHG5144506R0001)	
1x RCD 4-pole - 63A 0,03A, 10kA	3x receptacle 32A 5-pole, 06h (GHG5128506R0001)	
3x RCD with overcurrent protection (1-pole+N, C16A/0,03, 10kA)	6x receptacle 16A 3-pole, 06h (GHG5118306R0001)	
3x MCB 4-pole - C32A, 10kA	actuating flap for components	

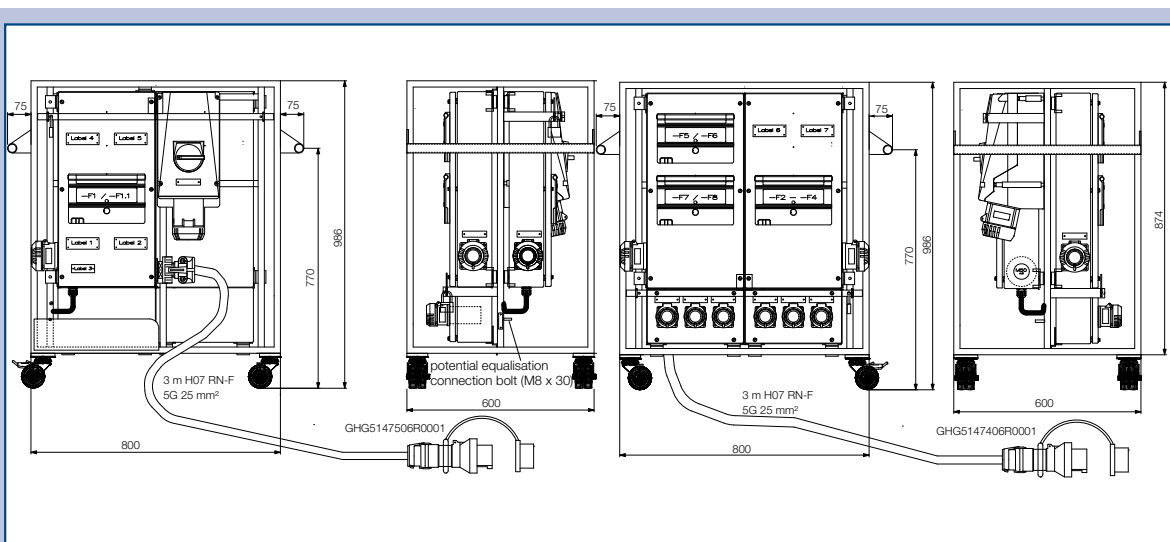
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

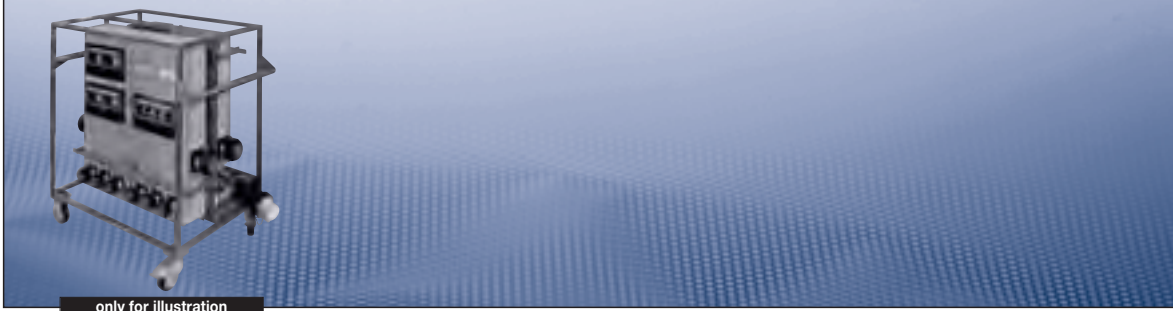
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



only for illustration

Technical data

Ex-protected portable power supply EXKO 233201 A0016

Marking accd. to 94/9/EC	Ⓔ II 2 G Ex de IIC T4 / Ⓔ II 2 D IP65 T95°C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	400 V / 230 V
Rated current	32 A
Frequency	50 Hz
External back up fuse	32 A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1x M32 trumpet shaped cable gland, 1x M12 cable gland plastic
Anschlusskabel	H07RN-F 5 x 6mm ² with plug 32A, 3 m
Enclosure material	sheet steel, painted (optional: Edelstahl AISI 316L), wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel squared 20 x 20 x 2 including lockable wheels 1019 x 800 x 600 mm
Weight	69 kg
Enclosure colour	RAL 7032

Ordering details

Components	Components external	Order No.
1x MCB S204M - C32A, 10kA	1x plug 32A 5-pole, 380-415V (06h) (GHG5127506R0001)	EXKO 233201 A0016
1x RCD F204A - 40A 0,03A 10kA	1x receptacle 32A 5-pole, 380-415V (06h) (GHG5128506R0001)	
3x MCB / RCD DS971 - C16A 0,03A, 10kA	6x receptacle 16A 3-pole, 230V (06h) (GHG5118306R0001)	
	actuating flap for components	

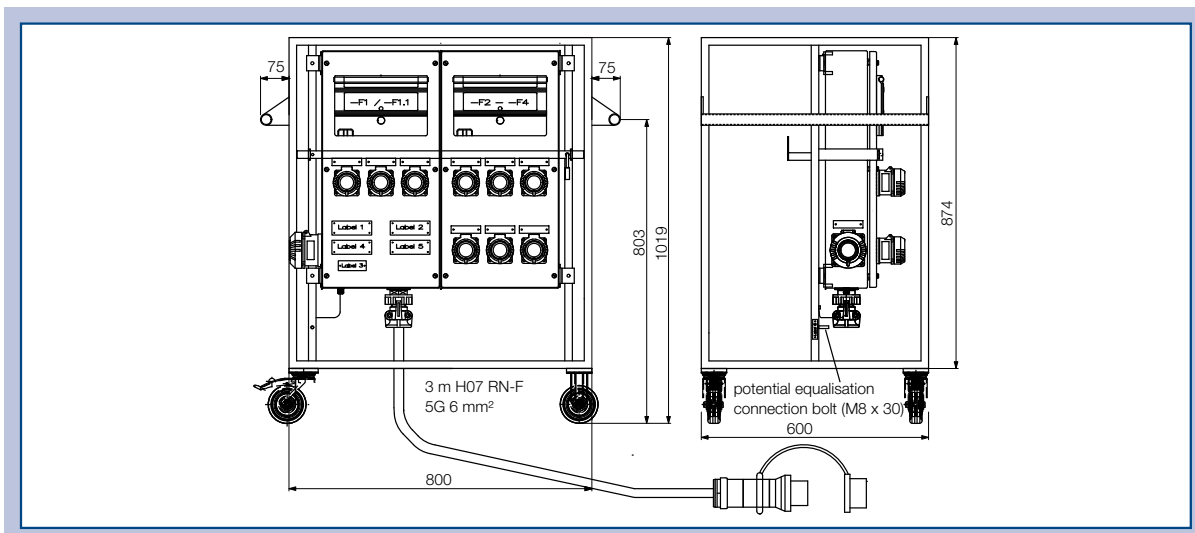
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

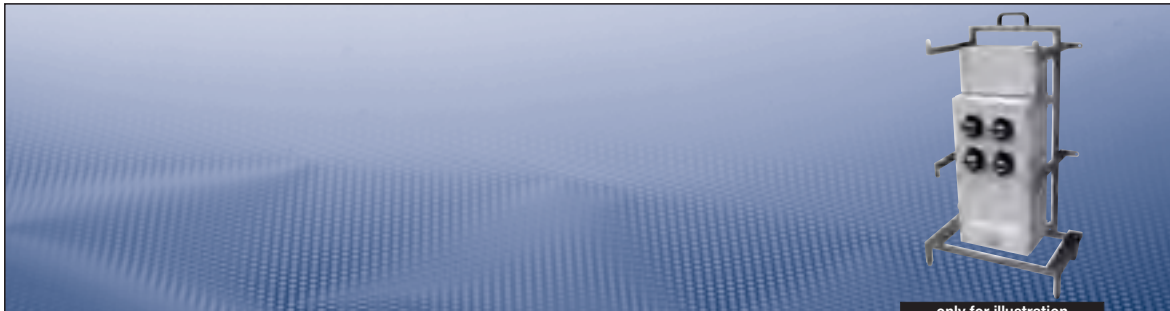
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



Technical data

Ex-protected portable power supply EXKO 233201 A0006

Marking accd. to 94/9/EC	Ⓔ II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	230/24 V transformer, 100 VA
Rated current	16 A
Frequency	50 Hz
External back up fuse	16 A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1x M25 trumpet shaped cable gland, 1x M12 cable gland plastic
Enclosure material	glass-fibre reinforced polyester (option sheet steel, painted oder stainless steel AISI 316L) wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel, squared 20 x 20 x 2, with wheels 1062 x 500 x 336 mm
Weight	30 kg
Enclosure colour	black

Ordering details

Components	Components external	Order No.
1x MCB S202M - K0,5A, 10kA 1x FI-LS DS971 - C4A 0,03A, 10kA 1x transformer 230/24V 100VA	2x receptacle 16A 3-pole, 24V (GHG5420007R0003) actuating flap for components	EXKO 233201 A0006

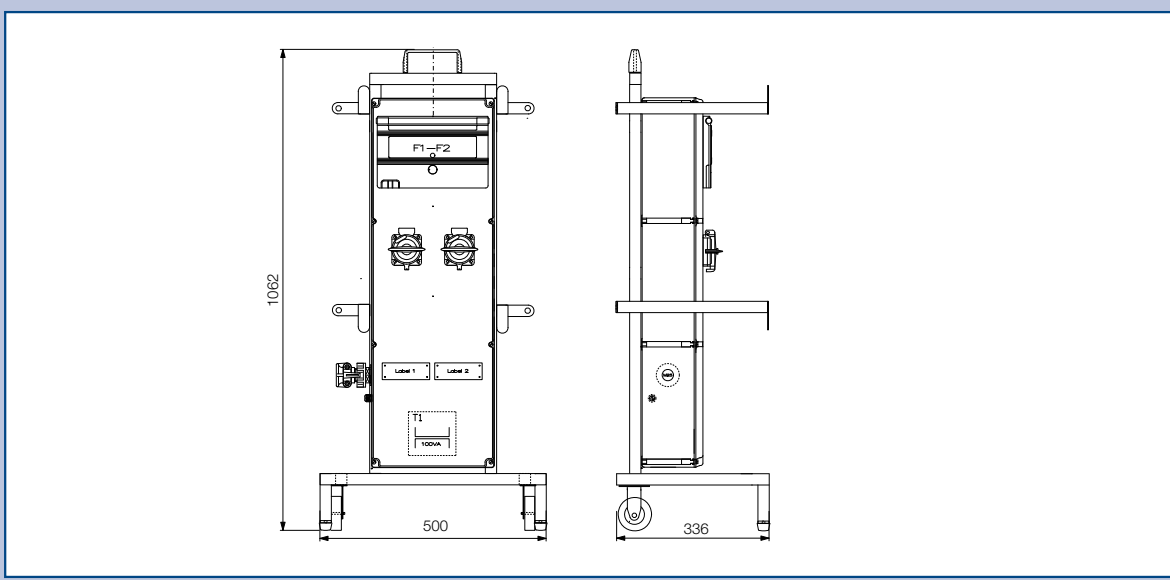
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

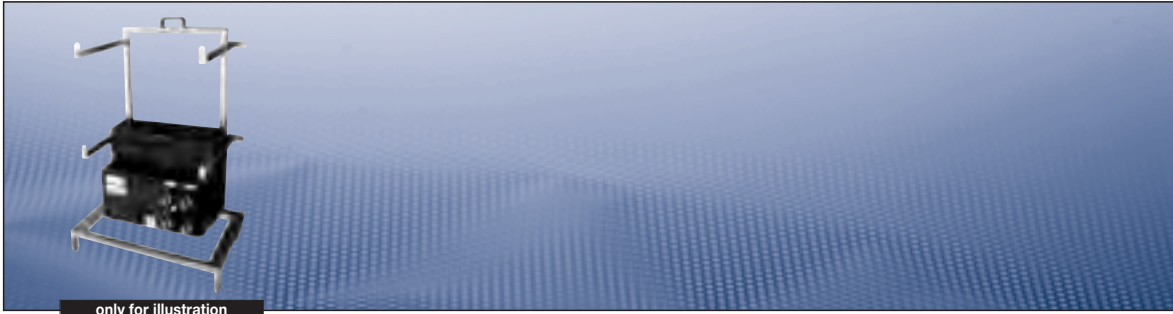
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



Technical data

Ex-protected portable power supply EXKO 233201 A0007

Marking accd. to 94/9/EC	Ⓔ II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	110/24 V transformer, 550 VA
Rated current	16 A
Frequency	50 Hz
External back up fuse	25A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1 x M25 trumpet shaped cable gland, 1 x M12 cable gland plastic
Enclosure material	glass-fibre reinforced polyester (option sheet steel, painted oder stainless steel AISI 316L) wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel squared 20 x 20 x 2 with wheels 1062 x 774 x 336 mm
Weight	44 kg
Enclosure colour	black

Ordering details

Components	Components external	Order No.
1x MCB S202P - K6A, 10kA 2x MCB S202M - C16A, 10kA 1x transformer 110/24V 550VA	1x receptacle 16A 3-pole, 110V (GHG5118304R0001) 2x receptacle 16A 2pole, 24V (GHG5420007R0004) actuating flap for components	EXKO 233201 A0007

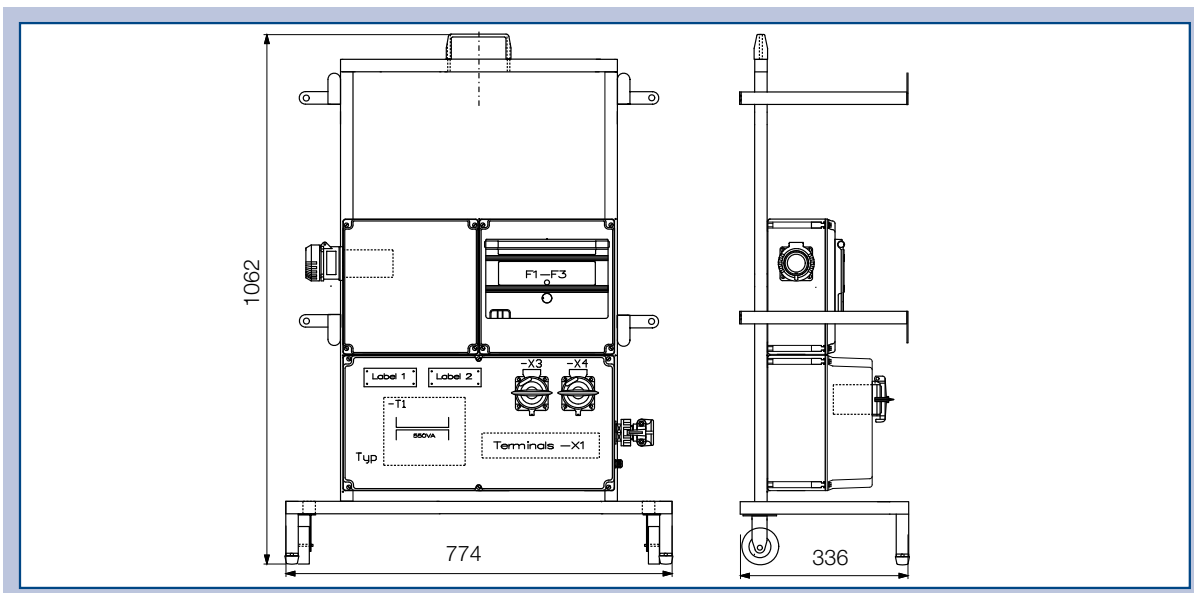
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

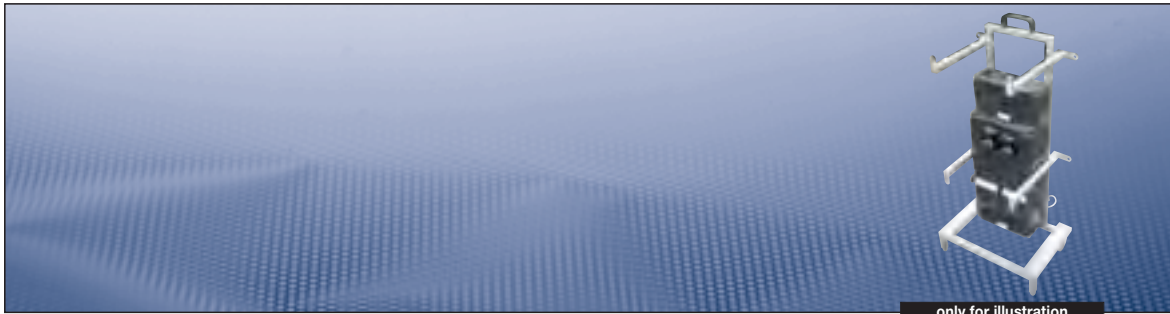
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



Technical data

Ex-protected portable power supply EXKO 233201 A0014

Marking accd. to 94/9/EC	Ex II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	230/42 V transformer, 550 VA
Rated current	16 A
Frequency	50 - 60 Hz
External back up fuse	16 A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1 x M25 trumpet shaped cable gland, 1 x M12 cable gland plastic
Anschlusskabel	H07RN-F 3 x 1,5 mm ² with plug 16A, 3 m
Enclosure material	glass-fibre reinforced polyester (option sheet steel, painted oder stainless steel AISI 316L) wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel squared 20 x 20 x 2 with wheels 1062 x 500 x 336 mm
Weight	40 kg
Enclosure colour	black

Ordering details

Components	Components external	Order No.
1 x MCB S202P - K3A, 10kA	2 x receptacle 16 A 2-pole, 42 V (GHG5420007R0002)	EXKO 233201 A0014
1 x MCB S202M - C10A, 10kA	1 x plug 16 A 3-pole, 230 V 06 h (GHG5117306R0001)	
1 x transformer 230/42V 550VA	actuating flap for components	

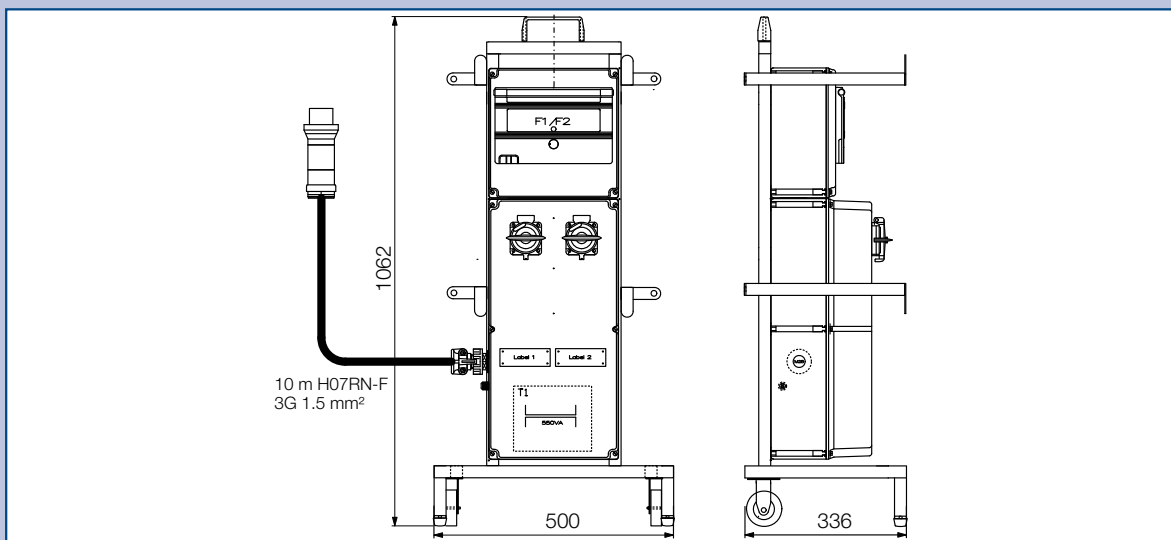
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

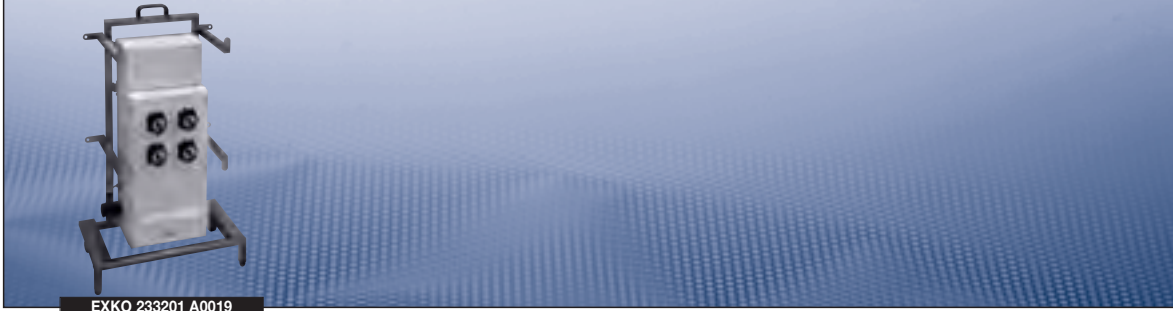
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



EXKO 233201 A0019

Technical data

Ex-protected portable power supply EXKO 233201 A0019

Marking accd. to 94/9/EC	Ⓔ II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +55 °C
Rated voltage	240/42 V transformer, 400 VA
Rated current	16 A
Frequency	50 Hz
External back up fuse	16 A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1x M32 trumpet shaped cable gland, 1x M12 cable gland plastic
Enclosure material	sheet steel, painted (option stainless steel AISI 316L) wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel squared 20 x 20 x 2 with wheels 1062 x 612 x 336 mm
Weight	38 kg
Enclosure colour	RAL 7032

Ordering details

Components	Components external	Order No.
1x MCB S202M - K16A, 10kA 1x Ex-d Sicherung 2x T 2A 1x transformer 240/24V 400VA	4x receptacle 16A 3-pole, 24V (GHG5425300V0000) 4x plug 16A 3-pole, 24V (GHG5422300V0000) actuating flap for components	EXKO 233201 A0019

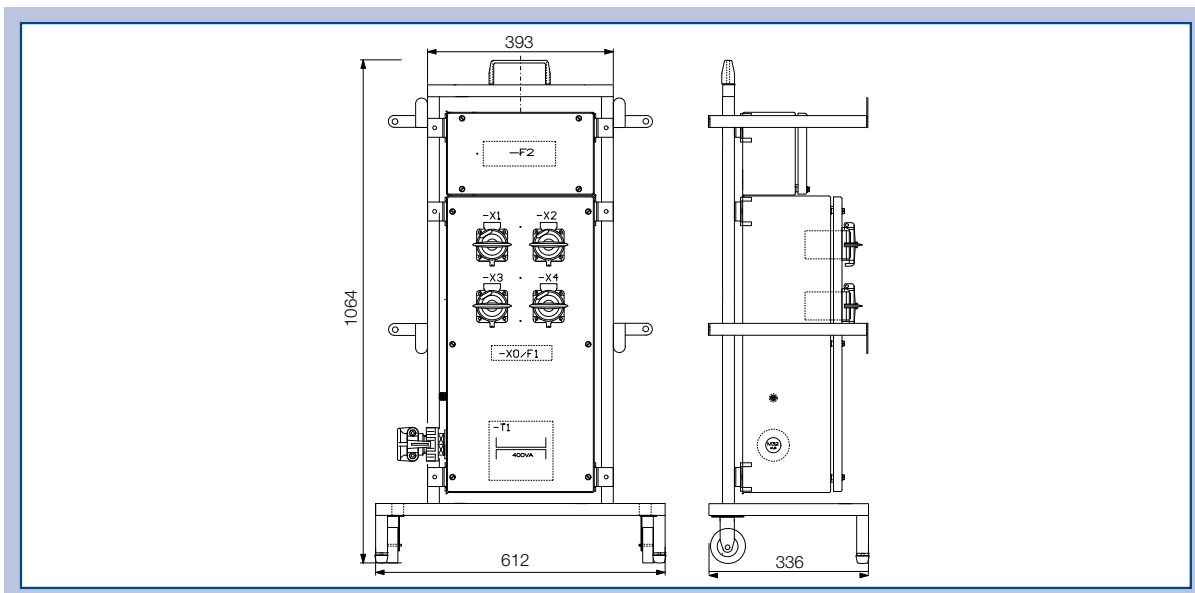
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

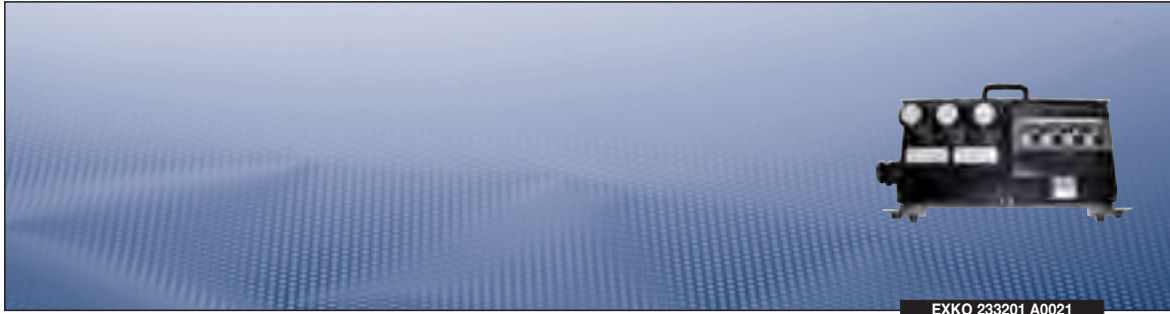
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



EXKO 233201 A0021

Technical data

Ex-protected portable power supply EXKO 233201 A0021

Marking accd. to 94/9/EC	Ⓔ II 2 G Ex de IIC T4 / Ⓔ II 2 D IP65 T95°C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	207 V / 120 V
Rated current	32 A
Frequency	50 Hz
External back up fuse	63 A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1x M40 trumpet shaped cable gland, 1x M12 cable gland plastic
Anschlusskabel	H07RN-F 5 x 10 mm ² without plug, 10 m
Enclosure material	glass-fibre reinforced polyester, metal plate AISI 304L wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame 378 x 594 x 213 mm
Weight	25 kg
Enclosure colour	black

Ordering details

Components	Components external	Order No.
1 x MCB S202M - C32A, 10kA 3 x MCB / RCD DS971 - C16A 0,03A, 6kA	3 x wall socket 16A 3-pole, 120V (04h) (GHG5118304R0001) actuating flap for components	EXKO 233201 A0021

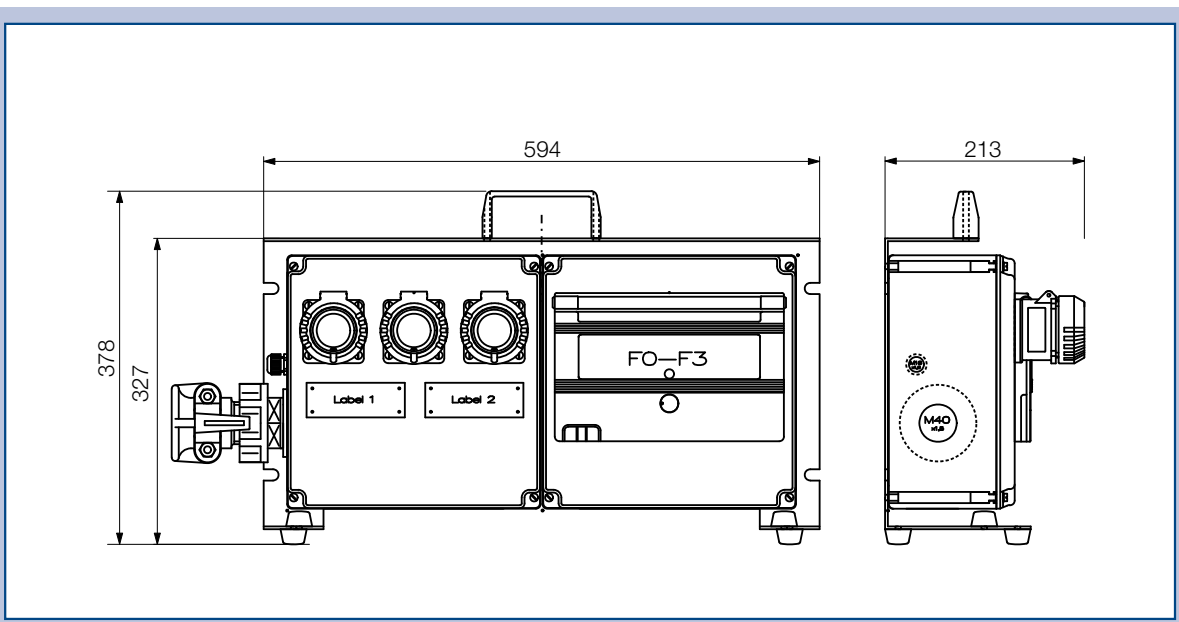
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

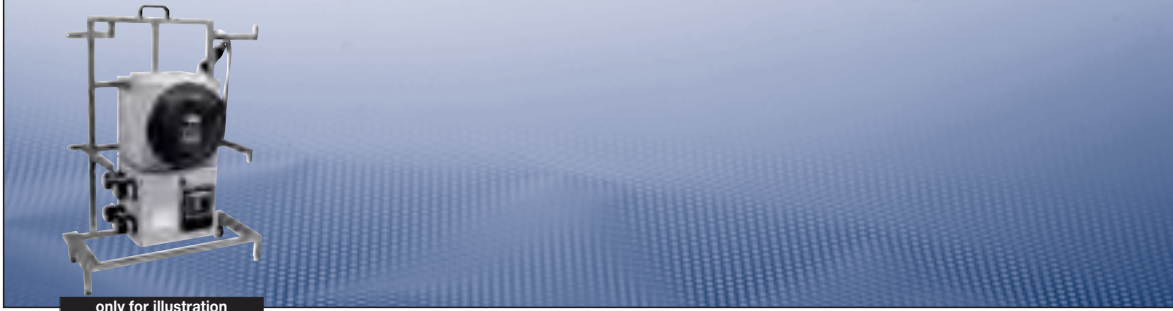
Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

Ex-protected portable power supply units



Technical data

Ex-protected portable power supply EXKO 233201 A0025

Marking accd. to 94/9/EC	Ex II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1057
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	230/24 V transformer, 400 VA
Rated current	16 A
Frequency	50 Hz
External back up fuse	16 A gL / gG
Insulation class	I
Degree of protection accd. to IEC 60529	IP65
Cable glands	1x M25 trumpet shaped cable gland, 1 x M12 cable gland plastic
Connection cable	H07RN-F 3 x 2.5 mm ² with plug 16 A, 3 m
Enclosure material	Ex-d enclosure: die-cast aluminium, Connection box: stainless steel AISI 316L wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel squared 20 x 20 x 2 including lockable wheels 936 x 720 x 369 mm
Weight	62 kg
Enclosure colour	RAL 7032

Ordering details

Components	Components external	Order No.
1 x MCB S202M - C10A, 10kA	1 x plug 16A 3-pole, 230V (06h) (GHG5117306R0001)	EXKO 233201 A0025
1 x MCB S202M - C13A, 10kA	4 x wall socket 16A 3-pole, 24V (01h) (GHG5118301R0001)	
1 x power supply 230V AC / 24V DC 20A	actuating flap for components	

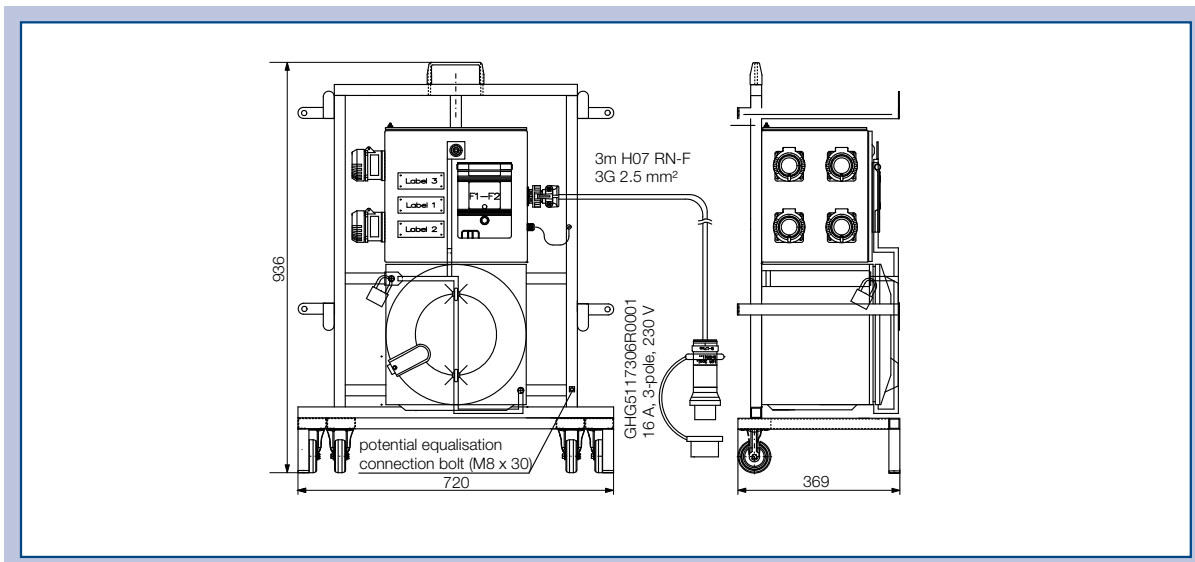
Option:

padlock facility for enclosure cover

Enclosure material sheet steel, painted oder stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm

JUNCTION BOXES AND TERMINAL ENCLOSURES

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12

EX-TERMINAL AND JUNCTION BOXES

7.2

EX-JUNCTION BOXES

7.4

UNIVERSAL EX-TERMINAL BOXES PLASTIC

7.10

UNIVERSAL EX-TERMINAL BOXES LIGHT ALLOY

7.26

EX-TERMINAL BOXES LIGHT ALLOY FLAME PROOF

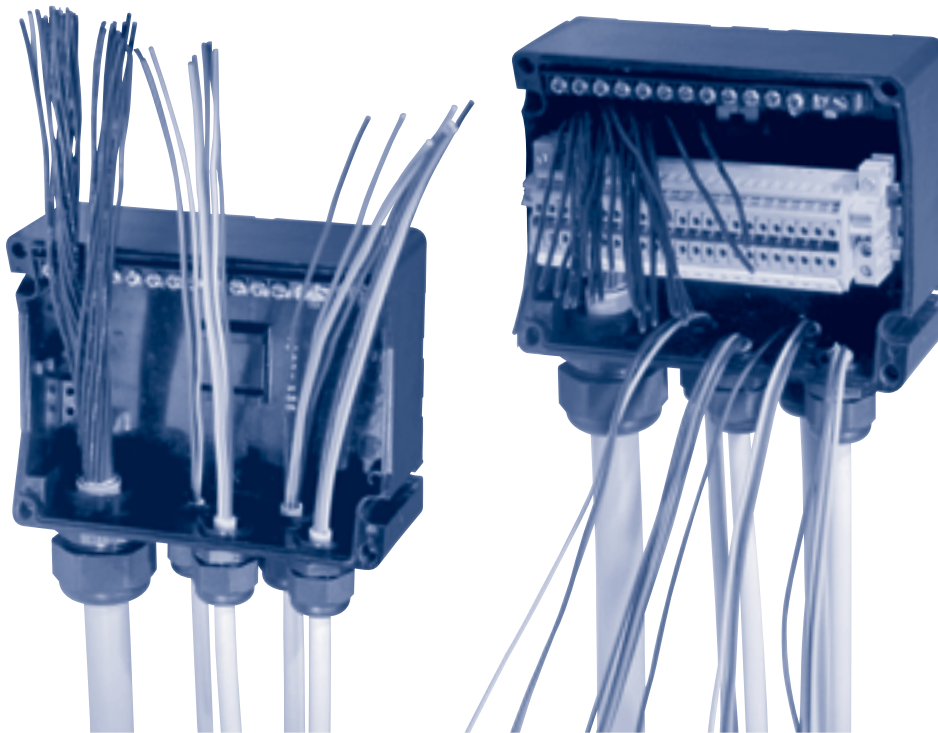
7.32

EX-TERMINAL ENCLOSURES STAINLESS STEEL

7.36

EX-INTERMEDIATE MOTOR TERMINAL BOXES

7.72



Ex-e Terminal and Junction boxes

Apparatus which do not create arcing or sparking or exceed max. permissible surface temperatures during normal operating conditions can be used in accordance with the European standard EN 60079-7 - "Ex-e" in hazardous areas of Zone 1, 2, 21 and 22.

All CEAG junction- and terminal boxes are manufactured according to this standard.

Unused cable entry holes are to be closed using either a certified screw or blanking plug. Terminal boxes can be subsequently re-fitted or upgraded with certified cable glands according to national regulations and the manufacturers recommendations.

The requirements on the EMC terminal boxes for use in the instrumentation and controlling fields are met with our metal and interior coated housings. The coating in combination with the affordable cable entries shield off the sensible instrumentation areas against unwanted external radiation fields.

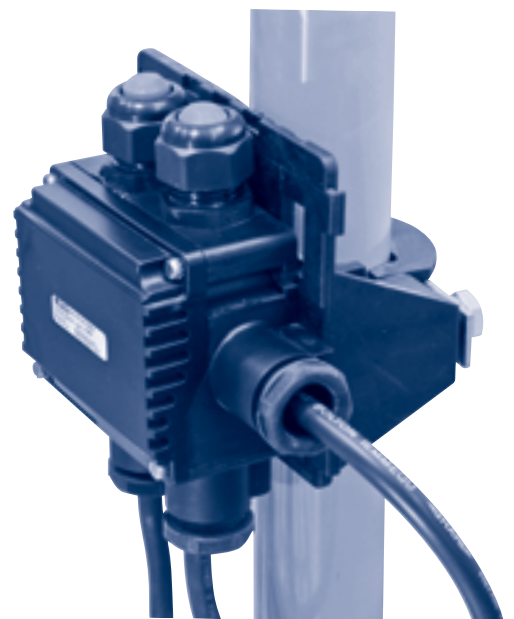
Connection or terminal boxes of the increased safety standard, which are used in nearly every country in the world are in comparison to the flame-proof encapsulated version, much cheaper and are generally much easier to install.

User-friendly technology and cost saving installation

Large terminal compartment allows an easy installation or retrofitting of wiring. Cost-saving terminal arrangements according to the customer's specification speed up the total installation time.

The innovative clip-on mounting system has in conjunction with the special designed apparatus the advantage of being a cost reducer.

Installation without a hot work permit! Using the clip-on mounting frames for the installation on walls, trellises and pipes you save time. Simply plugged! In combination with the new connection friendly apparatus you will find that the installation is now time saving and therefore saving you money.



Various solutions for your individual installation tasks

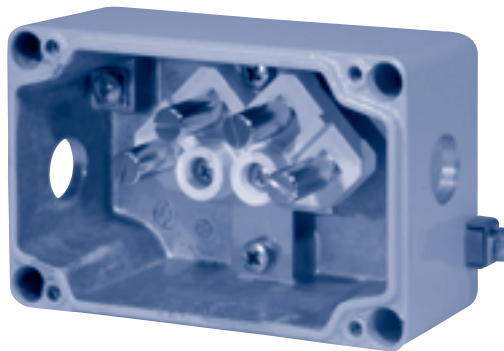
Terminal boxes made of moulded plastic with type of protection Ex-e are the most economic solution for wiring tasks. Lightweight design, corrosion resistance as well as wide thermal range are only a few of the advantages.



Light metal termination boxes combines light weight with heavy duty enclosure material. External earth connectors as well as metal cable glands directly screwed into the wall material offers some advantages using armoured cables.

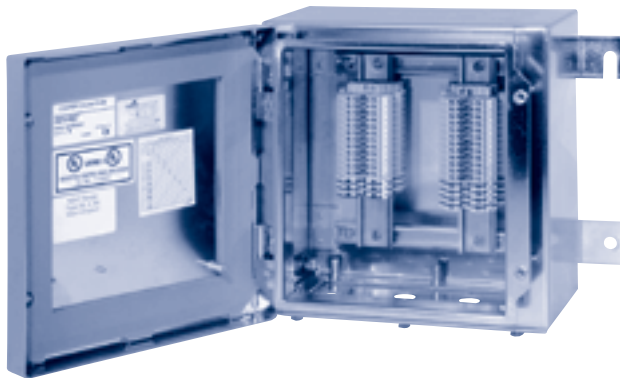
High chemical resistance of the housing is ensured by the use of impact-resistant plastic powder coating.

Covered screws and all outside and inside metallic parts are made of stainless steel.



The robust design of the stainless steel terminal enclosures provides a high degree of safety for offshore applications and in places where particularly adverse chemical, mechanical and climatic operating conditions prevail within the hazardous area.

Various terminal configuration as well as gland plates pre-manufactured according to the customer's requirements offers more flexibility for instrumentation and control installations using the Ex-e and Ex-i technologies.



All CEAG terminal enclosures will fulfil the latest requirement on testing according to international standards.

Beside the ATEX certification tests a lot of other certification procedures have to be run through before the product leaves the factory.

Additional type approvals from UL, GOST or Nepsi allows a world wide use.



E X - J U N C T I O N B O X

Plastic version for Zone 1 and Zone 21

The robust junction boxes made of plastic and light alloy are featured by their friendly mounting and installation capability and their design. They are fitted with pillar terminals for cable of up to 6 mm².

The practical orientated housing form allows for a problem-free access to the connection terminals for installation.

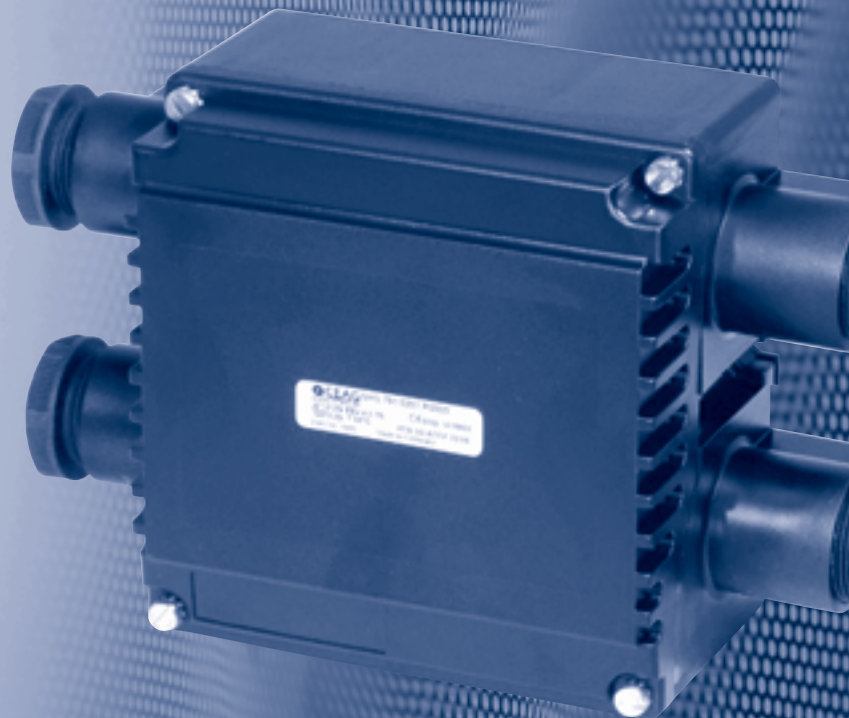
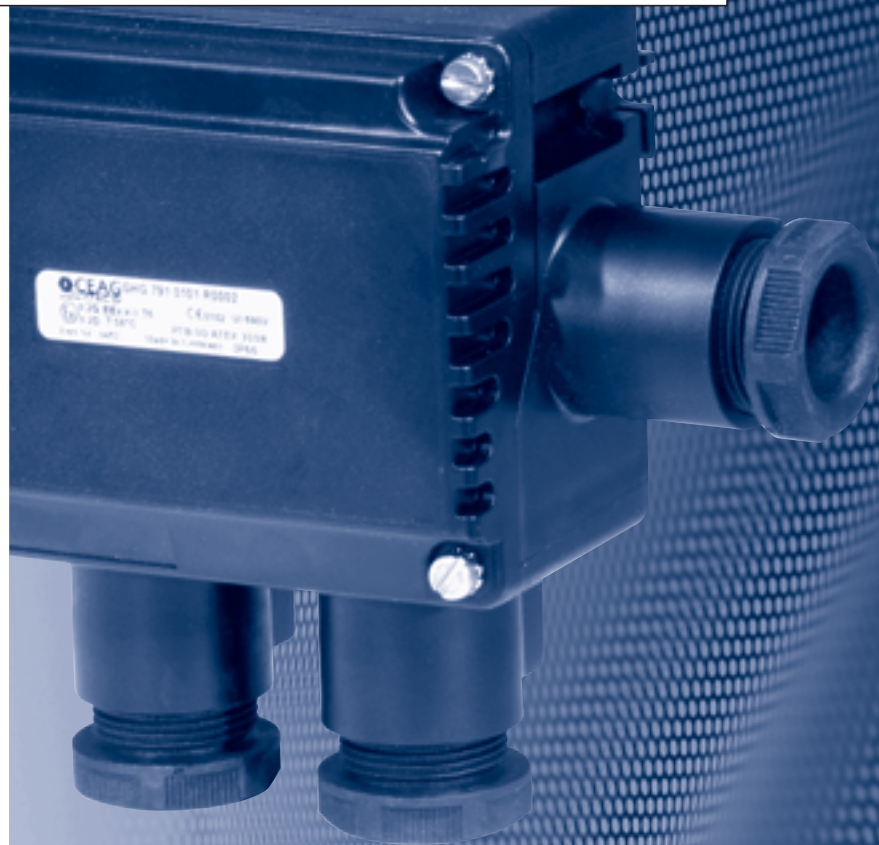
With the CEAG mounting system, the plastic junction boxes are economical in their use for mounting on walls, trellis and pipes. With wire and cable entries in the sizes M25 or M32 for Ø 8 – 17 mm or Ø 12 – 21 mm respectively, all requirements for the modern day installation technology are fulfilled.

For cable with armoring there are junction boxes available with internal metal clamps or light alloy versions allowing for screw joints. For the wire and cable entries that are not used there are certified blanking plugs supplied with the junction box.

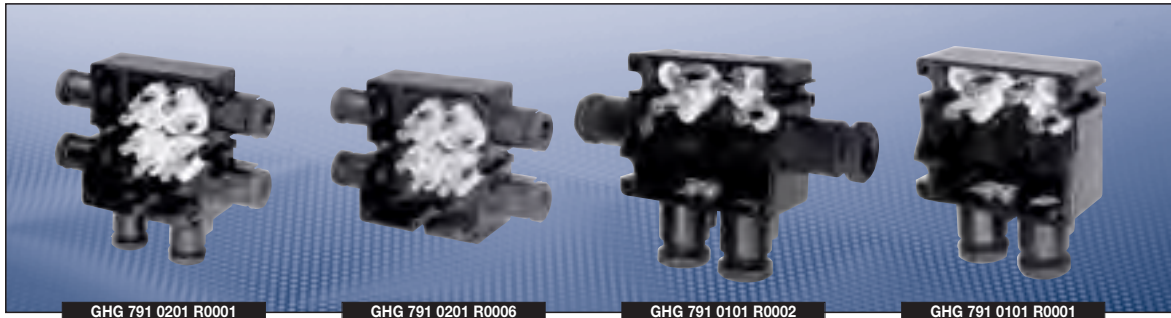
To enable a high chemical resistance of the light alloy junction boxes, these have been given an impact resistant plastic powder coating.

The cover screws and all other external metal parts are made of stainless steel (AISI 316L).

International approvals



- Decisive cost reduction with the CEAG mounting system
- Free accessible connection terminals
- Safety standard IP66
- Version for metal entries available



Technical data

GHG 791 01 up to 6 terminals | GHG 791 02 up to 6 terminals

Marking to 94/9/EC	Ⓔ II 2 G Ex dem ia II, IIC / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3108
IECEX certification of conformity	IECEX BK1 07.0034
Marking accd. to IECEx	Ex e II T6 / Ex ia IIC T6 Ex tD A21 IP66 T58 °C
Permissible ambient temperature	-20 °C to +40 °C / -55 °C to +40 °C (option)
Rated voltage	690 V / 550 V ¹⁾
Rated current	depends on terminal cross section
Connecting terminals	max. 4 x 4 mm ² /PE 4 x 2.5 mm ² (multi-wire) max. 2 x 6 mm ² /PE 4 x 4 mm ² (solid-wire) or 2 x 6 mm ² + 1 x 2.5 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Polyamide

GHG 791 01 up to 6 terminals

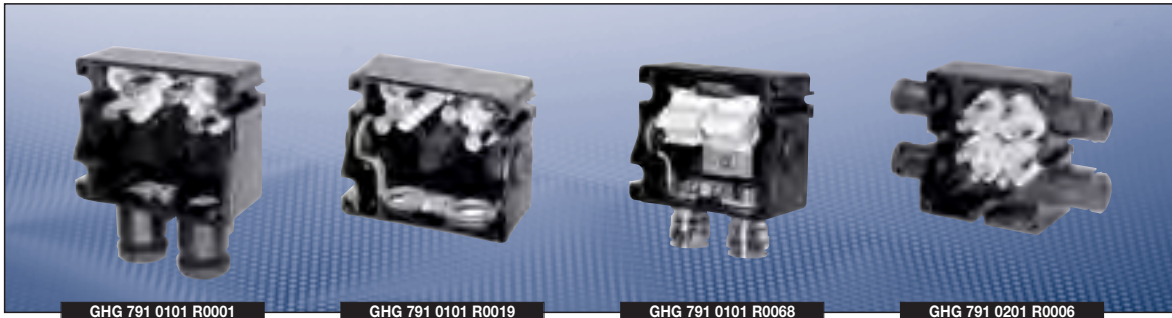
Cable glands/enclosure thread	max. 4 x M25 for cable Ø 10 - 17 mm max. 4 x M20 metal thread
Dimensions (L x W x H)	81.5 x 100 x 61 mm
Weight	approx. 0.3 kg

GHG 791 02 up to 6 terminals

Cable glands/enclosure thread	max. 6 x M25 for cable Ø 10 - 17 mm max. 6 x M32 for cable Ø 12 - 21 mm max. 6 x M20 metal thread
Dimensions (L x W x H)	117.5 x 113.5 x 73.5 mm
Weight	approx. 0.5 kg

¹⁾ for cage clamp terminals

Ex-junction boxes 791



Ordering details

Design	Cable gland	No. of terminals	Order No.
GHG 791 01 up to 6 terminals			
	2 x M25 for cable Ø 10-17 mm	4 x Ex-e, 1 x PE	GHG 791 0101 R0001
	4 x M25 for cable Ø 10-17 mm incl. 2 x blanking plug M25	4 x Ex-e, 1 x PE	GHG 791 0101 R0002
	4 x M20 metal thread incl. 2 x threaded plug M20	4 x Ex-e, 1 x PE	GHG 791 0101 R0019
	4 x M25 for cable Ø 8-17 mm incl. 2 x blanking plug M25	4 x 4 Ex-e ¹⁾ , 2 x PE	GHG 791 0101 R0069
	4 x M20 metal thread incl. 2 x threaded plug M20	4 x 4 Ex-e ¹⁾ , 2 x PE	GHG 791 0101 R0068
GHG 791 02 up to 6 terminals			
	4 x M25 for cable Ø 10-17 mm incl. 2 x blanking plug M25	6 x Ex-e, 2 x PE	GHG 791 0201 R0006
	4 x M32 for cable Ø 12-21 mm incl. 2 x blanking plug M32	6 x Ex-e, 2 x PE	GHG 791 0201 R0007
	6 x M25 for cable Ø 10-17 mm incl. 4 x blanking plug M25	6 x Ex-e, 2 x PE	GHG 791 0201 R0001
	6 x M32 for cable Ø 12-21 mm incl. 4 x blanking plug M32	6 x Ex-e, 2 x PE	GHG 791 0201 R0002
	6 x M20 metal thread incl. 4 x threaded plug M20	8 x Ex-e, 1 x PE	GHG 791 0201 R0003

Other applications available on request.

¹⁾ Cage clamp terminal

Accessories

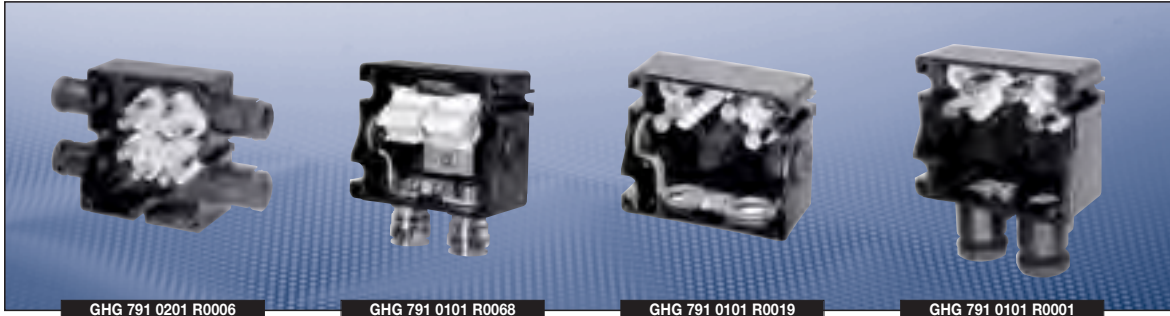
Mounting plate for junction box 791 01

Type	Application	Fixing method	Order No.
Size 1	Wall mounting	screwless mounting	GHG 610 1953 R0101
Size 1	Trellis mounting	screwless mounting	GHG 610 1953 R0103
Size 1	Pipe mounting	screwless mounting	GHG 610 1953 R0102
Protective canopy Size 2	for mounting plate size 1		GHG 610 1955 R0101

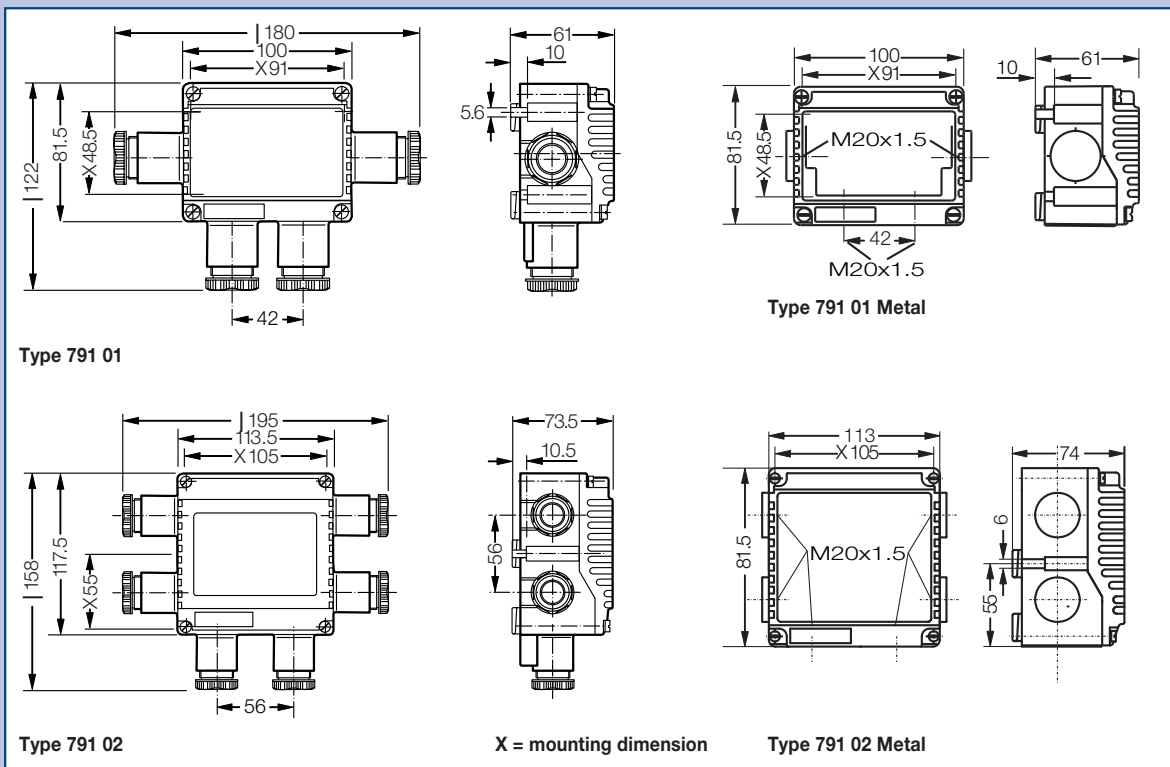
Mounting plate for junction box 791 02

Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwless mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwless mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwless mounting	GHG 610 1953 R0105
Protective canopy Size 2	for mounting plate size 2		GHG 610 1955 R0102

Details for accessories see page 7.78 pp.



Dimension drawing



Dimensions in mm

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E X - J U N C T I O N B O X E S

Light metal design for Zone 1 and Zone 21

The sturdy CEAG junction boxes made of light metal are used to distribute and conduct electricity in areas of Zone 1 and Zone 2 at no risk of explosion. Optionally, mantle terminals with a terminal range of 6 mm² are available for these branching boxes.

Four M20 threaded holes allow variable equipment with various ducts for cables and lines.

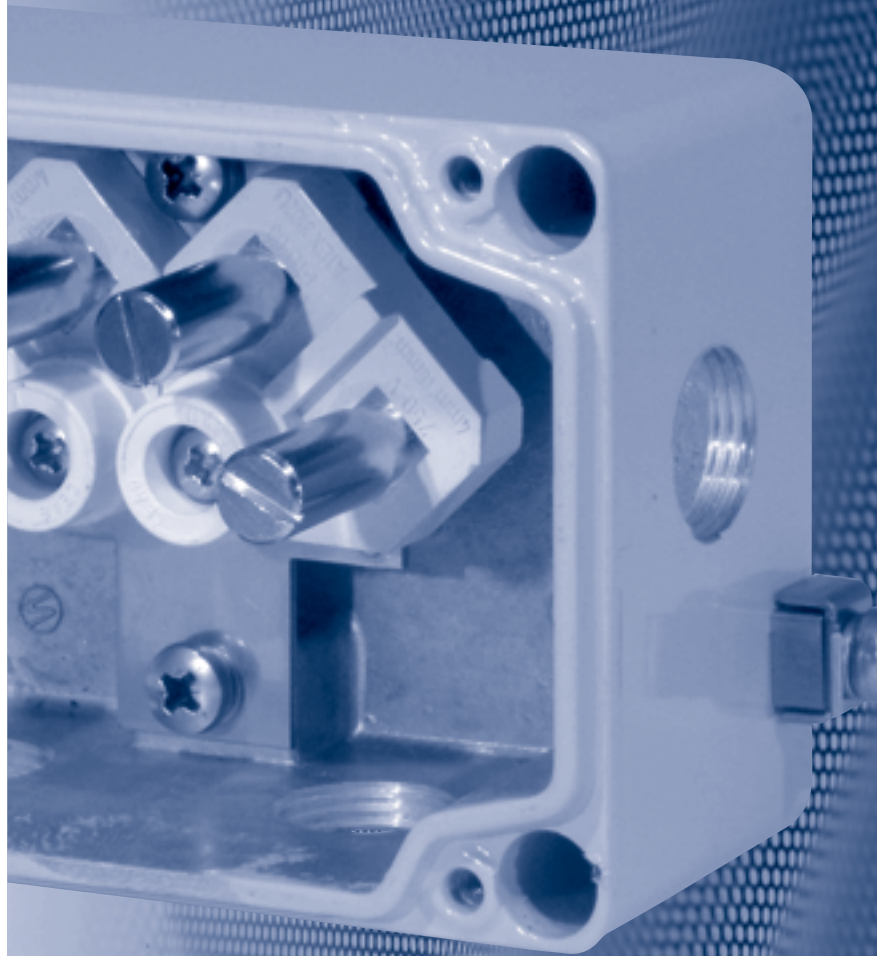
Drilled holes, cable and line ducts, through which no lines are conducted, should be closed with certified threaded stoppers.

High chemical resistance of the housing is ensured by the use of impact-resistant plastic powder coating.

Covered screws and all outside and inside metallic parts are made of stainless steel (AISI 316L).

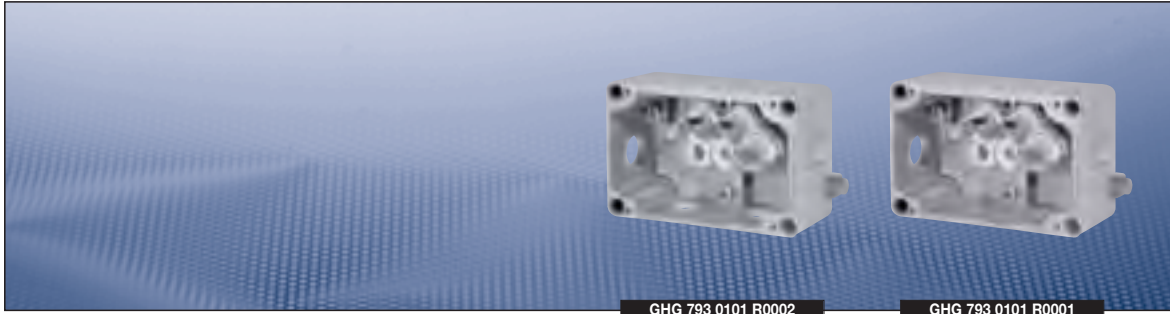
The light metal branching box has an outside earthing connection.

Internationally approved.



Mechanical, chemical and thermal resistance

Impact-resistant plastic powder coating



GHG 793 0101 R0002

GHG 793 0101 R0001

Technical data

Type 793 01 up to 4 terminal

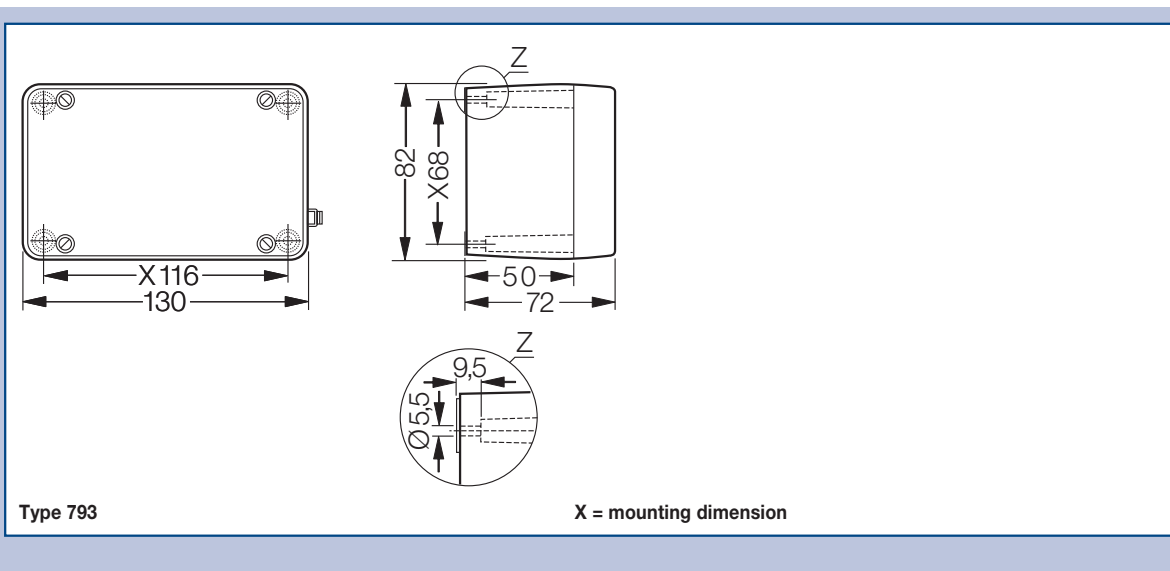
Marking to 94/9/EC	⊕ II 2 G Ex dem ia II, IIC T6 / ⊕ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3108
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	depends on terminal cross section
Connecting terminals	max. 4 x 4 mm ² /PE 4 x 2.5 mm ² (multi-wire) max. 2 x 6 mm ² /PE 4 x 4 mm ² (solid wire) or 2 x 6 mm ² + 1 x 2.5 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66
Cable glands/enclosure drilling	max. 4 x M20 drilling
Dimensions (L x W x H)	82 x 130 x 72 mm
Weight	approx. 0.8 kg
Enclosure material	light alloy die-casting (AlSi)
Enclosure colour	light grey

Ordering details

Design	Cable gland	No. of terminals	Order No.
GHG 793 01 up to 4 terminals			
	2 x M20 drilling	4 x Ex-e, 1 x PE	GHG 793 0101 R0001
	4 x M20 drilling incl. 2 x blanking plug M20	4 x Ex-e, 1 x PE	GHG 793 0101 R0002

Other applications available on request.

Dimension drawing



Dimensions in mm

UNIVERSAL TERMINAL BOXES

Ex-e/Ex-i Technology
plastic version measuring and controlling for Zone 1 and Zone 21

The terminal boxes were designed for measuring and controlling utilization in the Ex-e and Ex-i technology. They are used as a link between the main cable to the control room and the branch cables into the field. In addition to this, they may also be used for the direct connection of actuators and sensors.

The new terminal boxes for instrumentation installations are available in 5 sizes, ranging from 6 to max. 60 connection terminals. The optional interior coating protects your data cable connections against external radiation fields. The choice between screw and tension spring (screwless) terminals for single and multi-wire conductors makes it possible for engineers to select the type of connection most suitable for the particular application.

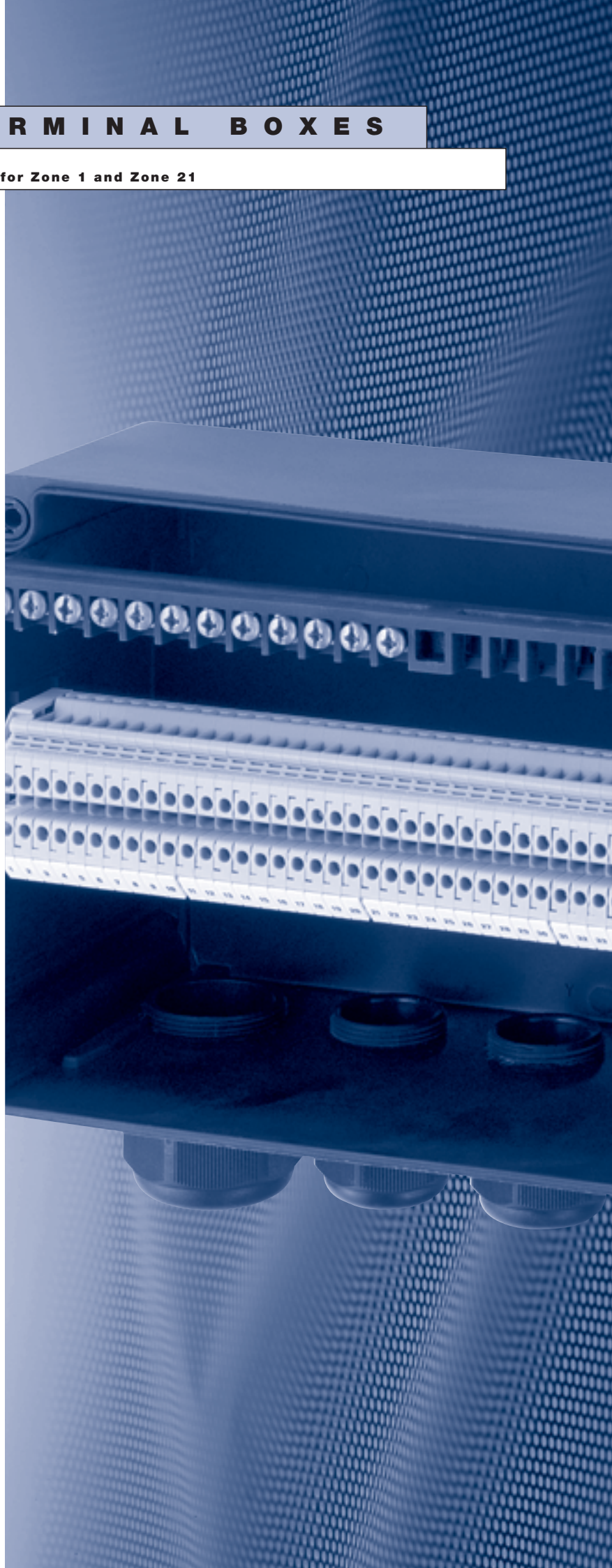
The CEAG installation system provides an economical way of mounting the terminal boxes on walls, trellis work and pipes. The terminal boxes are suited for the use of single or multiple cable glands.

With CEAG terminal boxes it is possible to apply separate potentials such as screen-grid leads or PE/PA conductors to the plug-in PE rails. The snap-out terminal rails allow a problem-free feeding-in of cables.

The well-proven clip-in flanges in moulded plastic or metal design allow multiple application possibilities. As a result of the optimized design, a large drilling surface was created. This can be fitted with a sufficient number of moulded plastic glands or an equal number of metal glands.

International approvals

- Decisive cost saving with the CEAG installation system
- Safety standard IP66
- Freely accessible connection terminals
- Clip-in flange technique
- Snap-out terminal rails
- Internal coating for EMC-Protection on request



Overview terminal boxes / Plastic version for Zone 1

To make it easier for you to be able to choose a terminal or junction box, you will find in table-form all the basic data that is required below. Using the table below you can choose and configure your terminal boxes.

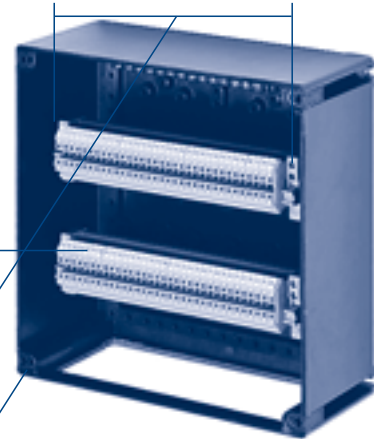
Using the maximum drill surface and the interference diameter of the wire and cable entries tables plus the number of terminals you require, you can choose the right terminal box for your application.

The maximum number of terminals derives from the rated current of the terminal. If the load per terminal lies below the rated current, then the maximum number of terminals for the terminal rail can be used.

The terminal boxes can also be equipped with (when requested) brass flanges and external earthing connectors.

Maximum number of terminals acc. to certification

Type	Terminal cross section in mm ²						
	2,5	4	6	10	16	25	35
GHG 791 01	6	6	–	–	–	–	–
GHG 791 02	12	10	7	–	–	–	–
GHG 731 11	16	14	10	8	8	–	–
GHG 731 12	24	24	18	18	14	–	–
GHG 721 00	26	22	17	13	11	–	–
GHG 721 10	48	40	30	24	20	–	–
GHG 744 01	40	33	25	20	17	17	–
GHG 745 02	2 x 41	2 x 34	2 x 26	2 x 20	17	17	14
GHG 746 03	2 x 94	2 x 78	2 x 59	2 x 47	40	40	32
GHG 749 04	2 x 148	2 x 124	2 x 94	2 x 75	63	63	51



Terminal rails

Type	Rail Length
GHG 791 01	40 mm
GHG 791 02	95 mm
GHG 731 11	107 mm
GHG 731 12	169 mm
GHG 721 00	140 mm
GHG 721 10	262 mm
GHG 744 01	230 mm
GHG 745 02	2 x 235 mm
GHG 746 03	2 x 510 mm
GHG 749 04	2 x 795 mm

Dimensions

Type	Width	x	Length	x	Height
GHG 791 01	100 mm	x	81 mm	x	61 mm
GHG 791 02	113 mm	x	117 mm	x	73 mm
GHG 731 11	120 mm	x	140 mm	x	95 mm
GHG 731 12	182 mm	x	140 mm	x	95 mm
GHG 721 00	165 mm	x	165 mm	x	131 mm
GHG 721 10	285 mm	x	165 mm	x	143 mm
GHG 744 01	271 mm	x	134 mm	x	136 mm
GHG 745 02	271 mm	x	271 mm	x	136 mm
GHG 746 03	544 mm	x	271 mm	x	136 mm
GHG 749 04	817 mm	x	271 mm	x	136 mm

Space required for wire and cable entries

Type	Interference	
	Plastic	Metal
M12	Ø 19 mm	Ø 21 mm
M16	Ø 25 mm	Ø 21 mm
M20	Ø 31 mm	Ø 26,5 mm
M25	Ø 37 mm	Ø 33 mm
M32	Ø 46 mm	Ø 45,1 mm
M40	Ø 56 mm	Ø 53 mm
M50	Ø 68 mm	Ø 60,5 mm
M63	Ø 84 mm	Ø 80 mm

max. drill surface

Type	Width x Height
GHG 791 01	80 mm x 45 mm
GHG 791 02	93 mm x 57 mm
GHG 731 11	95 mm x 75 mm
GHG 731 12	144 mm x 75 mm
GHG 721 00	132 mm x 91 mm
GHG 721 10	252 mm x 95 mm
GHG 744 01	238 mm x 134 mm
GHG 745 02	238 mm x 134 mm
GHG 746 03 (2x)	238 mm x 134 mm
GHG 749 04 (3x)	238 mm x 134 mm
Flange 1	70,5 mm x 48,5 mm
Flange 2	204 mm x 72,5 mm

Ex-e/Ex-i terminal box



Technical data

GHG 791 01 up to 4 terminals | GHG 791 02 up to 12 terminals

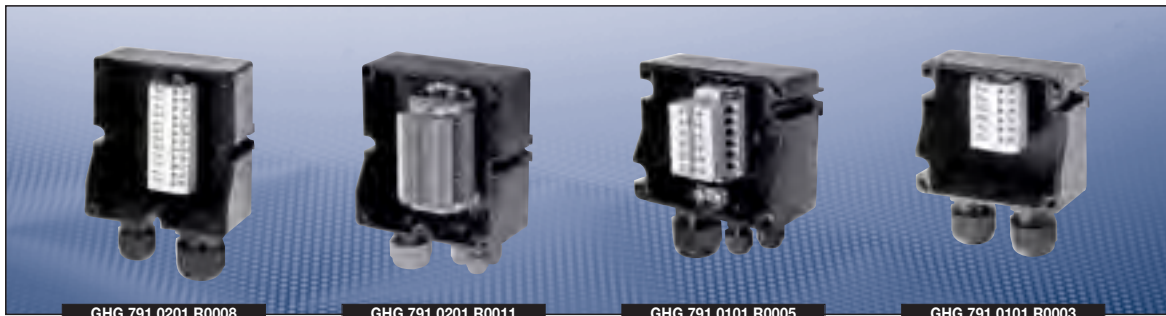
Marking to 94/9/EC	Ⓔ II 2 G Ex dem ia II, IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3108
IECEX certificate of conformity	IECEX BK1 07.0034
Marking accd. to IECEX	Ex e II T6 / Ex ia IIC T6 Ex tD A21 IP66 T58 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +40 °C (option)
Rated voltage	690 V
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Polyamide
Enclosure colour	black

GHG 791 01 up to 6 terminals

Rated current	max. 30 A
Connecting terminals	up to 4 mm ²
Cable glands/enclosure drilling	max. 2 x M25 or 1 x M25 + 2 x M12
Dimensions (L x W x H)	81.5 x 100 x 61 mm
Weight	approx. 0.3 kg

GHG 791 02 up to 12 terminals

Rated current	max. 39 A
Connecting terminals	up to 6 mm ²
Cable glands/enclosure drilling	max. 2 x M25 or 1 x M32 + 1 x M25 or 1 x M25 + 4 x M12
Dimensions (L x W x H)	117.5 x 113.5 x 73.5 mm
Weight	approx. 0.5 kg



Ordering details

Design	Cable gland	No. of terminals	Order No.
Type 791 01 up to 6 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-terminal 2 x 4 mm ²			
Ex-e	1 x M25 for cable Ø 8-17 mm 1 x M25 for 2 cable Ø 4.5-7 mm 1 x blanking plug for Ø 4.5-7 mm	6 x Ex-e 4 x PE/PA	GHG 791 0101 R0003
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M25 for 2 cable Ø 4.5-7 mm 1 x blanking plug for Ø 4.5-7 mm	6 x Ex-i 4 x PE/PA	GHG 791 0101 R0004
Ex-e	1 x M25 for cable Ø 8-17 mm 2 x M12 for cable Ø 4-7 mm 1 x blanking plug for M12	6 x Ex-e 4 x PE/PA	GHG 791 0101 R0005
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M12 for cable Ø 4-7 mm 1 x blanking plug for M12	6 x Ex-i 4 x PE/PA	GHG 791 0101 R0006
Type 791 01 up to 6 terminals assembled with screwless terminals 2 x 2.5 mm ² + PE/PA-terminal 2 x 4 mm ²			
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M25 for 2 cable Ø 4.5-7 mm 1 x blanking plug for Ø 4.5-7 mm	6 x Ex-i 1 x PE/PA	GHG 791 0101 R0008
Ex-e	1 x M25 for cable Ø 8-17 mm 2 x M12 for cable Ø 4-7 mm 1 x blanking plug for M12	6 x Ex-e 1 x PE/PA	GHG 791 0101 R0009
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M12 for cable Ø 4-7 mm 1 x blanking plug for M12	6 x Ex-i 1 x PE/PA	GHG 791 0101 R0010
Type 791 02 up to 6 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-terminal 2 x 4 mm ²			
Ex-e	1 x M25 for cable Ø 8-17 mm 1 x M25 for 2 cable Ø 4.5-7 mm 2 x blanking plug for Ø 4.5-7 mm	12 x Ex-e 4 x PE/PA	GHG 791 0201 R0008
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M25 for 2 cable Ø 4.5-7 mm 2 x blanking plug for Ø 4.5-7 mm	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0009
Ex-e	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-e 4 x PE/PA	GHG 791 0201 R0010
Ex-i	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0011
Type 791 02 up to 6 terminals assembled with screwless terminals 2 x 2.5 mm ² + PE/PA-terminal 2 x 4 mm ²			
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M32 for 4 cable Ø 4.5-7 mm 1 x blanking plug for Ø 4.5-7 mm	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0013
Ex-e	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-e 4 x PE/PA	GHG 791 0201 R0014
Ex-i	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0015

Other applications available on request.

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Ex-e/Ex-i terminal box



Accessories

Mounting plate for junction box 791 01

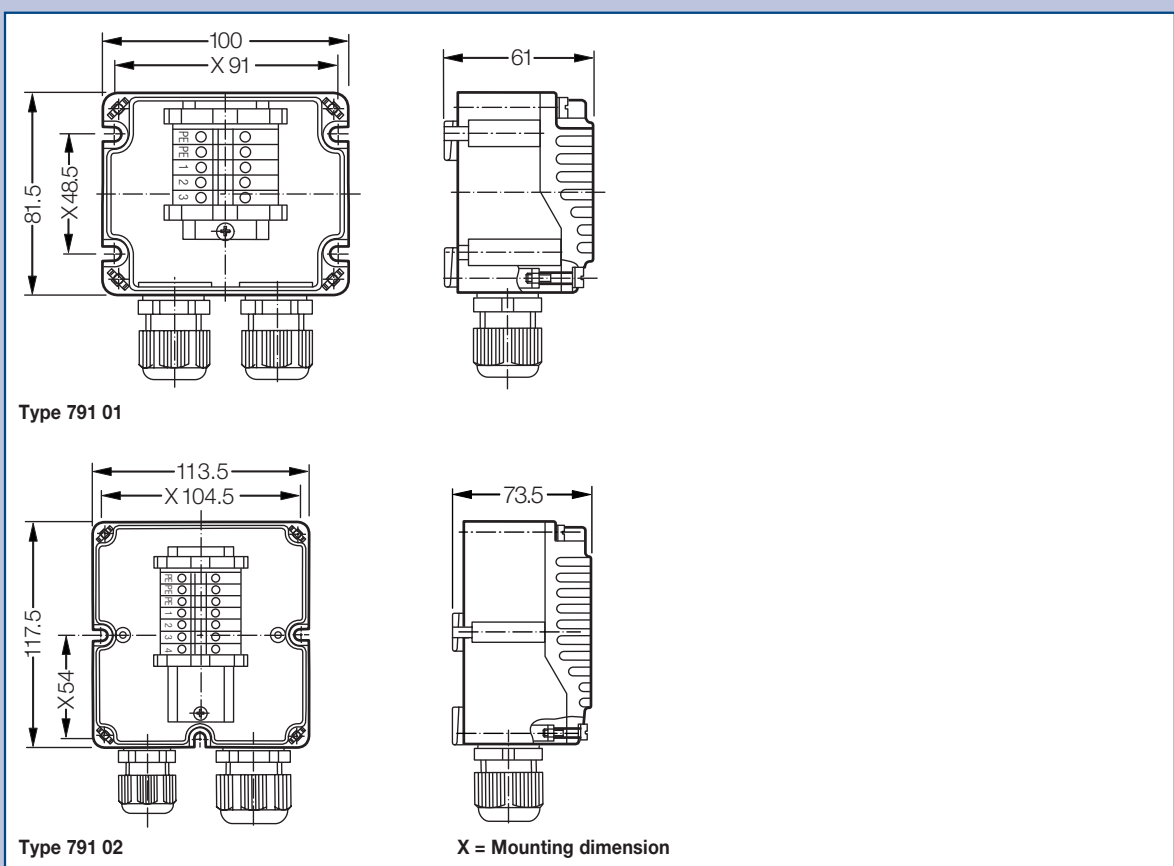
Type	Application	Fixing method	Order No.
Size 1	Wall mounting	screwless mounting	GHG 610 1953 R0101
Size 1	Trellis mounting	screwless mounting	GHG 610 1953 R0103
Size 1	Pipe mounting	screwless mounting	GHG 610 1953 R0102
Protective canopy Size 1	for mounting plate size 1		GHG 610 1955 R0101

Mounting plate for junction box 791 02

Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwless mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwless mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwless mounting	GHG 610 1953 R0105
Protective canopy Size 2	for mounting plate size 2		GHG 610 1955 R0102

Details for accessories see page 7.78 pp.

Dimension drawing



Dimensions in mm



Technical data

GHG 731 11 up to 16 terminals | GHG 731 12 up to 24 terminals

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib [ia/ib] m IIC T6 / Ⓔ II 2 D Ex tD A21 IP65 T 80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certification of conformity	IECEX BKI 05.0004
Marking accd. to IECEX	Ex e ia [ia] IIC T6/T5 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	Depends on terminal mounting
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

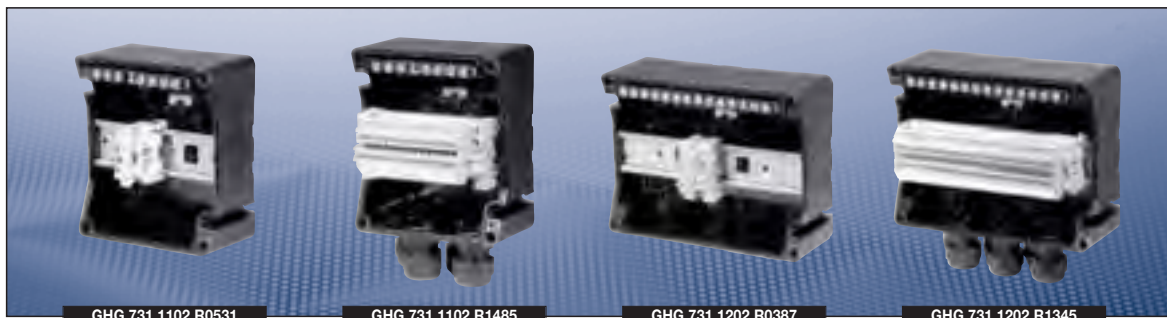
GHG 731 11 up to 16 terminals

Connecting terminals	up to 16 mm ²						
Dimensions (L x W x H)	140 x 120 x 95 mm						
Weight	approx. 0.8 kg						
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50
Max. number up/down	15	8	6	4	2	2	1
Terminal mounting space on the terminal rail	107 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²		
	16	14	10	8	8		

GHG 731 12 up to 24 terminals

Connecting terminals	up to 16 mm ²						
Dimensions (L x W x H)	140 x 182.5 x 95 mm						
Weight	approx. 1.1 kg						
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50
Max. number up/down	24	17	10	6	3	3	2
Length of assembling of the terminal rail	169 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²		
	24	24	18	18	14		

Ex-e/Ex-i terminal box



Ordering details

Design	Cable gland	Terminals	Order No.
Type 731 11 up to 16 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-e	without drilling	1 x Ex-e*/UT 3 N/7 x PE/PA	GHG 731 1102 R0531
Ex-e	without drilling	14 x Ex-e/UT 5 N/7 x PE/PA	GHG 731 1102 R1088
Ex-e	4 x M25	16 x Ex-e/UT 3 N/7 x PE/PA	GHG 731 1102 R1485
Type 731 12 up to 24 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-e	without drilling	1 x Ex-e*/UT 3 N/14 x PE/PA	GHG 731 1202 R0387
Ex-e	without drilling	24 x Ex-e/UT 5 N/14 x PE/PA	GHG 731 1202 R0976
Ex-e	4 x M25	28 x Ex-e/UT 3 N/14 x PE/PA	GHG 731 1202 R1345

* according to type examination certificate individual extensible

Accessories

Mounting plate for junction box 731 11

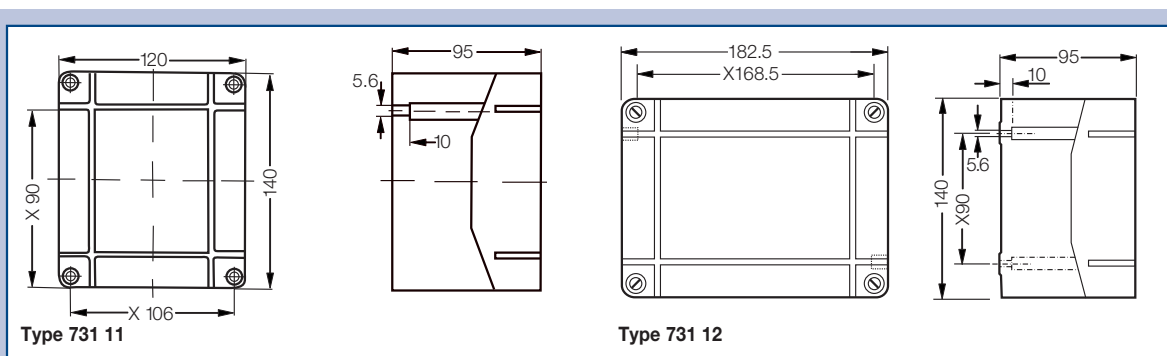
Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwless mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwless mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwless mounting	GHG 610 1953 R0105
Protective canopy Size 2	for mounting plate size 2		GHG 610 1955 R0102

Mounting plate for junction box 731 12

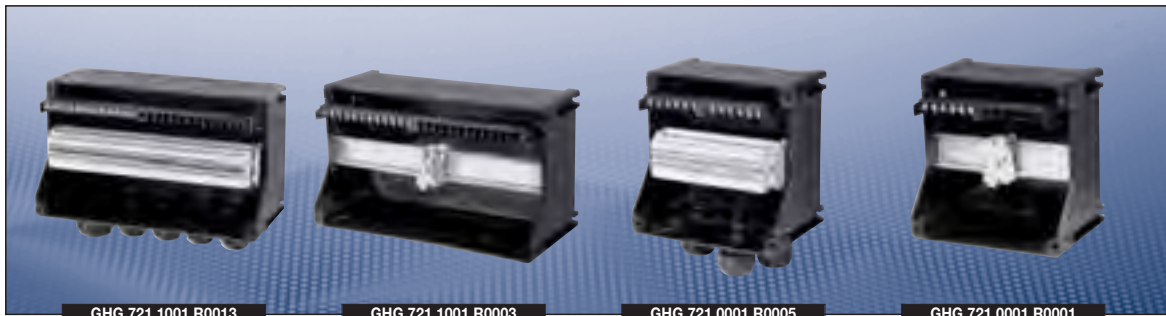
Type	Application	Fixing method	Order No.
Size 2A	Wall mounting	screwless mounting	GHG 610 1953 R0107
Size 2A	Trellis mounting	screwless mounting	GHG 610 1953 R0109
Size 2A	Pipe mounting	screwless mounting	GHG 610 1953 R0108
Protective canopy Size 2A	for mounting plate size 2A		GHG 610 1955 R0103

Details for accessories see page 7.78 pp.

Dimension drawing



Dimensions in mm



Technical data

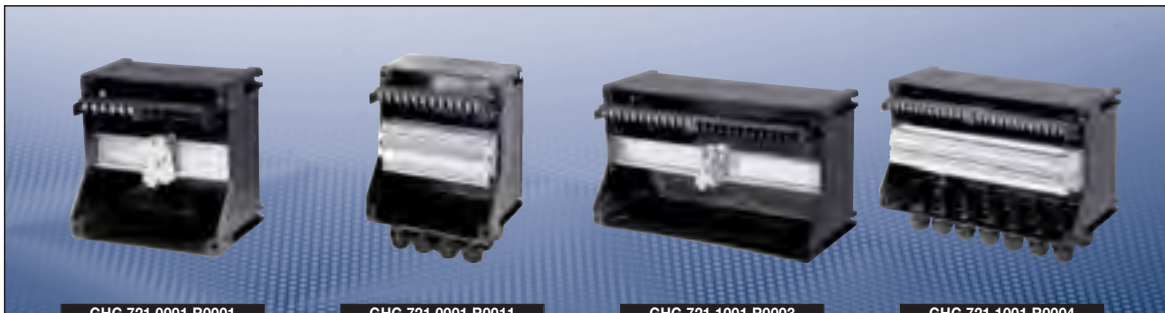
GHG 721 00 up to 26 terminals | GHG 721 10 up to 48 terminals	
Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib [ja/ib] m IIC T4 / Ⓔ II 2 D Ex tD A21 IP66 T 80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certification of conformity	IECEX BK1 05.0005
Marking accd. to IECEX	Ex e ia/ib [ja/ib] IIC T4/T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	Depends on terminal mounting
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

GHG 721 00 up to 26 terminals								
Connecting terminals	up to 16 mm ²							
Dimensions (L x W x H)	165 x 165 x 131.5 mm							
Weight	approx. 1.1 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	35	20	12	11	6	4	2	2
Max. number flange plastic	11	6	4	3	2	1	1	-
Max. number flange metal	-	-	3	2	1	-	-	-
Terminal mounting space on the terminal rail	140 mm							
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²			
	26	22	17	13	11			

GHG 721 10 up to 48 terminals								
Connecting terminals	up to 16 mm ²							
Dimensions (L x W x H)	165 x 285 x 143 mm							
Weight	approx. 1.7 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	75	42	32	21	11	8	4	3
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	-	-	12	9	5	3	3	2
Terminal mounting space on the terminal rail	262 mm							
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²			
	48	40	30	24	20			

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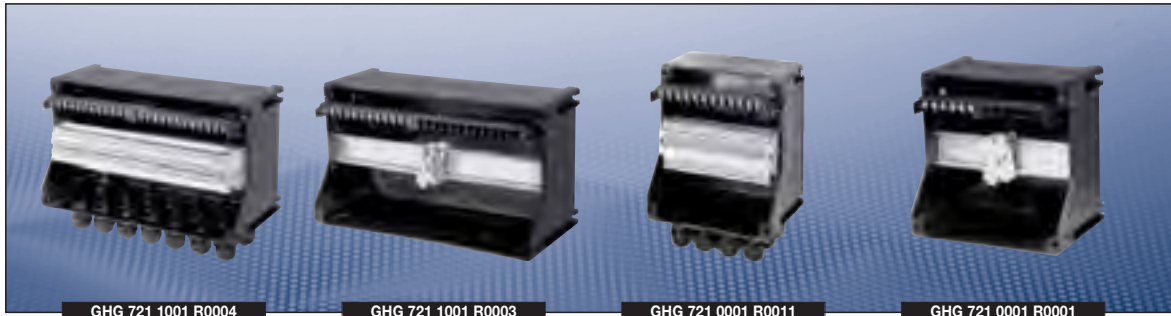
Ex-e/Ex-i terminal box



Ordering details

Design	Cable gland	No. of Terminals	Order No.
Type 721 00 up to 26 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-e	1 x M32 for cable Ø 12-21 mm 3 x M32 for 4 cable Ø 4.5-7 mm	24 x Ex-e 12 x PE/PA	GHG 721 0001 R0005
Ex-i	1 x M32 for cable Ø 12-21 mm 3 x M32 for 4 cable Ø 4.5-7 mm	24 x Ex-i 12 x PE/PA	GHG 721 0001 R0006
Ex-e	1 x M32 for cable Ø 12-21 mm 12 x M20 for cable Ø 5.5-13 mm	24 x Ex-e 12 x PE/PA	GHG 721 0001 R0007
Ex-i	1 x M32 for cable Ø 12-21 mm 12 x M20 for cable Ø 5.5-13 mm	24 x Ex-i 12 x PE/PA	GHG 721 0001 R0008
Type 721 00 up to 26 terminals assembled with screwless terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-i	1 x M32 for cable Ø 12-21 mm 3 x M32 for 4 cable Ø 4.5-7 mm	24 x Ex-i 12 x PE/PA	GHG 721 0001 R0010
Ex-e	1 x M32 for cable Ø 12-21 mm 12 x M20 for cable Ø 5.5-13 mm	24 x Ex-e 12 x PE/PA	GHG 721 0001 R0011
Ex-i	1 x M32 for cable Ø 12-21 mm 12 x M20 for cable Ø 5.5-13 mm	24 x Ex-i 12 x PE/PA	GHG 721 0001 R0012
Type 721 10 up to 48 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-e	without drilling	1 x Ex-e ¹⁾ / 24 x PE	GHG 721 1001 R0003
Type 721 10 up to 48 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-i	1 x M40 for cable Ø 16-28 mm 6 x M32 for 4 cable Ø 4.5-7 mm	48 x Ex-i 24 x PE/PA	GHG 721 1001 R0013
Ex-e	1 x M40 for cable Ø 16-28 mm 24 x M20 for cable Ø 5.5-13 mm	48 x Ex-e 24 x PE/PA	GHG 721 1001 R0004
Ex-i	1 x M40 for cable Ø 16-28 mm 24 x M20 for cable Ø 5.5-13 mm	48 x Ex-i 24 x PE/PA	GHG 721 1001 R0015
Type 721 10 up to 48 terminals assembled with screwless terminals 2 x 2.5 mm ² + PE/PA-rail 2.5 mm ²			
Ex-i	1 x M40 for cable Ø 16-28 mm 6 x M32 for 4 cable Ø 4.5-7 mm	48 x Ex-i 24 x PE/PA	GHG 721 1001 R0017
Ex-e	1 x M40 for cable Ø 16-28 mm 24 x M20 for cable Ø 5.5-13 mm	48 x Ex-e 24 x PE/PA	GHG 721 1001 R0018
Ex-i	1 x M40 for cable Ø 16-28 mm 24 x M20 for cable Ø 5.5-13 mm	48 x Ex-i 24 x PE/PA	GHG 721 1001 R0019

¹⁾ according to type examination certificate individual extensible
Other types on request



Accessories

Mounting plate for junction box 721 00

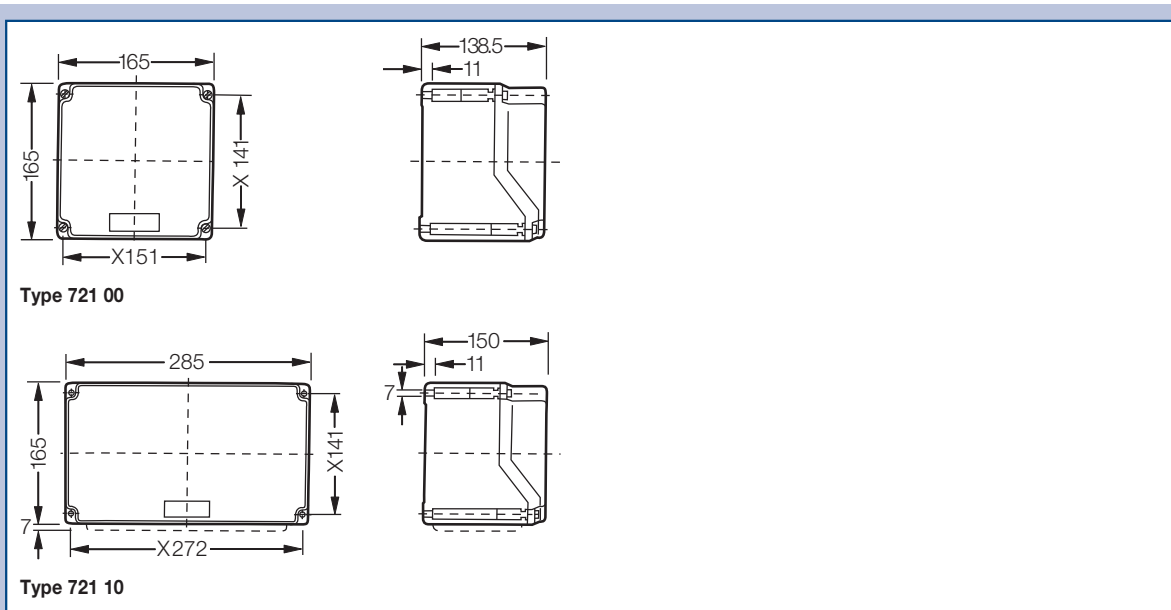
Type	Application	Fixing method	Order No.
Size 2A	Wall mounting	screwless mounting	GHG 610 1953 R0107
Size 2A	Trellis mounting	screwless mounting	GHG 610 1953 R0109
Size 2A	Pipe mounting	screwless mounting	GHG 610 1953 R0108
Protective canopy Size 2A	for mounting plate size 2A		GHG 610 1955 R0103

Mounting plate for junction box 721 10

Type	Application	Fixing method	Order No.
Size 3	Wall mounting	screwless mounting	GHG 610 1953 R0107
Size 3	Trellis mounting	screwless mounting	GHG 610 1953 R0109
Size 3	Pipe mounting	screwless mounting	GHG 610 1953 R0108
Protective canopy Size 3	for mounting plate size 3		GHG 610 1955 R0104

Details for accessories see page 7.78

Dimension drawing



Dimensions in mm

Ex-e/Ex-i terminal box



Technical data

GHG 744 01 up to 40 terminals | GHG 745 02 up to 82 terminals

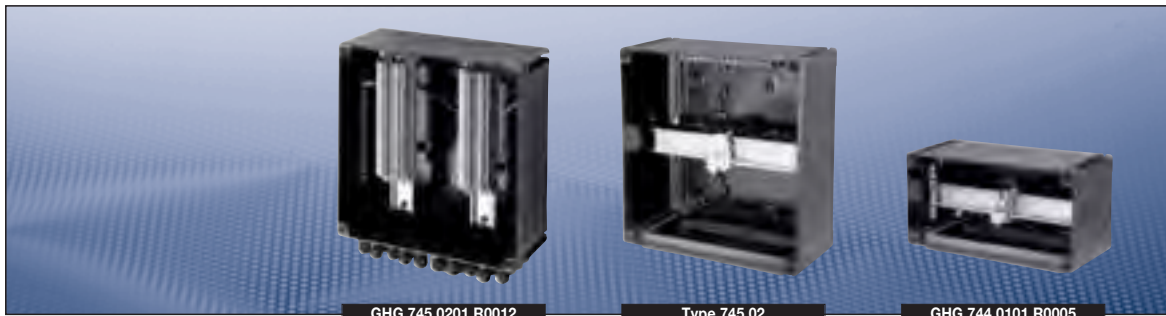
Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib [ia/ib] m IIC T4 / Ⓔ II 2 D Ex tD A21 IP66 T 80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certification of conformity	IECEX BKI 05.0006
Marking accd. to IECEX	Ex ed ia/ib m [ia/ib] IIC T4 – T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	Depends on terminal mounting
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

GHG 744 01 up to 31 terminals

Connecting terminals	up to 25 mm ²							
Dimensions (L x W x H)	271 x 134 x 136 mm							
Weight	approx. 1.5 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	60	36	26	18	10	7	4	3
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	–	–	11	9	5	3	3	2
Terminal mounting space on the terminal rail	1 x 230 mm							
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²	35 mm ²
Max. number of terminals acc. to certification	31	31	24	24	23	15	7	7

GHG 745 02 up to 82 terminals

Connecting terminals	up to 70 mm ²								
Dimensions (L x W x H)	271 x 270 x 36 mm								
Weight	approx. 2.5 kg								
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63	M63
Max. number down	60	36	26	18	10	7	4	3	3
Max. number flange plastic	46	25	20	11	8	4	3	2	2
Max. number flange metal	–	–	11	9	5	3	3	2	2
Terminal mounting space on the terminal rail	2 x 230 mm								
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²	50 mm ²	70 mm ²
Max. number of terminals acc. to certification	38	38	29	29	23	16	15	9	9



Ordering details

Design	Cable gland	No. of Terminals	Order No.
Type 744 01 up to 40 terminals assembled with screw terminals 2 x 4 mm ² + PE-rail 4 mm ²			
Ex-e	1 x plastic flange down without drilling	1 x Ex-e ¹⁾ 7 x PE	GHG 744 0101 R0005

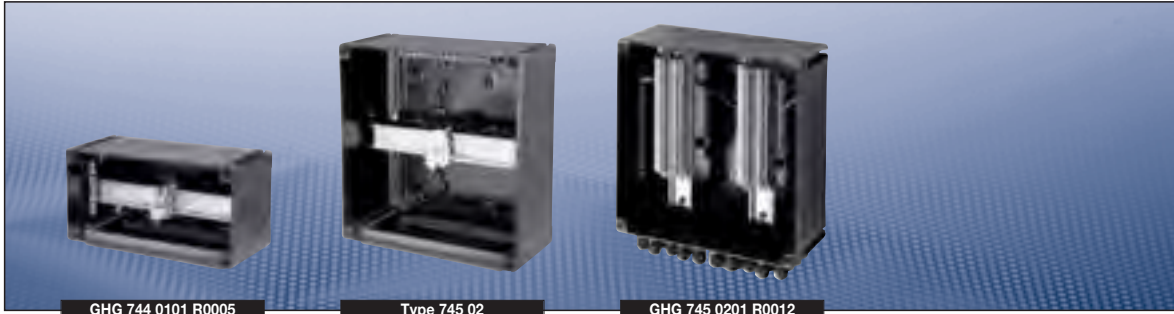
Type 745 02 up to 82 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 4 mm ²			
Ex-e	1 x plastic flange down without drilling	1 x Ex-e ¹⁾ 14 x PE	GHG 745 0201 R0004

Type 745 02 up to 82 terminals assembled with screw terminals 2 x 2.5 mm ² + PE/PA-rail 4 mm ²			
Ex-i	1 x M40 for cable Ø 22-35 mm 8 x M32 for 4 cable Ø 4.5-7 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0012
Ex-e	1 x M40 for cable Ø 22-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0013
Ex-i	1 x M40 for cable Ø 22-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0014
Ex-e	1 x M40 for cable Ø 22-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0015
Ex-i	1 x M40 for cable Ø 22-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0021

Type 745 02 up to 82 terminals assembled with screwless terminals 2 x 2.5 mm ² + PE/PA-rail 4 mm ²			
Ex-i	1 x M40 for cable Ø 22-35 mm 8 x M32 for 4 cable Ø 4.5-7 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0016
Ex-e	1 x M40 for cable Ø 22-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0017
Ex-i	1 x M40 for cable Ø 22-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0018
Ex-e	1 x M40 for cable Ø 22-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0020
Ex-i	1 x M40 for cable Ø 22-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0022

¹⁾ according to type examination certificate individual extensible
Other types on request

Ex-e/Ex-i terminal box



GHG 744 0101 R0005

Type 745 02

GHG 745 0201 R0012

Accessories

Mounting plate for junction box 744 01

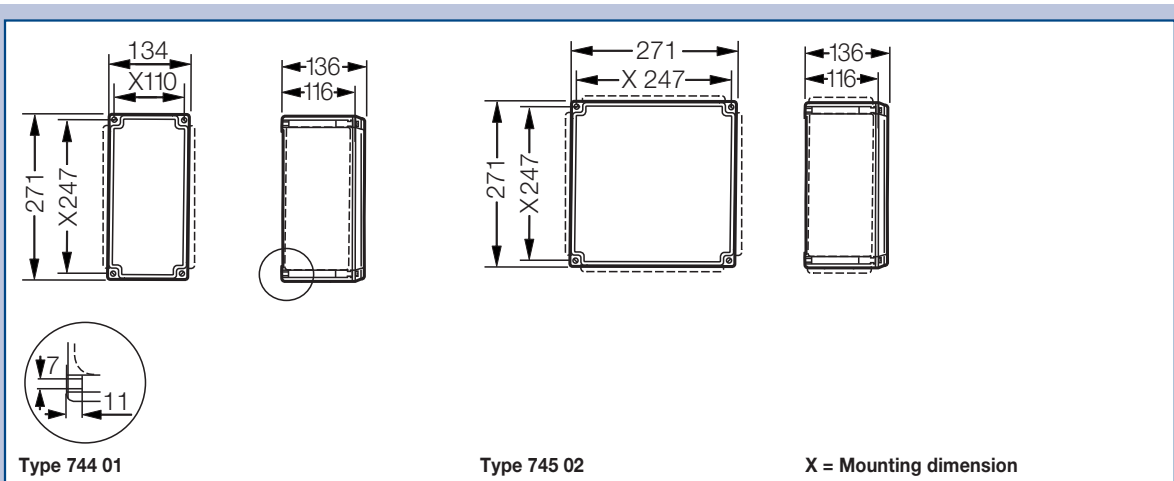
Type	Application	Fixing method	Order No.
Size 3	Wall mounting	screw mounting	GHG 610 1953 R0107
Size 3	Trellis mounting	screw mounting	GHG 610 1953 R0109
Size 3	Pipe mounting	screw mounting	GHG 610 1953 R0108
Protective canopy Size 3	for mounting plate size 3		GHG 610 1955 R0104

Mounting plate for junction box 745 02

Type	Application	Fixing method	Order No.
Size 3	Pipe mounting	screw mounting on 2 plates	GHG 610 1953 R0108
Protective canopy Size 3	for mounting plate size 3		GHG 610 1955 R0104

Details for accessories see page 7.78 pp.

Dimension drawing



Dimensions in mm



Type 749 04

Type 746 03

Technical data

GHG 746 03 up to 188 terminals | GHG 749 04 up to 296 terminals

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/lb [ia/lb] m IIC T4 / Ⓔ II 2 D Ex tD A21 IP66 T 80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certificate of conformity	IECEX BK1 05.0006
Marking accd. to IECEX	Ex ed ia/lb m [ia/lb] IIC T4 – T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	Depends on terminal mounting
Insulation class	I
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

GHG 746 03 up to 188 terminals

Connecting terminals	300 mm ²							
Dimensions (L x W x H)	544 x 271 x 136 mm							
Weight	approx. 4.2 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	120	72	52	36	20	14	8	6
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	-	-	11	9	5	3	3	2
Terminal mounting space on the terminal rail	horiz. 2 x 510 mm / vert. 4 x 230 mm							
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²	
Max. number of terminals acc. to certification	2 x 94	2 x 78	2 x 59	2 x 47	40	40	32	

GHG 749 04 up to 296 terminals

Connecting terminals	up to 240 mm ²							
Dimensions (L x W x H)	817 x 271 x 136 mm							
Weight	approx. 5.8 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	180	108	78	54	30	21	12	9
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	-	-	11	9	5	3	3	2
Terminal mounting space on the terminal rail	horiz. 2 x 795 mm / vert. 6 x 230 mm							
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²	
Max. number of terminals acc. to certification	2 x 148	2 x 124	2 x 94	2 x 75	63	63	51	

Ex-e/Ex-i terminal box



Type 746 03

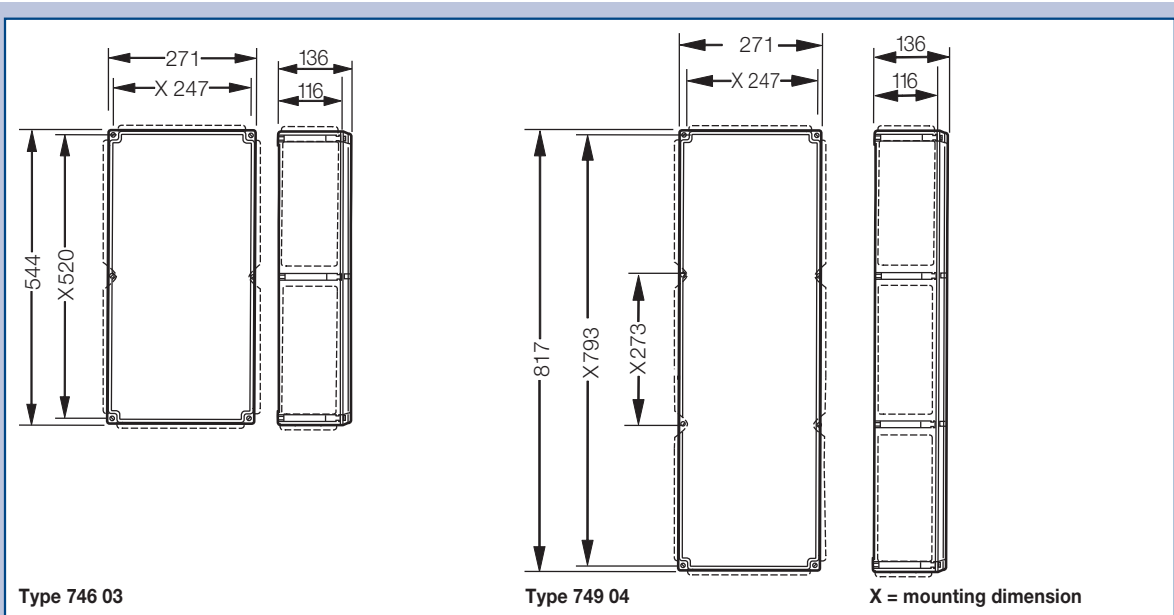
Type 749 04

Ordering details

Design	Cable gland	No. of Terminals	Order No.
Type 746 03 up to 188 terminals assembled with screw terminals 2 x 4 mm ² + PE-rail 4 mm ²			
Ex-e	2 x plastic flange down without drilling	1 x Ex-e ¹⁾ 2 x 14 x PE	GHG 746 0301 R0002
Type 749 04 up to 296 terminals assembled with screw terminals 2 x 2.5 mm ² + PE-rail 4 mm ²			
Ex-e	3 x plastic flange down without drilling	1 x Ex-e ¹⁾ 3 x 14 x PE	GHG 749 0401 R0001

¹⁾ according to type examination certificate individual extensible
Other types on request

Dimension drawing



Type 746 03

Type 749 04

X = mounting dimension

Dimensions in mm

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E X - T E R M I N A L B O X E S

Light alloy metal design for Zone 1 and Zone 21

The new sturdy CEAG terminal boxes made of a light alloy metal are used to distribute and conduct electricity in hazardous explosive areas of the Zones 1, 2, 21 and 22. Optionally, all of the modular terminals up to 35 mm² pursuant to EN 60079-7 are available in these terminal boxes.

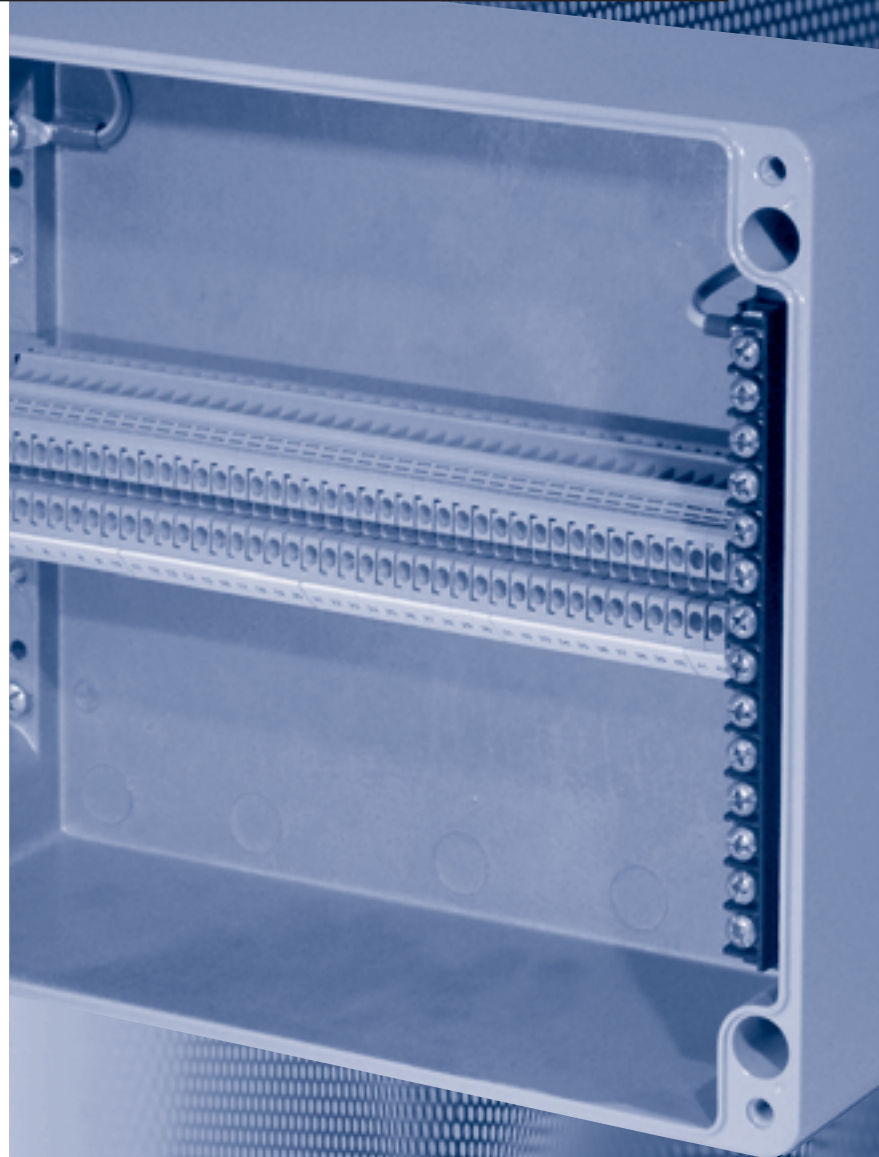
Variable equipment with various cable and line ducts pursuant to customer specification can be realised with the terminal boxes made of light alloy metal.

Drilled holes, cable and line ducts, through which no lines are conducted, should be closed with certified threaded stoppers. High chemical resistance of the housing is ensured by the use of impact-resistant plastic powder coating.

Covered screws and all outside and inside metallic parts are made of stainless steel.

The terminal boxes made of light metal have an outside earthing connection.

Internationally approved.



- Mechanical, chemical and thermal resistance
- Plastic powder coating
- Can be equipped individually, Impact-resistant

To make the choice of the right terminal boxes or branching boxes for your application, the tables on this page contain the basic data. You can use these tables to identify and configure your terminal boxes.

the number can be interpreted on the maximum length of the terminal strip that can be equipped.

In the table of the maximum number of terminals, the information is based on the rated current of the terminal concerned. If the current per terminal is below the rated current,

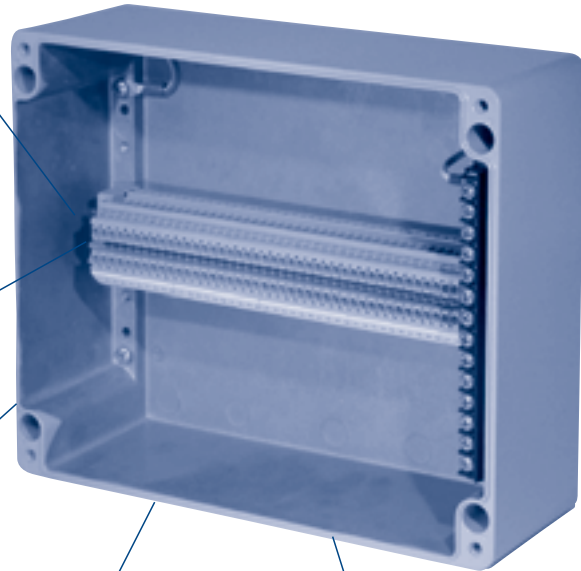
On the basis of the maximum drilled and the faulty circuit diameter of the cable and line duct, you can select the relevant terminal box by means of the number of ducts that you need.

Maximum number of terminals acc. to certification

Type	Terminal cross-section Ø in mm ²						
	2.5	4	6	10	16	25	35
GHG 793 0101	6	5	4	–	–	–	–
GHG 723 0001	33	27	20	16	15	–	–
GHG 723 1001	88	72	54	44	40	15	15
GHG 723 2001	136	112	84	68	60	22	22

Terminal rail

Type	Rail length
GHG 793 0101	46 mm
GHG 723 0001	185 mm
GHG 723 1001	2 x 242 mm
GHG 723 2001	2 x 362 mm



Dimensions

Type	Width	x	Length	x	Height
GHG 793 0101	130 mm	x	82 mm	x	72 mm
GHG 723 0001	220 mm	x	120 mm	x	81 mm
GHG 723 1001	280 mm	x	230 mm	x	111 mm
GHG 723 2001	400 mm	x	230 mm	x	111 mm

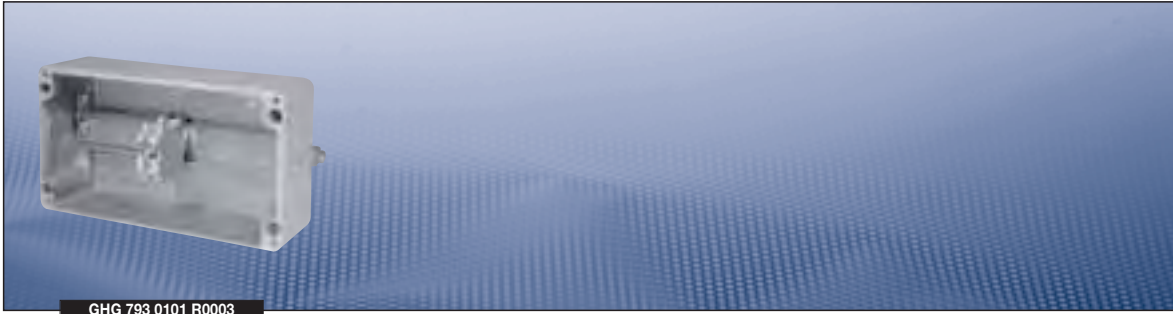
Space required for wire and cable entries

Type	Interference	
	Plastic	Diameter Metal
M12	Ø 19 mm	Ø 21 mm
M16	Ø 25 mm	Ø 21 mm
M20	Ø 31 mm	Ø 26.5 mm
M25	Ø 37 mm	Ø 33 mm
M32	Ø 46 mm	Ø 45.1 mm
M40	Ø 56 mm	Ø 53 mm
M50	Ø 68 mm	Ø 60.5 mm
M63	Ø 84 mm	Ø 80 mm

max. drilled surface

Type	Width x Height
GHG 793 0101	80 mm x 45 mm
GHG 723 0001	180 mm x 53 mm
GHG 723 1001	232 mm x 83 mm
GHG 723 2001	352 mm x 80 mm

Ex-e/Ex-i terminal box



GHG 793 0101 R0003

Technical data

Type 793 01 up to 11 terminals

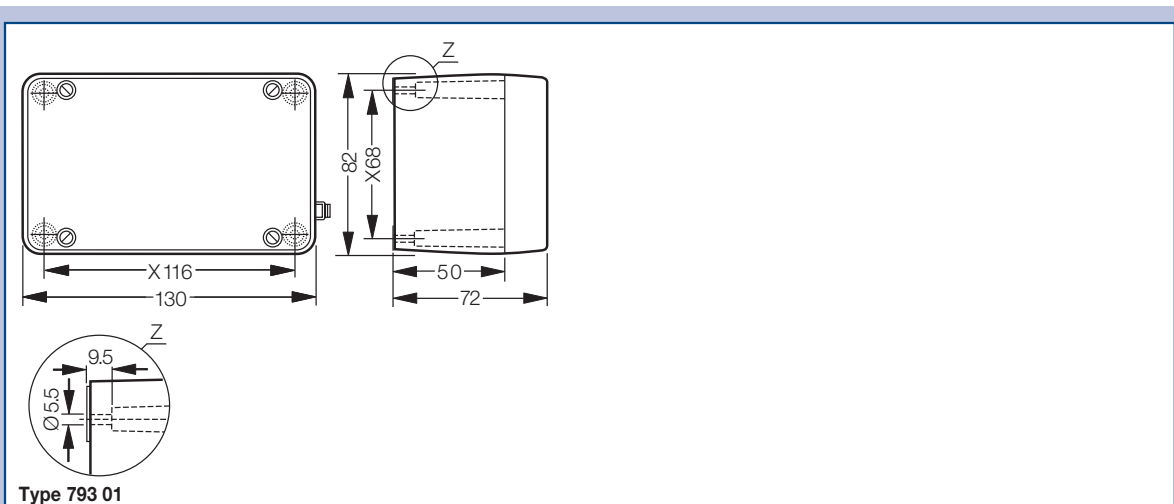
Marking to 94/9/EC	Ⓔ II 2 G Ex dem ia II, IIC T6 / Ⓔ II 2 D A21 IP66 T80 °C						
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)						
EC-Type Examination Certificate	PTB 00 ATEX 3108						
Rated voltage	up to 690 V						
Rated current	depends on terminal mounting						
Degree of EN 60529	IP66						
Enclosure material	light alloy die-casting (AlSi)						
Enclosure colour	light grey						
Terminal cross section	up to 6 mm ²						
Weight	approx. 0.68 kg						
Drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
Max. number down	5	2	2	1	-	-	-
Max. number of terminals acc. to certification	2.5 mm ²		4 mm ²		6 mm ²		
	16		14		10		

Ordering details

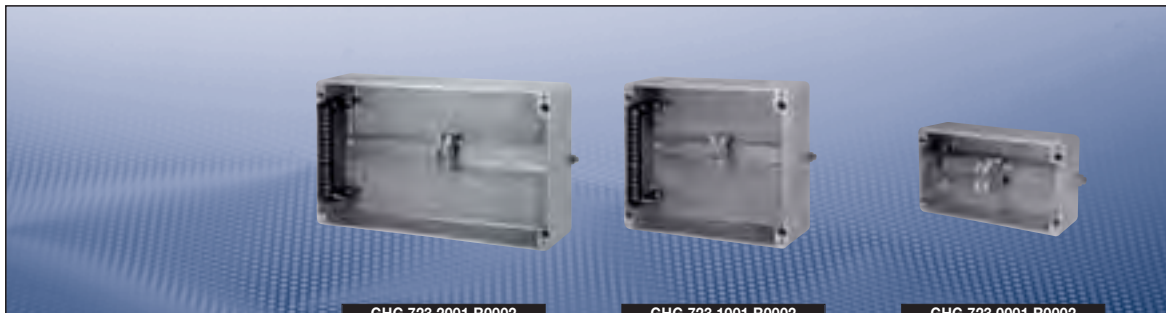
Design	Cable gland	No. of Terminals	Order No.
Typ 793 01 up to 11 terminals with screw terminals 2 x 2.5 mm ² + PE-terminal 2 x 4 mm ²			
Ex-e	without drilling	1 x Ex-e*/1 x PE	GHG 793 0101 R0003

* according to type examination certificate individual open ended

Dimension drawing



Dimensions in mm



Technical data

Type 723 00 | 723 10 | 723 20 up to 96 terminals

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib [ia/ib] m IIC T4 / Ⓔ II 2 D Ex tD A21 IP66 T 80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP66
Enclosure material	light alloy die-casting (AlSi)
Enclosure colour	light grey

Type 723 00 up to 24 terminals

Terminal cross section	max. 35 mm ²						
Weight	approx. 1.41 kg						
Max. number drillings/cable glands down	M16	M20	M25	M32	M40	M50	
	8	4	3	-	-	-	
Terminal mounting space on the terminal rail	1 x 185 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	24	24	18	18	14	-	-

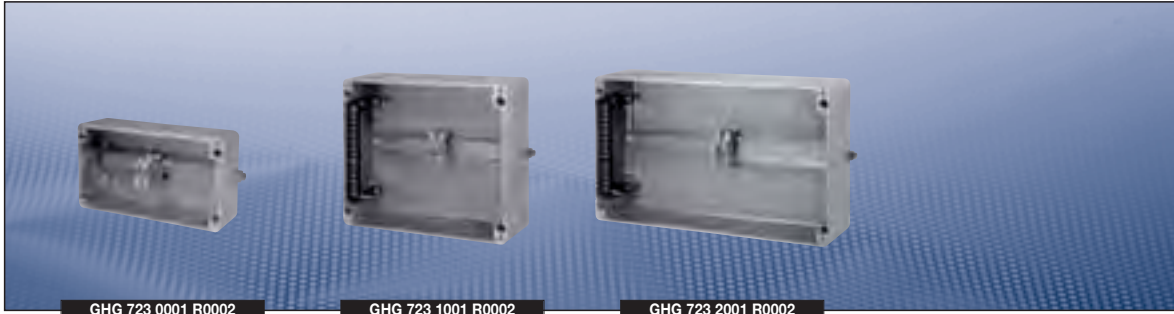
Type 723 10 up to 82 terminals

Terminal cross section	max. 50 mm ²						
Weight	approx. 3.84 kg						
Drillings/cable glands	M16	M20	M25	M32	M40	M50	
Max. number down	22	10	7	4	3	2	
Terminal mounting space on the terminal rail	2 x 242 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	2 x 41	2 x 34	2 x 26	2 x 20	1 x 17	1 x 17	1 x 14

Type 723 20 up to 96 terminals

Terminal cross section	max. 95 mm ²						
Weight	approx. 4.87 kg						
Drillings/cable glands	M16	M20	M25	M32	M40	M50	
Max. number down	30	18	10	6	5	4	
Terminal mounting space on the terminal rail	3 x 362 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	2 x 48	2 x 48	2 x 36	2 x 36	1 x 28	1 x 23	1 x 22

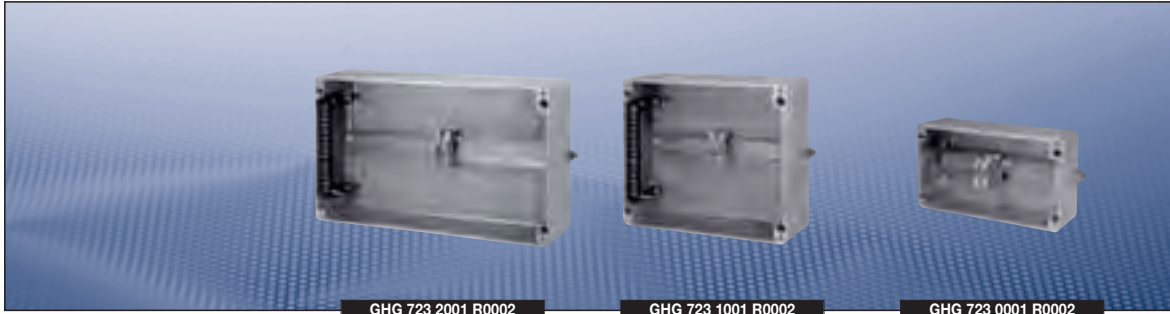
Ex-e/Ex-i terminal box



Ordering details

Design	Cable gland	No. of Terminals	Order No.
Type 723 00 mounted with screw terminals 2 x 2.5 mm ² + PE-terminal 4 mm ²			
Ex-e	without drilling	1 x Ex-e ¹⁾ /1 x PE	GHG 723 0001 R0002
Type 723 10 mounted with screw terminals 2 x 2.5 mm ² + PE-terminal 4 mm ²			
Ex-e	without drilling	1 x Ex-e ¹⁾ /14 x PE	GHG 723 1001 R0002
Type 723 20 mounted with screw terminals 2 x 2.5 mm ² + PE-terminal 4 mm ²			
Ex-e	without drilling	1 x Ex-e ¹⁾ /14 x PE	GHG 723 2001 R0002

¹⁾ according to type examination certificate individual extensible

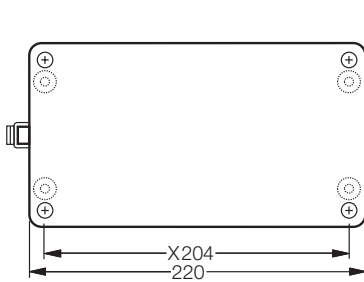


GHG 723 2001 R0002

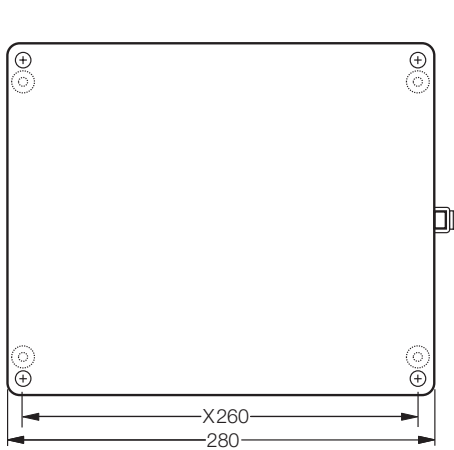
GHG 723 1001 R0002

GHG 723 0001 R0002

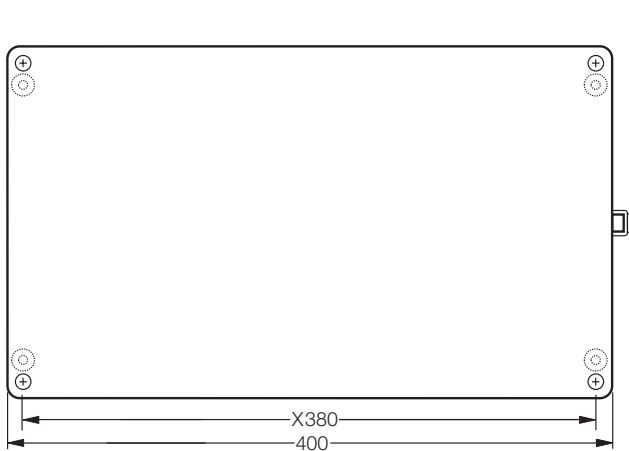
Dimension drawing



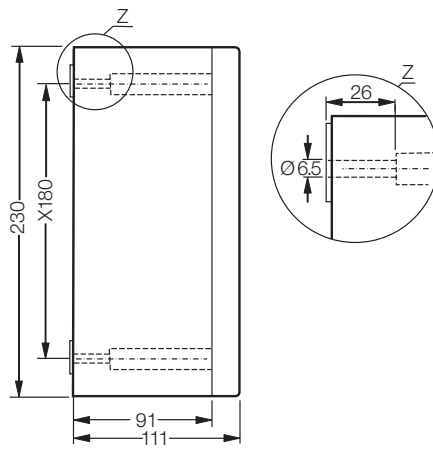
Type 723 00



Type 723 10



Type 723 20



X = mounting dimension

Dimensions in mm

1
2
3
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6
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8
9
10
11
12

EX - TERMINAL BOXES

Light metal design, explosion-proof for Zone 1 and Zone 21

Series C30 and C31 explosion-protected terminal boxes made of light metal are used to distribute and conduct electricity in areas of Zone 1, 2, 21 and 22 at no risk of explosion. Optionally, they are equipped with an assembly plate with pillar terminals or with terminals on an assembly plate with a terminal strip for individual equipment.

The connection cross-section can vary by up to 6 mm² or up to 10 mm².

A high "IP degree of protection" allows universal use in areas at risk of explosion.

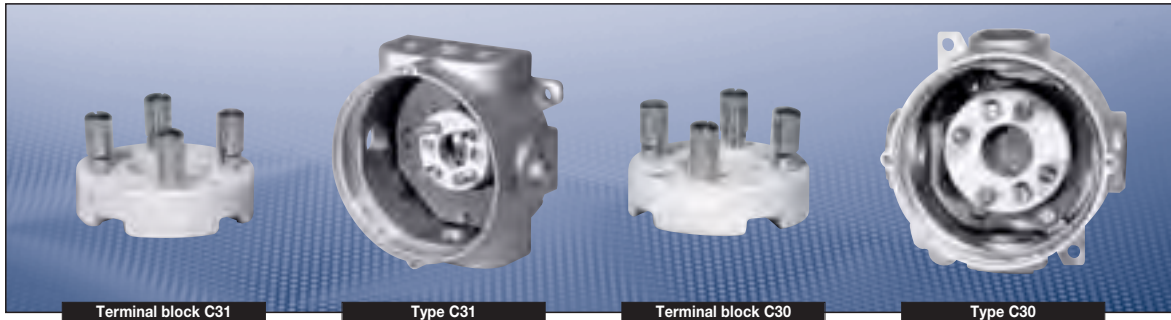
Optionally, the cables can be introduced into the terminal boxes via conduits or explosion-proof screw connections. Drilled holes through which no cables are conducted should be closed with certified threaded stoppers.

The light metal terminal boxes have an outside earthing connection.



High mechanical, chemical and thermal resistance

High degree of protection IP67



Technical data

Type C30 | Type C31

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIC T6 / Ⓔ II 2 D IP67 T 85 °C
EC-Type Examination Certificate	LOM 02 ATEX 2037 X
IECEX Certificate of Conformity	IECEX BK1 07.0026
Marking accd. to IECEX	Ex d IIC T6 Ex tD A21 IP67 T85 °C
Permissible ambient temperature	-20 °C to +55 °C
Rated voltage	690 V
Rated current (max.)	C30: 40 A / C31: 61 A
Insulation class	I
Degree of protection accd. EN 60529	IP67
Enclosure material	light alloy
Enclosure colour	natural finish

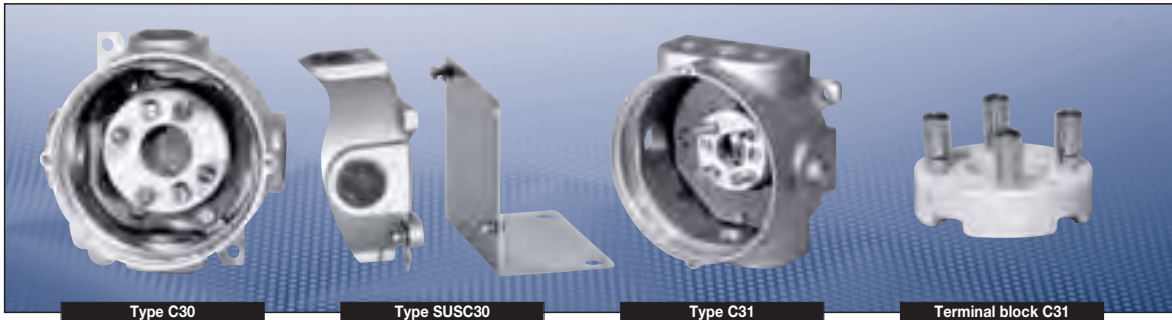
Type C30

Connecting terminals	up to 6 mm ²
Weight	approx. 0.8 kg (empty)
Max. number of drillings/cable glands	4
Terminal mounting space on the terminal rail	45 mm

Type C31

Connecting terminals	up to 10 mm ²
Weight	approx. 1.3 kg (empty)
Max. number of drillings/cable glands	8
Terminal mounting space on the terminal rail	82 mm

Ex-d terminal box



Ordering details

Type	Thread ISO 7/1 ¹⁾	Order No.
Type C30		
C30 T1	3 x 1/2"	NOR 000 001 151 181
C30 T2	3 x 3/4"	NOR 000 001 151 199
C30 X1	4 x 1/2"	NOR 000 001 151 206
C30 X2	4 x 3/4"	NOR 000 001 151 214
Type C31		
C31 T1	3 x 1/2"	NOR 000 111 150 001
C31 T2	3 x 3/4"	NOR 000 111 150 002
C31 T3	3 x 1"	NOR 000 111 150 003
C31 X1	4 x 1/2"	NOR 000 111 150 004
C31 X2	4 x 3/4"	NOR 000 111 150 005
C31 X3	4 x 1"	NOR 000 111 150 006

Accessories

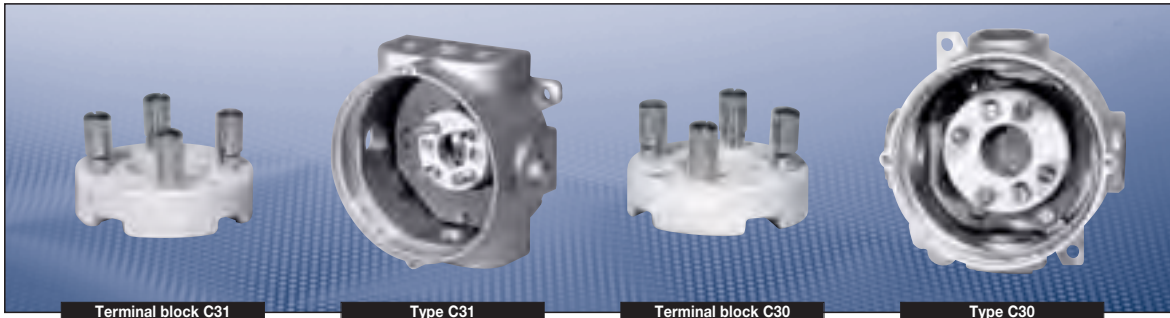
Build-in components type C30			
Type	Version	No. of terminals	Order No.
BC 30	Mounting plate with pillar terminals 4 x 4 mm ²	4 x Ex-e ²⁾	NOR 000 001 151 222
PBPD 30	Terminal rail DIN 46877	Mounting rail	NOR 000 000 115 314
PC 30	Mounting plate without terminals	-	NOR 000 000 115 302

Mounting angel for housing fixing type C30	
Type	Order No.
SUSC 30	NOR 000 000 115 311

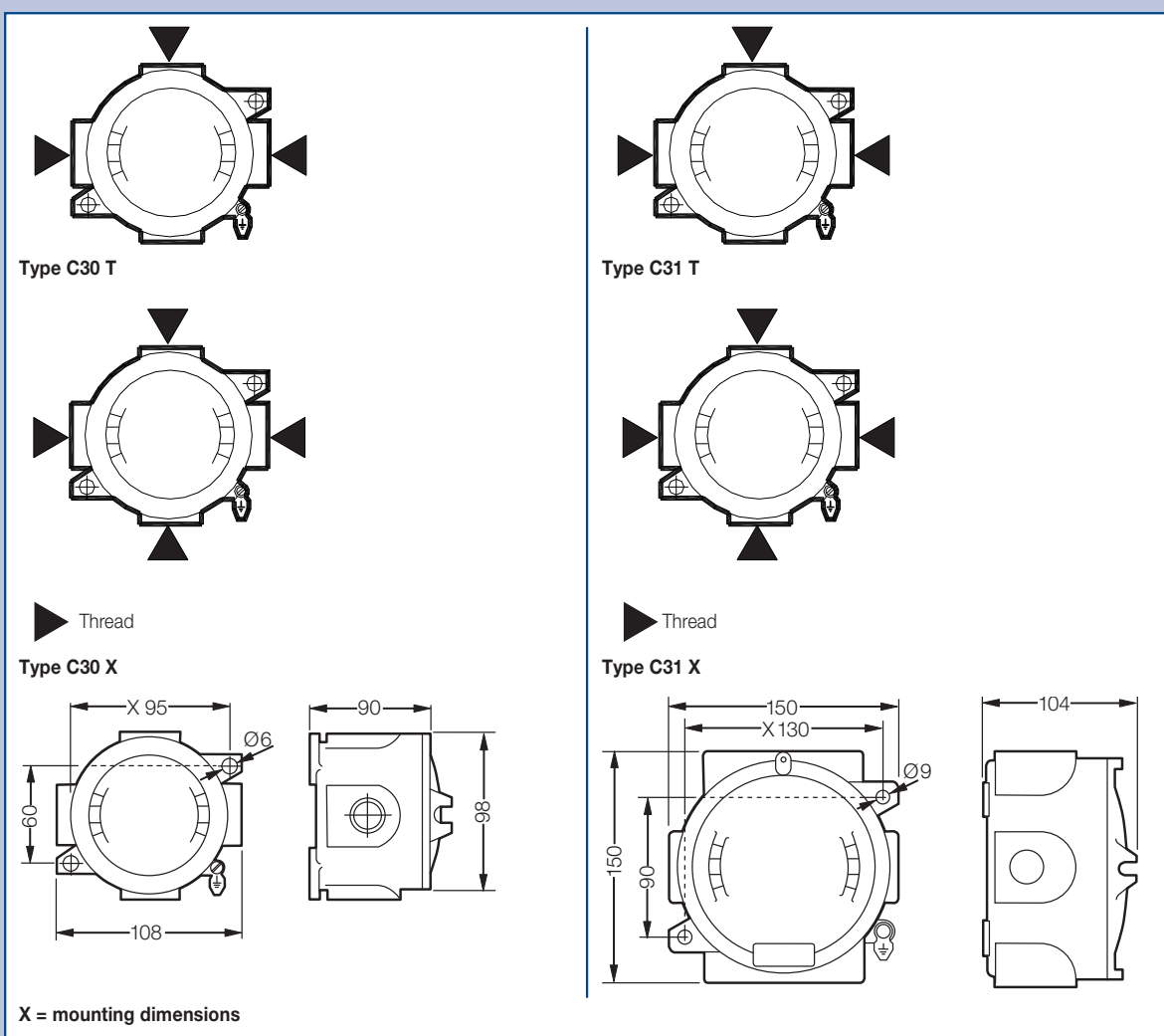
Build-in components type C31			
Type	Version	No. of terminals	Order No.
BC31	Mounting plate with pillar terminals	4 x 4 mm ² ²⁾	NOR 000 111 150 009
P C31	Mounting plate without terminals	-	NOR 000 000 115 306
PBPD 31	Terminal rail DIN 46877	-	NOR 000 000 115 015

¹⁾ Other threads on request

²⁾ 4 x 4 mm² multi-wire or 2 x 6 mm² solid



Dimension drawing



Dimensions in mm

1
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12

EX - TERMINAL ENCLOSURES

Stainless steel version for Zone 1 and Zone 21

The new explosion-protected terminal enclosures made of stainless steel (AISI 316 L) with ground surfaces was developed for instrumentation and control installations using the Ex-e and Ex-i technologies.

They act as a link between the main cable to the control room and the branch cables into the field. In addition to this, they may also be used for the direct connection of actuators and sensors. Here the metal cable glands also allow electromagnetically compatible connection methods.

The robust design of the stainless steel terminal boxes provides a high degree of safety for offshore applications and in places where particularly adverse chemical, mechanical and climatic operating conditions prevail within the hazardous area.

Three terminal enclosures series in various sizes are available for accommodating up to terminals. The choice between screw and tension-spring (screwless) terminals for single and multi-wire conductors makes it possible for the installation engineers to select the type of connection that is most suitable for the respective application. Two separate PE rails are available for the separate connection of PE/PA and screened cables. Due to the optimized design, there is a large drilling area for fitting a large number of metal glands. Unused entry holes must be sealed safely with certified blanking plugs. As an alternative, a screw-on metal flange can be used for a wide variety of applications.

International approvals

- Stainless steel AISI 316 L, electro-polished surface
- Highly resistant silicone seals
- Metal flanges available on request
- Safety standard IP66
- PE/PA rails



This external & internal brass earth/ground stud assembly enables rapid and reliable protective earth/ground connection, which is mounted on the side of the enclosure for ease of access.



The enclosure is mounted by four heavy-duty 3 mm thick surface welded and stainless steel lugs, with slotted bottom lugs for ease of mounting. These provide a secure, reliable means of mounting the enclosure



To make the choice of the right terminal boxes or branching boxes for your application, the tables on this page contain the basic data. You can use these tables to identify and configure your terminal boxes.

In the table of the maximum number of terminals, the information is based on the rated current of the terminal concerned. If the current per terminal is below the rated current,

the number can be interpreted on the maximum length of the terminal strip that can be equipped.

On the basis of the maximum drilled and the interference diameter of the cable and line duct, you can select the relevant terminal box by means of the number of ducts that you need.

Next Range

Size	Max. terminal capacity (2.5 mm ²)	Max. entry guide (M16) Top-Bottom/Left/Right
22/15/13	1 x 21	6/6/6
26/26/16	2 x 27	20/9/9
26/26/20	2 x 27	28/18/18
30/30/16	2 x 36	26/20/26
30/30/20	2 x 36	34/28/34
38/26/16	2 x 51	20/20/20
38/26/20	2 x 51	28/28/28
45/38/16	2 x 67	29/29/29
45/38/20	2 x 67	46/46/46
48/48/20	3 x 71	53/46/53
50/35/20	3 x 75	40/40/40
62/45/20	4 x 99	53/53/53
74/55/20	5 x 124	60/60/60
76/50/20	3 x 128	53/82/82
86/64/20	6 x 147	82/80/80
91/61/20	5 x 158	72/72/72
98/74/20	6 x 171	80/106/106
30/35/20		
landscape	3 x 36	40/28/34
38/45/20		
landscape	4 x 36	53/28/28
45/55/20		
landscape	5 x 67	60/44/44
50/64/20		
landscape	6 x 75	82/53/53

Ex-Cell Range

Size	Max. terminal capacity (2.5 mm ²)	Max. entry guide (M16) Top-Bottom/Left/Right
23/15/13	1 x 21	6/6/6
26/26/15	1 x 27	21/11/11
30/20/15	1 x 36	15/15/15
30/30/15	2 x 36	26/15/15
30/30/20	2 x 36	34/28/34
40/30/15	2 x 56	26/26/26
40/30/20	2 x 56	34/34/34
40/40/15	3 x 56	35/26/26
40/40/20	3 x 56	44/34/34
40/50/15	4 x 56	48/26/26
40/50/20	4 x 56	62/34/34
50/40/15	3 x 77	35/35/35
50/40/20	3 x 77	44/44/44
50/50/15	4 x 77	48/35/35
50/50/20	4 x 77	62/44/44
50/60/20	6 x 77	78/44/44
60/40/15	3 x 97	35/48/48
60/40/20	3 x 97	44/62/62
60/50/15	4 x 97	48/48/48
60/50/20	4 x 97	62/62/62
60/60/15	6 x 97	59/48/48
60/60/20	6 x 97	78/62/62
60/76/20	7 x 97	100/62/62
76/50/20	4 x 128	62/78/78
76/60/20	6 x 128	78/78/78
76/76/20	7 x 128	100/78/78

STB Range

Size	Max. terminal capacity (2.5 mm ²)	Max. entry guide (M16) Top-Bottom/Left/Right
12/12/08	1 x 8	7/7/4
15/12/08	1 x 13	7/9/6
15/15/09	1 x 13	9/9/6
19/15/09	1 x 21	9/12/8
19/19/10	1 x 21	18/18/14
25/25/12	2 x 31	32/32/26
16/38/12	1 x 55	50/20/44
25/40/13	3 x 31	54/32/48
38/38/22	3 x 42	100/100/88
40/60/22	3 x 46	164/108/92
60/40/22	5 x 79	108/164/152

GHG 74.2 Range

Size	Max. terminal capacity (2.5 mm ²)
744 21	40
745 22	82
746 23	188
749 24	296

EX - TERMINAL ENCLOSURES

Stainless Steel Version for Zone 1 and Zone 21

NEXT

The **NEXT** enclosure has been specifically designed for installation in locations with aggressively hostile environmental conditions. These include such locations as petrochemical hazardous areas, pharmaceutical, food process and utility applications.

Manufactured from high quality stainless steel that is electro-polished for a highly corrosion resistant „Chromium enriched“ surface.

This multi certified enclosure is available in a comprehensive range of 17 different sizes and two depths, each with the facility for many configuration possibilities for a multitude of applications.

Using the highest quality materials, unique design benefits and precision manufacturing the **NEXT** range is the benchmark in heavy-duty gauge enclosures of its class with a 25 year design life.

An integral drainage channel prevents liquids or other solids contaminants from running in or falling into the enclosure when the door is opened, and to minimise gasket path contamination.

The high integrity „one piece“ sealing gasket for superior ingress protection (IP) of 66 and excellent recovery and re-sealing properties for continuous environmental protection.

An option for the mounting of up to four 3 mm thick gland-plates on each side in 4 possible combinations of 1, 2, 3 or 4 gland-plates. All sealed to IP66 by a high integrity Chloroprene gasket and secured by stainless steel bolts into blind inserts.

316L Stainless Steel (1.4404 to EN 10088)

Superior „corrosion resistant“ electro chemically polished

High integrity „one piece“ closed cell chloroprene or optional silicone gasket

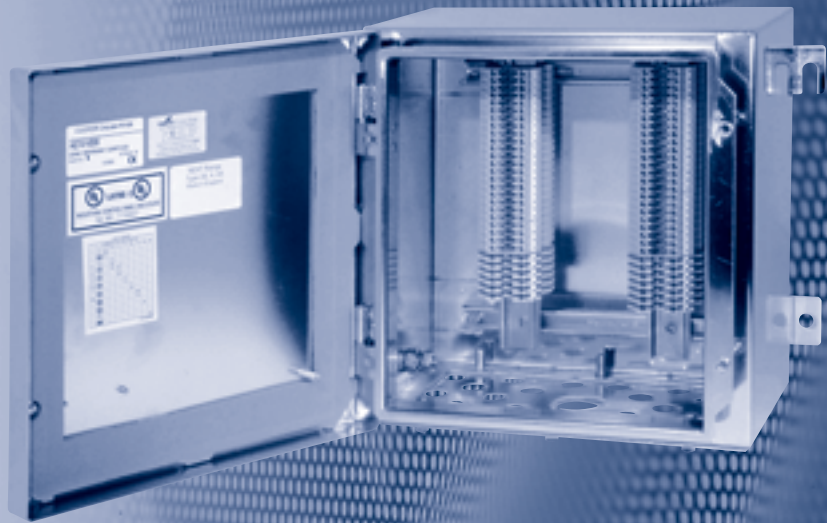
Detachable hinged door, stainless steel hinges with captive stainless steel hex screws

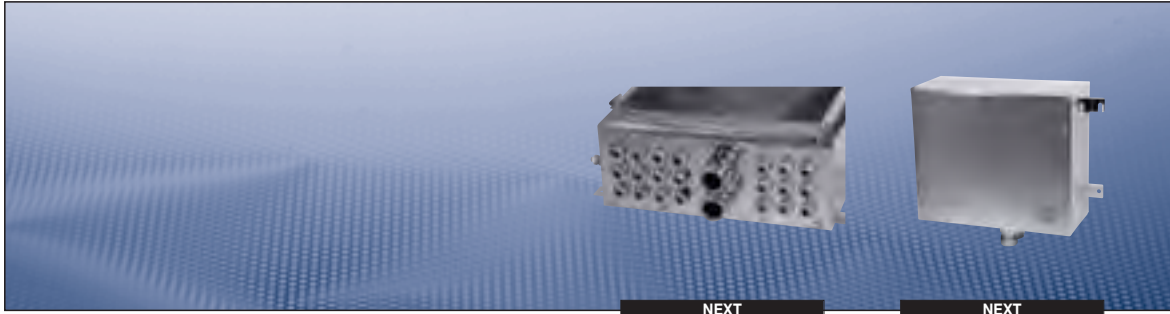
4 x external welded lugs, 11 mm Ø holes / slots.

Optional Gland Plate / Entries 3 mm thick

Extended ambient temperatures -65 °C to + 55 °C as option.

Certification GOST-R, AEx, cULus and Germanischer Lloyd on request.





Technical data

Ex-e Terminal Enclosure NEXT

Marking to 94/9/EC	⊕ II 2 G Ex e ia II, IIC T6, T5 / ⊕ II 2 D Ex tD A21 IP66 T80 °C, T95 °C
Temperature class	T6 up to +40 °C / T5 up to +55 °C
EC-Type Examination Certificate	PTB 04 ATEX 1015
Permissible ambient temperature	-45 °C to +55 °C -65 °C to +55 °C (option: Silicone gasket)
Rated voltage	up to 1100 V ¹⁾
Rated current	up to 500 A ¹⁾
Connecting terminals	up to 240 mm ² ¹⁾
Insulation class	I
Degree of protection accd. EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	up to 4 side optional gland plate (3 mm) combination with entries to meet requirements
Type of mounting	4 x 3 mm welded lugs with Ø 11 mm holes/slots, horizontal
Enclosure material	stainless steel 316 L electro chemically polished or sheet steel polyester powder coated (RAL 7032)
Material thickness	1.5 mm, 2 mm (- 62/45/20 and over)
Equipment mountings	4 x stand off pillars Ø 9 mm, 25 mm height, tapped M6 x 10, for rail or mounting plate
Enclosure earth	M10 external/internal brass earth stud assembly, M6 intern. stud on lid & painted gland plates
Gasket material	Chloroprene gasket, Silicone gasket (option)

¹⁾ depending on type of terminal and Ex-components used

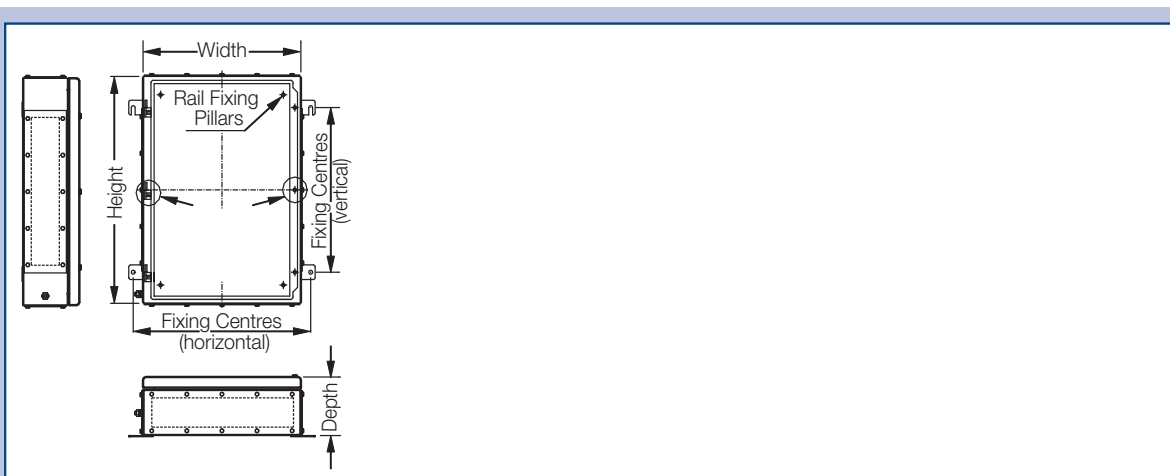
Additional Approvals:

cULUs types 3S, 4, 4 x approval suitable for

Class I, Div 2 applications, Class I Zone 1, AExe II T6 (Limited range available),

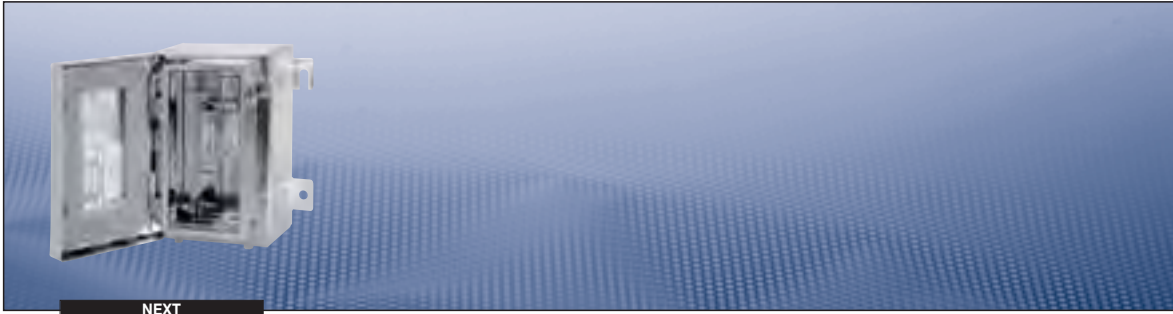
GOST 'R', Germanischer Lloyd

Dimension drawing



Dimensions in mm

Ex-e terminal enclosures



Ordering details NEXT METRIC up to 2 x 51 terminals

NEXT	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ F _{vertical} X F _{horizontal}	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing Rail length centres		Rail length		Row orientation vertical (thickness in mm)			
Size				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
22/15/13	229x152x130	152x208 ²⁾	3.25	129	52	149	72	1x21	1x17	1x13	1x10
26/26/16	260x260x160	170x316	5.50	160	160	180	180	2x27	2x23	1x17	1x13
26/26/20	260x260x205	170x316	5.50	160	160	180	180	2x27	2x23	1x17	1x13
30/30/16	306x306x160	203x361 ²⁾	7.00	206	260	226	226	2x36	2x30	2x23	2x18
30/30/20	306x306x205	203x361 ²⁾	7.00	206	206	226	226	2x36	2x30	2x23	2x18
38/26/16	380x260x160	250x316	7.00	280	180	300	160	2x51	2x43	1x32	1x25
38/26/20	380x260x205	250x316	7.00	280	180	300	160	2x51	2x43	1x32	1x25

NEXT	Available glanding area			Max. Entry Guide (metric)							Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
22/15/13	58x108	58x108	58x108	6/6/6	3/3/3	2/2/2	1/1/1	-	-	-	NXTS12215130
26/26/16	214x 80	114x 80	114x 80	20/9/9	10/6/6	6/3/2	3/2/3	3/1/1	2/1/1	-	NXTS12626160
26/26/20	214x124	114x124	114x124	28/18/18	15/9/9	12/5/5	6/4/4	5/2/2	2/1/1	2/1/1	NXTS12626200
30/30/16	261x 80	214x 80	261x 80	26/20/26	14/10/14	8/6/8	4/3/4	3/3/3	3/2/3	-	NXTS13030160
30/30/20	261x124	214x124	261x124	34/28/34	20/15/20	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	NXTS13030200
38/26/16	214x 80	214x 80	214x 80	20/20/20	10/10/10	6/6/6	3/3/3	3/3/3	2/2/2	-	NXTS13826160
38/26/20	214x124	214x124	214x124	28/28/28	15/15/15	12/12/12	6/6/6	5/5/5	2/2/2	2/2/2	NXTS13826200

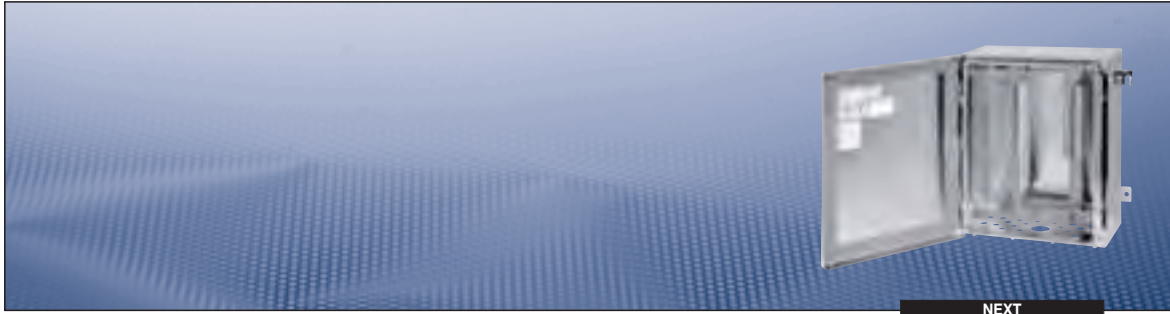
Options	
with 1 gland plate	NXT S1 XXYYZZ 1
with 2 gland plates	NXT S1 XXYYZZ 2
with 3 gland plate	NXT S1 XXYYZZ 3
with 4 gland plates	NXT S1 XXYYZZ 4
NXT Painted	NXT PS XXYYZZ N
Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0- HASP

Type	Order No.
Example	
30/30/16 with 3 gland plates, painted and Padlock HASP facility	NXTPS13030163-HASP

Notes: ¹⁾ Dimensions drawing see page 7.39

²⁾ $\frac{123}{3}$ Subtract 30 mm when no side gland plates

³⁾ Refer to „OPTIONS“ for full order number detail



NEXT

Ordering details NEXT METRIC up to 3 x 128 terminals

NEXT	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ F _{vertical X} F _{horizontal}	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing centres		Rail length		Row orientation vertical (thickness in mm)			
Size				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
45/38/16	458x382x160	305x437 ²⁾	9.75	358	282	378	302	2x 67	2x 56	2x42	2x33
45/38/20	458x382x205	305x437 ²⁾	9.75	358	282	378	302	2x 67	2x 56	2x42	2x33
48/48/20	480x480x205	327x535 ²⁾	10.40	380	380	400	400	3x 71	3x 59	3x44	3x35
50/35/20	500x350x205	350x406	10.50	400	260	420	270	3x 75	2x 63	2x47	2x37
62/45/20	620x450x205	450x506	17.00	520	350	540	370	4x 99	3x 83	3x62	3x49
74/55/20	740x550x205	540x606	30.40	640	450	660	470	5x124	4x103	4x77	4x61
76/50/20	762x508x205	508x564 ²⁾	23.50	662	408	682	428	3x128	3x106	3x80	3x64

NEXT	Available glanding area			Max. Entry Guide (metric)						Order No. ³⁾	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
45/38/16	337x 80	337x 80	337x 80	29/29/29	18/18/18	10/10/10	6/6/6	5/5/5	4/4/4	-	NXTS14538160
45/38/20	337x124	337x124	337x124	46/46/46	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	NXTS14538200
48/48/20	404x124	337x124	404x124	53/46/53	30/26/30	24/21/24	14/11/14	11/9/11	5/4/5	4/3/4	NXTS14848200
50/35/20	304x124	304x124	304x124	40/40/40	24/24/24	18/18/18	10/10/10	7/7/7	4/4/4	3/3/3	NXTS15035200
62/45/20	404x124	404x124	404x124	53/53/53	30/30/30	24/24/24	14/14/14	11/11/11	5/5/5	4/4/4	NXTS16245200
74/55/20	504x124	504x124	504x124	60/60/60	39/39/39	30/30/30	18/18/18	13/13/13	6/6/6	5/5/5	NXTS17455200
76/50/20	404x124	594x124	594x124	53/82/82	30/47/47	24/39/39	14/20/20	11/17/17	5/7/7	4/6/6	NXTS17650200

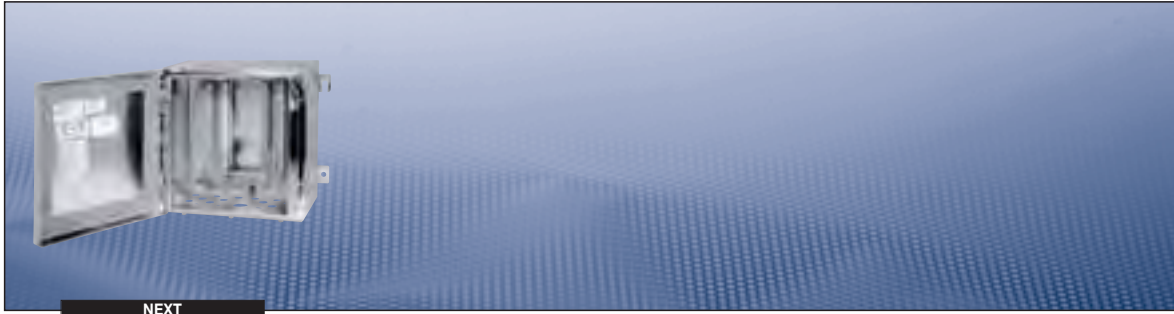
Options

with 1 gland plate	NXT S1 XXYYZZ 1	with 2 gland plates	NXT S1 XXYYZZ 2
with 3 gland plate	NXT S1 XXYYZZ 3	with 4 gland plates	NXT S1 XXYYZZ 4
NXT Painted	NXT PS XXYYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0- HASP

Type	Order No.
Example	
62/45/20 with 3 gland plates, 316L SS and Padlock HASP facility	NXTS162445203-HASP

- Notes: ¹⁾ Dimensions drawing see page 7.39
²⁾ 123³⁾ Subtract 30 mm when no side gland plates
³⁾ Refer to „OPTIONS“ for full order number detail

Ex-e terminal enclosures



NEXT

Ordering details NEXT METRIC up to 6 x 171 terminals

NEXT	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ F _{vertical} X F _{horizontal}	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing Rail length centres		Rail length		Row orientation vertical (thickness in mm)			
Size				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
86/64/20	860x640x205	570x696	29.00	760	540	780	560	6x147	5x123	5x 92	4x73
91/61/20	914x610x205	559x666 ²⁾	31.00	814	510	834	530	5x158	5x132	4x 99	4x79
98/74/20	980x740x205	700x796	38.00	880	640	900	660	6x171	6x143	5x107	5x85

NEXT	Available glanding area			Max. Entry Guide (metric)						Order No. ³⁾	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
86/64/20	594x124	2x (304x124)	2x (304x124)	82/80/80	47/48/48	39/36/36	20/20/20	17/14/14	7/8/8	6/6/6	NXTS18664200
91/61/20	566x108	566x108	566x108	72/72/72	42/42/42	24/24/24	18/18/18	8/8/8	7/7/7	6/6/6	NXTS19161200
98/74/20	2x (304x124)	2x (404x124)	2x (404x124)	80/106/106	48/60/60	36/48/48	20/28/28	14/22/22	8/10/10	6/8/8	NXTS19874200

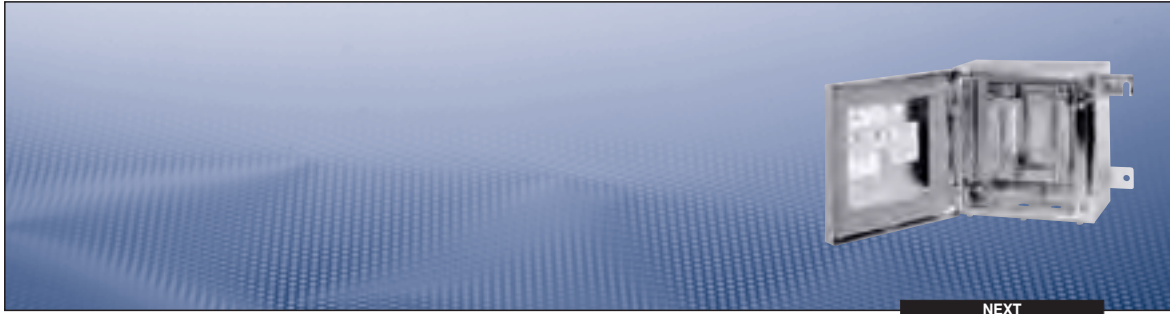
Options	
with 1 gland plate	NXT S1 XXYYZZ 1
with 2 gland plates	NXT S1 XXYYZZ 2
with 3 gland plate	NXT S1 XXYYZZ 3
with 4 gland plates	NXT S1 XXYYZZ 4
NXT Painted	NXT PS XXYYZZ N
Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0- HASP

Type	Order No.
Example	
91/61/20 with 1 gland plate, 316L SS and Padlock HASP facility	NXTS19161201-HASP

Notes: ¹⁾ Dimensions drawing see page 7.39

²⁾ 123³⁾ Subtract 30 mm when no side gland plates

³⁾ Refer to „OPTIONS“ for full order number detail



NEXT

Ordering details NEXT METRIC up to 6 x 75 terminals

NEXT	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ F _{vertical X} F _{horizontal}	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing Rail length centres		Rail length		Row orientation vertical (thickness in mm)			
Size				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content – landscape orientation –											
30/35/20	306x350x205	203x405	7.70	206	250	226	270	3x36	2x30	2x23	2x18
38/45/20	380x450x205	250x506	10.60	280	350	300	370	4x36	3x36	3x30	3x23
45/55/20	458x550x205	305x606	14.90	358	450	378	470	5x67	4x56	4x42	4x33
50/64/20	500x640x205	350x696	20.90	400	540	420	560	6x75	5x63	5x47	4x37

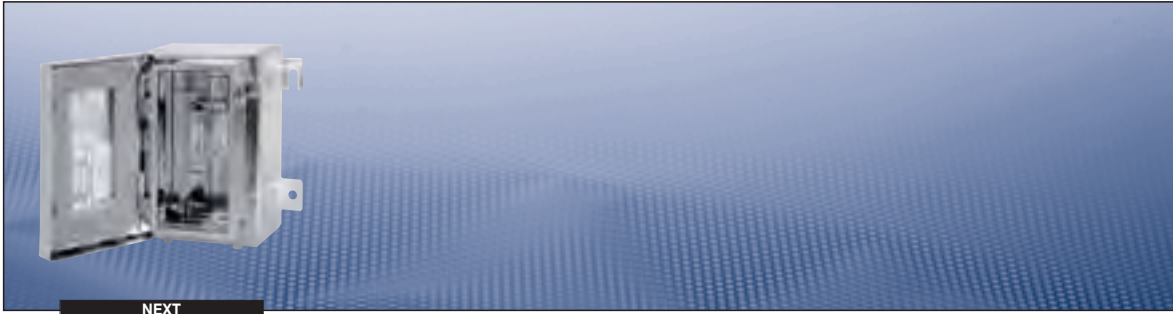
NEXT	Available glanding area			Max. Entry Guide (metric)						Order No. ³⁾	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail – landscape orientation –											
30/35/20	304x124	214x124	258x124	40/28/34	24/15/18	18/12/15	10/6/8	7/5/6	4/2/3	3/2/2	NXTS13035201
38/45/20	404x124	214x124	214x124	53/28/28	30/15/15	24/12/12	14/6/6	11/5/5	5/2/2	4/2/2	NXTS13845201
45/55/20	504x124	334x124	334x124	60/44/44	39/26/26	30/21/21	18/11/11	13/9/9	6/4/4	5/3/3	NXTS14555201
50/64/20	594x124	404x124	404x124	82/53/53	47/30/30	39/24/24	20/14/14	17/11/11	7/5/5	6/4/4	NXTS15064201

Options	
with 1 gland plate	NXT S1 XXYYZZ 1
with 2 gland plates	NXT S1 XXYYZZ 2
with 3 gland plate	NXT S1 XXYYZZ 3
with 4 gland plates	NXT S1 XXYYZZ 4
NXT Painted	NXT PS XXYYZZ N
Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0- HASP

Type	Order No.
Example	
30/35/20 with 3 gland plates, painted and Padlock HASP facility	NXTPS303520- HASP

Notes: ¹⁾ Dimensions drawing see page 7.39
²⁾ 123³⁾ Subtract 30 mm when no side gland plates
³⁾ Refer to „OPTIONS“ for full order number detail

Ex-e terminal enclosures



NEXT

Ordering details NEXT IMPERIAL up to 2 x 51 terminals

NEXT Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ F _{vertical} X F _{horizontal}	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing centres		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
22/15/13	9.02x 5.98x5.12	5.98x 8.19 ²⁾	7.15	5.08	2.05	5.87	2.83	1x21	1x17	1x13	1x10
26/26/16	10.24x10.24x6.3	6.69x12.44	12.10	6.30	6.30	7.09	7.09	2x27	2x23	1x17	1x13
26/26/20	10.24x10.24x8.07	6.69x12.44	12.10	6.30	6.30	7.09	7.09	2x27	2x23	1x17	1x13
30/30/16	12.05x12.05x6.3	0.79x 1.42 ²⁾	15.40	8.11	8.11	8.90	8.90	2x36	2x30	2x23	2x18
30/30/20	12.05x12.05x8.07	0.79x 1.42 ²⁾	15.40	8.11	8.11	8.90	8.90	2x36	2x30	2x23	2x18
38/26/16	14.96x10.24x6.3	9.84x12.44	15.40	11.02	7.09	11.81	6.30	2x51	2x43	1x32	1x25
38/26/20	14.96x10.24x8.07	9.84x12.44	15.40	11.02	7.09	11.81	6.30	2x51	2x43	1x32	1x25

NEXT Size	Available glanding area			Max. Entry Guide (imperial)							Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
22/15/13	4.25x2.28	4.25x2.28	4.25x2.28	3/3/3	2/2/2	2/2/2	-	-	-	-	NXTS12215130
26/26/16	8.43x3.15	4.49x3.15	4.49x3.15	11/5/5	4/2/2	4/2/2	3/1/1	2/1/1	-	-	NXTS12626160
26/26/20	8.43x4.88	4.49x4.88	4.49x4.88	17/8/8	12/6/6	7/3/3	5/2/2	2/1/1	2/1/1	2/1/1	NXTS12626200
30/30/16	10.28x3.15	8.43x3.15	10.28x3.15	13/11/13	5/4/5	4/4/4	4/3/4	3/2/3	-	-	NXTS13030160
30/30/20	10.28x4.88	8.43x4.88	10.28x4.88	20/17/20	15/12/15	8/7/8	7/5/7	3/2/3	2/2/2	2/2/2	NXTS13030200
38/26/16	8.43x3.15	8.43x3.15	8.43x3.15	11/11/11	4/4/4	4/4/4	3/3/3	2/2/2	-	-	NXTS13826160
38/26/20	8.43x4.88	8.43x4.88	8.43x4.88	17/17/17	12/12/12	7/7/7	5/5/5	2/2/2	2/2/2	2/2/2	NXTS13826200

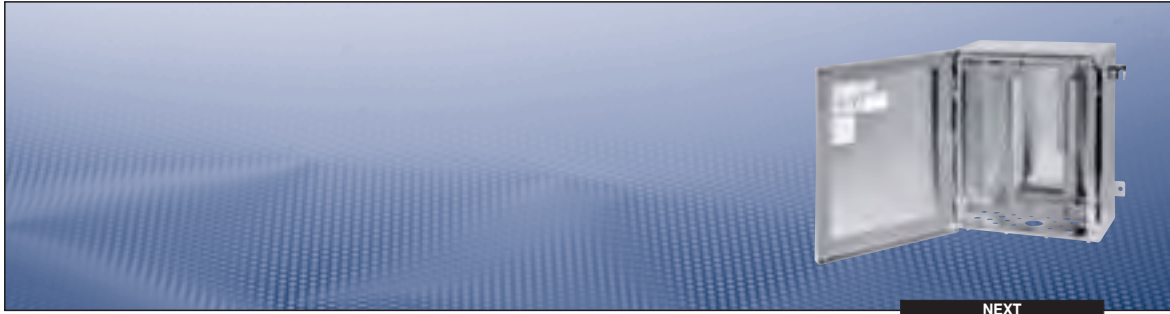
Options	
with 1 gland plate	NXT S1 XXYYZZ 1
with 3 gland plate	NXT S1 XXYYZZ 3
NXT Painted	NXT PS XXYYZZ N
with 2 gland plates	NXT S1 XXYYZZ 2
with 4 gland plates	NXT S1 XXYYZZ 4
Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT _ XXYYZZ0- HASP

Type	Order No.
Example	
38/26/20 with 1 gland plate, painted and Padlock HASP facility	NXTPS13826201-HASP

Notes: ¹⁾ Dimensions drawing see page 7.39

²⁾ 123³⁾ Subtract 30 mm when no side gland plates

³⁾ Refer to „OPTIONS“ for full order number detail



NEXT

Ordering details NEXT IMPERIAL up to 3 x 128 terminals

NEXT Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
		F _{vertical X} F _{horizontal}		Rail fixing centres		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
45/38/16	18.03x15.04x6.30	12.01x17.20 ²⁾	21.45	14.09	11.10	14.88	11.89	2x 67	2x 56	2x42	2x33
45/38/20	18.03x15.04x8.07	12.01x17.20 ²⁾	21.45	14.09	11.10	14.88	11.89	2x 67	2x 56	2x42	2x33
48/48/20	18.09x18.09x8.07	12.87x21.06 ²⁾	22.88	14.96	14.96	15.75	15.75	3x 71	3x 59	3x44	3x35
50/35/20	19.69x13.78x8.07	13.78x15.98	23.10	15.75	10.24	16.54	10.63	3x 75	2x 63	2x47	2x37
62/45/20	24.41x17.72x8.07	17.72x19.92	37.40	20.47	13.78	21.26	14.57	4x 99	3x 83	3x62	3x49
74/55/20	29.13x21.65x8.07	21.26x23.86	66.88	25.20	17.72	25.98	18.50	5x124	4x103	4x77	4x61
76/50/20	30.00x20.00x8.07	20.00x22.20 ²⁾	51.70	26.06	16.06	26.85	16.85	3x128	3x106	3x80	3x64

NEXT Size	Available glanding area			Max. Entry Guide (imperial)							Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
45/38/16	13.27x3.15	13.27x3.15	13.27x3.15	18/18/18	7/7/7	6/6/6	5/5/5	4/4/4	-	-	NXTS14538160
45/38/20	13.27x4.88	13.27x4.88	13.27x4.88	27/27/27	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	3/3/3	NXTS14538200
48/48/20	15.91x4.88	13.27x4.88	15.91x4.88	33/27/33	26/21/26	14/11/14	11/9/11	5/4/5	4/3/4	3/3/3	NXTS14848200
50/35/20	11.97x4.88	11.97x4.88	11.97x4.88	24/24/24	18/18/18	10/10/10	8/8/8	4/4/4	3/3/3	2/2/2	NXTS15035200
62/45/20	15.91x4.88	15.91x4.88	15.91x4.88	33/33/33	26/26/26	14/14/14	11/11/11	5/5/5	4/4/4	3/3/3	NXTS16245200
74/55/20	19.84x4.88	19.84x4.88	19.84x4.88	41/41/41	32/32/32	18/18/18	14/14/14	6/6/6	5/5/5	4/4/4	NXTS17455200
76/50/20	15.91x4.88	23.39x4.88	23.39x4.88	33/48/48	26/39/39	14/21/21	11/17/17	5/7/7	4/6/6	3/5/5	NXTS17650200

Options

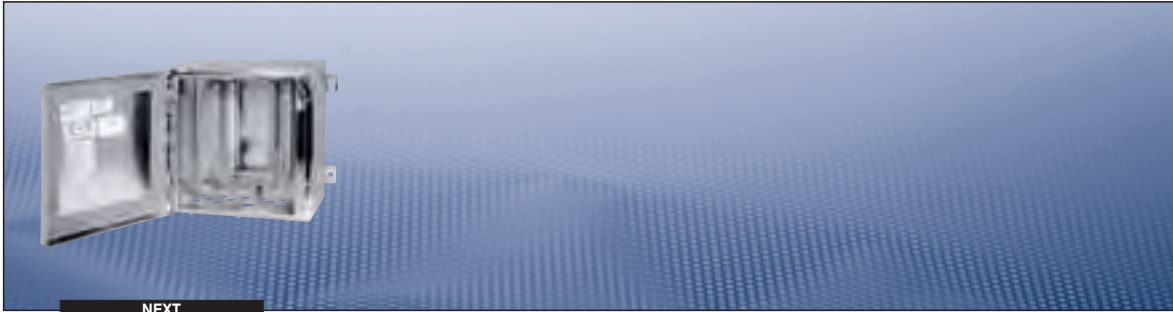
with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYZZ0-HASP

Type	Order No.
Example	
62/45/20 with 3 gland plates, painted and Padlock HASP facility	NXTPS62445203-HASP

- Notes: ¹⁾ Dimensions drawing see page 7.39
²⁾ 123³⁾ Subtract 30 mm when no side gland plates
³⁾ Refer to „OPTIONS“ for full order number detail

1
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11
12

Ex-e terminal enclosures



NEXT

Ordering details NEXT IMPERIAL up to 6 x 171 terminals

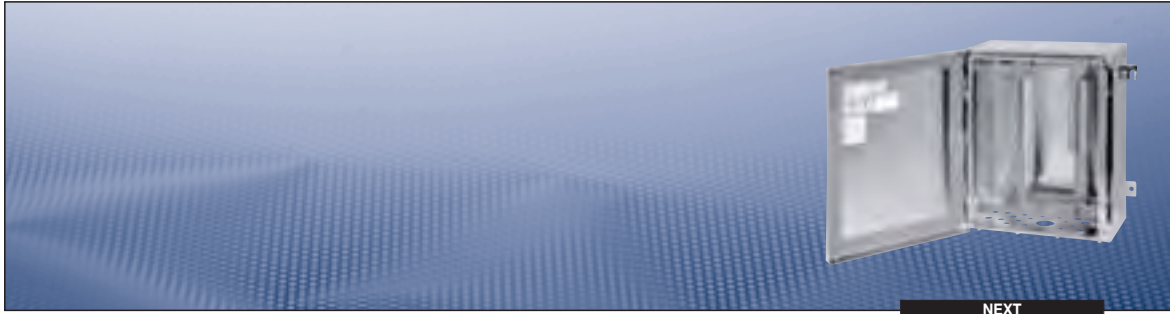
NEXT Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ F _{vertical} X F _{horizontal}	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing centres		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
86/64/20	33.86x25.20x8.07	22.44x27.40	83.80	29.92	21.26	30.71	22.05	6x147	5x123	5x 92	4x73
91/61/20	35.98x24.02x8.07	22.01x26.22 ²⁾	68.20	32.05	20.08	32.83	20.87	5x158	5x132	4x 99	4x79
98/74/20	38.58x29.13x8.07	27.56x31.34	83.60	34.65	25.20	35.43	25.98	6x171	6x143	5x107	5x85

NEXT Size	Available glanding area			Max. Entry Guide (imperial)							Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
86/64/20	1x (23.39x4.88)	2x (11.97x4.88)	2x (11.97x4.88)	48/8/24	39/36/18	21/20/10	17/16/8	7/7/4	6/5/3	5/4/2	NXTS18664200
91/61/20	22.28x4.25	22.28x4.25	22.28x4.25	47/47/47	24/24/24	20/20/20	8/8/8	7/7/7	6/6/6	5/5/5	NXTS19161200
98/74/20	2x (11.97x4.88)	2x (15.91x4.88)	2x (15.91x4.88)	48/66/33	36/51/26	20/28/14	16/22/11	7/9/5	5/7/4	4/6/3	NXTS19874200

Options	
with 1 gland plate	NXT S1 XXYYZZ 1
with 3 gland plate	NXT S1 XXYYZZ 3
NXT Painted	NXT PS XXYYZZ N
with 2 gland plates	NXT S1 XXYYZZ 2
with 4 gland plates	NXT S1 XXYYZZ 4
Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0- HASP

Type	Order No.
Example	
98/74/20 with 1 gland plate, 316L and Padlock HASP facility	NXTS19874201-HASP

- Notes:** ¹⁾ Dimensions drawing see page 7.39
²⁾ ~~123~~³⁾ Subtract 30 mm when no side gland plates
³⁾ Refer to „OPTIONS“ for full order number detail



Ordering details NEXT IMPERIAL up to 6 x 75 terminals

NEXT Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ F _{vertical X} F _{horizontal}	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing centres		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content – landscape orientation –											
35/30/20	12.05x13.78x8.07	7.99x15.94	17.0	8.11	9.84	8.90	10.63	3x36	2x30	2x23	2x18
45/38/20	14.96x17.72x8.07	9.84x19.92	23.2	11.02	13.78	11.81	14.57	4x36	3x36	3x30	3x23
55/45/20	18.03x21.65x8.07	12.01x23.86	32.7	14.09	17.72	14.88	18.50	5x67	4x56	4x42	4x33
64/50/20	19.69x25.20x8.07	13.78x27.40	46.1	15.75	21.26	16.54	22.05	6x75	5x63	5x47	4x37

NEXT Size	Available glanding area			Max. Entry Guide (metric) Top & Bottom / Left / Right							Order No. ³⁾
	Top & Bottom	Left	Right	gland (first row) hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail – landscape orientation –											
35/30/20	11.97x4.88	8.43x4.88	10.16x4.88	38/26/32	23/15/20	18/12/15	10/6/8	8/5/5	3/2/3	3/2/2	NXTS13530201
				21/14/18	12/8/10	10/6/8	8/5/7	4/2/3	3/2/3	3/2/2	
45/38/20	15.91x4.88	8.43x4.88	8.43x4.88	52/26/26	32/15/15	26/12/12	13/6/6	11/5/5	5/2/2	4/2/2	NXTS14538201
				29/14/14	16/8/8	13/6/6	11/5/5	5/2/2	4/2/2	4/2/2	
55/45/20	19.84x4.88	13.15x4.88	13.15x4.88	64/42/42	39/26/26	33/21/21	17/11/11	14/9/9	6/4/4	5/3/3	NXTS15545201
				36/23/23	20/13/13	17/11/11	14/9/9	6/4/4	5/3/3	5/3/3	
64/50/20	23.39x4.88	15.91x4.88	15.91x4.88	78/52/52	47/32/32	39/26/26	20/13/13	17/11/11	7/5/5	6/4/4	NXTS16450201
				42/29/29	24/16/16	21/13/13	17/11/11	8/5/5	6/4/4	6/4/4	

Options			
with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYZZ0- HASP

Type	Order No.
Example	
45/38/20 with 2 gland plates, 316L and Padlock HASP facility	NXTS14538202-HASP

Notes: ¹⁾ Dimensions drawing see page 7.39
²⁾ ¹²³ Subtract 30 mm when no side gland plates
³⁾ Refer to „OPTIONS“ for full order number detail

EX - TERMINAL ENCLOSURES

Stainless Steel Version for Zone 1 and Zone 21

Ex-Cell

The Ex-Cell enclosure range is an ATEX certified enclosure / termination solution for category 2 (Zone1) application with an ingress protection of IP66. Ex-Cell is available in a comprehensive range of sizes, each with the facility for various configuration possibilities for a multitude of applications. Using the highest quality materials, some unique design benefits and precision manufacturing, the Ex-Cell range is the benchmark in enclosure for both instrumentation and electrical applications.

The Ex-Cell product line is designed and ATEX certified for hazardous areas, UL-approved for heavy industrial applications and are predominantly used in the petrochemical, pharmaceutical, food process and utilities market sectors. As a result of this our enclosures have the inherent benefits of a high degree of ingress protection (IP) to environmental characteristics such as ingress of water and dust. The ingress protection (IP) of the complete product line is IP66 (water & dust), have an impact resistance of a minimum of 7 Nm whilst maintaining IP66, thus making them ideal for wash-down applications.

The Ex-Cell-I series is made for instrumentation with easy access central locking system and hinged cover.

The 1/4 turn embossed latch or bolt down fastening provides rapid means of achieving high integrity ingress protection (IP) of 66 environmental seal for reliable, rapid environmental protection.

An option for up to 3 gland plates (3 mm thick) on each side. Three possible combinations of 0, 1 or 3 gland-plates available. All sealed to IP66 rating by a high integrity Chloroprene gasket and secured by rapid fixing „Hytork“ fixing bolts.

An integral drainage channel prevents liquids or other solids contaminates from running in or falling into the enclosure when the door is opened, and to minimise gasket path contamination.

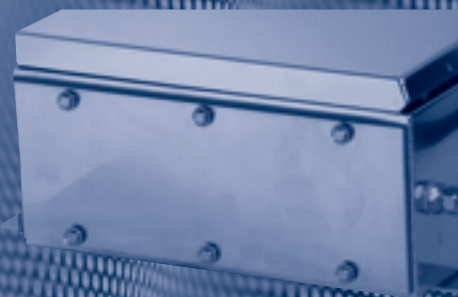
Stainless steel 316 L options and 304

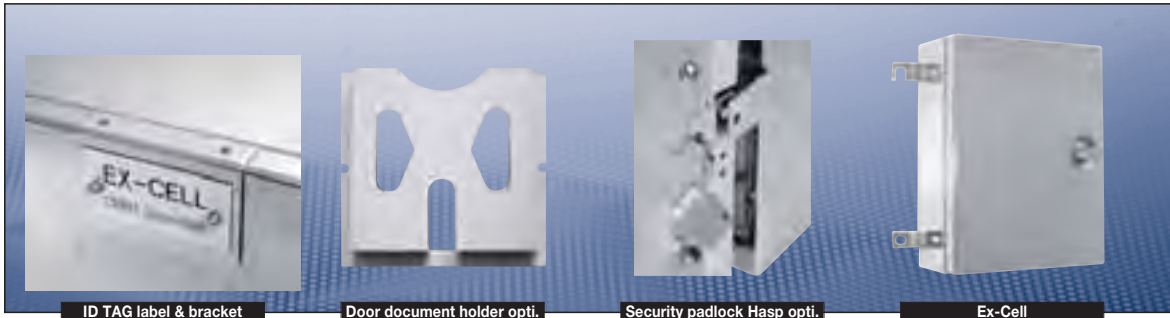
Safety standard IP66

Hinges and central locking device for easy access

Extended ambient temperatures -20 °C to +60 °C using chloroprene sponge gasket

External and internal earthing bolts





Technical data

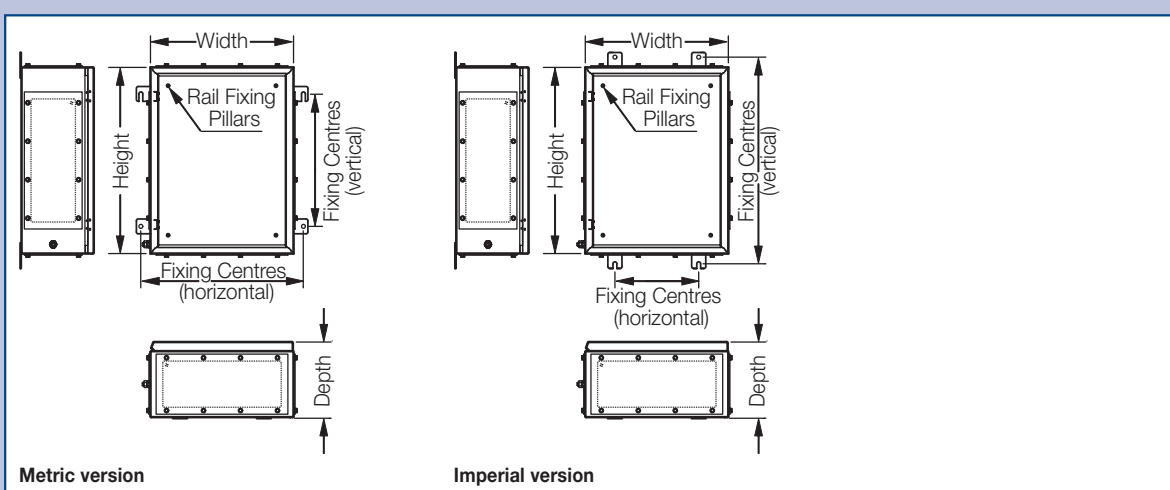
Type Ex-Cell METRIC and IMPERIAL

Marking to 94/9/EC	Ex II 2 G Ex dem ia/ib IIC T6, T5, T4 / Ex II 2 D Ex tD A21 IP66 T80 °C, T95 °C
Temperature class	T6 up to +40 °C / T5 up to +55 °C
EC-Type Examination Certificate	PTB 02 ATEX 1014
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option: closed cell expanded Silicone gasket)
Rated voltage	up to 750 V*
Rated current	up to 500 A*
Connecting terminals	u to 240 mm ² *
Insulation class	I
Degree of protection accd. EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	up to 4 side optional gland plate combination with entries to meet requirements
Type of mounting	4 x 3 mm welded lugs with Ø 11 mm holes/slots, vertical or horizontal
Enclosure material	stainless steel 316 L or 304 electro chemically polished or sheet steel polyester powder coated (RAL 7032)
Material thickness	1.2 mm (body), 1.5 mm (door)
Equipment mountings	4 x stand off pillars Ø 9 mm, 25 mm height, tapped M6 x 10, for rail or mounting plate
Enclosure earth	M10 external and internal brass earth stud assembly
Gasket material	PUR, Chloroprene gasket (option), closed cell expanded Silicone gasket (option)

* depending on type of terminal and Ex-components used

cULus types 3S, 4, 4x approval, Germanischer Lloyd available on request.

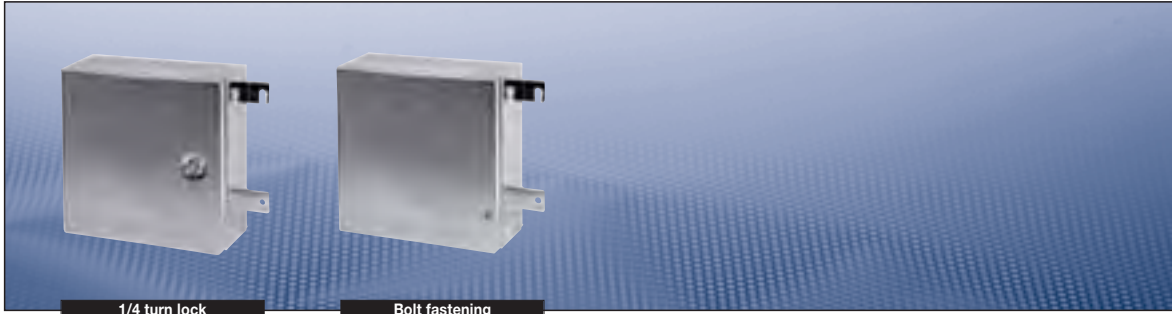
Dimension drawing



Dimensions in mm

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Ex-e/Ex-i terminal enclosures



1/4 turn lock

Bolt fastening

Ordering details Ex-Cell METRIC up to 2 x 56 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
23/15/13	229x152x127	152x208	2.35	129	52	149	72	1x21	1x17	1x13	1x10	1x 9
26/26/15	260x260x152	170x316	2.8	160	160	180	180	2x27	2x23	1x17	1x13	1x11
30/20/15	305x203x152	203x259	3.4	205	103	225	123	1x36	1x30	1x23	1x18	1x15
30/30/15	305x305x152	203x361	4.6	205	205	225	225	2x36	2x30	2x23	2x18	2x15
30/30/20	305x305x203	203x361	5.8	205	205	225	225	2x36	2x30	2x23	2x18	2x15
40/30/15	406x305x152	267x361	5.7	306	205	326	225	2x56	2x47	2x35	2x28	2x23
40/30/20	406x305x203	267x361	6.6	306	205	326	225	2x56	2x47	2x35	2x28	2x23

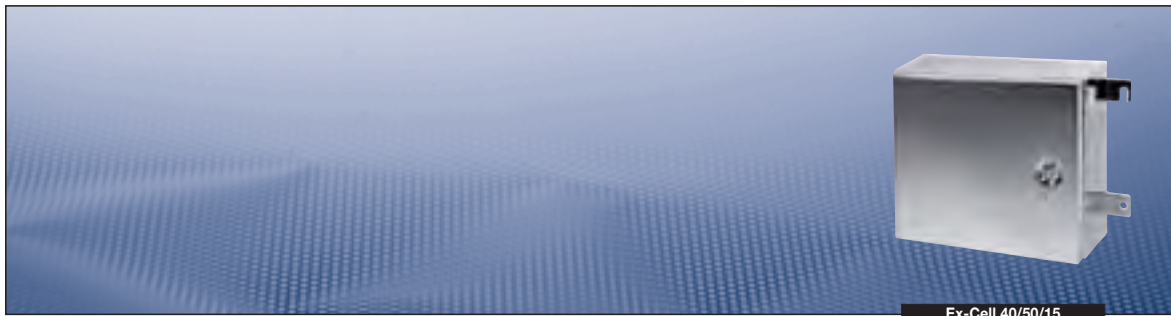
316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)							Order No. ²⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
23/15/13	108x 58	108x 58	108x 58	6/6/6	2/2/2	2/2/2	1/1/1	-	-	-	XLHS12315130
26/26/15	214x 80	114x 80	114x 80	21/11/11	10/5/5	4/2/2	3/2/2	3/1/1	2/1/1	-	XLHS12626150
30/20/15	156x 80	156x 80	156x 80	15/15/15	7/7/7	3/3/3	2/2/2	2/2/2	2/2/2	-	XLHS13020150
30/30/15	261x 80	156x 80	156x 80	26/15/15	13/7/7	5/3/3	4/2/2	3/2/2	3/2/2	-	XLHS13030150
30/30/20	261x124	214x124	261x124	34/28/34	18/15/18	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	XLHS13030200
40/30/15	261x 80	261x 80	261x 80	26/26/26	13/13/13	5/5/5	4/4/4	3/3/3	3/3/3	-	XLHS14030150
40/30/20	261x124	261x124	261x124	34/34/34	18/18/18	15/15/15	8/8/8	6/6/6	3/3/3	2/2/2	XLHS14030200

Options			
with 1 gland plate	XLH S1 XXYYZZ 1	with 3 gland plates	XLH S1 XXYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH NN XXYYZZ0- HASP

Type	Order No.
Example	
30/20/15 with 3 gland plates, painted with bolt fastening and permanent padlock HASP facility	XLHPS 3020153-B-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail



Ex-Cell 40/50/15

Ordering details Ex-Cell METRIC up to 3 x 77 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
40/40/15	406x406x152	267x462	7.1	306	306	326	326	3x56	3x47	3x35	3x28	3x23
40/40/20	406x406x203	267x462	8.1	306	306	326	326	3x56	3x47	3x35	3x28	3x23
40/50/15	406x508x152	267x564	8.5	306	408	326	428	4x56	4x47	4x35	4x28	4x23
40/50/20	406x508x203	267x564	9.7	306	408	326	428	4x56	4x47	4x35	4x28	4x23
50/40/15	508x406x152	354x462	8.5	408	306	428	326	3x77	3x64	3x48	3x38	3x32
50/40/20	508x406x203	354x462	9.7	408	306	428	326	3x77	3x64	3x48	3x38	3x32

316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)						Order No. ²⁾	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
40/40/15	337x 80	261x 80	261x 80	35/26/26	17/13/13	7/5/5	6/4/4	5/3/3	4/3/3	-	XLHS14040150
40/40/20	334x124	261x124	261x124	44/34/34	26/18/18	21/15/15	11/8/8	9/6/6	4/3/3	3/2/2	XLHS14040200
40/50/15	464x 80	261x 80	261x 80	48/26/26	24/13/13	10/5/5	8/4/4	7/3/3	6/3/3	-	XLHS14050150
40/50/20	460x124	261x124	261x124	62/34/34	35/18/18	29/15/15	15/8/8	13/6/6	5/3/3	4/2/2	XLHS14050200
50/40/15	337x 80	337x 80	337x 80	35/35/35	17/17/17	7/7/7	6/6/6	5/5/5	4/4/4	-	XLHS15040150
50/40/20	334x124	334x124	334x124	44/44/44	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	XLHS15040200

Options

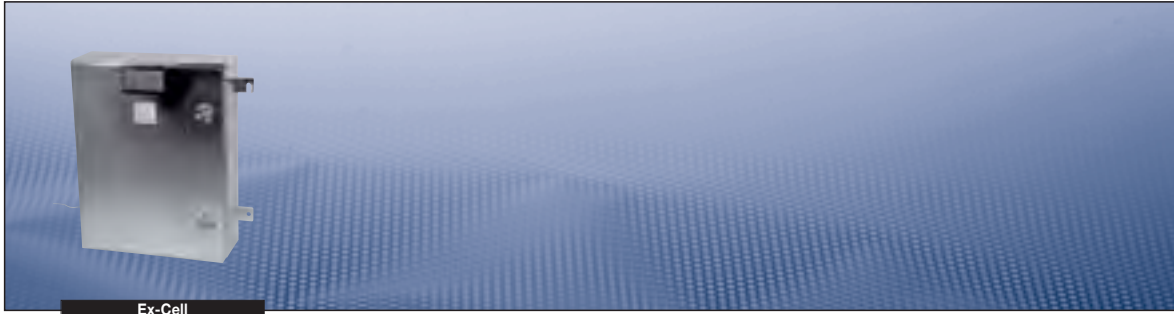
with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH NN XXYZZ0- HASP

Type	Order No.
Example	
40/50/20 with 1 gland plates, 316L SS with bolt fastening and permanent padlock HASP facility	XLHS14050201-B-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail

Ex-e/Ex-i terminal enclosures



Ex-Cell

Ordering details Ex-Cell METRIC up to 4 x 97 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
50/50/15	508x508x152	354x564	10.2	408	408	428	428	4x77	4x64	4x 48	4x38	4x32
50/50/20	508x508x203	354x564	11.4	408	408	428	428	4x77	4x64	4x 48	4x38	4x32
50/60/20	508x610x203	354x666	13.2	408	510	428	530	6x77	6x64	6x 48	6x38	6x32
60/40/15	610x406x152	445x462	9.9	510	306	530	326	3x97	3x81	3x61	3x49	3x40
60/40/20	610x406x203	445x462	11.2	510	306	530	326	3x97	3x81	3x61	3x49	3x40
60/50/15	610x508x152	445x564	11.8	510	408	530	428	4x97	4x81	4x61	4x49	4x40
60/50/20	610x508x203	445x564	13.2	510	408	530	428	4x97	4x81	4x61	4x49	4x40

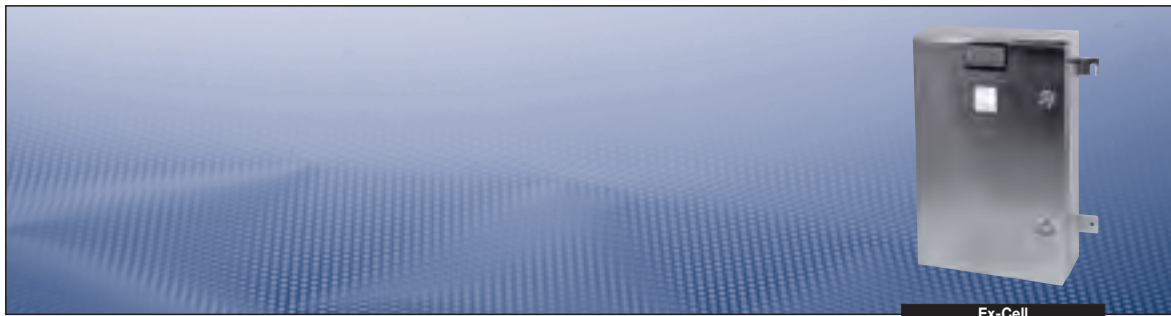
316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)						Order No. ²⁾	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50		M63
Gland entry detail											
50/50/15	464x 80	337x 80	337x 80	48/35/35	24/17/17	10/7/7	8/6/6	7/5/5	6/4/4	-	XLHS15050150
50/50/20	460x124	334x124	334x124	62/44/44	35/26/26	29/21/21	15/11/11	13/9/9	5/4/4	4/3/3	XLHS15050200
50/60/20	562x124	334x124	334x124	78/44/44	44/26/26	36/21/21	19/11/11	16/9/9	7/4/4	5/3/3	XLHS15060200
60/40/15	337x 80	464x 80	464x 80	35/48/48	17/24/24	7/10/10	6/8/8	5/7/7	4/6/6	-	XLHS16040150
60/40/20	334x124	460x124	460x124	44/62/62	26/35/35	21/29/29	11/15/15	9/13/13	4/5/5	3/4/4	XLHS16040200
60/50/15	464x 80	464x 80	464x 80	48/48/48	24/24/24	10/10/10	8/8/8	7/7/7	6/6/6	-	XLHS16050150
60/50/20	460x124	460x124	460x124	62/62/62	35/35/35	29/29/29	15/15/15	13/13/13	5/5/5	4/4/4	XLHS16050200

Options			
with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH NN XXYZZ0- HASP

Type	Order No.
Example	
60/50/20 with 3 gland plates, painted 1/4 turn lock fastening and permanent padlock HASP facility	XLHPS6050203-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail



Ex-Cell

Ordering details Ex-Cell METRIC up to 7 x 128 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing Rail length centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
60/60/15	610x610x152	445x666	13.7	510	510	530	530	6x	97	6x	81	6x40
60/60/20	610x610x203	445x666	15.3	510	510	530	530	6x	97	6x	81	6x40
60/76/20	610x762x203	445x818	18.3	510	662	530	682	7x	97	7x	81	7x40
76/50/20	762x508x203	508x564	15.9	662	408	682	428	4x	128	4x	106	4x53
76/60/20	762x610x203	508x666	18.3	662	510	682	530	6x	128	6x	106	6x53
76/76/20	762x762x203	508x818	21.9	662	662	682	682	7x	128	7x	106	7x53

316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)						Order No. ²⁾	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
60/60/15	562x 80	464x 80	464x 80	59/48/48	29/24/24	12/10/10	10/8/8	8/7/7	7/6/6	-	XLHS16060150
60/60/20	562x124	460x124	460x124	78/62/62	44/35/35	36/29/29	19/15/15	16/13/13	7/5/5	5/4/4	XLHS16060200
60/76/20	714x124	460x124	460x124	100/62/62	56/35/35	47/29/29	24/15/15	20/13/13	9/5/5	7/4/4	XLHS16076200
76/50/20	460x124	562x124	562x124	62/78/78	35/44/44	29/36/36	15/19/19	13/16/16	5/7/7	4/5/5	XLHS17650200
76/60/20	562x124	562x124	562x124	78/78/78	44/44/44	36/36/36	19/19/19	16/16/16	7/7/7	5/5/5	XLHS17660200
76/76/20	714x124	562x124	562x124	100/78/78	56/44/44	47/36/36	24/19/19	20/16/16	9/7/7	7/5/5	XLHS17676200

Options

with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH PS XXYZZ0- HASP

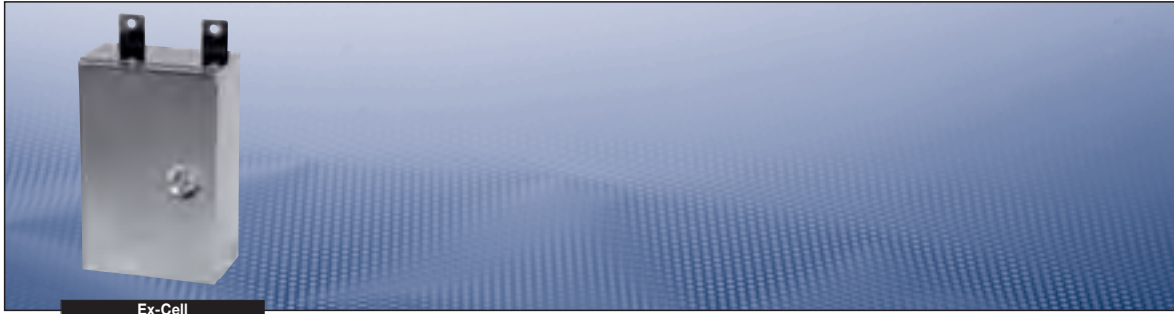
Type	Order No.
Example	
60/76/20 with 3 gland plates, 316 SS with bolt fastening and permanent padlock HASP facility	XLHS16076203-B-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail

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Ex-e/Ex-i terminal enclosures



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 2 x 36 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
9"/6"/5"	9x6x5	10.24x3.50	5.17	5.08	2.05	5.87	2.83	1x21	1x17	1x13	1x10	1x9
12"/8"/6"	12x8x6	13.24x5.50	7.54	8.07	4.06	8.86	4.84	1x36	1x30	1x23	1x18	1x15
12"/12"/6"	12x12x6	13.24x9.50	10.07	8.07	8.07	8.86	8.86	2x36	2x30	2x23	2x18	2x15
12"/12"/8"	12x12x8	13.24x9.50	12.76	8.11	8.11	8.90	8.90	2x36	2x30	2x23	2x18	2x15

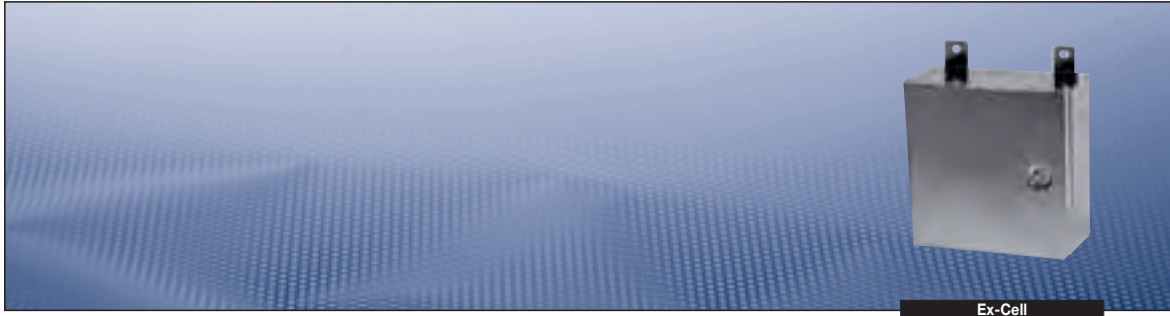
316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
9"/6"/5"	4.25x2.28	4.25x2.28	4.25x2.28	6/6/6	2/2/2	2/2/2	1/1/1	-	-	-	XLVS10906050
				2/2/2	2/2/2	2/2/2	-	-	-		
12"/8"/6"	6.14x3.15	6.14x3.15	6.14x3.15	9/9/9	7/7/7	3/3/3	2/2/2	2/2/2	2/2/2	-	XLVS11208060
				3/3/3	3/3/3	2/2/2	-	-	-		
12"/12"/6"	10.28x3.15	6.14x3.15	6.14x3.15	16/9/9	13/7/7	5/3/3	4/2/2	3/2/2	3/2/2	-	XLVS11212060
				12/3/3	5/3/3	4/2/2	4/0/0	3/0/0	-		
12"/12"/8"	10.27x4.88	8.42x4.88	10.27x4.88	32/26/32	20/15/20	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	XLVS11212080
				18/14/18	10/8/10	8/6/8	7/5/7	3/2/3	3/2/3	2/2/2	

Options			
with 1 gland plate	XLV S1 XXYZZ 1	with 3 gland plates	XLV S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYZZ0- HASP

Type	Order No.
Example	
12/8/6 with 3 gland plates, painted with bolt fastening	XLVS11208063-B

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 3 x 56 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
16"/12"/6"	16x12x6	17.24x 9.50	12.57	12.05	8.07	12.83	8.86	2x56	2x47	2x35	2x28	2x23
16"/12"/8"	16x12x8	17.24x 9.50	14.54	12.05	8.07	12.83	8.86	2x56	2x47	2x35	2x28	2x23
16"/16"/6"	16x16x6	17.24x10.00	15.63	12.05	12.05	12.83	12.83	3x56	3x47	3x35	3x28	3x23
16"/16"/8"	16x16x8	17.24x10.00	17.87	12.05	12.05	12.83	12.83	3x56	3x47	3x35	3x28	3x23

316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
16"/12"/6"	10.28x3.15	10.28x3.15	10.28x3.15	16/16/16	13/13/13	5/5/5	4/4/4	3/3/3	3/3/3	-	XLVS11612060
				12/12/12	5/5/5	4/4/4	4/4/4	3/3/3	-	-	
16"/12"/8"	10.27x4.88	10.27x4.88	10.27x4.88	32/32/32	20/20/20	15/15/15	8/8/8	6/6/6	3/3/3	2/2/2	XLVS11612080
				18/18/18	10/10/10	8/8/8	7/7/7	3/3/3	3/3/3	2/2/2	
16"/16"/6"	13.27x3.15	10.28x3.15	10.28x3.15	21/16/16	17/13/13	7/5/5	6/4/4	5/3/3	4/3/3	-	XLVS11616060
				15/12/12	7/5/5	6/4/4	5/4/4	4/3/3	-	-	
16"/16"/8"	13.15x4.88	10.27x4.88	10.27x4.88	42/32/32	26/20/20	21/15/15	11/8/8	9/6/6	4/3/3	3/2/2	XLVS11616080
				23/18/18	13/10/10	11/8/8	9/7/7	4/3/3	3/3/3	3/2/2	

Options			
with 1 gland plate	XLV S1 XXXYZZ 1	with 3 gland plates	XLV S1 XXXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXXYZZ0- HASP

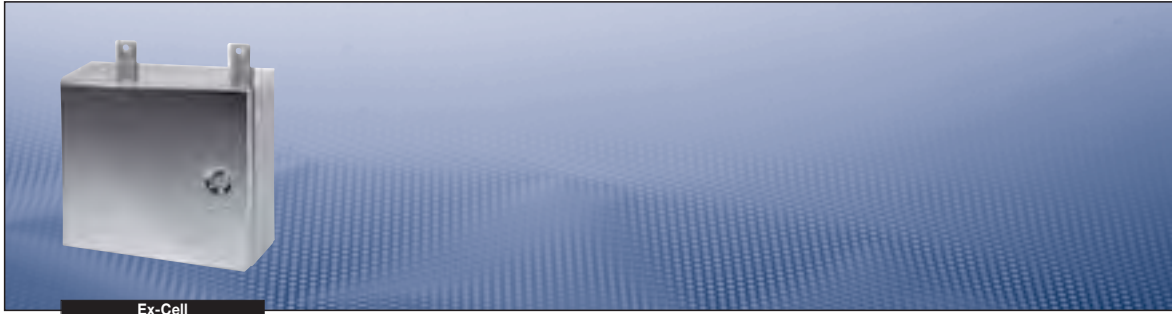
Type	Order No.
Example	
16/16/06 with 1 gland plates, 304 SS with 1/4 turn lock fastening and permanent padlock HASP facility	XLVS21616061-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail

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Ex-e/Ex-i terminal enclosures



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 3 x 77 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
16"/20"/6"	16x20x6	17.24x14.00	18.71	12.05	16.06	12.83	16.85	4x56	4x47	4x35	4x28	4x23
16"/20"/8"	16x20x8	17.24x14.00	21.24	12.05	16.06	12.83	16.85	4x56	4x47	4x35	4x28	4x23
20"/16"/6"	20x16x6	21.24x10.00	18.71	16.06	12.05	16.85	12.83	3x77	3x64	3x48	3x38	3x32
20"/16"/8"	20x16x8	21.24x10.00	21.24	16.06	12.05	16.85	12.83	3x77	3x64	3x48	3x38	3x32

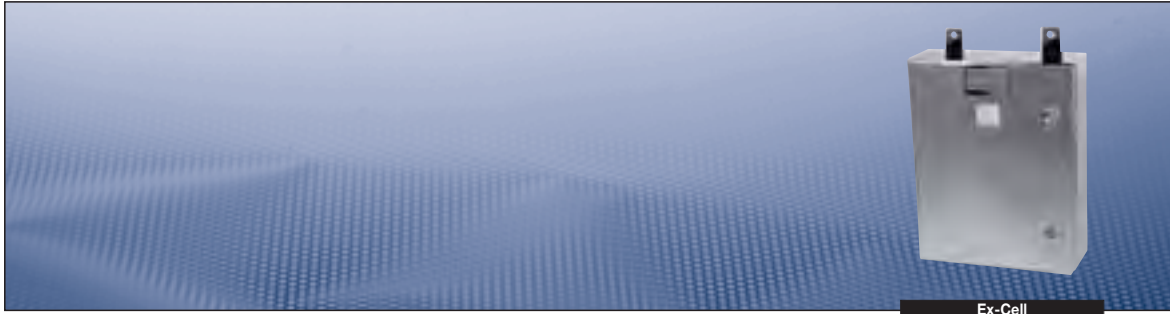
316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
16"/20"/6"	18.27x3.15	10.28x3.15	10.28x3.15	30/16/16	24/13/13	10/5/5	8/4/4	7/3/3	6/3/3	-	
				22/12/12	10/5/5	8/4/4	7/4/4	6/3/3	-	-	XLVS11620060
16"/20"/8"	18.11x4.88	10.27x4.88	10.27x4.88	58/32/32	36/20/20	30/15/15	15/8/8	13/6/6	5/3/3	4/2/2	
				33/18/18	18/10/10	16/8/8	13/7/7	6/3/3	5/3/3	4/2/2	XLVS11620080
20"/16"/6"	13.27x3.15	13.27x3.15	13.27x3.15	21/21/21	17/17/17	7/7/7	6/6/6	5/5/5	4/4/4	-	
				15/15/15	7/7/7	6/6/6	5/5/5	4/4/4	-	-	XLVS12016060
20"/16"/8"	13.15x4.88	13.15x4.88	13.15x4.88	42/42/42	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	
				23/23/23	13/13/13	11/11/11	9/9/9	4/4/4	3/3/3	3/3/3	XLVS12016080

Options			
with 1 gland plate	XLV S1 XXYZZ 1	with 3 gland plates	XLV S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYZZ0- HASP

Type	Order No.
Example	
20/16/8 with 3 gland plates, painted with bolt fastening and permanent padlock HASP facility	XLVPS2016083-B-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 6 x 77 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
20"/20"/6"	20x20x6	21.24x14.00	22.36	16.06	16.06	16.85	16.85	4x77	4x64	4x48	4x38	4x32
20"/20"/8"	20x20x8	21.24x14.00	25.17	16.06	16.06	16.85	16.85	4x77	4x64	4x48	4x38	4x32
20"/24"/8"	20x24x8	21.24x18.00	29.10	16.06	20.08	16.85	20.87	6x77	6x64	6x48	6x38	6x32

316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
20"/20"/6"	18.27x3.15	13.27x3.15	13.27x3.15	30/21/21	24/17/17	10/7/7	8/6/6	7/5/5	6/4/4	-	XLVS12020060
				22/15/15	10/7/7	8/6/6	7/5/5	6/4/4	-	-	
20"/20"/8"	18.11x4.88	13.15x4.88	13.15x4.88	58/42/42	36/26/26	30/21/21	15/11/11	13/9/9	5/4/4	4/3/3	XLVS12020080
				33/23/23	18/13/13	16/11/11	13/9/9	6/4/4	5/3/3	4/3/3	
20"/24"/8"	22.13x4.88	13.15x4.88	13.15x4.88	72/42/42	44/26/26	36/21/21	19/11/11	16/9/9	7/4/4	5/3/3	XLVS12024080
				41/23/23	23/13/13	19/11/11	16/9/9	7/4/4	6/3/3	5/3/3	

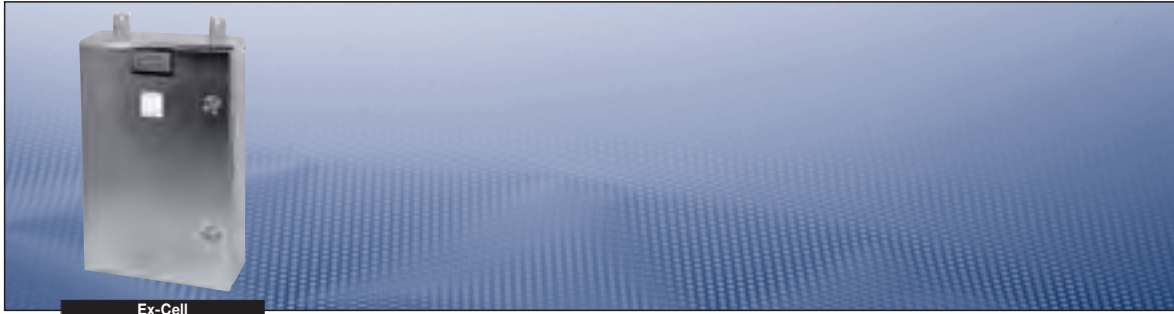
Options			
with 1 gland plate	XLV S1 XXXYZZ 1	with 3 gland plates	XLV S1 XXXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXXYZZ0- HASP

Type	Order No.
Example	
20/20/8 with 1 gland plates, 316L SS with bolt fastening	XLVS12020081-B

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail

Ex-e/Ex-i terminal enclosures



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 4 x 97 terminals

316L SS - 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
24"/16"/6"	24x16x6	25.24x10.00	21.80	20.08	12.05	20.87	12.83	3x97	3x81	3x61	3x49	3x40
24"/16"/8"	24x16x8	25.24x10.00	24.61	20.08	12.05	20.87	12.83	3x97	3x81	3x61	3x49	3x40
24"/20"/6"	24x20x6	25.24x14.00	26.01	20.08	16.06	20.87	16.85	4x97	4x81	4x61	4x49	4x40
24"/20"/8"	24x20x8	25.24x14.00	29.01	20.08	16.06	20.87	16.85	4x97	4x81	4x61	4x49	4x40

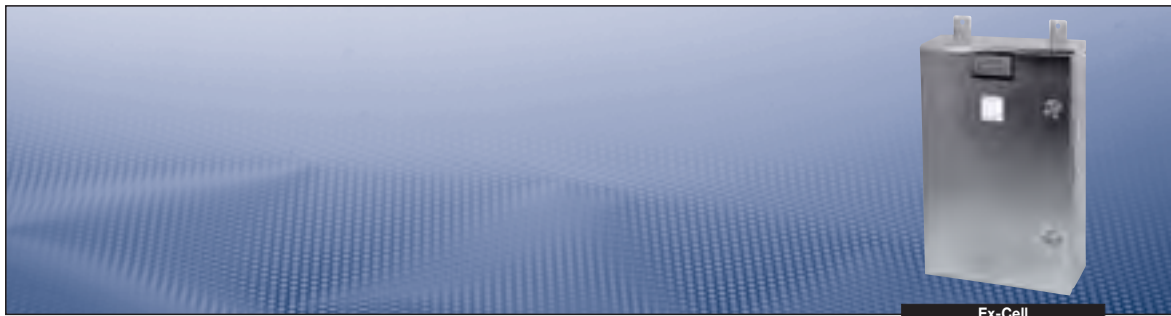
316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
24"/16"/6"	13.27x3.15	18.27x3.15	18.27x3.15	21/30/30	17/24/24	7/10/10	6/8/8	5/7/7	4/6/6	-	XLVVS12416060
				15/22/22	7/10/10	6/8/8	5/7/7	4/6/6	-	-	
24"/16"/8"	13.15x4.88	18.11x4.88	18.11x4.88	42/58/58	26/36/36	21/30/30	11/15/15	9/13/13	4/5/5	3/4/4	XLVVS12416080
				23/33/33	13/18/18	11/16/16	9/13/13	4/6/6	3/5/5	3/4/4	
24"/20"/6"	18.27x3.15	18.27x3.15	18.27x3.15	30/30/30	24/24/24	10/10/10	8/8/8	7/7/7	6/6/6	-	XLVVS12420060
				22/22/22	10/10/10	8/8/8	7/7/7	6/6/6	-	-	
24"/20"/8"	18.11x4.88	18.11x4.88	18.11x4.88	58/58/58	36/36/36	30/30/30	15/15/15	13/13/13	5/5/5	4/4/4	XLVVS12420080
				33/33/33	18/18/18	16/16/16	13/13/13	6/6/6	5/5/5	4/4/4	

Options			
with 1 gland plate	XLV S1 XXYZZ 1	with 3 gland plates	XLV S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYZZ0- HASP

Type	Order No.
Example	
24/16/6 with 1 gland plates, painted with bolt fastening and permanent padlock HASP facility	XLVPS2416061-B-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 7 x 97 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content						
				Rail fixing centres		Rail length		Row orientation vertical						
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²		
Enclosure dimensions and terminal content														
24"/24"/6"	24x24x6	25.24x18.00	30.22	20.08	20.08	20.87	20.87	6x97	6x81	6x61	6x49	6x40		
24"/24"/8"	24x24x8	25.24x18.00	33.60	20.08	20.08	20.87	20.87	6x97	6x81	6x61	6x49	6x40		
24"/30"/8"	24x30x8	25.24x24.00	40.30	20.08	26.06	20.87	26.85	7x97	7x81	7x61	7x49	7x40		

316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
24"/24"/6"	22.13x3.15	18.27x3.15	18.27x3.15	36/30/30	29/24/24	12/10/10	10/8/8	8/7/7	7/6/6	-	
				27/22/22	12/10/10	10/8/8	8/7/7	7/6/6	-	-	XLVS12424060
24"/24"/8"	22.13x4.88	18.11x4.88	18.11x4.88	72/58/58	44/36/36	36/30/30	19/15/15	16/13/13	7/5/5	5/4/4	
				41/33/33	23/18/18	19/16/16	16/13/13	7/6/6	6/5/5	5/4/4	XLVS12424080
24"/30"/8"	28.11x4.88	18.11x4.88	18.11x4.88	94/58/58	57/36/36	47/30/30	24/15/15	20/13/13	9/5/5	7/4/4	
				51/33/33	30/18/18	25/16/16	21/13/13	9/6/6	8/5/5	7/4/4	XLVS12430080

Options			
with 1 gland plate	XLV S1 XXXYZZ 1	with 3 gland plates	XLV S1 XXXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXXYZZ0- HASP

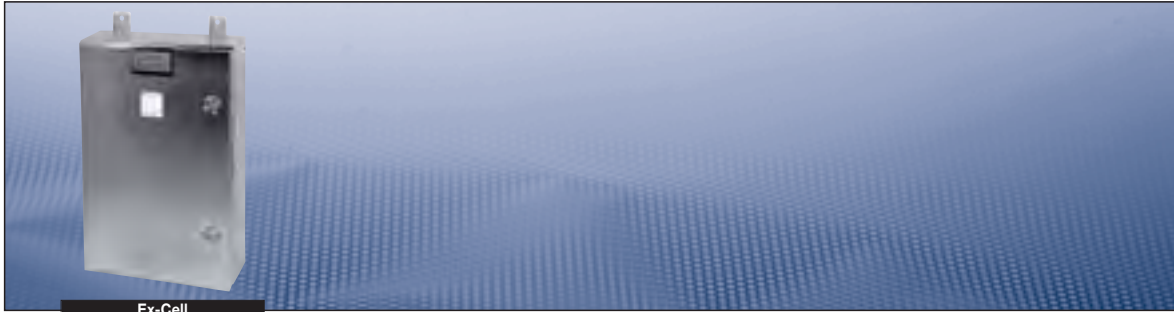
Type	Order No.
Example	
24/22/8 with 3 gland plates, 316L SS with bolt fastening	XLVS12422083-B

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail

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Ex-e/Ex-i terminal enclosures



Ex-Cell

Ordering details Ex-Cell IMPERIAL up to 7 x 128 terminals

316L SS- 1/4 Turn Lock Fastening Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing Rail length centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
Enclosure dimensions and terminal content												
30"/20"/8"	30x20x8	31.24x14.00	34.96	26.06	16.06	26.85	16.85	4x128	4x106	4x80	4x64	4x53
30"/24"/8"	30x24x8	31.24x18.00	40.30	26.06	20.08	26.85	20.87	6x128	6x106	6x80	6x64	6x53
30"/30"/8"	30x30x8	31.24x24.00	48.25	26.06	26.06	26.85	26.85	7x128	7x106	7x80	7x64	7x53

316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No. ²⁾
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
30"/20"/8"	18.11x4.88	22.13x4.88	22.13x4.88	58/72/72	36/44/44	30/36/36	15/19/19	13/16/16	5/7/7	4/5/5	XLVS13020080
				33/41/41	18/23/23	16/19/19	13/16/16	6/7/7	5/6/6	4/5/5	
30"/24"/8"	22.13x4.88	22.13x4.88	22.13x4.88	72/72/72	44/44/44	36/36/36	19/19/19	16/16/16	7/7/7	5/5/5	XLVS13024080
				41/41/41	23/23/23	19/19/19	16/16/16	7/7/7	6/6/6	5/5/5	
30"/30"/8"	28.11x4.88	22.13x4.88	22.13x4.88	94/72/72	57/44/44	47/36/36	24/19/19	20/16/16	9/7/7	7/5/5	XLVS13030080
				51/41/41	30/23/23	25/19/19	21/16/16	9/7/7	8/6/6	7/5/5	

Options			
with 1 gland plate	XLV S1 XXYZZ 1	with 3 gland plates	XLV S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYZZ0- HASP

Type	Order No.
Example	
30/30/8 with 1 gland plates, 304 SS with bolt fastening and permanent padlock HASP facility	XLVS23030081-B-HASP

Notes: ¹⁾ Dimensions drawing see page 7.49

²⁾ Refer to „OPTIONS“ for full order number detail

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EX - TERMINAL ENCLOSURES

Stainless Steel Version for Zone 1 and Zone 21

STB

The **STB** range is an “ATEX certified” terminal box solution available in various options of materials and finishes fully compliant with the impact, thermal and ingress requirements of EN 60079-0 ff. and EN 6124-0 ff. and is available in a comprehensive range of 12 different sizes. With for the possibilities many configuration for a multitude of applications. Using the highest quality materials, unique design benefits and precision manufacturing the **STB** range is the benchmark in heavy-duty gauge enclosures of its class.

STB has unique wrap-round lid cover design that wraps around the body of the enclosures eliminate ingress of either liquids such as green-water or powder, such as sand. This design provides a significant advantage as the gasket sealing area is not exposed to the external environment, preventing contamination from ice formations and abrasion of sand storms. The lid cover is secured and sealed to IP66 by the retained stainless steel bolts around the outside of the enclosure, whilst being supported a floppy hinge that allow the lid cover to be removed.

The superior quality „one piece“ Chloroprene closed cell gasket material that maintains the enclosures high ingress protection integrity providing IP66. This material has a wide operating temperature range for the most hostile environments.

The body of the **STB** enclosure has a superior wide surface area gasket sealing area 10 mm wide compared to conventional enclosures that use a knife-edge seal, that is only the thickness of the material, typically only 1.5 mm.

316L Stainless Steel (1.4404 to EN 10088)

Superior “corrosion resistant” electro chemically polished.

Sheet Steel - Polyester powder coated to RAL 7032.

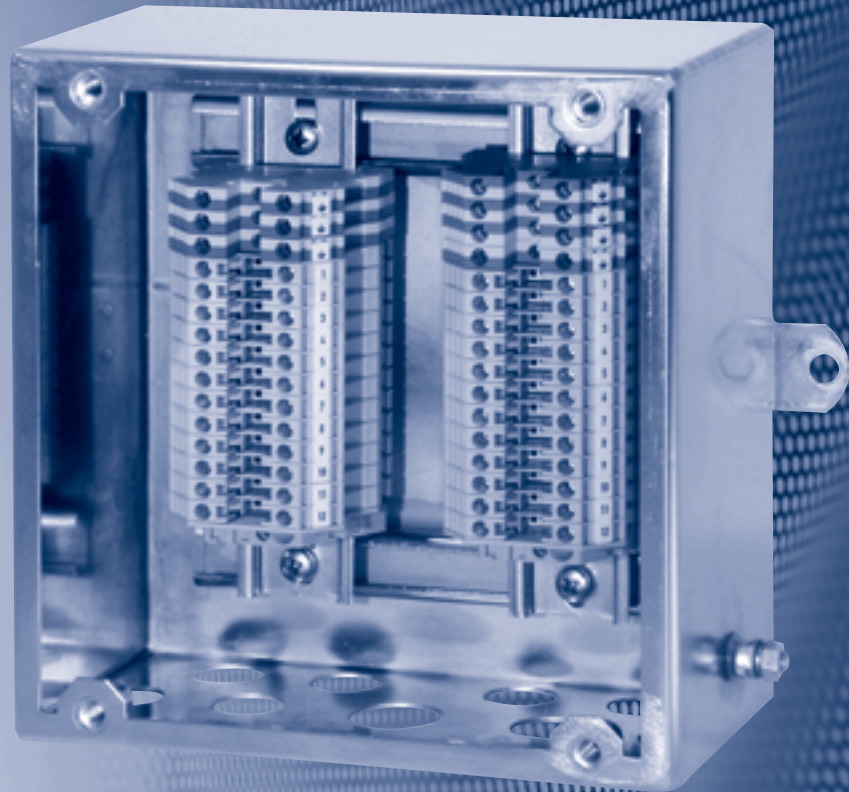
High integrity “one piece” solid Chloroprene rubber or High integrity “one piece” closed cell chloroprene sponge.

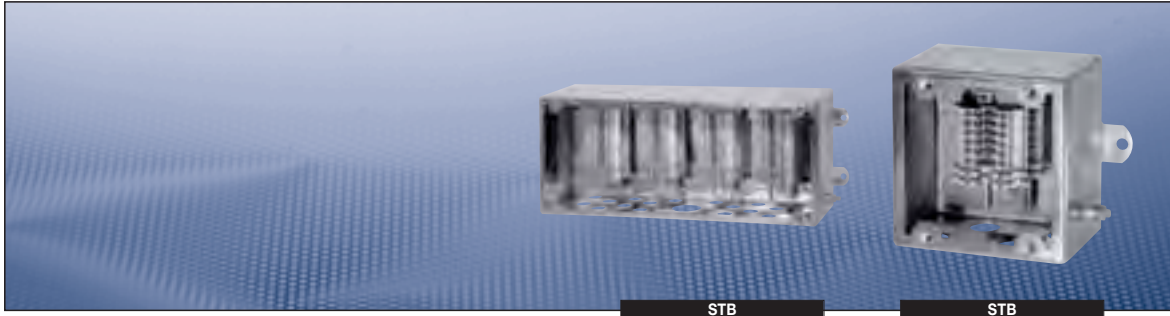
Optional Silicone gasket available on all sizes.

Safety standard IP66

Extended ambient temperatures -65°C to $+55^{\circ}\text{C}$ as option.

Certification GOST-R, AEx, cULus and Germanischer Lloyd on request





STB

STB

Technical data

Type STB Terminal Enclosure METRIC and IMPERIAL

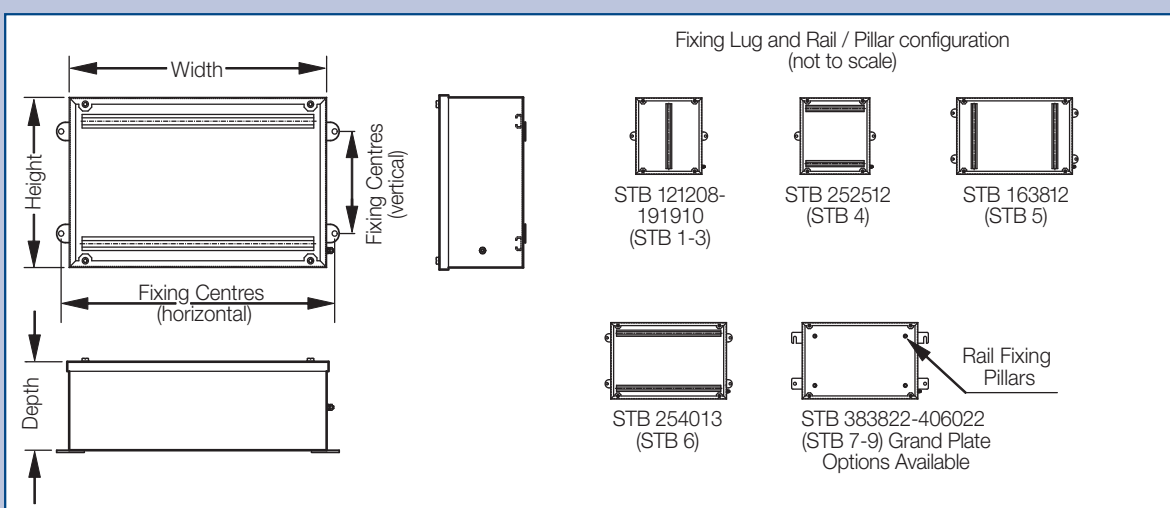
Marking to 94/9/EC	Ⓔ II 2 G Ex e ia IIC T6/T5 Ⓔ II 1 G Ex ia IIC T6, T5 Ⓔ II 2 D Ex tD A21 IP66 T95 °C
Temperature class	T6 up to +40 °C / T5 up to +55 °C
EC-Type Examination Certificate	PTB 04 ATEX 1015
Permissible ambient temperature	-30 °C to +40 °C -65 °C to +55 °C (option: Silicone gasket)
Rated voltage	up to 690 V*
Rated current	up to 500 A*
Connecting terminals	up to 240 mm ² *
Insulation class	I
Degree of protection accd. EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	up to 4 side optional gland plate combination with entries to meet requirements (38/38/20 - 60/40/20) combination with entries to meet requirements
Type of mounting	STB 12/12/08 - 25/25/12 2 welded lugs with Ø 8 mm holes STB 16/38/12 - 25/40/13 4 welded lugs with Ø 8 mm holes STB 38/38/22 - 60/40/20 4 welded lugs with Ø 11 mm holes
Enclosure material	stainless steel 316 L or sheet steel polyester powder coated (RAL 7032)
Material thickness	1.5 mm
Equipment mountings	12/12/08 - 25/40/13 internally welded TAS 20 rail terminals mounting 38/38/20 - 60/40/20 4 x stand off pillars Ø 9 mm, 25 mm height, tapped M6 x 10, for rail or mounting plate
Enclosure earth	12/12/08 - 25/40/13 M6 external/internal earth stud assembly 38/38/20 - 60/40/20 M10 external/internal earth stud assembly
Gasket material	Neoprene, Silicone gasket (option)

* depending on type of terminal and Ex-components used

Additional certifications:

GOST-R, cULus types 3S, 4, 4 x and Germanischer Lloyd approved on request.

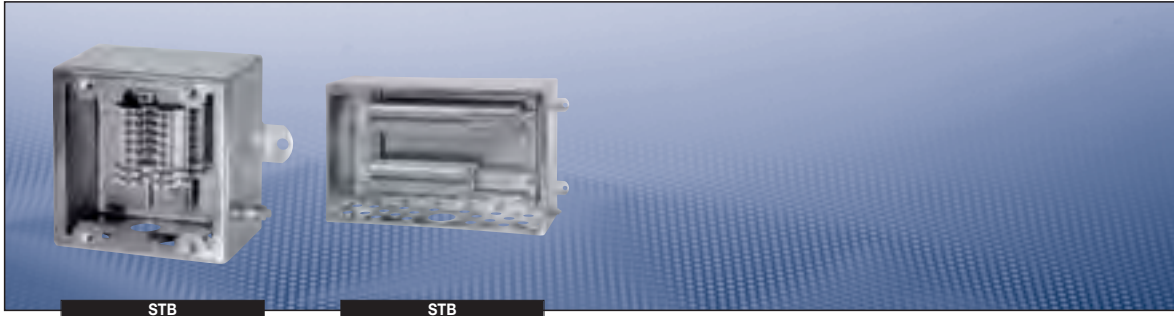
Dimension drawing



Dimensions in mm

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Ex-e Terminal enclosures



Ordering details STB METRIC up to 3 x 51 terminals

STB	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
12/12/08 ²⁾	120x120x 80	145x145	1.4	62	82	1x 8	1x 6	1x 5	1x 4		
15/12/08 ²⁾	150x120x 80	175x175	1.6	90	110	1x13	1x11	1x 8	1x 7		
15/15/09 ²⁾	150x150x 90	175x175	1.9	90	110	1x13	1x11	1x 8	1x 7		
19/15/09 ²⁾	190x150x 90	175x175	2.3	130	150	1x21	1x18	1x13	1x10		
19/19/10 ²⁾	190x190x100	215x215	3.0	130	150	1x21	1x18	1x13	1x10		
25/25/12 ²⁾	250x250x120	275x275	3.7	180	200	2x31	2x26	2x19	2x15		
16/38/12 ²⁾	160x380x120	80x405	3.7	300	320	1x55	1x46	1x34	1x28		
25/40/13 ²⁾	250x400x130	150x425	5.4	180	200	3x31	3x26	3x19	3x15		

STB	Available glanding area			Max. Entry Guide (metric)							Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
12/12/08 ²⁾	114x 63	114x 63	70x 63	7/7/4	3/3/1	2/2/1	2/2/1	-	-	-	STBS1121208
15/12/08 ²⁾	114x 63	114x 63	100x 63	7/9/6	3/3/2	2/3/2	2/2/1	-	-	-	STBS1151208
15/15/09 ²⁾	144x 73	144x 73	100x 73	9/9/6	6/6/4	3/3/2	2/2/1	2/2/1	-	-	STBS1151509
19/15/09 ²⁾	144x 73	184x 73	130x 73	9/12/8	6/8/6	3/4/2	2/3/2	2/2/1	-	-	STBS1191509
19/19/10 ²⁾	184x 83	184x 83	140x 83	18/18/14	8/8/6	7/7/5	3/3/2	2/2/2	2/2/1	-	STBS1191910
25/25/12 ²⁾	244x103	244x103	200x103	32/32/26	18/18/14	10/10/8	7/7/6	3/3/3	3/3/2	2/2/2	STBS1252512
16/38/12 ²⁾	372x103	154x103	330x103	50/20/44	29/11/24	15/6/14	12/4/10	5/2/5	4/1/4	3/1/3	STBS1163812
25/40/13 ²⁾	394x113	244x113	350x113	54/32/48	30/18/26	16/10/14	13/7/11	6/3/5	5/3/4	4/2/3	STBS1254013

Options			
STB Painted	STB PS 1XXYYZZ	STB with additional UL CERT ²⁾	STB _S 1XXYYZZ UL
STB with gland 1 plate ³⁾	STB _S 1XXYYZZ 1	STB with gland 3 plate ³⁾	STB _S 1XXYYZZ 3

Type	Order No.
Example	
15/15/09 painted with 3 gland plates and UL-certification	STBPS1151509-UL

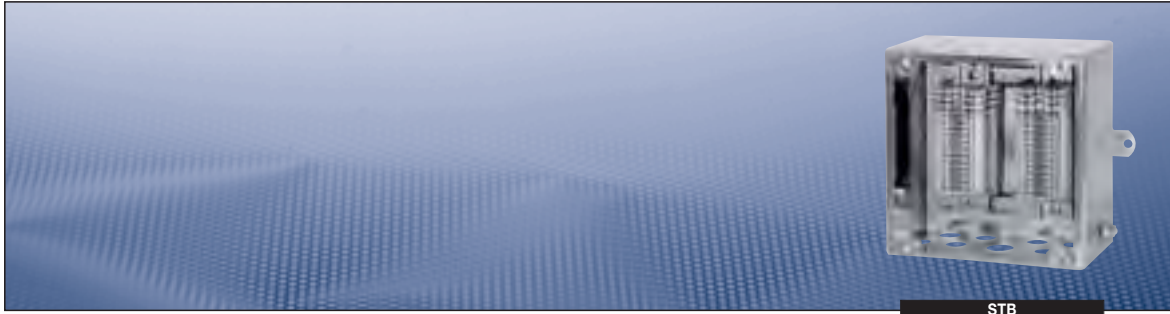
The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

Notes: ¹⁾ Dimensions drawing see page 7.63

²⁾ this types can be ordered with additional UL-Certification

³⁾ only this types includes UL-Certification and can be ordered with 1 or 3 gland plates

⁴⁾ Refer to „OPTIONS“ for full order number detail



STB

Ordering details STB METRIC up to 5 x 79 terminals

STB	Dimensions ¹⁾ H x W x D in mm	Fixing Centres ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing centres		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
38/38/22²⁾	380x380x220	250x435	8.5	280	300	3x42	3x39	3x32	3x25		
40/60/22²⁾	400x600x220	264x656	13.0	300	320	3x46	3x42	3x34	3x27		
60/40/22²⁾	600x400x220	464x456	13.0	500	520	5x79	5x73	5x59	5x47		

STB	Available glanding area			Max. Entry Guide (metric)						Order No.	
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
38/38/22²⁾	374x203	374x203	324x203	100/100/88	57/57/48	40/40/33	24/24/20	15/15/12	8/8/7	6/6/5	STBS13838220
40/60/22²⁾	594x203	394x203	344x203	164/108/92	93/60/51	65/40/35	40/26/22	26/17/14	14/9/7	11/7/6	STBS14060220
60/40/22²⁾	337x124	337x124	337x124	108/164/152	60/93/84	40/65/60	26/40/38	17/26/23	9/14/13	7/11/10	STBS16040220

Options			
STB Painted	STB PS 1XXYYZZ	STB with gland 1 plate²⁾	STB S 1XXYYZZ 1
STB with gland 3 plate³⁾	STB S 1XXYYZZ 3		

Type	Order No.
Example	
38/38/22 316L SS with 3 gland plates incl. UL-certification	STBS13838223

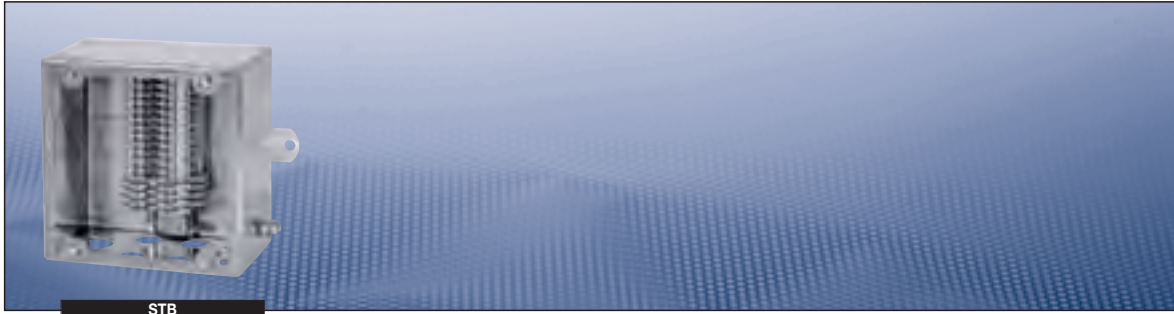
The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

Notes: ¹⁾ Dimensions drawing see page 7.63

²⁾ only this types includes UL-Certification and can be ordered with 1 or 3 gland plates

³⁾ Refer to „OPTIONS“ for full order number detail

Ex-e Terminal enclosures



STB

Ordering details STB IMPERIAL up to 21 terminals

STB	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing Rail length centres		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
12/12/08 ²⁾	4.72x4.72x3.15	5.71x5.71	3.08	2.44	3.23	1x 8	1x 6	1x 5	1x 4		
15/12/08 ²⁾	5.91x4.72x3.15	6.89x6.89	3.52	3.54	4.33	1x13	1x11	1x 8	1x 7		
15/15/09 ²⁾	5.91x5.91x3.54	6.89x6.89	4.18	3.54	4.33	1x13	1x11	1x 8	1x 7		
19/15/09 ²⁾	7.48x5.91x3.54	6.89x6.89	5.06	5.12	5.91	1x21	1x18	1x13	1x10		

STB	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No.
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
12/12/08 ²⁾	4.49x2.48	4.49x2.48	2.76x2.48	6/6/3	3/3/1	2/2/1	2/2/1	-	-	-	STBS1121208
				2/2/1	2/2/1	2/2/1	-	-	-		
15/12/08 ²⁾	4.49x2.48	5.67x2.48	3.94x2.48	6/8/5	3/3/2	2/3/2	2/2/1	-	-	-	STBS1151208
				2/3/2	2/3/2	2/2/1	-	-	-		
15/15/09 ²⁾	5.67x2.87	5.67x2.87	3.94x2.87	8/8/5	6/6/4	3/3/2	2/2/1	2/2/1	-	-	STBS1151509
				3/3/2	3/3/2	2/2/1	2/2/1	-	-		
19/15/09 ²⁾	5.67x2.87	7.24x2.87	5.12x2.87	8/11/7	6/9/6	3/4/2	2/3/2	2/2/1	-	-	STBS1191509
				3/4/3	3/3/2	2/3/2	2/2/2	-	-		

Options			
STB Painted	STB PS 1XXYYZZ	STB with additional UL CERT ²⁾	STB _S 1XXYYZZ UL
STB with gland 1 plate ³⁾	STB _S 1XXYYZZ 1	STB with gland 3 plate ³⁾	STB _S 1XXYYZZ 3

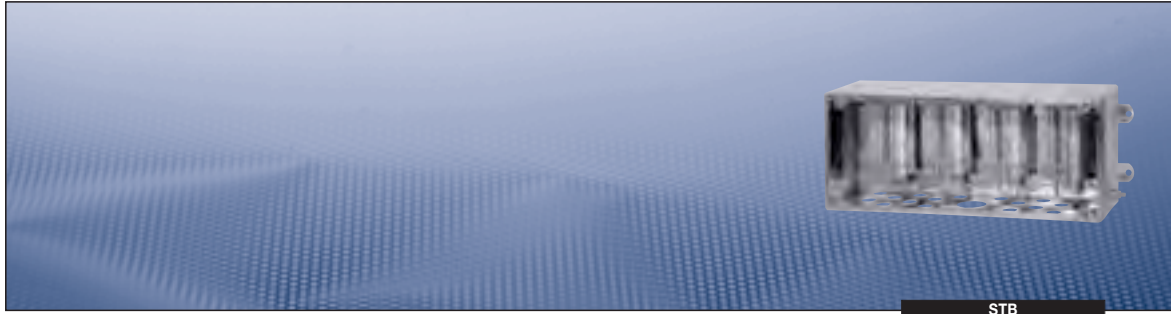
Type	Order No.
Example	
15/15/09 painted with 3 gland plates and UL-certification	STBPS151509UL

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

Notes: ¹⁾ Dimensions drawing see page 7.63

²⁾ only this types includes UL-Certification and can be ordered with 1 or 3 gland plates

³⁾ Refer to „OPTIONS“ for full order number detail



STB

Ordering details STB IMPERIAL up to 3 x 31 terminals

STB	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
19/19/10 ³⁾	7.48x 7.48x3.94	8.46x8.46	6.60	5.12	5.91	1x21	1x18	1x13	1x10		
25/25/12 ³⁾	9.48x 9.84x4.72	10.83x10.83	8.14	7.09	7.87	2x31	2x26	2x19	2x15		
16/38/12 ³⁾	6.30x14.96x4.72	3.15x15.94	8.14	11.81	12.60	1x55	1x46	1x34	1x28		
25/40/13 ³⁾	9.84x15.75x5.12	5.91x16.73	11.88	7.09	7.87	3x31	3x26	3x19	3x15		

STB	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No.
	Top & Bottom	Left	Right	Gland (first row) Hub (second row)							
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Gland entry detail											
19/19/10 ³⁾	7.24x3.27	7.24x3.27	7.24x3.27	17/17/12	9/9/6	7/7/5	3/3/2	2/2/2	2/2/1	-	
				8/8/6	3/3/3	3/3/2	2/2/2	2/2/1	-	-	STBS1191910
25/25/12 ³⁾	9.61x4.06	9.61x4.06	7.87x4.06	23/23/18	18/18/14	10/10/8	7/7/6	3/3/3	3/3/2	2/2/2	
				11/11/9	9/9/7	8/8/6	3/3/3	3/3/2	2/2/2	2/2/2	STBS1252512
16/38/12 ³⁾	14.65x4.06	6.06x4.06	12.99x4.06	36/14/29	29/11/23	16/6/12	12/4/9	5/2/4	4/1/3	3/1/3	
				17/6/15	15/5/13	12/4/11	5/2/5	5/2/4	4/1/3	3/1/3	STBS1163812
25/40/13 ³⁾	15.51x4.45	9.61x4.45	13.78x4.45	50/30/44	30/18/27	17/10/15	13/7/11	6/3/5	5/3/4	4/2/3	
				27/17/24	16/9/14	13/8/11	6/3/5	5/3/4	4/2/4	4/2/3	STBS1254013

Options			
STB Painted	STB PS 1XXYYZZ	STB with additional UL CERT ²⁾	STB S 1XXYYZZ UL
STB with gland 1 plate ³⁾	STB S 1XXYYZZ 1	STB with gland 3 plate ³⁾	STB S 1XXYYZZ 3

Type	Order No.
Example	
16/38/12 316L SS with 1 gland plate with UL-certification	STBS11638121UL

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

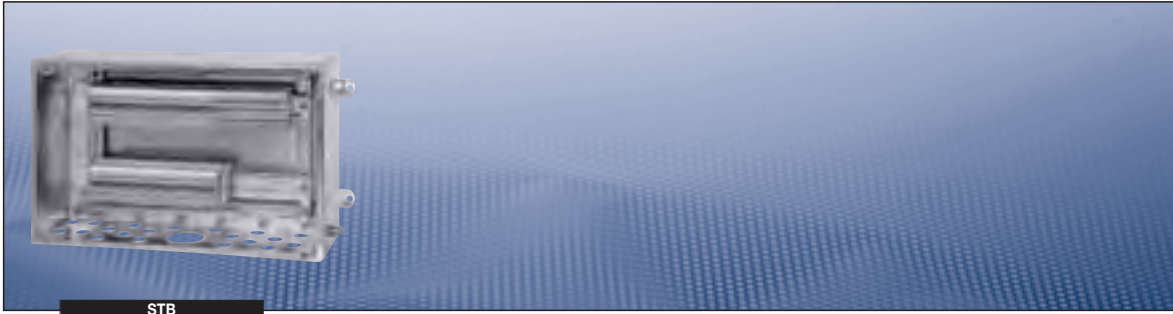
Notes: ¹⁾ Dimensions drawing see page 7.63

²⁾ only this types includes UL-Certification and can be ordered with 1 or 3 gland plates

³⁾ Refer to „OPTIONS“ for full order number detail

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Ex-e Terminal enclosures



STB

Ordering details STB IMPERIAL up to 5 x 79 terminals

STB Size	Dimensions ¹⁾ H x W x D in inches	Fixing Centres ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing centres		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
38/38/22²⁾	14.96x14.96x8.66	9.84x17.13	18.70	11.02	11.81	3x42	3x39	3x32	3x25		
40/60/22²⁾	15.75x23.62x8.66	10.39x25.83	28.60	11.81	12.60	3x46	3x42	3x34	3x27		
60/40/22²⁾	23.62x15.75x8.66	18.27x17.95	28.60	19.69	20.47	5x79	5x73	5x59	5x47		

STB Size	Available glanding area Top & Bottom Left Right (with gland plates fitted) in inches			Max. Entry Guide (imperial) Top & Bottom / Left / Right Gland (first row) Hub (second row)							Order No.
	1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT				
Gland entry detail											
38/38/22²⁾	14.72x7.99	14.72x7.99	12.76x7.99	84/84/70	57/57/48	40/40/33	24/24/20	15/15/12	8/8/7	6/6/5	STBS13838220
				43/43/38	30/30/26	24/24/22	15/15/14	14/14/11	7/7/6	6/6/5	
40/60/22²⁾	23.39x7.99	15.51x7.99	13.54x7.99	137/88/77	93/60/51	65/43/35	40/26/22	26/17/14	14/9/7	11/7/6	STBS14060220
				70/45/40	48/32/26	42/26/22	26/17/14	23/14/12	12/8/7	11/7/5	
60/40/22²⁾	15.51x7.99	23.39x7.99	21.42x7.99	88/137/123	60/93/84	43/65/58	26/40/36	17/26/23	9/14/13	7/11/10	STBS16040220
				45/70/65	32/48/44	26/42/38	17/26/24	14/23/20	8/12/11	7/11/10	

Options			
STB Painted	STB PS 1XXYYZZ	STB with gland 1 plate ²⁾	STB S 1XXYYZZ 1
STB with gland 3 plate ³⁾	STB S 1XXYYZZ 3		

Type	Order No.
Example	
38/38/22 painted with 3 gland plates incl. UL-certification	STBS3838223

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

Notes: ¹⁾ Dimensions drawing see page 7.63

²⁾ only this types includes UL-Certification and can be ordered with 1 or 3 gland plates

³⁾ Refer to „OPTIONS“ for full order number detail

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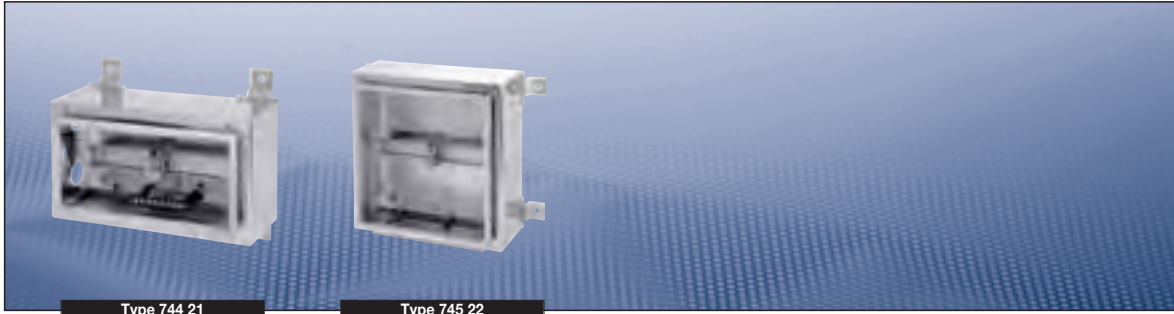
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Ex-e/Ex-i Terminal box



Type 744 21

Type 745 22

Technical data

Type 744 21/745 22/746 23/749 24 up to 296 terminal

Marking to 94/9/EC	⊕ II 2 G Ex de ia/ib [ia/ib] m IIC T6 / ⊕ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certificate of conformity	IECEX BK1 07.0023
Marking accd. to IECEX	Ex de ia/ib m [ia/ib] IIC T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP66
Enclosure material	Stainless steel AISI 316 L (1.4404)

Type 744 21 up to 40 terminal

Terminal cross section	max. 16 mm ²						
Weight	approx. 3.5 kg						
Max. number drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	37	23	15	9	5	3	2
with flange	29	17	12	7	4	2	–
Terminal mounting space on the terminal rail	1 x 230 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	1 x 40	1 x 33	1 x 25	1 x 20	1 x 17	1 x 17	–

Type 745 22 up to 82 terminal

Terminal cross section	max. 70 mm ²						
Weight	approx. 7.5 kg						
Max. number drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	37	23	15	9	5	3	2
with flange	29	17	12	7	4	2	–
Terminal mounting space on the terminal rail	2 x 230 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	2 x 41	2 x 34	1 x 26	2 x 20	1 x 17	1 x 17	1 x 14

Type 746 23 up to 188 terminal

Terminal cross section	max. 240 mm ²						
Weight	approx. 11.5 kg						
Max. number drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	71	46	30	18	10	6	4
with flange	58	34	24	14	8	4	–
Terminal mounting space on the terminal rail	2 x 510 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	2 x 94	2 x 78	1 x 59	2 x 47	1 x 40	1 x 40	1 x 32

Type 749 24 up to 296 terminal

Terminal cross section	max. 240 mm ²						
Weight	approx. 16.5 kg						
Max. number drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	108	69	45	27	15	9	6
with flange	87	51	36	21	12	6	–
Terminal mounting space on the terminal rail	2 x 795 mm						
Max. number of terminals acc. to certification	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
	2 x 148	2 x 124	1 x 94	2 x 75	1 x 63	1 x 63	1 x 51



Type 749 24

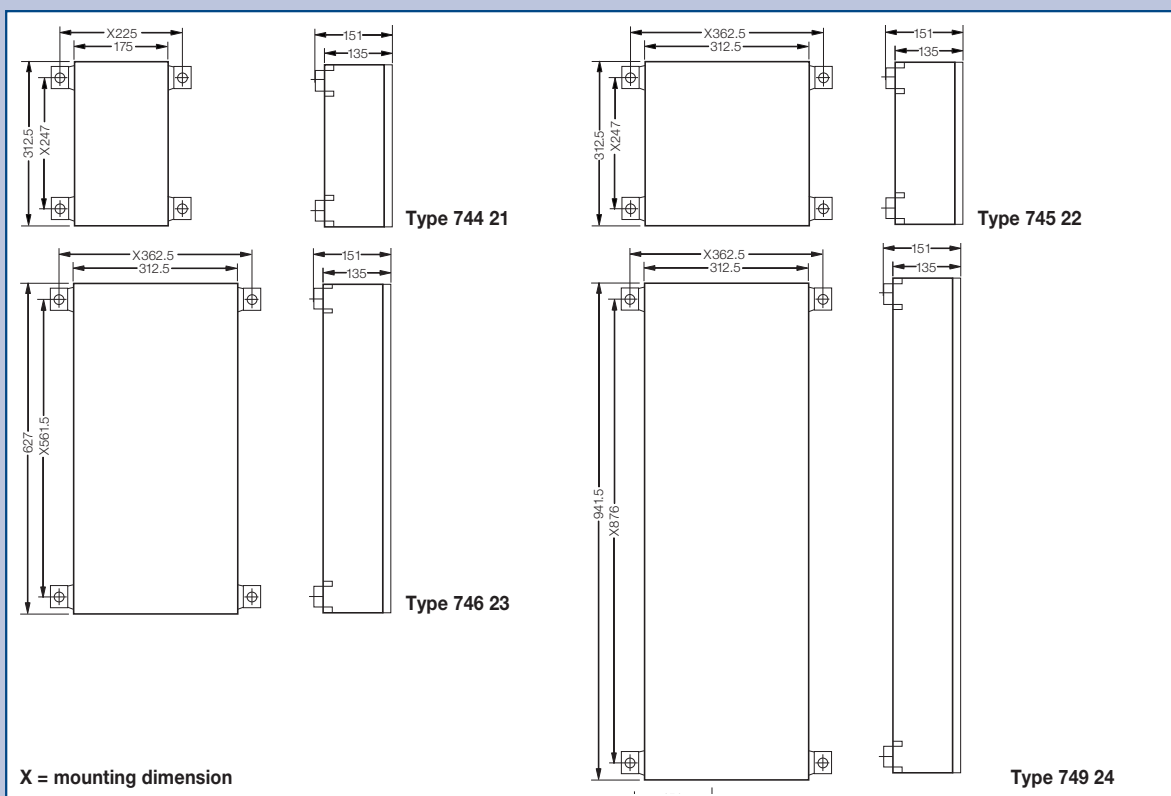
Type 746 23

Ordering details

Type	Cable gland	No. of terminals	Order No.
Terminal boxes 744 21 mounted with screw terminals 2 x 2.5 mm ² + PE-rail 4 mm ²			
Ex-e	1 x Stainless steel down without drilling	1 x Ex-e* 7 x PE	GHG 744 2101 R0001
Terminal boxes 745 22 mounted with screw terminals 2 x 2.5 mm ² + PE-rail 4 mm ²			
Ex-e	1 x Stainless steel down without drilling	1 x Ex-e* 14 x PE	GHG 745 2201 R0001
Terminal boxes 745 22 mounted with screw terminals 2 x 2.5 mm ² + PE-rail 4 mm ²			
Ex-e	2 x Stainless steel down without drilling	1 x Ex-e* 2 x 14 x PE	GHG 746 2301 R0001
Terminal boxes 749 24 mounted with screw terminals 2 x 2.5 mm ² + PE-rail 4 mm ²			
Ex-e	3 x Stainless steel down without drilling	1 x Ex-e* 3 x 14 x PE	GHG 749 2401 R0001

* acc. to type examination certificate individual extensible
Other versions available on request.

Dimension drawing



Dimensions in mm

EX-INTERMEDIATE MOTOR TERMINAL BOXES

up to 240 mm²
Plastic version for Zone 1 and Zone 21

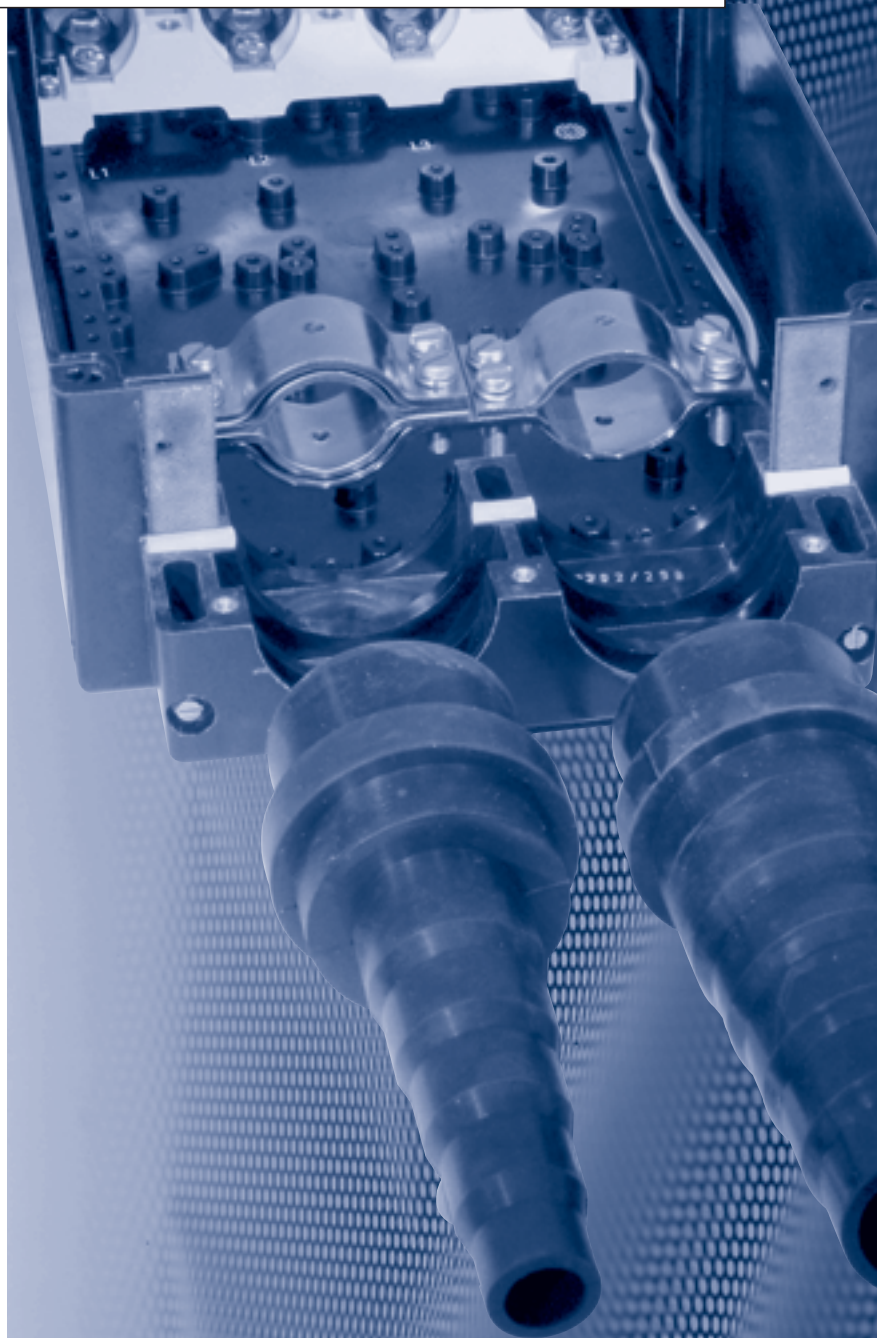
The CEAG connection and junction boxes are for example used in Zones 1, 2, 21 and 22 as junction boxes for the connection of pumps, heating, motordrives etc. in hazardous explosion endangered areas.

The connection and junction boxes are fitted with certified terminals accommodating for 240 mm² according to EN 50 019. For larger terminal cross sections, versions with terminal bolts are also used.

A special version with terminal rails accommodating for 240 mm² and a double cable end box enables the connection of larger terminal cross sections. The cable to be connected is put through the front side and is laid into the double cable terminal box where it is then connected to the terminal bolts on the copper rail.

The terminal boxes are fitted with trumpet shaped cable glands and a strain relief or just a strain relief for a flexible cable outing.

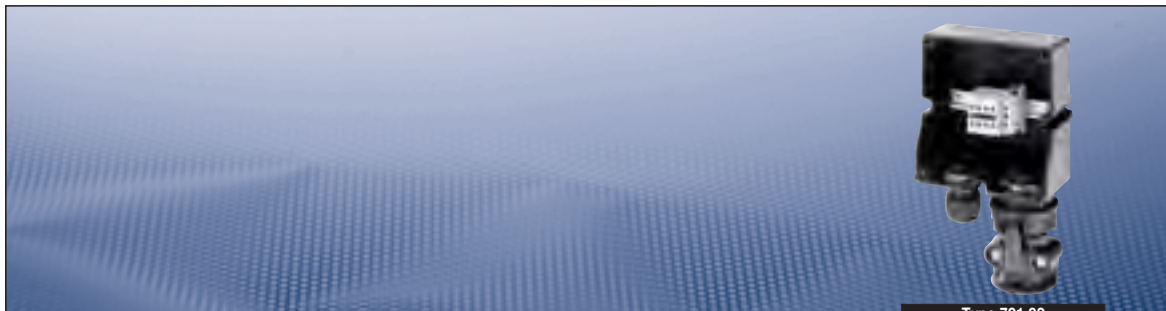
International approvals



Decisive cost reduction with the CEAG mounting system using junction boxes accommodating for 70 mm²

With four cables, connections of up to 240 mm² possible

Mechanical, chemical and thermal durability



Type 791 02

Technical data

Type 791 02	
Marking to 94/9/EC	Ⓔ II 2 G Ex dem ia II, IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C
EC-Type Examination Certificate	PTB 00 ATEX 3108
IECEX certificate of conformity	IECEX BK1 07.0034
Marking accd. to IECEx	Ex e II T6 / Ex ia IIC T6 Ex tD A21 IP66 T58 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP66
Enclosure material	Polyamide
Terminal cross section	up to 6 mm ²
Weight	approx. 0.7 kg

Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 791 02 mounted with screw terminals 2 x 4 mm ² + 1 x PE-terminal 2 x 4 mm ²			
Ex-e	1 x M25 for cable Ø 8-17 mm	4 x Ex-e	GHG 791 0201 R0016
	1 x M32 trumpet-shaped gland for cable Ø 15-20 mm	1 x PE	

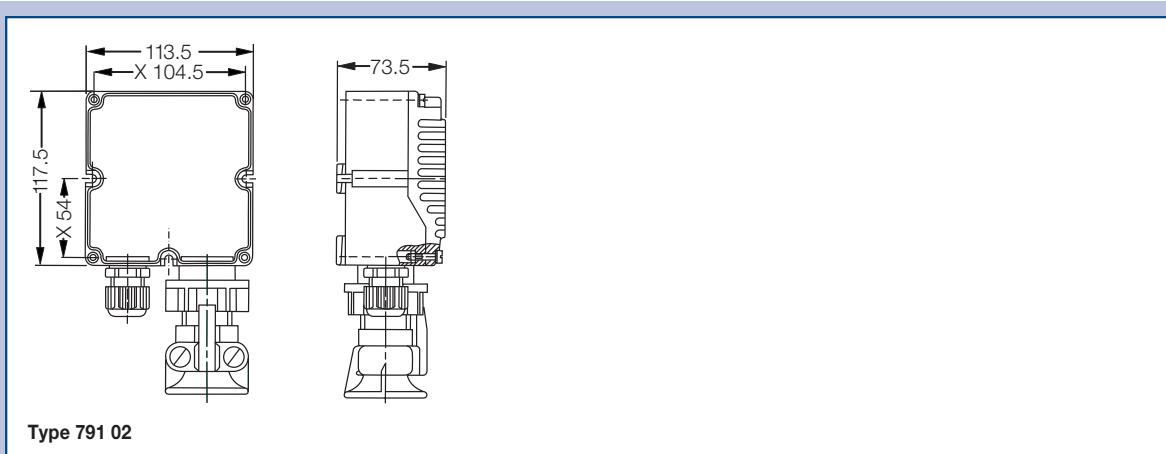
Other versions for cable Ø 15 - 20 mm available on request.

Accessories

Mounting plate for intermediate motor terminal box 791 02

Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwless mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwless mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwless mounting	GHG 610 1953 R0105
Protective canopy Size 2	for mounting plate size 2		GHG 610 1955 R0102

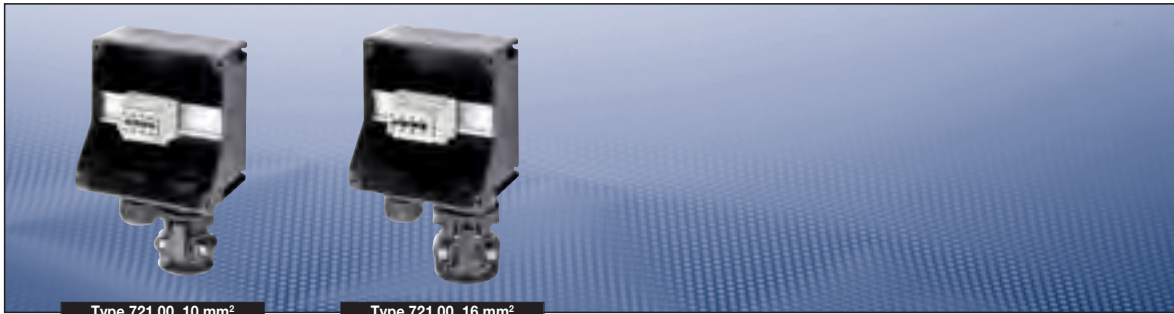
Dimension drawing



Type 791 02

Dimensions in mm

Ex-Intermediate motor terminal boxes 10 mm²/16 mm²



Technical data

Type 721 00

Marking to 94/9/EC	⊕ II 2 G Ex de ia/ib [ia/ib] m IIC T6 / ⊕ II 2 D Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certificate of conformity	IECEX BK1 07.0023
Marking accord. to IECEx	Ex ed ia/ib m [ia/ib] IIC T4 – T6 Ex tD A21 IP66 T80 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP66
Terminal cross section	721 00 max. 10 mm ² / 721 10 max. 16 mm ²
Enclosure material	Glass-fibre reinforced polyester
Weight	721 00 approx. 1.0 kg / 721 10 approx. 1.1 kg

Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 721 00 mounted with screw terminals 2 x 10 mm ² + 1 x PE-terminal 2 x 10 mm ²			
Ex-e	1 x M40 for cable Ø 17-28 mm 1 x M40 trumpet-shaped gland for cable Ø 19-27 mm	4 x Ex-e 1 x PE	GHG 721 0001 R0013

Type	Cable gland	No. of terminals	Order No.
Type 721 00 mounted with screw terminals 2 x 16 mm ² + 1 x PE-terminal 2 x 16 mm ²			
Ex-e	1 x M50 for cable Ø 21-35 mm 1 x M50 trumpet-shaped gland for cable Ø 26-34 mm	4 x Ex-e 1 x PE	GHG 721 0001 R0014

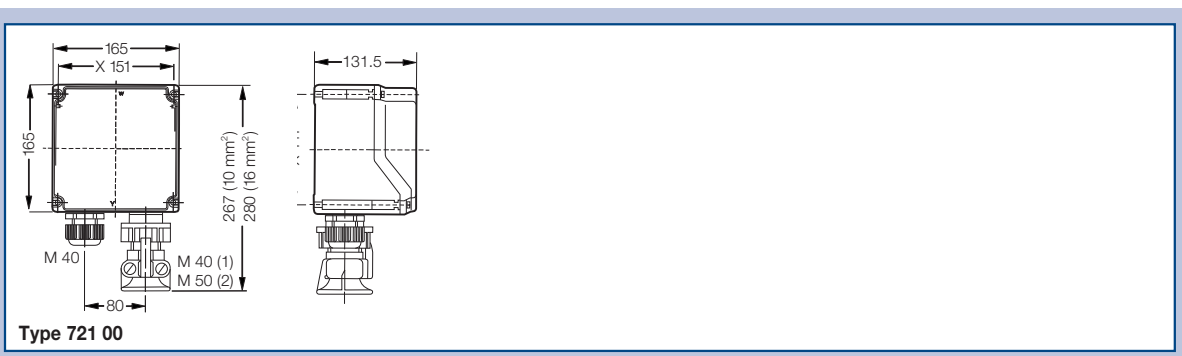
Other versions available on request.

Accessories

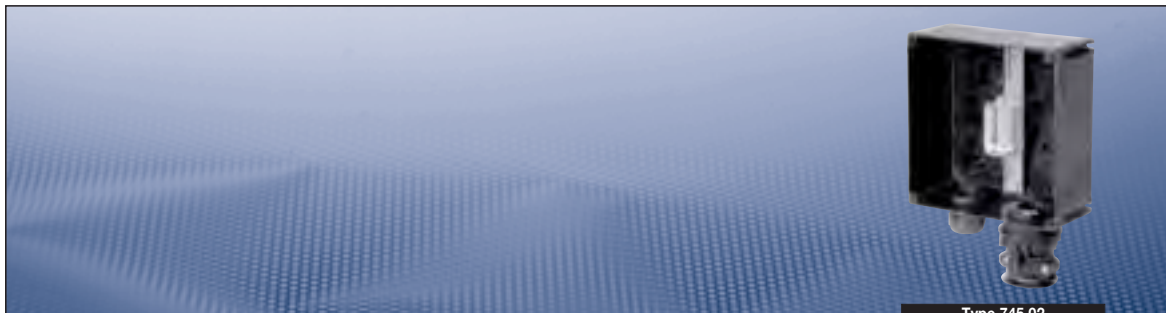
Mounting plate for junction box 721 00

Type	Application	Fixing method	Order No.
Size 2A	Wall mounting	screwless mounting	GHG 610 1953 R0107
Size 2A	Trellis mounting	screwless mounting	GHG 610 1953 R0109
Size 2A	Pipe mounting	screwless mounting	GHG 610 1953 R0108
Protective canopy Size 2A	for mounting plate size 2A		GHG 610 1955 R0103

Dimension drawing



Dimensions in mm



Type 745 02

Technical data

Type 745 02	
Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib [ia/ib] m IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certificate of conformity	IECEX BKI 07.0034
Marking accd. to IECEx	Ex ed ia/ib m [ia/ib] IIC T4 – T6 Ex tD A21 IP66 T80 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 35 mm ² or max. 70 mm ²
Weight	745 0201 R0002 approx. 3.0 kg / 745 0201 R0003 approx. 3.2 kg

Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 745 02 mounted with screw terminals 2 x 35 mm ² + 1 x PE-terminal 2 x 35 mm ²			
Ex-e	1 x M50 for cable Ø 21-35 mm 1 x M63 trumpet-shaped gland for cable Ø 35-46 mm	4 x Ex-e 1 x PE	GHG 745 0201 R0002

Type	Cable gland	No. of terminals	Order No.
Type 745 02 mounted with screw terminals 2 x 50/70 mm ² + 1 x PE-terminal 2 x 50/70 mm ²			
Ex-e	1 x M50 for cable Ø 21-35 mm 1 x M63 trumpet-shaped gland for cable Ø 35-46 mm	4 x Ex-e 1 x PE	GHG 745 0201 R0003

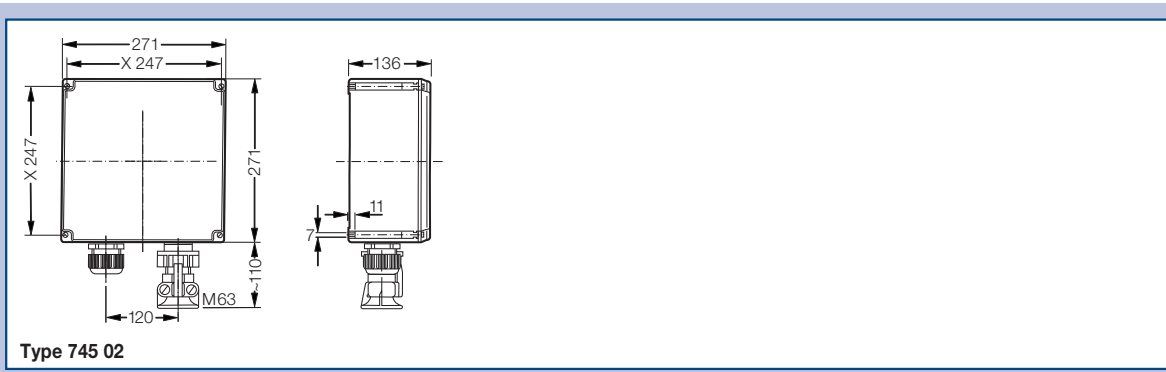
Other versions available on request.

Accessories

Mounting plate for junction box 745 02

Type	Application	Fixing method	Order No.
Size 3	Pipe mounting	screw mounting on 2 plates	GHG 610 1953 R0108
Protective canopy Size 3	for mounting plate size 3		GHG 610 1955 R0104

Dimension drawing



Type 745 02

Dimensions in mm

Ex-Intermediate motor terminal boxes 185 mm²/240 mm²



Technical data

Type 746 03	
Marking to 94/9/EC	⊕ II 2 G Ex de ia/ib [ia/ib] m IIC T6 / ⊕ II 2 D Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX certificate of conformity	IECEX BK1 07.0023
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] IIC T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP54
Cable gland	via double cable pothead
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 180 mm ² or max. 240 mm ²
Weight	746 0301 R0001 approx. 6.3 kg / 746 0301 R0008 approx. 16.5 kg

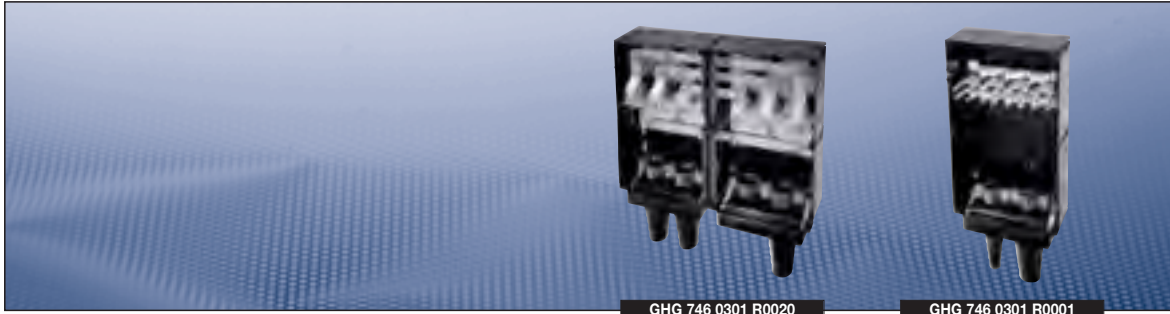
Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 746 03 assembled with bold clamp 2 x 185 mm ² + PE-bold clamp 2 x 185 mm ²			
Ex-e	Double cable end box 1 x Entry sleeve 21-45 mm 1 x Entry sleeve 46-72 mm	3 x Ex-e 1 x PE	GHG 746 0301 R0001

Type	Cable gland	No. of terminals	Order No.
Type 746 03 assembled with bold clamp 240 mm ² + PE-bold clamp 240 mm ²			
Ex-e	Double cable end box 2 x Entry sleeve 46-72 mm	6 x Ex-e 2 x PE	GHG 746 0301 R0008

Type	Cable gland	No. of terminals	Order No.
Type 746 03 assembled with bold clamp 240 mm ² + PE-bold clamp 240 mm ²			
Ex-e	Double cable end box 3 x Entry sleeve 46-72 mm	12 x Ex-e 4 x PE	GHG 746 0301 R0020

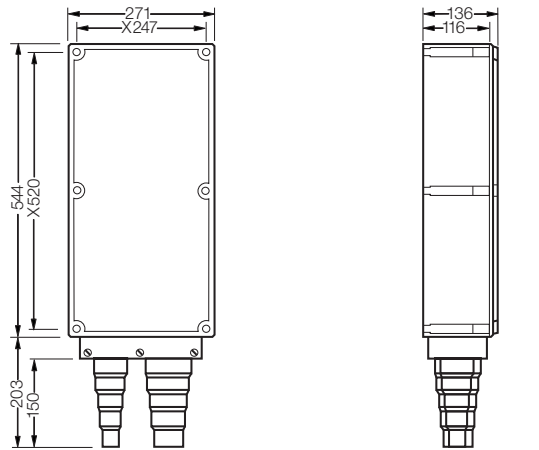
Other versions available on request.



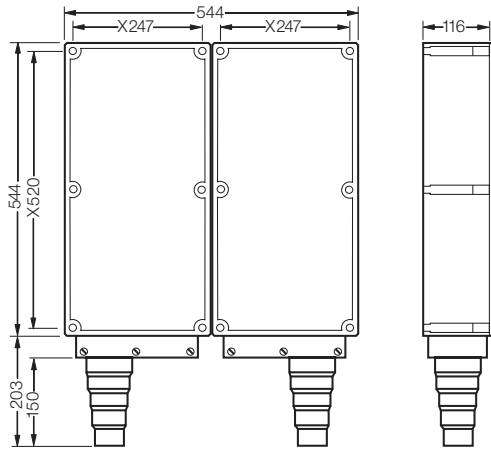
GHG 746 0301 R0020

GHG 746 0301 R0001

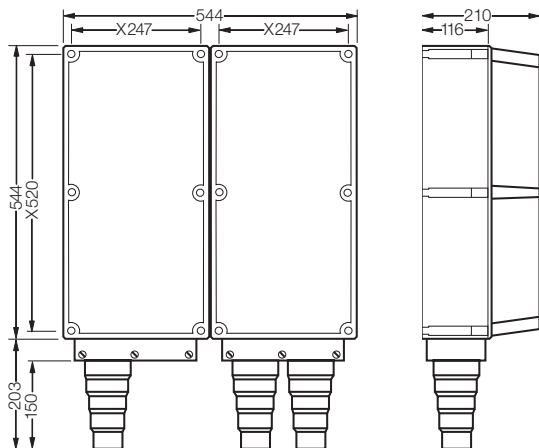
Dimension drawing



GHG 746 0301 R0001



GHG 746 0301 R0008



GHG 746 0301 R0020

X = fixing dimension

Dimensions in mm

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

FIXING MATERIALS AND ACCESSORIES

Distribution and junction boxes

The CEAG mounting plates are the innovative answer to the customer requested ability for mounting apparatus without having to use tools.

In close cooperation with our customers, this intelligent and innovative solution for the mounting of a variety of terminal boxes and appliances onto trellis, piping and walls was developed.

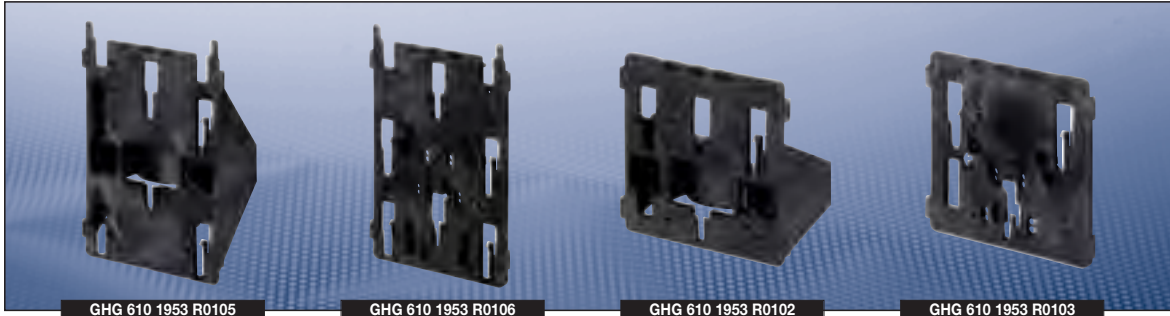
The clip-on mounting system in connection with the CEAG explosion-protected distribution, plugs and sockets and terminal boxes renders a decisive cost reduction.

No "hot work permits" are needed!

Optional clip-on protection canopies made of stainless steel offer protection against aggressive environmental influences, direct sunlight and rain.



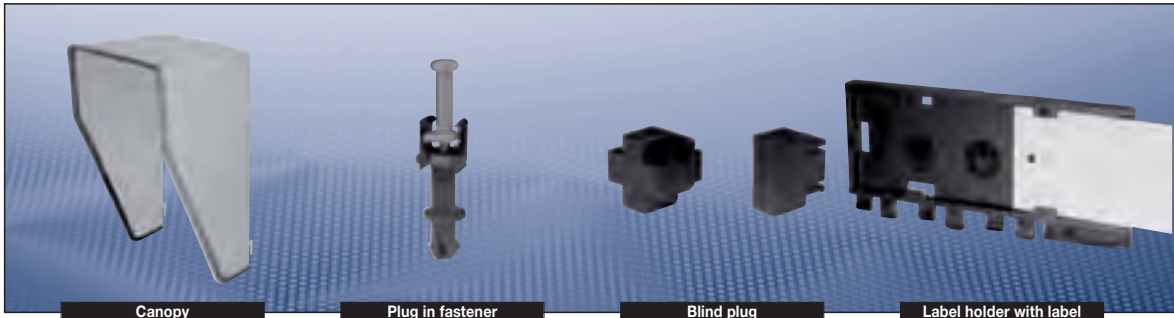
- Decisive cost reduction – just clip-it-on
- Quick appliance mounting with clip-on technology – no "hot work permit" needed
- Easy installation of the mounting plates on walls, trellis and pipes
- Universal use as appliance holder – just clip-it-on



Mounting plates

Type	Application	Order No.
Size 1	Wall mounting	GHG 610 1953 R0101
Size 1	Trellis mounting	GHG 610 1953 R0103
Size 1	Pipe mounting	GHG 610 1953 R0102
Size 2	Wall mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	GHG 610 1953 R0105
Size 2A	Wall mounting	GHG 610 1953 R0107
Size 2A	Trellis mounting	GHG 610 1953 R0109
Size 2A	Pipe mounting	GHG 610 1953 R0108
Size 3	Wall mounting	GHG 610 1953 R0118
Size 3	Trellis mounting	GHG 610 1953 R0118
Size 3	Pipe mounting	GHG 610 1953 R0110
Size 4	Wall mounting	GHG 610 1953 R0126
Size 4	Trellis mounting	GHG 610 1953 R0126
Size 4	Pipe mounting	GHG 610 1953 R0130
Size 5	Wall mounting	GHG 610 1953 R0128
Size 5	Trellis mounting	GHG 610 1953 R0128
Size 5	Pipe mounting	GHG 610 1953 R0132

| Fitting materials and accessories |



Canopy

Plug in fastener

Blind plug

Label holder with label

Accessories

For mounting plate

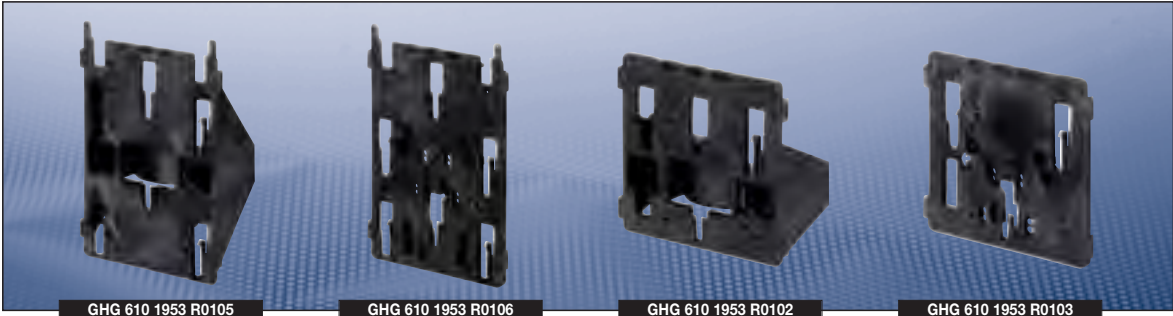
Type	OU	Order No.
Label holder with type label (blank) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Type label for label holder and mounting plates size 4 and size 5	10	GHG 610 1953 R0011
Blind plug for unused fixing points of mounting plates size 4 and size 5	10	GHG 610 1953 R0134
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm fixing elements 1 set = 4 pcs.	10	GHG 610 1953 R0041
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

The order No. will show 1 pcs.

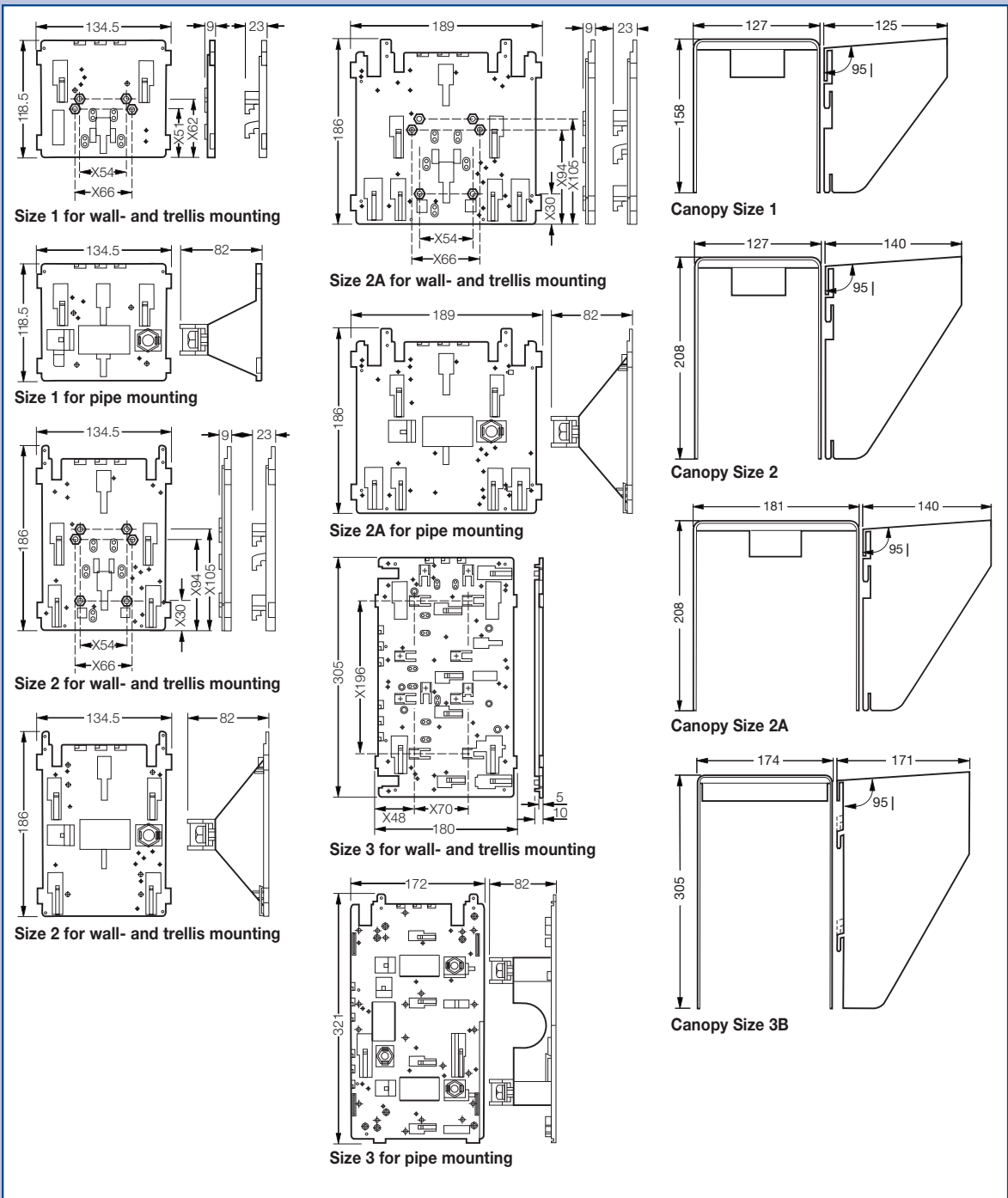
Please note that only pack quantities (OU) can be ordered.

Protective canopy for mounting plate

Type	Application	Order No.
Size 1	for mounting plate size 1	GHG 610 1955 R0101
Size 2	for mounting plate size 2	GHG 610 1955 R0102
Size 2A	for mounting plate size 2A	GHG 610 1955 R0103
Size 3	for mounting plates pipe fixing size 3 vertically	GHG 610 1955 R0104
Size 3A	for mounting plates wall/trellis fixing size 3 vertically	GHG 610 1955 R0105
Size 3B	for mounting plates pipe fixing size 3 horizontal	GHG 610 1955 R0106
Size 4	for mounting plate size 4	GHG 610 1955 R0107
Size 5	for mounting plate size 5	GHG 610 1955 R0108



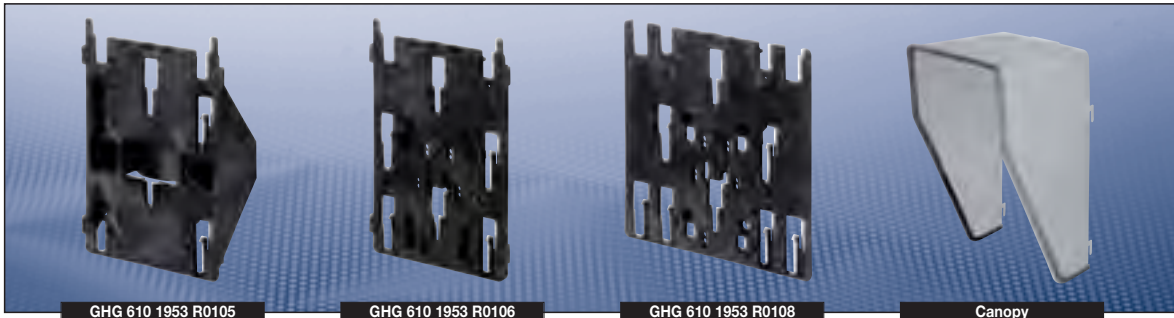
Dimensions



Dimensions in mm

1
2
3
4
5
6
7
8
9
10
11
12

Fitting materials and accessories



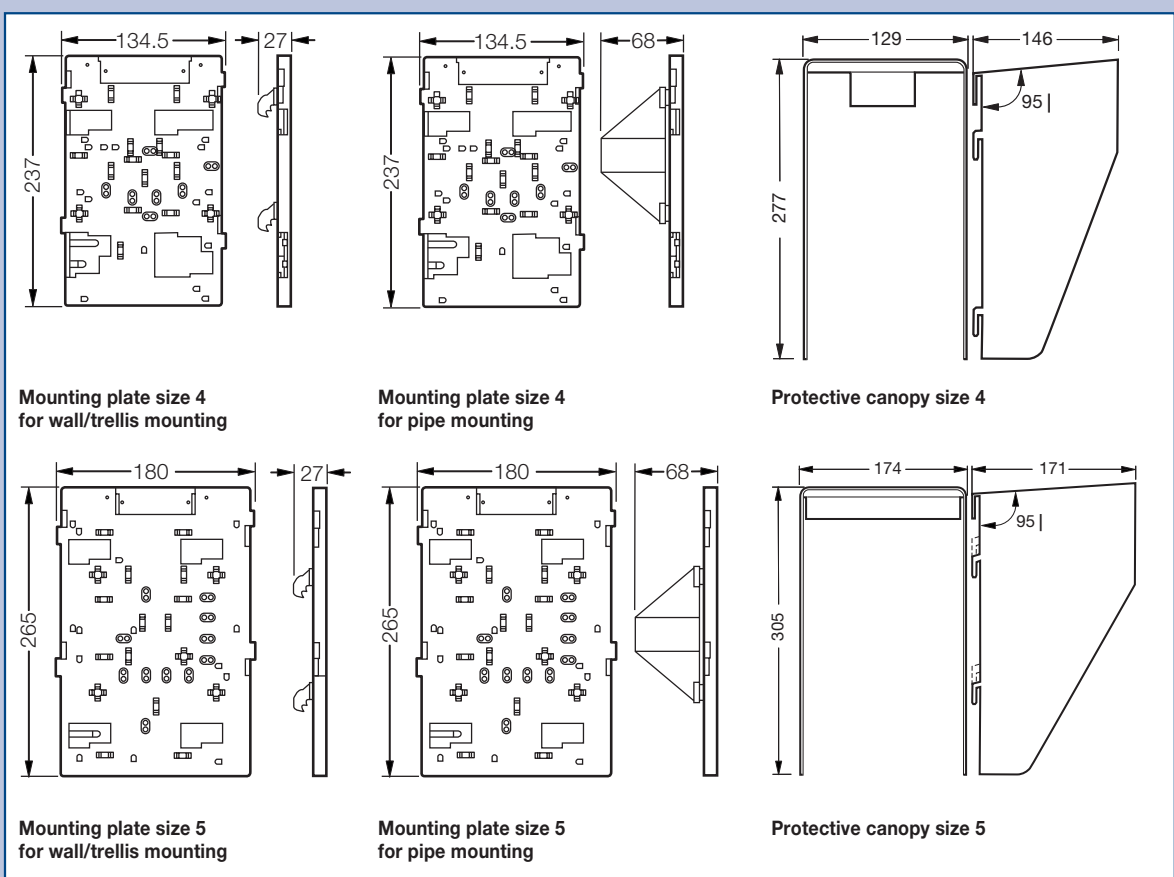
GHG 610 1953 R0105

GHG 610 1953 R0106

GHG 610 1953 R0108

Canopy

Dimensions



Dimensions in mm

CABLE GLANDS

1

2

3

4

5

6

7

8

PLASTIC CABLE GLANDS

8.2

PLASTIC TRUMPET SHAPED CABLE GLANDS

8.7

PLASTIC BREATHING PLUGS

8.8

METAL CABLE GLANDS TYPE ADE (<2000 cm³) Ex-d

8.11

METAL CABLE GLANDS TYPE CMDEL Ex-e

8.19

METAL CABLE GLANDS TYPE ADL (>2000 cm³) Ex-d

8.23

METAL REDUCING RINGS, SCREW PLUGS AND ADAPTER

8.30

9

10

11

12

E X - C A B L E G L A N D S

Plastic version for Zone 1 and Zone 21

Cable glands with metric screw-in threads are now standard and had replace the PG cable glands that were formally used.

The PG cable glands are still available as spare parts and for the upgrading of already installed apparatus.

The new CEAG plastic cable glands are in accordance with EN 60079-7 and can be used in Ex-e/Ex-i housings in hazardous explosive areas of the Zones 21, 2 and 22.

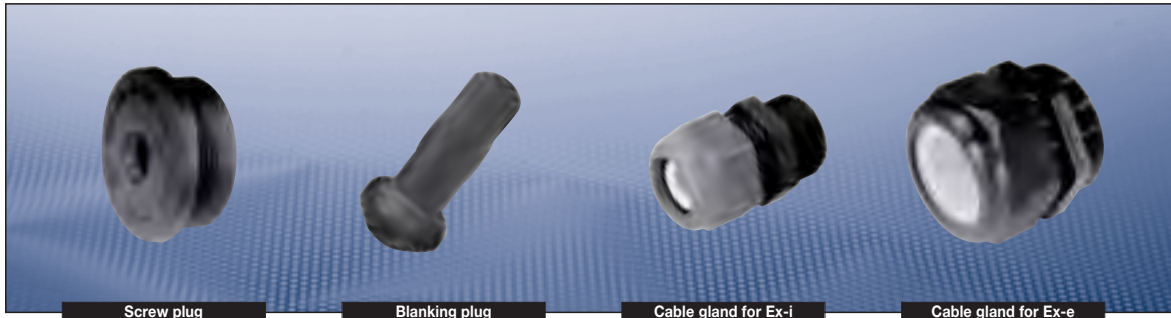
Optional and not used cable glands must be closed with certified blanking plugs. The blanking plugs allow for a flexible and cost effective utilization of the explosion-protected appliances. Changes and upgrades can be then easily carried out at a later date.

The outstanding feature of the CEAG cable glands is the large cable connection area. A high IP safety standard is achieved with the integrated sealing lip on the screw-in cable entries. Installed on a plain surface the use of an additional sealing ring can be overided. The good mechanical and handling features are achieved by using a modified Polyamide material and a optimized tooling area.

International approvals

- Large cable connection area
- Hand tightening – only a low torque needed
- Safety standard IP66
- Optimized tooling area
- Trapezoid thread, for a secure hold





Technical data

Ex-e Cable glands | Blanking plugs | Reducing rings

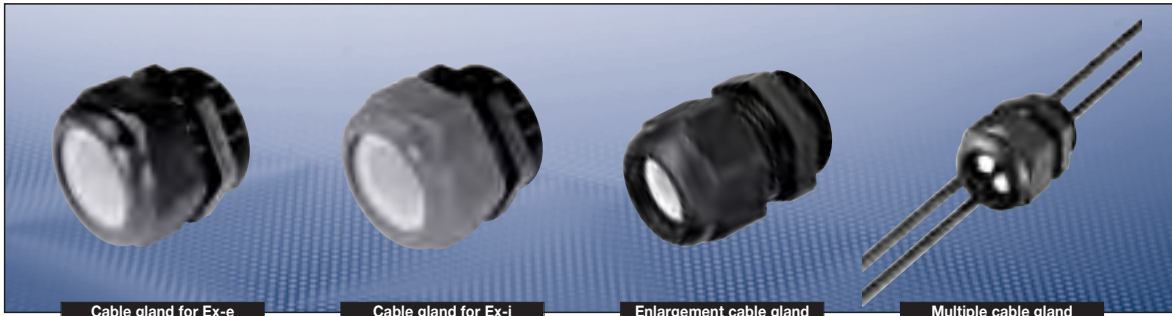
Marking to 94/9/EC	Ex II 2 G Ex e II / Ex II 2 D Ex tD A21 IP66
EC-Type Examination Certificate of conformity	M12-M16: PTB 99 ATEX 3101 X / M20-M63: PTB 99 ATEX 3128 X
IECEX Certification of conformity	IECEX PTB 05.0004X
Marking accd. to IECEX	Ex e II
Permissible ambient temperature	-20 °C to +70 °C -55 °C to +70 °C option ¹⁾
Degree of protection accd. EN 60529	IP66 / IP68: 1 m water depth for 0.5 h
Enclosure material	Polyamide

Ex-e Screw plug

Marking to 94/9/EC	Ex II 2 G Ex e II / Ex II 2 D Ex tD A21 IP66
EC-Type Examination Certificate of conformity	M20-M50: PTB 98 ATEX 3130 / M63: PTB 03 ATEX 1058 (nur II 2 G)
IECEX Certification of conformity	IECEX PTB 03.0000 (M20 - M50)
Marking accd. to IECEX	Ex e II
Permissible ambient temperature	M20-M50: -55 °C to +55 °C / M63: -20 °C to +55 °C
Degree of protection accd. EN 60529	IP66 / IP68: 1 m water depth 0.5 h
Enclosure material	Polyamide

¹⁾ Low temperature cable gland on request

Ex-cable glands



Ordering details

Thread	Cable Ø mm	A/F mm	L1 mm	L2 mm	Weight approx. kg	OU	Order No. (-20 °C up to 70 °C)
Ex-e cable glands with short thread accd. to EN 50262							
M12 x 1.5	4 - 7	15	19.3	8	0.003	20	GHG 960 1955 R 0001
M16 x 1.5	5.5 - 10	20	23.0	8	0.006	20	GHG 960 1955 R 0002
M20 x 1.5	5.5 - 13	24	25.0	8	0.009	20	GHG 960 1955 R 0003
M25 x 1.5	8 - 17	29	29.5	8	0.017	20	GHG 960 1955 R 0004
M32 x 1.5	12 - 21	36	35.5	10	0.026	20	GHG 960 1955 R 0005

Ex-e cable glands with long thread							
M12 x 1.5	4 - 7	15	19.3	12	0.003	20	GHG 960 1955 R 0021
M16 x 1.5	5.5 - 10	20	23.0	12	0.007	20	GHG 960 1955 R 0022
M20 x 1.5	5.5 - 13	24	25.0	13	0.010	20	GHG 960 1955 R 0023
M25 x 1.5	8 - 17	29	29.5	13	0.018	20	GHG 960 1955 R 0024
M32 x 1.5	12 - 21	36	35.5	15	0.029	20	GHG 960 1955 R 0025
M40 x 1.5	17 - 28	46	39.5	15	0.046	10	GHG 960 1955 R 0026
M50 x 1.5	22 - 35	55	44.0	16	0.073	10	GHG 960 1955 R 0027
M63 x 1.5	27 - 48	68	47.0	16	0.116	5	GHG 960 1955 R 0028

Ex-i cable glands with short thread							
M12 x 1.5	4 - 7	15	19.3	8	0.003	20	GHG 960 1955 R0101
M16 x 1.5	5.5 - 10	20	23.0	8	0.006	20	GHG 960 1955 R0102
M20 x 1.5	5.5 - 13	24	25.0	8	0.009	20	GHG 960 1955 R0103
M25 x 1.5	8 - 17	29	29.5	8	0.017	20	GHG 960 1955 R0104
M32 x 1.5	12 - 21	36	35.5	10	0.026	20	GHG 960 1955 R0105

Ex-i cable glands with long thread							
M12 x 1.5	4 - 7	15	19.3	12	0.003	20	GHG 960 1955 R0121
M16 x 1.5	5.5 - 10	20	23.0	12	0.007	20	GHG 960 1955 R0122
M20 x 1.5	5.5 - 13	24	25.0	13	0.010	20	GHG 960 1955 R0123
M25 x 1.5	8 - 17	29	29.5	13	0.018	20	GHG 960 1955 R0124
M32 x 1.5	12 - 21	36	35.5	15	0.029	20	GHG 960 1955 R0125
M40 x 1.5	17 - 28	46	39.5	15	0.046	10	GHG 960 1955 R0126
M50 x 1.5	22 - 35	55	44.0	16	0.073	10	GHG 960 1955 R0127
M63 x 1.5	27 - 48	68	47.0	16	0.116	5	GHG 960 1955 R0128

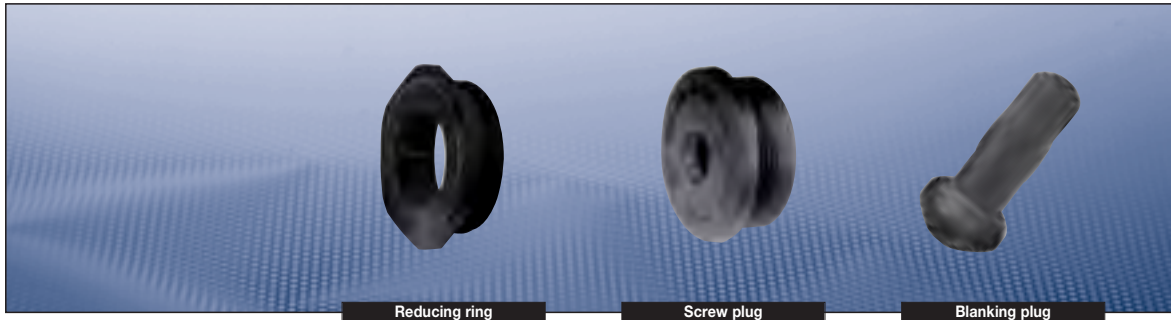
Enlargement cable glands (reduced thread diameter)							
M16/M20	5,5 - 13	24	25.0	12	0.010	20	GHG 960 1956 R0002
M20/M25	8 - 17	29	29.5	13	0.018	20	GHG 960 1956 R0003
M25/M32	12 - 21	36	35.5	13	0.029	20	GHG 960 1956 R0004
M32/M40	16 - 28	46	39.5	15	0.046	10	GHG 960 1956 R0005
M40/M50	21 - 35	55	44.0	15	0.073	10	GHG 960 1956 R0006
M50/M63	27 - 48	68	47.0	16	0.116	5	GHG 960 1956 R0007

Multiple cable glands							
M25 x 1.5	2 x 4.5 - 7	29	29.5	8	0.340	20	GHG 960 1955 R0054
M32 x 1.5	4 x 4.5 - 7	36	35.5	10	0.540	20	GHG 960 1955 R0055

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.



Ordering details

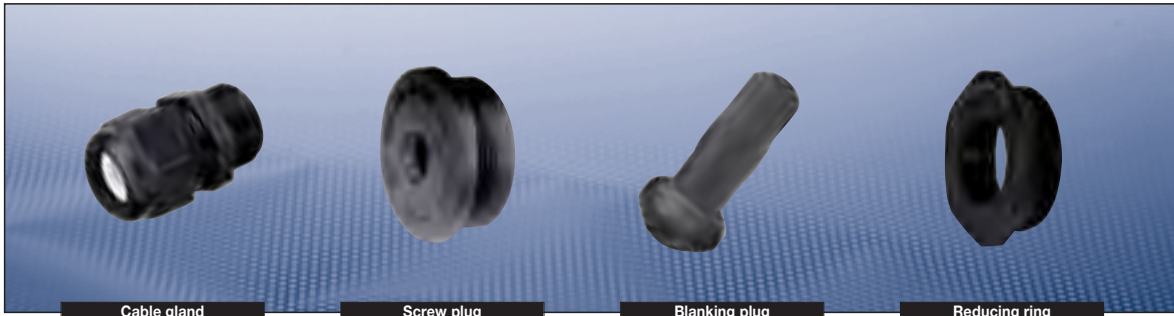
For cable gland	Ø A mm	Length B mm	Weight approx. kg	OU	Order No. (-20 °C up to 70 °C)
Blanking plug					
M12	6.0	30.3	0.001	20	GHG 960 1944 R0101
M16	7.0	33.0	0.001	20	GHG 960 1944 R0102
M20	8.5	34.5	0.002	20	GHG 960 1944 R0103
M25	11.0	36.0	0.003	20	GHG 960 1944 R0104
M32	14.0	39.5	0.005	20	GHG 960 1944 R0105
M40	20.0	42.0	0.018	10	GHG 960 1944 R0106
M50	26.0	44.0	0.033	10	GHG 960 1944 R0107
M63	34.0	45.0	0.108	5	GHG 960 1944 R0108

Thread	Ø D mm	Length A mm	Length B mm	Weight approx. kg	OU	Order No.
Screw plug						
M16 x 1.5	21.5	4.0	12	0.002	20	GHG 960 1952 R0111
M20 x 1.5	25.5	4.0	13	0.004	20	GHG 960 1952 R0112
M25 x 1.5	30.5	4.0	13	0.007	20	GHG 960 1952 R0113
M32 x 1.5	37.5	5.5	15	0.013	10	GHG 960 1952 R0114
M40 x 1.5	45.5	5.5	15	0.020	10	GHG 960 1952 R0115
M50 x 1.5	55.5	5.5	16	0.030	5	GHG 960 1952 R0116
M63 x 1.5	85	6.5	16	0.040	5	GHG 960 1952 R0117

Thread 1	Thread 2	L1 mm	L2 mm	L3 mm	AF mm	Weight approx. kg	OU	Order No.
Reducing rings								
M20 x 1.5	M16 x 1.5	12	8	8	24	0.014	20	GHG 960 1946 R0071
M25 x 1.5	M20 x 1.5	14	8	8	29	0.016	20	GHG 960 1946 R0072
M32 x 1.5	M20 x 1.5	16	10	6	36	0.017	20	GHG 960 1946 R0056
M32 x 1.5	M25 x 1.5	16	10	10	36	0.016	20	GHG 960 1946 R0074
M40 x 1.5	M25 x 1.5	16	10	8	46	0.023	10	GHG 960 1946 R0059
M40 x 1.5	M32 x 1.5	16	10	10	46	0.021	10	GHG 960 1946 R0077
M50 x 1.5	M32 x 1.5	18	12	10	55	0.036	10	GHG 960 1946 R0062
M50 x 1.5	M40 x 1.5	18	12	10	68	0.032	10	GHG 960 1946 R0080
M63 x 1.5	M40 x 1.5	18	12	10	68	0.040	5	GHG 960 1946 R0065
M63 x 1.5	M50 x 1.5	18	12	12	68	0.030	5	GHG 960 1946 R0083

Cable glands with PG-thread are available on request.
 The order No. will show 1 pcs.
 Please note that only order units (OU) can be ordered.

| Ex-cable glands |



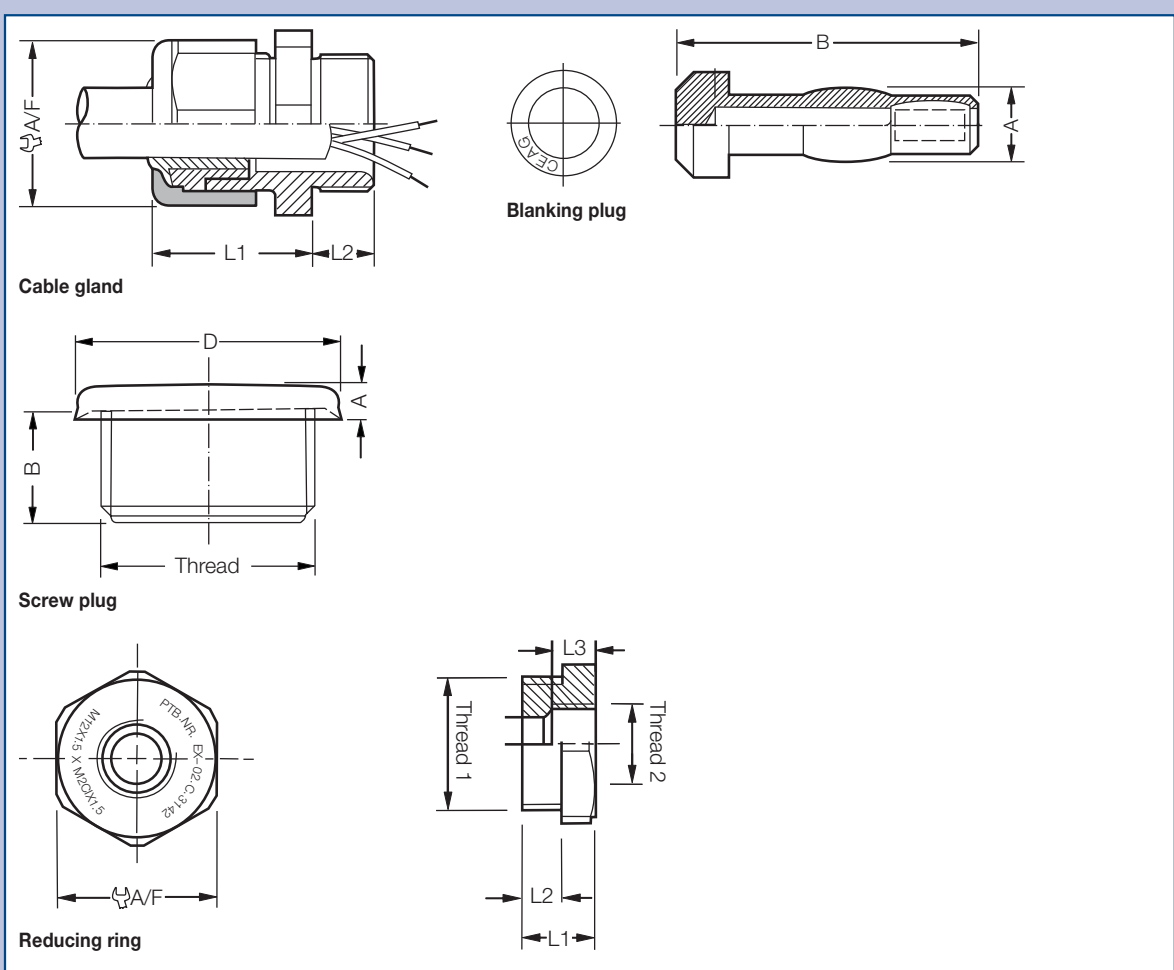
Cable gland

Screw plug

Blanking plug

Reducing ring

Dimensions drawing



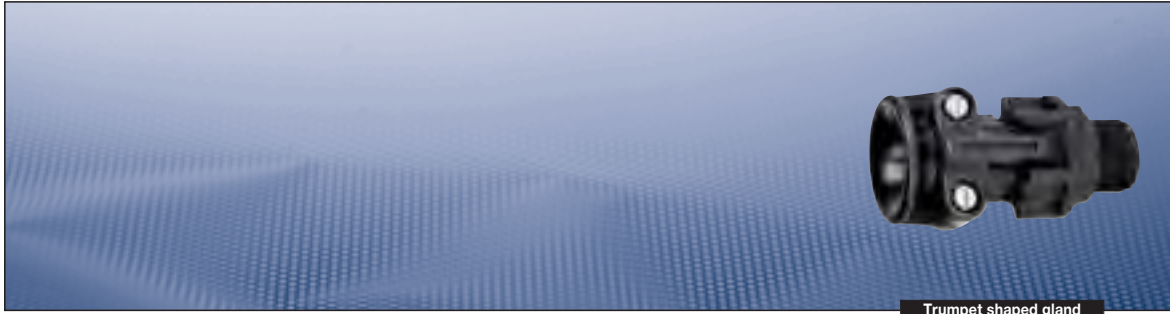
Cable gland

Blanking plug

Screw plug

Reducing ring

Dimensions in mm



Trumpet shaped gland

Technical data

Ex-e trumpet shaped cable gland

Marking to 94/9/EC	Ⓔ II 2 G Ex e II / Ⓔ II 2 D Ex tD A21 IP66
EC-Type Examination Certificate	PTB 00 ATEX 3121
Permissible ambient temperature	-40 °C to +85 °C -50 °C to +80 °C option ¹⁾
Degree of protection accd. EN 60529	IP66
Enclosure material	Polyamide

Ordering details

Thread	E mm	L1 mm	L2 mm	Ø Cable mm	A/F mm	Weight approx. kg	OU	Order No.
Ordering details trumpet shaped cable gland								
M20 x 1.5	47	64	15	8 – 13	26	0.057	10	GHG 960 1949 R0111
M25 x 1.5	51	65	15	11 – 16	32	0.070	10	GHG 960 1949 R0112
M32 x 1.5	68	80	15	15 – 20	41	0.140	10	GHG 960 1949 R0113
M40 x 1.5	81	86	15	19 – 27	50	0.194	10	GHG 960 1949 R0114
M50 x 1.5	96	95	16	26 – 34	60	0.333	1	GHG 960 1949 R0115
M63 x 1.5	107	105	16	35 – 46	75	0.742	1	GHG 960 1949 R0116

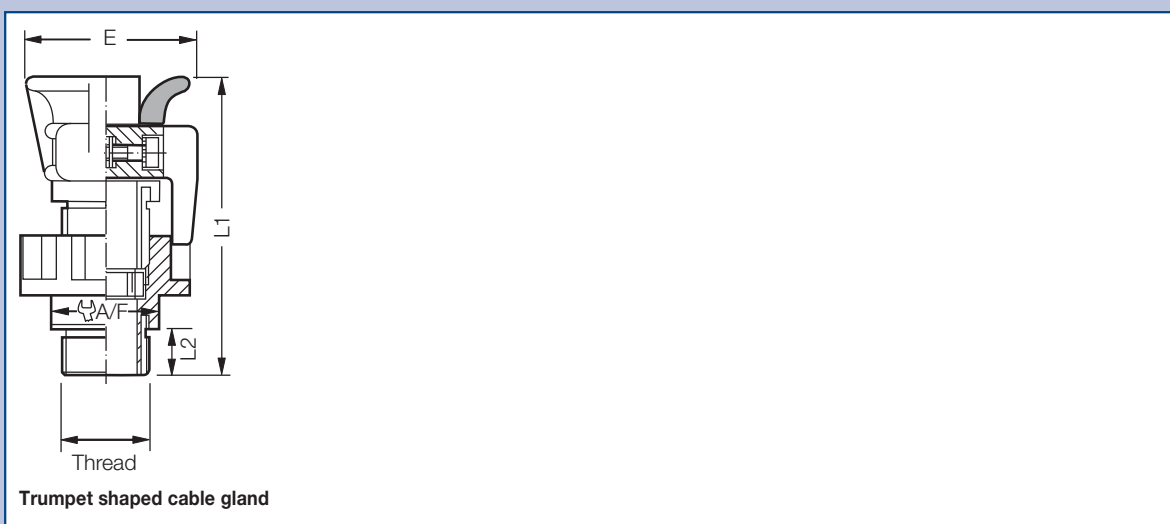
Trumpet shaped glands and reducing rings with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

¹⁾ Low temperature version on request

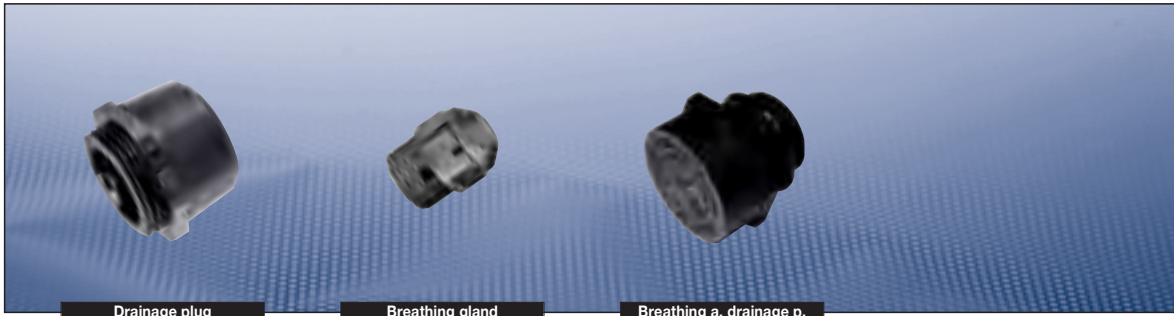
Dimension drawing



Trumpet shaped cable gland

Dimensions in mm

Ex-cable glands



Drainage plug

Breathing gland

Breathing a. drainage p.

Technical data

Ex-e Drainage plug

Marking to 94/9/EC	⊕ II 2 G Ex e II
EC-Type Examination Certificate	PTB 01 ATEX 1128 X
Permissible ambient temperature	-20 °C to +40 °C
Degree of protection accd. EN 60529	IP55
Enclosure material	Polyamide

Ex-e Breathing plug

Marking to 94/9/EC	⊕ II 2 G Ex e II / ⊕ II 2 D Ex tD A21 IP6X
EC-Type Examination Certificate	PTB 01 ATEX 1018
IECEX Certificate of conformity	IECEX PTB 06.0028
Marking accd. to IECEX	Ex e II / Ex tD A21 IP6X
Permissible ambient temperature	-20 °C to +70 °C
Degree of protection accd. EN 60529	IP64/IP66
Enclosure material	Polyamide

Ex-e Breathing and drainage plug

Marking to 94/9/EC	⊕ II 2 G Ex e II
EC-Type Examination Certificate	SIRA 99 ATEX 3050 U
Permissible ambient temperature	-50 °C to +85 °C
Degree of protection accd. EN 60529	IP66
Enclosure material	Glass filled Polyamide

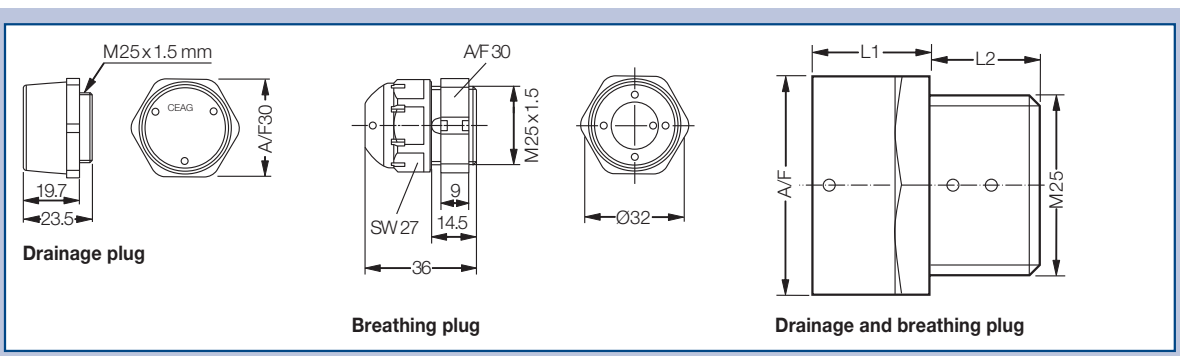
Ordering details

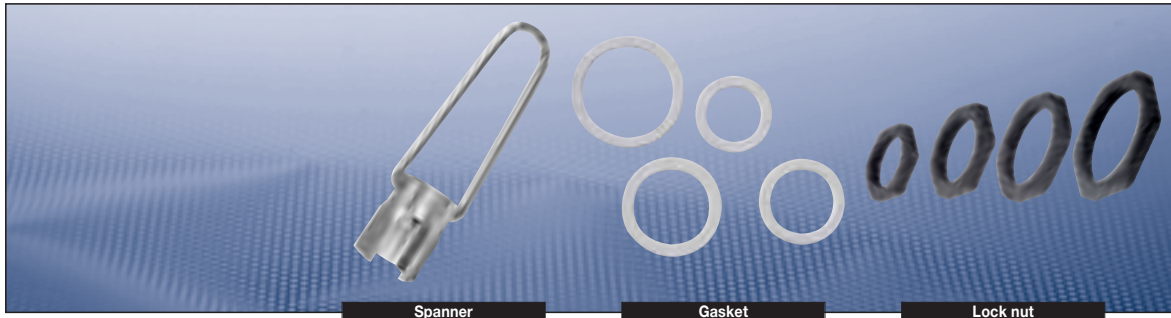
Type	Thread	A/F mm	L1 mm	L2 mm	Weight kg	OU	Order No.
Drainage plug	M25 x 1.5	30	19	4.5	0.011	20	GHG 960 1927 R0105
Breathing plug	M25 x 1.5	27	21.5	14.5	0.01	20	GHG 960 1954 R0004
Breathing and Drainage plug	M25 x 1.5	40	17	15	0.03	20	GHG 960 1954 R0002

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Dimension drawing





Spanner

Gasket

Lock nut

Accessories

Ordering details lock nut for cable glands

Type	A/F mm	Thickness mm	Weight g	OU	Order No.
M12 x 1.5	17	5	9	10	GHG 960 1941 R0031
M16 x 1.5	22	5	14	10	GHG 960 1941 R0032
M20 x 1.5	26	6	22	10	GHG 960 1941 R0033
M25 x 1.5	32	6	32	10	GHG 960 1941 R0034
M32 x 1.5	41	7	59	10	GHG 960 1941 R0035
M40 x 1.5	50	7	79	5	GHG 960 1941 R0036
M50 x 1.5	60	8	98	5	GHG 960 1941 R0037
M63 x 1.5	75	8	150	5	GHG 960 1941 R0038

Ordering details gaskets for glands

Type	ØD mm	L mm	Weight g	OU	Order No.
M12 x 1.5	18	1,2	0.44	10	CAP 221 249
M16 x 1.5	22	1,2	0.50	10	CAP 221 649
M20 x 1.5	24	1,2	0.48	10	CAP 222 049
M25 x 1.5	30	1,5	0.69	10	CAP 222 549
M32 x 1.5	42	1,5	1.39	10	CAP 223 249
M40 x 1.5	52	1,5	2.00	10	CAP 224 049
M50 x 1.5	63	1,5	2.00	10	CAP 225 049
M63 x 1.5	77	2,0	4.80	10	CAP 226 349

Ordering details special spanner for fastening of cable glands

Type	Size	SW mm	Weight kg	Order No.
Set 1	M12	15	0.825	GHG 960 1951 R0001
	M16	20		
	M20	24		
	M25	29		
	M32	36		
	M40	46		
Set 2	M50	55	0.905	GHG 960 1951 R0002
	M63	68		

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

E X - C A B L E G L A N D S

Metal design for Zone 1 and Zone 21

For introducing cables or leads into metal housings, explosion-protected housing or, if reinforced cables have to be introduced, metal cable glands are used. Metal glands are designed for use in areas of Zone 1, 2, 21 and Zone 22 at no risk of explosion and for cables with and without reinforcement.

Depending on the area of use, these cable entries are certified with the type of protection Ex-d or Ex-e pursuant to En 60079-1 or EN 60079-7.

For special applications, the cable glands are available in high-quality stainless steel 316L, nickel-plated brass, marine bronze or anodised AV4PB.

In the case of systems or housings manufactured according to the NEC (National Electrical Code), the line or the connecting cable must be introduced via conduits, mounting fittings, etc. with NPT threads. Optional holes, or those that are not used, must be closed with a screw connection certified for this purpose.

Special versions are available for different applications. For explosion-proof enclosures up to 2000 cm³ screw connections of type ADE can be used. For enclosures >2000 cm³ cable glands type ADL... can be used.

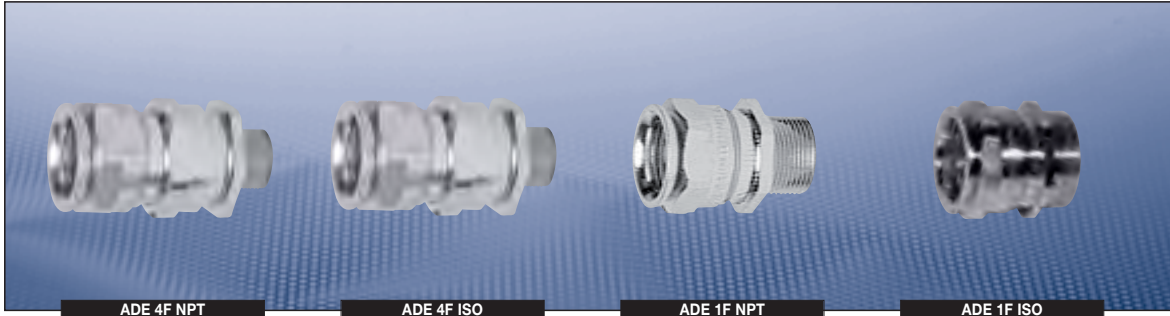
Internationally approved.



Mechanical, chemical and thermal resistance

Explosion-protected designs

High-quality alloy



Technical data

Ex-e cable glands metal design ADE 1F | ADE 4F

Marking to 94/9/EC	Ex II 2 G Ex e II / Ex d IIC (IIC \leq 2000 cm ³) / Ex II 2 D Ex tD
EC-Type Examination Certificate	LCIE 97 ATEX 6008 X
IECEX-Certificate of Conformity	IECEX LCI 05.0004X
Marking accd. to IECEx	Ex d IIC / Ex e II / Ex tD
Permissible ambient temperature	-40 °C up to +100 °C -70 °C up to +220 °C (option)
Degree of protection accd. EN 60529	IP66 / IP68 - 10 bar
Thread	ISO-thread accd. ISO 965/1, ISO 965R and EN 60423
Enclosure material	Brass, nickel-plated

Ex-cable glands



ADE 1F ISO

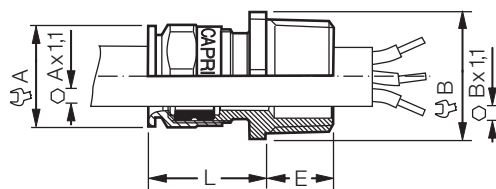
Ordering details

Thread	Type	Cable Ø mm	A mm	B mm	L mm	E mm	Weight kg	Order No.
Cable gland type ADE 1F MsNi for unarmoured cables with ISO thread								
M12 x 1.5	4	4.0 - 8	15	15	20	15	0.020	CAP 816 404
M16 x 1.5	4	4.0 - 8.5	15	19	20	15	0.025	CAP 816 594
M16 x 1.5	5	6.0 - 12	19	19	22	15	0.030	CAP 816 504
M20 x 1.5	4	4.0 - 8.5	15	24	20	15	0.056	CAP 816 674
M20 x 1.5	5	6.0 - 12	19	24	22	15	0.038	CAP 816 694
M20 x 1.5	6	8.5 - 16	24	24	25	15	0.045	CAP 816 604
M25 x 1.5	5	6.0 - 12	19	30	22	15	0.088	CAP 816 774
M25 x 1.5	6	8.5 - 16	24	30	25	15	0.055	CAP 816 794
M25 x 1.5	7	12 - 20.5	30	30	27	15	0.070	CAP 816 704
M32 x 1.5	7	12 - 21	30	36	27	15	0.100	CAP 816 894
M32 x 1.5	8	16 - 27.5	41	41	34	15	0.150	CAP 816 804
M40 x 1.5	8	16 - 27.5	41	44	34	15	0.175	CAP 816 994
M40 x 1.5	9	21 - 34	48	48	36	15	0.210	CAP 816 904
M50 x 1.5	9	21 - 34	48	55	36	16	0.245	CAP 817 094
M50 x 1.5	10	27 - 41	55	55	39	16	0.285	CAP 817 004
M63 x 1.5	11	33 - 48	64	67	41	17	0.400	CAP 817 294
M63 x 1.5	12	40 - 56	72	72	43	17	0.490	CAP 817 204
M75 x 1.5	12	40 - 56	72	80	43	18	0.560	CAP 817 394
M75 x 1.5	13	47 - 65	85	85	49	18	0.735	CAP 817 304
M80 x 2.0	13	47 - 65	85	85	49	20	0.885	CAP 817 494
M80 x 2.0	14	54 - 73	95	95	56	20	1.060	CAP 817 404
M90 x 2.0	14	54 - 74	95	95	56	22	1.300	CAP 817 594
M90 x 2.0	15	63 - 82	110	110	61	22	1.665	CAP 817 504
M100 x 2.0	15	63 - 83	110	110	61	22	1.850	CAP 817 694
M100 x 2.0	16	72 - 92	120	120	62	22	2.160	CAP 817 604

Please use sealing washers (see page 8.18).

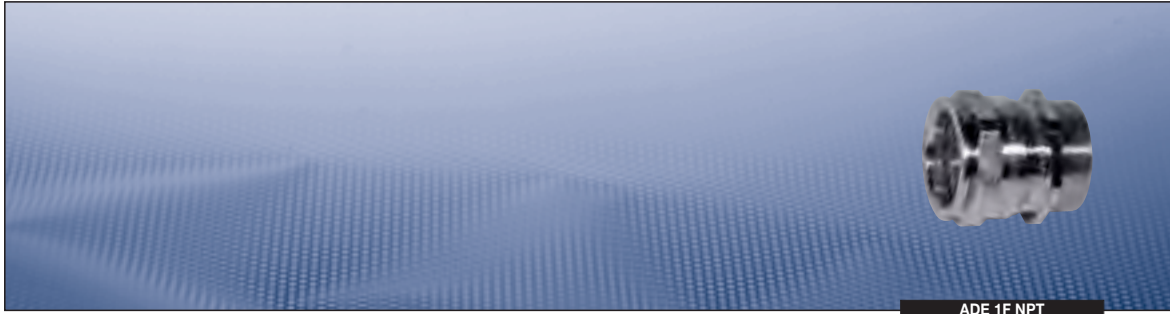
Enlarged temperature range from -70 °C up to +220 °C please use Order No.: CAP...5 instead of CAP...4

Dimension drawing



Type ADE 1F

Dimensions in mm



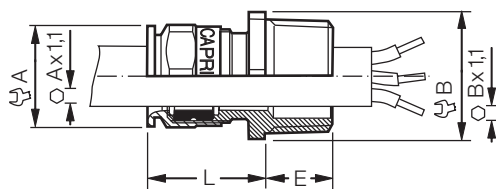
Ordering details

Thread	Type	Cable Ø mm	A mm	B mm	L mm	E mm	Weight kg	Order No.
Cable gland type ADE 1F MsNi for unarmoured cables with NPT thread								
1/4"	4	4.0 - 8	15	15	20	12	0.020	CAP 818 404
3/8"	4	4.0 - 8.5	15	19	20	12	0.025	CAP 818 594
3/8"	5	6.0 - 12	19	19	22	12	0.030	CAP 818 504
1/2"	4	4.0 - 8.5	15	24	20	16	0.062	CAP 818 674
1/2"	5	6.0 - 12	19	24	22	16	0.040	CAP 818 694
1/2"	6	8.5 - 15.5	24	24	25	16	0.045	CAP 818 604
3/4"	5	6.0 - 12	19	30	22	16	0.097	CAP 818 774
3/4"	6	8.5 - 16	24	30	25	16	0.055	CAP 818 794
3/4"	7	12 - 20.5	30	30	27	16	0.070	CAP 818 704
1"	7	12 - 21	30	36	27	20	0.110	CAP 818 894
1"	8	16 - 26	41	41	34	20	0.160	CAP 818 804
1"1/4	8	16 - 27.5	41	44	34	20	0.180	CAP 818 994
1"1/4	9	21 - 34	48	48	36	20	0.220	CAP 818 904
1"1/2	9	21 - 34	48	51	36	20	0.260	CAP 819 094
1"1/2	10	27 - 41	55	55	39	20	0.300	CAP 819 004
2"	11	33 - 48	64	64	41	20	0.420	CAP 819 294
2"	12	40 - 53	72	72	43	20	0.510	CAP 819 204
2"1/2	12	40 - 56	72	80	43	28	0.600	CAP 819 494
2"1/2	13	47 - 62.5	85	85	49	28	0.800	CAP 819 404
3"	14	54 - 74	95	95	56	30	1.400	CAP 819 594
3"	15	63 - 78	110	110	61	30	1.700	CAP 819 504
3"1/2	15	63 - 83	110	110	61	32	1.900	CAP 819 694
3"1/2	16	72 - 92	120	120	62	32	2.300	CAP 819 604

Please use sealing washers (see page 8.18).

Enlarged temperature range from -70 °C up to +220 °C please use Order No.: CAP...5 instead of CAP...4

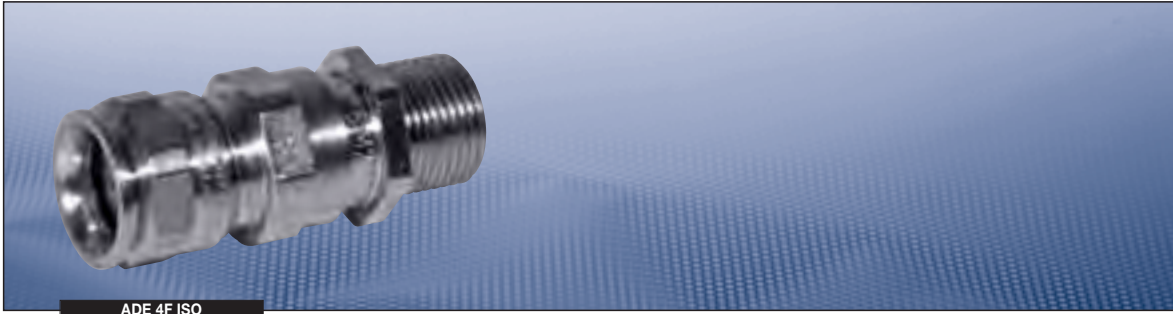
Dimension drawing



Type ADE 1F NPT

Dimensions in mm

Ex-cable glands



ADE 4F ISO

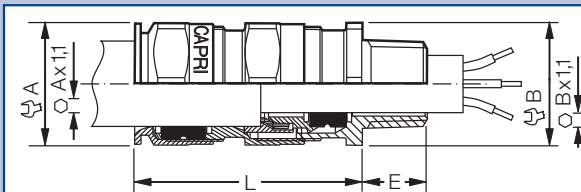
Ordering details

Thread	Type	Cable Ø outside mm	Cable Ø inside mm	Armour up to mm	A mm	B mm	L mm	E mm	Weight kg	Order No.
Cable gland type ADE 4F MsNi for armoured cables with ISO thread										
M12 x 1.5	5	6.0 - 12	4.0 - 8	0.9	19	19	36	15	0.048	CAP 846 404
M16 x 1.5	5	6.0 - 12	4.0 - 8.5	0.9	19	19	36	15	0.057	CAP 846 594
M16 x 1.5	6	8.5 - 16	6.0 - 12	1.25	19	24	36	15	0.078	CAP 846 504
M20 x 1.5	5	6.0 - 12	4.0 - 8.5	0.9	19	24	36	15	0.080	CAP 846 674
M20 x 1.5	6	8.5 - 16	6.0 - 12	1.25	24	24	42	15	0.090	CAP 846 694
M20 x 1.5	7	12 - 21	8.5 - 15.5	1.25	30	30	46	15	0.123	CAP 846 604
M25 x 1.5	6	8.5 - 16	6.0 - 12	1.25	24	30	42	15	0.122	CAP 846 774
M25 x 1.5	7	12 - 21	8.5 - 16	1.25	30	30	46	15	0.170	CAP 846 794
M25 x 1.5	8	16 - 27.5	12 - 20.5	1.6	41	41	56	15	0.270	CAP 846 704
M32 x 1.5	8	16 - 27.5	12 - 21	1.25	41	41	56	15	0.310	CAP 846 894
M32 x 1.5	9	21 - 34	16 - 27.5	1.6	48	48	63	15	0.400	CAP 846 804
M40 x 1.5	9	21 - 34	16 - 27.5	2.0	48	48	63	15	0.445	CAP 846 994
M40 x 1.5	10	27 - 41	21 - 34	2.0	55	55	68	15	0.540	CAP 846 904
M50 x 1.5	10	27 - 41	21 - 34	2.0	55	55	68	16	0.600	CAP 847 094
M50 x 1.5	11	33 - 48	27 - 41	2.5	64	64	74	16	0.735	CAP 847 004
M63 x 1.5	12	40 - 56	33 - 48	2.5	72	72	77	17	0.996	CAP 847 294
M63 x 1.5	13	47 - 65	40 - 56	2.5	85	85	85	17	1.480	CAP 847 204
M75 x 1.5	13	47 - 65	40 - 56	2.5	85	85	85	18	1.590	CAP 847 394
M75 x 1.5	14	54 - 74	47 - 65	2.5	95	95	92	18	2.305	CAP 847 304
M80 x 2.0	14	54 - 74	47 - 65	3.15	95	95	92	20	2.270	CAP 847 494
M80 x 2.0	15	63 - 83	54 - 73	3.15	110	110	104	20	3.150	CAP 847 404
M90 x 2.0	15	63 - 83	54 - 74	3.15	110	110	104	22	3.175	CAP 847 594
M90 x 2.0	16	72 - 93	63 - 82	3.15	120	120	108	22	3.675	CAP 847 504
M90 x 2.0	17	85 - 107	63 - 82	3.15	135	120	108	22	3.675	CAP 847 574

Please use sealing washers (see page 8.18).

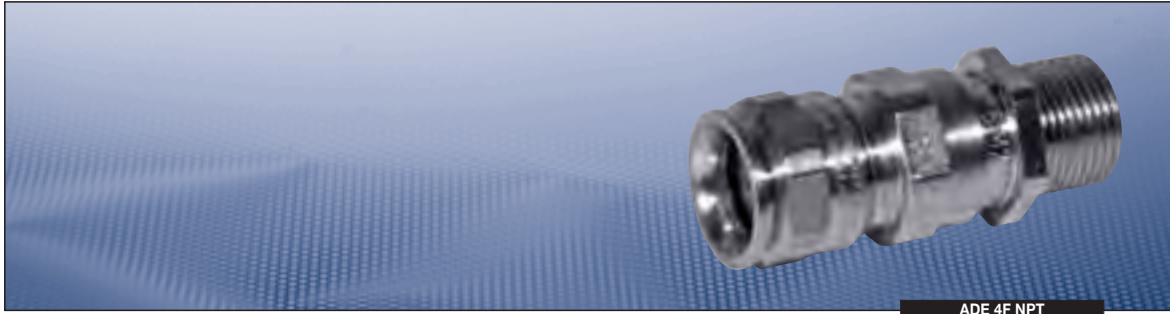
Enlarged temperature range from -70 °C up to +220 °C please use Order No.: CAP...5 instead of CAP...4

Dimension drawing



Type ADE 4F

Dimensions in mm



ADE 4F NPT

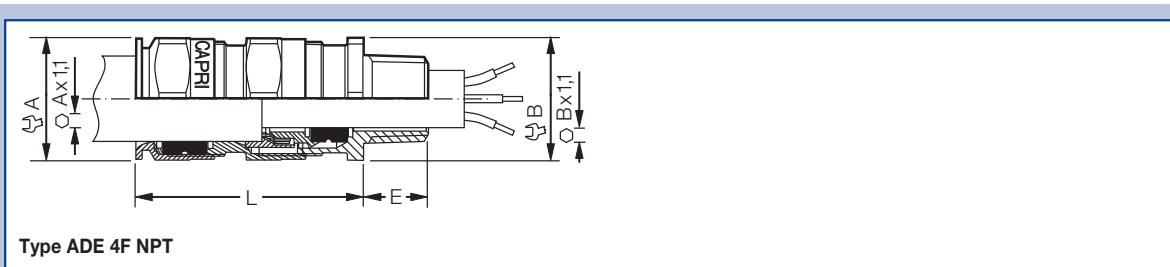
Ordering details

Thread	Type	Cable Ø outside mm	Cable Ø inside mm	Armour up to mm	A mm	B mm	L mm	E mm	Weight kg	Order No.
Cable gland type ADE 4F MsNi for armoured cables with NPT thread										
1/4"	5	6.0 - 12	4.0 - 8	0.9	19	19	36	12	0.048	CAP 848 404
3/8"	5	6.0 - 12	4.0 - 8.5	0.9	19	19	36	12	0.057	CAP 848 594
3/8"	6	8.5 - 16	6.0 - 12	1.25	24	24	42	12	0.075	CAP 848 504
1/2"	5	6.0 - 12	4.0 - 8.5	0.9	19	24	36	16	0.095	CAP 848 674
1/2"	6	8.5 - 16	6.0 - 12	1.25	24	24	42	16	0.090	CAP 848 694
1/2"	7	12 - 21	8.5 - 15.5	1.25	30	30	46	16	0.120	CAP 848 604
3/4"	6	8.5 - 16	6.0 - 12	1.25	24	30	42	16	0.136	CAP 848 774
3/4"	7	12 - 21	8.5 - 16	1.25	30	30	46	16	0.170	CAP 848 794
3/4"	8	16 - 27.5	12 - 20.5	1.6	41	41	56	16	0.270	CAP 848 704
1"	8	16 - 27.5	12 - 21	1.25	41	41	46	20	0.310	CAP 848 894
1"	9	21 - 34	16 - 26	1.6	48	48	63	20	0.400	CAP 848 804
1 1/4"	9	21 - 34	16 - 27.5	2.0	48	48	63	20	0.445	CAP 848 994
1 1/4"	10	27 - 41	21 - 34	2.0	55	55	68	20	0.540	CAP 848 904
1 1/2"	10	27 - 41	21 - 34	2.0	55	55	68	20	0.600	CAP 849 094
1 1/2"	11	33 - 48	27 - 41	2.5	64	64	74	20	0.800	CAP 849 004
2"	12	40 - 56	33 - 48	2.5	72	72	77	20	1.000	CAP 849 294
2"	13	47 - 65	40 - 53	2.5	85	85	85	20	1.500	CAP 849 204
2 1/2"	13	47 - 65	40 - 56	2.2	85	85	85	28	1.700	CAP 849 494
2 1/2"	14	54 - 74	47 - 62.5	2.5	95	95	92	28	2.400	CAP 849 404
3"	15	63 - 83	54 - 74	3.15	110	110	104	30	3.300	CAP 849 594
3"	16	72 - 93	63 - 78	3.15	120	120	108	30	3.800	CAP 849 504

Please use sealing washers (see page 8.18).

Enlarged temperature range from -70 °C up to +220 °C please use Order No.: CAP...5 instead of CAP...4

Dimension drawing

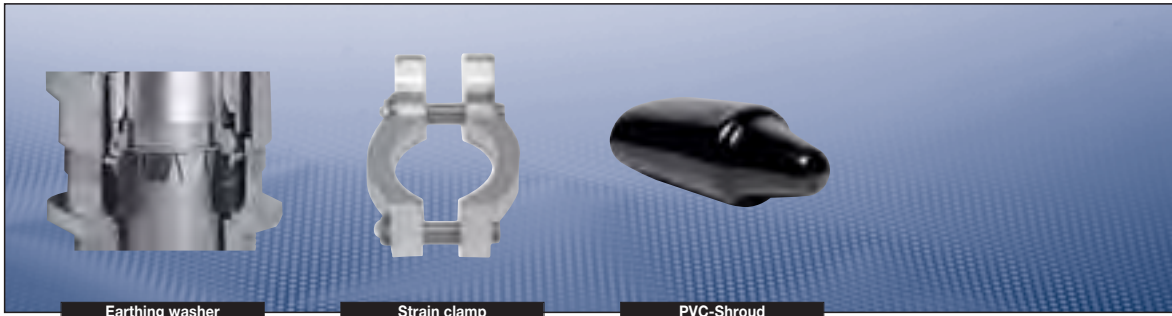


Type ADE 4F NPT

Dimensions in mm

1
2
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12

Ex-cable glands



Earthing washer

Strain clamp

PVC-Shroud

Accessories for cable glands type ADE

Ordering details for PVC-Shrouds

Type ADE	Ø D/mm	OU	Order No.
4	16	10	CAP 506 040
5	20	10	CAP 506 050
6	25	10	CAP 506 060
7	31	10	CAP 506 070
8	43	10	CAP 506 080
9	52	10	CAP 506 090
10	59	10	CAP 506 100
11	67	10	CAP 506 110
12	75	10	CAP 506 120
13	90	10	CAP 506 130
14	100	10	CAP 506 140
15	116	10	CAP 506 150
16	127	10	CAP 506 160

Ordering details for strain clamp

Type ADE	for cable Ø mm	for A/F	B/mm	C/mm	Weight/kg	OU	Order No.
4	4 – 8.5	15	18	5	0.0085	1	CAP 810 434
5	6 – 12	19	22	5	0.007	1	CAP 810 534
6	8.5 – 16	24	27.5	6	0.015	1	CAP 810 634
7	12 – 21	30	33.5	8	0.028	1	CAP 810 734
8	16 – 27.5	41	45	8	0.044	1	CAP 810 834
9	21 – 34	48	52	9.5	0.061	1	CAP 810 934
10	27 – 41	55	59	9.5	0.069	1	CAP 811 034
11	33 – 48	64	69	12	0.13	1	CAP 811 134
12	40 – 56	72	78	12	0.16	1	CAP 811 234
13	47 – 65	85	92	16	0.37	1	CAP 811 334
14	54 – 74	95	103	16	0.42	1	CAP 811 434
15	63 – 83	110	118	18	0.64	1	CAP 811 534
16	72 – 93	120	128	18	0.68	1	CAP 811 634

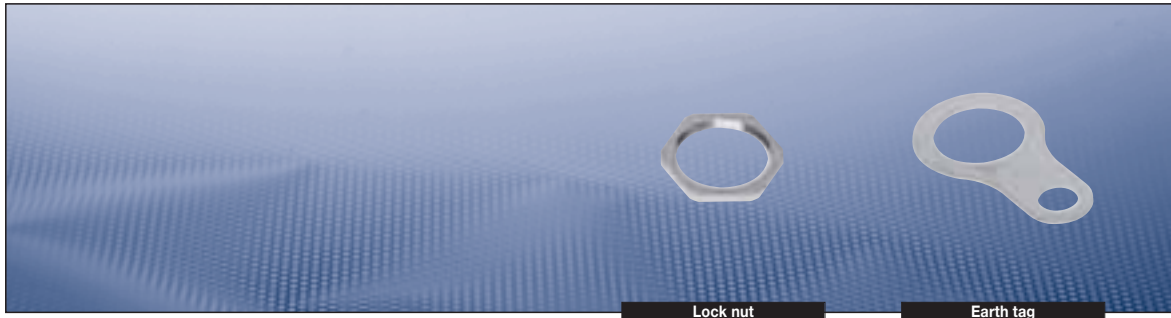
Ordering details earthing washer for cable glands

Type ADE	for cable Ø mm	A mm	H mm	Weight/g	OU	Order No.
5	4 – 7.5	10	3.2	0.25	10	CAP 560 530
6	9 – 11	13.9	4	0.3	10	CAP 560 630
7	9 – 15	18.3	4.8	0.6	10	CAP 560 730
8	12 – 20	23.8	5.7	0.9	10	CAP 560 830
9	16 – 26.5	31	7.2	1.5	10	CAP 560 930
10	21 – 32.5	38.3	8.2	2.8	10	CAP 561 030
11	28 – 39.5	45.3	8.8	3.8	10	CAP 561 130
12	33 – 46.5	52.8	9.5	5.8	10	CAP 561 230
13	40 – 54.5	60.8	10.1	7.3	10	CAP 561 330
14	46.5 – 61	71	11.4	11	10	CAP 561 430
15	54 – 72.5	80.5	12.6	14.5	10	CAP 561 530
16	63 – 81.5	89.5	12.6	14.5	10	CAP 561 630

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.



Lock nut

Earth tag

Accessories for cable glands type ADE

Ordering details earth tags for cable glands

Thread ISO/NPT	Dimensions					Weight approx. kg	OU	Order No.
	A mm	B mm	ØC mm	ØD mm	E mm			
M12 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	CAP 567 024
M16 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	CAP 567 034
M20 x 1.5 ISO	53.8	33	7	28.6	13	0.008	10	CAP 567 054
M25 x 1.5 ISO	61.5	36	10.5	34	17	0.011	10	CAP 567 074
M32 x 1.5 ISO	73	41	12.2	42	22	0.015	10	CAP 567 094
M40 x 1.5 ISO	86.5	44,5	13.5	54	30	0.025	10	CAP 567 124
M50 x 1.5 ISO	111.5	58	13.5	67	40	0.041	1	CAP 567 154
M63 x 1.5 ISO	125.5	67	13.5	77	40	0.044	1	CAP 567 184
3/8" NPT	53,8	33	7	28,6	13	0.008	1	CAP 567 044
1/2" NPT	61,5	36	10,5	34	17	0.008	10	CAP 567 064
3/4" NPT	73	41	12,2	42	22	0.008	10	CAP 567 084
1" NPT	73	41	12,2	42	22	0.011	10	CAP 567 104
1*1/4 NPT	86,5	44,5	13,5	54	30	0.015	10	CAP 567 134
1*1/2 NPT	111,5	58	13,5	67	40	0.025	1	CAP 567 154
2" NPT	125,5	67	13,5	77	40	0.041	1	CAP 567 174
2*1/2 NPT	137,5	73	13,5	89	40	0.044	1	CAP 567 194

Ordering details lock nuts MsNi

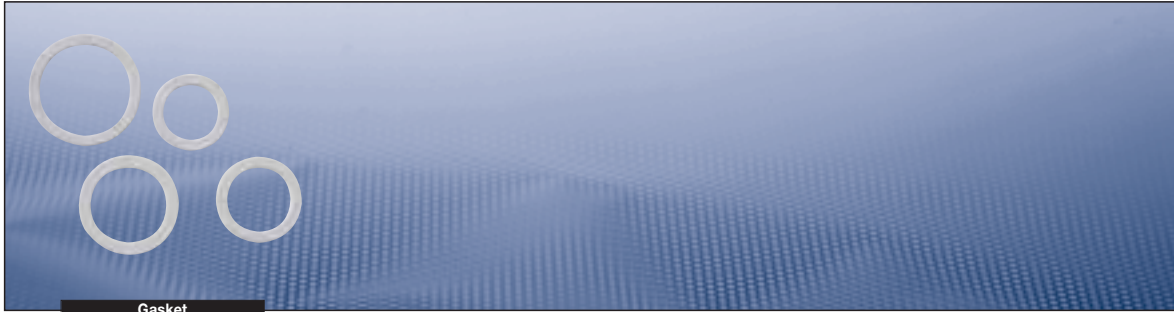
Thread ISO/NPT	A/F mm	L mm	OU	Order No.
M12 x 1.5 ISO	14	2.8	10	CAP 221 294
M16 x 1.5 ISO	18	2.8	10	CAP 221 694
M20 x 1.5 ISO	23	3.0	10	CAP 222 094
M25 x 1.5 ISO	28	3.0	10	CAP 222 594
M32 x 1.5 ISO	36	3.5	10	CAP 223 294
M40 x 1.5 ISO	44	4.0	10	CAP 224 094
M50 x 1.5 ISO	54	5.0	10	CAP 225 094
M63 x 1.5 ISO	70	6.0	10	CAP 226 394
1/4" NPT	16	2.8	10	CAP 280 104
3/8" NPT	20	2.8	10	CAP 280 114
1/2" NPT	24	3.5	10	CAP 280 124
3/4" NPT	30	3.5	10	CAP 280 134
1" NPT	37	4.5	10	CAP 280 144
1*1/4 NPT	47	4.5	10	CAP 280 154
1*1/2 NPT	52	5.0	10	CAP 280 164
2" NPT	64	5.5	10	CAP 280 174
2*1/2 NPT	77	6.5	10	CAP 280 184
3" NPT	95	8.0	10	CAP 280 194
3*1/2 NPT	110	10.0	10	CAP 280 204
4" NPT	120	11.0	10	CAP 280 214

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Ex-cable glands



Gasket

Accessories for cable glands type ADE

Ordering details gaskets for cable glands

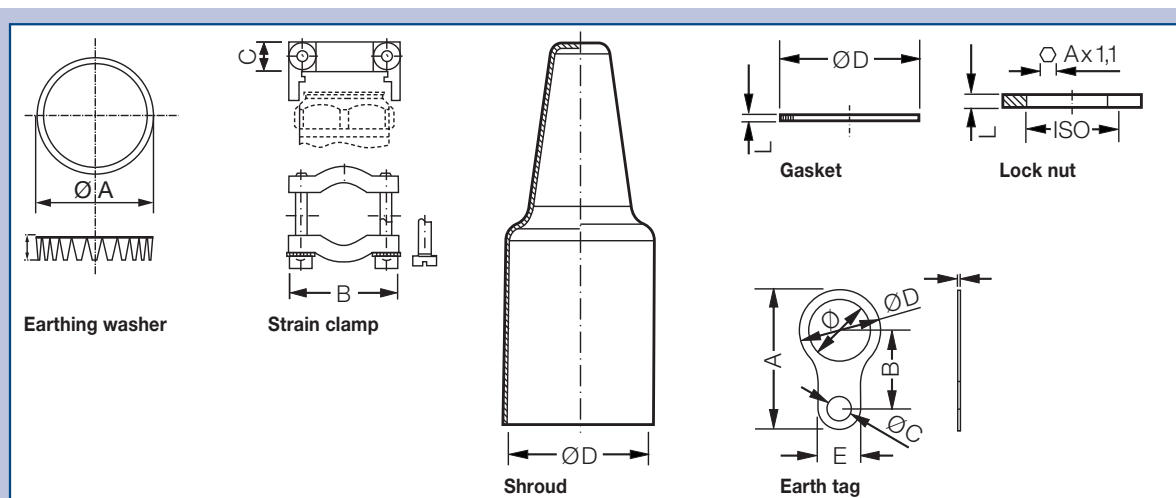
Thread	Ø D mm	L mm	OU	Order No. Fibrous material	Order No. Neoprene
M12	18	1.2	10	CAP 221 245	CAP 221 249
M16	22	1.2	10	CAP 221 645	CAP 221 649
M20	24	1.2	10	CAP 222 045	CAP 222 049
M25	30	1.5	10	CAP 222 545	CAP 222 549
M32	42	1.5	10	CAP 223 245	CAP 223 249
M40	52	1.5	10	CAP 224 045	CAP 224 049
M50	63	1.5	10	CAP 225 045	CAP 225 049
M63	77	2.0	10	CAP 226 345	CAP 226 349
1/4"	20	1.5	10	CAP 239 014	CAP 229 014
3/8"	22	1.5	10	CAP 239 038	CAP 229 038
1/2"	27	1.5	10	CAP 239 012	CAP 229 012
3/4"	33	1.5	10	CAP 239 034	CAP 229 034
1"	41	1.5	10	CAP 239 010	CAP 229 010
1 1/4"	52	1.5	10	CAP 239 114	CAP 229 114
1 1/2"	57	1.5	10	CAP 239 112	CAP 229 112
2"	71	2.0	10	CAP 239 020	CAP 229 020
2 1/2"	85	2.0	10	CAP 239 212	CAP 229 212
3"	104	2.0	10	CAP 238 049	CAP 229 300
3 1/2"	120	2.0	10	CAP 239 312	CAP 229 312

Cable glands with PG-thread are available on request.

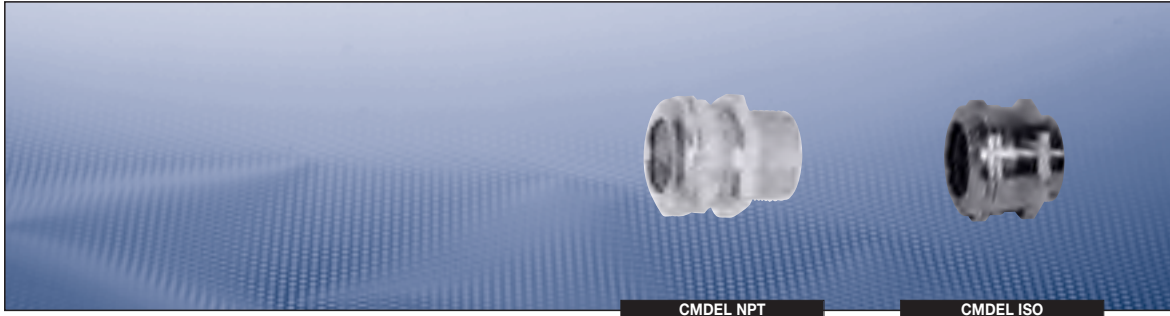
The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Dimension drawing



Dimensions in mm



Technical data

Ex-e cable glands metal design CMDEL

Marking to 94/9/EC	⊕ II 2 G Ex e II / ⊕ II 2 D Ex tD
EC-Type Examination Certificate	LCIE 97 ATEX 6005 X
Permissible ambient temperature	-40 °C up to +100 °C -70 °C up to +220 °C (option)
Degree of protection accd. EN 60529	IP66 / IP68 - 10 bar
Thread	ISO thread accd. ISO 965/1, ISO 965/2 and EN 60432
Enclosure material	Nickel-plated brass (stainless steel, bronze, natural brass option)

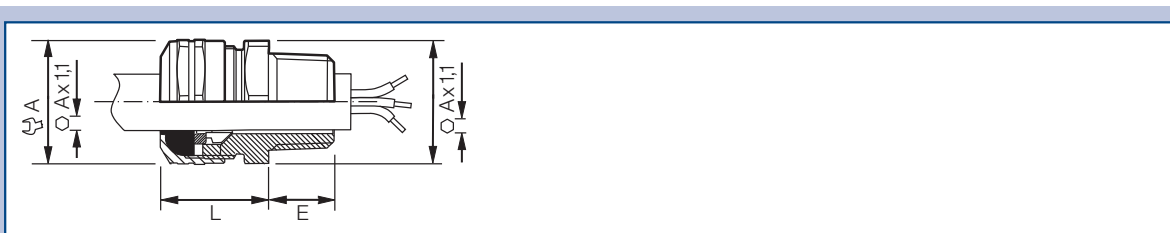
Ordering details

Thread	Cable Ø mm	A mm	L mm	E mm	Weight approx. kg	Order No.
Cable gland type CMDEL MsNi for unarmoured cables with ISO thread						
M10 x 1.0	1.5 - 5.0	15	17	7	0.017	CAP 221 004
M12 x 1.5	4.0 - 8.0	18	17	7	0.021	CAP 221 204
M16 x 1.5	7.0 - 11	22	20	8	0.036	CAP 221 604
M20 x 1.5	8.0 - 13	24	20	8	0.043	CAP 222 004
M25 x 1.5	13.0 - 18	30	24	9	0.071	CAP 222 504
M32 x 1.5	17.5 - 25	41	28	10	0.143	CAP 223 204
M40 x 1.5	24.5 - 33.5	52	38	11	0.263	CAP 224 004
M50 x 1.5	33.0 - 43	63	42	12	0.386	CAP 225 004
M63 x 1.5	43.0 - 55	77	47	13	0.583	CAP 226 304

Cable gland type CMDEL MsNi for unarmoured cables with NPT thread						
1/2"	7.5 - 13	24	20	16	0.045	CAP 183 134
3/4"	12.5 - 18	30	24	16	0.022	CAP 183 144
1"	17.5 - 25	41	28	20	0.034	CAP 183 154
1 1/4"	24.5 - 33.5	52	38	20	0.041	CAP 183 164
1 1/2"	24.5 - 33.5	52	38	20	0.042	CAP 183 174
2"	33 - 43	63	42	20	0.046	CAP 183 184
2 1/2"	42.5 - 55	77	47	28	0.066	CAP 183 194

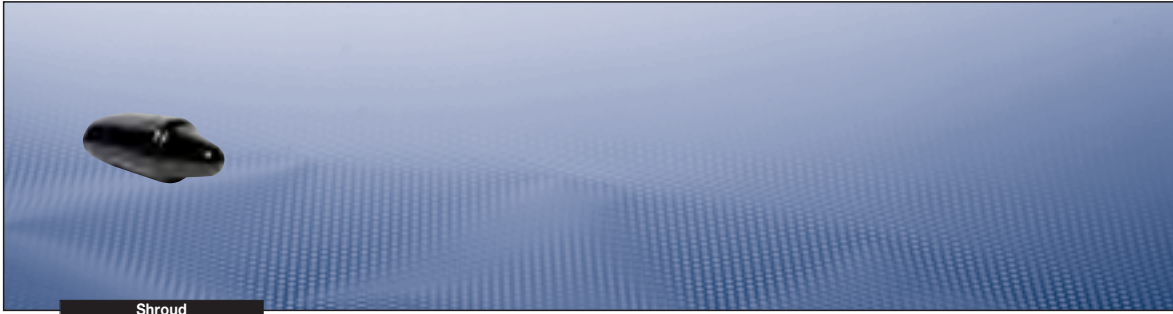
Please use sealing washers (see page 8.18).

Dimension drawing



Dimensions in mm

Ex-cable glands



Accessories for cable glands type CMDEL

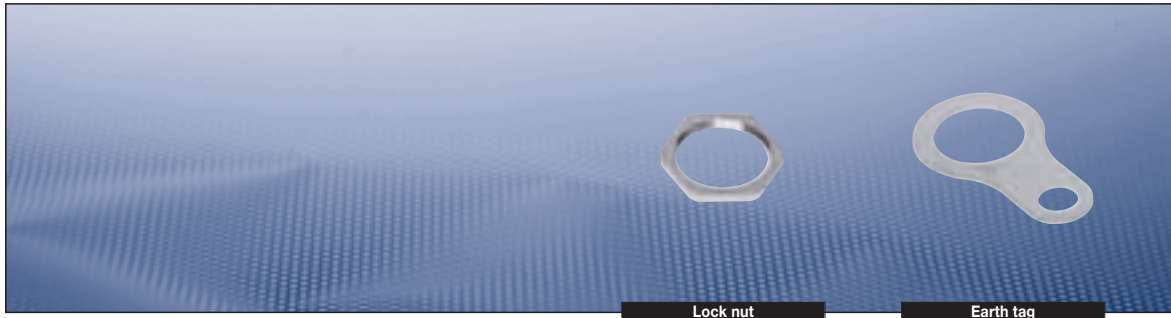
Ordering details for PVC-shrouds for cable glands

Type CMDEL	OU	Order No.
M10	10	CAP 506 040
M12 / M16	10	CAP 506 050
M20 / 1/2"	10	CAP 506 060
M25 / 3/4"	10	CAP 506 070
M32 / 1"	10	CAP 506 080
M40 / 1 1/4" / 1 1/2"	10	CAP 506 090
M50 / 2"	10	CAP 506 100
2 1/2"	10	CAP 506 110
12	10	CAP 506 120

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.



Lock nut

Earth tag

Accessories for cable glands type CMDEL

Ordering details earth tags MsNi for cable glands

Thread	Dimensions					Weight approx. kg	OU	Order No.
	A	B	ØC	ØD	E			
M12 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	CAP 567 024
M16 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	CAP 567 034
M20 x 1.5 ISO	53.8	33	7	28.6	13	0.008	10	CAP 567 054
M25 x 1.5 ISO	61.5	36	10.5	34	17	0.011	10	CAP 567 074
M32 x 1.5 ISO	73	41	12.2	42	22	0.015	10	CAP 567 094
M40 x 1.5 ISO	86.5	44.5	13.5	54	30	0.025	10	CAP 567 124
M50 x 1.5 ISO	111.5	58	13.5	67	40	0.041	10	CAP 567 154
M63 x 1.5 ISO	125.5	67	13.5	77	40	0.044	10	CAP 567 184
3/8" NPT	53.8	33	7	28.6	13	0.008	10	CAP 567 044
1/2" NPT	61.5	36	10.5	34	17	0.008	10	CAP 567 064
3/4" NPT	73	41	12.2	42	22	0.008	10	CAP 567 084
1" NPT	73	41	12.2	42	22	0.011	10	CAP 567 104
1 1/4" NPT	86.5	44.5	13.5	54	30	0.015	10	CAP 567 134
1 1/2" NPT	111.5	58	13.5	67	40	0.025	10	CAP 567 154
2" NPT	125.5	67	13.5	77	40	0.041	10	CAP 567 174
2 1/2" NPT	137.5	73	13.5	89	40	0.044	10	CAP 567 194

Ordering details lock nuts MsNi

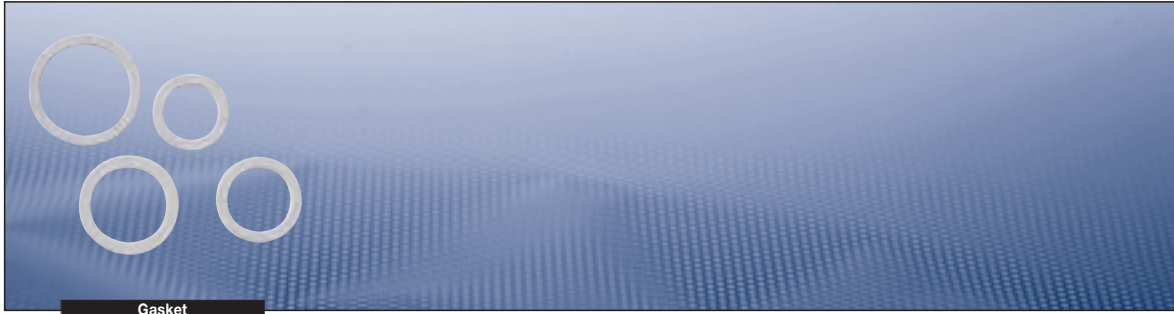
Thread ISO/NPT	A/F mm	L mm	OU	Order No.
M12 x 1.5 ISO	14	2.8	10	CAP 221 294
M16 x 1.5 ISO	18	2.8	10	CAP 221 694
M20 x 1.5 ISO	23	3.0	10	CAP 222 094
M25 x 1.5 ISO	28	3.0	10	CAP 222 594
M32 x 1.5 ISO	36	3.5	10	CAP 223 294
M40 x 1.5 ISO	44	4.0	10	CAP 224 094
M50 x 1.5 ISO	54	5.0	10	CAP 225 094
M63 x 1.5 ISO	70	6.0	10	CAP 226 394
1/4" NPT	16	2.8	10	CAP 280 104
3/8" NPT	20	2.8	10	CAP 280 114
1/2" NPT	24	3.5	10	CAP 280 124
3/4" NPT	30	3.5	10	CAP 280 134
1" NPT	37	4.5	10	CAP 280 144
1 1/4" NPT	47	4.5	10	CAP 280 154
1 1/2" NPT	52	5.0	10	CAP 280 164
2" NPT	64	5.5	10	CAP 280 174
2 1/2" NPT	77	6.5	10	CAP 280 184
3" NPT	95	8.0	10	CAP 280 194
3 1/2" NPT	110	10.0	10	CAP 280 204
4" NPT	120	11.0	10	CAP 280 214

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Ex-cable glands



Gasket

Accessories for cable glands type CMDEL

Ordering details gaskets for cable glands

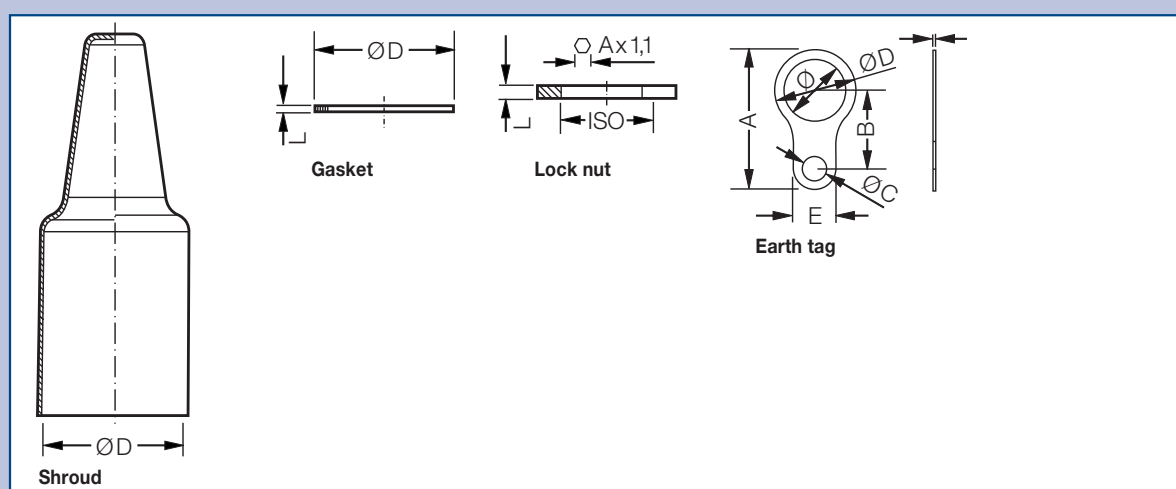
Thread ISO/NPT	Ø D mm	L mm	OU	Order No. Fibrous material	Order No. Neoprene
M12 x 1.5 ISO	18	1.2	10	CAP 221 245	CAP 221 249
M16 x 1.5 ISO	22	1.2	10	CAP 221 645	CAP 221 649
M20 x 1.5 ISO	24	1.2	10	CAP 222 045	CAP 222 049
M25 x 1.5 ISO	30	1.5	10	CAP 222 545	CAP 222 549
M32 x 1.5 ISO	42	1.5	10	CAP 223 245	CAP 223 249
M40 x 1.5 ISO	52	1.5	10	CAP 224 045	CAP 224 049
M50 x 1.5 ISO	63	1.5	10	CAP 225 045	CAP 225 049
M63 x 1.5 ISO	77	2.0	10	CAP 226 345	CAP 226 349
1/4" NPT	20	1.5	10	CAP 239 014	CAP 229 014
3/8" NPT	22	1.5	10	CAP 239 038	CAP 229 038
1/2" NPT	27	1.5	10	CAP 239 012	CAP 229 012
3/4" NPT	33	1.5	10	CAP 239 034	CAP 229 034
1" NPT	41	1.5	10	CAP 239 010	CAP 229 010
1"1/4 NPT	52	1.5	10	CAP 239 114	CAP 229 114
1"1/2 NPT	57	1.5	10	CAP 239 112	CAP 229 112
2" NPT	71	2.0	10	CAP 239 020	CAP 229 020
2"1/2 NPT	85	2.0	10	CAP 239 212	CAP 229 212
3" NPT	104	2.0	10	CAP 238 049	CAP 229 300
3"1/2 NPT	120	2.0	10	CAP 239 312	CAP 229 312

Cable glands with PG-thread are available on request.

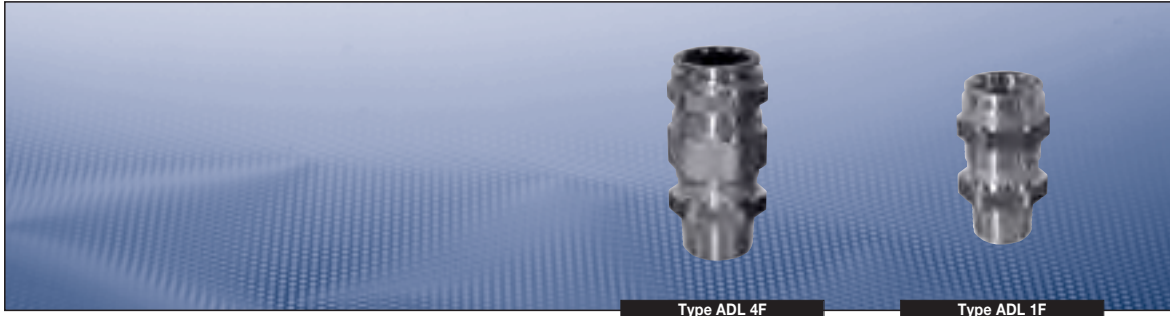
The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Dimension drawing



Dimensions in mm



Technical data

Ex-e cable glands metal design ADL 1F | ADL 4F V> 2000 cm³

Marking to 94/9/EC	⊕ Ex II 2 G Ex d IIC / Ex e II / ⊕ Ex II 2 D Ex tD
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Permissible ambient temperature	-40 °C to +100 °C -70 °C up to +220 °C (option)
Degree of protection accd. EN 60529	IP66 / IP68 - 10 bar
Thread	ISO thread acc. ISO 965/1, ISO 965/2 and EN 60423
Enclosure material	Natural brass (stainless steel, MsNi, bronze option)

Ex-cable glands



Type ADL 1F

Ordering details

Thread	Type	Cable Ø outside mm	Dimensions			Weight approx. kg	Order No.
			A mm	L ¹⁾ mm	E mm		
Cable gland type ADL 1F for unarmoured cables							
ISO20 x 1.5	ADL 1F ISO20 N05B2	6 - 10	28	59	16	0,094	NOR 000 222 260 852
ISO20 x 1.5	ADL 1F ISO20 N05B1	9 - 14	28	59	16	0,093	NOR 000 222 260 860
ISO25 x 1.5	ADL 1F ISO25 N05B2	6 - 10	28	59	16	0,098	NOR 000 222 260 878
ISO25 x 1.5	ADL 1F ISO25 N05B1	9 - 14	28	59	16	0,096	NOR 000 002 260 886
ISO25 x 1.5	ADL 1F ISO25 N06B4	14 - 18	32	60	18	0,117	NOR 000 222 260 927
ISO25 x 1.5	ADL 1F ISO25 N06B5	16 - 19	32	60	18	0,108	NOR 000 112 260 590
ISO32 x 1.5	ADL 1F ISO32 N07B3	20 - 23	40	73	18	0,217	NOR 000 112 260 623
ISO32 x 1.5	ADL 1F ISO32 N08B1	20 - 27.5	52	83	18	0,357	NOR 000 112 260 657
NPT 1/2"	ADL 1F NPT1/2" N05B2	6 - 10	28	59	16	0,100	NOR 000 222 260 753
NPT 1/2"	ADL 1F NPT1/2" N05B1	9 - 14	28	59	16	0,099	NOR 000 222 260 761
NPT 3/4"	ADL 1F NPT3/4" N05B2	6 - 10	28	59	16	0,107	NOR 000 222 260 779
NPT 3/4"	ADL 1F NPT3/4" N05B1	9 - 14	28	59	16	0,105	NOR 000 222 260 787
NPT 3/4"	ADL 1F NPT3/4" N06B4	14 - 18	32	60	16	0,123	NOR 000 222 260 894
NPT 3/4"	ADL 1F NPT3/4" N06B5	16 - 19	32	60	16	0,115	NOR 000 002 260 890
NPT 1"	ADL 1F NPT1" N07B3	20 - 23	40	73	21	0,235	NOR 000 112 260 607
1" ISO 7/1	ADL 1F 1"ISO7-1 N07B3	20 - 23	40	73	19	0,230	NOR 000 002 260 915
NPT 1"	ADL 1F NPT1" N08B1	20 - 26	52	83	21	0,380	NOR 000 112 260 631
1" ISO 7/1	ADL 1F 1"ISO7-1 N08B1	20 - 26	52	83	19	0,375	NOR 000 002 260 923

The threaded up to 3/4" NPT compatible with ISO 7/1 conic

PG 13.5	ADL 1F PG13.5 N05B2 B	6 - 10	28	59	16	0,098	NOR 000 222 260 810
PG 13.5	ADL 1F PG13.5 N05B1 A	9 - 14	28	59	16	0,096	NOR 000 222 260 828
PG 16	ADL 1F PG16 N05B2	6 - 10	28	59	16	0,107	NOR 000 222 260 836
PG 16	ADL 1F PG16 N05B1	9 - 14	28	59	16	0,105	NOR 000 222 260 844
PG 21	ADL 1F PG21 N06B4	14 - 18	32	60	21	0,147	NOR 000 222 260 919

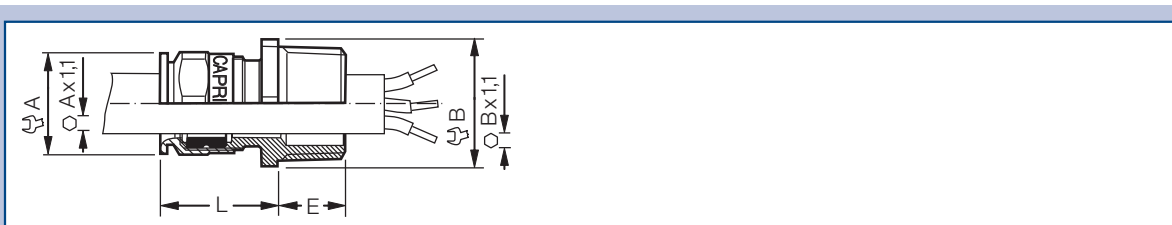
¹⁾ Dimensions with max. cable

All dimensions in mm

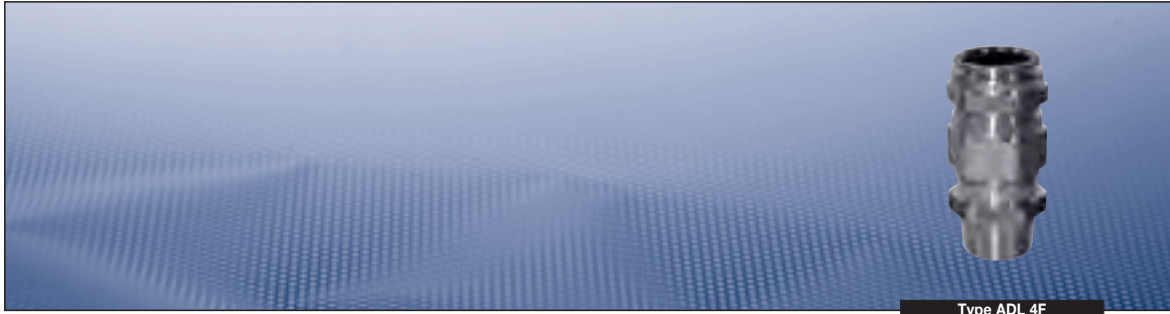
Please use sealing washers (see page 8.18).

Enlarged temperature range from -70 °C up to +220 °C please use Order No.: CAP...5 instead of CAP...4

Dimension drawing



Dimensions in mm



Type ADL 4F

Ordering details

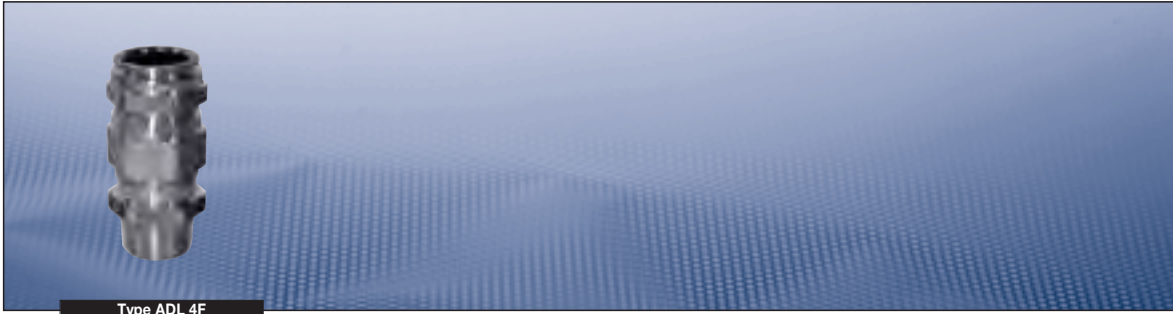
Thread	Type	Cable Ø ²⁾		Armour up to mm	Dimensions				Weight approx. kg	Order No.
		Outside mm	Inside mm		A mm	B mm	L ¹⁾ mm	E mm		
Cable gland type ADL 4F for armoured cables										
ISO20 x 1.5	ADL 4F ISO20 N05B2	10 - 15	6 - 10	0.15 - 1.25	28	-	59	16	0.152	NOR 000 222 260 547
ISO20 x 1.5	ADL 4F ISO20 N05B1	13 - 18	9 - 14	0.15 - 1.25	28	-	59	16	0.150	NOR 000 222 260 555
ISO25 x 1.5	ADL 4F ISO25 N05B2	10 - 15	6 - 10	0.15 - 1.25	28	-	59	16	0.155	NOR 000 222 260 563
ISO25 x 1.5	ADL 4F ISO25 N05B1	13 - 18	9 - 14	0.15 - 1.25	28	-	59	16	0.153	NOR 000 222 260 571
ISO25 x 1.5	ADL 4F ISO25 N06B4	18 - 22	14 - 18	0.15 - 1.25	32	-	60	18	0.184	NOR 000 222 260 638
ISO25 x 1.5	ADL 4F ISO25 N06B5	19 - 23	16 - 19	0.15 - 1.25	32	-	60	18	0.173	NOR 000 112 260 409
ISO32 x 1.5	ADL 4F ISO32 N06B4	18 - 22	14 - 18	0.15 - 1.25	32	36	63.5	15	0.228	NOR 000 222 260 646
ISO32 x 1.5	ADL 4F ISO32 N07B3	18 - 27.5	20 - 23	0.15 - 1.6	40	-	73	18	0.370	NOR 000 112 260 433
ISO32 x 1.5	ADL 4F ISO32 N08B1	23 - 33.5	20 - 27.5	0.15 - 2	52	-	83	18	0.690	NOR 000 112 260 467
ISO50 x 1.5	ADL 4F ISO50 N09B1	29 - 40.5	25 - 33	0.2 - 2	57	-	87	18	0.900	NOR 000 112 260 706
ISO50 x 1.5	ADL 4F ISO50 N10B2	35 - 48	30 - 39	0.5 - 2.5	72	-	100	18	1.255	NOR 000 112 260 722
ISO60 x 1.5	ADL 4F ISO60 N10B1	41 - 53	37 - 45	0.5 - 2.5	72	-	100	18	1.165	NOR 000 112 260 748
ISO60 x 1.5	ADL 4F ISO60 N10B3	50 - 56.5	44 - 49.5	0.5 - 2.5	72	-	100	18	1.120	NOR 000 112 260 764
NPT 1/2"	ADL 4F NPT 1/2" N05B2	10 - 15	6 - 10	0.15 - 1.25	28	-	59	16	0.158	NOR 000 222 260 422
NPT 1/2"	ADL 4F NPT 1/2" N05B1	13 - 18	9 - 14	0.15 - 1.25	28	-	59	16	0.156	NOR 000 222 260 430
NPT 3/4"	ADL 4F NPT 3/4" N05B2	10 - 15	6 - 10	0.15 - 1.25	28	-	59	16	0.165	NOR 000 222 260 464
NPT 3/4"	ADL 4F NPT 3/4" N05B1	13 - 18	9 - 14	0.15 - 1.25	28	-	59	16	0.163	NOR 000 222 260 472
NPT 3/4"	ADL 4F NPT 3/4" N06B4	18 - 22	14 - 18	0.15 - 1.25	32	-	60	16	0.190	NOR 000 222 260 589
NPT 3/4"	ADL 4F NPT 3/4" N06B5	19 - 23	16 - 19	0.15 - 1.25	32	-	60	16	0.180	NOR 000 002 260 733
NPT 1"	ADL 4F NPT 1" N06B4	13 - 18	9 - 14	0.15 - 1.25	32	38	67.5	20	0.267	NOR 000 222 260 612
NPT 1"	ADL 4F NPT 1" N06B5	19 - 23	16 - 19	0.15 - 1.25	32	38	67.5	20	0.257	NOR 000 112 260 392
NPT 1"	ADL 4F NPT 1" N07B3	18 - 27.5	20 - 23	0.15 - 1.6	40	-	73	21	0.390	NOR 000 112 260 417
NPT 1"	ADL 4F NPT 1" N08B1	23 - 33.5	20 - 26	0.15 - 2	52	-	83	21	0.712	NOR 000 112 260 441
NPT 1 1/4"	ADL 4F NPT 1 1/4" N07B3	18 - 27.5	20 - 23	0.15 - 1.6	40	44	83.5	20	0.520	NOR 000 112 260 425
NPT 1 1/4"	ADL 4F NPT 1 1/4" N08B1	23 - 33.5	20 - 26	0.15 - 2	52	-	83	21	0.730	NOR 000 112 260 459
NPT 1 1/2"	ADL 4F NPT 1 1/2" N09B1	29 - 40.5	25 - 33	0.2 - 2	57	-	87	21	0.904	NOR 000 112 260 780
NPT 1 1/2"	ADL 4F NPT 1 1/2" N10B2	35 - 48	30 - 39	0.2 - 2.5	72	-	100	18	1.255	NOR 000 112 260 798
NPT 2"	ADL 4F NPT 2" N10B1	41 - 53	37 - 45	0.2 - 2.5	72	-	100	25	1.190	NOR 000 112 260 805
NPT 2"	ADL 4F NPT 2" N10B3	50 - 56.5	44 - 49.5	0.2 - 2.5	72	-	100	25	1.140	NOR 000 112 260 813

¹⁾ The threaded up to 3/4" NPT compatible with ISO 7/1 conic

²⁾ Dimensions with max. cable

Enlarged temperature range from -70 °C up to +220 °C please use Order No.: CAP...5 instead of CAP...4

Ex-cable glands



Type ADL 4F

Ordering details

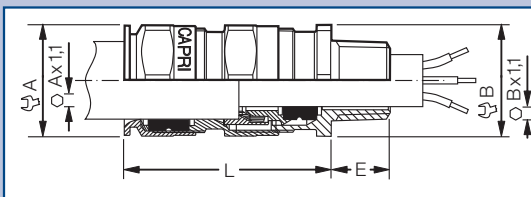
Thread	Type	Cable Ø ²⁾		Armour up to mm	Dimensions				Weight approx. kg	Order No.
		Outside mm	Inside mm		A mm	B mm	L ¹⁾ mm	E mm		
Cable gland type ADL 4F for armoured cable										
PG 11	ADL 4F PG11 N05B1	13 - 18	9 - 14	0.15 - 1.25	28	–	59	16	0.147	NOR 000 222 260 373
PG 13.5	ADL 4F PG13.5 N05B2	10 - 15	6 - 10	0.15 - 1.25	28	–	59	16	0.156	NOR 000 222 260 399
PG 13.5	ADL 4F PG13.5 N05B1	13 - 18	9 - 14	0.15 - 1.25	28	–	59	16	0.154	NOR 000 222 260 513
PG 16	ADL 4F PG16 N05B2	10 - 15	6 - 10	0.15 - 1.25	28	–	59	16	0.165	NOR 000 222 260 521
PG 16	ADL 4F PG16 N05B1	13 - 18	9 - 14	0.15 - 1.25	28	–	59	16	0.163	NOR 000 222 260 539
PG 21	ADL 4F PG21 N06B4	18 - 22	14 - 18	0.15 - 1.25	32	–	60	21	0.215	NOR 000 222 260 604
PG 21	ADL 4F PG21 N06B5	19 - 23	16 - 19	0.15 - 1.25	32	–	60	21	0.203	NOR 000 112 260 152
PG 29	ADL 4F PG29 N07B3	18 - 27.5	20 - 23	0.15 - 1.6	40	–	73	21	0.428	NOR 000 112 260 160
PG 29	ADL 4F PG29 N08B1	23 - 33.5	20 - 27.5	0.15 - 2	52	–	83	21	0.740	NOR 000 112 260 178
PG 36	ADL 4F PG36 N09B1	29 - 40.5	25 - 33	0.2 - 2	57	–	87	21	0.892	NOR 000 112 260 714
1" ISO 7/1	ADL 4F 1"ISO7-1 N05B4	18 - 22	14 - 18	0.15 - 1.25	32	36	67.5	19	0.265	NOR 000 222 260 620
1" ISO 7/1	ADL 4F 1"ISO7-1 N06B5	19 - 23	16 - 19	0.15 - 1.25	32	36	67.5	19	0.255	NOR 000 112 260 037
1" ISO 7/1	ADL 4F 1"ISO7-1 N07B3	18 - 27.5	20 - 23	0.15 - 1.6	40	–	73	19	0.385	NOR 000 002 260 741
1" ISO 7/1	ADL 4F 1"ISO7-1 N08B1	23 - 33.5	20 - 26	0.15 - 2	52	–	83	19	0.708	NOR 000 002 260 824
1 1/4" ISO 7/1	ADL 4F 1 1/4"ISO7-1 N08B1	23 - 33.5	20 - 27.5	0.15 - 2	52	–	83	21.5	0.803	NOR 000 112 260 053
1 1/2" ISO 7/1	ADL 4F 1 1/2"ISO7-1 N09B1	29 - 40.5	25 - 33	0.2 - 2	57	–	87	21.5	0.803	NOR 000 002 260 759
1 1/2" ISO 7/1	ADL 4F 1 1/2"ISO7-1 N10B2	35 - 48	30 - 39	0.5 - 2.5	72	–	100	21.5	1.282	NOR 000 002 260 767
2" ISO 7/1	ADL 4F 2"ISO7-1 N10B1	41 - 53	37 - 45	0.5 - 2.5	72	–	100	26	1.210	NOR 000 002 260 791
2" ISO 7/1	ADL 4F 2"ISO7-1 N10B3	50 - 56.5	44 - 49.5	0.5 - 2.5	72	–	100	26	1.162	NOR 000 002 260 808

¹⁾ The threaded up to 3/4" NPT compatible with ISO 7/1 conic

²⁾ Dimensions with max. cable

Please use sealing washers (see page 8.18).

Dimension drawing



Dimensions in mm



Accessories for cable glands type ADL

Ordering details for strain clamp

Type	for A/F mm	Cable Ø mm	B mm	C mm	Weight kg	Order No.
5	28/29	6.5 – 13	34	9	0.03	CAP 901 234
5	28/29	10.5 – 17	34	9	0.033	CAP 901 294
6	32	7 – 15	42	10.5	0.058	CAP 903 434
6	32	13 – 21	42	10.5	0.065	CAP 903 494
7	40/41	18 – 27.5	51	10.5	0.088	CAP 901 094
8	52	16 – 27.5	65	12	0.118	CAP 901 434
8	52	23.5 – 33.5	65	12	0.118	CAP 901 494
9	57	29 – 40.5	65	12	0.149	CAP 901 594
10	72	30 – 44	78	12	0.133	CAP 902 034
10	72	40 – 53	78	12	0.169	CAP 902 094

Ordering details shrouds for cable glands ADL...

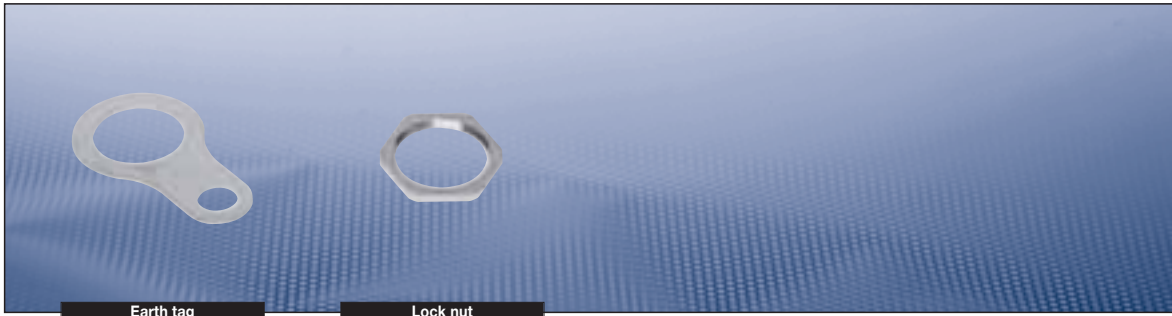
Type	for A/F mm	Ø D mm	OU	Weight kg	Order No.
5	28/29	31	0.0163	10	CAP 506 070
7	32	43	0.040	10	CAP 506 080
8	40/41	52	0.047	10	CAP 506 090
9	52	59	0.069	10	CAP 506 100
10	57	75	0.102	10	CAP 506 120
11	72	90	0.120	10	CAP 506 113

Cable glands with PG-thread are available on request.

The order no. will show 1 pcs.

Please note that only order units (OU can be ordered).

Ex-cable glands



Accessories for cable glands type ADL

Ordering details earth tags for cable glands

Thread ISO/NPT	Dimensions					Weight approx. kg	OU	Order No.
	A mm	B mm	ØC mm	ØD mm	E mm			
M12 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	CAP 567 024
M16 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	CAP 567 034
M20 x 1.5 ISO	53.8	33	7	28.6	13	0.008	10	CAP 567 054
M25 x 1.5 ISO	61.5	36	10.5	34	17	0.011	10	CAP 567 074
M32 x 1.5 ISO	73	41	12.2	42	22	0.015	10	CAP 567 094
M40 x 1.5 ISO	86.5	44.5	13.5	54	30	0.025	10	CAP 567 124
M50 x 1.5 ISO	111.5	58	13.5	67	40	0.041	10	CAP 567 154
M63 x 1.5 ISO	125.5	67	13.5	77	40	0.044	10	CAP 567 184
3/8" NPT	53.8	33	7	28.6	13	0.008	10	CAP 567 044
1/2" NPT	61.5	36	10.5	34	17	0.008	10	CAP 567 064
3/4" NPT	73	41	12.2	42	22	0.008	10	CAP 567 084
1" NPT	73	41	12.2	42	22	0.011	10	CAP 567 104
1 1/4" NPT	86.5	44.5	13.5	54	30	0.015	10	CAP 567 134
1 1/2" NPT	111.5	58	13.5	67	40	0.025	10	CAP 567 154
2" NPT	125.5	67	13.5	77	40	0.041	10	CAP 567 174
2 1/2" NPT	137.5	73	13.5	89	40	0.044	10	CAP 567 194

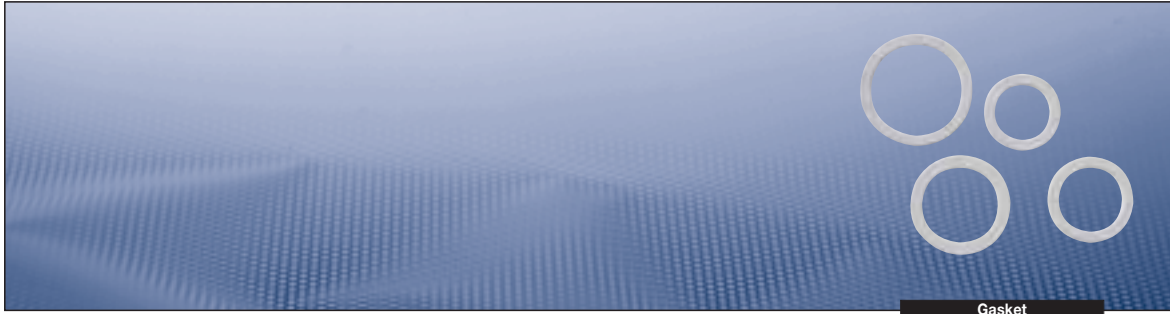
Ordering details lock nuts

Thread ISO/NPT	A/F mm	L mm	OU	Order No.
M12 x 1.5 ISO	14	2.8	10	CAP 221 294
M16 x 1.5 ISO	18	2.8	10	CAP 221 694
M20 x 1.5 ISO	23	3.0	10	CAP 222 094
M25 x 1.5 ISO	28	3.0	10	CAP 222 594
M32 x 1.5 ISO	36	3.5	10	CAP 223 294
M40 x 1.5 ISO	44	4.0	10	CAP 224 094
M50 x 1.5 ISO	54	5.0	10	CAP 225 094
M63 x 1.5 ISO	70	6.0	10	CAP 226 394
1/4" NPT	16	2.8	10	CAP 280 104
3/8" NPT	20	2.8	10	CAP 280 114
1/2" NPT	24	3.5	10	CAP 280 124
3/4" NPT	30	3.5	10	CAP 280 134
1" NPT	37	4.5	10	CAP 280 144
1 1/4" NPT	47	4.5	10	CAP 280 154
1 1/2" NPT	52	5.0	10	CAP 280 164
2" NPT	64	5.5	10	CAP 280 174
2 1/2" NPT	77	6.5	10	CAP 280 184
3" NPT	95	8.0	10	CAP 280 194
3 1/2" NPT	110	10.0	10	CAP 280 204
4" NPT	120	11.0	10	CAP 280 214

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.



Gasket

Accessories for cable glands type ADL

Ordering details gaskets for cable glands

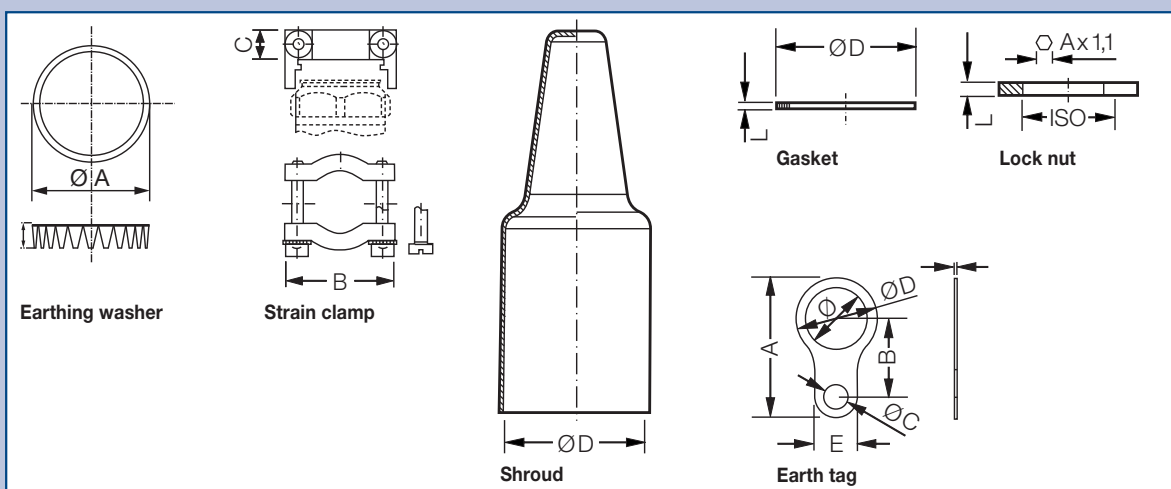
Thread ISO/NPT	Ø D mm	L mm	OU	Order No. Fibrous material	Order No. Neoprene
M12 x 1.5 ISO	18	1.2	10	CAP 221 245	CAP 221 249
M16 x 1.5 ISO	22	1.2	10	CAP 221 645	CAP 221 649
M20 x 1.5 ISO	24	1.2	10	CAP 222 045	CAP 222 049
M25 x 1.5 ISO	30	1.5	10	CAP 222 545	CAP 222 549
M32 x 1.5 ISO	42	1.5	10	CAP 223 245	CAP 223 249
M40 x 1.5 ISO	52	1.5	10	CAP 224 045	CAP 224 049
M50 x 1.5 ISO	63	1.5	10	CAP 225 045	CAP 225 049
M63 x 1.5 ISO	77	2.0	10	CAP 226 345	CAP 226 349
1/4" NPT	20	1.5	10	CAP 239 014	CAP 229 014
3/8" NPT	22	1.5	10	CAP 239 038	CAP 229 038
1/2" NPT	27	1.5	10	CAP 239 012	CAP 229 012
3/4" NPT	33	1.5	10	CAP 239 034	CAP 229 034
1" NPT	41	1.5	10	CAP 239 010	CAP 229 010
1*1/4 NPT	52	1.5	10	CAP 239 114	CAP 229 114
1*1/2 NPT	57	1.5	10	CAP 239 112	CAP 229 112
2" NPT	71	2.0	10	CAP 239 020	CAP 229 020
2*1/2 NPT	85	2.0	10	CAP 239 212	CAP 229 212
3" NPT	104	2.0	10	CAP 238 049	CAP 229 300
3*1/2 NPT	120	2.0	10	CAP 239 312	CAP 229 312

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

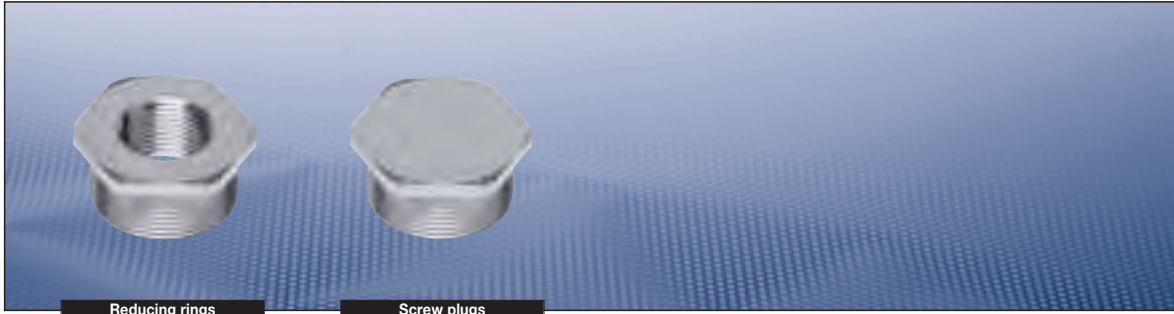
Dimension drawing



Dimensions in mm

1
2
3
4
5
6
7
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9
10
11
12

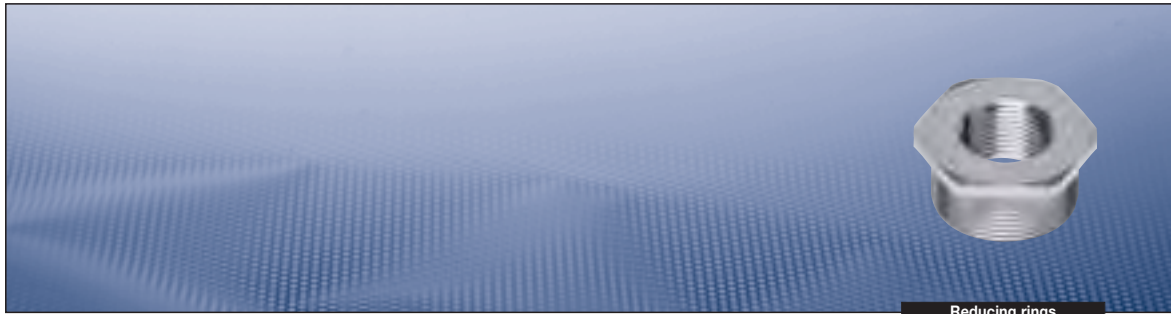
Ex-cable glands



Technical data

Ex-d cable glands metal design Reducing rings Screw plug Adapter ISO-NPT	
Marking to 94/9/EC	⊕ II 2 G Ex e II / Ex d IIC / ⊕ II 2 D Ex tD
EC-Type Examination Certificate	LCIE 98 ATEX 0001 U
Permissible ambient temperature	-40 °C to +100 °C
Degree of protection accd. EN 60529	IP66 / IP68 - 10 bar
Enclosure material	Brass, nickel-plated (stainless steel, bronze, natural brass option)

Please use sealing washers (see page 8.18).



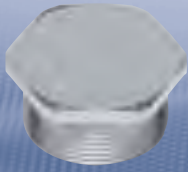
Reducing rings

Ordering details

Thread 1 (male)	Thread 2 (female)	A mm	L mm	E mm	Order No.
Reducing rings ISO for Metric thread, MsNi					
M16 x 1.5	M12 x 1.5	18	2.8	15	CAP 745 834
M20 x 1.5	M12 x 1.5	23	3.0	15	CAP 745 844
M20 x 1.5	M16 x 1.5	23	3.0	15	CAP 740 024
M25 x 1.5	M16 x 1.5	28	3.0	15	CAP 740 034
M25 x 1.5	M20 x 1.5	28	3.0	15	CAP 740 294
M32 x 1.5	M20 x 1.5	36	3.5	15	CAP 740 304
M32 x 1.5	M25 x 1.5	36	3.5	15	CAP 740 564
M40 x 1.5	M25 x 1.5	44	4.0	15	CAP 740 574
M40 x 1.5	M32 x 1.5	44	4.0	15	CAP 740 834
M50 x 1.5	M32 x 1.5	54	5.0	16	CAP 740 844
M50 x 1.5	M40 x 1.5	54	5.0	16	CAP 741 104
M63 x 1.5	M40 x 1.5	67	5.5	17	CAP 741 114
M63 x 1.5	M50 x 1.5	67	5.5	17	CAP 741 374
M75 x 1.5	M32 x 1.5	80	6.0	18	CAP 740 864
M75 x 1.5	M40 x 1.5	80	6.0	18	CAP 741 124
M75 x 1.5	M50 x 1.5	80	6.0	18	CAP 741 384
M75 x 1.5	M63 x 1.5	80	6.0	18	CAP 741 644
M90 x 2.0	M63 x 1.5	95	8.0	22	CAP 745 854
M90 x 2.0	M75 x 2.0	95	8.0	22	CAP 745 864
M100 x 2.0	M75 x 2.0	110	10.0	22	CAP 745 874
M100 x 2.0	M90 x 2.0	120	10.0	22	CAP 745 914
M110 x 2.0	M90 x 2.0	120	11.0	22	CAP 745 924
M110 x 2.0	M100 x 2.0	120	11.0	22	CAP 745 934

Reducing rings NPT, MsNi					
3/8"	1/4"	18	2.8	12	CAP 745 574
1/2"	2/4"	22	3.0	16	CAP 745 584
1/2"	3/8"	22	3.0	16	CAP 745 594
3/4"	3/8"	28	3.0	16	CAP 745 604
3/4"	1/2"	28	3.0	16	CAP 744 884
1"	1/2"	36	3.5	20	CAP 744 894
1"	3/4"	36	3.5	20	CAP 745 154
1 1/4	3/4"	44	4.0	20	CAP 745 164
1 1/4	1"	44	4.0	20	CAP 745 424
1 1/2	1"	50	5.0	20	CAP 745 434
1 1/2	1 1/4	50	5.0	20	CAP 745 694
2"	1"	64	5.5	20	CAP 745 444
2"	1 1/4	64	5.5	20	CAP 745 704
2"	1 1/2	64	5.5	20	CAP 745 964
2 1/2	1 1/2	75	6.0	28	CAP 745 974
2 1/2	2"	75	6.0	28	CAP 746 234
3"	2"	90	8.0	30	CAP 746 244
3"	2 1/2	90	8.0	30	CAP 746 504
3 1/2	2 1/2	110	10.0	32	CAP 745 654
3 1/2	3"	110	10.0	32	CAP 745 664
4"	3"	120	11.0	32	CAP 746 834
4"	3 1/2	120	11.0	32	CAP 745 734

Ex-cable glands

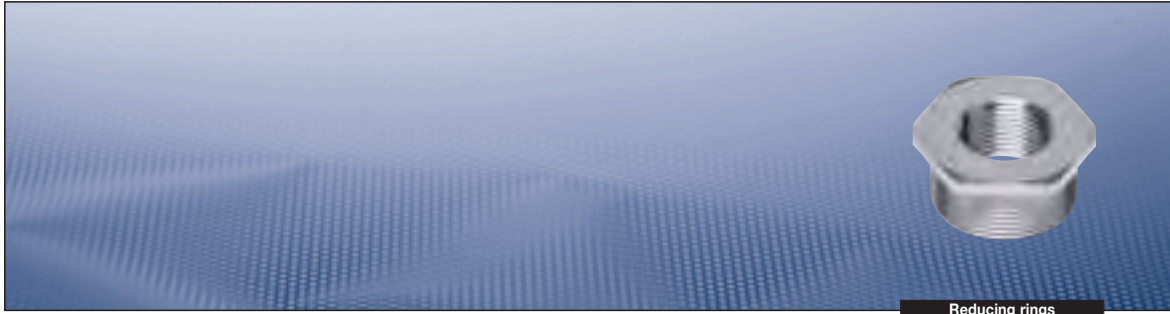


Screw plugs

Ordering details

Thread 1 (male)	A mm	L mm	E mm	Order No.
Screw plug with ISO thread, MsNi				
M12 x 1.5	14	2.8	15	CAP 190 124
M16 x 1.5	18	3.0	15	CAP 190 164
M20 x 1.5	23	3.0	15	CAP 190 204
M25 x 1.5	28	3.5	15	CAP 190 254
M32 x 1.5	36	4.0	15	CAP 190 324
M40 x 1.5	44	4.0	15	CAP 190 404
M50 x 1.5	54	5.0	16	CAP 190 504
M63 x 1.5	67	5.5	17	CAP 190 634
Screw plug with NPT thread, MsNi				
1/4 "	14	2.8	12	CAP 190 194
3/8 "	18	2.8	12	CAP 190 294
1/2 "	22	3.0	16	CAP 190 394
3/4 "	28	3.0	16	CAP 190 494
1 "	36	3.5	20	CAP 190 594
1 " 1/4	44	4.0	20	CAP 190 694
1 " 1/2	50	5.0	20	CAP 190 794
2 "	64	5.5	20	CAP 190 894
2 " 1/2	75	6.0	28	CAP 190 994
3 "	90	8.0	30	CAP 191 094
3 " 1/2	110	10.0	32	CAP 191 194
4 "	120	11.0	32	CAP 191 294

Please use sealing washers (see page 8.18).



Reducing rings

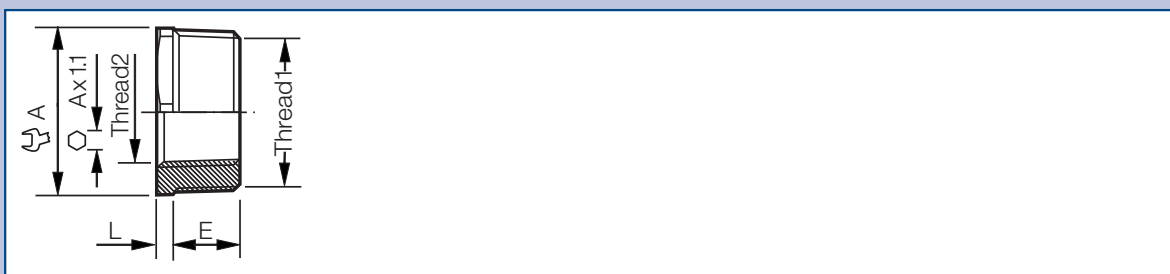
Ordering details

Thread 1 (male)	Thread 2 (female)	A mm	L mm	E mm	Ø D mm	Order No.
Adapter ISO - NPT, MsNi						
M20 x 1.5	1/2 " NPT	24	18	15	15.5	CAP 744 704
M20 x 1.5	3/4 " NPT	30	18.5	15	15.5	CAP 744 964
M25 x 1.5	3/4 " NPT	30	18.5	15	20.3	CAP 744 974
M25 x 1.5	1 " NPT	38	22.5	15	20.3	CAP 745 234
M32 x 1.5	1 " NPT	38	22.5	15	27.3	CAP 745 244
M32 x 1.5	1 " 1/4 NPT	48	22.5	15	27.3	CAP 745 504
M40 x 1.5	1 " 1/4 NPT	48	22.5	15	35.3	CAP 745 514
M40 x 1.5	1 " 1/2 NPT	52	22.5	15	35.3	CAP 745 774
M50 x 1.5	2 " NPT	64	22.5	16	45.2	CAP 746 044
M63 x 1.5	2 " NPT	67	22.5	17	53.6	CAP 746 054
M63 x 1.5	2 " 1/2 NPT	77	31	17	57.8	CAP 746 314

Adapter NPT - ISO, MsNi						
1/2 " NPT	M20 x 1.5	23	18.5	16	15.0	CAP 740 454
1/2 " NPT	M25 x 1.5	28	19.0	16	15.0	CAP 740 714
3/4 " NPT	M25 x 1.5	28	19.0	16	20.1	CAP 740 724
3/4 " NPT	M32 x 1.5	36	19.0	16	20.1	CAP 740 984
1 " NPT	M32 x 1.5	36	19.0	20	26.0	CAP 740 994
1 " NPT	M40 x 1.5	44	19.0	20	26.0	CAP 741 254
1 " 1/4 NPT	M40 x 1.5	44	19.0	20	34.8	CAP 741 264
1 " 1/4 NPT	M50 x 1.5	54	20.0	20	34.8	CAP 741 524
1 " 1/2 NPT	M50 x 1.5	54	20.0	20	40.8	CAP 741 534
1 " 1/2 NPT	M63 x 1.5	67	21.0	20	40.8	CAP 741 794
2 " NPT	M63 x 1.5	67	21.0	20	52.4	CAP 741 804

Please use sealing washers (see page 8.18).

Dimension drawing



Dimensions in mm

EX-CONTROL UNITS AND CONTROL STATIONS



EX-CONTROL UNITS AND CONTROL STATIONS

9.2

EX-INSTALLATION SWITCH

9.4

EX-CONTROL STATIONS

9.6

INDIVIDUAL EX-CONTROL STATIONS

9.32

EX-CONTROL AND SIGNAL UNITS FOR PANEL MOUNTING

9.80

EX-CONTROL-SWITCHES

9.112

FLAMEPROOF LIGHT ALLOY CONTROL STATIONS

9.124

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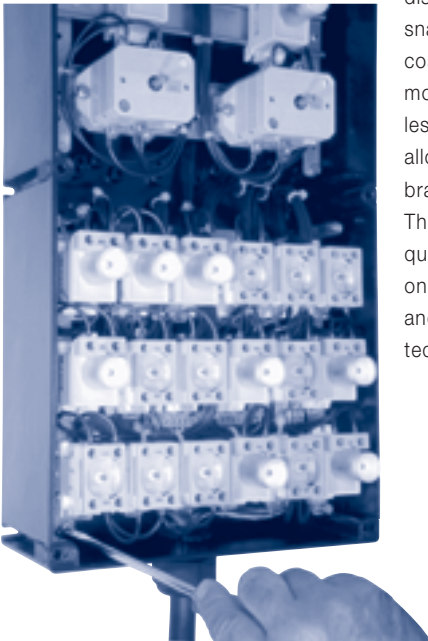
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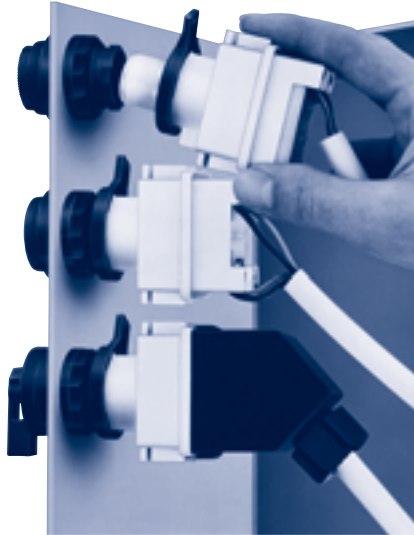
Material selection

At the heart of every electrical system is the control station. Even under the most adverse conditions, CEAG control stations can be used and operated reliably. The enclosures consist of impact-resistant thermoplastic, glass-fibre-reinforced polyester, light alloy or stainless steel. The robust materials, thermoplastic and polyester, fulfil the specification for surface resistance $< 10^9 \Omega$ required by EN 60079. The well-tried enclosure materials have proven their high resistance to chemicals in indoor and outdoor installations – especially in the chemical and off-shore industries. All metal parts are made of stainless steel.



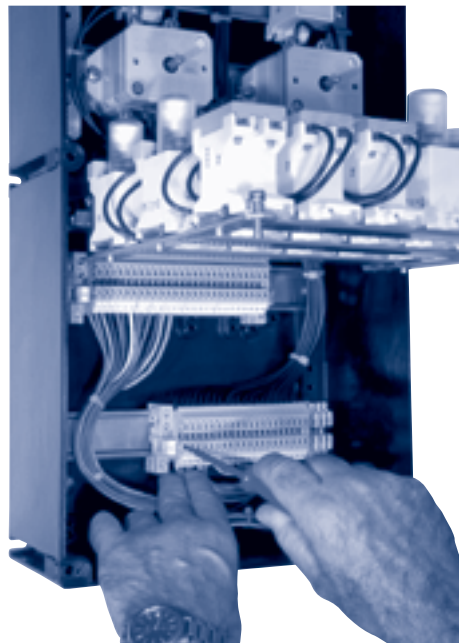
Combination of moulded plastic enclosures

The modular design of the GHG 44x control-station series lets you combine distribution modules with screwless snap-on mounting logically and at low cost. Standard sizes enable enclosure mounting via flanged joints. The screwless snap-on mounting system also allows the attachment of plastic or brass flanges on the enclosures. This mounting technique also lets you quickly and easily retrofit cable entries on the flanges. System modifications and extensions can thus be implemented in short time and with little effort.



Panel mounting

CEAG control and indicating elements can be integrated in panels with a wall thickness of up to 5 mm. The CEAG components for panel mounting, such as signal lamps, pushbuttons and switches, can be instantly plugged into the control and indicating elements on the panel via a bayonet-ring fitting. The single-wire installation is clear and simple. All panel-mounted apparatus can be retrofitted for cable connection



with a slip-on strain relief and protective cap and is then completely certified. Planning and procurement of panel-mounted apparatus with different cable lengths is a thing of the past.

Installation technology

CEAG control stations have a well thought out design concept. The flame-proof built-in components, such as signal lamps, pushbuttons and switches, are snap-on mounted to a rail moulded in the enclosure. They can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place. Low-cut side walls allow a quick and optimised cable connection. CEAG control stations feature standard M25 moulded-plastic cable entries with an 8 to 17 mm clamping diameter. Alternatively, metal screws and flanges can be used for mounting. The metal flanges enable external earthing. The CEAG control stations are installed using pre-wired connection terminals. The wired built-in components are snap-on mounted on a stainless-steel fold-out mounting frame. To connect the control and indicating elements, the mounting frame is folded out, the cables are quickly and easily fed into enclosure and attached logically to the terminals.

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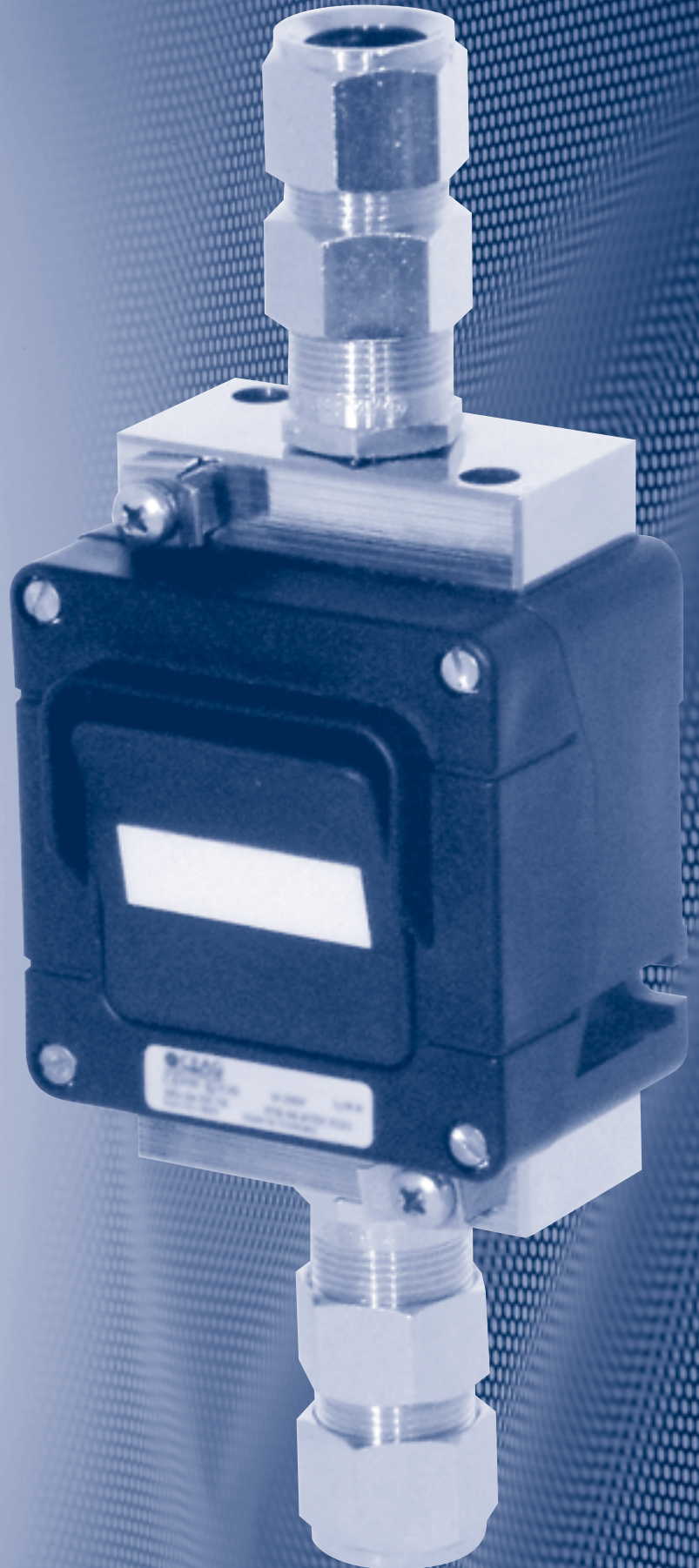
EX - INSTALLATION SWITCH

16 A, 250 V
Plastic version for Zone 1 and Zone 21

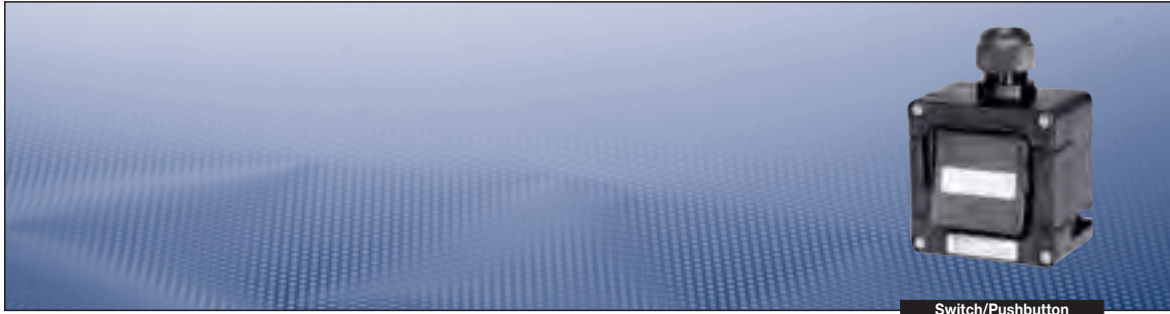
The explosion-protected installation switches are for use in the Zones 1, 2, 21 and 22. The materials used have proved to be safe and reliable for both indoor and outdoor installations, in particular in chemical and off-shore plants. The robust housings are made of a modified polyamide material.

The large actuator surface of the installation switch allows perfect operation, even when wearing working gloves. A protective collar prevents inadvertent operation. The toggle has a luminescent label which is in accordance with §7 of the Workshop Regulations and is also free from radioactive additives. Due to the external fixing facility, the switch can be installed easily while the cover is closed. Cable entry from the top is made possible by turning the base. In special cases a through wiring is possible as one can see on the illustration opposite.

International approvals.



- Large toggle also for working gloves
- Safety standard IP66
- Cable entry from the top or bottom
- Connecting terminals easily accessible



Switch/Pushbutton

Technical data

Ex-installation switches and Ex-pushbuttons

Marking to 94/9/EC	Ex II 2 G Ex de IIC T6 / Ex II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 98 ATEX 3121
IECEX Certificate of conformity	IECEX BK1 07.0036
Marking acc. IECEx	Ex ed IIC T6 Ex tD A21 IP66 T67 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	250 V, 50 - 60 Hz
Rated current	16 A
Connecting terminals	Switch terminals: 2 x 2.5 mm ² / PE-terminals: 4 x 2.5 mm ²
Degree of protection accd. to EN 60529	IP66
Cable glands ¹⁾	Ex-e cable glands max. 2 x M25; 2 x M20 thread
Weight	0.32 kg
Enclosure material	Polyamide

Ordering details

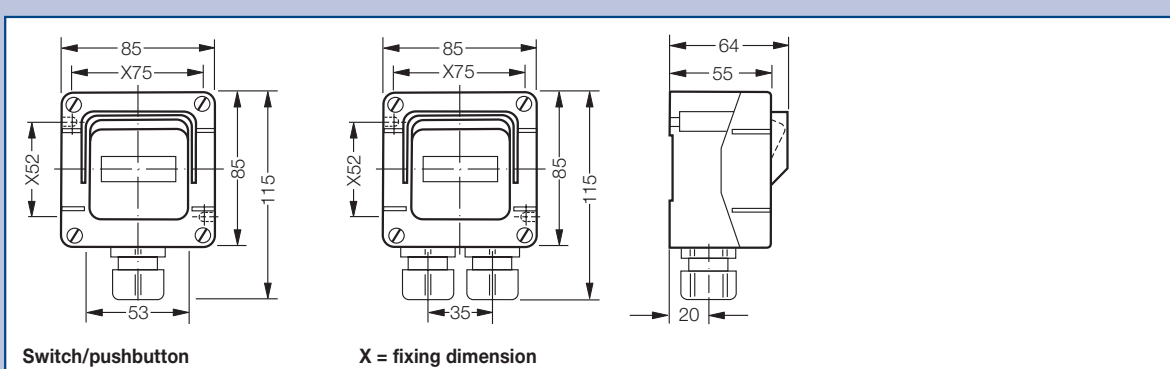
Type	Contact arrangement	Cable glands ¹⁾	Order No.
ON-OFF switch 2-pole		1 x M25	GHG 273 2000 R0017
		2 x M25	GHG 273 2000 R0018
		2 x M20 ²⁾	GHG 273 2000 R0003
Change-over switch		1 x M25	GHG 273 6000 R0011
		2 x M20 ²⁾	GHG 273 6000 R0003
		2 x M25	GHG 273 6000 R0014
Pushbutton		1 x M25	GHG 273 4000 R0004
		2 x M25	GHG 273 4000 R0007

¹⁾ Base enclosure can be rotated after wards (entry from top or down)

²⁾ Threaded only

Other versions available on request

Dimension drawing



Dimensions in mm

EX - CONTROL STATIONS

Moulded plastic Version for Zone 1 and Zone 21

Even under the most adverse conditions, CEAG control stations can be used and operated reliably. The enclosures consist of low-temperature impact-resistant thermoplastic which fulfils the requirements of EN 60079 and provides a high resistance to chemicals. The well thought out design with low side walls allows optimum cable connection. Quick fixing allows up to three CEAG built-in components, such as signal lamps, pushbuttons and switches, to be snapped on a rail in the enclosure. They can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails prevent the built-in components from being twisted out of place. Wall mounting can be carried out via easily accessible fixing apertures when the enclosure cover is sealed. CEAG mounting plates offer a time-saving fixing technique. CEAG control stations feature standard M25 moulded-plastic cable entries with an 8 to 17 mm clamping diameter. Coupling pieces link enclosures to each other and prevent them from being twisted out of place. Alternatively, metal screws and flanges can be used for mounting – the metal flanges also enable external earthing.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

- Flat side walls
- Quick fixing of all built-in components
- High chemical resistance
- Different enclosures can be combined





Technical data

Ex-Control stations Type 411 81 | Type 411 82 | Type 411 83

Marking to 94/9/EC	⚡ II 2 G Ex ed ib m IIC T6 ⚡ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEX Certificate of conformity	IECEX BKI 04.0003	
Marking acc. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	690 V AC	
Rated current	16 A	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A	Ex23 AC-15: U _e 230 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 2 A U _e 230 V / I _e 0.5 A
Connecting terminals	2 x 2.5 mm ²	
Insulation class	I	
Degree of protection accd. EN 60529	IP66 (standard)	
Cable glands/Gland plates/Enclosure drilling	1 x M25 Ex-e cable gland for cables from Ø 8 - 17 mm or 1 x M20 thread	
Enclosure material	Polyamide	
Enclosure colour	Black	

Type 411 81

Dimensions (L x W x H)	85 x 85 x 77.5 mm
Weight (empty)	0.25 kg

Type 411 82

Dimensions (L x W x H)	125 x 85 x 77.5 mm
Weight (empty)	0.35 kg

Type 411 83

Dimensions (L x W x H)	165 x 85 x 77.5 mm
Weight (empty)	0.45 kg

Type 411 82 with measuring instrument AM 72

Movement	Moving iron	Moving coil
Marking to 94/9/EC	⚡ II G Ex e II	⚡ II G Ex ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold -25 sec. 25-fold - 4 sec. 50-fold - 1 sec.	10-fold -5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Inductance L _i	-	≤ 0.1 mH
Capacitance C _i	-	≤ 0.1 nF
Open circuit voltage U _i	-	30 V
Short circuit current I _i	-	150 mA
Connecting terminals	2 x 1.5 - 4 mm ²	
Weight	0.70 kg	

¹⁾ Base enclosure can be rotated afterwards (entry from top or down)
Other versions available on request

Ex-control stations



Ordering details type 411 81 with 1 built-in component

Version	Built-in components	Weight approx.	Order No.
	1 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP"	0.40 kg	GHG 411 8100 R0001
	1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"	0.45 kg	GHG 411 8100 R0002
	1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" with key unlocking	0.50 kg	GHG 411 8100 R0012
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.45 kg	GHG 411 8100 R0009
	1 x key-operated switch SLS 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"	0.52 kg	GHG 411 8100 R0018
	1 x control switch SCT 1 change-over SW 6 "engaging-engaging" label: HAND – AUTO	0.45 kg	GHG 411 8100 R0003
	label: "0 – I"	0.45 kg	GHG 411 8100 R0004
	label: "I – II"	0.45 kg	GHG 411 8100 R0005
	1 x control switch SCT 2 NO SW 5 "engaging-engaging-engaging" label: HAND – 0 – AUTO	0.45 kg	GHG 411 8100 R0006
	label: "I 0 II"	0.45 kg	GHG 411 8100 R0007
	label: "Local Remote Auto"	0.45 kg	GHG 411 8100 R0008



Ordering details type 411 82 with 2 built-in components

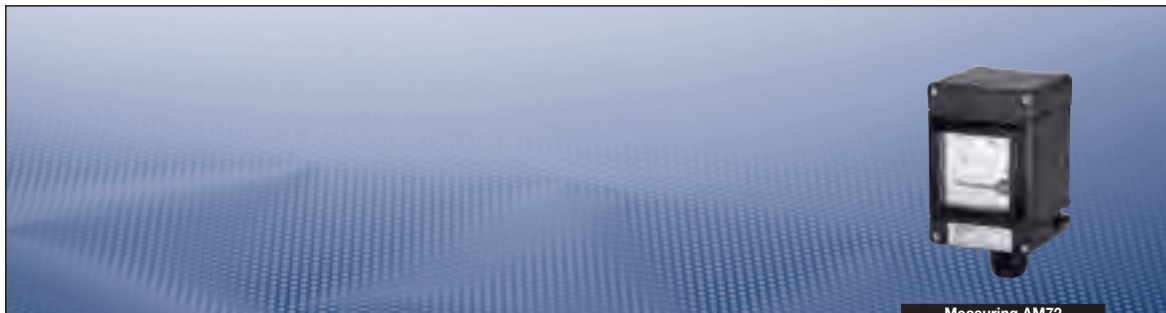
Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	0.54 kg	GHG 411 8200 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.65 kg	GHG 411 8200 R0003
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"	0.57 kg	GHG 411 8200 R0016
	1 x control switch SCT 1 change-over SW 6 "engaging-engaging" label: "0 - I" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	0.57 kg	GHG 411 8200 R0017
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"	0.65 kg	GHG 411 8200 R0018

Ex-control stations



Ordering details type 411 83 with 3 built-in components

Version	Built-in components	Weight approx.	Order No.
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"</p>	0.76 kg	GHG 411 8300 R0001
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"</p>	0.80 kg	GHG 411 8300 R0003
<p>1—⊗—2</p>	<p>1 x measuring instrument AM72 CT connection n/1A Scale 0 –100%/150% 1 x control switch SCT 1 NO + 1 NC SW 8 "engaging-engaging-spring" label: "0 - I"</p>	0.92 kg	GHG 411 8300 R0023
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x control switch SCT 1 change-over SW 6 "engaging-engaging" label: "HAND - AUTO"</p>	0.80 kg	GHG 411 8300 R0004



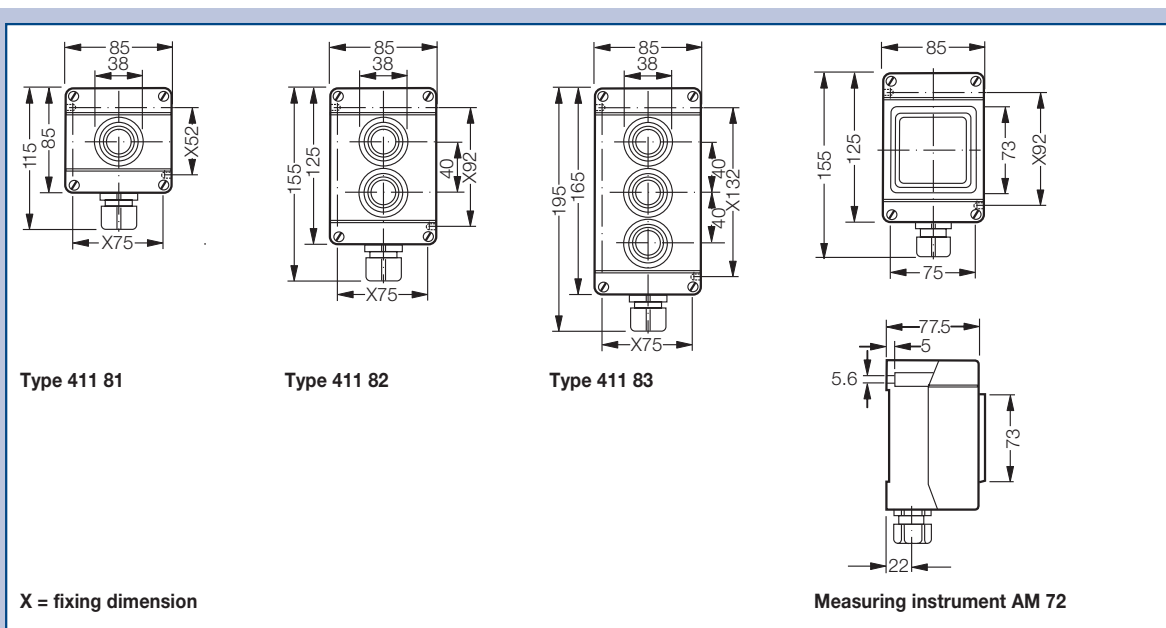
Measuring AM72

Ordering details measuring instrument AM72, type 411 82

Version	Movement	Weight	Order No.
Version direct measurement with 1 x cable entry M25			
0 - 1 / 1.5 A	moving iron	0.70 kg	GHG 411 8281 R0002
0 - 2.5 / 3.75 A	moving iron	0.70 kg	GHG 411 8281 R0003
0 - 5 / 7.5 A	moving iron	0.70 kg	GHG 411 8281 R0004
0 - 10 / 15 A	moving iron	0.70 kg	GHG 411 8281 R0005
0 - 16 / 24 A	moving iron	0.70 kg	GHG 411 8281 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	moving coil	0.80 kg	GHG 411 8285 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	moving coil	0.80 kg	GHG 411 8286 R0035

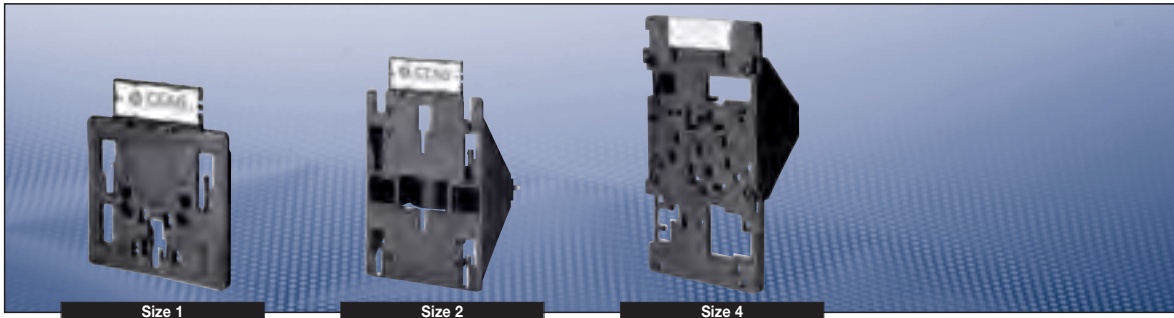
Version CT connection n/1A with 1 x entry M25			
0 - 1 / 1.5 A	moving iron	0.70 kg	GHG 411 8282 R0002
0 - 2.5 / 3.75 A	moving iron	0.70 kg	GHG 411 8282 R0003
0 - 5 / 7.5 A	moving iron	0.70 kg	GHG 411 8282 R0004
0 - 10 / 15 A	moving iron	0.70 kg	GHG 411 8282 R0005
0 - 15 / 22,5 A	moving iron	0.70 kg	GHG 411 8282 R0007
0 - 20 / 30 A	moving iron	0.70 kg	GHG 411 8282 R0008
0 - 30 / 45 A	moving iron	0.70 kg	GHG 411 8282 R0009
0 - 40 / 60 A	moving iron	0.70 kg	GHG 411 8282 R0010
0 - 50 / 75 A	moving iron	0.70 kg	GHG 411 8282 R0011
0 - 60 / 90 A	moving iron	0.70 kg	GHG 411 8282 R0012
0 - 75 / 112.5 A	moving iron	0.70 kg	GHG 411 8282 R0013
0 - 100 / 150 A	moving iron	0.70 kg	GHG 411 8282 R0014
0 - 100% / 150%	moving iron	0.70 kg	GHG 411 8282 R0001

Dimension drawing



Dimensions in mm

Ex-control stations



Accessories

Mounting plate for type 411 81

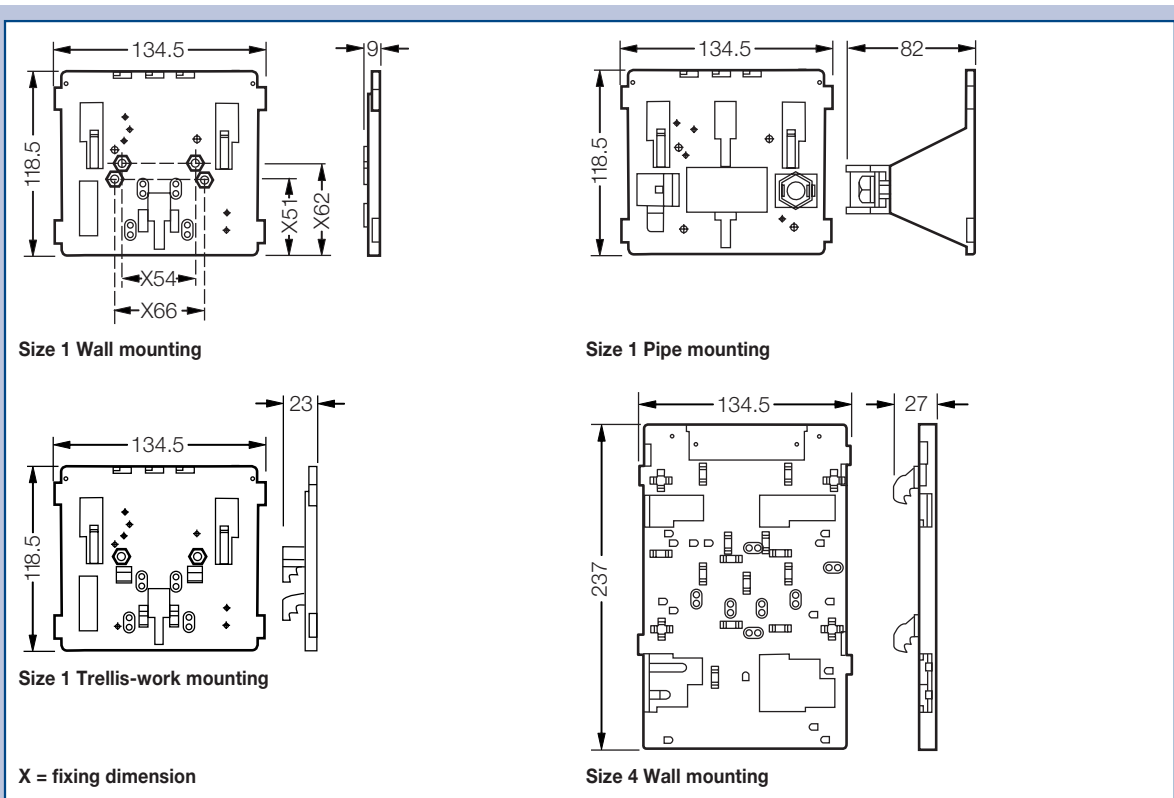
Type	Application	Mounting technique	OU	Order No.
Size 1	Wall mounting	screw-on	1	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	1	GHG 610 1953 R0102
Size 1	Trellis-work mounting	screw-on	1	GHG 610 1953 R0103
Size 4	Wall mounting	snap-on ¹⁾	1	GHG 610 1953 R0126
Size 4	Trellis-work mounting	snap-on ¹⁾	1	GHG 610 1953 R0126
Size 4	Pipe mounting	snap-on ¹⁾	1	GHG 610 1953 R0130

Mounting plate for type 411 82 and 411 83

Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	screw-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	screw-on	1	GHG 610 1953 R0105
Size 2	Trellis-work mounting	screw-on	1	GHG 610 1953 R0106
Size 4	Wall mounting	snap-on ¹⁾	1	GHG 610 1953 R0126
Size 4	Trellis-work mounting	snap-on ¹⁾	1	GHG 610 1953 R0126
Size 4	Pipe mounting	snap-on ¹⁾	1	GHG 610 1953 R0130
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

¹⁾ snap-on with snap-on mounting 5.5 mm

Dimension drawing



Dimensions in mm



Type 434...

Type 432...

Technical data

Ex-Control stations Type 432 | Type 434

Marking to 94/9/EC	Ⓔ II 2 G Ex ed ib m IIC T6 Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEX Certificate of conformity	IECEX BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A	Ex23 AC-15: U _e 230 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 2 A U _e 230 V / I _e 0.5 A
Connecting terminals	2 x 4 mm ²	
Insulation class	I	
Degree of protection accd. EN 60529	IP66 (standard)	
Cable glands/Gland plates/Enclosure drilling	2 x M25 Ex-e cable gland for cables from Ø 8 - 17 mm incl. 1 blanking plug or 2 x M20 thread	
Enclosure material	Polyamide	
Enclosure colour	Black	

Type 432

Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

Type 434

Dimensions (L x W x H)	245 x 100 x 90 mm
Weight (empty)	0.70 kg

¹⁾ Base enclosure can be rotated afterwards (entry from top or down)
Other versions available on request

Ex-control stations



Type 432...01

Type 432...02

Type 432...03

Type 432...05

Ordering details type 432 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	0.85 kg	GHG 432 0011 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.90 kg	GHG 432 0011 R0002
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"	0.85 kg	GHG 432 0011 R0003
	1 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.95 kg	GHG 432 0011 R0005



Type 432...17

Type 432...05

Type 432...03

Ordering details type 432 with 1 control switch GHG 23

Version	Built-in components	Weight approx.	Order No.
	1 x control switch GHG 23		
	1 change-over SW 6 "engaging-engaging" label: "HAND - AUTO" label: "0 - I"	0.70 kg 0.70 kg	GHG 432 0001 R0003 GHG 432 0001 R0004
	1 x control switch GHG 23		
	2 NO SW 5 "engaging-engaging-engaging" label: "HAND 0 AUTO" label: "I 0 II"	0.70 kg 0.70 kg	GHG 432 0001 R0005 GHG 432 0001 R0006
	1 x control switch GHG 23		
	1 NO + 1 NC SW 8 "engaging-engaging-spring return" label: "0 - I"	0.70 kg 0.70 kg	GHG 432 0001 R0012 GHG 432 0001 R0013
	label: "AUS-Betrieb-EIN" label: "0 IN START"	0.70 kg	GHG 432 0001 R0014
	1 x control switch GHG 23		
	2 change-over SW 6 "engaging-engaging" label: "I - II" label: "HAND I AUTO"	0.70 kg 0.70 kg	GHG 432 0001 R0015 GHG 432 0001 R0016
	1 x control switch GHG 23		
	2 NO + 1 NC SW 5 "engaging-engaging-engaging" label: "I II III"	0.86 kg	GHG 432 0001 R0017
	1 x control switch GHG 23		
	2 NO + 1 NC SW 8 "engaging-engaging-spring return" label: "0 - I"	0.86 kg 0.86 kg	GHG 432 0001 R0018 GHG 432 0001 R0019
	label: "AUS-Betrieb-EIN" label: "0 IN START"	0.86 kg	GHG 432 0001 R0020

Ex-control stations



Ordering details type 432 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
<p>1 — — 2</p>	<p>1 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150%</p> <p>1 x control switch GHG 23 1 change-over SW 6 "spring return-engaging" label: "0 - I"</p>	1.35 kg	GHG 432 0011 R0006
<p>1 — — 2</p>	<p>1 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150%</p> <p>1 x control switch GHG 23 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"</p>	1.35 kg	GHG 432 0011 R0008
<p>1 — — 2</p>	<p>1 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150%</p> <p>1 x control switch GHG 23 1 NO + 1 NC SW 8 "engaging-engaging-spring" label: "0 - I"</p>	1.35 kg	GHG 432 0011 R0009
<p>1 — — 2</p>	<p>2 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150%</p> <p>1 x control switch GHG 23 2 NO + 1 NC SW 5 "engaging-engaging-engaging" label: "I II III"</p>	1.35 kg	GHG 432 0011 R0010



Type 434...11

Type 434...10

Type 434...02

Ordering details type 434 with 4 built-in components

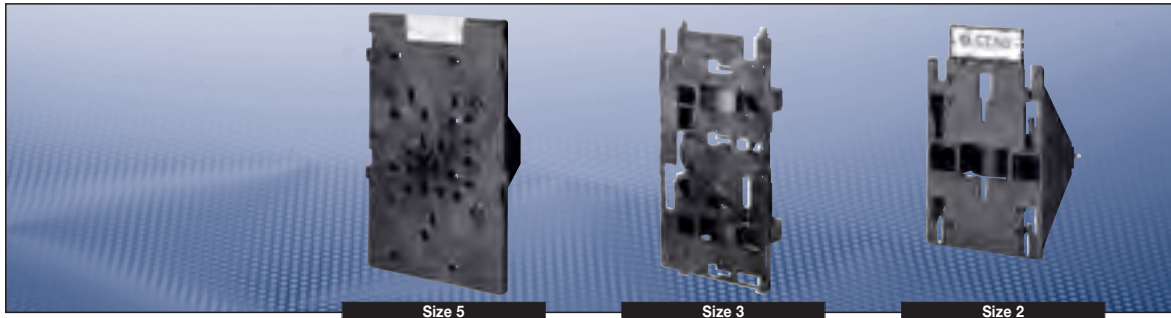
Version	Built-in components	Weight approx.	Order No.
 	1 x measuring AM72 CT connection n/1A Scale 0 –100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	1.40 kg	GHG 434 0111 R0002
 	1 x measuring AM72 CT connection n/1A Scale 0 –100%/150% 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" 1 x control switch GHG 23 1 change-over SW 6 "engaging-engaging" label: "0 – I"	1.55 kg	GHG 434 0111 R0010
 	1 x measuring AM72 CT connection n/1A Scale 0 –100%/150% 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" 1 x control switch GHG 23 1 NO + 1 NC SW 8 "engaging-engaging-spring return" label: "0 – I"	1.55 kg	GHG 434 0111 R0011

Ex-control stations



Ordering details type 434 with 4 built-in components

Version	Built-in components	Weight approx.	Order No.
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"</p>	1.45 kg	GHG 434 1111 R0004
<p>X1—⊗—X2</p>	<p>2 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"</p>	1.45 kg	GHG 434 1111 R0005
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" 1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"</p>	1.55 kg	GHG 434 1111 R0009



Accessories

Mounting plate for type 432

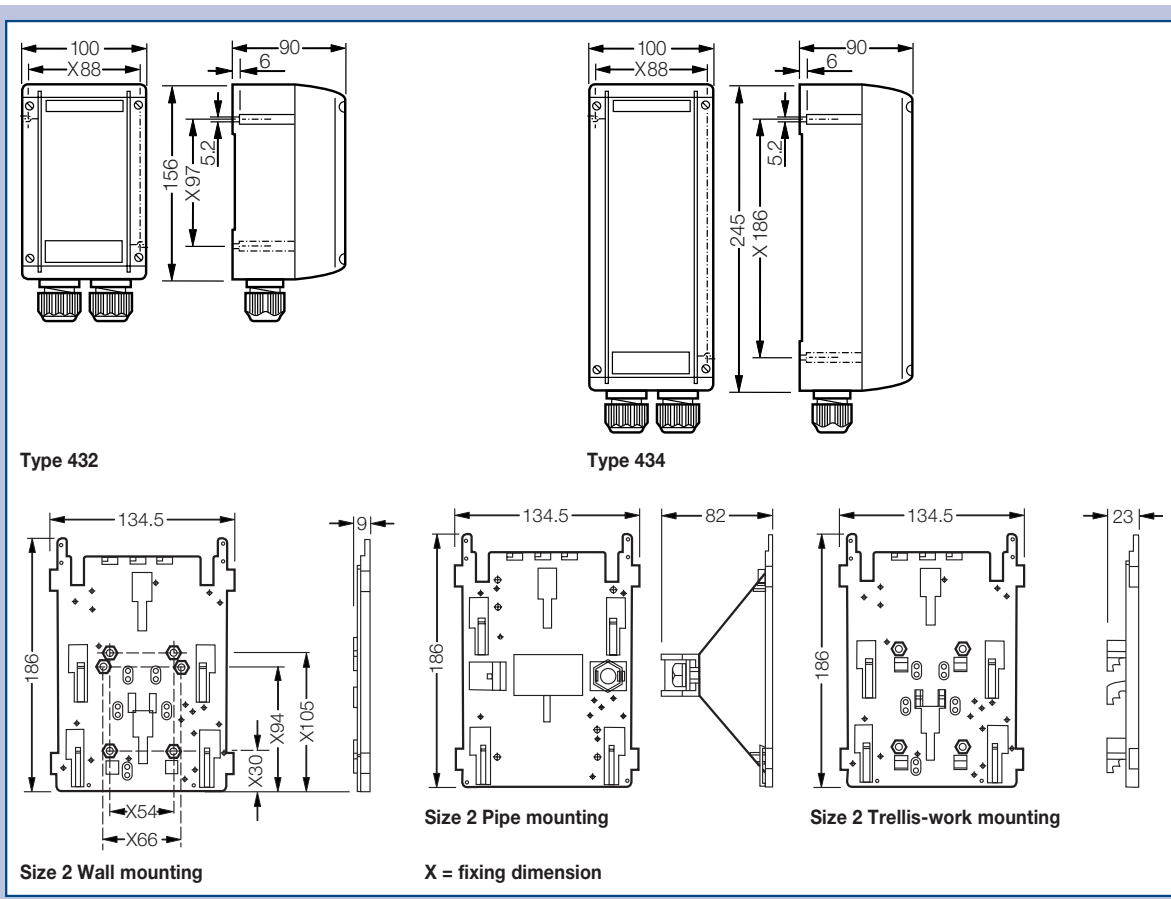
Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	screw-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	screw-on	1	GHG 610 1953 R0105
Size 2	Trellis-work mounting	screw-on	1	GHG 610 1953 R0106
Size 5	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Pipe mounting	snap-on *	1	GHG 610 1953 R0132

Mounting plate for type 434

Type	Application	Mounting technique	OU	Order No.
Size 3	Wall mounting	screw-on	1	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	1	GHG 610 1953 R0110
Size 3	Trellis-work mounting	screw-on	1	GHG 610 1953 R0118
Size 5	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Pipe mounting	snap-on *	1	GHG 610 1953 R0132
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

* snap-on with snap-on mounting 5.5 mm

Dimension drawing



EX - CONTROL STATIONS

Light alloy Version for Zone 1 and Zone 21

Light-alloy control stations in explosion-protected design are equipped with up to four components. These control stations are made of high-quality cast aluminium-silicon (AlSi). A robust plastic powder coating according to RAL 7031 protects the CEAG control stations against aggressive atmospheres and chemicals. Cover screws as well as all internal and external metal parts are made of stainless steel. CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures.

To facilitate insertion of cables into the entries, the built-in components can be snapped out of the enclosures. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place.

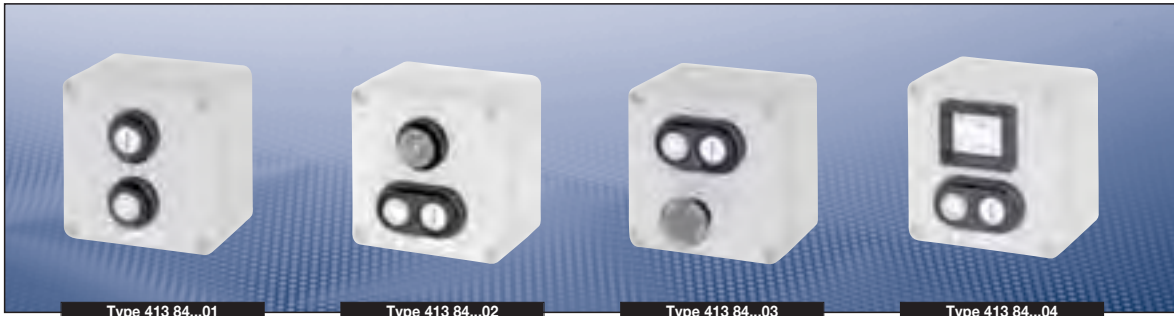
Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.



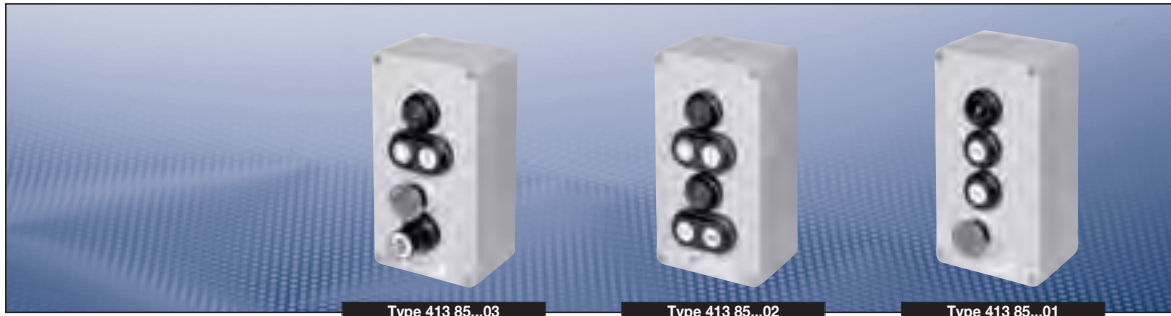
- High mechanical, chemical and thermal resistance
- Individual configuration
- Impact-resistant plastic powder coating

Ex-control stations



Ordering details type 413 84 with 2 built-in components

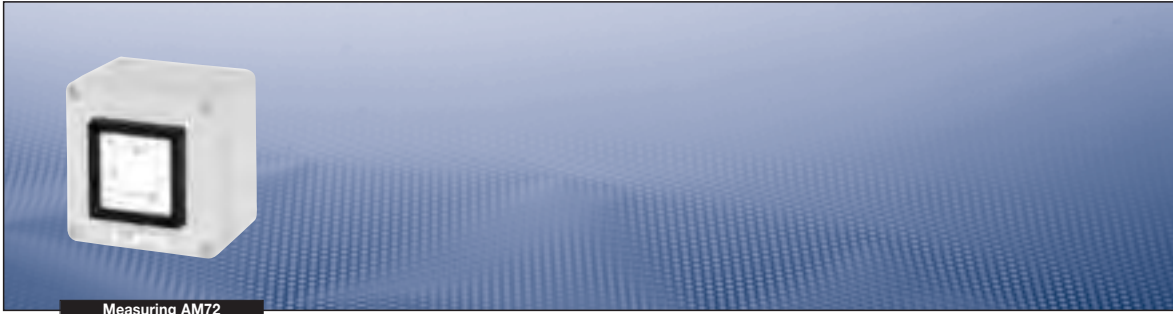
Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	1.25 kg	GHG 413 8400 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.30 kg	GHG 413 8400 R0002
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"	1.30 kg	GHG 413 8400 R0003
	1 x measuring instrument AM45 CT connection n/1A Scale 0 -100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.35 kg	GHG 413 8400 R0004



Ordering details type 413 85 with 4 built-in components

Version	Built-in components	Weight approx.	Order No.
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"</p>	2.10 kg	GHG 413 8500 R0001
<p>X1—⊗—X2</p> <p>X1—⊗—X2</p>	<p>2 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"</p>	2.10 kg	GHG 413 8500 R0002
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" label: "I 0 II" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" 1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"</p>	2.20 kg	GHG 413 8500 R0003

Ex-control stations



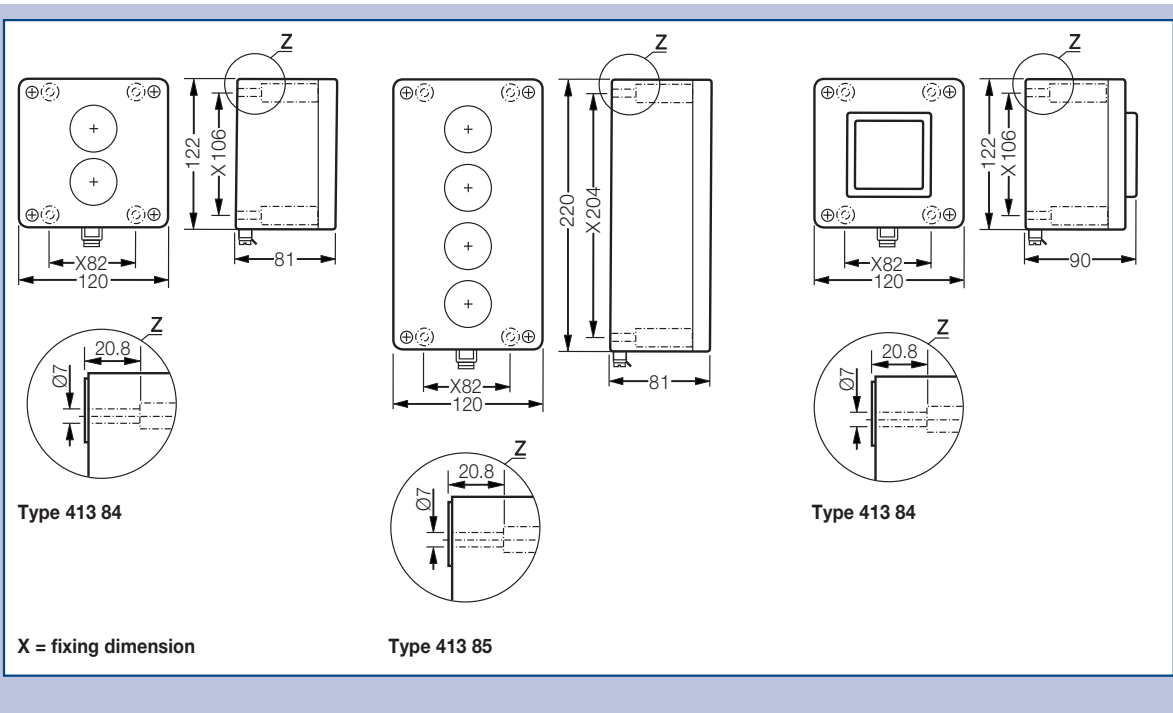
Measuring AM72

Ordering details type 413 84 with measuring instrument AM72

Version	Movement	Weight approx.	Order No.
Version direct measurement with 1 x threaded entry M20			
0 - 1 / 1.5 A	moving iron	1.25 kg	GHG 413 8481 R0002
0 - 2.5 / 3.75 A	moving iron	1.25 kg	GHG 413 8481 R0003
0 - 5 / 7.5 A	moving iron	1.25 kg	GHG 413 8481 R0004
0 - 10 / 15 A	moving iron	1.25 kg	GHG 413 8481 R0005
0 - 16 / 24 A	moving iron	1.25 kg	GHG 413 8481 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	moving coil	1.35 kg	GHG 413 8481 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	moving coil	1.35 kg	GHG 413 8481 R0035

Version CT connection n/1A with 1 x threaded entry M20			
0 - 1 / 1.5 A	moving iron	1.25 kg	GHG 413 8482 R0002
0 - 2.5 / 3.75 A	moving iron	1.25 kg	GHG 413 8482 R0003
0 - 5 / 7.5 A	moving iron	1.25 kg	GHG 413 8482 R0004
0 - 10 / 15 A	moving iron	1.25 kg	GHG 413 8482 R0005
0 - 15 / 22.5 A	moving iron	1.25 kg	GHG 413 8482 R0007
0 - 20 / 30 A	moving iron	1.25 kg	GHG 413 8482 R0008
0 - 30 / 45 A	moving iron	1.25 kg	GHG 413 8482 R0009
0 - 40 / 60 A	moving iron	1.25 kg	GHG 413 8482 R0010
0 - 50 / 75 A	moving iron	1.25 kg	GHG 413 8482 R0011
0 - 60 / 90 A	moving iron	1.25 kg	GHG 413 8482 R0012
0 - 75 / 112.5 A	moving iron	1.25 kg	GHG 413 8482 R0013
0 - 100 / 150 A	moving iron	1.25 kg	GHG 413 8482 R0014
0 - 100% / 150%	moving iron	1.25 kg	GHG 413 8482 R0033

Dimension drawing



Dimensions in mm

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E X - C O N T R O L S T A T I O N

Stainless steel Version for Zone 1 and Zone 21

CEAG explosion-protected control stations made of high-grade 316L stainless steel are designed to accommodate up to four built-in components. These stainless-steel control stations with electro-polished surfaces offer protection for applications in the off-shore industry and at sites with especially severe mechanical, chemical and climatic conditions.

CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures. To facilitate insertion of cables into the entries, the built-in components can be snapped out of the enclosures. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.



High mechanical, chemical and thermal resistance

Individual configuration

Clean-room applications



Technical data

Ex-Control stations Type 414 81 | Type 414 82

Marking to 94/9/EC	Ⓔ II 2 G Ex ed ib m IIC T6 Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEX Certificate of conformity	IECEX BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ec ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A	Ex23 AC-15: U _e 230 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 2 A U _e 230 V / I _e 0.5 A
Connecting terminals	with gold contact points max. 0.4 A 2 x 4 mm ²	
Insulation class	I	
Degree of protection accd. EN 60529	IP66 (standard)	
Cable glands/Gland plates/Enclosure drilling	1 x drilling Ø 21 mm for cable gland M20	
Enclosure material	Stainless steel AISI 316 L	

Type 414 81

Dimensions (L x W x H)	166 x 140 x 76 mm
Weight (empty)	1.40 kg

Type 414 82

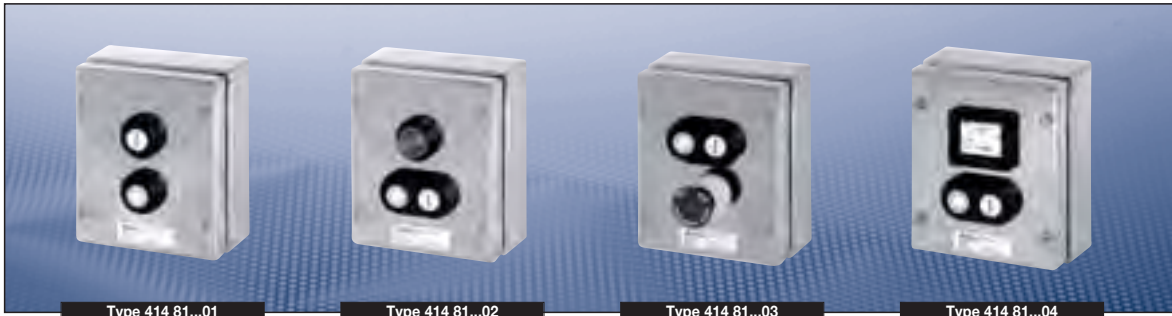
Dimensions (L x W x H)	286 x 140 x 76 mm
Weight (empty)	2.10 kg

Type 414 81 with measuring instrument AM 72

Movement	Moving iron	Moving coil
Marking to 94/9/EC	Ⓔ II G Ex e II	Ⓔ II G Ex ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold -25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1:1.5	10-fold -5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Inductance L _i	-	≤ 0.1 mH
Capacitance C _i	-	≤ 0.1 nF
Open circuit voltage U _i	-	30 V
Short circuit current I _i	-	150 mA
Connecting terminals	2 x 1.5 - 4 mm ²	
Weight	1.25 kg	

¹⁾ Base enclosure can be rotated afterwards (entry from top or down)
Other versions available on request

Ex-control stations



Ordering details type 414 81 with 2 built-in components

Version*	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	1.80 kg	GHG 414 8100 R0001
X1—⊗—X2 	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.85 kg	GHG 414 8100 R0002
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"	1.85 kg	GHG 414 8100 R0003
1—⊠—2 	1 x measuring instrument AM45 CT connection n/1A Scale 0–100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.85 kg	GHG 414 8100 R0004

*Without external fixing lugs (see accessories page 9.30)



Type 414 82...03

Type 414 82...02

Type 414 82...01

Ordering details type 414 82 with 4 built-in components

Version*	Built-in components	Weight approx.	Order No.
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop"</p>	2.80 kg	GHG 414 8200 R0001
<p>X1—⊗—X2</p> <p>X1—⊗—X2</p>	<p>2 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"</p>	2.80 kg	GHG 414 8200 R0002
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" 1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"</p>	2.90 kg	GHG 414 8200 R0003

*Without external fixing lugs (see accessories page 9.30)

Ex-control stations



Type 414 81..

Ordering details type 414 81 with measuring AM72

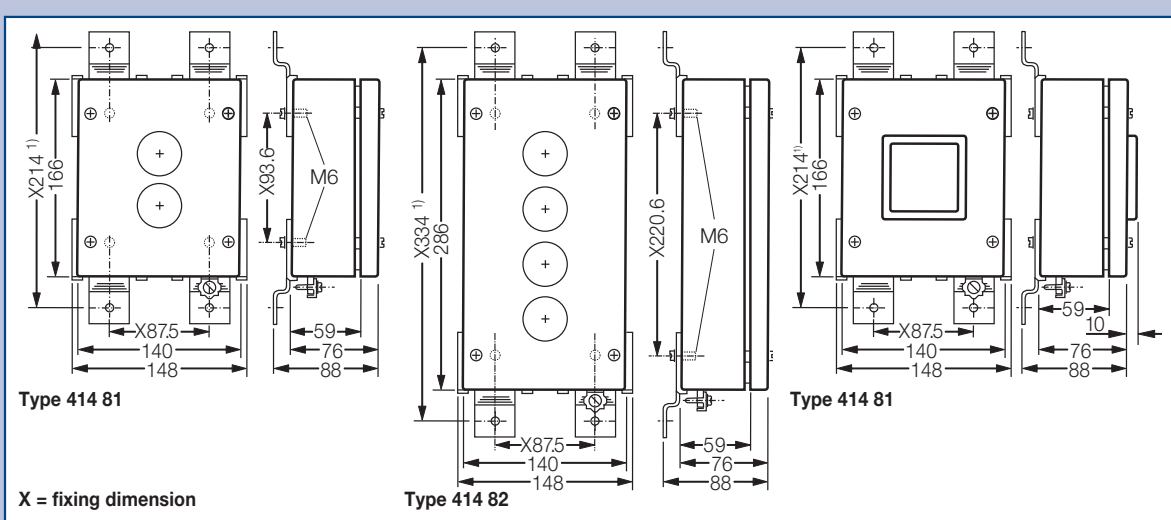
Version	Movement	Weight approx.	Order No.
Version direct measurement with 1 x threaded entry Ø 21 mm (without external fixing lugs)			
0 - 1 / 1.5 A	moving iron	1.25 kg	GHG 414 8181 R0002
0 - 2.5 / 3.75 A	moving iron	1.25 kg	GHG 414 8181 R0003
0 - 5 / 7.5 A	moving iron	1.25 kg	GHG 414 8181 R0004
0 - 10 / 15 A	moving iron	1.25 kg	GHG 414 8181 R0005
0 - 16 / 24 A	moving iron	1.25 kg	GHG 414 8181 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	moving coil	1.35 kg	GHG 414 8181 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	moving coil	1.35 kg	GHG 414 8181 R0035

Version CT connection n/1A with 1 x threaded entry Ø 21 mm (without external fixing lugs)			
0 - 1 / 1.5 A	moving iron	1.25 kg	GHG 414 8182 R0002
0 - 2.5 / 3.75 A	moving iron	1.25 kg	GHG 414 8182 R0003
0 - 5 / 7.5 A	moving iron	1.25 kg	GHG 414 8182 R0004
0 - 10 / 15 A	moving iron	1.25 kg	GHG 414 8182 R0005
0 - 15 / 22.5 A	moving iron	1.25 kg	GHG 414 8182 R0007
0 - 20 / 30 A	moving iron	1.25 kg	GHG 414 8182 R0008
0 - 30 / 45 A	moving iron	1.25 kg	GHG 414 8182 R0009
0 - 40 / 60 A	moving iron	1.25 kg	GHG 414 8182 R0010
0 - 50 / 75 A	moving iron	1.25 kg	GHG 414 8182 R0011
0 - 60 / 90 A	moving iron	1.25 kg	GHG 414 8182 R0012
0 - 75 / 112.5 A	moving iron	1.25 kg	GHG 414 8182 R0013
0 - 100/ 150 A	moving iron	1.25 kg	GHG 414 8182 R0014
0 - 100% / 150%	moving iron	1.25 kg	GHG 414 8182 R0033

Accessories

Type	Order No.
External fixing lugs (2 pcs)	GHG 610 1941 R0013

Dimension drawing



¹⁾ Scope of delivery without fixing lugs

Dimensions in mm

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E X - C O N T R O L S T A T I O N S

For individual controls
Moulded-plastic version for Zone 1 and Zone 21

CEAG control stations can be combined according to customers' specifications. Quick fixing allows up to three CEAG built-in components, such as signal lamps, pushbuttons and switches, to be snapped on a rail in the enclosure. The enclosures consist of low-temperature impact-resistant thermoplastic which fulfils the requirements of EN 60079 and provides a high resistance to chemicals. The well thought out design with low side walls allows optimum cable connection. The components can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails prevent the built-in components from being twisted out of place.

CEAG's optional mounting plates offer a time-saving fixing technique. Coupling pieces link enclosures to each other and prevent them from being twisted out of place. Alternatively, metal screws and flanges can be used for mounting – the metal flanges also enable external earthing. The built-in components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.



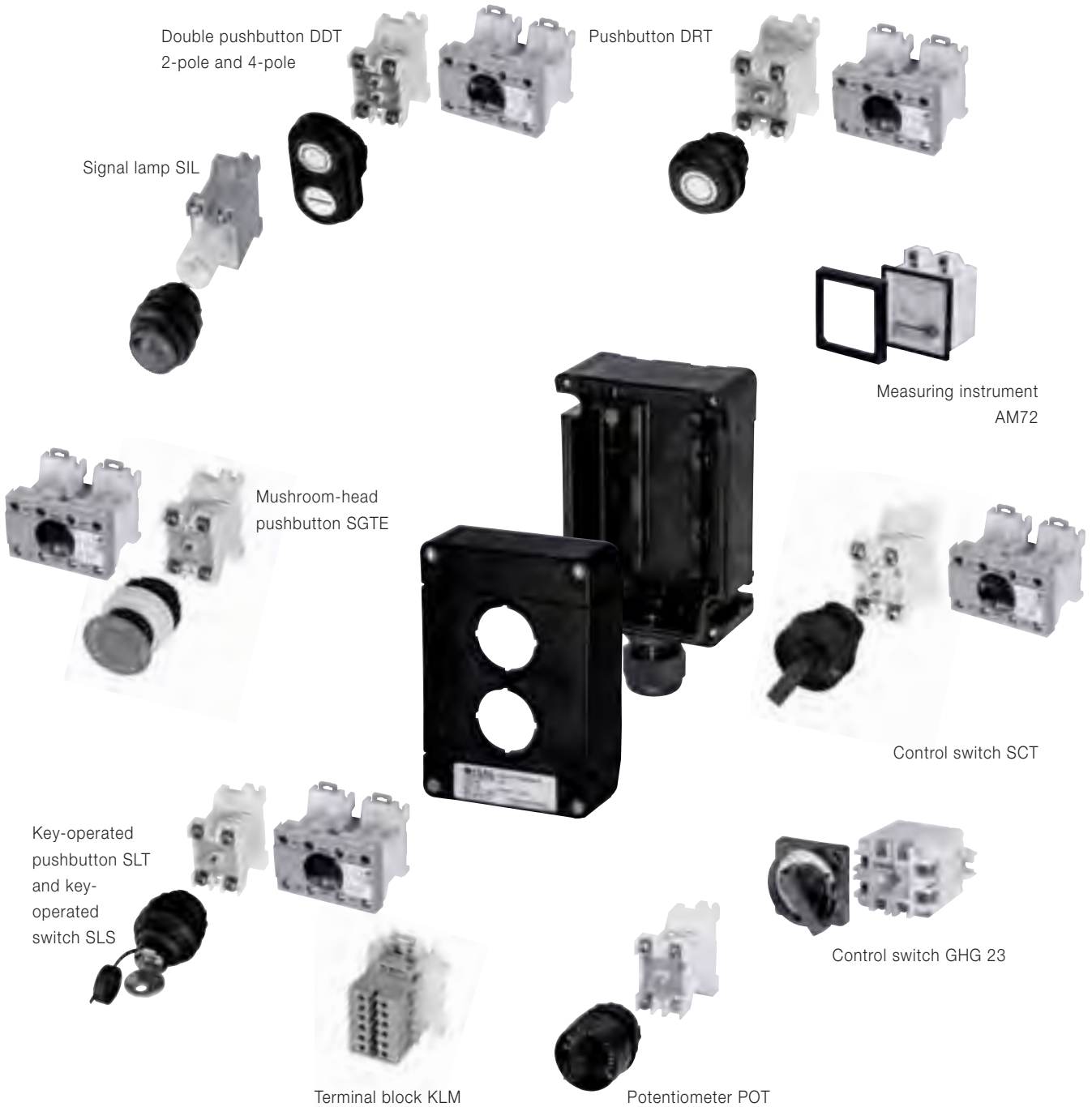
- Flat side walls
- Quick fixing for all built-in components
- High chemical resistance
- Different enclosures can be combined

Customised control stations, covered by type examination certificates, can be individually combined from CEAG's numerous built-in components.

ordering. The sum of the code numbers designates a complete control station.

A coding system for these components with unique designations can be used for planning, selection and

For the selection of control units and components, please see page 9.34 pp.




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| Order Code for Individual Control Units |










Individual control units can be defined by 4 groups of components:

1. Empty Enclosure
2. Components per mounting area
3. Accessories
4. Cable glands

Code 1: Empty Enclosure


















Code for enclosure

MA		411 81
MA		411 82
MA		411 83
MA		432
MA		434
MA		414 81
MA		414 82
MA		413 84
MA		413 85

Code 2: Components per mounting area (max. 4)

A	C	D(1)	(D2)	E	F	Mounting area 1 MA1
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
A	C	D(1)	(D2)	E	F	Mounting area 2 MA2
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
A	C	D(1)	(D2)	E	F	Mounting area 3 MA3
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
A	C	D(1)	(D2)	E	F	Mounting area 4 MA4
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

 Pushbutton DRT 2-pole	 4-pole	 Signal lamp SIL
 Double-pushbutton DDT 2-pole	 4-pole	 Potentiometer POT
 Key-operated pushbutton SLT 2-pole	 4-pole	 Control switch Ex 23 Ex 29
 Key-operated switch SLS 2-pole	 4-pole	 Measuring instrument AM 45 AM 72
 Mushroom-head pushbutton SGTE	 SGT	 Terminal block KLM

Example: Enclosure Type 434,
 Pushbutton (MA4),
 Signal lamp (MA3)
 Emergency stop
 Mushroom head pushbutton (MA2)
 Double pushbutton (MA1)

Code 1: 434..
 Code 2 MA4: DRT 14 001
 Code 2 MA3: SIL 1 10
 Code 2 MA2 SGTE 13 1 1 2
 Code 2 MA1: DDT15 001 007

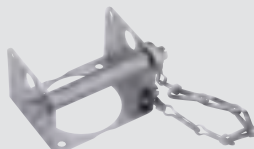
Code 3 MA1: ZUB 19
 Code 3 MA2: ZUB 19
 Code 3 MA3: ZUB 02
 Code 3 MA4: --
 Code 4: GEH 1 GK M25 2

Code 3: Labels and locking facilities

A	B	C	Mounting area 1 MA1
<input type="text"/>	<input type="text"/>	<input type="text"/>	
A	B	C	Mounting area 2 MA2
<input type="text"/>	<input type="text"/>	<input type="text"/>	
A	B	C	Mounting area 3 MA3
<input type="text"/>	<input type="text"/>	<input type="text"/>	
A	B	C	Mounting area 4 MA4
<input type="text"/>	<input type="text"/>	<input type="text"/>	



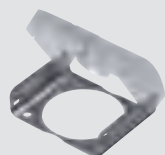
Label with holder
ZUB 20



locking facility
ZUB 14



locking facility with hammer
ZUB 05



locking facility
ZUB 22



locking facility double pushbutton
ZUB 17

Code 4: Cable entries and flanges

A	B	C	D	E
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



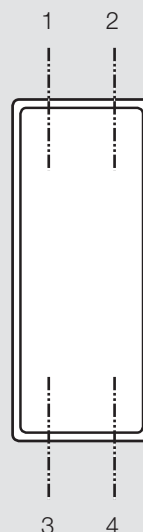
Metal flange plate
FLM



plastic cable gland
GK

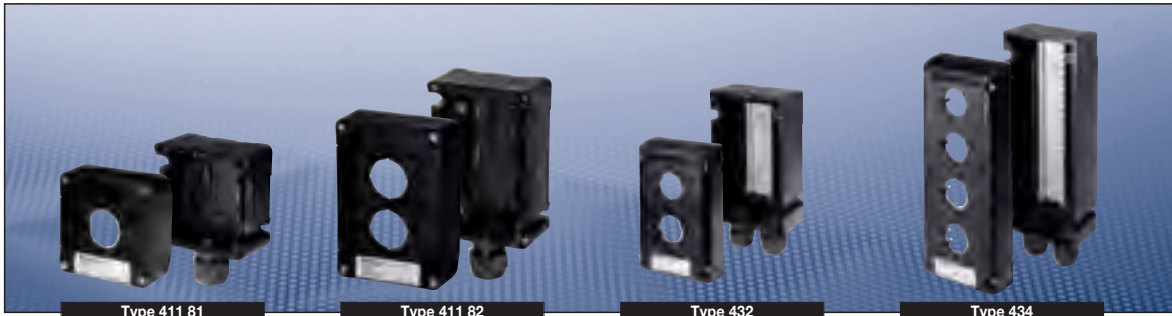


plastic trumpet-shaped
cable gland TR



position for
drilling/gland

Ex-control stations



Technical data

Ex-Control stations Type 41. and 43. for individual configuration	
Marking to 94/9/EC	II 2 G Ex ed ib m IIC T6 II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3117
IECEX Certificate of conformity	IECEX BK1 04.0003
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V AC
Rated current	16 A
Connecting terminals	2 x 4 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66 (standard)
Enclosure material	Polyamide
Enclosure colour	black

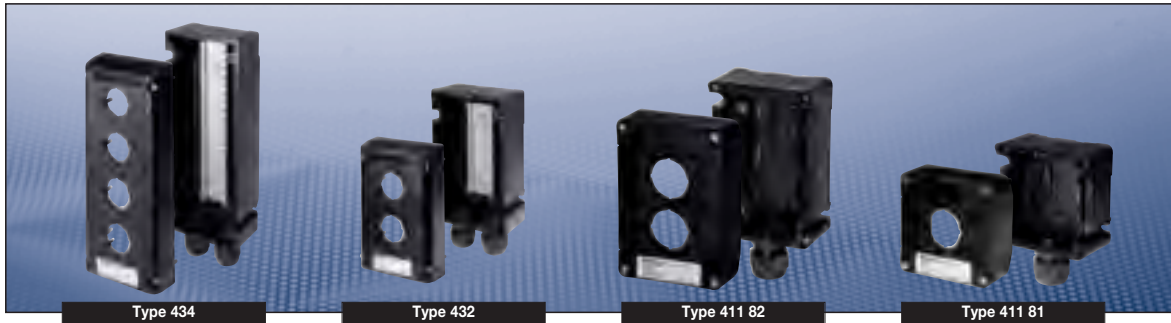
Type 411 81	
Cable glands/Gland plates/Enclosure drilling	1 x M25 Ex-e cable gland max. 2 x M25; 2 x M20 Gewinde
Dimensions (L x W x H)	85 x 85 x 77.5 mm
Weight (empty)	0.25 kg
Mounting arrangements	1 mounting area

Type 411 82	
Cable glands/Gland plates/Enclosure drilling	1 x M25 Ex-e cable gland max. 2 x M25; 2 x M20 Gewinde
Dimensions (L x W x H)	125 x 85 x 77.5 mm
Weight (empty)	0.35 kg
Mounting arrangements	2 mounting areas

Type 411 83	
Cable glands/Gland plates/Enclosure drilling	1 x M25 Ex-e cable gland max. 2 x M25; 2 x M20 Gewinde
Dimensions (L x W x H)	165 x 85 x 77.5 mm
Weight (empty)	0.45 kg
Mounting arrangements	3 mounting areas

Type 432	
Cable glands/Gland plates/Enclosure drilling	2 x M25 Ex-e cable gland max. 2 x M25; 3 x M20 Gewinde incl. 1 blanking plug or 2 x M20 thread
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg
Mounting arrangements	2 mounting areas

Type 434	
Cable glands/Gland plates/Enclosure drilling	2 x M25 Ex-e cable gland max. 2 x M25; 3 x M20 Gewinde incl. 1 blanking plug or 2 x M20 thread
Dimensions (L x W x H)	245 x 100 x 90 mm
Weight (empty)	0.70 kg
Mounting arrangements	4 mounting areas



Ordering codes (Code 1)

1. Empty enclosure	2. Components arrangement/Terminals				3. Labels/Locking devices	4. Cable glands
	Mounting area 1	Mounting area 2	Mounting area 3	Mounting area 4		
411 81 ¹⁾	X	-	-	-	X	X
411 82	X	X	-	-	X	X
411 83	X	X	X	-	X	X
432	X	X	-	-	X	X
434	X	X	X	X	X	X

Possible components (Code 1)

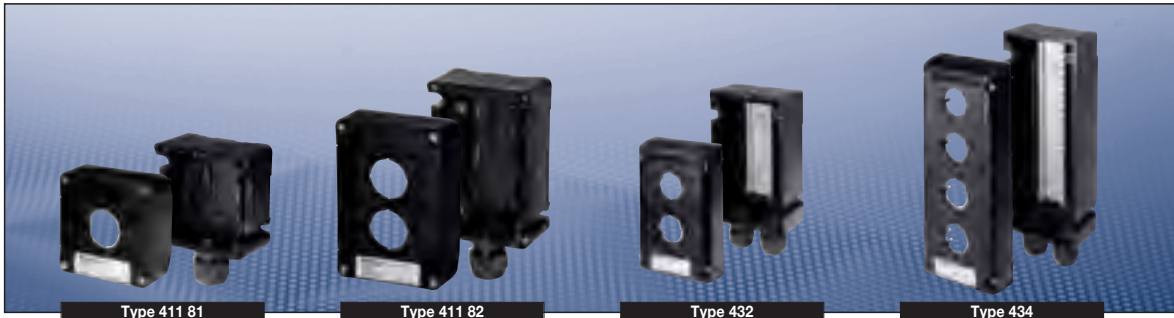
Component	Code	Component	Code
Pushbutton (2-pole or 4-pole ²⁾)	DRT	Measuring instrument	AM72 ²⁾
Double pushbutton (2-pole or 4-pole ²⁾)	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole ²⁾)	SLT	Signal lamp	SIL
Key switch (2-pole or 4-pole ²⁾)	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole ²⁾)	SCT	Terminal block (4 mm ²)	KLM
Mushroom-head pushbutton (2-pole or 4-pole ²⁾)	SGT	Blanking element	BLV
Control switch	GHG 23 ³⁾		

¹⁾ 4-pole component not possible

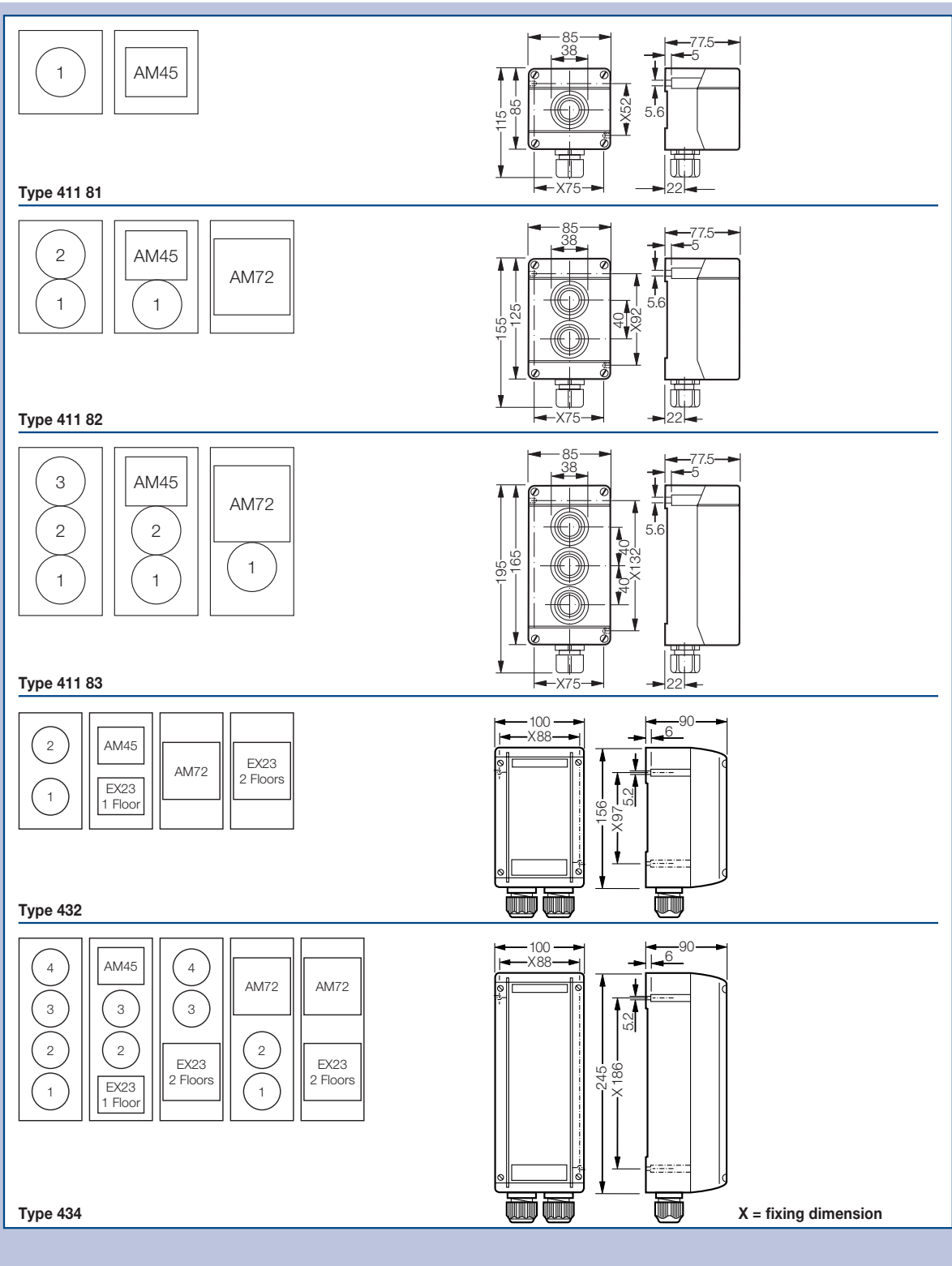
²⁾ 2 mounting areas are needed

³⁾ only for type 43., 2 mounting areas are needed

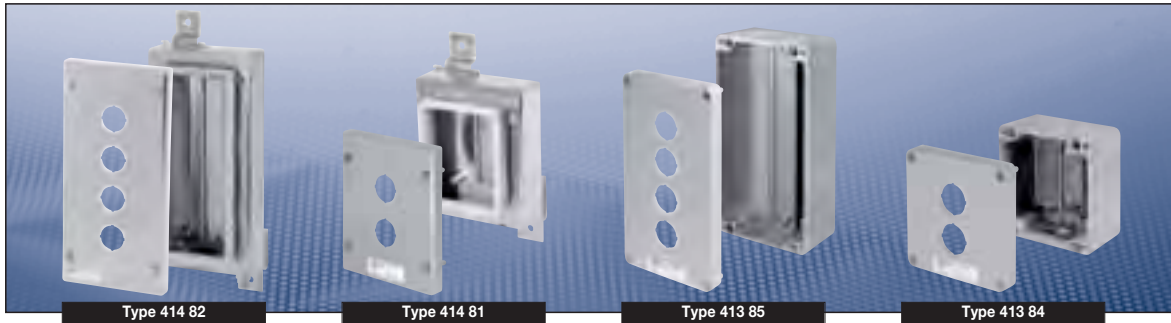
Ex-control stations



Mounting areas | Dimension drawing



Dimensions in mm



Technical data

Ex-Control stations Type 413. and 414. for individual configuration

Marking to 94/9/EC	II 2 G Ex ed ib m IIC T6 II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3117
IECEX Certificate of conformity	IECEX BKI 04.0003
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V AC
Rated current	16 A
Connecting terminals	see technical data for built-in components
PE-connection terminals	2 x 4 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66 (standard)

Type 413 84

Cable glands/Gland plates/Enclosure drilling	max. 2 x M25; 2 x M20
Dimensions (L x W x H)	122 x 120 x 81 mm
Weight (empty)	0.85 kg
Enclosure material	cast aluminium-silicon (AlSi)
Enclosure colour	grey RAL 7031
Mounting arrangements	2 mounting areas

Type 413 85

Cable glands/Gland plates/Enclosure drilling	max. 2 x M25; 2 x M20
Dimensions (L x W x H)	122 x 120 x 81 mm
Weight (empty)	1.45 kg
Enclosure material	cast aluminium-silicon (AlSi)
Enclosure colour	grey RAL 7031
Mounting arrangements	4 mounting areas

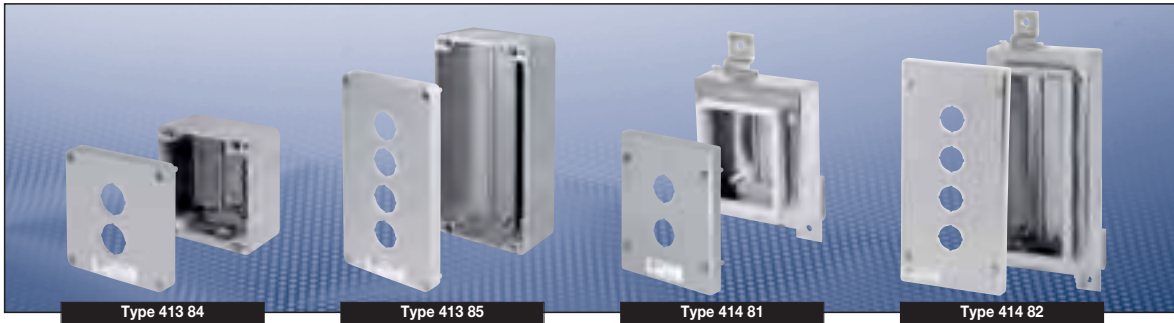
Type 414 81

Cable glands/Gland plates/Enclosure drilling	max. 3 x Ø 21 mm for cable gland M20 max. 2 x Ø 25.5 mm for cable gland M25
Dimensions (L x W x H)	166 x 140 x 76 mm
Weight (empty)	1.40 kg
Enclosure material	Stainless steel AISI 316 L
Enclosure colour	polished
Mounting arrangements	2 mounting areas

Type 414 82

Cable glands/Gland plates/Enclosure drilling	max. 4 x Ø 21 mm for cable gland M20 max. 2 x Ø 25.5 mm for cable gland M25
Dimensions (L x W x H)	286 x 140 x 76 mm
Weight (empty)	2.10 kg
Enclosure material	Stainless steel AISI 316 L
Enclosure colour	polished
Mounting arrangements	4 mounting areas

Ex-control stations



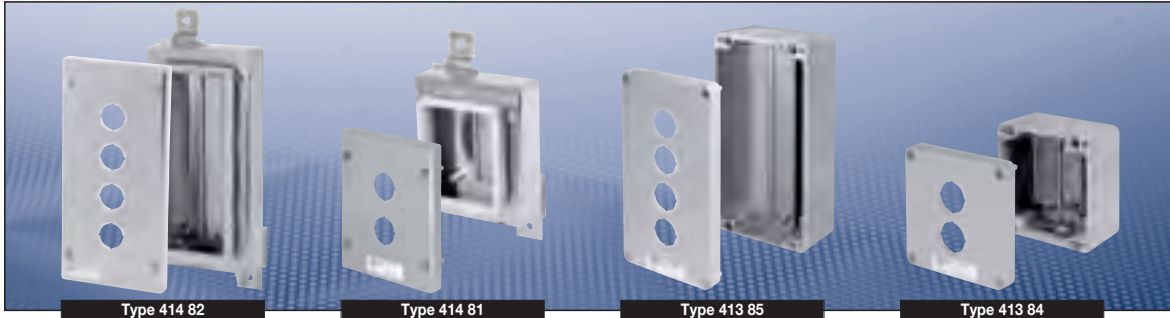
Ordering codes (Code 1)

1. Empty enclosure	2. Components arrangement/Terminals				3. Labels/Locking devices	4. Cable glands
	Mounting area 1	Mounting area 2	Mounting area 3	Mounting area 4		
413 84	X	X	-	-	X	X
413 85	X	X	X	X	X	X
414 81	X	X	-	-	X	X
414 82	X	X	X	X	X	X

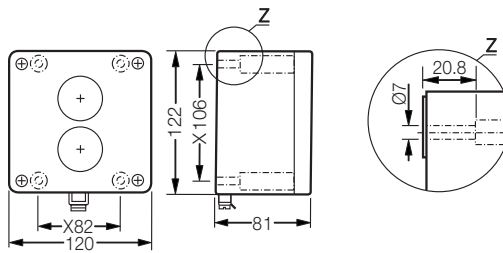
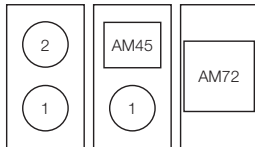
Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole ¹⁾)	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton (2-pole or 4-pole ¹⁾)	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole ¹⁾)	SLT	Signal lamp	SIL
Key switch (2-pole or 4-pole ¹⁾)	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole ¹⁾)	SCT	Terminal block (4 mm ²)	KLM
Mushroom-head pushbutton (2-pole or 4-pole ¹⁾)	SGT	Blanking element	BLV
Control switch	GHG 23 ¹⁾		

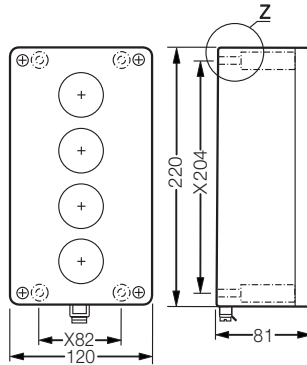
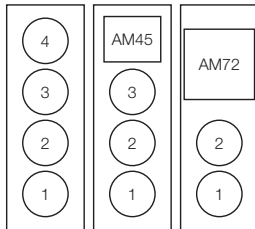
¹⁾ 2 mounting areas are needed



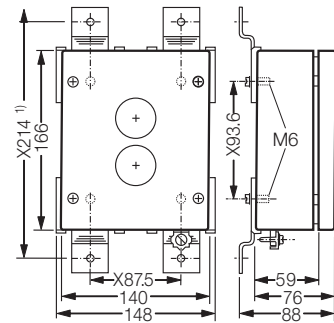
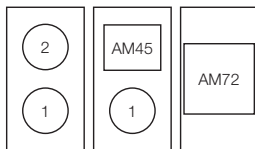
Mounting areas | Dimension drawing



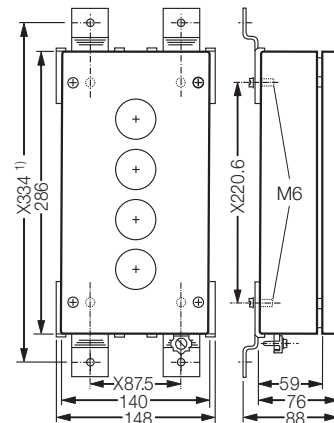
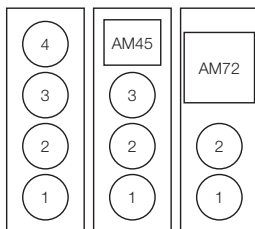
Type 413 84



Type 413 85



Type 414 81

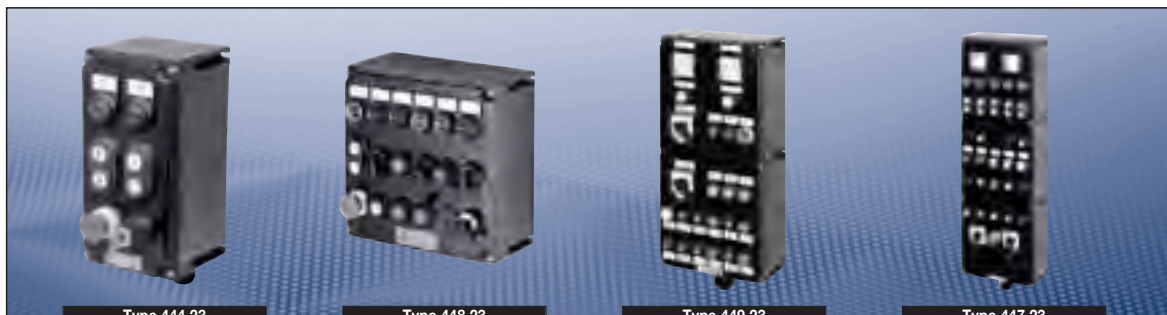


Type 414 82

X = fixing dimension

Dimensions in mm

Ex-control stations



Technical data

Ex-Control stations Type 444, 448, 449, and 447 for individual configuration	
Marking to 94/9/EC	Ex II 2 G Ex de ia/ib m [ia/ib] IIC T6 Ex II 2 D Ex tD A21 IP66/IP65 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX Certificate of conformity	IECEX BK1 07.0023
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] IIC T4 .. T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V AC
Rated current	40 A
Connecting terminals	see technical data for built-in components
PE-connection terminals	2 x 4 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66 (standard)
Cable glands/Gland plates/Enclosure drilling	as ordered accd. to manufacturer's specification
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

Type 444 23

Connecting terminals	max. 20 terminals UT 4
Dimensions (L x W x H)	271 x 134 x 136 mm
Weight (empty)	1.5 kg with mounting framework
Mounting arrangements	6 mounting areas

Type 448 23

Connecting terminals	max. 30 terminals UT 4
Dimensions (L x W x H)	271 x 271 x 136 mm
Weight (empty)	2.5 kg with mounting framework
Mounting arrangements	distance 40 mm max. 18 mounting areas distance 50 mm max. 15 mounting areas distance 60 mm max. 12 mounting areas

Type 449 23

Connecting terminals	max. 60 terminals UT 4
Dimensions (L x W x H)	544 x 271 x 136 mm
Weight (empty)	4.5 kg with mounting framework
Mounting arrangements	distance 40 mm max. 36 mounting areas distance 50 mm max. 30 mounting areas distance 60 mm max. 24 mounting areas

Type 447 23

Connecting terminals	max. 90 terminals UT 4
Dimensions (L x W x H)	817 x 271 x 136 mm
Weight (empty)	6.5 kg with mounting framework
Mounting arrangements	distance 40 mm max. 64 mounting areas distance 50 mm max. 45 mounting areas distance 60 mm max. 36 mounting areas



Ordering codes (Code 1)

1. Empty enclosure	2. Components arrangement/Terminals				3. Labels/Locking devices	4. Cable glands
	Mounting area 1 ... 6	Mounting area 7 ... 18	Mounting area 19 ... 36	Mounting area 37 ... 64		
444 23	X	-	-	-	X	X
448 23	X	X	-	-	X	X
449 23	X	X	X	-	X	X
447 23	X	X	X	X	X	X

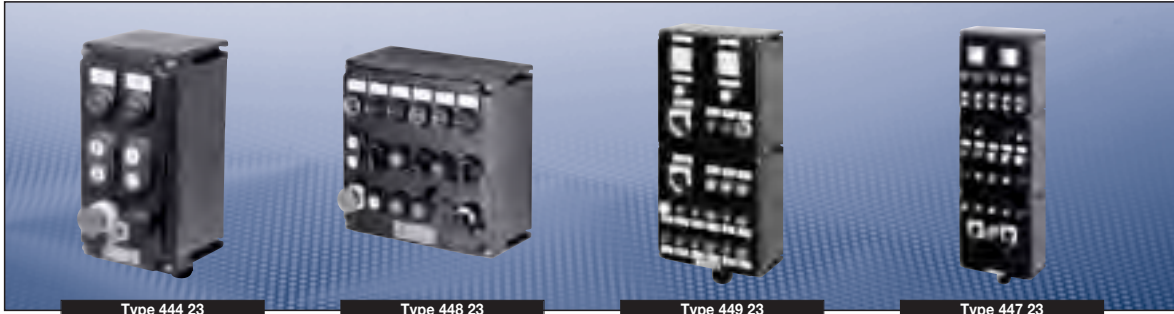
Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole ¹⁾)	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton (2-pole or 4-pole ¹⁾)	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole ¹⁾)	SLT	Signal lamp	SIL
Key switch (2-pole or 4-pole ¹⁾)	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole ¹⁾)	SCT	Serial terminals (4 mm ²)	KLM...A ²⁾
Mushroom-head pushbutton (2-pole or 4-pole ¹⁾)	SGT	Terminal block (4 mm ²)	KLM...B
Control switch	GHG 23 ¹⁾	Blanking element	BLV

¹⁾ 2 mounting areas are needed

²⁾ Serial terminals and PE-Terminal are mounted on a rail below the hinged frame

Ex-control stations



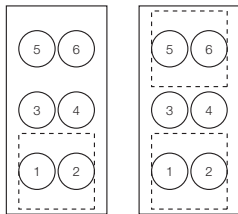
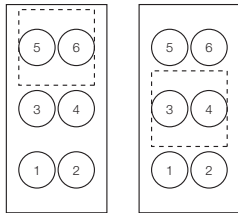
Type 444 23

Type 448 23

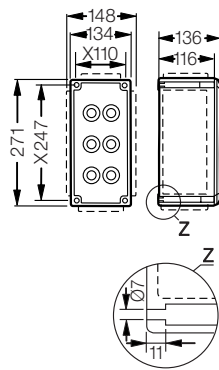
Type 449 23

Type 447 23

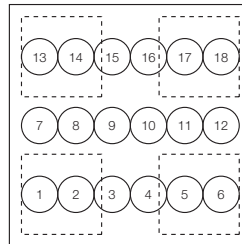
Mounting areas | Dimension drawing



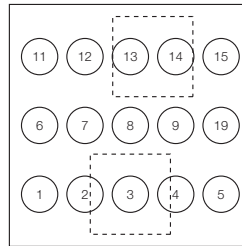
Distance between centres 40, 50 and 60 mm for positioning of built-in components



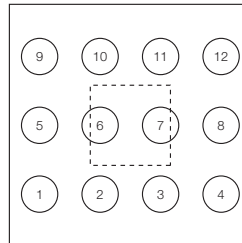
Type 444 23



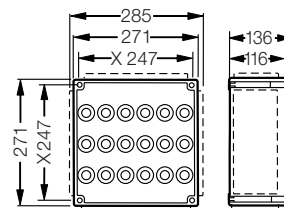
Distance between centres 40 mm



Distance between centres 50 mm



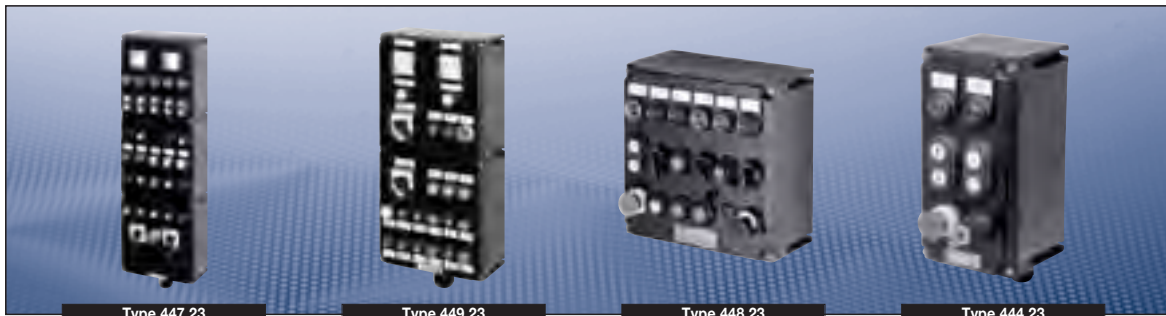
Distance between centres 60 mm



Type 448 23

X = fixing dimension

Dimensions in mm



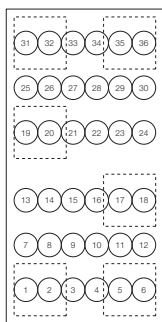
Type 447 23

Type 449 23

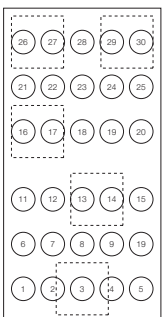
Type 448 23

Type 444 23

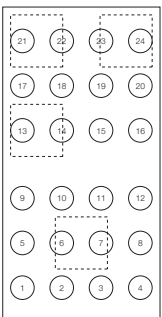
Mounting areas | Dimension drawing



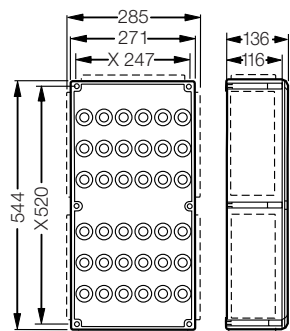
Distance between centres 40 mm



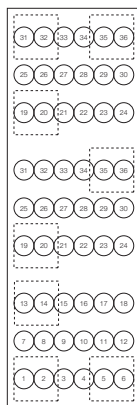
Distance between centres 50 mm



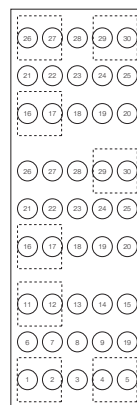
Distance between centres 60 mm



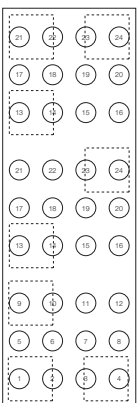
Type 449 23



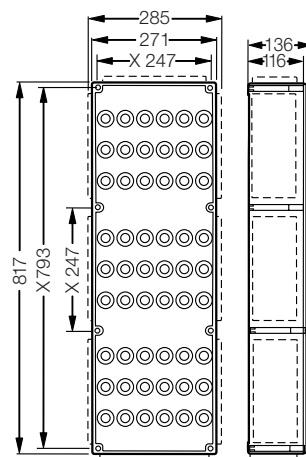
Distance between centres 40 mm



Distance between centres 50 mm



Distance between centres 60 mm



Type 447 23

X = fixing dimension

Dimensions in mm

Ex-control stations



Type 443 34

Technical data

Ex-Control stations Type 443 34 for individual configuration

Marking to 94/9/EC	II 2 G Ex ed ia/lb m IIC T6 II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 01 ATEX 1115
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V AC
Rated current	63 A
Connecting terminals	as ordered accd. to manufacturer's specification
PE-connection terminals	2 x 4 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66 (standard)
Cable glands/Gland plates/Enclosure drilling	as ordered accd. to manufacturer's specification
Dimensions (L x W x H)	280 x 180 x 90 mm
Weight	2.3 kg with mounting framework
Enclosure material	cast aluminium-silicon (AlSi)
Enclosure colour	grey RAL 7031
Mounting arrangements	max. 9 mounting areas

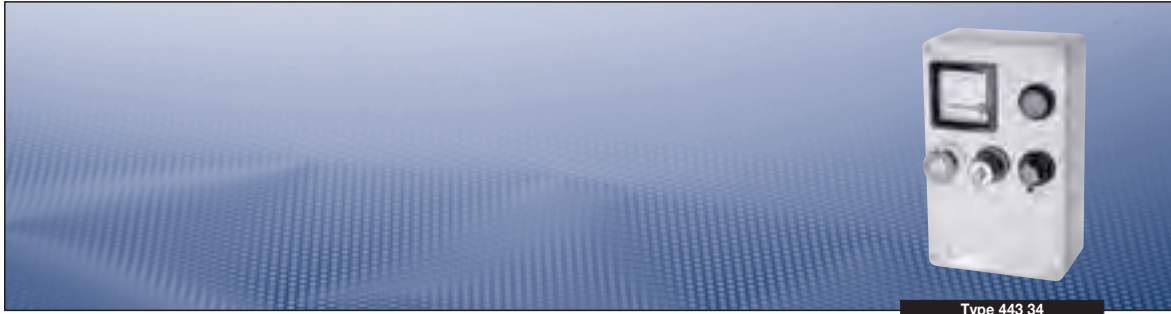
Ordering codes (Code 1)

1. Empty enclosure	2. Components arrangement/Terminals			3. Labels/Locking devices	4. Cable glands
	Mounting area 1 ... 3	Mounting area 4 ... 6	Mounting area 7 ... 9		
443 34	X	X	X	X	X

Possible components (Code 1)

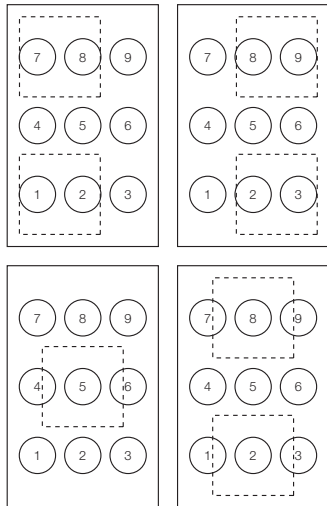
Component	Code	Component	Code
Pushbutton (2-pole or 4-pole ¹⁾)	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton (2-pole or 4-pole ¹⁾)	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole ¹⁾)	SLT	Blanking element	BLV
Key switch (2-pole or 4-pole ¹⁾)	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton (2-pole or 4-pole ¹⁾)	SGT	Control switch	GHG 29 ¹⁾
Control switch (2-pole or 4-pole ¹⁾)	SCT	Terminal (4 mm ²)	KLM ... A ¹⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B ¹⁾
Potentiometer	POT		

¹⁾ 2 mounting areas are needed

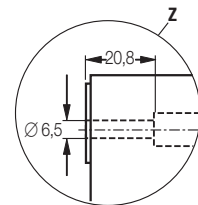
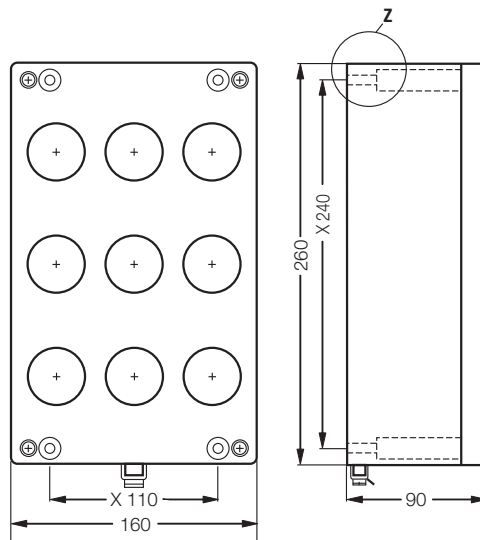


Type 443 34

Mounting areas | Dimension drawing



Distance between centres 40, 50 and 60 mm for positioning of built-in components



Type 443 34

X = fixing dimension

Dimensions in mm

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Ex-control stations



Type 444 33

Type 448 33

Type 449 33

Type 447 33

Technical data

Ex-Control stations Type 444, 448, 449, and 447 stainless steel for individual configuration

Marking to 94/9/EC	Ex II 2 G Ex de ia/ib m [ia/ib] IIC T6 Ex II 2 D Ex tD A21 IP66/IP65 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEX Certificate of conformity	IECEX BK1 07.0023
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] IIC T4 .. T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V AC
Rated current	40 A
Connecting terminals	see technical data for built-in components
PE-connection terminals	2 x 4 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP66 (standard)
Cable glands/Gland plates/Enclosure drilling	as ordered accd. to manufacturer's specification
Enclosure material	Stainless steel AISI 316 L
Enclosure colour	polished

Type 444 33

Connecting terminals	max. 20 terminals UT 4
Dimensions (L x W x H)	312.5 x 175 x 135 mm
Weight (empty)	3.5 kg with mounting framework
Mounting arrangements	6 mounting areas

Type 448 33

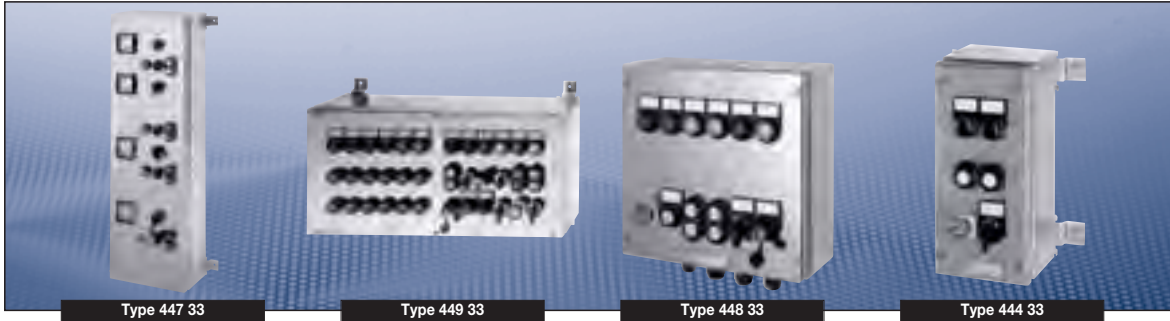
Connecting terminals	max. 30 terminals UT 4
Dimensions (L x W x H)	312.5 x 312.5 x 135 mm
Weight (empty)	7.5 kg with mounting framework
Mounting arrangements	distance 40 mm max. 18 mounting areas distance 50 mm max. 15 mounting areas distance 60 mm max. 12 mounting areas

Type 449 33

Connecting terminals	max. 60 terminals UT 4
Dimensions (L x W x H)	627 x 312.5 x 135 mm
Weight (empty)	11.5 kg with mounting framework
Mounting arrangements	distance 40 mm max. 36 mounting areas distance 50 mm max. 30 mounting areas distance 60 mm max. 24 mounting areas

Type 447 33

Connecting terminals	max. 90 terminals UT 4
Dimensions (L x W x H)	941.5 x 312.5 x 135 mm
Weight (empty)	16.5 kg with mounting framework
Mounting arrangements	distance 40 mm max. 54 mounting areas distance 50 mm max. 45 mounting areas distance 60 mm max. 36 mounting areas



Ordering codes (Code 1)

1. Empty enclosure	2. Components arrangement/Terminals				3. Labels/Locking devices	4. Cable glands
	Mounting area 1 ... 6	Mounting area 7 ... 18	Mounting area 19 ... 36	Mounting area 37 ... 64		
444 33	X	-	-	-	X	X
448 33	X	X	-	-	X	X
449 33	X	X	X	-	X	X
447 33	X	X	X	X	X	X

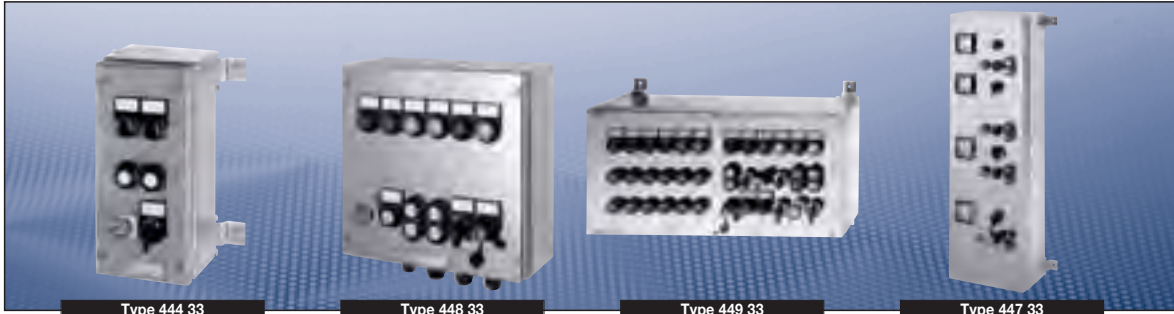
Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole ¹⁾)	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton (2-pole or 4-pole ¹⁾)	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole ¹⁾)	SLT	Blanking element	BLV
Key switch (2-pole or 4-pole ¹⁾)	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton (2-pole or 4-pole ¹⁾)	SGT	Control switch	GHG 29 ¹⁾
Control switch (2-pole or 4-pole ¹⁾)	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

¹⁾ 2 mounting areas are needed

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame

Ex-control stations



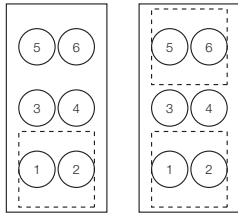
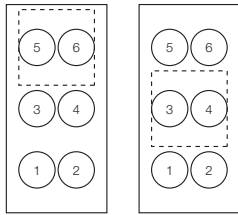
Type 444 33

Type 448 33

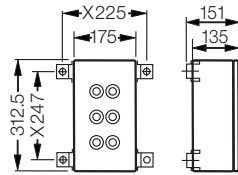
Type 449 33

Type 447 33

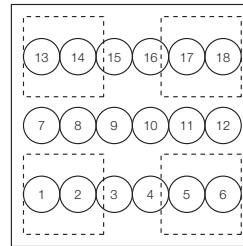
Mounting area | Dimension drawing



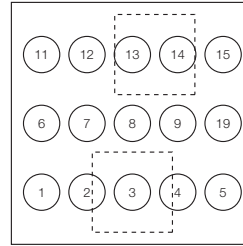
Distance between centres
40, 50 and 60 mm



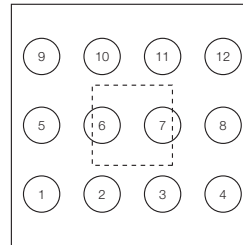
Type 444 33



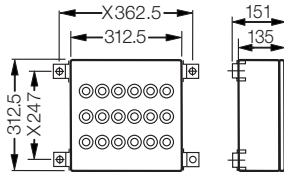
Distance between centres 40 mm



Distance between centres 50 mm



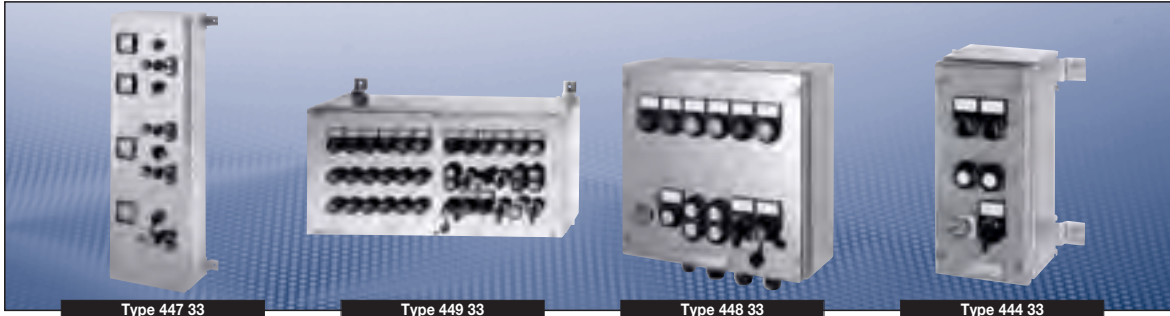
Distance between centres 60 mm



Type 448 33

X = fixing dimension

Dimensions in mm



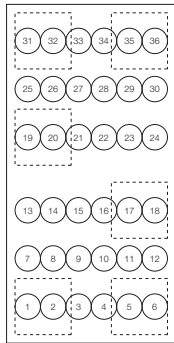
Type 447 33

Type 449 33

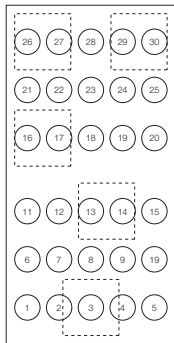
Type 448 33

Type 444 33

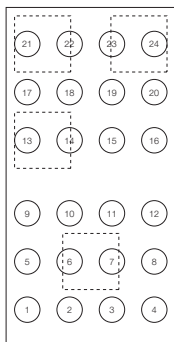
Mounting area | Dimension drawing



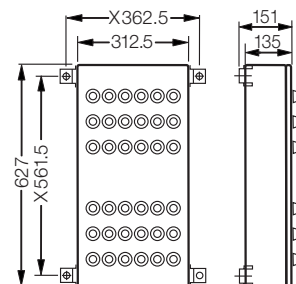
Distance between centres 40 mm



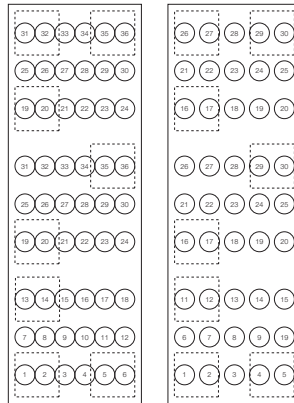
Distance between centres 50 mm



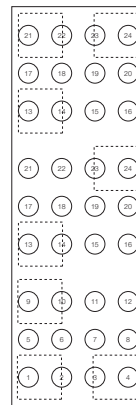
Distance between centres 60 mm



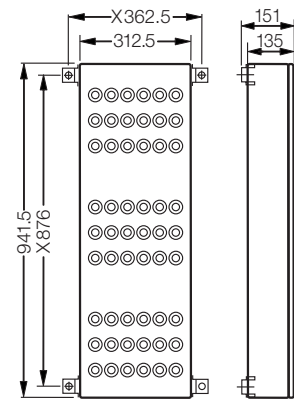
Type 449 33



Distance between centres
40 mm 50 mm



Distance between centres 60 mm

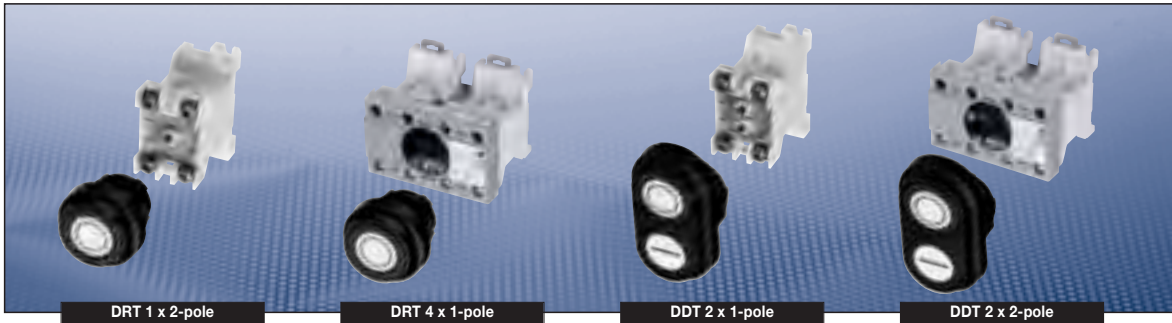


Type 447 33

X = fixing dimension

Dimensions in mm

■ Built-in Components ■



Technical data

Ex-Pushbutton DRT and Double pushbutton DDT

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib IIC / Ⓔ I M 2 Ex de ia/ib I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric Silicone or Viton on request

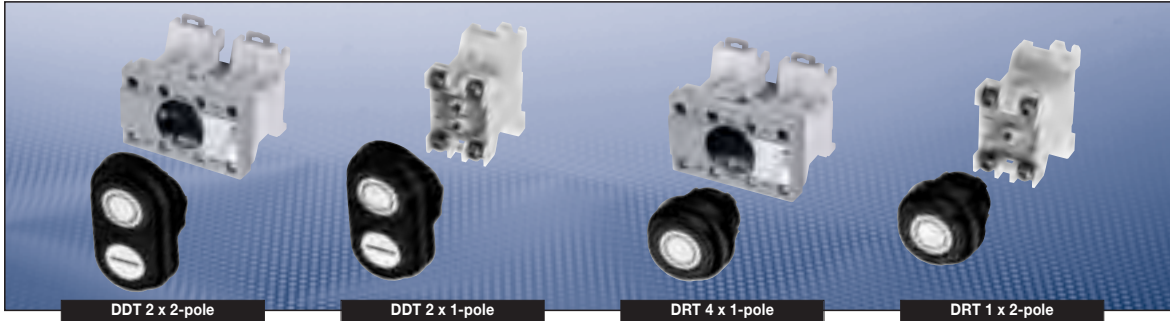
2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

4-pole Version¹⁾

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas.
The actuator will be in the middle of the two mounting areas.

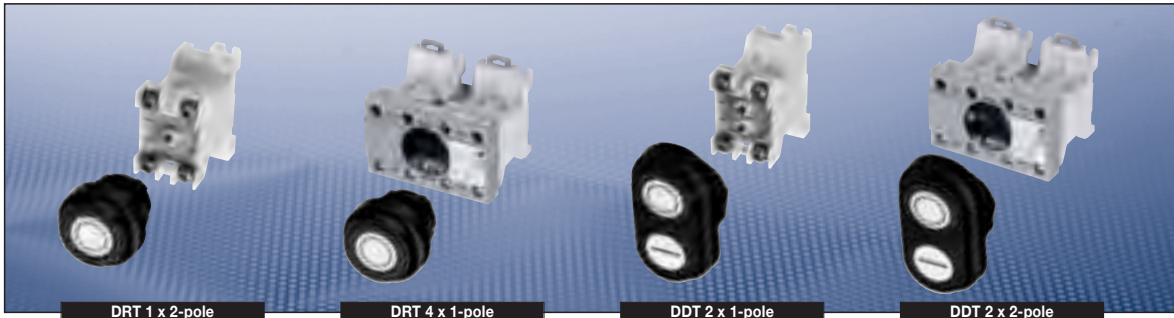


Ordering code for Component (Code 2)

Code	Component	Code
A	Pushbutton, for enclosure mounting	DRT
	Double pushbutton, for enclosure mounting	DDT

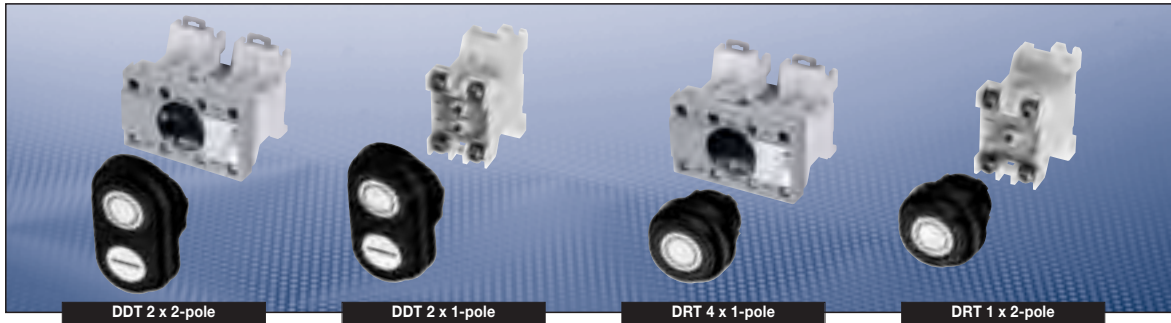
Code	Contact system	Contacts		Code	
		DRT	DDT	silver contact points	gold contact points
C	2 NC			13	16
	2 NO			14	17
	1 NO + 1 NC			15	18
	4 NC			20	25
	1 NC + 3 NO			21	26
	2 NC + 2 NO			22	27
	3 NC + 1 NO			23	28
	4 NO			24	29

■ Built-in Components ■



Ordering code for Component (Code 2)

Code	Label	Inscription	Code	Inscription	Code
D1, D2		0, I, Start, Stop	001	0	002
		I	003	I I	004
		☹	005	STOP	006
		START	007	NOT-AUS	008
		LANGSAM	009	SCHNELL	010
		EMERG.STOP	011	-	012
		ARRET	014	MARCHE	015
		AUF	016	AB	017
		Neutral whtie	018	Neutral green	019
		0, I, Arret, Marche	020	UP	024
		DOWN	025	ZU	026
		ON	027	OFF	028
		+	030	-	031
		Neutral red	033	Neutral yellow	034
		EIN	036	AUS	037
		AUTO	039	HAND	050
		SENKEN	051	HEBEN	052
		LINKS	053	RECHTS	054
		FAST	055	SLOW	056
		RESET	057	OPEN	058

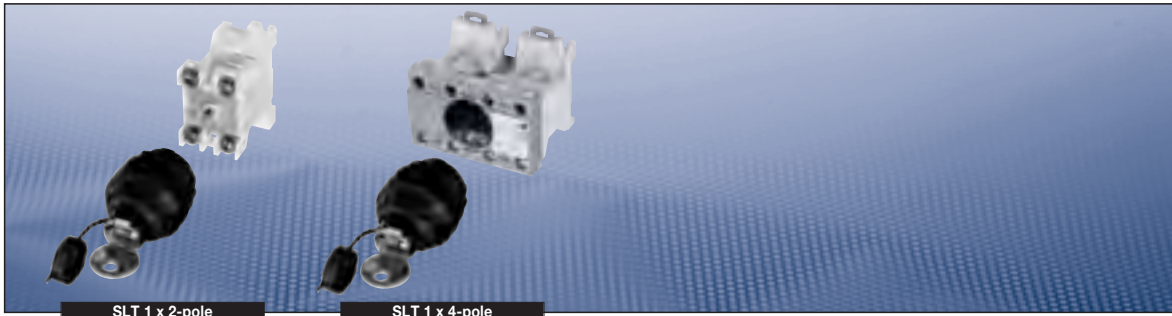


Example for ordering code (Code 2)

Version	Contact arrangement	Code	Ordering Code				
			A	B	C	D1	D2
Pushbutton with silver contact points							
Version with standard label (0, I, START, STOP)							
2 NC	2 NC	13	DRT	0	13	001	---
2 NO	2 NO	14	DRT	0	14	001	---
1 NO + 1 NC	1 NO + 1 NC	15	DRT	0	15	001	---
4 NC	4 NC	20	DRT	0	20	001	---
3 NO + 1 NC	3 NO + 1 NC	21	DRT	0	21	001	---
2 NO + 2 NC	2 NO + 2 NC	22	DRT	0	22	001	---
1 NC + 3 NO	1 NC + 3 NO	23	DRT	0	23	001	---
4 NO	4 NO	24	DRT	0	24	001	---

Double pushbutton with gold contact points							
Version with standard label (0, I, START, STOP)							
2 NC	2 NC	16	DDT	0	16	001	001
2 NO	2 NO	17	DDT	0	17	001	001
1 NO + 1 NC	1 NO + 1 NC	18	DDT	0	18	001	001
4 NC	4 NC	25	DRT	0	25	001	001
3 NO + 1 NC	3 NO + 1 NC	26	DRT	0	26	001	001
2 NO + 2 NC	2 NO + 2 NC	27	DRT	0	27	001	001
1 NC + 3 NO	1 NC + 3 NO	28	DRT	0	28	001	001
4 NO	4 NO	29	DRT	0	29	001	001

Built-in Components



Technical data

Ex-Key operated pushbutton SLT

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib IIC / Ⓔ I M 2 Ex de ia/ib I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric Silicone or Viton on request
Latch point	CEAG 1 (others on request)

2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

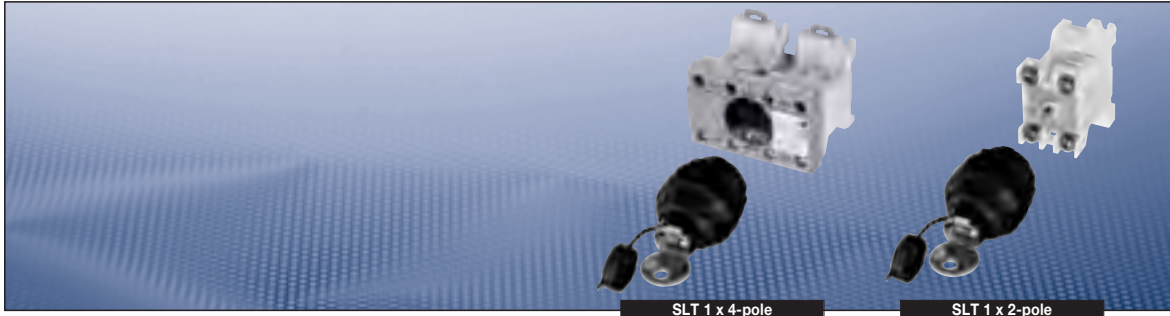
4-pole Version¹⁾

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas. The actuator will be in the middle of the two mounting areas.

Example for ordering code (Code 2)

Version	Contact arrangement	Code	Ordering Code			
			A	B	C	D
Key switch with silver contact points						
Version with contact function: lockable/removeable/lockable/removeable (code 10)						
2 NC	2 NC	13	SLT	0	13	10
2 NO	2 NO	14	SLT	0	14	10
1 NO + 1 NC	1 NO + 1 NC	15	SLT	0	15	10
2 NO + 2 NC	2 NO + 2 NC	22	SLT	0	22	10
4 NC	4 NC	20	SLT	0	20	10
4 NO	4 NO	24	SLT	0	24	10
3 NO + 1 NC	3 NO + 1 NC	21	SLT	0	21	10
1 NO + 3 NC	1 NO + 3 NC	23	SLT	0	23	10
Key switch with gold contact points						
Version with contact function: lockable/removeable/lockable/removeable (code 10)						
2 NO + 2 NC	2 NO + 2 NC	27	SLT	0	27	10
4 NC	4 NC	25	SLT	0	25	10
4 NO	4 NO	29	SLT	0	29	10
3 NO + 1 NC	3 NO + 1 NC	26	SLT	0	26	10
1 NO + 3 NC	1 NO + 3 NC	28	SLT	0	28	10



SLT 1 x 4-pole

SLT 1 x 2-pole

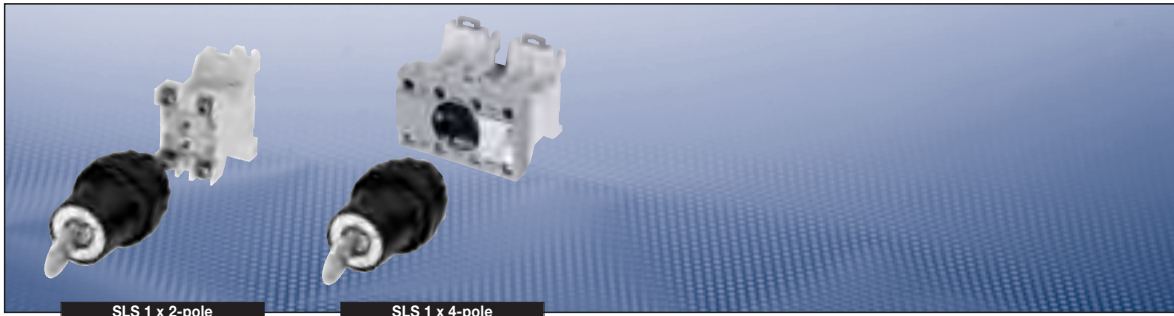
Ordering code for Component (Code 2)

Code	Component	Code
A	Key operated pushbutton	SLT

Code	Contact system	Contacts	Code	
			silver contact points	gold contact points
C	2 NC		13	16
	2 NO		14	17
	1 NO + 1 NC		15	18
	4 NO		20	25
	1 NC + 3 NO		21	26
	2 NC + 2 NO		22	27
	3 NC + 1 NO		23	28
	4 NC		24	29

Code	Function	Pushbutton not pressed	Key	Pushbutton pressed	Key	Code
D		lockable	removable	lockable	removable	10
		lockable	removable	lockable	not removable	11
		lockable	removable	not lockable	not removable	12
		lockable	not removable	lockable	removable	13
		not lockable	not removable	lockable	removable	14
	not lockable	removable	auto lockable	removable	15	

■ Built-in Components ■



Technical data

Ex-Key operated switch SLS

Marking to 94/9/EC	Ex II 2 G Ex de ia/ib IIC / Ex I M 2 Ex de ia/ib I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 60 V / I_e 0,8 A U_e 110 V / I_e 0,5 A
Switching system	engaging – engaging – engaging
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Latch point	CEAG 1 (others on request)

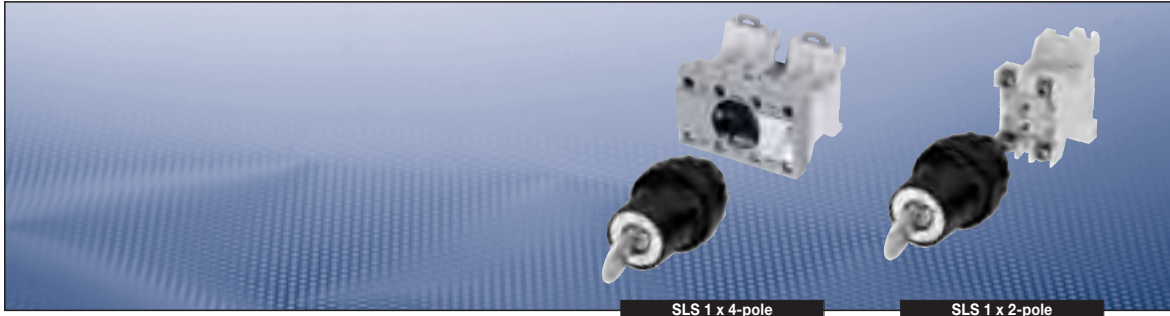
2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

4-pole Version¹⁾

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas.
The actuator will be in the middle of the two mounting areas.



SLS 1 x 4-pole

SLS 1 x 2-pole

Ordering code for Component (Code 2)

Code	Component	Code
A	Key switch	SLS 5

Code	Contact system	Contacts	Code	
			silver contact points	gold contact points
C	2 NO		04	14
	2 NO		05	15
	4 NO		24	34
	2 NO + 2 NC		23	33
	4 NO		25	35

Code	Contact label	Inscription	Code
D		I 0 II	01
		Fern 0 Ort	02
		Hand 0 Auto	03

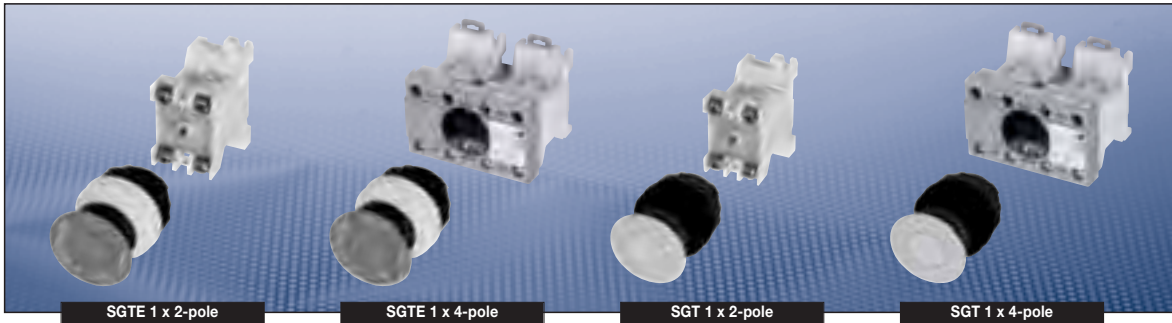
Other labels on request

Example for ordering code (Code 2)

Contact system	Ordering Code		
	A	C	D
Key switch with silver contact points and label „I 0 II“			
04	SLS 5	04	01
05	SLS 5	05	01

Switch can be locked in all positions and key can be removed in all positions

Built-in Components



Technical data

Ex-Mushroom Head Pushbutton (Emergency Stop „SGTE“ and Normal Version „SGT“)

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib IIC / Ⓔ I M 2 Ex de ia/ib I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric Silicone or Viton on request

2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

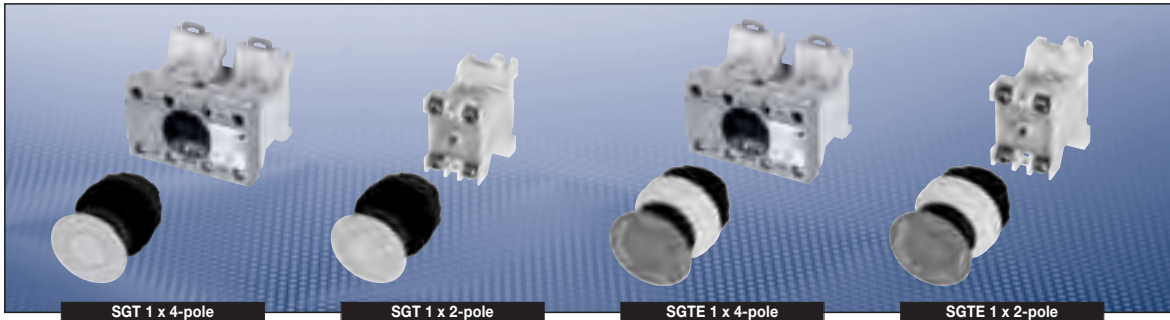
4-pole Version¹⁾

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas.

The actuator will be in the middle of the two mounting areas.

The pushbutton „Emergency Stop“ will be equipped with a black plate in the centre of the pushbutton actuator.

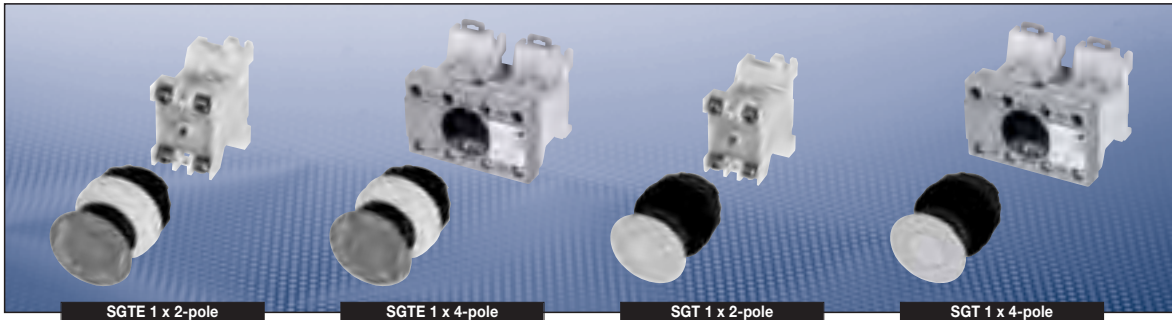


Ordering code for Component (Code 2)

Code	Component	Code
A	Mushroom head pushbutton	SGT
	Mushroom head pushbutton (Emergency Stop)	SGTE

Code	Contact system	Contacts	Code	
			silver contact points	gold contact points
C	2 NC		13	16
	2 NO		14	17
	1 NO + 1 NC		15	18
	4 NC		20	25
	3 NO + 1 NC		21	26
	2 NO + 2 NC		22	27
	1 NO + 3 NC		23	28
	4 NO		24	29

| Built-in Components |



Ordering code for Component (Code 2)

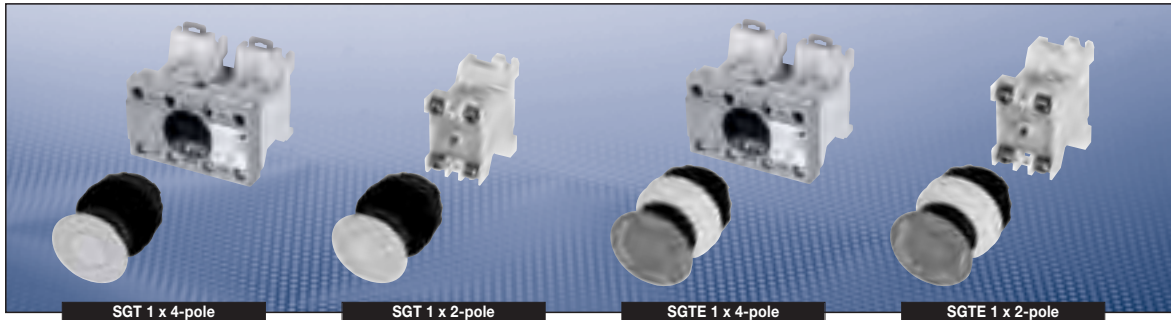
Code	Mushroom head inscription	Inscription	Code
D		Emergency Stop (German - Englisch) ¹⁾	1
		Emergency Stop (German - French) ¹⁾	4
		0, I, START, STOP	01
		0	02
		I	03
		II	04
		💡	05
		STOP	06
		START	07
		LANGSAM	09
		SCHNELL	10
		-	12
		ARRET	14
		MARCHE	15
		0, I, Arret, Marche	20
		UP	24
		DOWN	25
		ZU	26
		ON	27
		OFF	28
	+	30	
	-	31	

Code	Mushroom head inscription	Colour	Code
E		red	1
		yellow ²⁾	2
		black ²⁾	3

Code	Function	released	engaged	unlocking	Code
F		not lockable	not lockable	n/a (pushbutton function)	1 ²⁾
		not lockable	lockable	hand released	2
		not lockable	lockable	key released	3

¹⁾ only SGTE

²⁾ only SGT

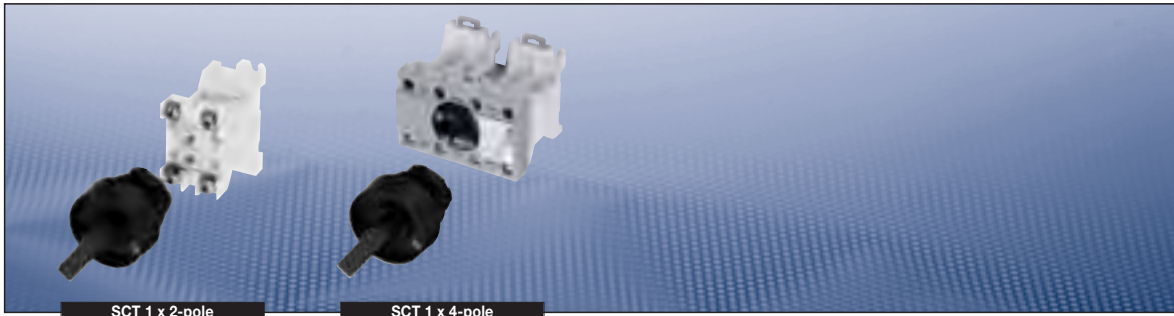


Example for ordering code (Code 2)

Contact system	Ordering Code				
	A	C	D	E	F
EMERGENCY STOP mushroom-head pushbutton red, with silver contact points					
Version with inscription D/E, hand released					
2 NC	SGTE 0	13	1	1	2
2 NO	SGTE 0	14	1	1	2
1 NO + 1 NC	SGTE 0	15	1	1	2
2 NO + 2 NC	SGTE 0	22	1	1	2
4 NC	SGTE 0	20	1	1	2
4 NO	SGTE 0	24	1	1	2
3 NO + 1 NC	SGTE 0	21	1	1	2
1 NO + 3 NC	SGTE 0	23	1	1	2

Mushroom-head pushbutton with silver contact points, without locking, mushroom head, black					
Version with standard label (0, I, START, STOP)					
2 NC	SGT 0	13	01	3	1
2 NO	SGT 0	14	01	3	1
1 NO + 1 NC	SGT 0	15	01	3	1
2 NO + 2 NC	SGT 0	22	01	3	1
4 NC	SGT 0	20	01	3	1
4 NO	SGT 0	24	01	3	1
3 NO + 1 NC	SGT 0	21	01	3	1
1 NO + 3 NC	SGT 0	23	01	3	1

■ Built-in Components ■



Technical data

Ex-Mini-control switch SCT

Marking to 94/9/EC	Ex II 2 G Ex de ia/lb IIC / Ex I M 2 Ex de ia/lb I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey

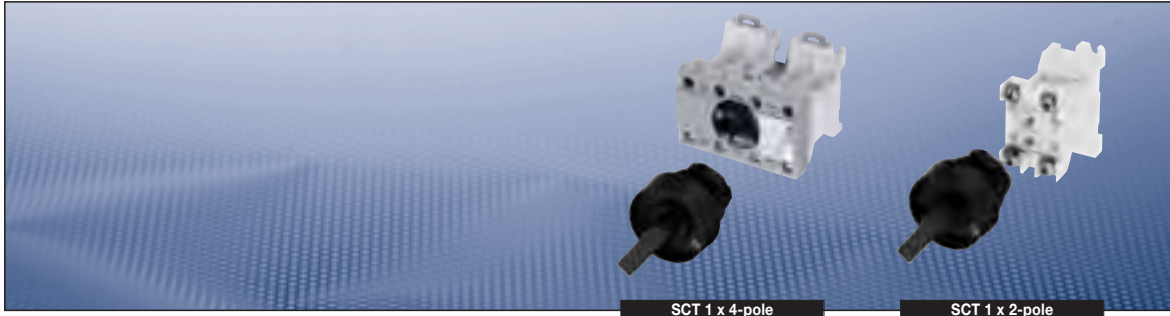
2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions in mm (L x W x H)	59 x 31 x 45
Weight	0.15 kg

4-pole Version¹⁾

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas.
The actuator will be in the middle of the two mounting areas.



SCT 1 x 4-pole

SCT 1 x 2-pole

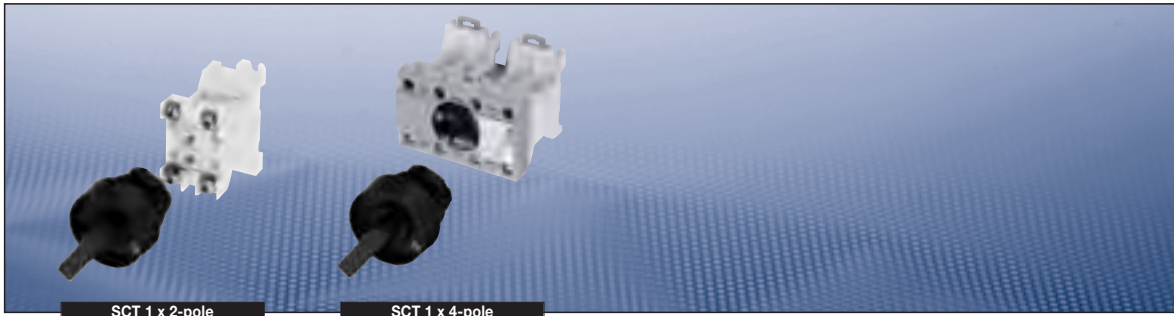
Ordering code for Component (Code 2) Code A - C - D - E

Code	Component	Code
A	Mini-control switch	SCT

Code	Switching mechanism	Version	Code	
C	4	spring – engaging – spring	4	
	5	engaging – engaging – engaging	5	
	6	engaging – engaging	6	
	7	spring – engaging – engaging	7	
	8	engaging – engaging – spring	8	



Built-in Components

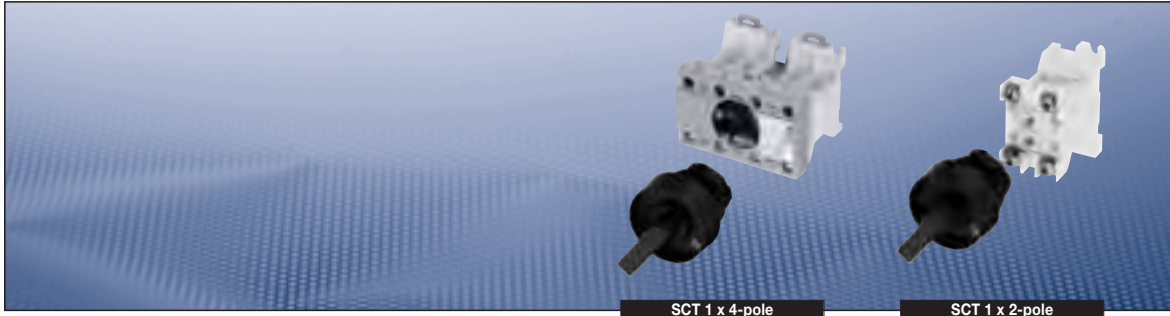


SCT 1 x 2-pole

SCT 1 x 4-pole

Ordering code for Component (Code 2) Code A - C - D - E

Code	Contact system	Contacts	Code	
			silver contact points	gold contact points
D			01	11
			02	12
			03	13
			04	14
			05	15
			07	17
			22	32
			23	33
			21	31
			26	36
			25	35
			27	37
			24	34



SCT 1 x 4-pole

SCT 1 x 2-pole

Ordering code for Component (Code 2) Code A - C - D - E

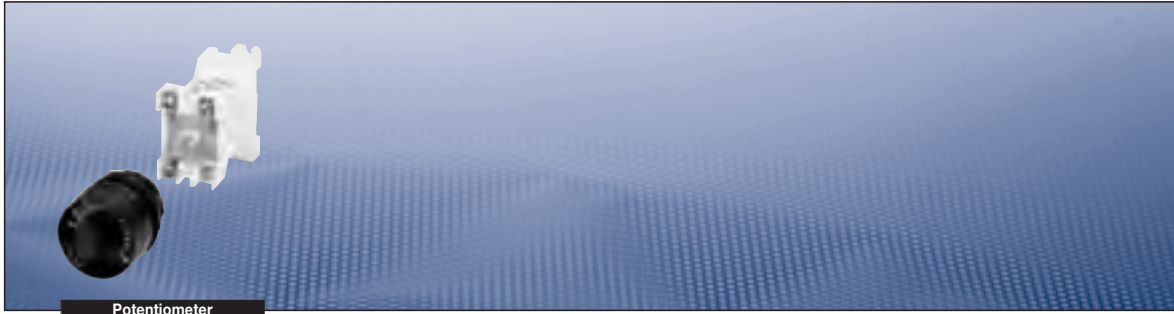
Code	Inscription	Code	Inscription	Code
E	0	I	01	0
	I	II	02	AUS
	STOP	START	03	AUS
	HAND	AUTO	04	ÖRTLICH
	SENKEN	HEBEN	05	START
	REMOTE	LOCAL	06	OFF
	I	0	07	HAND
	AUS	BETRIEB	08	0
	AUS	0	09	MAN
	AUF	0	10	START
	Entriegelt	0	11	HEBEN
	OUT	OF	12	OFF
	LOCAL	REMOTE	13	AUS
		II	18	
		II	19	AUTO
		AUTO	20	AUTO
		FERN	21	FERN
		STOP	22	STOP
		ON	23	ON
		AUTO	24	AUTO
		START	25	START
		AUTO	26	AUTO
		STOP	27	STOP
		SENKEN	28	SENKEN
		ON	29	ON
		EIN	30	EIN

Other labels on request

Example for ordering code (Code 2)

Contact system	Switch mechanism	Contact Code	Ordering Code			
			A	C	D	E
Control switch with silver contact points						
Switch can be locked in all positions						
I II	6	01	SCT	6	01 or 21	02
0 I	6	03	SCT	6	03 or 23	01
I II	6	02	SCT	6	02 or 22	02
I 0 II	4	04	SCT	4	04 or 24	07
I 0 II	5	05	SCT	5	05 or 26	07
0 I	7	07	SCT	7	07 or 27	01

Built-in Components



Technical data

Ex-Potentiometer POT

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib IIC / Ⓔ I M 2 Ex de ia/ib I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	up to 250 V
Power consumption	max. 1 W
Resistance range	100 – 10000 Ohm
Tolerance	± 20 %
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	DIN rail mounting
Enclosure colour	grey
Angle of rotation	270°
Scale	0 - 100 %

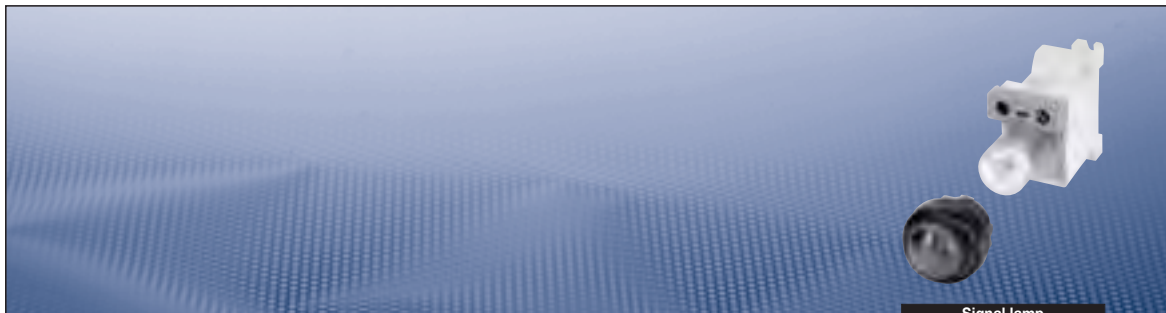
Ordering code for Component (Code 2) Code A - C

Code	Component	Code
A	Potentiometer	POT

Code	Resistance	Code
C	0 - 100 Ohm	01
	0 - 220 Ohm	02
	0 - 470 Ohm	03
	0 - 1000 Ohm	04
	0 - 2200 Ohm	07
	0 - 4700 Ohm	05
	0 - 10000 Ohm	06

Example for ordering code (Code 2)

Version	Code
Potentiometer 1 W 25 % tolerance	
0 - 100 Ohm	POT 01
0 - 470 Ohm	POT 03
0 - 4700 Ohm	POT 05



Technical data

Ex-Signal lamp SIL	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC / Ⓔ II 2 G Ex d ia IIC
EC-Type Examination Certificate	PTB 98 ATEX 1040 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage (Ex ed IIC)	20 V to 250 V AC/DC
(Ex d ia IIC)	18 V to 30 V DC
(Ex ed IIC)	12 V to 30 V AC/DC
Rated current (20 V to 250 V)	approx. 4 - 15 mA
(10 V to 28 V Ex d ia IIC)	max. 25 mA
12 V to 30 V	max. 24 mA
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	DIN rail mounting
Enclosure colour	grey

Ordering code for Component (Code 2) Code A - C - D

Code	Component	Code
A	Signal lamp	SIL

Code	Colour of lens	Code
C	white	1
	yellow	2
	red	3
	blue	4
	green	5

Code	Voltage	Code
D	20 V - 250 V AC/DC	10
	18 V - 30 V DC (Ex-i ¹)	34
	12 V - 24 V AC/DC	11

¹) Supply by valve-driver components, e.gl., with data:

U₀ = 20 V - 18 V DC with R_i = 200 Ω - 500 Ω or

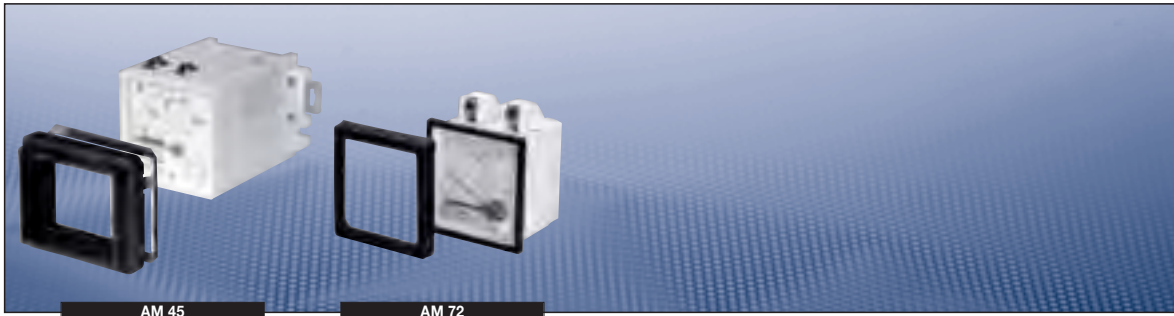
U₀ = 10 V - 18 V DC with R_i = 100 Ω - 200 Ω

No effective C_i and L_i values.

Example for ordering code (Code 2)

Version	Ordering Code		
	A	C	D
Signal lamp SIL (examples)			
Universal voltage 20 V - 250 V AC/DC white	SIL	1	10
For intrinsically safe circuits 18 V up to 30 V DC blue	SIL	4	34
Low voltage 12 V up to 24 V AC/DC red	SIL	3	11

Built-in Components

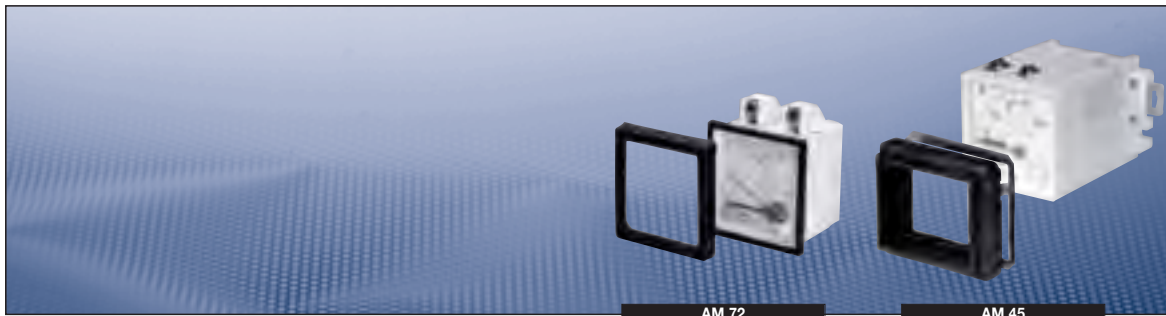


AM 45

AM 72

Technical data

Ex-Measuring instrument AM 45/AM 72	moving iron	moving coil
Marking to 94/9/EC	Ex II 2 G Ex e II / Ex II 2 G Ex e mb II Ex I M 2 Ex e I	Ex II 2 G Ex ib II C Ex I M 2 Ex ib I
EC-Type Examination Certificate	PTB 99 ATEX 2032 U	
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	up to 420 V (AM 45) up to 750 V (AM 72)	
Power consumption	max. 0.31 A	
Overload range	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	10 fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 24 mA
Inductance L_i	< 0.1 mH	
Capacitance C_i	< 0.1 nF	
Winding specification of moving coil	26.5 windings	
Internal resistance	2.5 Ω \pm 30 %	
Open circuit voltage max. U_i	30 V	
Short circuit current max. I_i	150 mA	
Accuracy	Class 2.5	Class 1.5
Movement	moving iron	moving coil
Connecting terminals	2 x 1.5 - 4 mm ²	
Degree of protection accd. EN 60529	IP66	
Display size	50 x 45 mm (AM 45) 72 x 72 mm (AM 72)	
Weight	0.35 kg	
Type of mounting	DIN rail mounting	
Enclosure material	grey	



Ordering code for Component (Code 2) Code A - C - D

Code	Component	Code
A	Measuring instrument AM 45	AM 45
	Measuring instrument AM 72	AM 72

Code	Movement	Code
C	Direct connection	1
	Ct connection 1 /A	2
	Ct connection n/5 A	3
	Port 0 - 20/24 mA (scale 0-100% / 120%) 1)	5
	Port 4 - 20/24 mA (scale 0-100% / 120%) 1)	6
	Moving-coil connection 0 - 20/24 mA (scale 0-100% / 120%) 1) 3)	7
	Moving-coil connection 4 - 20/24 mA (scale 0-100% / 120%) 1) 3)	8

Code	Measuring range	Code	Measuring range	Code
D	0 - 1	02	0 - 75 / 112.5 A	13
	0 - 2.5 / 3.75 A ²⁾	03	0 - 100 / 150 A	14
	0 - 5 / 7.5 A ²⁾	04	0 - 150 / 225 A	15
	0 - 10 / 15 A ²⁾	05	0 - 200 / 300 A	16
	0 - 15 / 22.5 A	06	0 - 250 / 375 A	17
	0 - 20 / 30 A ²⁾	08	0 - 300 / 450 A	18
	0 - 30 / 45 A	09	0 - 400 / 600 A	19
	0 - 40 / 60 A	10	0 - 500 / 750 A	20
	0 - 50 / 75 A	11	0 - 600 / 900 A	21
	0 - 60 / 90 A	12	0 - 100% / 150%	33

¹⁾ Movements 0 - 20 mA / 4 - 20 mA and with moving-coil connection are only available with scale 0 - 100 %/120 %

²⁾ Version for direct connection (standard: CT connection n/1A) possible

³⁾ Moving coil only for Ex-i of Ex-d flameproof applications

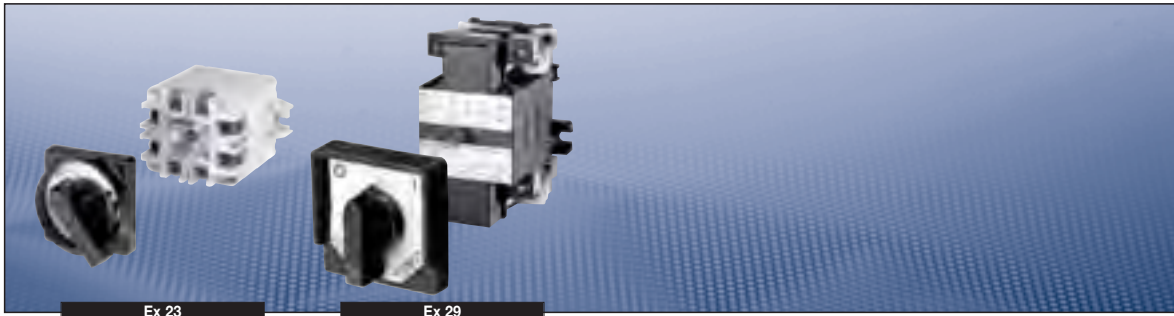
Other interchangeable scales available on request

Example for ordering code (Code 2)

Movement	Measuring range	Ordering Code		
		A	C	D
Measuring instrument AM 45				
Version with direct connection				
Direct (moving iron)	0 - 1 / 1.5 A	AM45	1	02
Direct (moving iron)	0 - 10 / 15 A	AM45	1	05
0 - 20 / 24 mA (moving coil)	0-100% / 120%	AM45	5	33
4 - 20 / 24 mA (moving coil)	0-100% / 120%	AM45	6	33
Moving iron measuring instrument AM 72				
Version with CT connection n/1A				
Converter n / 1A	0 - 100% / 150%	AM72	2	33
Moving-coil measuring instrument AM 45 (Ex-i application only)				
Version with direct connection				
0 - 20 / 24 mA	0-100% / 120%	AM45	7	33
4 - 20 / 24 mA	0-100% / 120%	AM45	8	33

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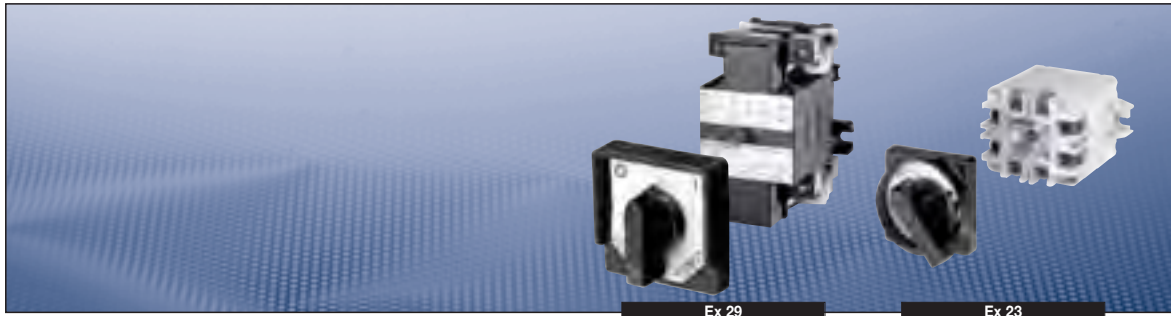
■ Built-in Components ■



Technical data

Ex-built-in Components for individual control stations		
Control switch Ex 23 and Ex 29	Ex 23	Ex 29
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 98 ATEX 1116 U	PTB 98 ATEX 1118 U
Application temperature	-20 °C to +40 °C -55 °C to +45 °C (option)	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	up to 500 V	up to 500 V
Rated current	10 A	16 A ¹⁾
Rated current gold contacts	0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 230 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 230 V / I _e 0.5 A	AC-15: U _e 230 V / I _e 6 A U _e 400 V / I _e 4 A DC-13: U _e 24 V / I _e 2 A U _e 230 V / I _e 0.3 A
Connecting terminals	2 x 0.5 - 2.5 mm ²	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Weight	1 tier: approx. 0.2 kg 2 tiers: approx. 0.35 kg 3 tiers: -	approx. 0.25 kg approx. 0.40 kg approx. 0.55 kg
Type of mounting	DIN rail mounting	
Enclosure colour	grey	black

¹⁾ 12 A cable section must be 2.5 mm²



Ordering code for Component (Code 2) Code A - C - D - E - F

Code	Component	Code
A	Ex 23	Ex 23
	Ex 29	Ex 29

Code	Switch mechanism	Code
C	spring - engaging - spring	4
	engaging - engaging - engaging	5
	engaging - engaging	6
	spring - engaging - engaging	7
	engaging - engaging - spring	8

Code	Contact	Silver contact points	Code	Silver contact points
D		060		034
		062		037
		065		049
		061		023
		063		019
		067		033
		011		024

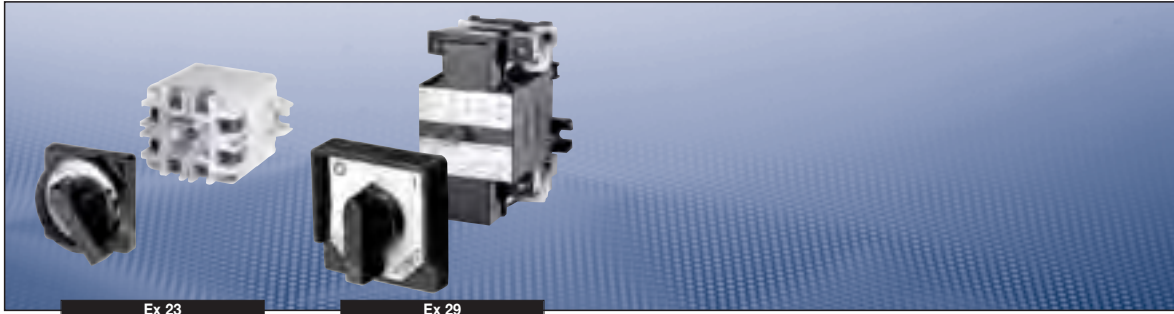
Versions with gold contact points are available on request.
 Versions with compulsory NO are possible.

Code	Label (Contact label)	Code	Label (Contact label)	Code
E	0	I	0	I
	I	II	AUS	AUTO
	STOP	START	AUS	HAND
	HAND	AUTO	ÖRTLICH	AUS
	SENKEN	HEBEN	START	NORMAL
	REMOTE	LOCAL	OFF	0
	I	0	HAND	OFF
	AUS	BETRIEB	0	IN
	AUS	0	MAN	AUTO
	AUF	0	START	STOP
	Entriegelt	0	HEBEN	SENKEN
	OUT	OF	OFF	ON
	LOCAL	REMOTE	AUS	EIN
	STOP	0	HAND	AUTO
	HAND	0	ON	OFF
	AUF	AUS	I	II
		II	III	
		III	18	
			19	
			20	
			21	
			22	
			23	
			24	
			25	
			26	
			27	
			28	
			29	
			30	
			31	
			32	
			33	

Code	Locking facility	Code
F	None <input type="checkbox"/>	0
	Centre <input type="checkbox"/>	1
	Left <input type="checkbox"/>	2
	Right <input type="checkbox"/>	3

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Built-in Components

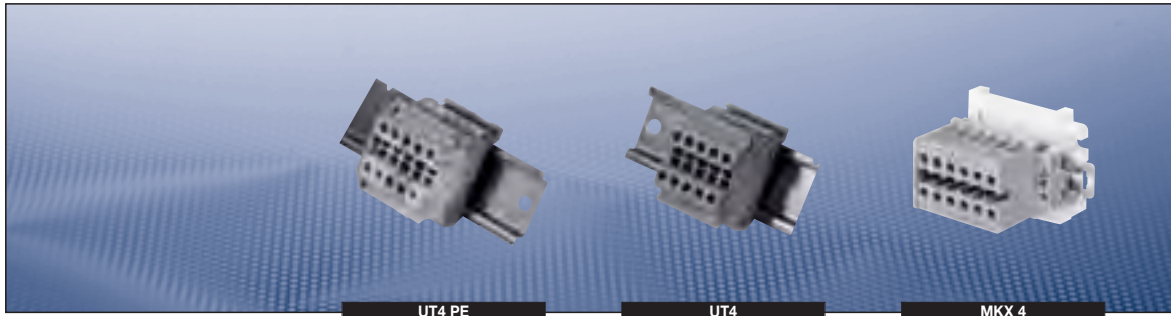


Ex 23

Ex 29

Example for ordering code (Code 2)

Version	Movement	Contact	Label	Locking facility	Ordering code
A	B	C	D	E	A B C D E
Ex 23		6 	060 I - II 02	none 0 <input type="checkbox"/>	Ex 23 6 060 02 0
Ex 23		5 	034 I - 0 - II 07	Centre 1 <input type="checkbox"/>	Ex 23 5 034 07 1
Ex 29		6 	060 I - II 02	none 0 <input checked="" type="checkbox"/>	Ex 29 6 060 02 0
Ex 29		6 	065 0 - I 01	Left 2 <input checked="" type="checkbox"/>	Ex 29 6 065 01 2



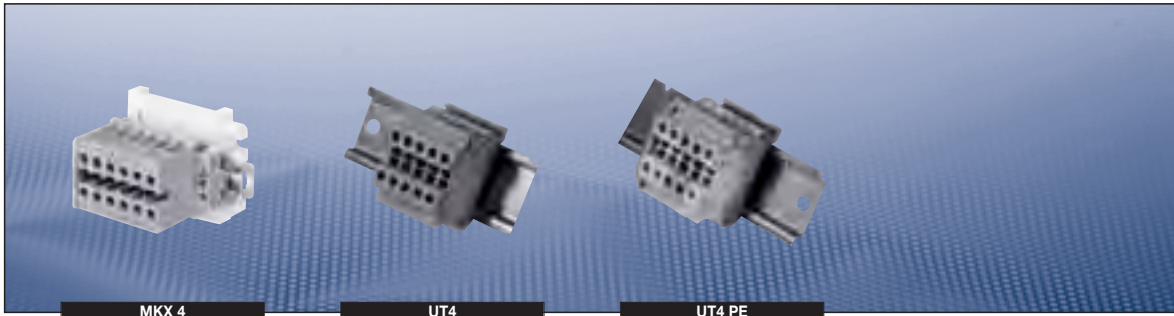
Technical data

Ex-built-in Components for individual control stations

Terminals

	MXK 4-Ex	UT 4 / UT 4 PE
Marking to 94/9/EC	Ⓔ II 2 G Ex e II	Ⓔ II 2 G Ex e II / Ⓔ II 2 D Ex e II
EC-Type Examination Certificate	PTB 99 ATEX 3132U	KEMA 04 ATEX 2048 U
IECEX certificate of conformity	IECEX KEMA 06.0027U	
Marking accd. to IECEx	Ex e II	
Application temperature	-50 °C to +55 °C	-50 °C to +55 °C
Rated voltage	up to 420 V	up to 690 V
Rated current	max. 27 A	max. 30 A
Connecting terminals	4 mm ²	0.14 mm ² - 4 mm ² multi-wire 0.14 mm ² - 6 mm ² single-wire
	4 mm ²	0.14 mm ² - 4 mm ² multi-wire 0.14 mm ² - 6 mm ² single-wire
Dimensions (L x B x H)	6.2 mm width	47.7 mm x 6.2 mm
Weight	0.01 kg	0.01 kg
Type of mounting	NS 35 DIN rail mounted	NS 35 DIN rail mounted
Enclosure colour	grey	grey

Built-in Components



Ordering code for Component (Code 2) Code A - C - D - E - F

Code	Component	Code
A	KLM	KLM

Code	Version	Code
C	Ex-e	1
	Ex-i	2

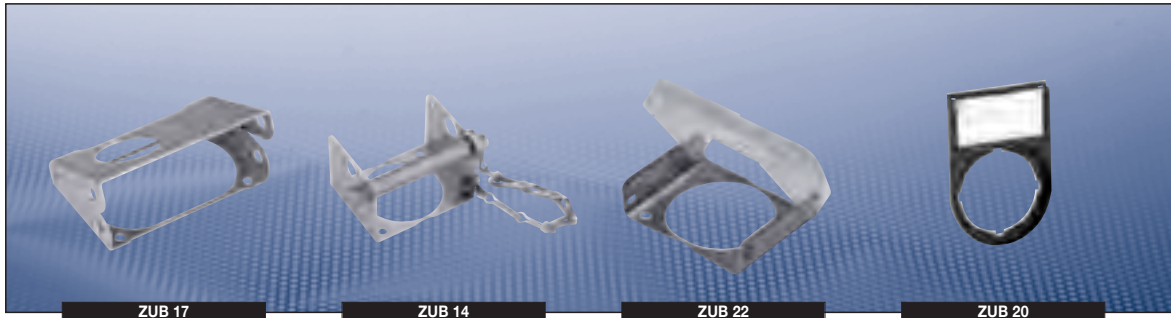
Code	Terminal type	Code
D	Terminal block MXK4-Ex max. 6 terminals	B
	Terminal insert max. 3 terminals	E
	Terminal UT 4 / UT 4 PE	A

Code	Number of terminals	Code
E	1	001
	2	002
	3	003
	ect.	ect.

Other variants, e.g. modules with resistors or fine-wire fuses, available on request.

Example for ordering code (Code 2)

Version	Number	Ordering code				
		A	C	D	E	F
Terminal block MXK 4-EX 6 x Ex-e terminals MXK 4 + 1 PE-terminal Ex-e Connection terminals		6 KLM	1	B	006	01
Terminal UK 4 12 x Ex-e terminal UT 4 + 2 PE-terminal Ex-e terminal		12 KLM	1	A	012	02



Ordering code for labels and locking facilities (Code 3) Code A - B - C

Code	Label	Code
A	52.0 x 13 mm 37.0 x 17 mm with holder	ZUB 19 ZUB 20

Code	Inscription	Code
B	Text to be determined	1 ... 4

Code	Mounting area	Code
C		1 ... 4

Code	Locking facility	for operating element	Material	Code
A	with flap (blank)	Pushbutton	Stainless steel	ZUB 12
	with flap (red)	Pushbutton	Stainless steel	ZUB 13
	with flap without „0“ activation	Double pushbutton	Stainless steel	ZUB 16
	with flap with „0“ activation	Double pushbutton	Stainless steel	ZUB 17
	with flap (blank)	Mushroom-head pushbutton	Stainless steel	ZUB 02
	with flap (red)	Mushroom-head pushbutton	Stainless steel	ZUB 01
	with bolt and chain	Mushroom-head pushbutton	Stainless steel	ZUB 14
	Fire alarm (red) with hammer	Mushroom-head pushbutton	Stainless steel	ZUB 15
	Fire alarm (red) with hammer activates alarm when broken	Mushroom-head pushbutton	Stainless steel	ZUB 05
	with flap, not activated	Pushbutton	Plastic	ZUB 23
	with flap, activated	Pushbutton	Plastic	ZUB 24
	with flap, not activated	Mushroom-head pushbutton	Plastic	ZUB 22
	with flap, activated	Mushroom-head pushbutton	Plastic	ZUB 21

Built-in Components



Ordering code for Cable glands and flanges (Code 4) Code A - B - C - D - E

Code	Version	Component	Code
A	Entry type	Entry direct in enclosure	GEH
		Entry via plastic flange	FLK
		Entry via metal flange	FLM

Code	Version	Component	Code
B	Entry side	Entry side on bottom (left or right)	1, 2
	Position	Entry side on top (left or right)	3, 4

Code	Version	Component	Code
C	Entry element	Only entry	OE
		Threaded entry	BO
		Threaded plug	SV
		Cable plastic gland	GK
		Cabel metal* gland	GM*
		Cable entry with plastic plug	GV
		Trumpet-shaped plastic gland	TR

Code	Version	Component	Code
D	Size	M12, M16, M20, M25, M32, M40, M50, M63	M..
		Ø21, Ø26	d..

Code	Version	Component	Code
E	Number	Number of entries	..

*For metal glands, the type of cable/entry must be stated in plain language in the order.
Other versions on request.

Example for ordering code

Version	Number	Ordering Code				
		A	B	C	D	E
2 cable entries M25 moulded plastic Version without plug direct from below into the enclosure	X	GEH	3	GK	M25	02

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EX - CONTROL AND SIGNAL UNITS

For panel mounting

CEAG control and indicating elements can be integrated in panels with a wall thickness of up to 5 mm.

The CEAG components for panel mounting, such as signal lamps, pushbuttons and switches, can be instantly plugged into the control and indicating elements on the panel via bayonet-ring fitting. The single-wire installation is clear and simple.

All panel-mounted apparatus can be retrofitted for cable connection with a slip-on strain relief and protective cover and is then completely certified. Planning and procurement of panel-mounted apparatus with different cable lengths is a thing of the past.

The completely certified measuring instruments for direct and indirect measurement are available for different amperage ranges. The instruments are equipped with a transformer for easy adaptation to other ranges on the interchangeable scales.

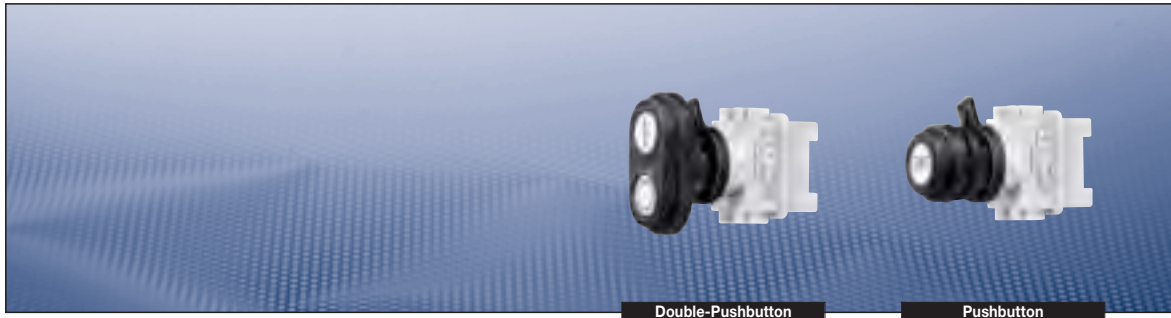


Bayonet-ring catch for quick one-hand mounting

Complete certification of built-in apparatus

Connection terminals for variable, low-cost wiring

Standard actuator-element size of \varnothing 30.5 mm



Double-Pushbutton

Pushbutton

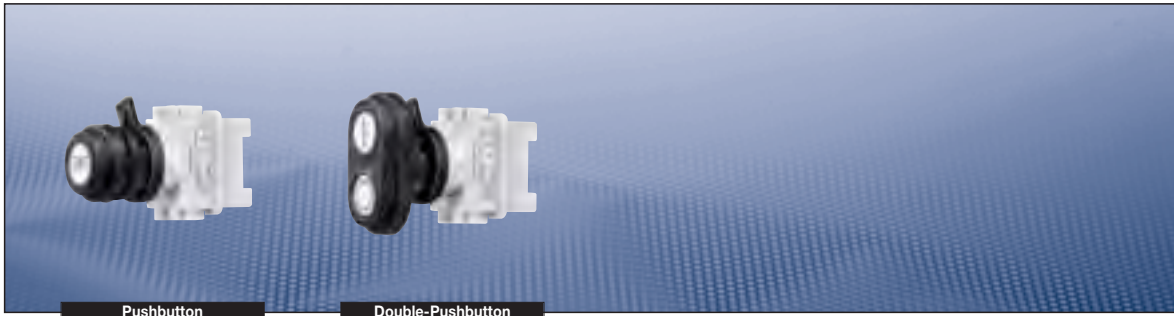
Technical data

Pushbutton Type 418 811 and double pushbutton Type 418 814

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.20 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric silicone or viton on request

¹⁾ If protective covers are used

Ex-Control and signal units for panel mounting



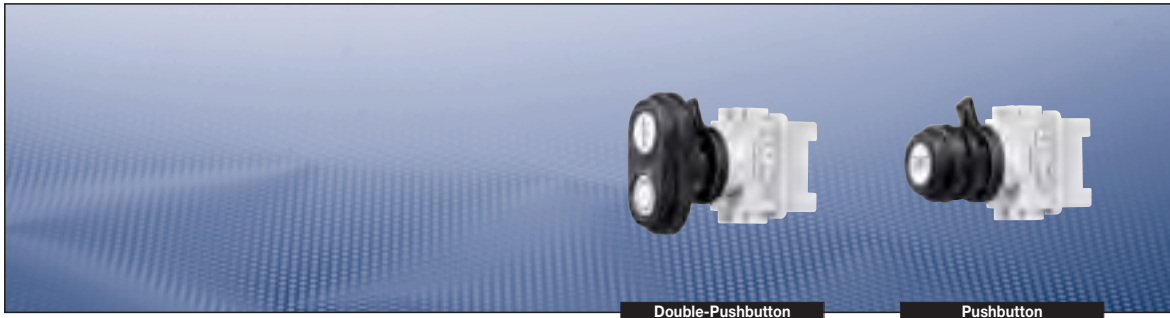
Ordering code for Component (Code 2) Code A - B - C1 - (C2)

A	B	C2	C1
GHG 418 81_	_	R	_

Code	Component	Code
A	Pushbutton	GHG 418 811
	Double pushbutton	GHG 418 814

Code	Contact system	Contacts	Code	
			silver contact points	gold contact points
B	2 NC		3	6
	2 NO		4	7
	1 NO + 1 NC		5	8

Code	Inscription	Code	Inscription	Code
C1, C2	0, I, Start, Stop	01	0	02
	I	03	II	04
		05	STOP	06
	START	07	NOT-AUS	08
	LANGSAM	09	SCHNELL	10
	EMERG.STOP	11		12
		13	ARRET	14
	MARCHE	15	AUF	16
	AB	17	Neutral white	18
	Neutral green	19	0, I, Arret, Marche	20
	UP	24	DOWN	25
	ZU	26	ON	27
	OFF	28	+	30
	-	31	Neutral red	33
	Neutral yellow	34	EIN	36
	AUS	37	Neutral black	38
	AUTO	39	Neutral blue	40
	HAND	50	SENKEN	51
HEBEN	52	LINKS	53	
RECHTS	54	FAST	55	
SLOW	56	RESET	57	
OPEN	58			



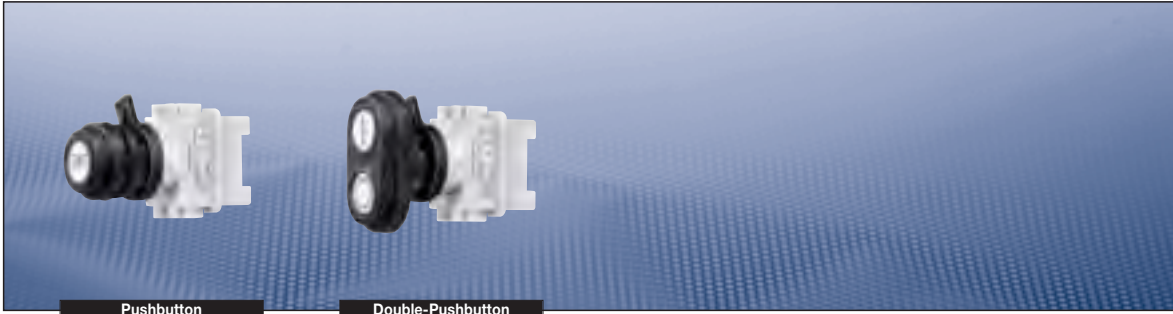
Example for ordering code (Code 2)

Version	Label	Ordering code			
		A	B	C1	C2
Pushbutton without protective cover, silver contact points					
2 NC	(0, I, START, STOP)	GHG 418 811	3	R0001	-
2 NO	(0, I, START, STOP)	GHG 418 811	4	R0001	-
1 NO + 1 NC	(0, I, START, STOP)	GHG 418 811	5	R0001	-
Double-pushbutton without protective cover, with gold contact points					
2 NC	(0, I, START, STOP)	GHG 418 814	6	R01	01
2 NO	(0, I, START, STOP)	GHG 418 814	7	R01	01
1 NO + 1 NC	(0, I, START, STOP)	GHG 418 814	8	R01	01

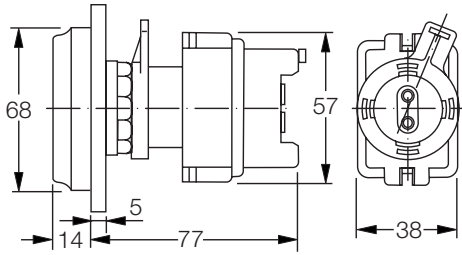
Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

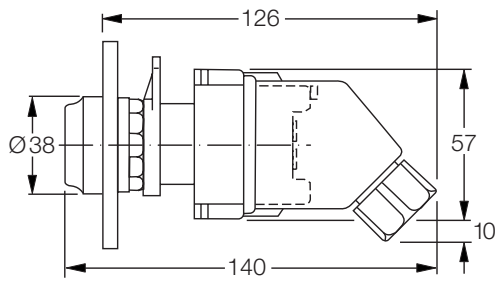
Please note that we can only deliver in the ordering units (OU) stated in the tables above



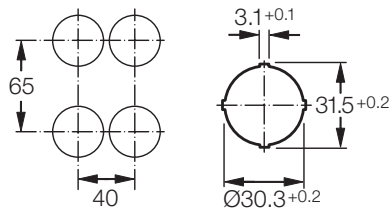
Dimension drawing



(Double-)pushbutton without protective cover

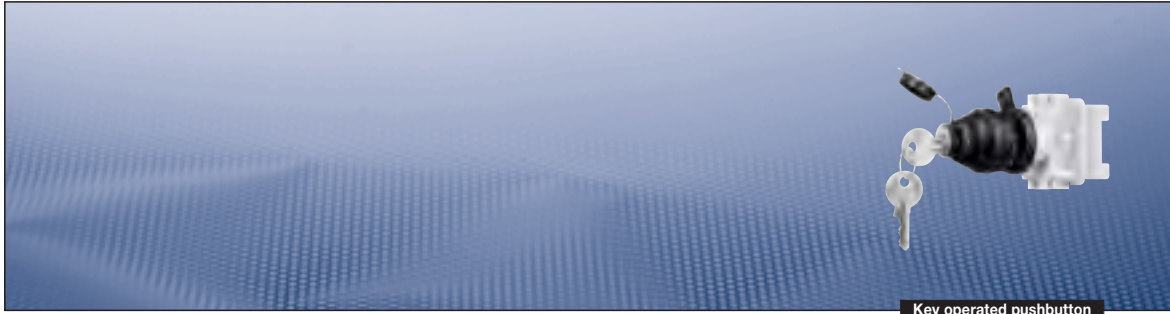


(Double-)pushbutton with protective cover



Minimum distances

Dimensions in mm



Key operated pushbutton

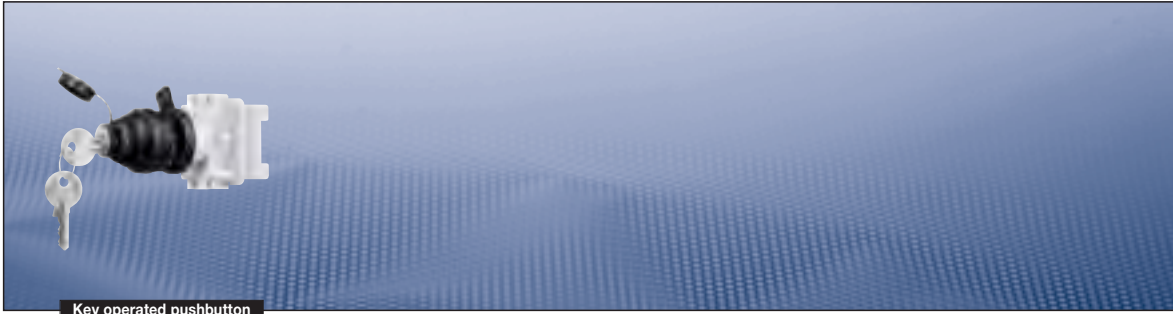
Technical data

Key operated pushbutton Type 418 812

Marking to 94/9/EC	Ex II 2 G Ex ed IIC T6 / Ex I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric silicone or viton on request
Latch point	CEAG 1 (others on request)

¹⁾ If protective covers are used

Ex-Control and signal units for panel mounting



Key operated pushbutton

Ordering code for Component (Code 2) Code A - B - C

A	B	C
GHG 418 812	—	R00 —

Code	Component	Code
A	Key operated pushbutton	GHG 41 812

Code	Contact system	Contacts	Code	
			silver contact points	gold contact points
B	2 NC		3	6
	2 NO		4	7
	1 NO + 1 NC		5	8

Code	Pushbutton not pressed	Key	pushbutton pressed	Key	Code
C	lockable	removable	lockable	removable	10
	lockable	removable	lockable	not removable	11
	lockable	removable	not lockable	not removable	12
	lockable	not removable	lockable	removable	13
	not lockable	not removable	lockable	removable	14
	not lockable	removable	auto lockable	removable	15

Example for ordering code (Code 2)

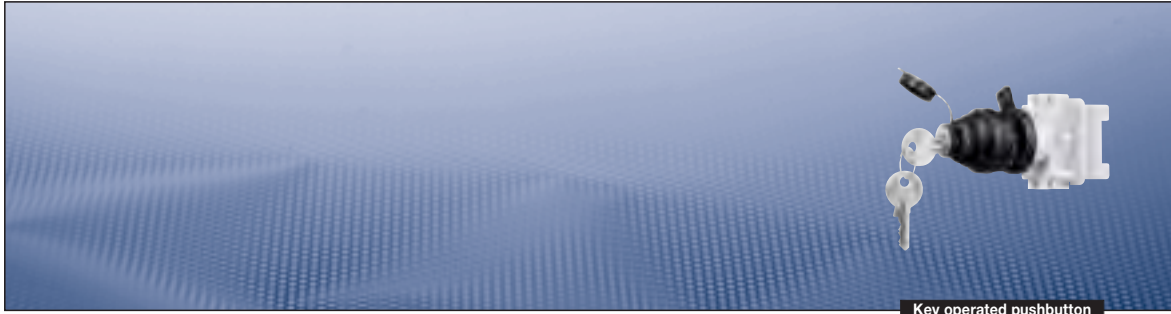
Version	Label		Ordering code		
	pushbutton not pressed	pushbutton pressed	A	B	C
Key switch with silver contact points, without protective cover					
1 NO + 1 NC	lockable	lockable	GHG 418 812	5 R00	10
	Key removable	Key removable			
2 NC	lockable	lockable	GHG 418 812	3 R00	11
	Key removable	Key removable			
2 NO	lockable	not lockable	GHG 418 812	4 R00	12
	Key removable	Key not removable			

Key switch with gold contact points, without protective cover					
1 NO + 1 NC	lockable	lockable	GHG 418 812	8 R00	10
	Key removable	Key removable			
2 NC	lockable	lockable	GHG 418 812	6 R00	11
	Key removable	Key removable			
2 NO	lockable	not lockable	GHG 418 812	7 R00	12
	Key removable	Key not removable			

Accessories

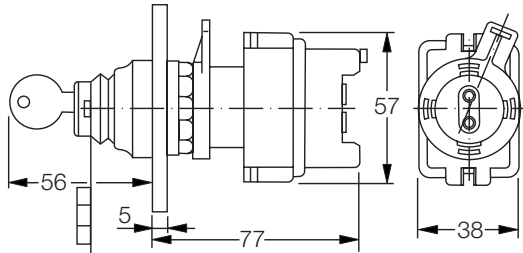
Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

Please note that we can only deliver in the ordering units (OU) stated in the tables above

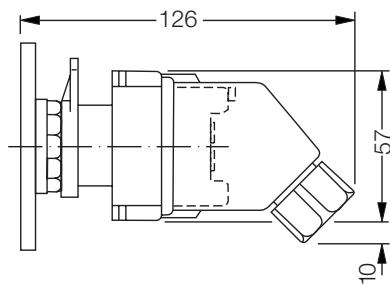


Key operated pushbutton

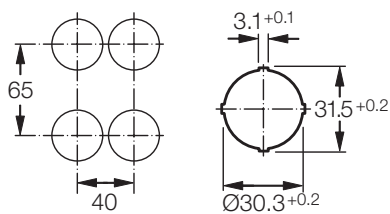
Dimension drawing



Key switch without protective cover

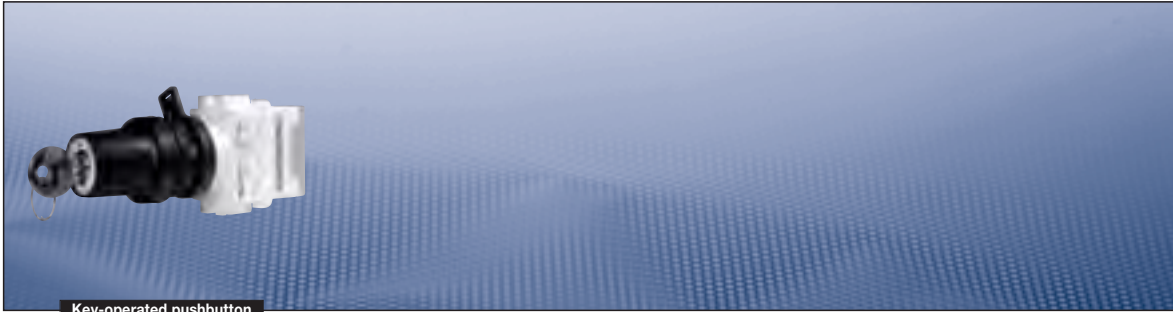


Key switch with protective cover



Minimum distances

Dimensions in mm



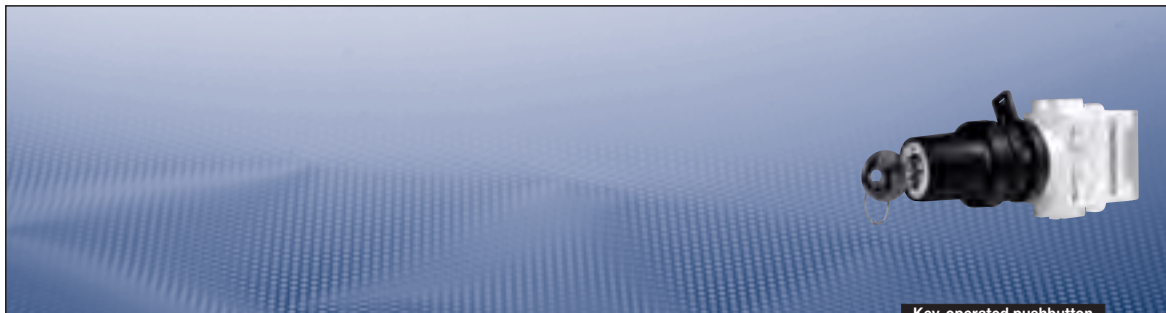
Key-operated pushbutton

Technical data

Key operated switch Type 418 8195

Marking to 94/9/EC	II 2 G Ex ed IIC T6 / I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Switching system	engaging - engaging - engaging
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Latch point	CEAG 1 (others on request)

¹⁾ If protective covers are used



Key-operated pushbutton

Ordering code for Component (Code 2) Code A - C - D

A	C	D
GHG 418 8195	R5	-

Code	Component	Code
A	Key switch	GHG 418 8195

Code	Contact system	Contacts	Code silver contact points	gold contact points
C	2 NC		4	7
	2 NO		5	8

Code	Inscription	Code
D	I 0 II	07
	Fern 0 Ort	08
	Hand 0 Auto	09

other labels on request

Example for ordering code (Code 2)

Switch mechanism	Contact system	Label	Order No.			
			A	C	D	
Key switch with silver contacts, without protective cover						
4		I 0 II	GHG 418 8195	R 5	4	07
4		FERN 0 ORT	GHG 418 8195	R 5	4	08
4		HAND 0 AUTO	GHG 418 8195	R 5	4	09
5		I 0 II	GHG 418 8195	R 5	5	07
5		FERN 0 ORT	GHG 418 8195	R 5	5	08
5		HAND 0 AUTO	GHG 418 8195	R 5	5	09

Switch can be locked in all positions and key can be removed in all positions

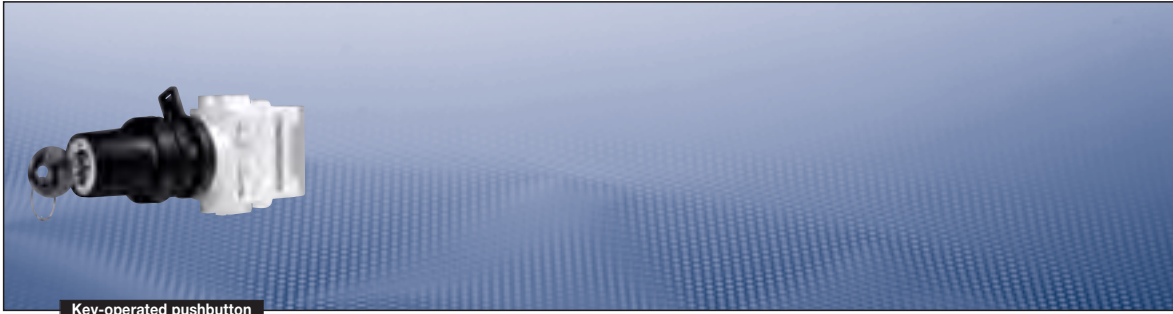
Key switch with gold contacts, without protective cover						
7		I 0 II	GHG 418 8195	R 5	7	07
7		FERN 0 ORT	GHG 418 8195	R 5	7	08
7		HAND 0 AUTO	GHG 418 8195	R 5	7	09
8		I 0 II	GHG 418 8195	R 5	8	07
8		FERN 0 ORT	GHG 418 8195	R 5	8	08
8		HAND 0 AUTO	GHG 418 8195	R 5	8	09

Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

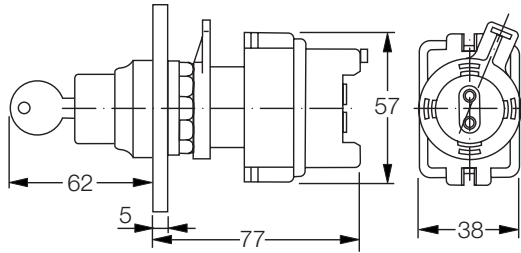
Please note that we can only deliver in the ordering units (OU) stated in the tables above

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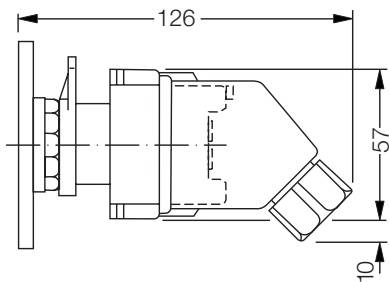


Key-operated pushbutton

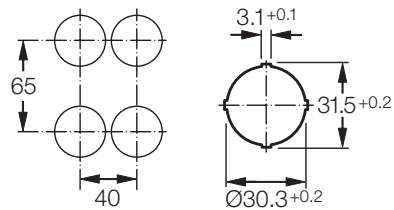
Dimension drawing



Key switch without protective cover

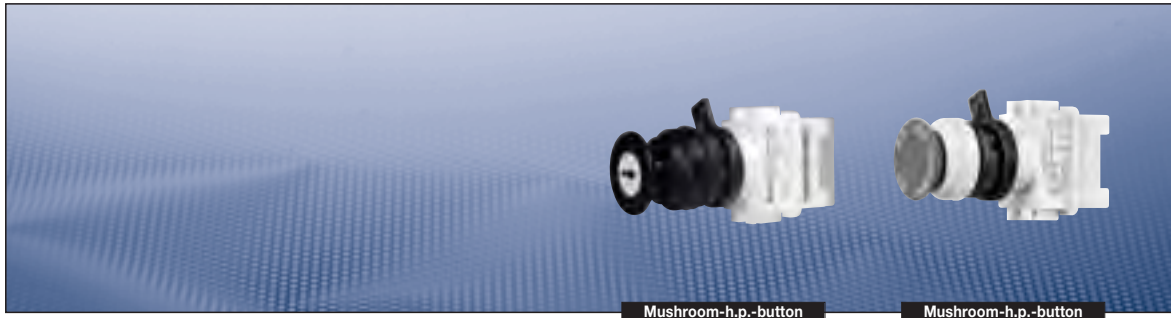


Key switch with protective cover



Minimum distances

Dimensions in mm



Mushroom-h.p.-button

Mushroom-h.p.-button

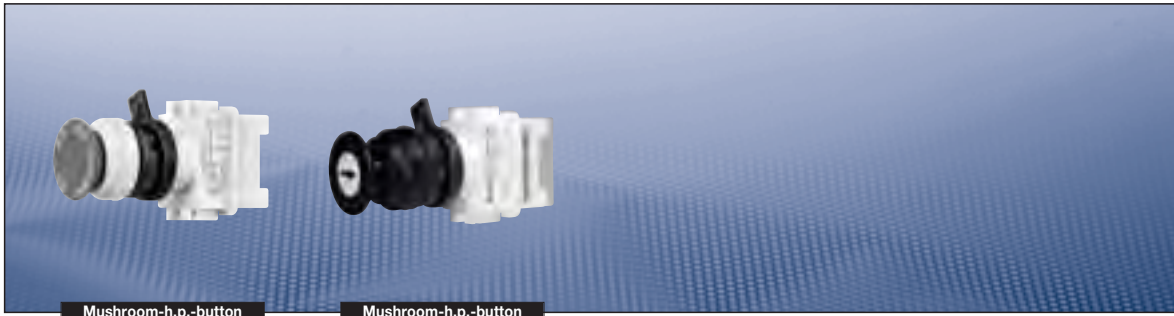
Technical data

Mushroom head pushbutton (Emergency stop and normal version)

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex ed I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Gasket material	Neoprene (Standard), fluoric silicone or viton on request

¹⁾ If protective covers are used

Ex-Control and signal units for panel mounting



Ordering code for Component (Code 2) Code A - B - C - D - E

A	B	C	D	E
GHG 418 815	- R	-	-	-

Code	Component	Code
A	Mushroom head pushbutton	GHG 418 815

Code	Contact system	Contacts hand released	key released	Code silver contact points	gold contact points
B	2 NC			3	6
	2 NO			4	7
	1 NO + 1 NC			5	8

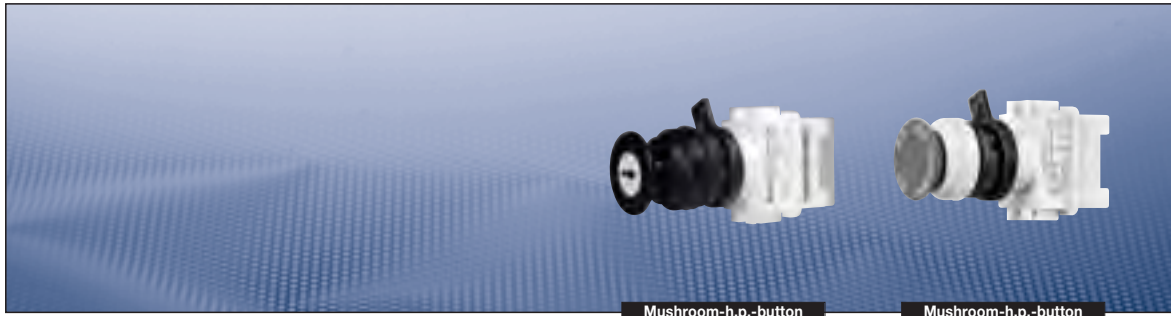
Code	Mushroom head inscription and color	Code
C	NOT-AUS EMERGENCY STOP (German - English) ¹⁾	1
	NOT-AUS ARRET D'URGENCE (German - French) ¹⁾	4
	Red	1
	Yellow ¹⁾	2
	Black ²⁾	3

Code	released	engaged	unlocking	Code
D	not lockable	not lockable	n/a (pushbutton function)	1 ²⁾
	not lockable	lockable	hand released	2 ¹⁾
	not lockable	lockable	key released	3 ¹⁾

Code	Inscription (contact label)	Code	Inscription (contact label)	Code
E	0, I, Start, Stop	01	0	02
	I	03	II	04
		05	STOP	06
	START	07	NOT-AUS ¹⁾	08

¹⁾ only Emergency stop mushroom head pushbutton

²⁾ only Mushroom head pushbutton normal version



Example for ordering code (Code 2)

Contact system	Mushroom head colour	Inscription	Order No.				
			A	B	C	D	E
EMERGENCY STOP mushroom-head pushbutton red, with silver contact points, without protective cover							
Version with inscription D/E, hand released							
2 NC	red	German/English	GHG 418 815	3	R 1	2	00
2 NC	red	German/French	GHG 418 815	3	R 4	2	00
2 NO	red	German/English	GHG 418 815	4	R 1	2	00
2 NO	red	German/French	GHG 418 815	4	R 4	2	00
1 NO + 1 NC	red	German/English	GHG 418 815	5	R 1	2	00
1 NO + 1 NC	red	German/French	GHG 418 815	5	R 4	2	00

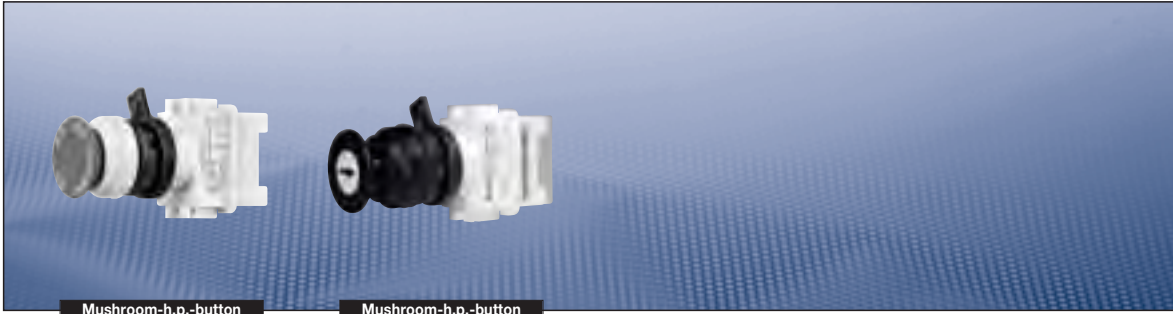
Version with inscription D/E, key released							
2 NC	red	German/English	GHG 418 815	3	R 1	3	00
2 NC	red	German/French	GHG 418 815	3	R 4	3	00
2 NO	red	German/English	GHG 418 815	4	R 1	3	00
2 NO	red	German/French	GHG 418 815	4	R 4	3	00
1 NO + 1 NC	red	German/English	GHG 418 815	5	R 1	3	00
1 NO + 1 NC	red	German/French	GHG 418 815	5	R 4	3	00

Mushroom-head pushbutton, with silver contact points, without protective cover							
Version with inscription D/E, pushbutton function only							
2 NC	black	0, I, START, STOP	GHG 418 815	3	R 3	1	01
2 NC	yellow	0, I, START, STOP	GHG 418 815	3	R 2	1	01
2 NO	black	0, I, START, STOP	GHG 418 815	4	R 3	1	01
2 NO	yellow	0, I, START, STOP	GHG 418 815	4	R 2	1	01
1 NO + 1 NC	black	0, I, START, STOP	GHG 418 815	5	R 3	1	01
1 NO + 1 NC	yellow	0, I, START, STOP	GHG 418 815	5	R 2	1	01

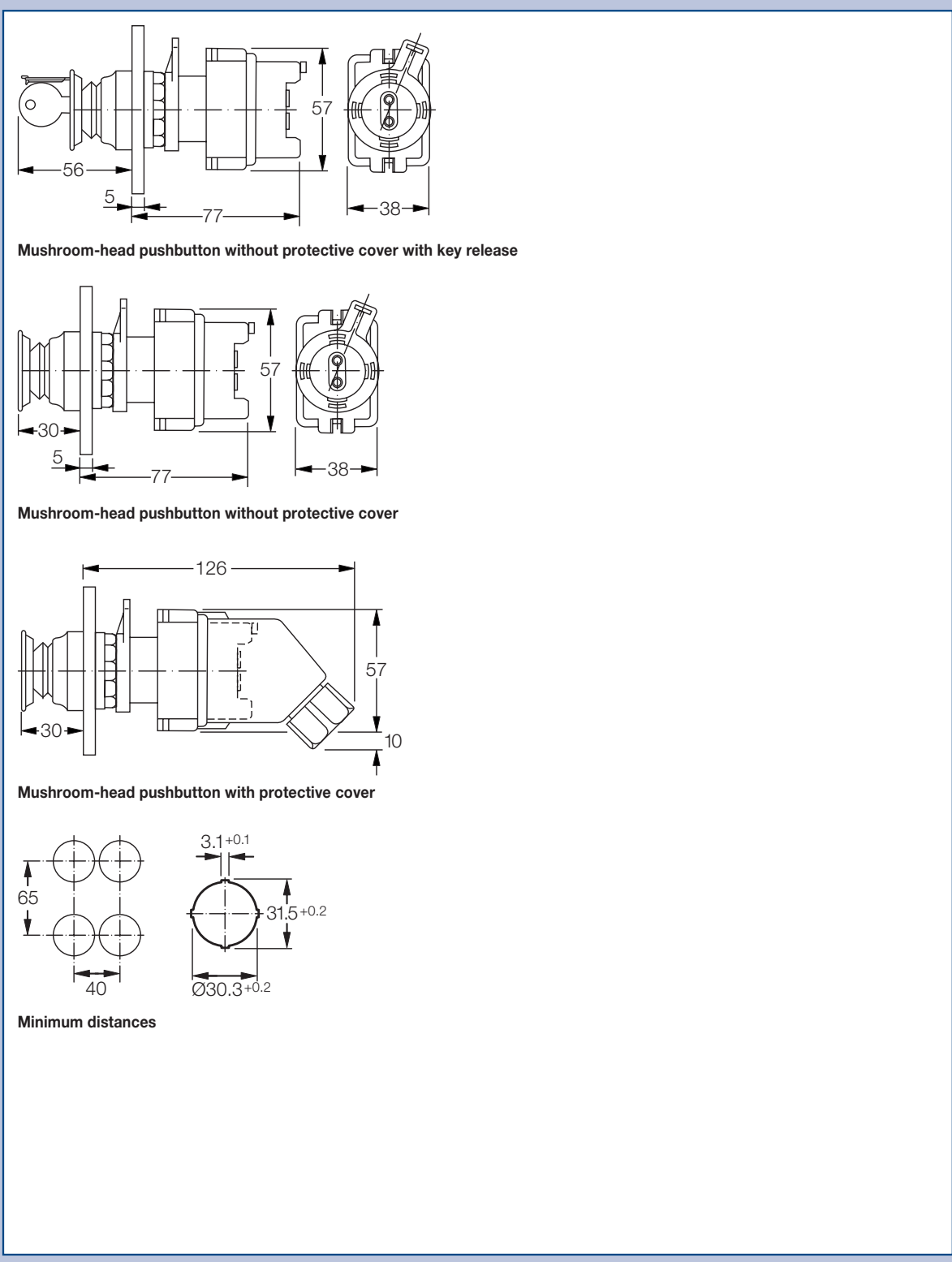
Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

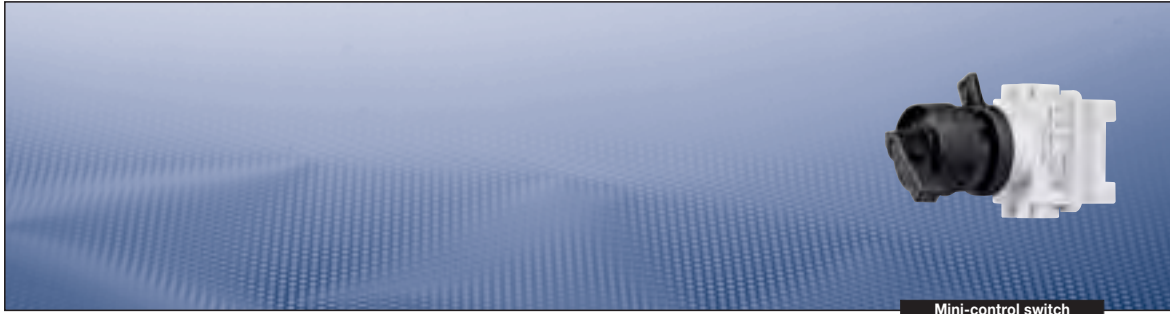
Please note that we can only deliver in the ordering units (OU) stated in the tables above



Dimension drawing



Dimensions in mm



Mini-control switch

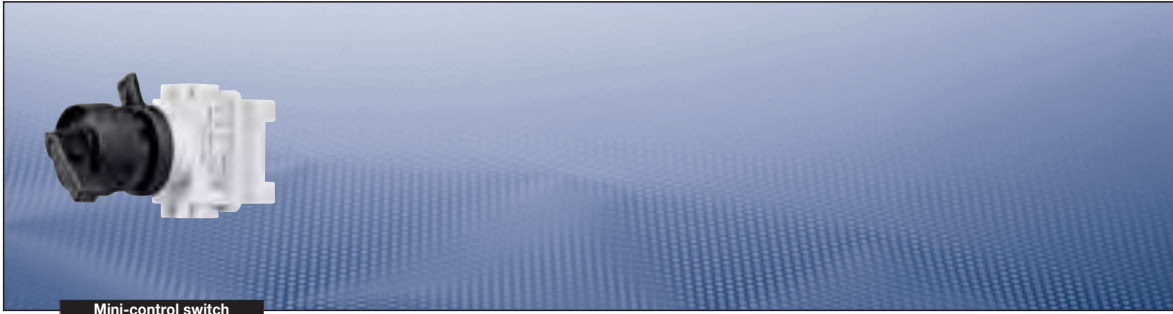
Technical data

Mini-Control switch Type 418 8190

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 220 V / I _e 1 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey

¹⁾ If protective covers are used

| Ex-Control and signal units for panel mounting |



Mini-control switch

Ordering code for Component (Code 2) Code A - B - C - D - E

A	B	C	D	E
GHG 418 819	-	R	-	-

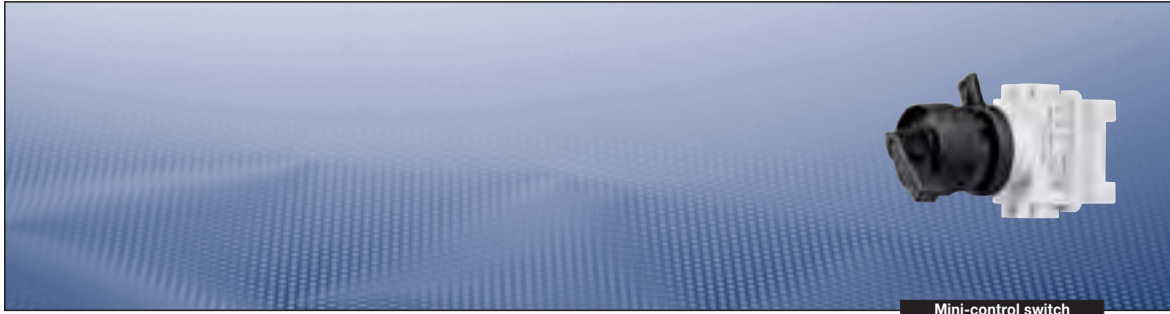
Code	Component	Code
A	Mini-Control Switch	GHG 418 819

Code	Contact material	Code
B	silver	0
	gold	1

Code	Switch mechanism	Code
C	spring - engaging - engaging	4
	engaging - engaging - engaging	5
	engaging - engaging	6
	spring - engaging - engaging	7
	engaging - engaging - spring	8

Code	Contact system	Contacts	Code
D			0
			1
			2
			3
			5
			7

Code	Inscription (Contact label)	Code	Inscription (Contact label)	Code	
E	0	I	01	HAND 0 AUTO	15
	I	II	02	AUF AUS ZU	16
	STOP	START	03	HAND AUS AUTO	17
	HAND	AUTO	04	0 I II	18
	SENKEN	HEBEN	05	AUS AUTO EIN	19
	REMOTE	LOCAL	06	AUS HAND AUTO	20
	I	0 II	07	ÖRTLICH AUS FERN	21
	AUS BETRIEB	EIN	08	START NORMAL STOP	22
	AUS	0 EIN	09	OFF 0 ON	23
	AUF	0 AB	10	HAND OFF AUTO	24
	STOP	0 START	14	0 IN START	25



Mini-control switch

Example for ordering code (Code 2)

Switching mechanism	Code	Contact system	Code	Label schild	Order No.				
					A	B	C	D	E
Control switch with silver contact points, without protective cover Switch can be locked in all positions									
	6		0	I II	GHG 418 819	0 R 6	0	02	
	6		2	0 I	GHG 418 819	0 R 6	2	01	
	6		1	I II	GHG 418 819	0 R 6	1	02	
	5		3	I 0 II	GHG 418 819	0 R 5	3	07	
	5		5	I 0 II	GHG 418 819	0 R 5	5	07	
	8		7	0 I	GHG 418 819	0 R 8	7	01	

Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing

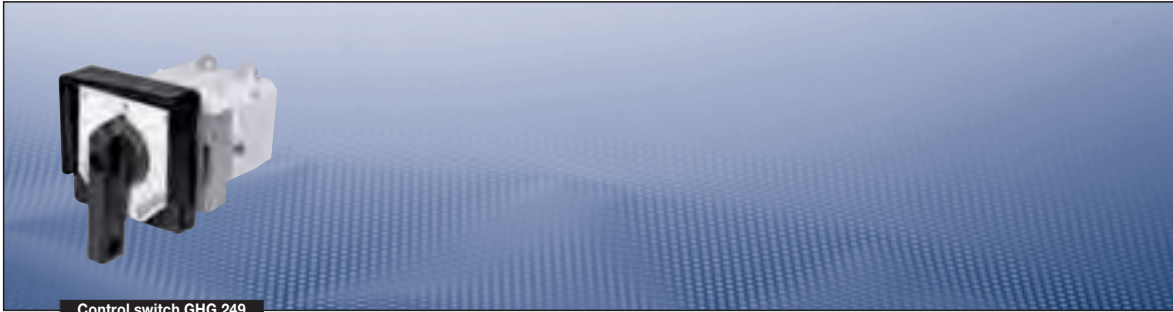
Mini-control switch without protective cover

Mini-control switch with protective cover

Minimum distances

Dimensions in mm

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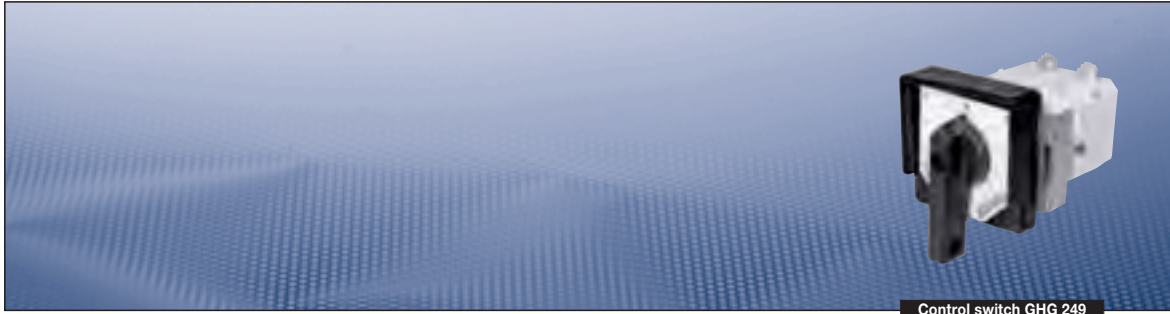
Control switch GHG 249

Technical data

Control switch GHG 249

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 98 ATEX 1117 U ¹⁾
Permissible ambient temperature	-20 °C to +40 °C
	-55 °C to +45 °C (option)
Rated voltage	up to 690 V AC
Rated current	up to 20 A
Rated current gold contacts	up to 0.4 A
Rated marking- / rated breaking capacity accd. to EN 60947-5-1	AC-3: U _e 230 V / I _e 8 A
	U _e 400 V / I _e 6 A
	AC-11: U _e 24 V / I _e 6 A U _e 230 V / I _e 0.4 A
Connecting terminals	2 x 2.5 mm ² multi wire, 6 mm ² single wire
Weight	0.55 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey

¹⁾ Must be installed in a certified enclosure



Control switch GHG 249

Ordering code for Component (Code 2) Code A - B - C - D

A	B	C	D ¹⁾
249	-	-	-

Code	Component	Code
A	Control switch GHG 249	249

Code	Switch mechanism	Code
B	spring - engaging - spring	4
	engaging - engaging - engaging	5
	engaging - engaging	6
	spring - engaging - engaging	7
	engaging - engaging - spring	8

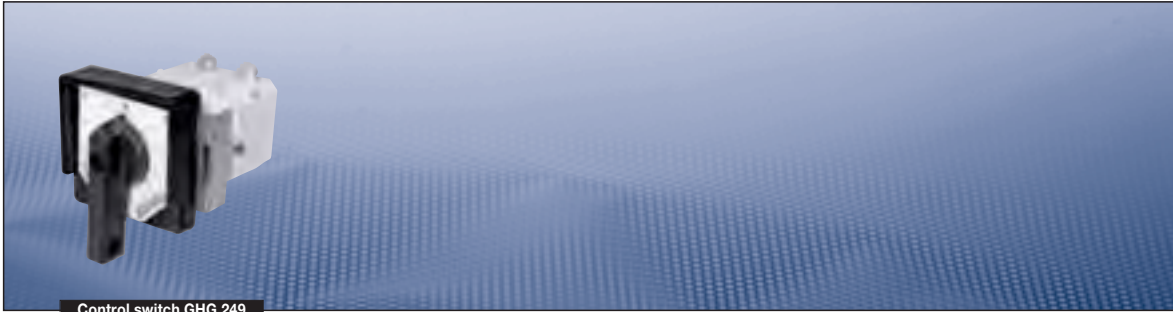
Code	Contacts	Code
C		019
		033
		024
		021
		049
		037
		039
		038

Code	Inscription (Contact label)	Code	Inscription (Contact label)	Code
D	0 I	01	0 I II	18
	I II	02	AUS AUTO EIN	19
	STOP START	03	AUS HAND AUTO	20
	HAND AUTO	04	ÖRTLICH AUS FERN	21
	SENKEN HEBEN	05	START NORMAL STOP	22
	REMOTE LOCAL	06	OFF 0 ON	23
	I 0 II	07	HAND OFF AUTO	24
	AUS BETRIEB EIN	08	0 IN START	25
	AUS 0 EIN	09	MAN AUTO	26
	AUF 0 AB	10	START STOP	27
	Enriegelt 0 Verriegelt	11	HEBEN SENKEN	28
	OUT OF HAND	12	OFF ON	29
	LOCAL REMOTE AUTO	13	AUS EIN	30
	STOP 0 START	14	HAND AUTO	31
	HAND 0 AUTO	15	ON OFF	32
	AUF AUS ZU	16	II III	33

¹⁾ The code will represent only a selected part of configuration.







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Ex-Control and signal units for panel mounting

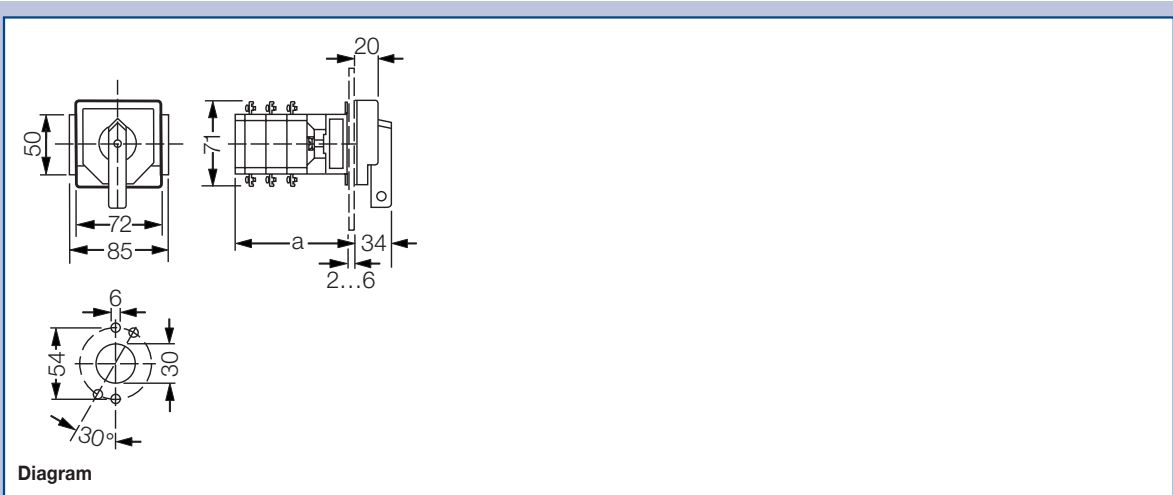


Control switch GHG 249

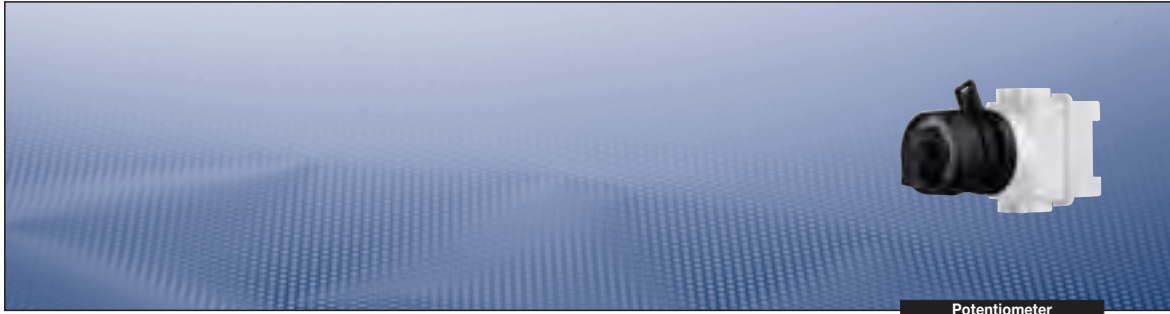
Example for ordering code (Code 2)

Version	Switching mechanism	Code	Contact	Code	Label	Code	Order Code
A	B		C		D		
GHG 249		6		019	0 - I	01	GHG 249 6 01901
GHG 249		6		037	STOP - 0 - START	14	GHG 249 6 03714
GHG 249		6		033	I - II	02	GHG 249 6 03302

Dimension drawing



Dimensions in mm



Potentiometer

Technical data

Potentiometer Type 418 8131

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	up to 250 V AC
Power consumption	max. 1 W
Resistance range	100 - 10000 Ω
Tolerance	± 20 %
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Angle of rotation	270°
Scale	0 - 100 %

¹⁾ If protective covers are used

Ex-Control and signal units for panel mounting



Potentiometer

Ordering code for Component (Code 2) Code A - B

A	B
GHG 418 8131 R00	—

Code	Component	Code
A	Potentiometer	GHG 418 8131

Code	Resistance	Code
B	0 - 100 Ohm	11
	0 - 220 Ohm	12
	0 - 470 Ohm	13
	0 - 1000 Ohm	14
	0 - 2200 Ohm	17
	0 - 4700 Ohm	15
	0 - 10000 Ohm	16

Example for ordering code (Code 2)

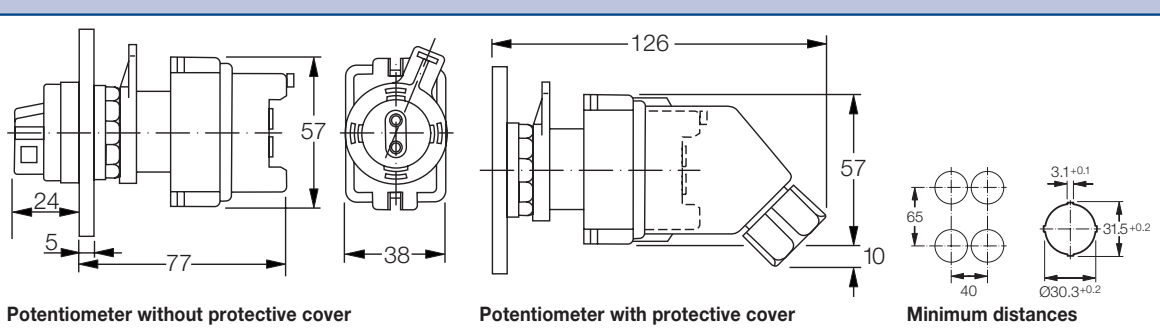
Version	Order No.	
	A	B
Potentiometer 1 W 25 % tolerance, without protective cover		
0 - 100 Ohm	GHG 418 8131	R 0011
0 - 220 Ohm	GHG 418 8131	R 0012
0 - 470 Ohm	GHG 418 8131	R 0013
0 - 1000 Ohm	GHG 418 8131	R 0014
0 - 2200 Ohm	GHG 418 8131	R 0017
0 - 4700 Ohm	GHG 418 8131	R 0015
0 - 10000 Ohm	GHG 418 8131	R 0016

Accessories

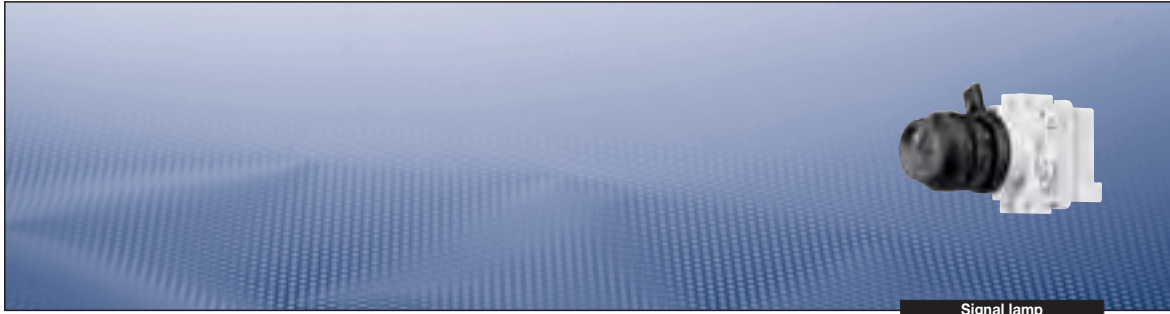
Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Dimensions in mm



Signal lamp

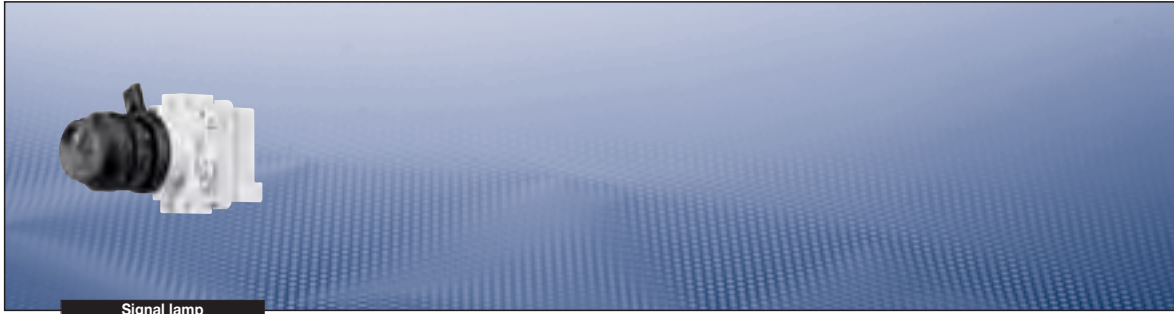
Technical data

Signal lamp Type 418 8170

Marking to 94/9/EC		⊕ II 2 G Ex ed IIC / ⊕ II 2 G Ex d ia IIC
EC-Type Examination Certificate		PTB 98 ATEX 1040 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature		-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	(Ex ed IIC) (LED)	20 V to 250 V AC/DC
	(Ex d ia IIC)	10 V to 28 V DC
	(Ex ed IIC)	12 V to 30 V AC/DC
Rated current	(20 V to 250 V) (LED)	approx. 4 - 15 mA
	(10 V to 28 V Ex d ia IIC)	max. 25 mA
	(12 V to 30 V) DC	max. 24 mA
Connecting terminals		2 x 2.5 mm ²
Degree of protection accd. EN 60529		IP66 ¹⁾
Dimensions (L x W x H)		approx. 59 x 31 x 45 mm
Weight		0.15 kg
Type of mounting		Ø 30.5 mm fixing hole
Enclosure colour		grey

¹⁾ If protective covers are used

Ex-Control and signal units for panel mounting



Signal lamp

Ordering code for Component (Code 2) Code A - B

A	B
GHG 418 8170 R00	—

Code	Component	Code
A	Signal lamp	GHG 418 8170

Code	Resistance	Code
B	20 V - 250 V AC/DC	51
	18 V - 30 V DC (Ex-i ¹)	52
	12 V - 30 V AC/DC	53

Example for ordering code (Code 2)

Version	Order Code	
	A	B
Version without protective cover with lens cover yellow, red, green and white		
Universal voltage 20V - 250 V AC/DC	GHG 418 81 70	R0051
For intrinsically safe circuits (18 V up to 30 V DC ¹)	GHG 418 81 70	R0052
Low voltage 12 V up to 24 V AC/DC	GHG 418 81 70	R0053

¹) Supply by valve-driver components, e.g., with data:

$U_o = 20\text{ V} - 28\text{ V DC}$ with $R_i = 200\ \Omega - 500\ \Omega$ or $U_o = 10\text{ V} - 18\text{ V DC}$ with $R_i = 100\ \Omega - 200\ \Omega$

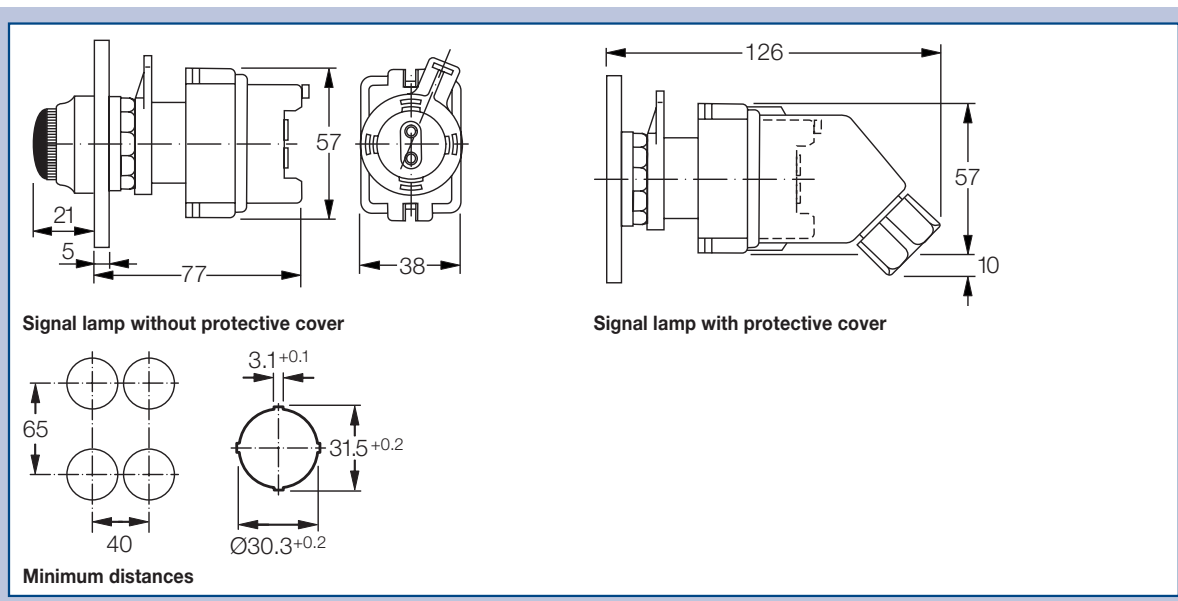
No effective C_i and L_i values.

Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	GHG 410 1939 R0002

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Dimensions in mm

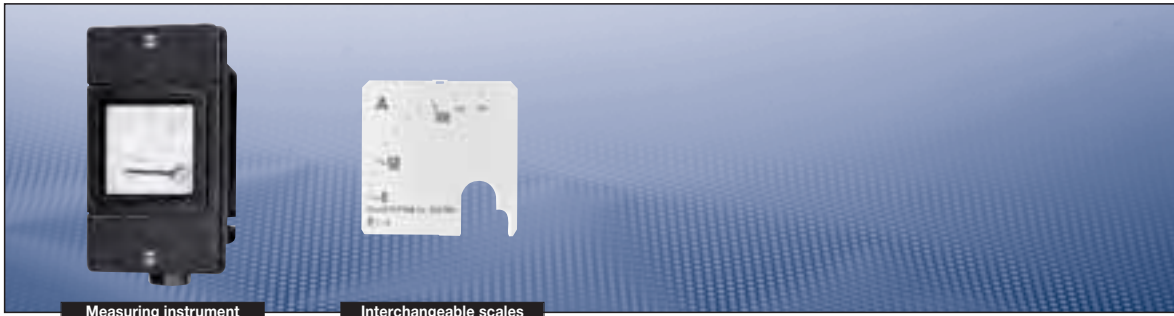


Technical data

Type 412 82 with measuring instrument AM 72

	Moving iron	Moving coil
Marking to 94/9/EC	Ex II 2 G Ex e II / Ex II 2 G Ex e mb II Ex I M 2 Ex e I	Ex II 2 G Ex ib IIC Ex I M 2 Ex ib I
EC-Type Examination Certificate	PTB 00 ATEX 3117	
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	up to 690 V	
Power consumption	max. 0.31 VA	
Overload range	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	10-fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 24 mA
Winding specification of moving coil		26.5 windings
Internal resistance		2.5 Ω \pm 30 %
Inductance Li		< 0.1 mH
Capacitance Ci		< 0.1 nF
Open circuit voltage Ui		\leq 30 V
Short circuit current Ii		\leq 150 mA
Accuracy	Class 2.5	Class 1.5
Connecting terminals	2 x 1.5 - 4 mm ²	
Degree of protection accd. EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x M25 (\varnothing 8 - 17 mm)	
Dimensions (L x W x H)	160 x 95 x 62 mm	
Display size AM 72	72 x 72 mm	
Weight	0.8 kg	
Type of mounting	DIN rail mounting	
Enclosure colour	grey	

| Ex-Control and signal units |



Ordering code for Component (Code 2) Code A - B - C

A	B	C
GHG 412 828	_	R0

Code	Component	Code A
A	Measuring instrument AM 72	GHG 412 828

Code	Movement	Code B
B	Direct connection	1
	Ct connection 1 /A	2
	Port 0 - 20/24 mA (scale 0-100% / 120%) ¹⁾	5
	Port 4 - 20/24 mA (scale 0-100% / 120%) ¹⁾	6
	Moving-coil connection 0 - 20/24 mA (scale 0-100% / 120%) ^{1) 3)}	7
	Moving-coil connection 4 - 20/24 mA (scale 0-100% / 120%) ^{1) 3)}	8

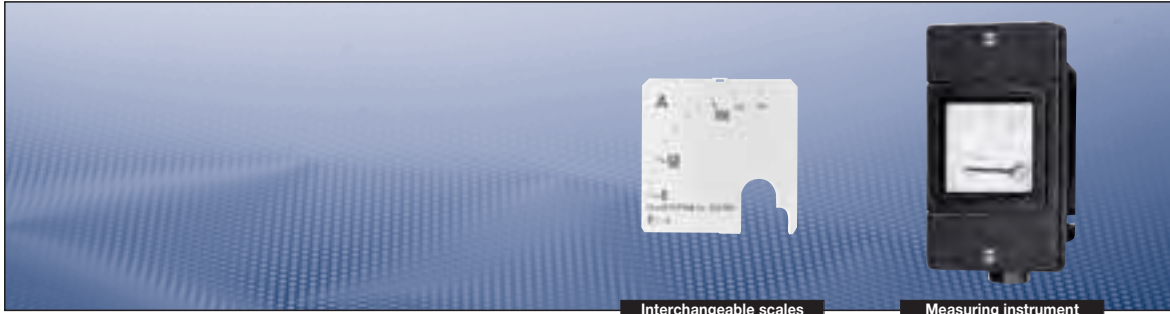
Code	Measuring range/scale	Code C	Measuring range/scale	Code C
C	0 - 1	002	0 - 75 / 112.5 A	013
	0 - 2.5 / 3.75 A ²⁾	003	0 - 100 / 150 A	014
	0 - 5 / 7.5 A ²⁾	004	0 - 150 / 225 A	015
	0 - 10 / 15 A ²⁾	005	0 - 200 / 300 A	016
	0 - 15 / 22.5 A	006	0 - 250 / 375 A	017
	0 - 20 / 30 A ²⁾	008	0 - 300 / 450 A	018
	0 - 30 / 45 A	009	0 - 400 / 600 A	019
	0 - 40 / 60 A	010	0 - 500 / 750 A	020
	0 - 50 / 75 A	011	0 - 600 / 900 A	021
	0 - 60 / 90 A	012	0 - 100% / 150%	033

¹⁾ Movements 0 - 20 mA/ 4 - 20 mA and with moving-coil connection are only available with scale 0 - 100%/ 120%.

²⁾ Version for direct connection (standard: CT connection n/1A) possible.

³⁾ Moving coil only for Ex-i of Ex-d flameproof applications

Other interchangeable scales available on request.



Interchangeable scales

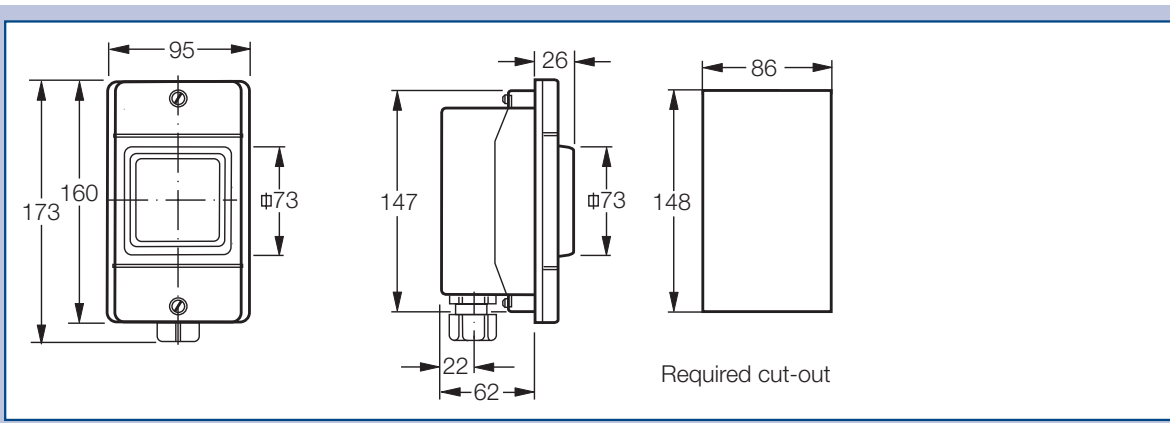
Measuring instrument

Example for ordering code (Code 2)

Measuring range	Movement	Ordering code
Measuring instrument AM 72, direct measurement Version with 1 x cable entry M25		
0 - 1 / 1.5 A	Moving iron	GHG 412 8281 R0002
0 - 2.5 / 3.75 A	Moving iron	GHG 412 8281 R0003
0 - 5 / 7.5 A	Moving iron	GHG 412 8281 R0004
0 - 10 / 15 A	Moving iron	GHG 412 8281 R0005
0 - 16 / 24 A	Moving iron	GHG 412 8281 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri = 320 Ω)	Moving coil	GHG 412 8285 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri = 320 Ω)	Moving coil	GHG 412 8286 R0035

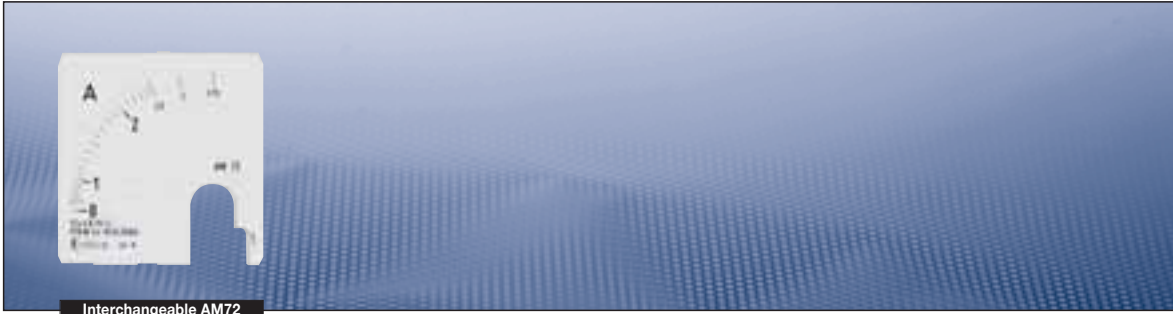
Measuring instrument AM 72, Ct connection n/1A Version with 1 x cable entry M25		
0 - 1 / 1.5 A	Moving iron	GHG 412 8282 R0002
0 - 2.5 / 3.75 A	Moving iron	GHG 412 8282 R0003
0 - 5 / 7.5 A	Moving iron	GHG 412 8282 R0004
0 - 10 / 15 A	Moving iron	GHG 412 8282 R0005
0 - 15 / 22.5 A	Moving iron	GHG 412 8282 R0006
0 - 20 / 30 A	Moving iron	GHG 412 8282 R0008
0 - 30 / 45 A	Moving iron	GHG 412 8282 R0009
0 - 40 / 60 A	Moving iron	GHG 412 8282 R0010
0 - 50 / 75 A	Moving iron	GHG 412 8282 R0011
0 - 60 / 90 A	Moving iron	GHG 412 8282 R0012
0 - 75 / 112.5 A	Moving iron	GHG 412 8282 R0013
0 - 100 / 150 A	Moving iron	GHG 412 8282 R0014
0 - 150 / 225 A	Moving iron	GHG 412 8282 R0015
0 - 200 / 300 A	Moving iron	GHG 412 8282 R0016
0 - 250 / 375 A	Moving iron	GHG 412 8282 R0017
0 - 300 / 450 A	Moving iron	GHG 412 8282 R0018
0 - 400 / 600 A	Moving iron	GHG 412 8282 R0019
0 - 500 / 750 A	Moving iron	GHG 412 8282 R0020
0 - 600 / 900 A	Moving iron	GHG 412 8282 R0021
0 - 100% / 150%	Moving iron	GHG 412 8282 R0031

Dimension drawing



Dimensions in mm

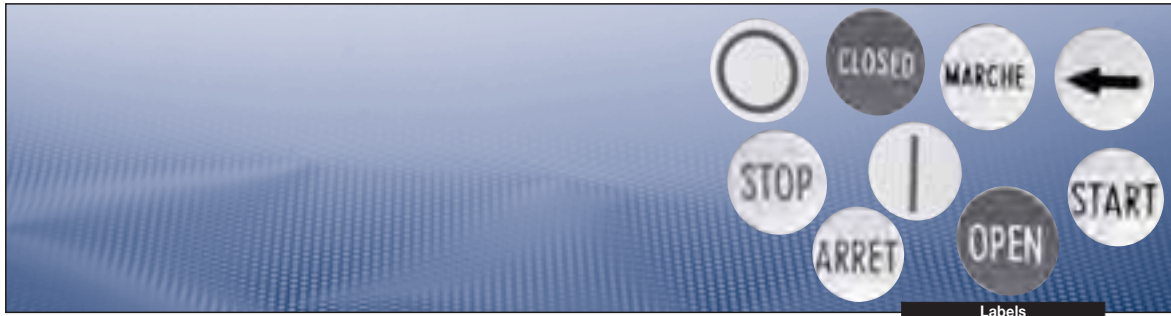
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Ordering details

Interchangeable scales for measuring instrument , CT connection n/1A for AM 45/AM 72			
Scale	Order unit	Order No. AM45	Order No. AM72
0 - 1 / 1.5 A	10 pieces	GHG 410 1926 R0001	GHG 410 1928 R0001
0 - 2.5 / 3.75 A	10 pieces	GHG 410 1926 R0002	GHG 410 1928 R0002
0 - 5 / 7.5 A	10 pieces	GHG 410 1926 R0003	GHG 410 1928 R0003
0 - 10 / 15 A	10 pieces	GHG 410 1926 R0004	GHG 410 1928 R0004
0 - 15 / 22.5 A	10 pieces	GHG 410 1926 R0005	GHG 410 1928 R0005
0 - 20 / 30 A	10 pieces	GHG 410 1926 R0006	GHG 410 1928 R0006
0 - 25 / 37.5 A	10 pieces	GHG 410 1926 R0021	GHG 410 1928 R0021
0 - 30 / 45 A	10 pieces	GHG 410 1926 R0007	GHG 410 1928 R0007
0 - 40 / 60 A	10 pieces	GHG 410 1926 R0008	GHG 410 1928 R0008
0 - 50 / 75 A	10 pieces	GHG 410 1926 R0009	GHG 410 1928 R0009
0 - 60 / 90 A	10 pieces	GHG 410 1926 R0010	GHG 410 1928 R0010
0 - 75 / 112.5 A	10 pieces	GHG 410 1926 R0011	GHG 410 1928 R0011
0 - 100 / 150 A	10 pieces	GHG 410 1926 R0012	GHG 410 1928 R0012
0 - 150 / 225 A	10 pieces	GHG 410 1926 R0013	GHG 410 1928 R0013
0 - 200 / 300 A	10 pieces	GHG 410 1926 R0014	GHG 410 1928 R0014
0 - 250 / 375 A	10 pieces	GHG 410 1926 R0015	GHG 410 1928 R0015
0 - 300 / 450 A	10 pieces	GHG 410 1926 R0016	GHG 410 1928 R0016
0 - 400 / 600 A	10 pieces	GHG 410 1926 R0017	GHG 410 1928 R0017
0 - 500 / 750 A	10 pieces	GHG 410 1926 R0018	GHG 410 1928 R0018
0 - 600 / 900 A	10 pieces	GHG 410 1926 R0019	GHG 410 1928 R0019
0 - 100% / 150%	10 pieces	GHG 410 1926 R0020	GHG 410 1928 R0051

Special scales available on request.



Labels

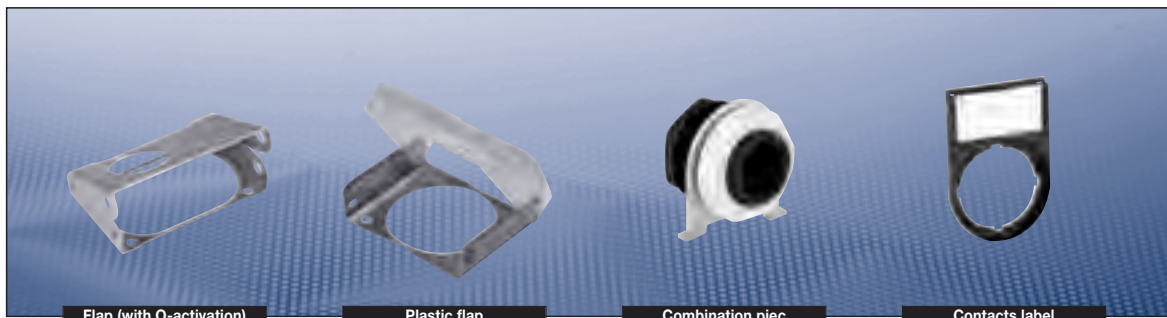
Ordering code

Labels for pushbuttons

Inscription	Code	Inscription	Code
0, I, Start, Stop	001	0	002
I	003	II	004
D	005	STOP	006
START	007	NOT-AUS	008
LANGSAM	009	SCHNELL	010
EMERG.STOP	011	➤	012
ARRET	014	MARCHE	015
AUF	016	AB	017
Neutral white	018	Neutral green	019
0, I, Arret, Marche	020	UP	024
DOWN	025	ZU	026
ON	027	OFF	028
+	030	-	031
Neutral red	033	Neutral yellow	034
EIN	036	AUS	037
AUTO	039	HAND	050
SENKEN	051	HEBEN	052
LINKS	053	RECHTS	054
FAST	055	SLOW	056
RESET	057	OPEN	058
HALT	069	III	070
VOR	073	ZURÜCK	074
FIRE ALARM	094	FORWARD	095
REVERSE	096	RUN	100
HIGH	101	LOW	102
LP	151	HQ	152
LQ	157	STÖR. QUITT	162
SPERREN	163	ENTSPERREN	164
ENTRIEGELN	165	VERRIEGELN	166

Further labels are available on request.

Accessories



Flap (with O-activation)

Plastic flap

Combination piec

Contacts label

Ordering code

Locking facilities

Version	Operating element	OU	Order No.
with flap (blank)	Mushroom-head pushbutton	1	GHG 410 1901 R0124
with flap (red)	Mushroom-head pushbutton	1	GHG 410 1901 R0125
with bolt and chain (blank)	Mushroom-head pushbutton	1	GHG 410 1901 R0126
Fire alarm (red)* with hammer	Mushroom-head pushbutton	1	GHG 410 1901 R0128
Fire alarm (red) with hammer	Mushroom-head pushbutton	1	GHG 410 1901 R0141
with plastic flap	Mushroom-head pushbutton activated		GHG 410 1994 R0001
with plastic flap	Mushroom-head pushbutton non-activated		GHG 410 1994 R0002
with plastic flap	Pushbutton activated		GHG 410 1994 R0003
with plastic flap	Pushbutton non-activated		GHG 410 1994 R0004
with plastic flap	Emergency Stop		GHG 410 1994 R0005
with flap (blank)	Pushbutton	1	GHG 410 1901 R0132
with flap (red)	Pushbutton	1	GHG 410 1901 R0133
with flap without „0“-activation (blank)	Double pushbutton	1	GHG 410 1901 R0134
with flap with „0“-activation (blank)	Double pushbutton	1	GHG 410 1901 R0135
with bracket (1 Set)	Switch GHG 23/28	5	GHG 440 1917 R0001

* released when window is broken – select appropriate activation element.

Please note that we can only deliver in the ordering units (OU) stated in the tables above.

Labels and tools for control switches

Content	Type	OU	Order No.
Label with label holder	Blank (can be engraved)	10	GHG 410 1953 R0001
Combination piece for Control station Typ 411	incl. twist protection and seal	1	GHG 410 1921 R0001
Mounting and dismantling tool for lock nuts on operating elements	Spanner	1	GHG 410 1914 R0001
Blanking element for control units	incl. seal and lock nut	10	GHG 410 1920 R0001
Protective cap	for panel-mounted operating elements	5	GHG 410 1939 R0002

Please note that we can only deliver in the ordering units (OU) stated in the tables above.

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EX - CONTROL SWITCHES

With and without Measuring instruments

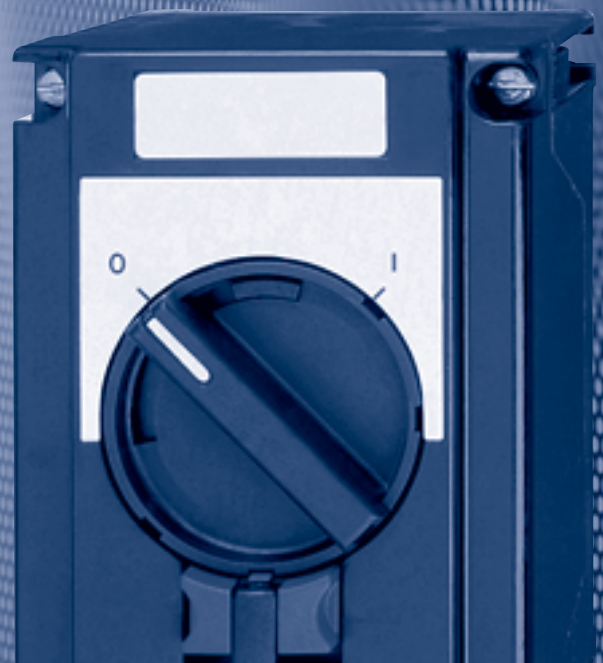
The GHG 29 control switch series features an easy-to-install and easy-to-connect design. This control switch can be implemented with up to 6 contacts and for 2 to 5 switch positions. Thus, practically all applications in modern control engineering can be covered. Contacts are protected against contact to VBG 4 and have a terminal cross section of up to 6 mm² for the connection of single and multi-wire conductors. The rated current of the control switch at 500 V is 16 A. The external contours of the enclosure facilitate access to the connection terminals and thus allow easy installation. Further installation advantages result from the snap-on/snap-off switch contact block and measuring instrument.

A labyrinth seal in the cover guarantees the degree of protection IP66. The impact-resistant, glass-fibre-reinforced polyester enclosure material is a prerequisite for withstanding even the most rugged industrial operating conditions. The switch can be padlocked using the integrated locking facility.

The locking position is indicated by a red pin. An interchangeable apparatus label and a neutral switch-position label are supplied with each switch.

With CEAG installation system, control switches can be installed with high cost-efficiency.

The control switches are also available on request with snap-on metal or moulded-plastic flanges.



- Decisive cost saving with the CEAG mounting system
- Easily accessible connection terminals
- Degree of protection IP66
- Cable connection range up to 6 mm²
- Integrated locking facility
- Optional forced contact on request



GHG 293

GHG 292

Technical data

Ex-Control switch Type 292 without and Type 293 with measuring instrument		
	with GHG 29 switch	with GHG 28 switch
Marking to 94/9/EC	Ex II 2 G Ex ed ia IIC T5/T6 Ex II 2 D Ex tD A21 IP66 T80 °C	Ex II 2 G Ex ed ia IIC T5/T6 Ex II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1163	PTB 99 ATEX 1163
IECEX Certificate of Conformity	IECEX BKI 07.0011	IECEX BKI 07.0011
Marking accord. to IECEx	Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C	Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +47 °C (T6) ... +55 °C (T5) option	
Rated voltage	max. 500 V	max. 690 V
Rated current	16 A	20 A
Rated current gold contacts	0.4 A	
Overload range (Type 293 only)	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	
Measuring range (Type 293 only)	max. 0 - 25 A direct / n / 1A	
Accuracy (Type 293 only)	Class 2.5	
Circuit (Type 293 only)	moving iron	
Rated marking- / rated breaking capacity accd. to EN 60947-5-1	AC-15: U_e 230 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.3 A	AC-15: U_e 230 V / I_e 8 A U_e 400 V / I_e 6 A DC-13: U_e 24 V / I_e 6 A U_e 230 V / I_e 0.4 A
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²	
Degree of protection accd. EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x M25 (Ø 8 - 17 mm) ¹⁾	
Dimensions (L x W x H)	170 x 110 x 129 mm	225 x 110 x 129 mm
Weight	approx. 1.10 kg (1 level) approx. 1.25 kg (2 level) approx. 1.40 kg (3 level)	approx. 1.90 kg (1 level) approx. 2.05 kg (2 level) approx. 2.20 kg (3 level)
Enclosure material	glass-fibre-reinforced polyester	
Enclosure colour	black	

¹⁾ Brass flange for metal entries available on request (except for II D at date of publication).

Ex-Control switches



Ordering code for Control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

A	B1	B2	C	D	E	E2	F 1)
GHG 29_	_	_	_	_	_	_	_

Code	Component	Code
A	Control switch	GHG 292
	Control switch with measuring instrument	GHG 293

Code	Switch mechanism	Code
B1	spring - engaging - spring	4
	engaging - engaging - engaging	5
	engaging - engaging	6
	spring - engaging - engaging	7
	engaging - engaging - spring	8

Code	Contact	Silver contact points	Code	Silver contact points
B2		060		034
		062		037
		065		049
		061		023
		063		019
		067		033
		011		024

Other versions as well as gold contact points are available on request.

Code	Inscription (Contact label)	Code	Inscription (Contact label)	Code
C	0	I	001	0
	I	II	002	I
	STOP	START	003	II
	HAND	AUTO	004	AUS
	SENKEN	HEBEN	005	AUTO
	REMOTE	LOCAL	006	ÖRTLICH
	I	0	007	AUS
	AUS	BETRIEB	008	START
	AUS	0	009	NORMAL
	AUF	0	010	STOP
	Entriegelt	0	011	HEBEN
	OUT	OF	012	SENKEN
	LOCAL	REMOTE	013	OFF
	STOP	0	014	ON
	HAND	0	015	AUS
	AUF	AUS	016	EIN
	HAND	AUS	017	START
		ZU		AUTO
		AUTO		STOP
				HEBEN
				SENKEN
				OFF
				ON
				AUS
				EIN
				START
				AUTO
				STOP
				HEBEN
				SENKEN
				OFF
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				AUS
				EIN
				START
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				AUTO
				STOP
				HEBEN



GHG 293

GHG 292

Ordering code for Control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

Code	Locking facility	Code
D	None <input type="checkbox"/>	0
	Centre <input type="checkbox"/>	1
	Left <input type="checkbox"/>	2
	Right <input type="checkbox"/>	3

Code	Movement	Code
E1	Direct connection	01
	Ct connection 1 /A	02
	Connection 0 - 20/24 mA (scale 0-100% / 120%)	05
	Connection 4 - 20/24 mA (scale 0-100% / 120%)	06
	Moving-coil connection 0 - 20/24 mA (scale 0-100% / 120%)	07
	Moving-coil connection 4 - 20/24 mA (scale 0-100% / 120%)	08

Code	Mesasuring range/scale	Code	Mesasuring range/scale	Code
E2	0 - 1	002	0 - 75 /112.5 A	013
	0 - 2.5 / 3.75 A ²⁾	003	0 - 100 / 150 A	014
	0 - 5 / 7.5 A ²⁾	004	0 - 150 / 225 A	015
	0 - 10 / 15 A ²⁾	005	0 - 200 / 300 A	016
	0 - 15 / 22.5 A	006	0 - 250 / 375 A	017
	0 - 20 / 30 A ²⁾	008	0 - 300 / 450 A	018
	0 - 30 / 45 A	009	0 - 400 / 600 A	019
	0 - 40 / 60 A	010	0 - 500 / 750 A	020
	0 - 50 / 75 A	011	0 - 600 / 900 A	021
	0 - 60 / 90 A	012	0 - 100% / 150%	031

Code	Buil-in components designation		
F1	Entry type	Entry direct in enclosure	GEH
		Entry via plastic flange	FLK
		Entry via metal flange	FLM
F2	Entry element	only threaded entry	BO
		Threaded plug	SV
		Cable entry moulded plastic	GK
		Cable entry metal*	GM*
		Cable entry with plug	GV
F3	Size	M12, M16, M20, M25, M32, M40	M1 Ø ..
		Ø21, Ø26	
F4	Number	No. of entries	..

¹⁾ The code will represent only a selected part of configuration.

Ex-Control switches



GHG 292

GHG 293

Example for ordering code (Code 2)

Control switch with silver contact points, Switch mechanism „5“, Contact arrangement „063“,

Label „HAND-0-AUTO“, can be locked at „0“,

Measuring instrument AM72 for Ct connection „n/1A“, Scale „0 - 50/75 A“,

Cable entry 1 x threaded entry M25 on bottom direct entry.

Code A	B1	B2	C	D	E1	E2	F1	F2	F3	F4
GHG 293 /	5 /	063 /	015 /	1 /	2 /	011 /	GEH /	BO /	M25 /	1

Ordering details

Switching mechanism	Contact system	Code	Label inscription	Order No.
Control switch Type 292 with silver contacts Version with locking facility in „0“-, or position „right (Code 3)“, cable entry 1 x M25 on bottom.				
6		062	0 I	GHG 292 1000 R0001
6		065	0 I	GHG 292 1000 R0002
4		067	0 I	GHG 292 1000 R0003
8		067	0 I	GHG 292 1000 R0004
4		037	0 I	GHG 292 2000 R0002
8		037	0 I	GHG 292 2000 R0003
5		024	I 0 II	GHG 292 2000 R0004
5		023	HAND OFF AUTO	GHG 292 2001 R0001

Switching mechanism	Contact system	Code	Label inscription	Order No.
Control switch with measuring instrument Type 293 with silver contacts Version with locking facility in „0“-, or „left“ position, Measuring instrument AM 72 for CT connection n/1A, Scale 0 - 100/150 %. 1 x M32 on bottom.				
6		062	0 I	GHG 293 1000 R0001
6		065	0 I	GHG 293 1000 R0002



GHG 293

GHG 292

Accessories

Mounting plate for type 292

Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	snap-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	1	GHG 610 1953 R0105
Size 2	Trellis-work mounting	snap-on	1	GHG 610 1953 R0106
Size 4	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 4	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0128
Size 4	Pipe mounting	snap-on *	1	GHG 610 1953 R0132

Mounting plate for type 293

Type	Application	Mounting technique	OU	Order No.
Size 3	Wall mounting	snap-on	1	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	1	GHG 610 1953 R0110
Size 3	Trellis-work mounting	snap-on	1	GHG 610 1953 R0118
Size 5	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Pipe mounting	snap-on *	1	GHG 610 1953 R0132
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

*snap-on with snap-on mounting 5.5 mm

EX - CONTROL SWITCHES

Light alloy Version for Zone 1

CEAG explosion-protected control switches are made of high-quality cast aluminium-silicon (AlSi). A robust plastic powder coating according to RAL 7031 protects the CEAG control switches against aggressive atmospheres and chemicals. Cover screws as well as all internal and external metal parts are made of stainless steel. These switches feature an easy-to-install and easy-to-connect design. The cam switch version allows implementation of many variants, covering almost all applications in modern control engineering. An optional locking facility allows to secure the switch against unauthorised or inadvertent actuation with a padlock.

Internationally approved.



- High mechanical, chemical and thermal resistance
- Impact-resistant plastic powder coating
- Snap-on switch holder



GHG 295

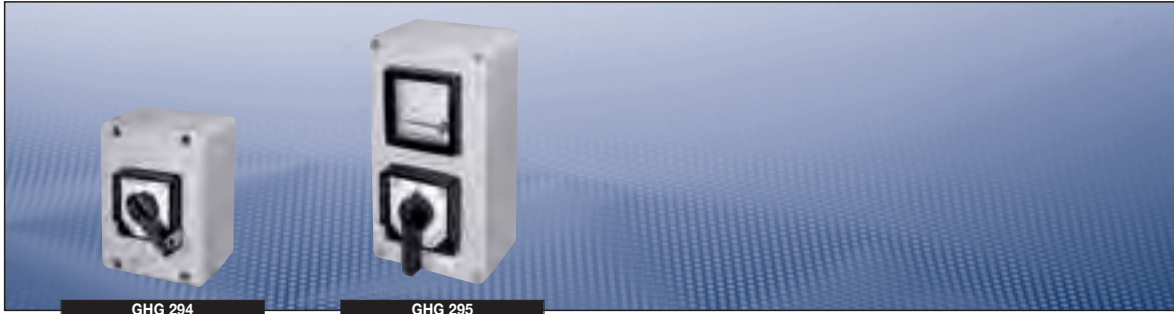
GHG 294

Technical data

Ex-Control switch Type 294 without and Type 295 with measuring instrument		
	with GHG 29 switch	with GHG 28 switch
Marking to 94/9/EC	Ex II 2 G Ex ed ia IIC T5/T6 Ex II 2 D Ex tD A21 IP66 T80 °C	Ex II 2 G Ex ed ia IIC T5/T6 Ex II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1163	PTB 99 ATEX 1163
IECEX Certificate of Conformity	IECEX BKI 07.0011	IECEX BKI 07.0011
Marking accord. to IECEx	Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C	Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +47 °C (T6) ... +55 °C (T5) option	
Rated voltage	max. 500 V	max. 690 V
Rated current	16 A	20 A
Rated current gold contacts	0.4 A	
Overload range (Type 293 only)	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	
Measuring range (Type 293 only)	max. 0 - 25 A direct / n / 1A	
Accuracy (Type 293 only)	Class 2.5	
Circuit (Type 293 only)	moving iron	
Rated marking- / rated breaking capacity accd. to EN 60947-5-1	AC-15: U_e 230 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.3 A	AC-15: U_e 230 V / I_e 8 A U_e 400 V / I_e 6 A DC-13: U_e 24 V / I_e 6 A U_e 230 V / I_e 0.4 A
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²	
Degree of protection accd. EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x M25 (Ø 8 - 17 mm) ¹⁾	
Dimensions (L x W x H)	170 x 130 x 129 mm	260 x 160 x 90 mm
Weight	approx. 1.90 kg (1 level) approx. 2.05 kg (2 level)	approx. 2.90 kg (1 level) approx. 3.05 kg (2 level)
Enclosure material	high quality cast aluminium (AIS)	
Enclosure colour	grey RAL 7031	

¹⁾ Control switches with direct indicating measuring instruments in the standard version are delivered with 2 looping terminals and PE terminal as well as M32 and M25 cable entries.

Ex-Control switches



Ordering code for Control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

A	B1	B2	C	D	E	E2	F 1)
GHG 29_	_	_	_	_	_	_	_

Code	Component	Code
A	Control switch	GHG 294
	Control switch with measuring instrument	GHG 295

Code	Switch mechanism	Code
B1	spring - engaging - spring	4
	engaging - engaging - engaging	5
	engaging - engaging	6
	spring - engaging - engaging	7
	engaging - engaging - spring	8

Code	Contact	Silver contact points	Code	Silver contact points
B2		060		034
		062		037
		065		049
		061		023
		063		019
		067		033
		011		024

Other versions as well as gold contact points are available on request.

Code	Inscription (contact label)	Code	Inscription (contact label)	Code
C	0 I	001	0 I II	018
	I II	002	AUS AUTO EIN	019
	STOP START	003	AUS HAND AUTO	020
	HAND AUTO	004	ÖRTLICH AUS FERN	021
	SENKEN HEBEN	005	START NORMAL STOP	022
	REMOTE LOCAL	006	OFF 0 ON	023
	I 0 II	007	HAND OFF AUTO	024
	AUS BETRIEB EIN	008	0 IN START	025
	AUS 0 EIN	009	MAN AUTO	026
	AUF 0 AB	010	START STOP	027
	Entriegelt 0 Verriegelt	011	HEBEN SENKEN	028
	OUT OF HAND	012	OFF ON	029
	LOCAL REMOTE AUTO	013	AUS EIN	030
	STOP 0 START	014	HAND AUTO	031
	HAND 0 AUTO	015	ON OFF	032
	AUF AUS ZU	016	I II III	033
	HAND AUS AUTO	017		



Ordering code for Control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

Code	Locking facility	Code
D	None <input type="checkbox"/>	0
	Centre <input type="checkbox"/>	1
	Left <input type="checkbox"/>	2
	Right <input type="checkbox"/>	3

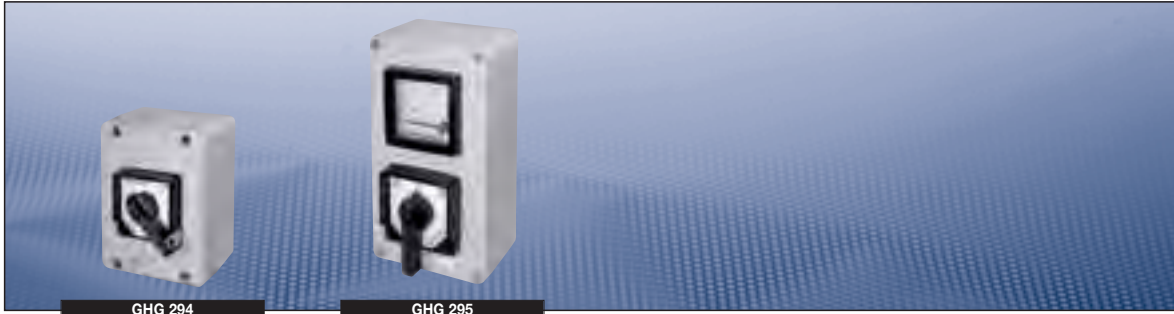
Code	Movement	Code
E1	Direct connection	01
	Ct connection 1 /A	02
	Connection 0 - 20/24 mA (scale 0-100% / 120%)	05
	Connection 4 - 20/24 mA (scale 0-100% / 120%)	06
	Moving-coil connection 0 - 20/24 mA (scale 0-100% / 120%)	07
	Moving-coil connection 4 - 20/24 mA (scale 0-100% / 120%)	08

Code	Mesasuring range/scale	Code	Measuring range/scale	Code
E2	0 - 1	002	0 - 75 /112.5 A	013
	0 - 2.5 / 3.75 A ²⁾	003	0 - 100 / 150 A	014
	0 - 5 / 7.5 A ²⁾	004	0 - 150 / 225 A	015
	0 - 10 / 15 A ²⁾	005	0 - 200 / 300 A	016
	0 - 15 / 22.5 A	006	0 - 250 / 375 A	017
	0 - 20 / 30 A ²⁾	008	0 - 300 / 450 A	018
	0 - 30 / 45 A	009	0 - 400 / 600 A	019
	0 - 40 / 60 A	010	0 - 500 / 750 A	020
	0 - 50 / 75 A	011	0 - 600 / 900 A	021
	0 - 60 / 90 A	012	0 - 100% / 150%	031

Code	Buil-in components designation		
F1	Entry type	Entry direct in enclosure	GEH
		Entry via plastic flange	FLK
		Entry via metal flange	FLM
F2	Entry element	only threaded entry	BO
		Threaded plug	SV
		Cable entry moulded plastic	GK
		Cable entry metal*	GM*
		Cable entry with plug	GV
F3	Size	M12, M16, M20, M25, M32, M40	M1 Ø ..
		Ø21, Ø26	
F4	Number	No. of entries	..

¹⁾ The code will represent only a selected part of configuration.

Ex-Control switches



GHG 294

GHG 295

Example for ordering code (Code 2)

Control switch with silver contact points, Switch mechanism „5“, Contact arrangement „063“,

Label „HAND-0-AUTO“, can be locked at „0“,

Measuring instrument AM72 for Ct connection „n/1A“, Scale „0 - 50/75 A“,

Cable entry 1 x threaded entry M25 on bottom direct entry.

Code A	B1	B2	C	D	E1	E2	F1	F2	F3	F4
GHG 295 /	5 /	063 /	015 /	1 /	2 /	011 /	GEH /	BO /	M25 /	1

Ordering details

Switching mechanism	Contact system	Code	Label inscription	Order No.
Control switch Type 294 with silver contacts Version with locking facility in „0“-, or position „right“ (Code 3)“, cable entry 1 x M25 on bottom.				
6		062	0 I	GHG 294 1000 R0001
6		065	0 I	GHG 294 1000 R0002
4		067	0 I	GHG 294 1000 R0003
8		067	0 I	GHG 294 1000 R0004
4		037	0 I	GHG 294 2000 R0002
8		037	0 I	GHG 294 2000 R0003
5		024	I 0 II	GHG 294 2000 R0004
5		023	HAND OFF AUTO	GHG 294 2001 R0001

Switching mechanism	Contact system	Code	Label inscription	Order No.
Control switch with measuring instrument Type 295 with silver contacts Version with locking facility in „0“-, or „left“ position, Measuring instrument AM 72 for CT connection n/1A, Scale 0 - 100/150 %. 1 x M32 on bottom.				
6		062	0 I	GHG 295 1000 R0001
6		065	0 I	GHG 295 1000 R0002

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LIGHT ALLOY CONTROL STATIONS

Ex-d pushbutton and control switches

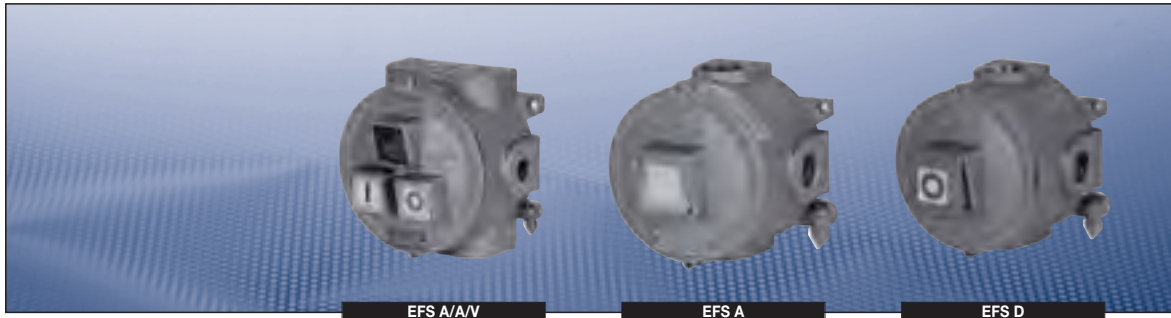
Ex-d explosion-protected control stations made of light alloy metal are equipped with up to three components to switch and control processes in areas of Zone 1, 2, 21 and 22 at no risk of explosion.

Built-in components, such as signal lamps, pushbuttons and switches are ready installed inside of the enclosures. To facilitate insertion of cables into the entries, Ex-d threads for 3/4" Ex-d cable glands are available at the enclosures.

A high "IP degree of protection" allows universal use in areas at risk of explosion. The light metal control stations have an outside earthing connection.



- High degree of protection IP67
- High mechanical, chemical and thermal resistance
- Individual configuration



Technical data

Ex-d control stations Type EFS

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIC T6 / Ⓔ II 2 D IP67 T 85 °C
EC-Type Examination Certificate	LOM 03 ATEX 2034
IECEX Certificate of Conformity	IECEX BK1 07.0027
Marking accd. to IECEX	Ex d IIC T6 Ex tD A21 IP67 T80 °C
Permissible ambient temperature	-20 °C to +55 °C
Rated voltage	max. 660 V AC
Rated current	max. 20 A
PE connecting terminals	2 x 2.5 mm ² / PE ext.: 2 x 6 mm ²
Insulation class	I
Incandescent lamp	230 V 3 W
Degree of protection accd. EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	1 x 3/4" ISO 7/1 or 2 x 3/4" ISO 7/1, one plugged
Enclosure material	Light alloy
Enclosure colour	natural finish

Other versions available on request

Ordering details

Type	Version	Weight	Order No.
Control units			
EFS A	1 x pushbutton, 1 NO + 1 NC, label "White"	0.75 kg	NOR 000 114 110 511
EFS A/A	2 x pushbutton, 1 NO + 1 NC, label "I - 0"	0.85 kg	NOR 000 114 110 553
EFS D	1 x mushroom head pushbutton, 1 NO + 1 NC, label "0"	0.80 kg	NOR 000 114 110 587
EFS A/D	1 x pushbutton 1 NO, 1 x mushroom head pushbutton NC, label "I - 0"	0.85 kg	NOR 000 114 110 540
EFS L	1 x alarm pushbutton, 1 NO + 1 NC, with windows	0.85 kg	NOR 000 114 110 595
EFS A/A/A	3 x pushbutton, 1 NO + 1 NC, label "0 - I - II"	1.50 kg	NOR 000 114 110 747
EFS A/A/V	2 x pushbutton, 1 NO + 1 NC, label "0 - I - II", 1 x green signal lamp	1.50 kg	NOR 000 114 110 748
EFS 72	With measuring instruments 72 mm x 72 mm	1.20 kg	NOR 000 114 110 740

Type	Version	Weight	Order No.
Control switches			
EFS I	0 - 1	0.90 kg	NOR 000 003 110 945
EFS H	1 - 2	0.90 kg	NOR 000 003 110 937
EFS J	1 - 0 - 2	0.90 kg	NOR 000 003 110 953
EFS P	0 - 1	0.90 kg	NOR 000 003 110 995
EFS P40	0 - 1	0.90 kg	NOR 000 114 110 738

EX-SAFETY AND MAIN CURRENT SWITCHES



APPLICATIONS

10.2

EX-SAFETY SWITCHES

10.4

INDUSTRIAL SAFETY SWITCHES

10.34

EX-MAIN CURRENT SWITCHES

10.58

EX-POWER CIRCUIT BREAKERS

10.70

EX-MANUAL MOTOR STARTERS

10.84

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Applications

Safety switches are used to reliably isolate the power supply on electrical installations and apparatus during maintenance, cleaning and repair work.

Main current switches are used to operate drives, motors and other electrical equipment.

Star-delta starters, reversing starters and pole-changing switches (Dahlander switches) can be implemented with CEAG main current switches.

Motors have to be protected against overloads, phase failures and overheating: CEAG power circuit breakers and manual motor starters feature phase-failure protection as well as thermal and electromagnetic tripping for reliable motor protection. CEAG manual motor starters have such a precise tripping time that they are equally suited for the protection of Ex-e as well as Ex-d motors – to put you on the safe side.

CEAG safety features

Safety and main current switches can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

All CEAG safety switches up to 180 A feature full AC-3 motor switching capacities and isolating properties according to EN 60947-3 with compulsory opening of the main current contacts; optional Emergency stop versions according to EN 60204-1 are also available.

Additional lagging/leading auxiliary contacts guarantee double safety for extreme switching conditions.

The switch position is always indicated by the switch handle – practically excluding wrong operation.

You'll find these advantages in all CEAG safety, main current and Emergency stop switches as well as in the safety switches for converter drives.

A special safety feature offered by the manual motor starter: It can only be re-activated on site of the drive. An operating-current trip for remote cut-off is optional.

To take advantage of the short-circuit protection in the starter, a suitable backup fuse must be selected. You'll find the details in the relevant technical data.

Usage categories

The two most important usage categories for circuit breakers and motor starters: AC-23 for circuit breakers and the more demanding usage category AC-3 for motor starters.

Starters, defined according to AC-3, are used to switch motor loads. Switches which fall into the AC-3 usage category are used for switching of motor loads under normal operating conditions. Here, the test procedure requires 50 making and breaking samples. Circuit breakers, defined according to AC-23, are designed for occasional separation of motor loads. For this category EN 60947-4 requires only five making and breaking samples.



The AC-3 usage category makes great demands on the operating cycles and the service life of motor starters. All CEAG safety switches and manual motor starters up to 180 A fulfill these high requirements for the motor-switching capacity of usage category AC-3 as specified by EN 60947-4-1.

Areas of application

We offer you a wide range of products in all areas: explosion-protected apparatus for gas and dust areas as well as for industrial applications in rough environments.

Material

Both explosion-protected as well as industrial switches are provided in

impact-resistant polyamide, glass-fibre-reinforced polyester, powder-coated steel, high-grade stainless steel or flameproof enclosures made of light alloy, depending on the area of application and amperage.

All explosion-protected switches are certified according to the ATEX directive.

Mounting

Switches up to 180 A can be mounted simply and quickly with the CEAG mounting system to pipes, trellis work and walls. What's more, CEAG switches up to 40 A offer low-cost mounting – in a snap – with the snap-on system.

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E X - S A F E T Y S W I T C H E S

Up to 630 A

CEAG safety switches can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

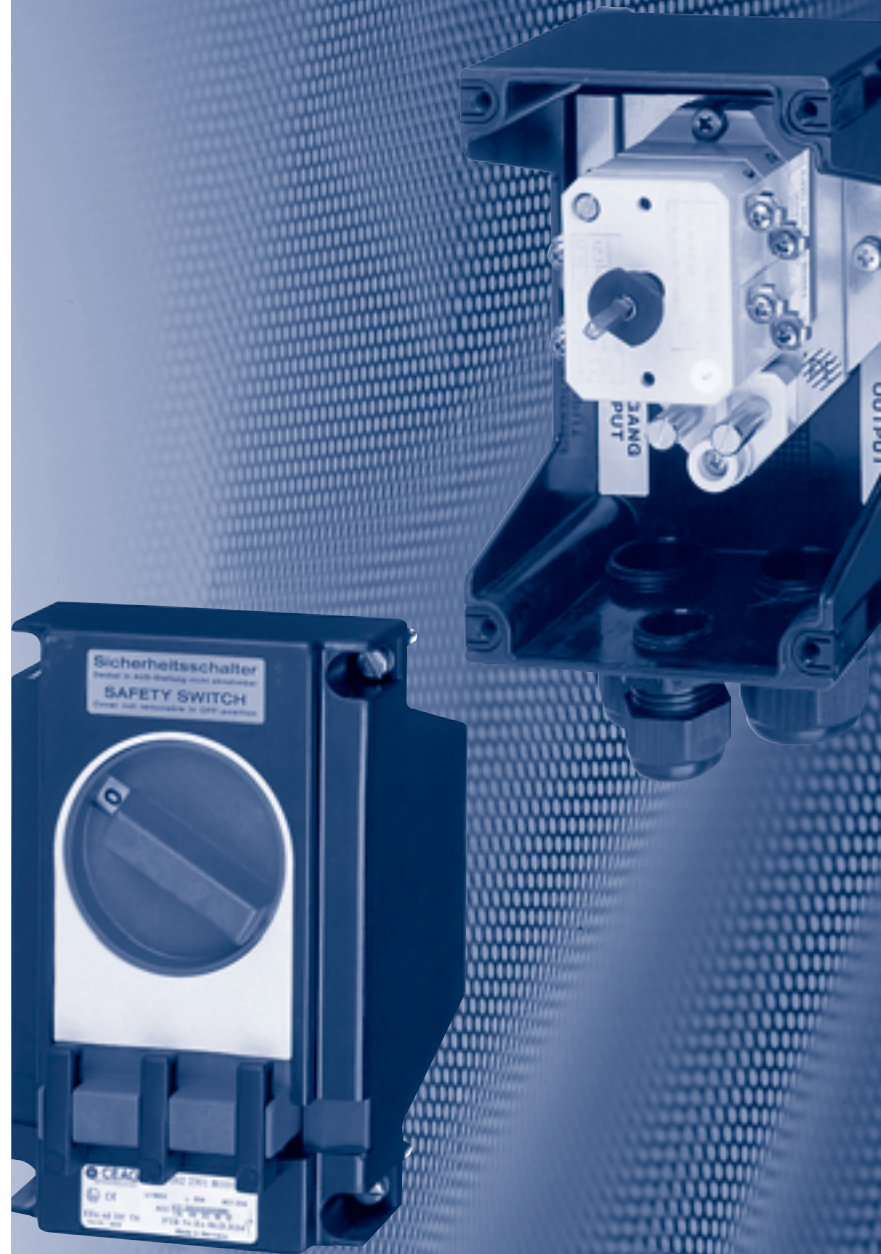
All CEAG safety switches feature full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts; optional EMERGENCY STOP versions according to EN 60204-1 are also available.

Additional lagging/leading auxiliary contacts guarantee double safety for extreme switching conditions.

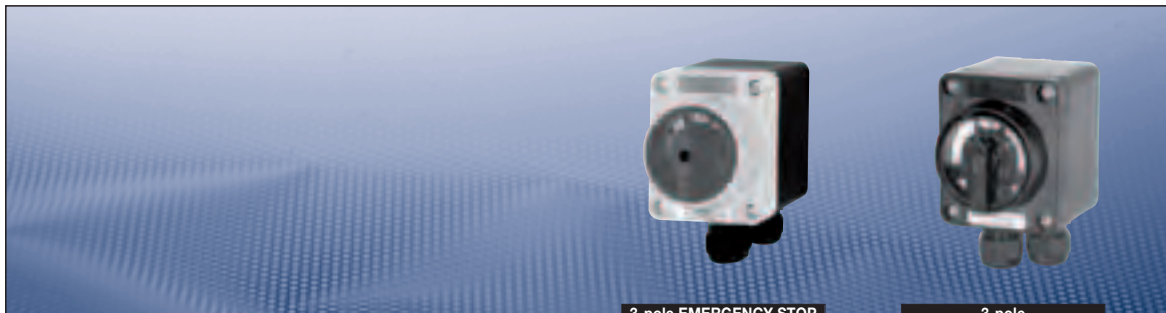
The safety switches feature an installation-friendly design and easily accessible connection terminals.

Versions in impact-resistant polyamide or glass-fibre-reinforced polyester enclosures provide the high degree of protection IP66 for safety switches up to 180 A. These can be optionally supplied with snap-on moulded plastic or brass flanges. Safety switches for amperages up to 630 A are supplied in metal enclosures. These can be equipped with screw-on flanges. The described safety switches at the sizes 210 - 630 A are also available for Explosion Group IIB, which is sufficient for many of the applications.

Internationally approved.



- Full AC-3 switching capacity
- Double safety: additional auxiliary contact
- Cost-saving installation up to 180 A
- Snap-on mounting up to 40 A
- IP66 protection up to 180 A



3-pole EMERGENCY STOP

3-pole

Technical data

Ex-Safety switch 10 A	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 1074
IECEX Certificate of Conformity	BKI 07.0014
Marking accd. to IECEx	Ex ed IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature	-20 °C to +40 °C ¹⁾
Rated voltage	up to max. 500 V
Rated current	max. 10 A
Frequency	50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 10 A U _e 400 V / I _e 10 A U _e 500 V / I _e 10 A
Back-up fuse	up to 400 V AC: 20 A gL up to 500 V AC: 16 A gL
Connecting terminals	Main contact 2 x 1.5 - 2.5 mm ² Auxiliary-/Signal contact 2 x 0.5 - 2.5 mm ²
Degree of protection accd. EN 60529	IP66
Insulation class	I
Cable glands/enclosure drilling	M20 (d = 5 - 13 mm) see ordering details M25 (d = 8 - 17 mm) see ordering details
Weight	0.55 kg
Enclosure material	impact resistant polyamide
Enclosure colour	black
Auxiliary contact	1 x NO making - lagging; breaking - leading
Padlocking	can be locked in OFF position with 3 commercially available padlocks

¹⁾ Other ambient temperatures on request

Ex-Safety switches



3-pole

3-pole EMERGENCY STOP

Ordering details

Version	Cable gland	Order No.
3-pole	2 x M25 / 1 x M 20	GHG 261 0005 R0009
3-pole	2 x M20	GHG 261 0005 R0005
3-pole EMERGENCY STOP	2 x M25 / 1 x M 20	GHG 261 0005 R0010

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-safety switch 10 A 3-pole

Type	Application	Fixing method	Order No.
Size 1	Wall mounting	screw-on	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	GHG 610 1953 R0102
Size 1	Trellis mounting	screw-on	GHG 610 1953 R0103

Accessories for mounting plates

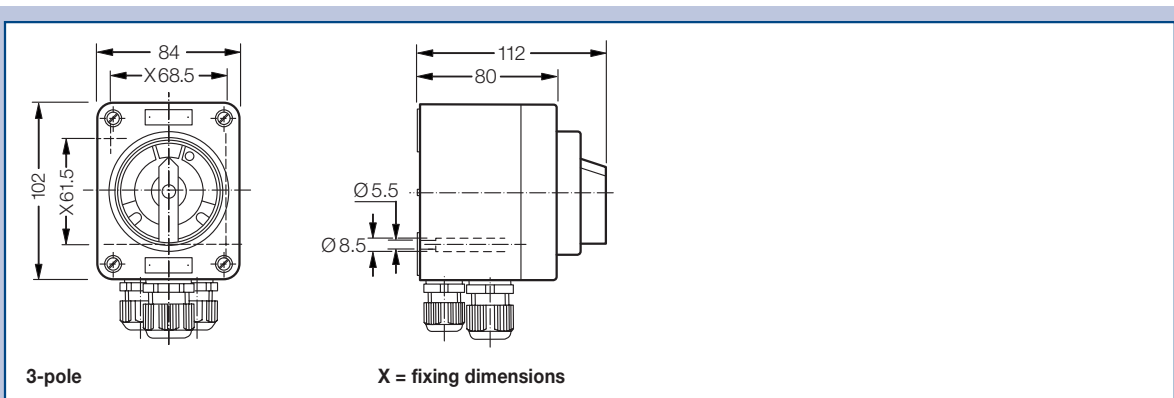
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for label holder for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

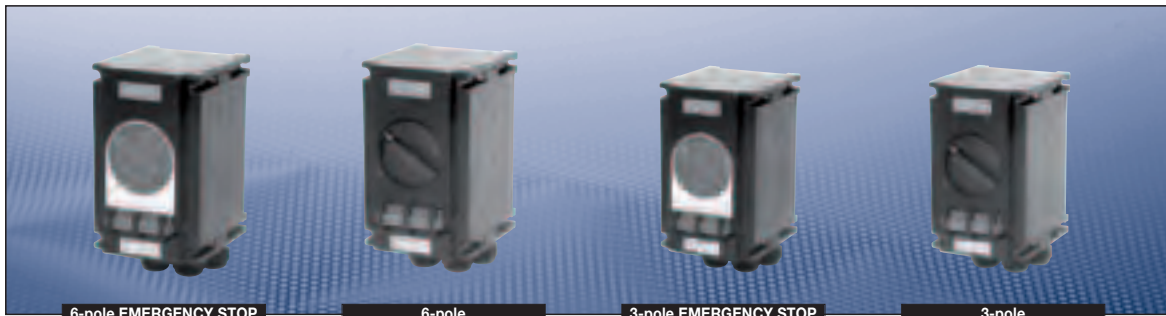
Type	Application	OU	Order No.
Size 1	for mounting plates size 1	1	GHG 610 1955 R0101

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimensions



Dimensions in mm



Technical data

Ex-Safety switch 20 A		
Marking to 94/9/EC	Ⓔ II 2 G Ex ed ia IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1161	
IECEX Certificate of Conformity	BKI 07.0012	
Marking accd. to IECEx	Ex ed ia IIC T6 Ex tD A21 IP66 T55 °C	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 20 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 20 A U _e 400 V / I _e 20 A U _e 500 V / I _e 10 A U _e 690 V / I _e 10 A	
Back-up fuse	up to 400 V AC: 35 A gL up to 500 V AC: 35 A gL up to 690 V AC: 25 A gL	
Connecting terminals	Main contact	2 x 4 mm ²
	Auxiliary-/Signal contact	2 x 0.5 - 2.5 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M20 (d = 5 - 13 mm) see ordering details M25 (d = 8 - 17 mm) see ordering details M32 (d = 12 - 21 mm) see ordering details Option: metal flange with thread	
Weight	3-pole	approx. 1.48 kg
	6-pole	approx. 2.43 kg
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC (only 6-pole version) making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Other ambient temperatures on request

Ex-Safety switches



3-pole

3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

Ordering details

Version	Cable entry	Order No.
Safety switch 20 A 3-pole		
Version with 1 auxiliary contact (NO)		
3-pole	2 x M32 / 1 x M25	GHG 262 2301 R0001
3-pole EMERGENCY STOP	2 x M32 / 1 x M25	GHG 262 2301 R0002
Safety switch 20 A 4-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
4-pole	2 x M20	GHG 262 2301 R0007
4-pole EMERGENCY STOP	2 x M32 / 1 x M25	GHG 262 2301 R0010
Safety switch 20 A 6-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
6-pole	4 x M32 / 1 x M25	GHG 262 2601 R0001
6-pole	4 x M25	GHG 262 2601 R0005
6-pole EMERGENCY STOP	4 x M32 / 1 x M25	GHG 262 2601 R0002

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-safety switch 20 A 3-pole

Type	Application	Fixing technique	Order No.
Size 2	Wall mounting	snap-on	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	GHG 610 1953 R0106

Mounting plate for Ex-safety switch 20 A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

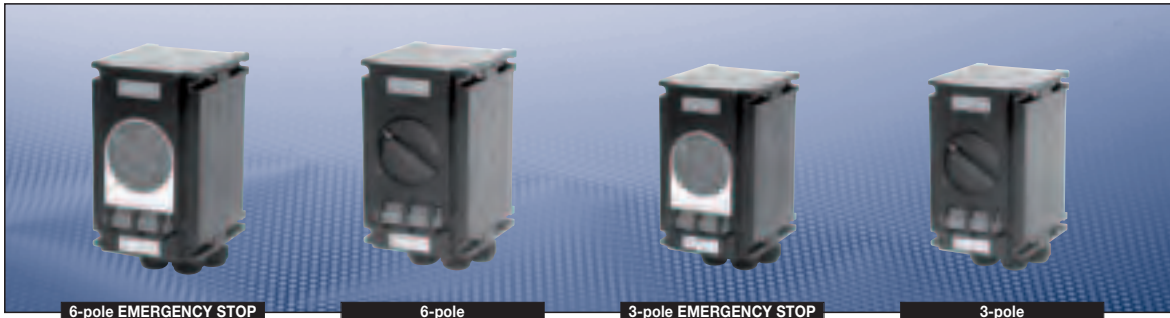
Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

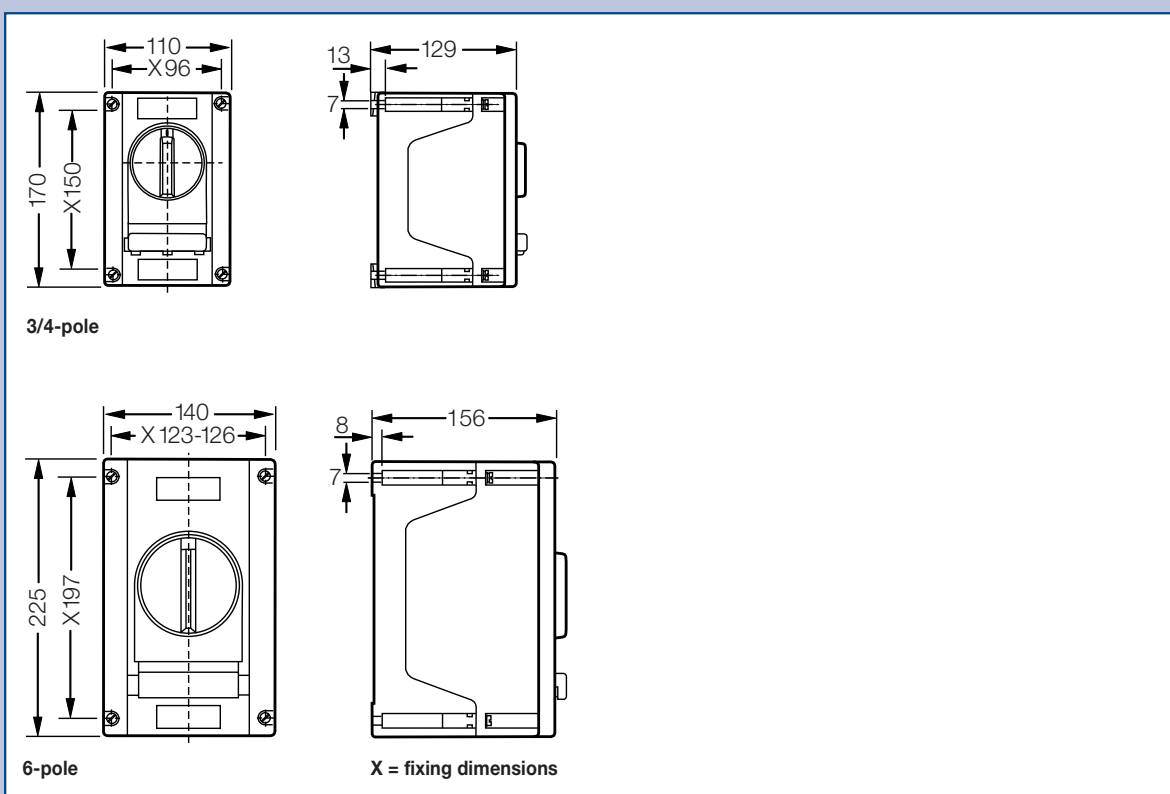
Accessories for canopies plates

Type	Application	OU	Order No.
Size 2	for mounting plates size 2	1	GHG 610 1955 R0102
Size 2A	for mounting plates size 2A	1	GHG 610 1955 R0103
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above



Dimension drawing



Dimensions in mm

Ex-Safety switches



3-pole

3-pole EMERGENCY STOP

6-pole

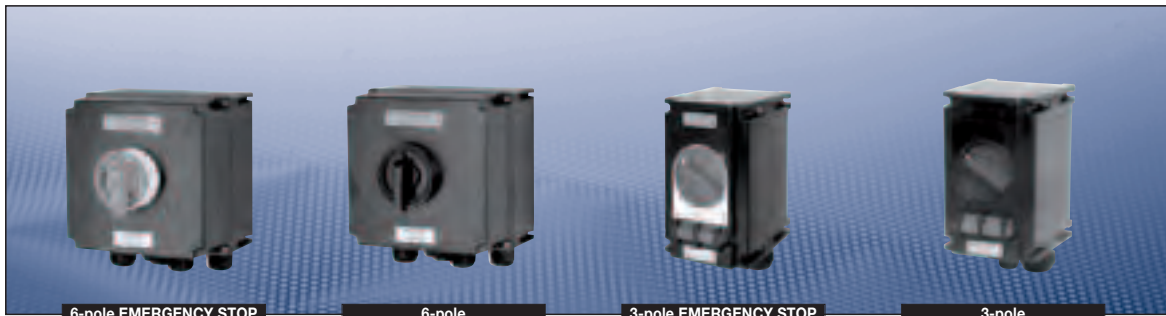
6-pole EMERGENCY STOP

Technical data

Ex-Safety switch 40 A

Marking to 94/9/EC	Ⓔ II 2 G Ex ed ia IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1161	
IECEX Certificate of Conformity	BKI 07.0012	
Marking accd. to IECEx	Ex ed ia IIC T6 Ex tD A21 IP66 T53 °C	
Permissible ambient temperature	-20 °C to +40 °C	
Rated voltage	up to max. 690 V	
Rated current	max. 40 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 40 A U _e 400 V / I _e 40 A U _e 500 V / I _e 40 A U _e 690 V / I _e 32 A	
Back-up fuse	up to 400 V AC: 80 A gL up to 500 V AC: 80 A gL up to 690 V AC: 63 A gL	
Connecting terminals	Main contact	2 x 16 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M40 (d = 16 - 28 mm) see ordering details option: metal flange with thread	
Weight	3-pole	approx. 2.30 kg
	4-pole	approx. 2.75 kg
	6-pole	approx. 6.50 kg
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC (only 6-pole version) making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Other ambient temperatures on request



Ordering details

Version	Cable entry	Order No.
Safety switch 40 A 3-pole		
Version with 1 auxiliary contact (NO)		
3-pole	2 x M40 / 1 x M25	GHG 263 2301 R0001
3-pole EMERGENCY STOP	2 x M40 / 1 x M25	GHG 263 2301 R0002
Safety switch 40 A 4-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
4-pole	2 x M25	GHG 263 2301 R0007
Safety switch 40 A 6-pole		
Version with 2 auxiliary contact (NO)		
6-pole	4 x M40 / 1 x M25	GHG 263 0050 R0001
6-pole	4 x M25	GHG 263 0050 R0006
6-pole EMERGENCY STOP	4 x M40 / 1 x M25	GHG 263 0050 R0002

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-safety switch 40 A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Ex-safety switch 40 A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

Accessories for mounting plates

Type	OU	Order No.
label for label holder and mounting plates size 4 and size 5	10	GHG 610 1953 R0011
Blanking plug for label holder size 4 and size 5 1 set = 1 each	10	GHG 610 1953 R0134
Snap-on for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 each	10	GHG 610 1953 R0041
Installation kit for pipes 1" (of 27 - 30 mm) for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

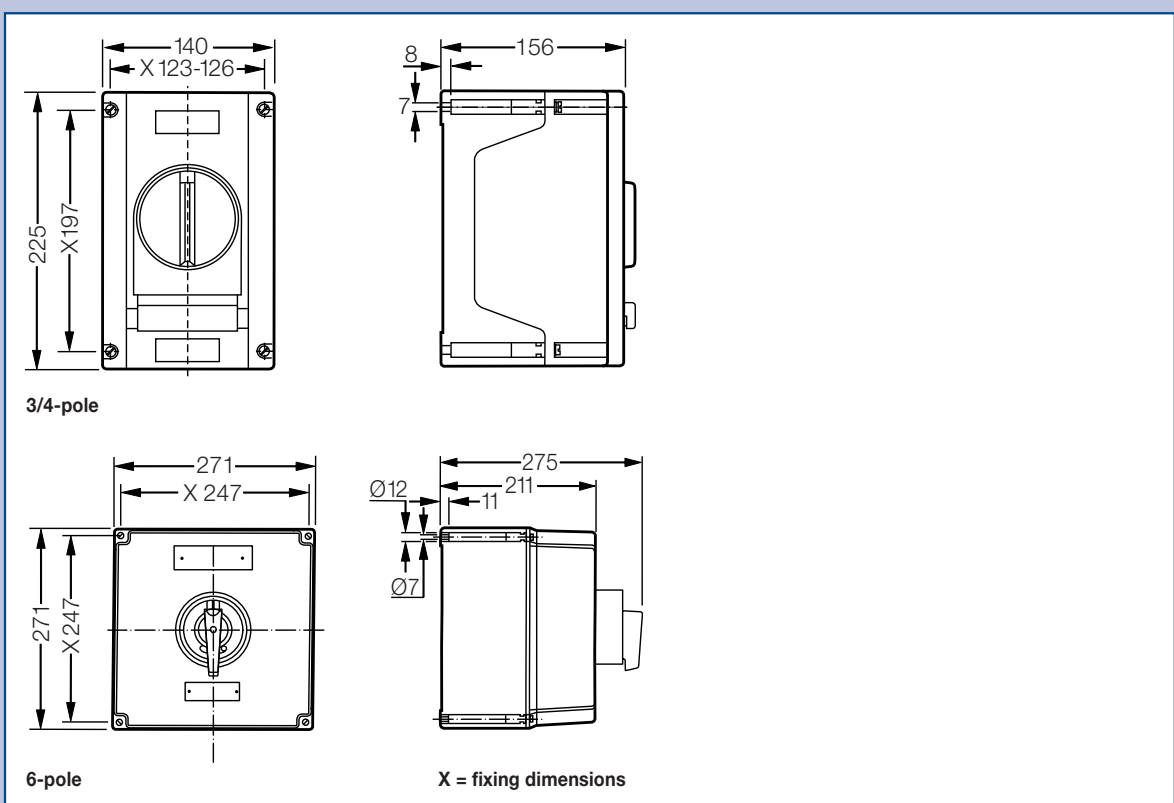
Type	Application	OU	Order No.
Size 4	for mounting plates size 4	1	GHG 610 1955 R0107

Please note that we can only deliver in the ordering units (OU) stated in the tables above

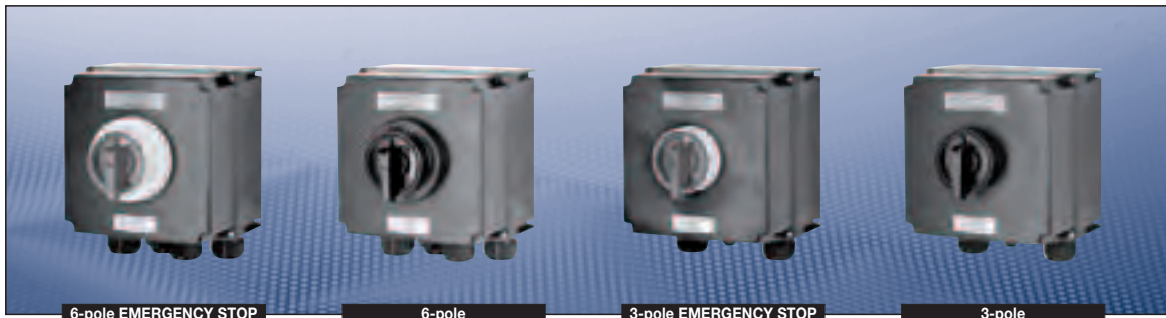
| Ex-Safety switches |



Dimension drawing



Dimensions in mm

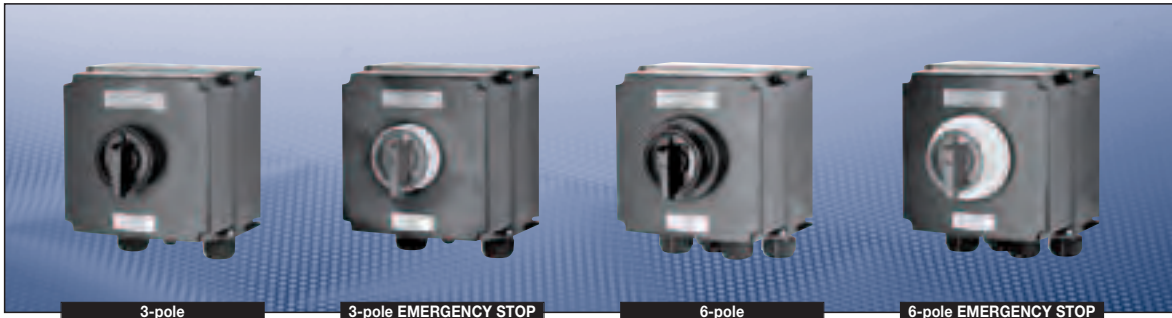


Technical data

Ex-Safety switch 80 A		
Marking to 94/9/EC		Ⓔ II 2 G Ex ed ia IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 00 ATEX 1091
IECEX Certificate of conformity		BKI 07.0010
Marking accd. to IECEx		Ex ed ia IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		-20 °C to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 80 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 80 A U _e 400 V / I _e 80 A U _e 500 V / I _e 80 A U _e 690 V / I _e 63 A
Back-up fuse		up to 400 V AC: 160 A gL up to 500 V AC: 160 A gL up to 690 V AC: 125 A gL
Connecting terminals	Main contact	2 x 25 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP66
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details M32 (d = 12 - 21 mm) see ordering details M50 (d = 21 - 35 mm) see ordering details Option: metal flange with thread
Weight	3-pole	approx. 6.5 kg
	6-pole	approx. 9.0 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks

¹⁾ Other ambient temperatures on request

Ex-Safety switches



Ordering details

Version	Cable entry	Order No.
Safety switch 80 A 3-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	2 x M50 / 1 x M25	GHG 264 0020 R0001
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	GHG 264 0020 R0002
Safety switch 80 A 6-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
6-pole	4 x M50 / 1 x M25	GHG 264 0021 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 264 0021 R0002

Customized version on request, auxiliary contacts in Ex ia available

Accessories

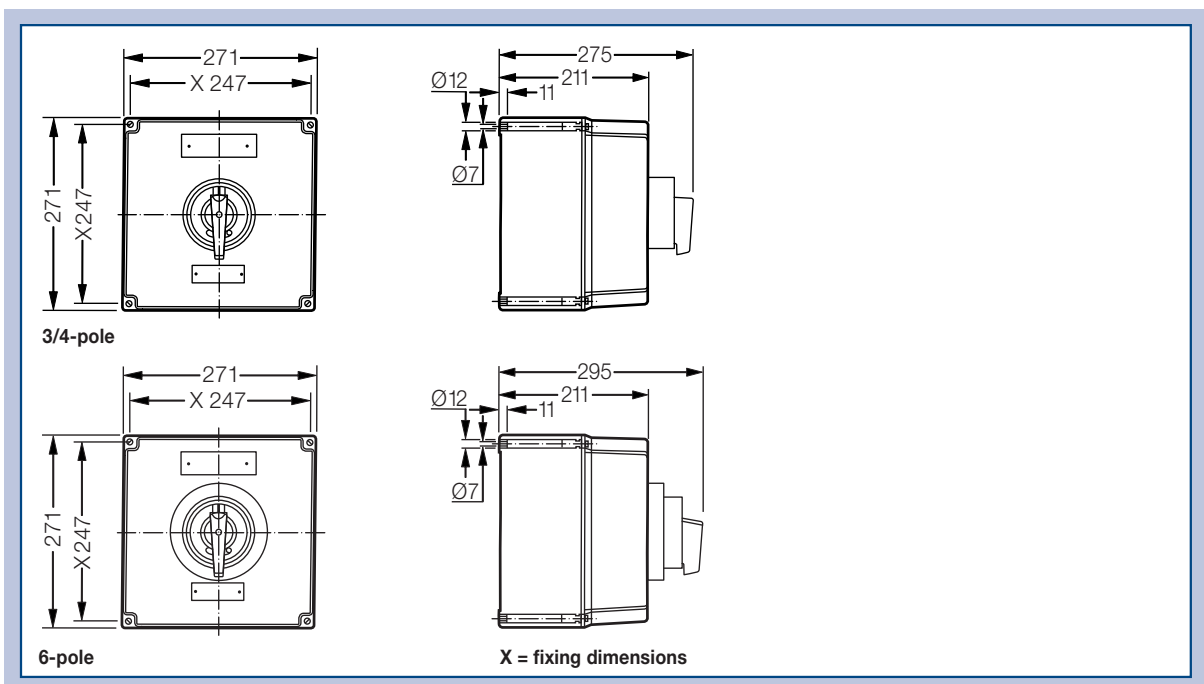
Mounting plate for Ex-safety switch 80 A 3- and 6-pole			
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

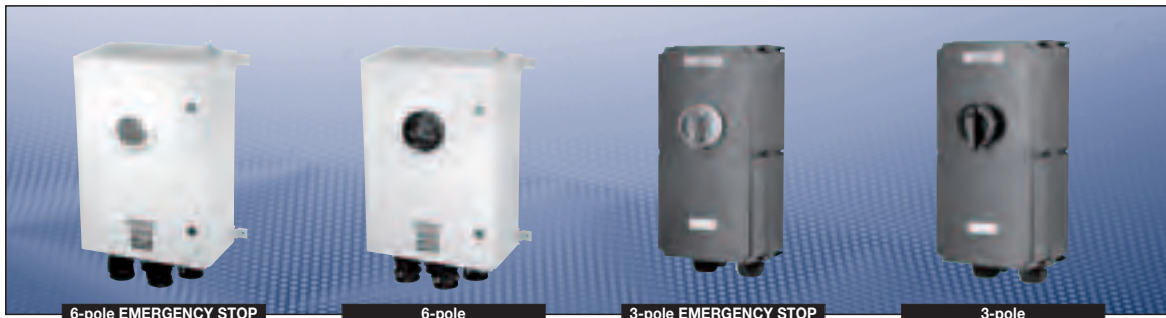
¹⁾ observe mounting distance

Accessories for mounting plates		
Type	OU	Order No.
label for label holder and mounting plates size 4 and size 5	10	GHG 610 1953 R0011
Installation kit for pipes 1" (of 27 - 30 mm) for label holder for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing





Technical data

Ex-Safety switch 125 A			
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C		
EC-Type Examination Certificate	3-pole	PTB 99 ATEX 1164	
	6-pole	PTB 00 ATEX 1073	
IECEX Certificate of Conformity	BKI 07.0005		
Marking accd. to IECEx	Ex de IIC T6 Ex tD A21 IP66 T53 °C		
Permissible ambient temperature	-20 °C to +40 °C		
Rated voltage	up to max. 690 V		
Frequency	50/60 Hz		
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 125 A U _e 400 V / I _e 125 A U _e 500 V / I _e 125 A U _e 690 V / I _e 110 A		
Back-up fuse	up to 400 V AC: 200 A gL up to 500 V AC: 200 A gL up to 690 V AC: 160 A gL		
Connecting terminals	Main contact	3-pole	1 x 50/70 mm ²
		6-pole	6 x 95 mm ² /2 x 95 mm ²
	Auxiliary-/Signal contact		2 x 4 mm ²
Insulation class	I		
Degree of protection accd. EN 60529	IP66		
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M40 (d = 16 - 28 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details Option: metal flange with 2 x thread		
Weight	3-pole	approx. 16 kg	
	6-pole	approx. 31 kg	
Enclosure material	3-pole	glass-fibre reinforced polyester	
	6-pole	steel, powder-coated	
Enclosure colour	3-pole	black	
	6-pole	white	
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging		
Padlocking	can be locked in OFF position with 3 commercially available padlock		

¹⁾ Other ambient temperatures on request

Ex-Safety switches



Ordering details

Version	Cable entry	Order No.
Safety switch 125 A		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	GHG 265 0010 R0001
4-pole	2 x M40	GHG 265 0010 R0005
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	GHG 265 0010 R0002
6-pole	4 x M63 / 1 x M25	EXKO 224716 K 0000
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 224726 K 0000

Customized version on request, auxiliary contacts in Ex ia available

Accessories

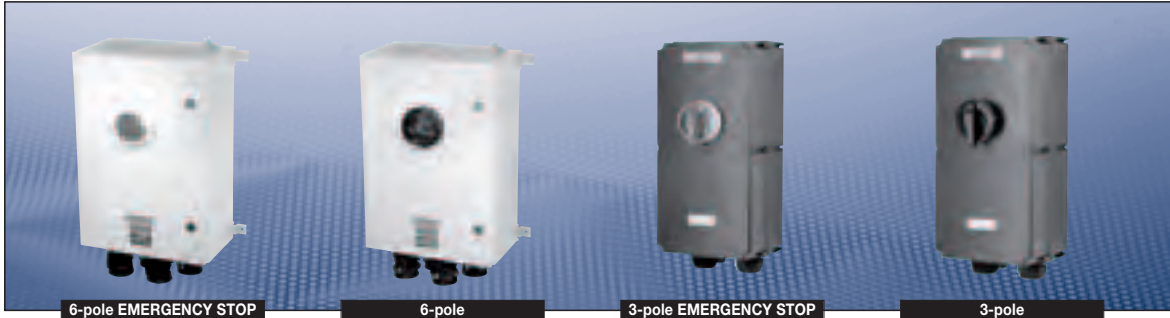
Mounting plate for Ex-safety switch 125 A 3-pole ²⁾			
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

²⁾ 2 pcs. necessary for mounting

Accessories for mounting plates		
Type	OU	Order No.
Label holder with label (unlabelled) mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) mounting plate for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above



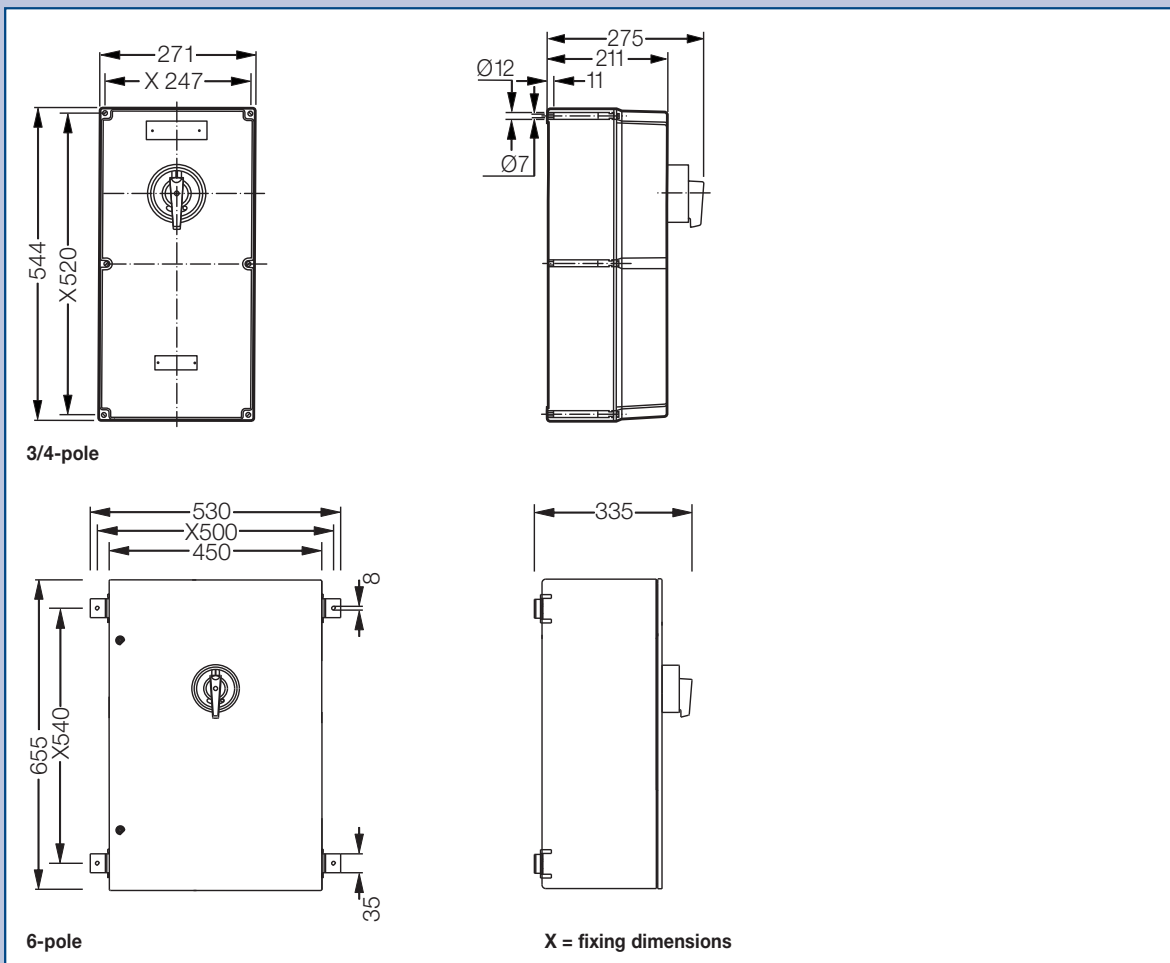
6-pole EMERGENCY STOP

6-pole

3-pole EMERGENCY STOP

3-pole

Dimension drawing



Dimensions in mm

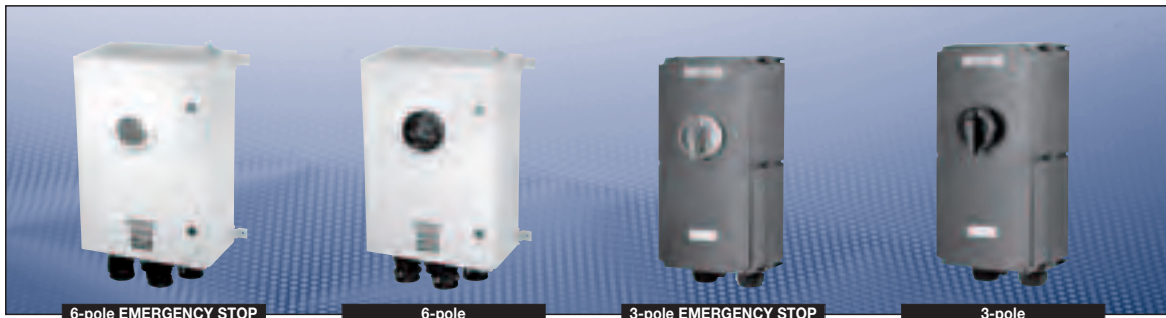
Ex-Safety switches



Technical data

Ex-Safety switch 180 A			
Marking to 94/9/EC			Ex II 2 G Ex de IIC T6 Ex II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	3-pole		PTB 99 ATEX 1164
	6-pole		PTB 00 ATEX 1073
IECEX Certificate of Conformity			BKI 07.0005
Marking accd. to IECEx			Ex de IIC T6 -55 °C to +45 °C Ex tD A21 IP66 T53 °C
Permissible ambient temperature			-20 °C to +40 °C
Rated voltage			up to max. 690 V
Frequency			50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3			U _e 230 V / I _e 180 A
			U _e 400 V / I _e 180 A
			U _e 500 V / I _e 150 A
			U _e 690 V / I _e 125 A
Back-up fuse			up to 400 V AC: 250 A gL
			up to 500 V AC: 250 A gL
			up to 690 V AC: 200 A gL
Connecting terminals	Main contact	3-pole	1 x 120 mm ²
		6-pole	6 x 150 mm ² /2 x 95 mm ²
	Auxiliary-/Signal contact		2 x 4 mm ²
Insulation class			I
Degree of protection accd. EN 60529			IP66
Cable glands/enclosure drilling			M25 (d = 8 - 17 mm) see ordering details M40 (d = 16 - 28 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details Option: metal flange with 2 x thread
Weight	3-pole		approx. 16.5 kg
	6-pole		approx. 31,5 kg
Enclosure material	3-pole		glass-fibre reinforced polyester
	6-pole		steel, powder-coated
Enclosure colour	3-pole		black
	6-pole		white
Auxiliary contact			1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking			can be locked in OFF position with 3 commercially available padlocks

¹⁾ Other ambient temperatures on request



Ordering details

Version	Cable entry	Order No.
Safety switch 180 A		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	GHG 266 0006 R0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	GHG 266 0006 R0002
6-pole	4 x M63 / 1 x M25	EXKO 224716 L 0000
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 224726 L 0000

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-safety switch 180 A 3-pole²⁾

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

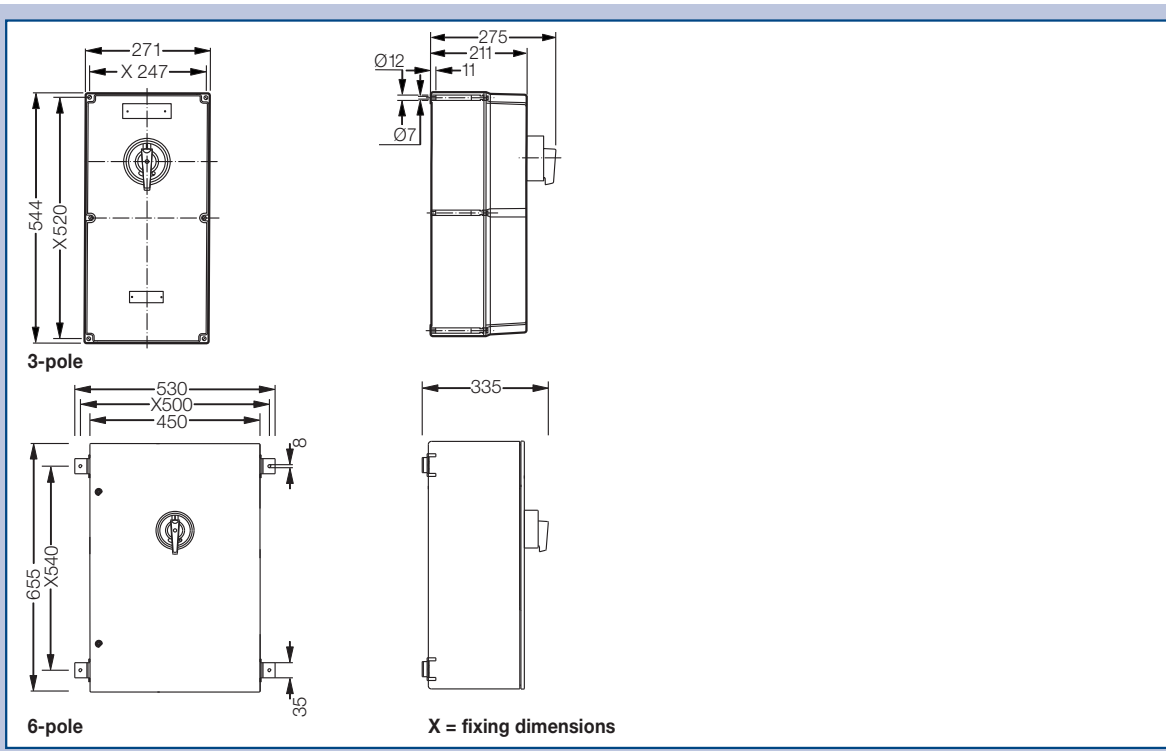
²⁾ 2 pcs. necessary for mounting

Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabeled) mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) mounting plate for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above

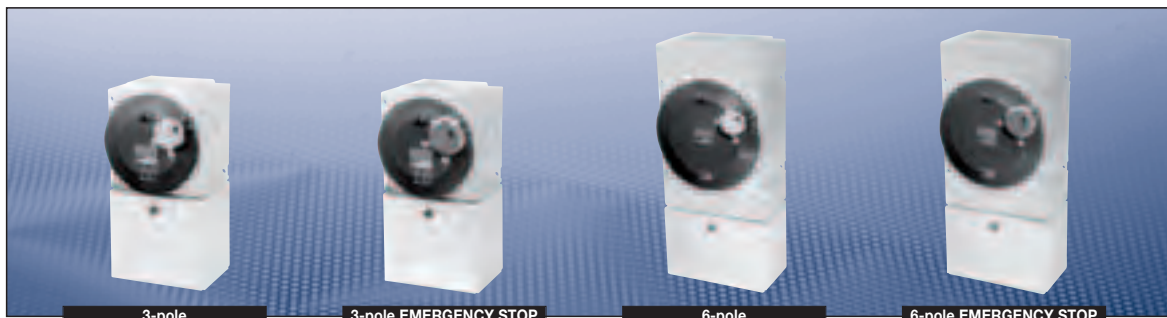
Dimension drawing



Dimensions in mm

1
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12

Ex-Safety switches



3-pole

3-pole EMERGENCY STOP

6-pole

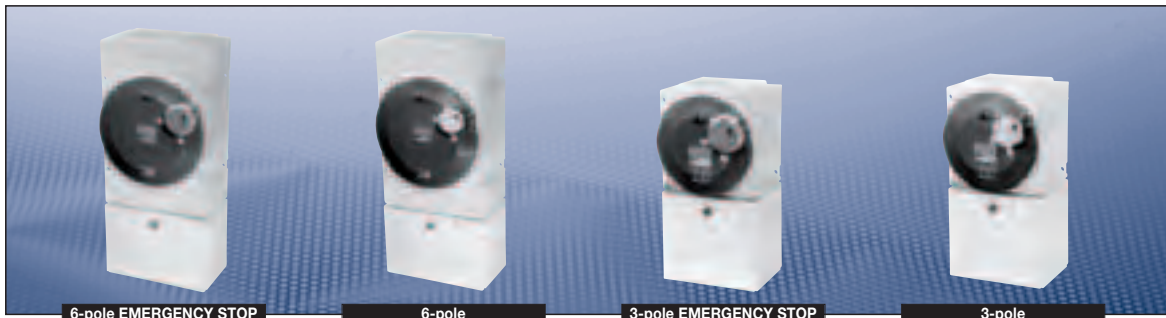
6-pole EMERGENCY STOP

Technical data

Ex-Safety switch 210 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6, T5 or T4 ¹⁾ / Ⓔ II 2 D IP66 T80 °C/T95 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1057	
IECEX Certificate of Conformity	BKI 06.0006	
Marking accd. to IECEX	Ex de ia/ib [ia/ib] IIC T6, T5 or T4 Ex tD A21 IP66 T80 °C, T95 °C or T130 °C	
Permissible ambient temperature	-20 °C to +40 °C	
Rated voltage	up to max. 690 V	
Rated current	max. 210 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 210 A U _e 400 V / I _e 210 A U _e 500 V / I _e 210 A U _e 690 V / I _e 210 A	
Back-up fuse	up to 400 V AC: 250 A gL up to 500 V AC: 250 A gL up to 690 V AC: 200 A gL	
Connecting terminals	Main contact	3-pole 3 x 150 mm ² /95 mm ² 6-pole 6 x 150 mm ² /2 x 95 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP54 (IP65 optional)	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details	
Weight	3-pole	approx. 41.5 kg
	6-pole	approx. 84,5 kg
Enclosure material	aluminium, powder-coated polyester connection box steel, powder-coated	
Colour	Enclosure	grey (RAL 7032)
	Cover	dark grey (RAL 7022)
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Also available with Explosion Group IIB

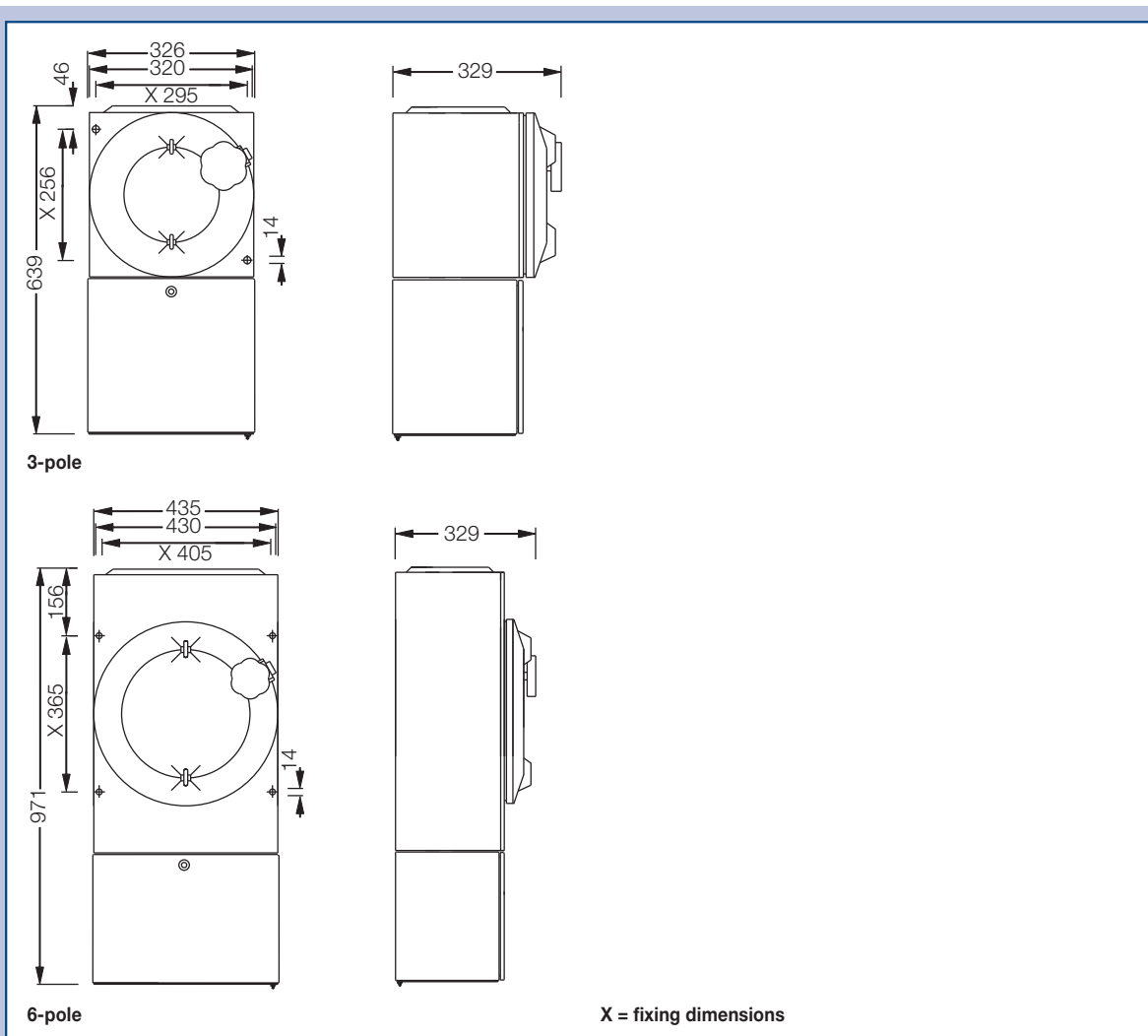


Ordering details

Version	Cable entry	Order No.
Safety switch 210 A 3-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	EXKO 731713 S0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	EXKO 731723 S0001
Safety switch 210 A 6-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
6-pole	4 x M63 / 1 x M25	EXKO 731716 S0001
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 731726 S0001

Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



Dimensions in mm

Ex-Safety switches

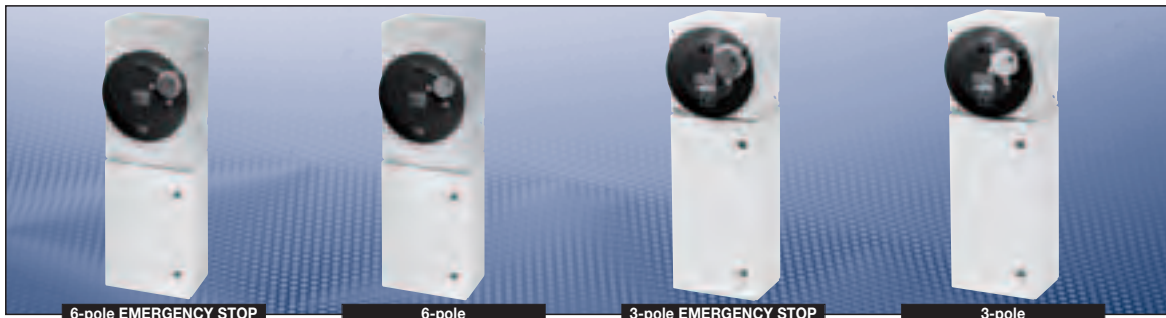


Technical data

Ex-Safety switch 250 A		
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6, T5 or T4 ¹⁾ / Ⓔ II 2 D IP66 T80 °C/T95 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1057	
IECEX Certificate of Conformity	BKI 06.0006	
Marking accd. to IECEx	Ex de ia/ib [ia/ib] IIC T6, T5 or T4 Ex tD A21 IP66 T80 °C, T95 °C or T130 °C	
Permissible ambient temperature	-20 °C to +40 °C ²⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 250 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 250 A U _e 400 V / I _e 250 A U _e 500 V / I _e 250 A U _e 690 V / I _e 250 A	
Back-up fuse	up to 400 V AC: 250 A gL up to 500 V AC: 250 A gL up to 690 V AC: 200 A gL	
Connecting terminals	Main contact	3-pole 3 x 150 mm ² /95 mm ² 6-pole 6 x 150 mm ² /2 x 95 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP54 (IP65 optional)	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details	
Weight	3-pole	approx. 41.5 kg
	6-pole	approx. 84,5 kg
Enclosure material	aluminium, powder-coated polyester connection box steel, powder-coated	
Colour	Enclosure	grey (RAL 7032)
	Cover	dark grey (RAL 7022)
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

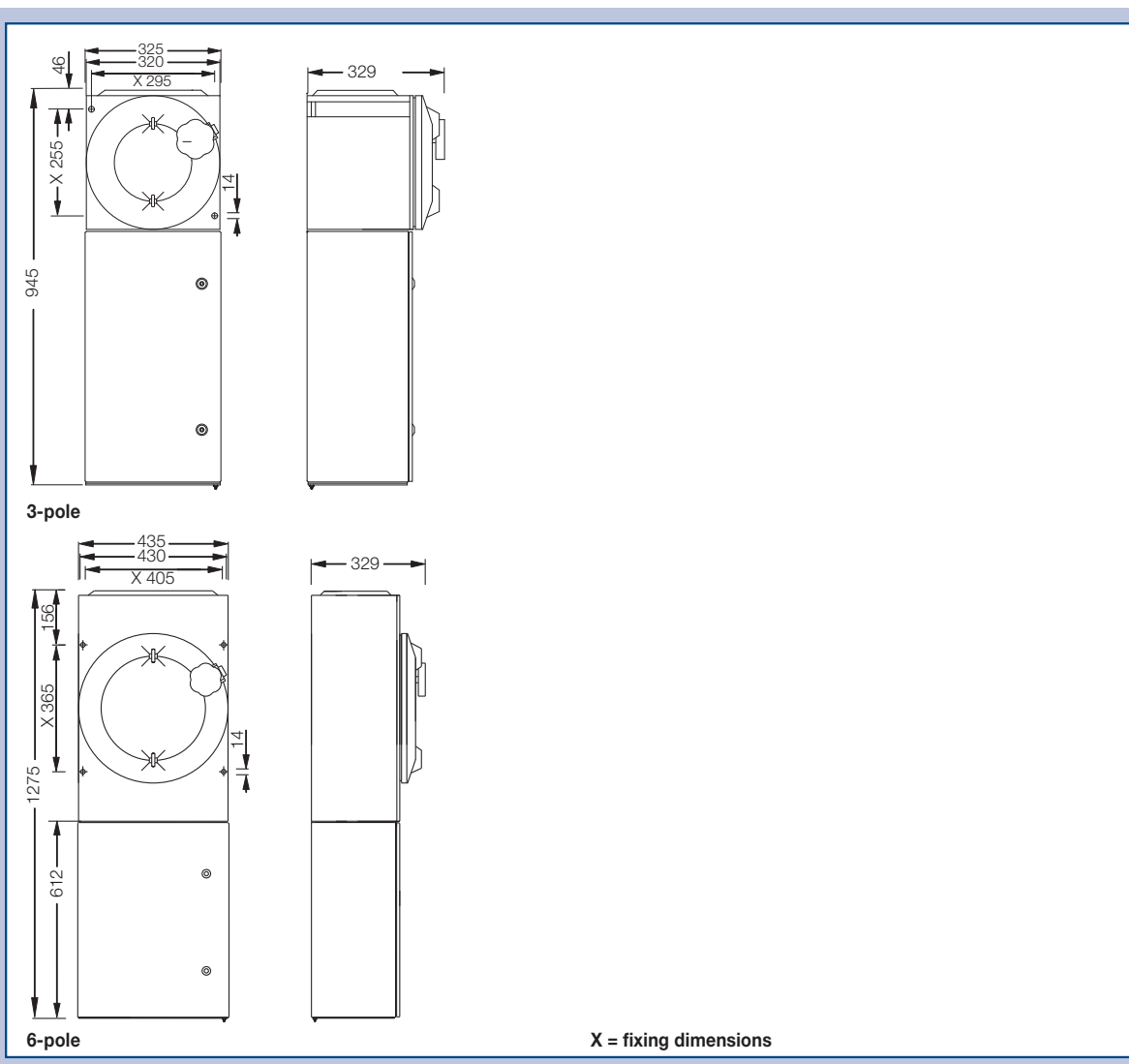


Ordering details

Version	Cable entry	Order No.
Safety switch 250 A 3-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	EXKO 731713 T0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	EXKO 731723 T0001
Safety switch 250 A 6-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
6-pole	4 x M63 / 1 x M25	EXKO 731716 T0001
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 731726 T0001

Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



Dimensions in mm

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Ex-Safety switches

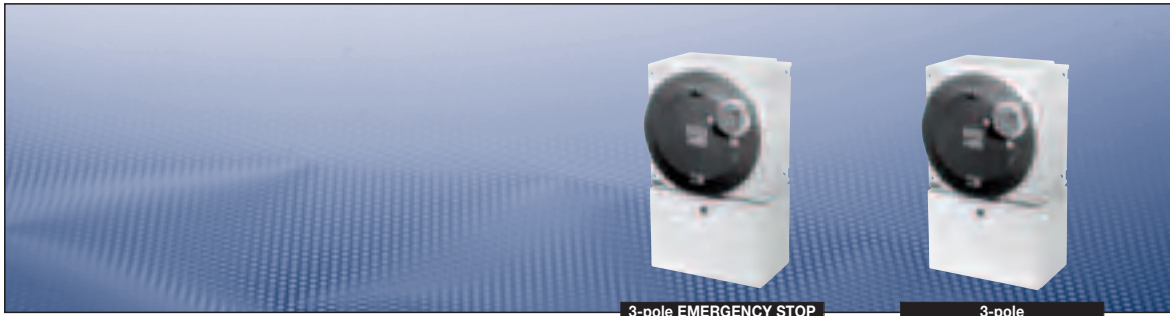


Technical data

Ex-Safety switch 400 A		
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6, T5 or T4 ¹⁾ / Ⓔ II 2 D IP66 T80 °C/T95 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1057	
IECEX Certificate of Conformity	BKI 06.0006	
Marking accd. to IECEx	Ex de ia/ib [ia/ib] IIC T6, T5 or T4 Ex tD A21 IP66 T80 °C, T95 °C or T130 °C	
Permissible ambient temperature	-20 °C to +40 °C ²⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 400 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 400 A U _e 400 V / I _e 400 A U _e 500 V / I _e 400 A U _e 690 V / I _e 400 A	
Back-up fuse	up to 400 V AC: 500 A gL up to 500 V AC: 500 A gL up to 690 V AC: 500 A gL	
Connecting terminals	Main contact	6 x 150 mm ² /2 x 95 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP54 (IP65 optional)	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details	
Weight	approx. 64.5 kg	
Enclosure material	aluminium, powder-coated polyester connection box steel, powder-coated	
Colour	Enclosure	grey (RAL 7032)
	Cover	dark grey (RAL 7022)
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

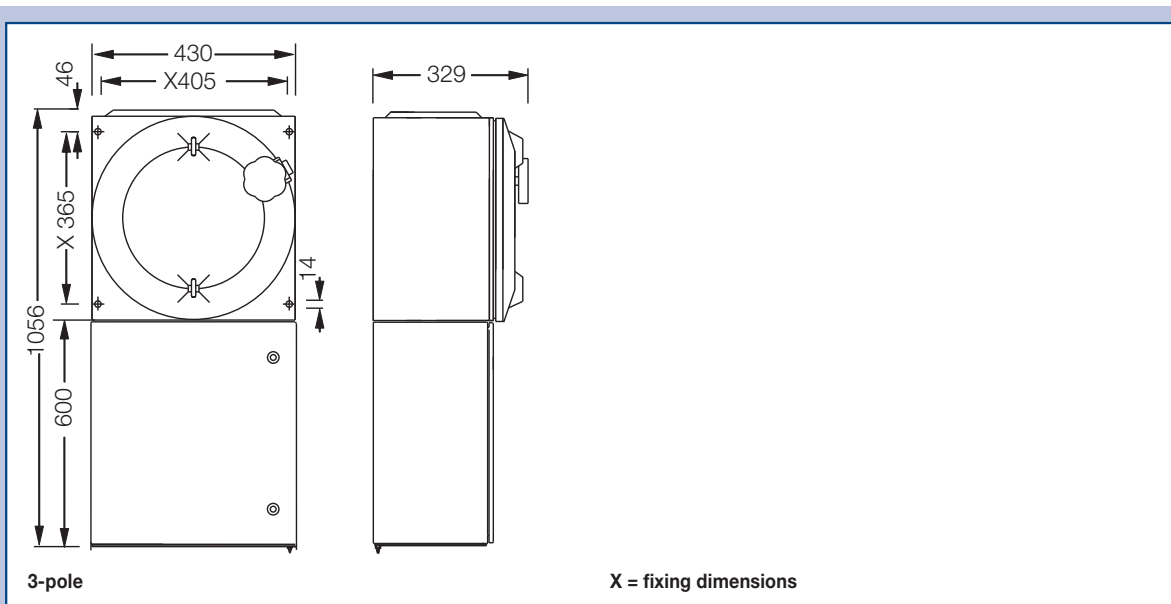


Ordering details

Version	Cable entry	Order No.
Safety switch 400 A 3-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	4 x M63 / 1 x M25	EXKO 731713 U0001
3-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 731723 U0001

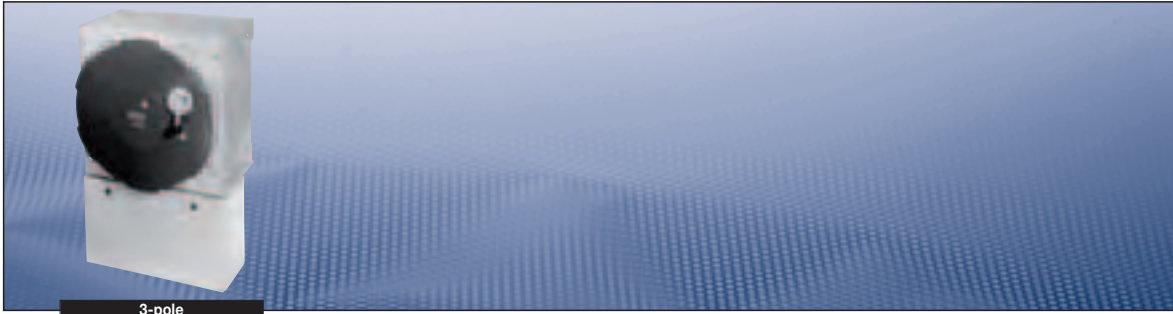
Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



Dimensions in mm

Ex-Safety switches



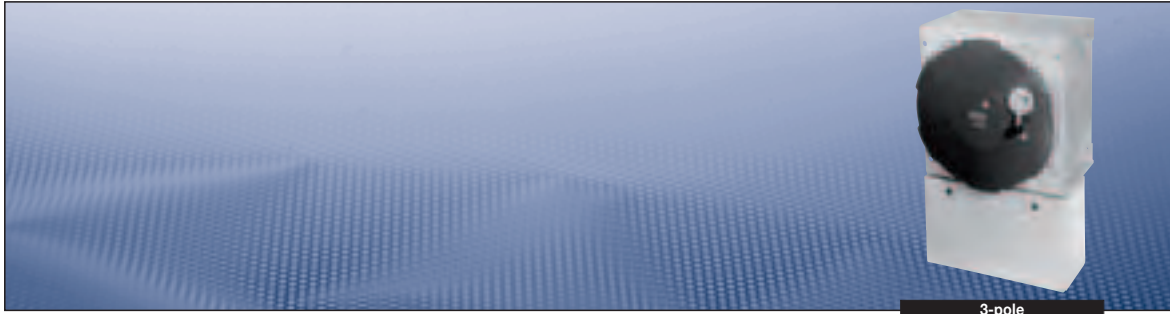
3-pole

Technical data

Ex-Safety switch 630 A		
Marking to 94/9/EC		Ⓔ II 2 G Ex de IIC T6, T5 or T4 ¹⁾ / Ⓔ II 2 D IP66 T80 °C/T95 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6, T5 or T4 Ex tD A21 IP66 T80 °C, T95 °C or T130 °C
Permissible ambient temperature		-20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 630 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 630 A U _e 400 V / I _e 630 A U _e 500 V / I _e 630 A U _e 690 V / I _e 630 A
Back-up fuse		up to 400 V AC: 800 A gL up to 500 V AC: 800 A gL up to 690 V AC: 800 A gL
Connecting terminals	Main contact	6 x 240 mm ² /2 x 120 mm ²
	Auxiliary/Signal contact	2 x 4 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (IP65 optional)
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details M80 (d = 62 - 68 mm) see ordering details
Weight		approx. 245 kg
Enclosure material		steel, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure	grey (RAL 7032)
	Cover	dark grey (RAL 7022)
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request



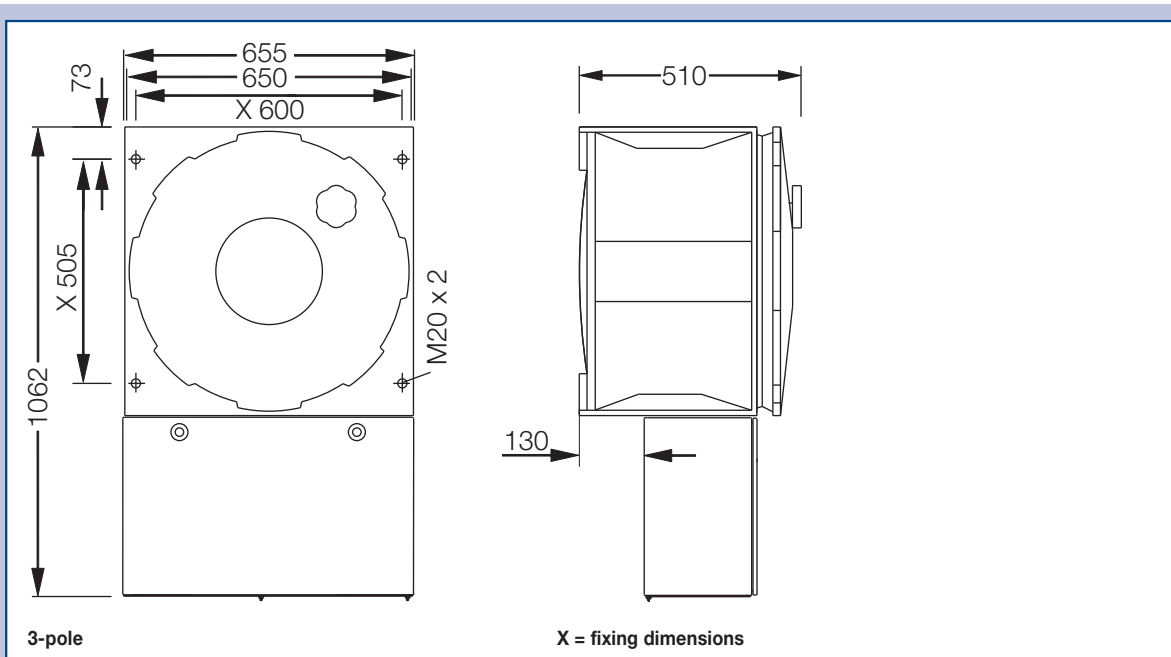
3-pole

Ordering details

Version	Cable entry	Order No.
Safety switch 630 A 3-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole	4 x M80 / 1 x M25	EXKO 731713 V0001
3-pole EMERGENCY STOP	4 x M80 / 1 x M25	EXKO 731723 V0001

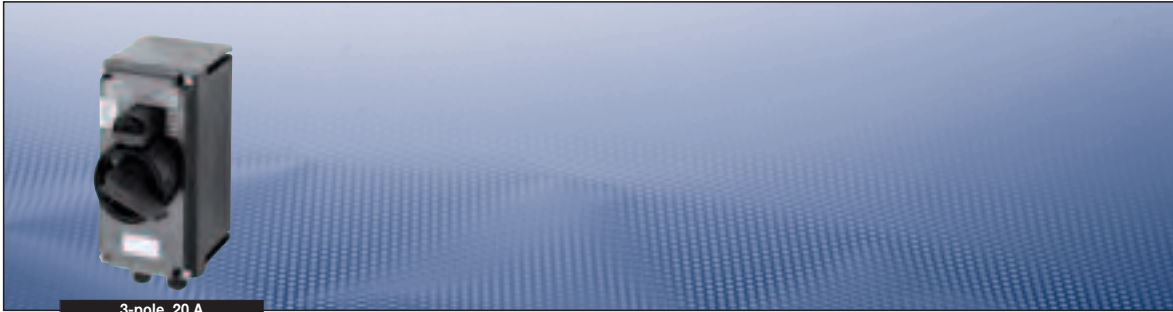
Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



Dimensions in mm

Ex-Safety switches



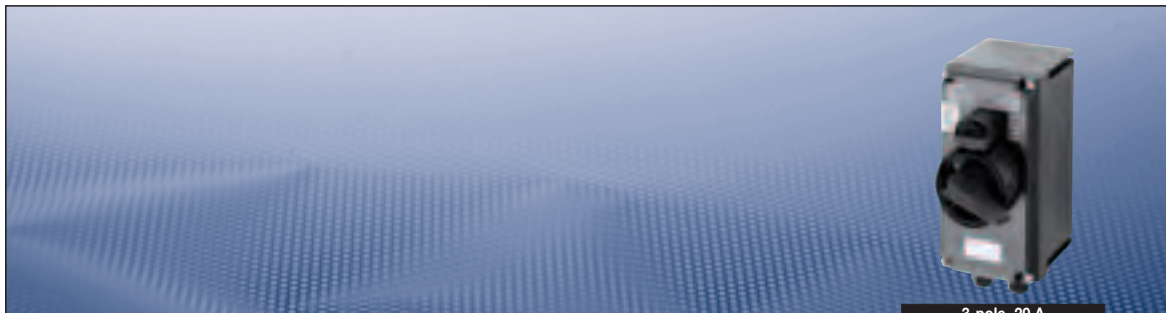
3-pole, 20 A

Technical data

Ex-Safety switch 20 A for variable-speed three-phase drives

Marking to 94/9/EC	Ⓔ II 2 G Ex ed ia IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1161	
IECEX Certificate of Conformity	BKI 07.0012	
Marking accd. to IECEx	Ex ed ia IIC T6 Ex tD A21 IP66 T55 °C	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 20 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 20 A U _e 400 V / I _e 20 A U _e 500 V / I _e 16 A U _e 690 V / I _e 10 A	
Back-up fuse	up to 400 V AC: 35 A gL up to 500 V AC: 35 A gL up to 690 V AC: 25 A gL	
Connecting terminals	Main contact	2 x 4 mm ²
	Auxiliary/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17.5 mm) see ordering details M32 (d = 12 - 21 mm) see ordering details Option: metal flange with 2 x thread	
Weight	approx. 1.48 kg	
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging	
Safety interlock for electronics	1 x NO making - lagging; breaking - leading	

¹⁾ Other ambient temperatures on request



Ordering details

Version	Cable entry	Order No.
Safety switch 20 A		
Version with 2 auxiliary contact (1 x NO; 1 x NC), 1 x safety interlock for electronics (1 x NO)		
3-pole	2 x M32 / 2 x M25	GHG 262 0014 R0001

Customized version on request

Accessories

Mounting plate for Ex-safety switch 20 A variable-speed three-phase drives

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	screw-on	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	GHG 610 1953 R0110
Size 3	Trellis mounting	screw-on	GHG 610 1953 R0118

Accessories for mounting plates

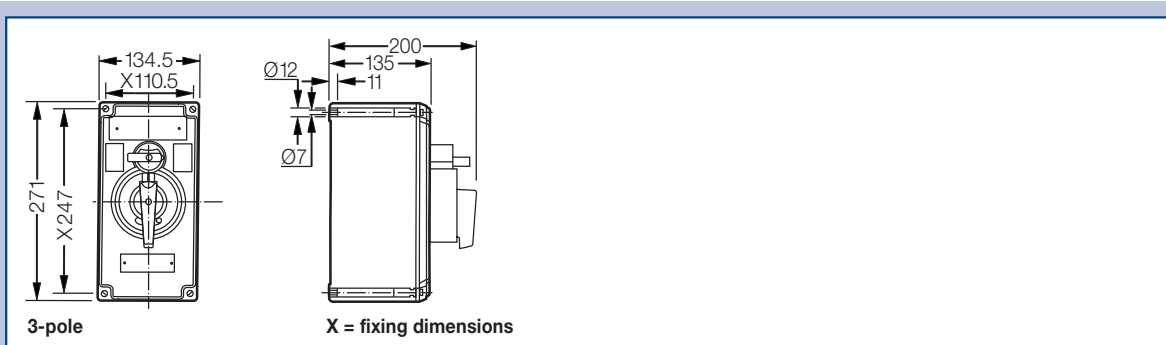
Type	OU	Order No.
Label holder with label (unlabelled) mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) mounting plate for pipe mounting	10	GHG 610 1953 R0020

Accessories canopies for mounting plates

Type	Application	OU	Order No.
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Dimensions in mm

Ex-Safety switches



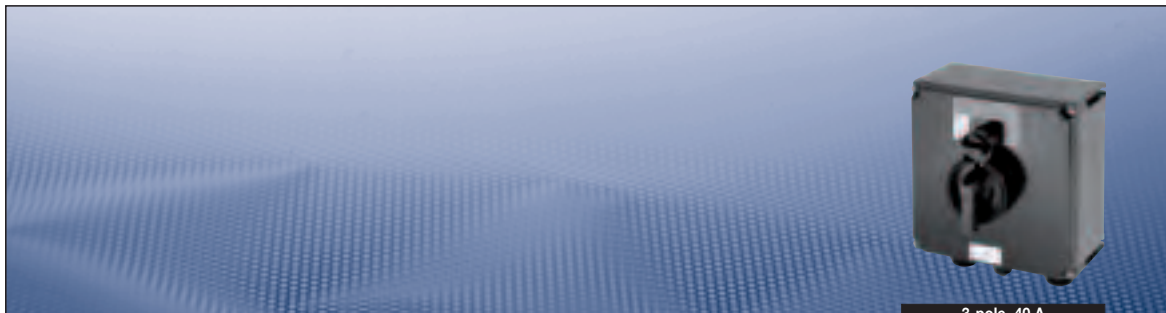
3-pole, 40 A

Technical data

Ex-Safety switch 40 A for variable-speed three-phase drives

Marking to 94/9/EC	Ⓔ II 2 G Ex ed ia IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1161	
IECEX Certificate of Conformity	BKI 07.0012	
Marking accd. to IECEx	Ex ed ia IIC T6 Ex tD A21 IP66 T53 °C	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 40 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 40 A U _e 400 V / I _e 40 A U _e 500 V / I _e 40 A U _e 690 V / I _e 32 A	
Back-up fuse	up to 400 V AC: 80 A gL up to 500 V AC: 80 A gL up to 690 V AC: 63 A gL	
Connecting terminals	Main contact	2 x 16 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17.5 mm) see ordering details M40 (d = 17 - 28 mm) see ordering details M50 (d = 22 - 35 mm) see ordering details Option: metal flange with 2 x thread	
Weight	approx. 4.3 kg	
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging	
Safety interlock for electronics	1 x NO making - lagging; breaking - leading	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Other ambient temperatures on request



3-pole, 40 A

Ordering details

Version	Cable entry	Order No.
Safety switch 40 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC), 1 x safety interlock for electronics (1 x NO)		
3-pole	2 x M40 / 2 x M25	GHG 263 0053 R0001

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-safety switch 125 A/180 A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

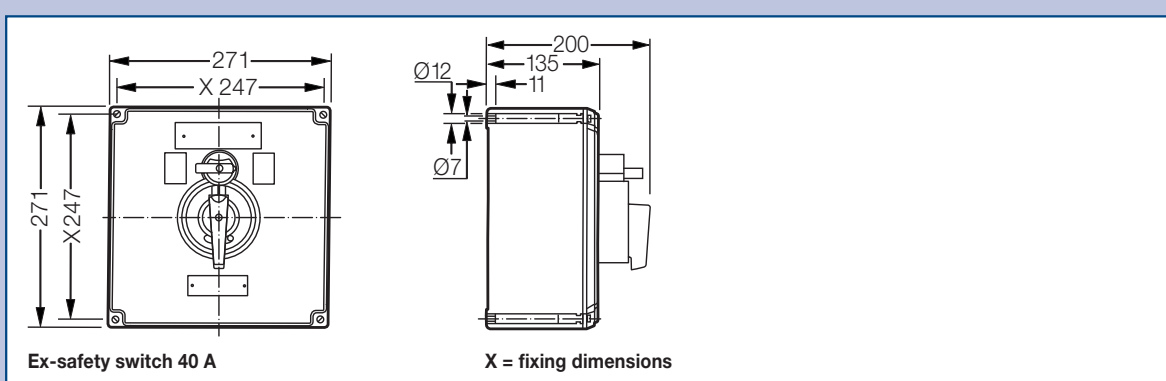
¹⁾ observe mounting distance

Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabelled) mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) mounting plate for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Ex-safety switch 40 A

X = fixing dimensions

Dimensions in mm

Ex-Safety switches



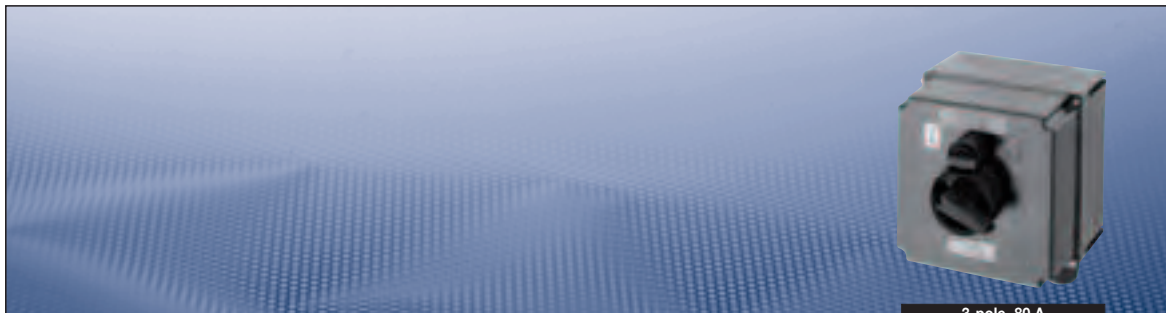
3-pole, 80 A

Technical data

Ex-Safety switch 80 A for variable-speed three-phase drives

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 1091	
IECEX Certificate of Conformity	BKI 07.0010	
Marking accd. to IECEx	Ex ed ia II T6 Ex tD A21 IP66 T53 °C	
Permissible ambient temperature	-20 °C to +40 °C	
Rated voltage	up to max. 690 V	
Rated current	max. 80 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 80 A U _e 400 V / I _e 80 A U _e 500 V / I _e 80 A U _e 690 V / I _e 63 A	
Back-up fuse	up to 400 V AC: 160 A gL up to 500 V AC: 160 A gL up to 690 V AC: 160 A gL	
Connecting terminals	Main contact	2 x 25 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17.5 mm) see ordering details M40 (d = 17 - 28 mm) see ordering details M50 (d = 22 - 35 mm) see ordering details Option: metal flange with 2 x thread	
Weight	approx. 7.25 kg	
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging	
Safety interlock for electronics	1 x NO making - lagging; breaking - leading	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

¹⁾ Other ambient temperatures on request



3-pole, 80 A

Ordering details

Version	Cable entry	Order No.
Safety switch 80 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC), 1 x safety interlock for electronics (1 x NO)		
3-pole	2 x M50 / 2 x M25	GHG 264 0024 R0001

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-safety switch 80 A variable-speed three-phase drives

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

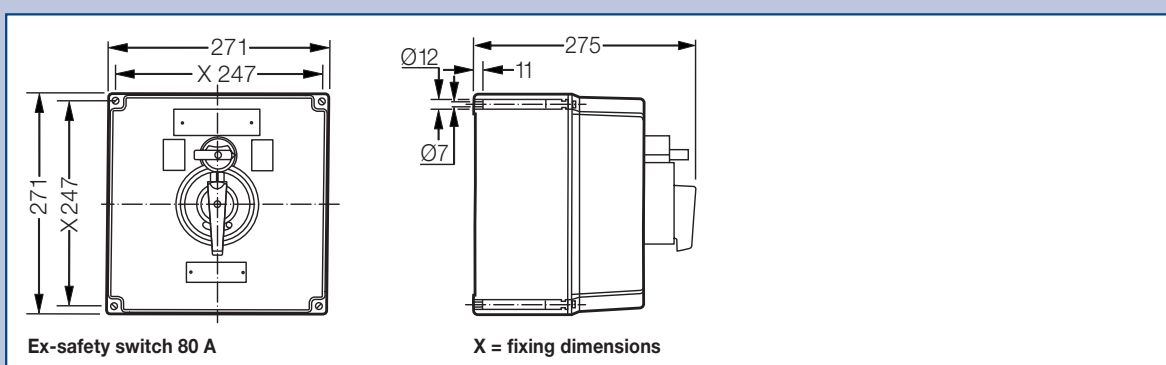
¹⁾ observe mounting distance

Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabelled) mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) mounting plate for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Ex-safety switch 80 A

X = fixing dimensions

Dimensions in mm

INDUSTRIAL SAFETY SWITCHES

CEAG safety switches can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

Full AC 3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts and optional EMERGENCY STOP versions according to EN 60204-1 are further features offered by CEAG safety switches. Additional lagging/leading auxiliary contacts guarantee double safety for extreme switching conditions.

The safety switches feature an installation-friendly design and easily accessible connection terminals.

For rough industrial environments we use the proven enclosures from the explosion-protection areas:

impact-resistant, modified moulded-plastic enclosures made of glass-fibre-reinforced polyester, powder-coated steel or stainless steel 316 L. These can be optionally supplied with snap-on moulded plastic or brass flanges. Metal versions can be equipped with screw-on flanges.

Up to 630 A the high degree of protection, IP66, is guaranteed.



- Full AC-3 switching capacity
- Double safety: additional auxiliary contact
- Cost-saving installation
- Up to 40 A: snap mounting
- Up to 630 A: IP66 protection



Technical data

Industrial-Safety switch 10 A

Permissible ambient temperature	-20 °C to +40 °C	
Rated voltage	up to max. 500 V	
Rated current	max. 10 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 10 A	
	U _e 400 V / I _e 10 A	
	U _e 500 V / I _e 10 A	
Back-up fuse	up to 400 V AC: 20 A gL	
	up to 500 V AC: 16 A gL	
Connecting terminals	Main contact	2 x 1.5 - 2.5 mm ²
	Auxiliary-/Signal contact	2 x 0.5 - 2.5 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M20 (d = 5 - 13 mm) see ordering details	
	M25 (d = 8 - 17 mm) see ordering details	
Weight	0.55 kg	
Enclosure material	impact resistant polyamide	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

Industrial safety switches



3-pole

3-pole EMERGENCY STOP

Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 10 A		
3-pole	2 x M25 / 1 x M20	GHG 981 0014 R0011
3-pole EMERGENCY STOP	2 x M25 / 1 x M20	GHG 981 0014 R0012

Customized version on request

Accessories

Mounting plate for industrial-safety switch 10 A 3-pole

Type	Application	Fixing technique	Order No.
Size 1	Wall mounting	screw-on	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	GHG 610 1953 R0102
Size 1	Trellis mounting	screw-on	GHG 610 1953 R0103

Accessories for mounting plates

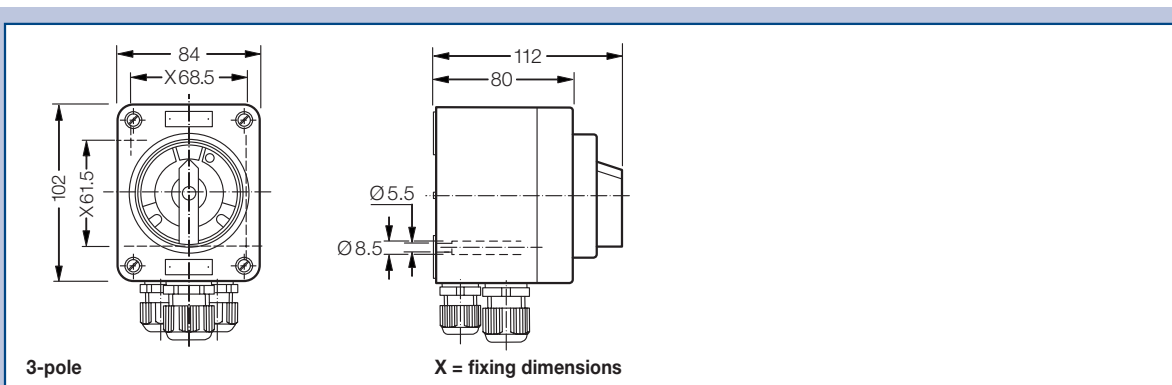
Type	OU	Order No.
Label holder with label (unlabelled) mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) mounting plate for pipe mounting	10	GHG 610 1953 R0020

Accessories canopies for mounting plates

Type	Application	OU	Order No.
Size 1	mounting plate size 1	1	GHG 610 1955 R0101

Please note that we can only deliver in the ordering units (OU) stated in the tables above

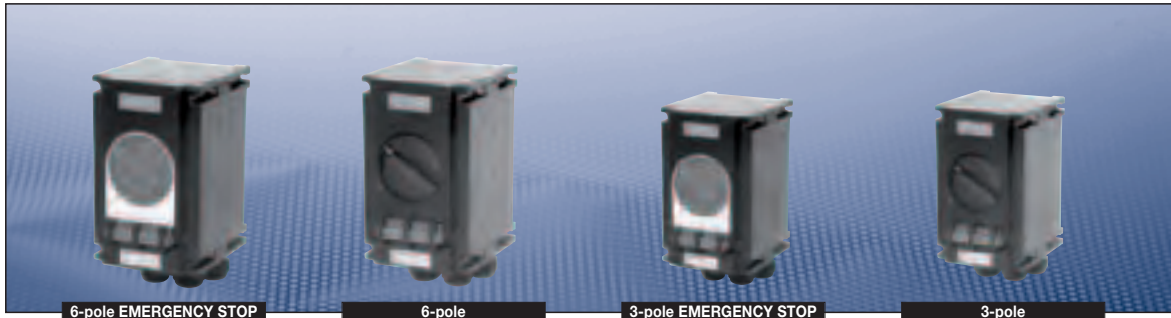
Dimension drawing



3-pole

X = fixing dimensions

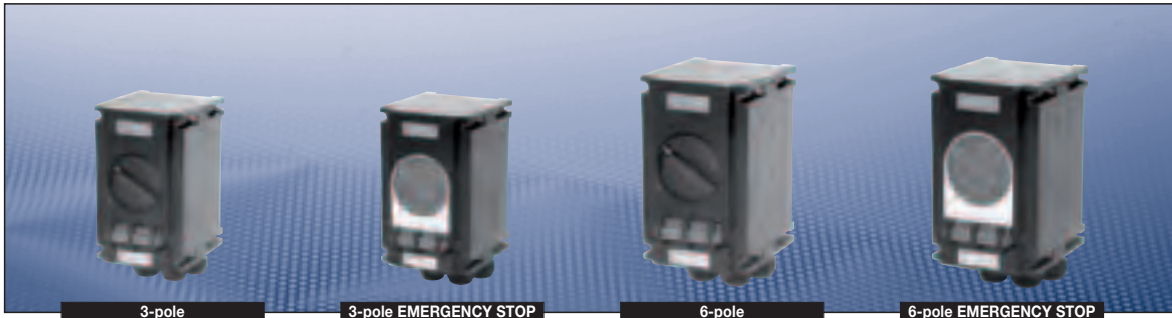
Dimensions in mm



Technical data

Industrial-Safety switch 25 A		
Permissible ambient temperature		-20 °C to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 25 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 20 A
		U _e 400 V / I _e 20 A
		U _e 500 V / I _e 16 A
		U _e 690 V / I _e 10 A
Back-up fuse		up to 400 V AC: 35 A gL
		up to 500 V AC: 35 A gL
		up to 690 V AC: 25 A gL
Connecting terminals	Main contact	2 x 4 mm ²
	Auxiliary-/Signal contact	2 x 0.5 - 2.5 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP66
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details
		M32 (d = 12 - 21 mm) see ordering details
		Option: metal flange with 2 x thread
Weight	3-pole	approx. 1.48 kg
	6-pole	approx. 2.43 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading
		1 x NC (only 6-pole version) making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks

Industrial safety switches



3-pole

3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 25 A 3-pole		
Version with 1 auxiliary contact (NO)		
3-pole	2 x M32 / 1 x M25	GHG 981 0037 R0001
3-pole EMERGENCY STOP	2 x M32 / 1 x M25	GHG 981 0037 R0002
Industrial-Safety switch 25 A 6-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
6-pole	4 x M32 / 1 x M25	GHG 981 0038 R0001
6-pole EMERGENCY STOP	4 x M32 / 1 x M25	GHG 981 0038 R0002

Customized version on request

Accessories

Mounting plate for industrial-safety switch 25 A 3-pole

Type	Application	Fixing technique	Order No.
Size 2	Wall mounting	snap-on	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	GHG 610 1953 R0106

Mounting plate for industrial-safety switch 25 A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Snap-on for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 each	10	GHG 610 1953 R0041
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

Type	Application	OU	Order No.
Size 2	for mounting plates size 2	1	GHG 610 1955 R0102
Size 2A	for mounting plates size 2A	1	GHG 610 1955 R0103
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above



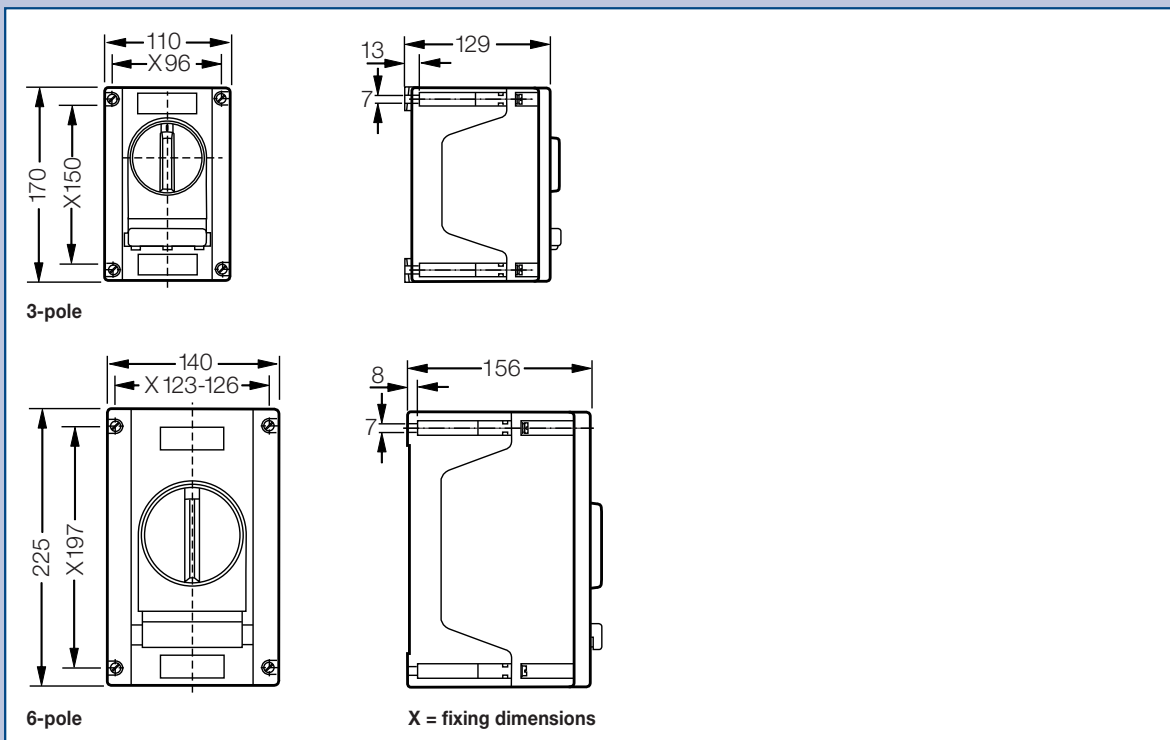
6-pole EMERGENCY STOP

6-pole

3-pole EMERGENCY STOP

3-pole

Dimension drawing



Dimensions in mm

Industrial safety switches



3-pole

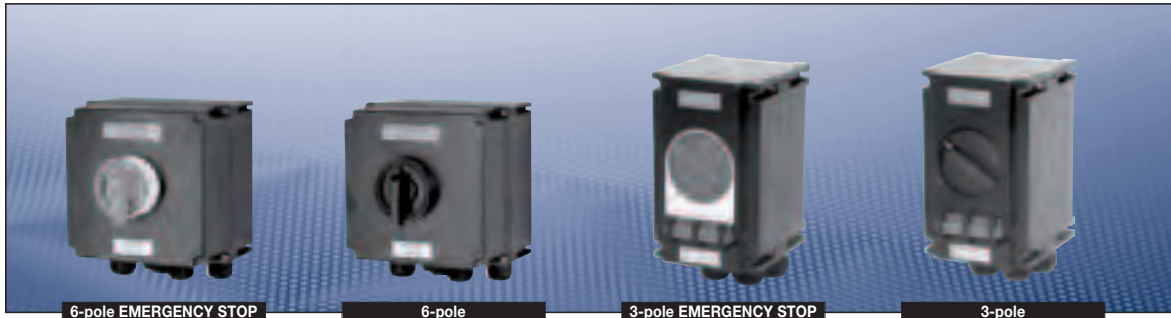
3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

Technical data

Industrial-Safety switch 40 A		
Permissible ambient temperature		-20 °C to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 40 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 40 A U _e 400 V / I _e 40 A U _e 500 V / I _e 40 A U _e 690 V / I _e 32 A
Back-up fuse		up to 400 V AC: 80 A gL up to 500 V AC: 80 A gL up to 690 V AC: 63 A gL
Connecting terminals	Main contact	2 x 16 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP66
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details M40 (d = 16 - 28 mm) see ordering details Option: metal flange on request
Weight	3-pole	approx. 2.30 kg
	6-pole	approx. 6.50 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks



Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 40 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
3-pole	2 x M40 / 1 x M25	GHG 981 0039 R0001
3-pole EMERGENCY STOP	2 x M40 / 1 x M25	GHG 981 0039 R0002
Industrial-Safety switch 40 A 6-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
6-pole	4 x M40 / 1 x M25	GHG 981 0024 R0001
6-pole EMERGENCY STOP	4 x M40 / 1 x M25	GHG 981 0024 R0002

Customized version on request

Accessories

Mounting plate for industrial-safety switch 40 A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for industrial-safety switch 40 A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Snap-on for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 each	10	GHG 610 1953 R0041
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

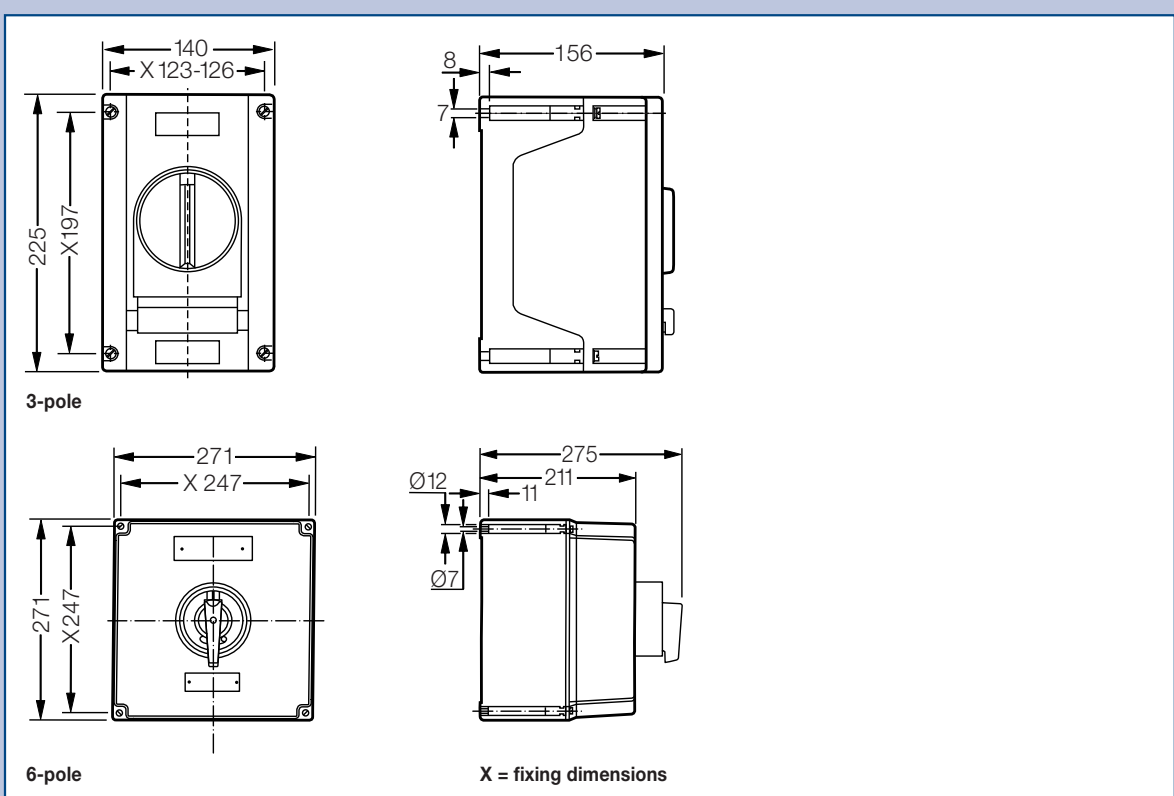
Type	Application	OU	Order No.
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Industrial safety switches



Dimension drawing



Dimensions in mm



Technical data

Industrial-Safety switch 80 A		
Permissible ambient temperature		-20 °C to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 80 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 80 A U _e 400 V / I _e 80 A U _e 500 V / I _e 80 A U _e 690 V / I _e 80 A
Back-up fuse		up to 400 V AC: 160 A gL up to 500 V AC: 160 A gL up to 690 V AC: 125 A gL
Connecting terminals	Main contact	2 x 25 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP66
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details M50 (d = 21 - 35 mm) see ordering details Option: metal flange with 2 x thread
Weight	3-pole	approx. 6.50 kg
	6-pole	approx. 9.00 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks

Industrial safety switches



3-pole

3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 80 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
3-pole	2 x M50 / 1 x M25	GHG 981 0025 R0001
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	GHG 981 0025 R0002
Industrial-Safety switch 80 A 6-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
6-pole	4 x M50 / 1 x M25	GHG 981 0026 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 981 0026 R0002

Customized version on request

Accessories

Mounting plate for industrial-safety switch

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

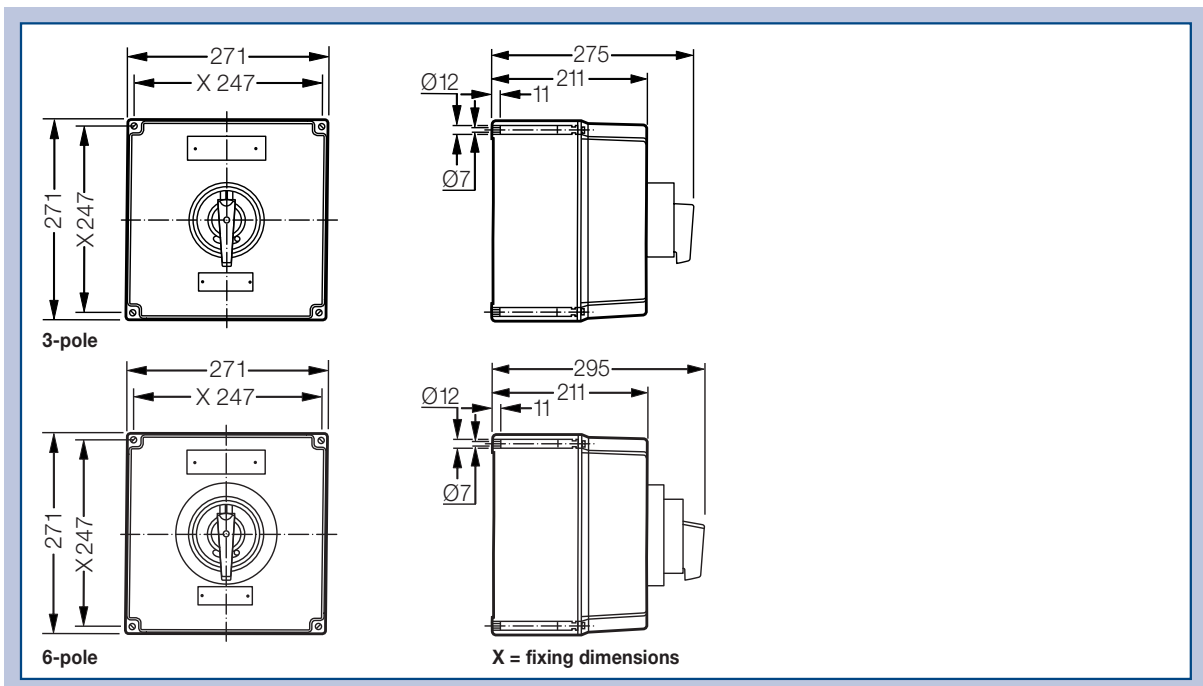
¹⁾ observe mounting distance

Accessories for mounting plates

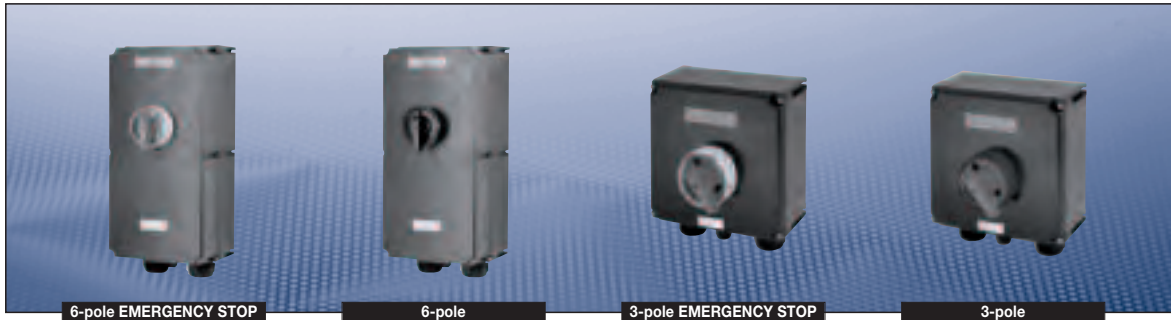
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Dimensions in mm



Technical data

Industrial-Safety switch 100 A		
Permissible ambient temperature		-20 °C to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 100 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 100 A U _e 400 V / I _e 100 A U _e 500 V / I _e 100 A U _e 690 V / I _e 100 A
Back-up fuse		up to 400 V AC: 200 A gL up to 500 V AC: 200 A gL up to 690 V AC: 160 A gL
Connecting terminals	Main contact	1 x 50/70 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP66
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details M50 (d = 21 - 35 mm) see ordering details Option: metal flange with 2 x thread
Weight	3-pole	approx. 9.50 kg
	6-pole	approx. 16.00 kg
Enclosure material	3-pole	glass-fibre reinforced polyester
	6-pole	steel, powder-coated
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks

Industrial safety switches



3-pole

3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 100 A 3-pole		
Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
3-pole	2 x M50 / 1 x M25	GHG 981 0029 R0004
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	GHG 981 0029 R0005
Industrial-Safety switch 100 A 6-pole		
Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
6-pole	4 x M50 / 1 x M25	GHG 981 0030 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 981 0030 R0002

Customized version on request

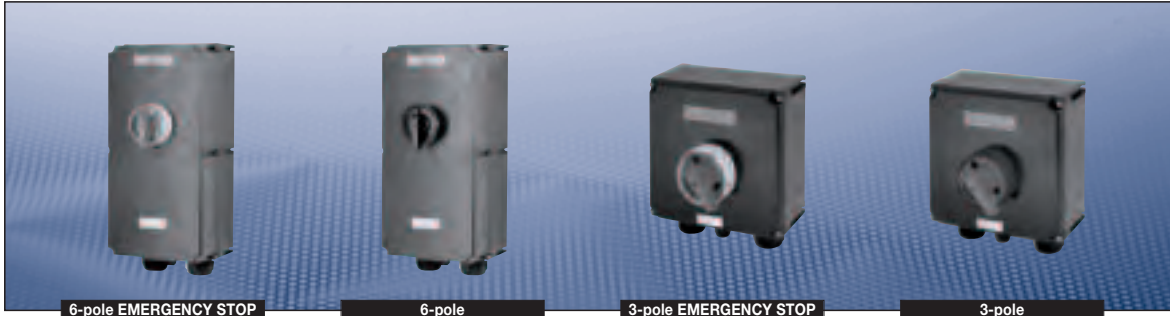
Accessories

Mounting plate for industrial-safety switch			
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

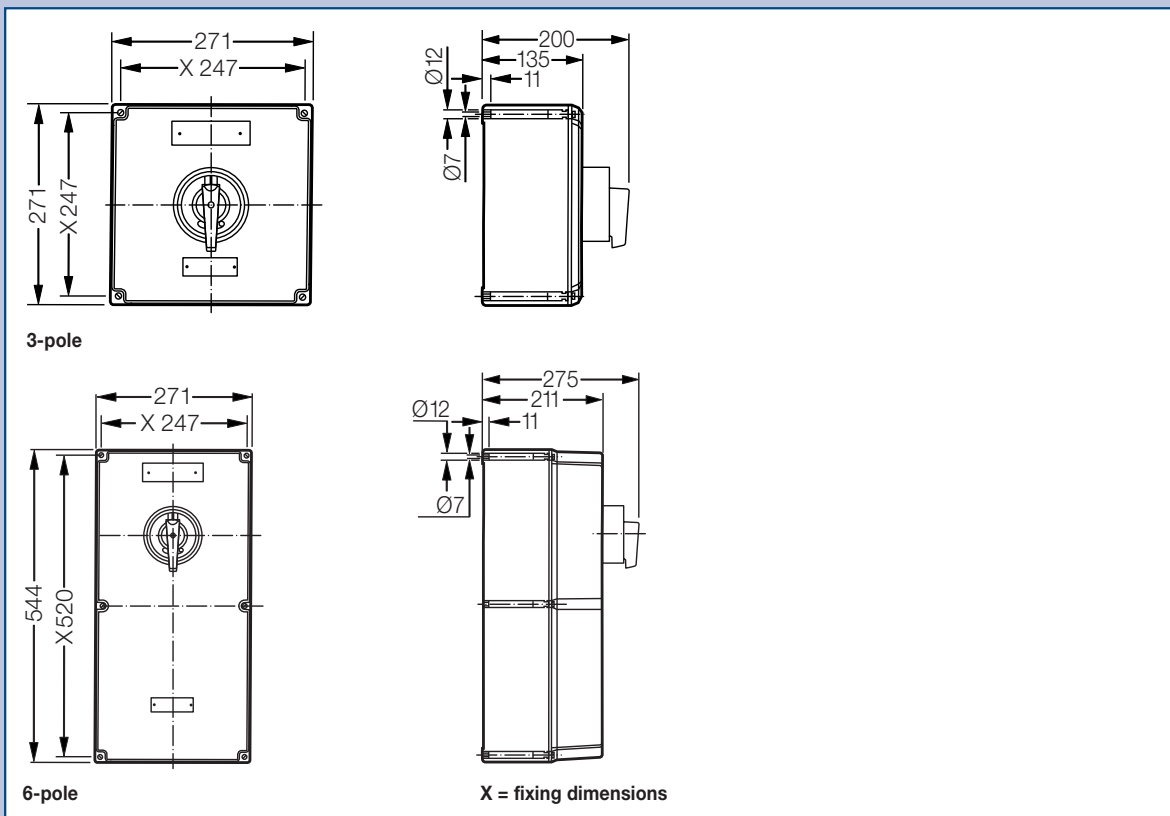
¹⁾ observe mounting distance

Accessories for mounting plates		
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above



Dimension drawing



Dimensions in mm

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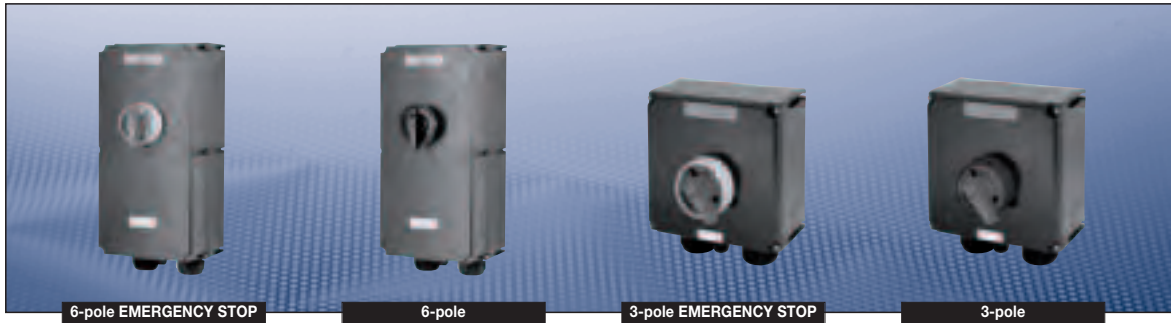
Industrial safety switches



Technical data

Industrial-Safety switch 160 A

Permissible ambient temperature		-20 °C to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 160 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 160 A U _e 400 V / I _e 160 A U _e 500 V / I _e 160 A U _e 690 V / I _e 160 A
Back-up fuse		up to 400 V AC: 250 A gL up to 500 V AC: 250 A gL up to 690 V AC: 200 A gL
Connecting terminals	Main contact	1 x 95 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP66
Cable glands/enclosure drilling		M25 (d = 8 - 17 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details Double cable end box (d = 46 -72 mm) Option: metal flange with 2 x thread
Weight	3-pole	approx. 9.00 kg
	6-pole	approx. 16.50 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking		can be locked in OFF position with 3 commercially available padlocks



Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 160 A 3-pole		
Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
3-pole	2 x M63 / 1 x M25	GHG 981 0031 R0003
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	on request

Industrial-Safety switch 160 A 6-pole		
Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
6-pole	4 x M50 / 1 x M25	GHG 981 0032 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 981 0032 R0002

Customized version on request

Accessories

Mounting plate for industrial-safety switch			
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

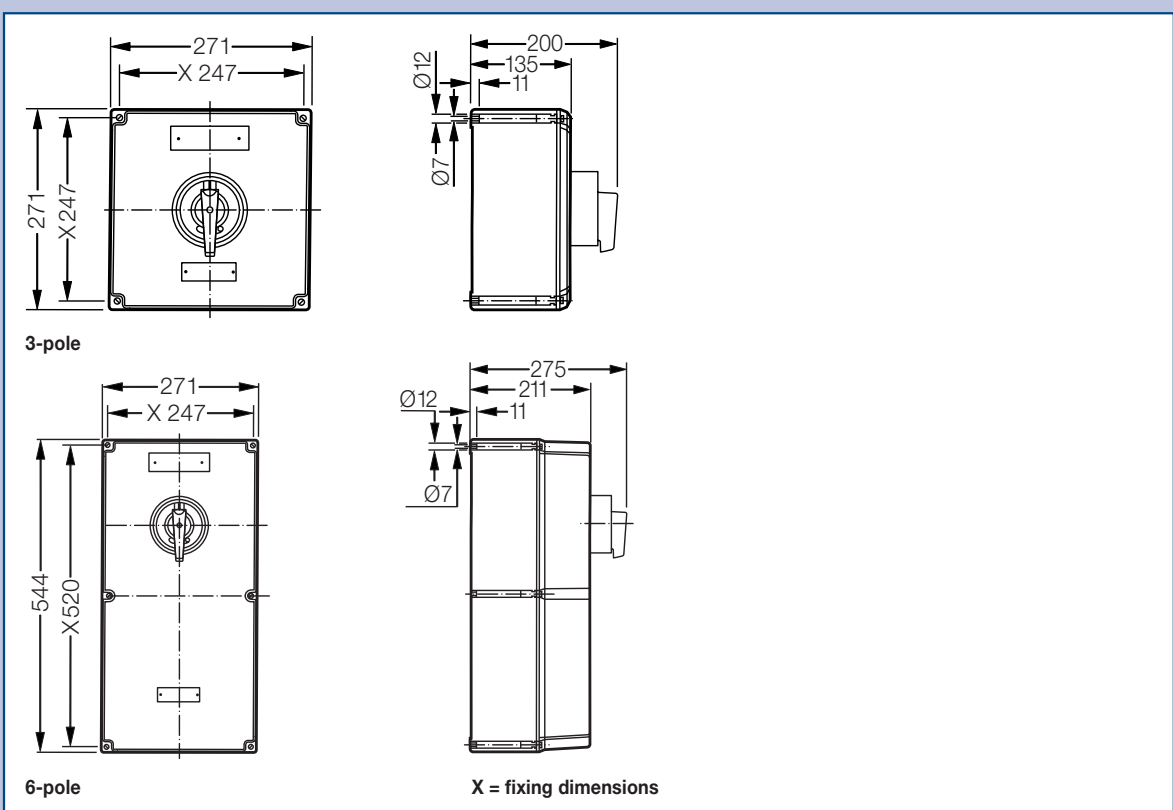
Accessories for mounting plates		
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Please note that we can only deliver in the ordering units (OU) stated in the tables above

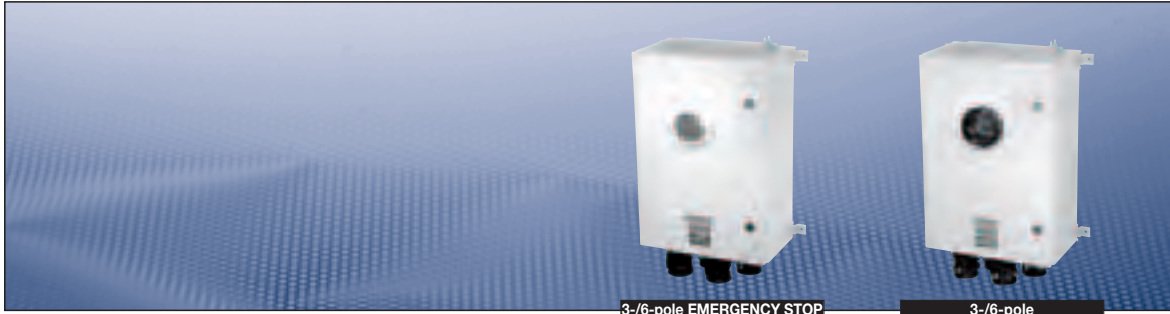
Industrial safety switches



Dimension drawing



Dimensions in mm

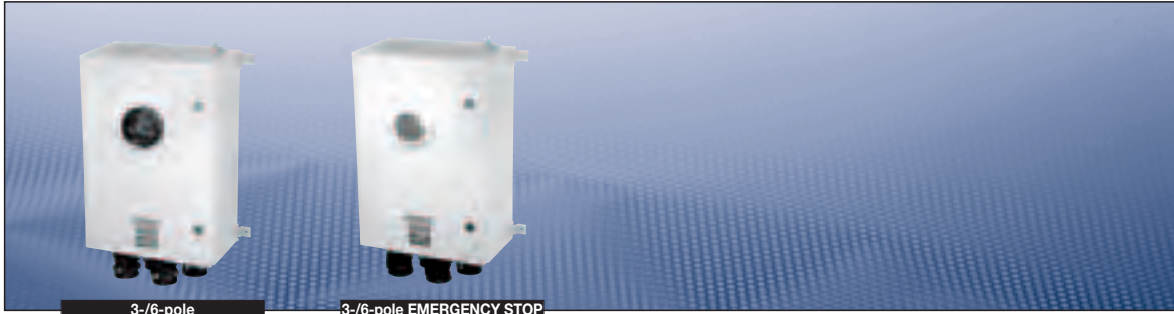


Technical data

Industrial-Safety switch 250 A

Permissible ambient temperature	-20 °C to +40 °C	
Rated voltage	up to max. 690 V	
Rated current	max. 250 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 250 A	
	U _e 400 V / I _e 250 A	
	U _e 500 V / I _e 250 A	
	U _e 690 V / I _e 250 A	
Back-up fuse	up to 400 V AC: 250 A gL	
	up to 500 V AC: 200 A gL	
	up to 690 V AC: 200 A gL	
Connecting terminals	Main contact	3-pole 3 x 150 mm ² /95 mm ²
		6-pole 6 x 150 mm ² /2 x 95 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP65	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details	
	M63 (d = 27 - 48 mm) see ordering details	
Weight	3-pole	approx. 18 kg
	6-pole	approx. 31 kg
Enclosure material	steel, powder-coated	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading	
	1 x NC making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

Industrial safety switches

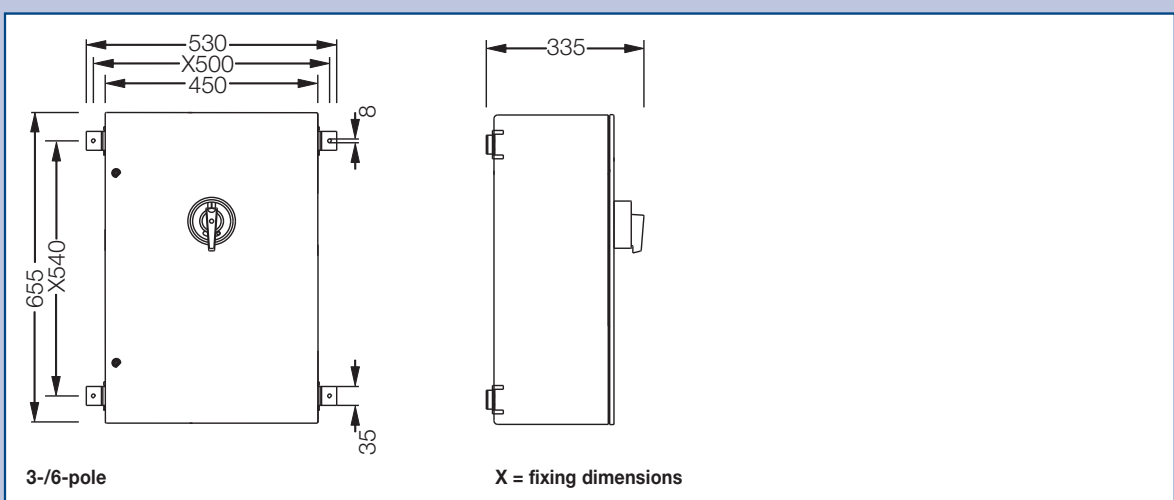


Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 250 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	KO 731713 W0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	KO 731723 W0001
Industrial-Safety switch 250 A 6-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
6-pole	4 x M63 / 1 x M25	KO 731716 W0001
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	KO 731726 W0001

Customized version on request

Dimension drawing



Dimensions in mm



Technical data

Industrial-Safety switch 400 A	
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	up to max. 690 V
Rated current	max. 250 A
Frequency	50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 400 A U _e 400 V / I _e 400 A U _e 500 V / I _e 400 A U _e 690 V / I _e 400 A
Back-up fuse	up to 400 V AC: 500 A gL up to 500 V AC: 500 A gL up to 690 V AC: 500 A gL
Connecting terminals	Main contact 3 x 150 mm ² /95 mm ² Auxiliary-/Signal contact 2 x 4 mm ²
Insulation class	I
Degree of protection accd. EN 60529	IP65
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M63 (d = 27 - 48 mm) see ordering details
Weight	approx. 39.50 kg
Enclosure material	steel, powder-coated
Enclosure colour	black
Auxiliary contact	1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking	can be locked in OFF position with 3 commercially available padlocks

Industrial safety switches

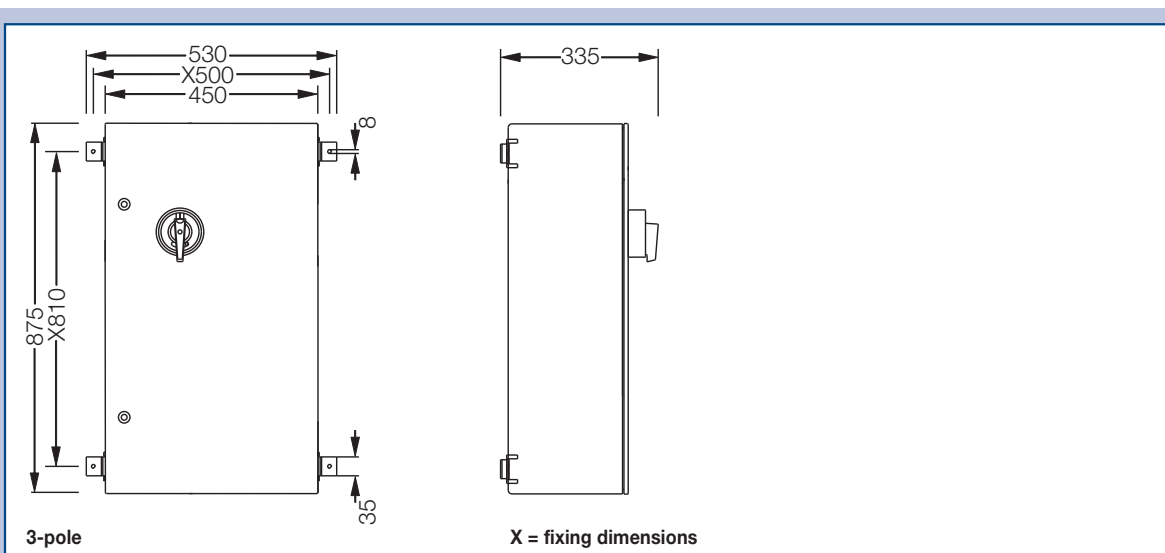


Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 400 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	KO 731713 X0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	KO 731723 X0001

Customized version on request

Dimension drawing



Dimensions in mm



Technical data

Industrial-Safety switch 630 A

Permissible ambient temperature	-20 °C to +40 °C	
Rated voltage	up to max. 690 V	
Rated current	max. 630 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 630 A	
	U _e 400 V / I _e 630 A	
	U _e 500 V / I _e 630 A	
	U _e 690 V / I _e 630 A	
Back-up fuse	up to 400 V AC: 800 A gL	
	up to 500 V AC: 800 A gL	
	up to 690 V AC: 800 A gL	
Connecting terminals	Main contact	3 x 240 mm ² /120 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP65	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details	
	M80 (d = 62 - 68 mm) see ordering details	
Weight	approx. 40.50 kg	
Enclosure material	steel, powder-coated	
Enclosure colour	black	
Auxiliary contact	1 x NO making - lagging; breaking - leading	
	1 x NC making - leading; breaking - lagging	
Padlocking	can be locked in OFF position with 3 commercially available padlocks	

Industrial safety switches

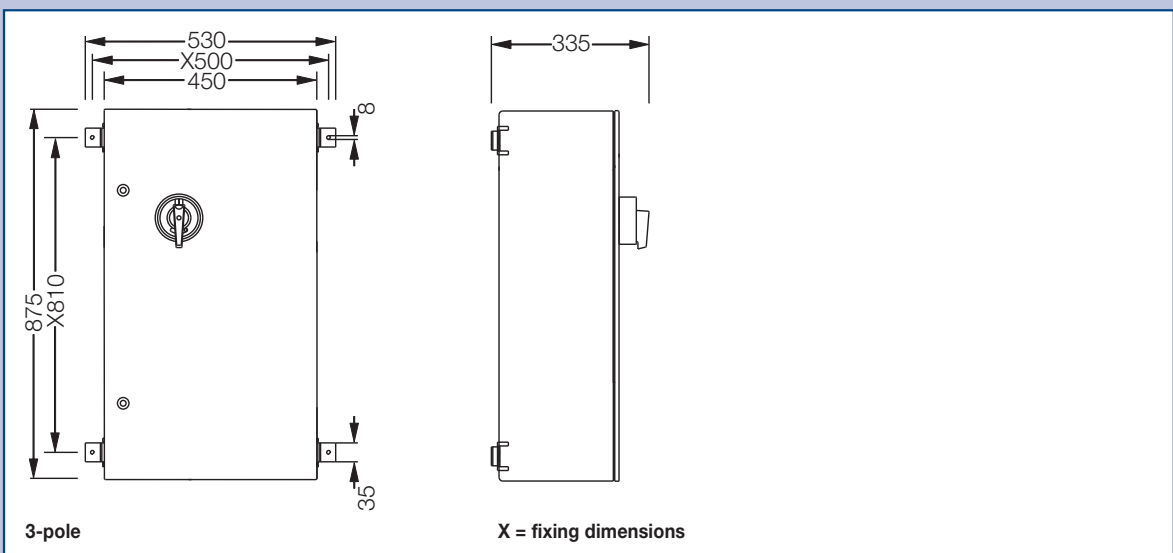


Ordering details

Version	Cable entry	Order No.
Industrial-Safety switch 630 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
3-pole	4 x M80 / 1 x M25	KO 731713 Y0001
3-pole EMERGENCY STOP	4 x M80 / 1 x M25	KO 731723 Y0001

Customized version on request

Dimension drawing



Dimensions in mm

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EX - MAIN CURRENT SWITCHES

Up to 630 A

CEAG main current switches in a number of versions can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position.

Full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts according to EN 60204-1 are just some of the eminent features offered by CEAG's main current switches.

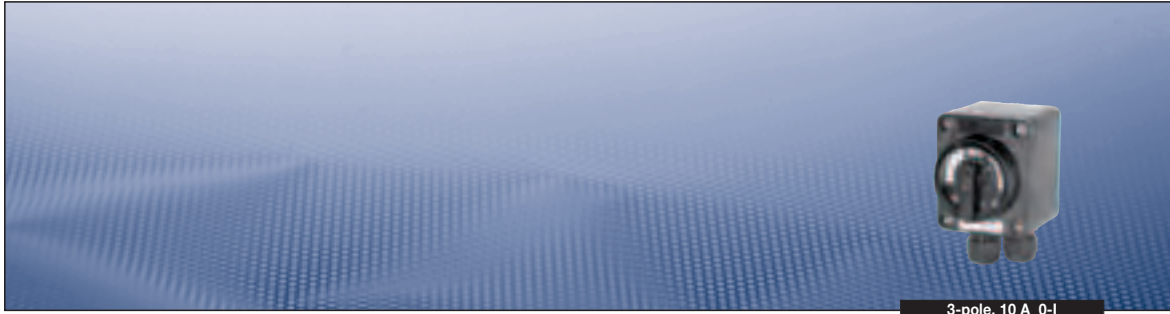
The main current switches feature an installation-friendly design and easily accessible connection terminals. Versions in impact-resistant polyamide or glass-fibre-reinforced polyester guarantee the high degree of protection IP66 for amperages up to 180 A. These can be optionally supplied with snap-on moulded plastic or brass flanges. They can be equipped with screw-on flanges.

Main current switches >180 A are realized in metal enclosures.

Internationally approved.



- Full AC-3 switching capacity
- Cost-saving installation
- Variants: star, delta, Dahlander or reversing switches up to 80 A
- Up to 40 A: snap mounting
- Up to 180 A: IP66 protection



3-pole, 10 A 0-I

Technical data

Ex-Main current switch 10 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 1074	
IECEX Certificate of Conformity	BKI 07.0014	
Marking accd. to IECEx	Ex ed IIC T6 Ex tD A21 IP66 T53 °C	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 500 V	
Rated current	max. 80 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 10 A U _e 400 V / I _e 10 A U _e 500 V / I _e 10 A	
Back-up fuse	up to 400 V AC: 10 A gL up to 500 V AC: 10 A gL	
Connecting terminals	Main contact	2 x 1.5 - 2.5 mm ²
	Auxiliary-/Signal contact	2 x 0.5 - 2.5 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details	
Weight	approx. 0.60 kg	
Enclosure material	impact resistant polyamide	
Enclosure colour	black	

¹⁾ Other ambient temperatures on request

Ex-Main current switches



3-pole, 10 A 0-I

Ordering details

Version	Cable entry	Order No.
Ex-Main current switch 10 A 3-pole 0-I	2 x M25	ON-OFF switch GHG 261 0006 R0001

Customized version on request

Accessories

Mounting plate for Ex-main current switch 10 A 3-pole

Type	Application	Fixing technique	Order No.
Size 1	Wall mounting	screw-on	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	GHG 610 1953 R0102
Size 1	Trellis mounting	screw-on	GHG 610 1953 R0103

Accessories for mounting plates

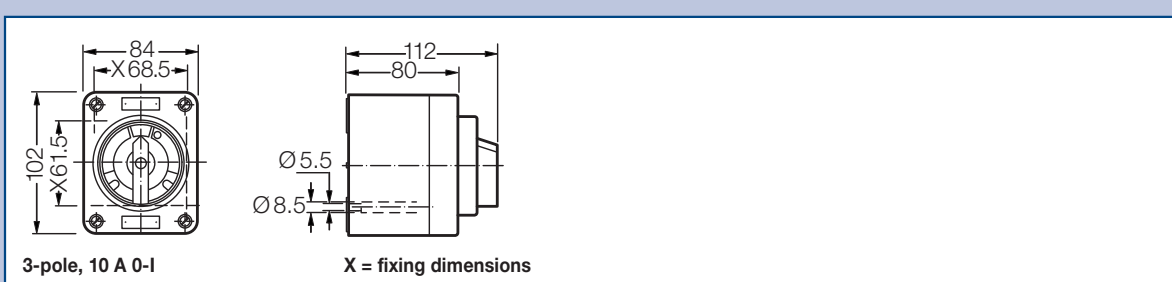
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

Type	Application	OU	Order No.
Size 1	for mounting plate size 1	1	GHG 610 1955 R0101

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Dimensions in mm

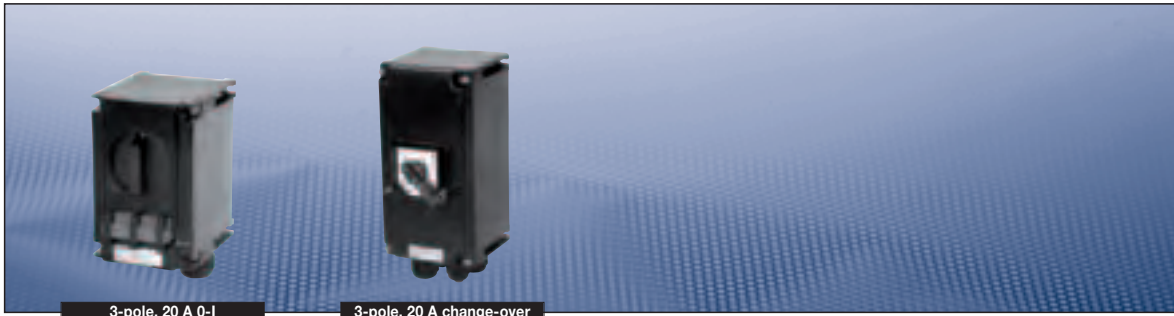


Technical data

Ex-Main current switch 20 A		
Marking to 94/9/EC	Ⓔ II 2 G Ex ed ia IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1161	
IECEX Certificate of Conformity	BKI 07.0012	
Marking accd. to IECEx	Ee ed ia IIC T6 Ex tD A21 IP66 T55 °C	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 20 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 20 A U _e 400 V / I _e 20 A U _e 500 V / I _e 16 A U _e 690 V / I _e 10 A	
Back-up fuse	up to 400 V AC: 35 A gL up to 500 V AC: 35 A gL up to 690 V AC: 25 A gL	
Connecting terminals	Main contact	2 x 4 mm ²
	Auxiliary-/Signal contact	2 x 0.5 - 2.5 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M32 (d = 12 - 21 mm) see ordering details Option: metal flange with thread	
Weight	approx. 1.40 kg	
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	

¹⁾ Other ambient temperatures on request

Ex-Main current switches



Ordering details

Version	Cable entry	Order No.
Main current switch 20 A 3-pole		
3-pole 0 - I	2 x M32	ON-OFF switch GHG 262 1301 R0001
0 - Y - D	3 x M32	star-delta GHG 262 0016 R0004
0 - I - II	3 x M32	Dahlander GHG 262 0016 R0005
Main current switch 20 A 3-pole		
Version with 2 auxiliary contact (1 x NO; 1 x NC)		
3-pole I - II	3 x M32/1 x M25	change-over switch GHG 262 0016 R0001
I - 0 - D	3 x M32/1 x M25	change-over switch GHG 262 0016 R0002
I - 0 - II	3 x M32/1 x M25	reversing switch GHG 262 0016 R0003

Customized version on request, auxiliary contacts in Ex ia available

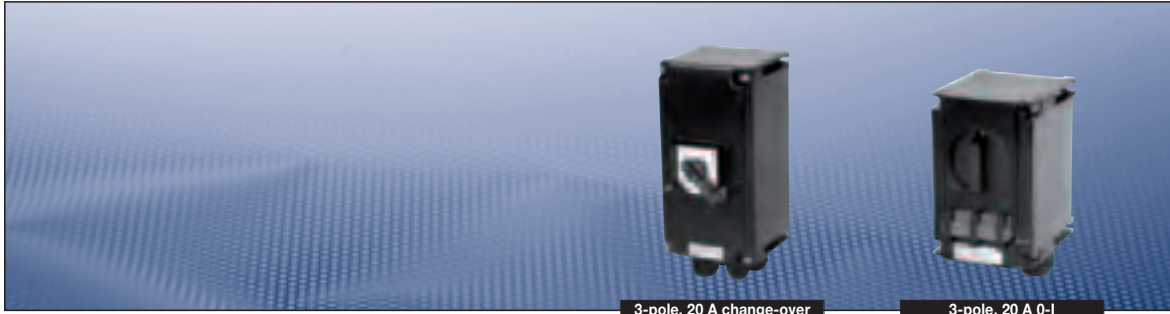
Accessories

Mounting plate for Ex-main current switch 20 A 3-pole			
Type	Application	Fixing technique	Order No.
Size 2	Wall mounting	snap-on	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	GHG 610 1953 R0106

Accessories for mounting plates		
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Snap-on for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 each	10	GHG 610 1953 R0041
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates			
Type	Application	OU	Order No.
Size 2	for mounting plate size 2	1	GHG 610 1955 R0102
Size 2A	for mounting plate size 2A	1	GHG 610 1955 R0103

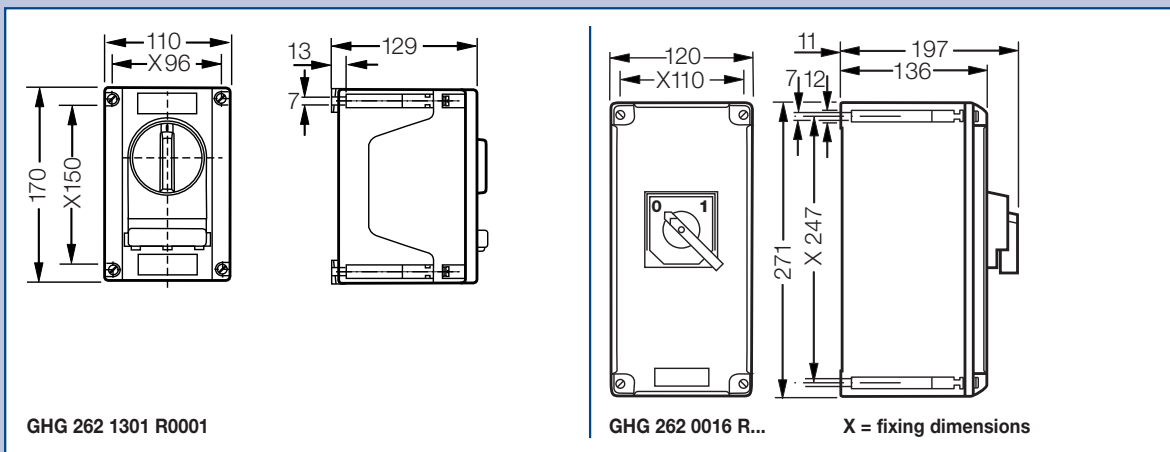
Please note that we can only deliver in the ordering units (OU) stated in the tables above



3-pole, 20 A change-over

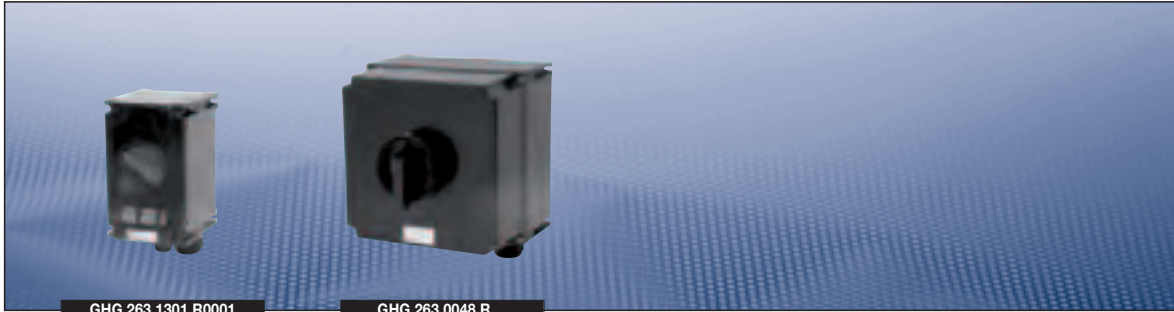
3-pole, 20 A 0-1

Dimension drawing



Dimensions in mm

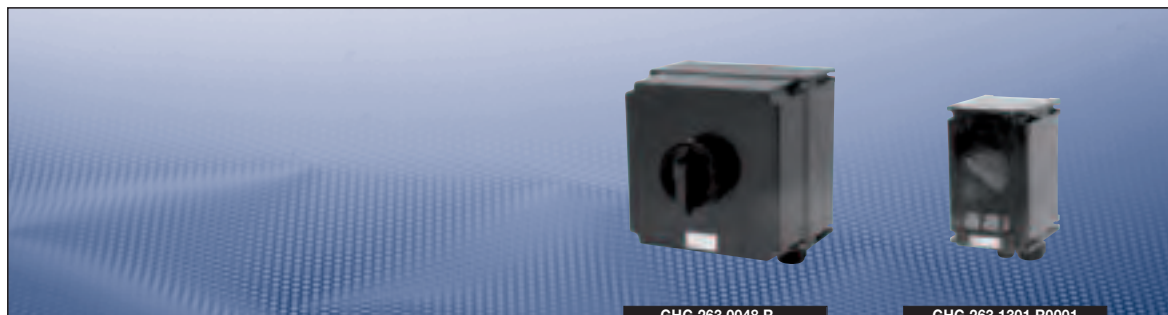
Ex-Main current switches



Technical data

Ex-Main current switch 40 A		
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 99 ATEX 1161	
IECEX Certificate of Conformity	BKI 07.0012	
Marking accd. to IECEx	Ex ed ia II T6 Ex tD A21 IP66 T55 °C	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 40 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 40 A U _e 400 V / I _e 40 A U _e 500 V / I _e 40 A U _e 690 V / I _e 32 A	
Back-up fuse	up to 400 V AC: 80 A gL up to 500 V AC: 80 A gL up to 690 V AC: 63 A gL	
Connecting terminals	Main contact	2 x 16 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details M40 (d = 16 - 28 mm) see ordering details Option: metal flange with thread	
Weight	3-pole	approx. 2.30 kg
	6-pole	approx. 6.50 kg
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	

¹⁾ Other ambient temperatures on request



Ordering details

Version	Cable entry	Order No.
Ex-Main current switch 40 A 3-pole		
3-pole	0 - I	2 x M40, 1 x M25
	0 - Y - D	3 x M40, 2 x M25 screw plug
	0 - I - II	3 x M40, 2 x M25 screw plug
		ON-OFF switch
		star-delta
		Dahlander
		GHG 263 1301 R0001
		GHG 263 0048 R0005
		GHG 263 0048 R0006
Safety switch 40 A 3-pole		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
3-pole	I - II	3 x M40/1 x M25, 1 x M25 screw plug
	I - 0 - D	3 x M40/1 x M25, 1 x M25 screw plug
	I - 0 - II	2 x M40/1 x M25, 1 x M25 screw plug
		change-over switch
		change-over switch
		reversing switch
		GHG 263 0048 R0002
		GHG 263 0048 R0003
		GHG 263 0048 R0004

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-main current switch 40 A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Ex-main current switch 40 A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

Accessories for mounting plates

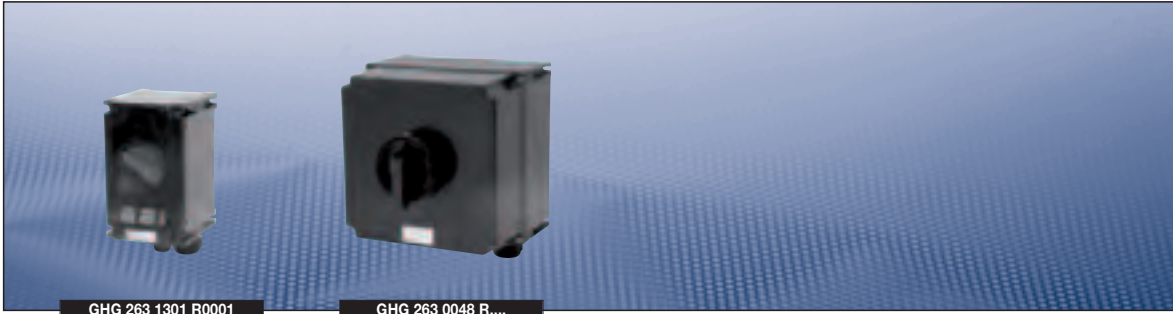
Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Snap-on for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 each	10	GHG 610 1953 R0041
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

Type	Application	OU	Order No.
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above

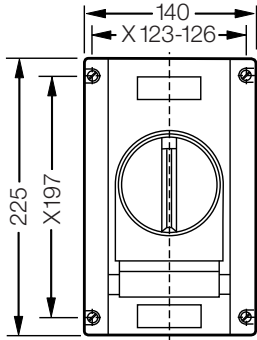
| Ex-Main current switches |



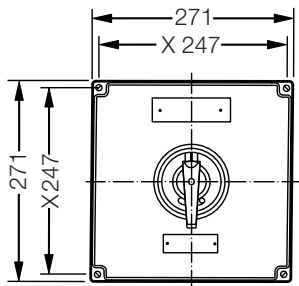
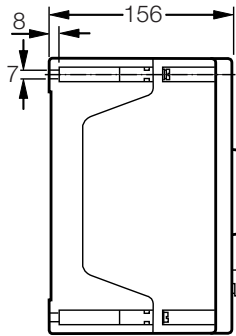
GHG 263 1301 R0001

GHG 263 0048 R....

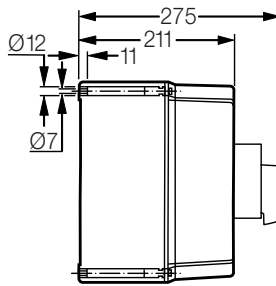
Dimension drawing



GHG 263 1301 R0001

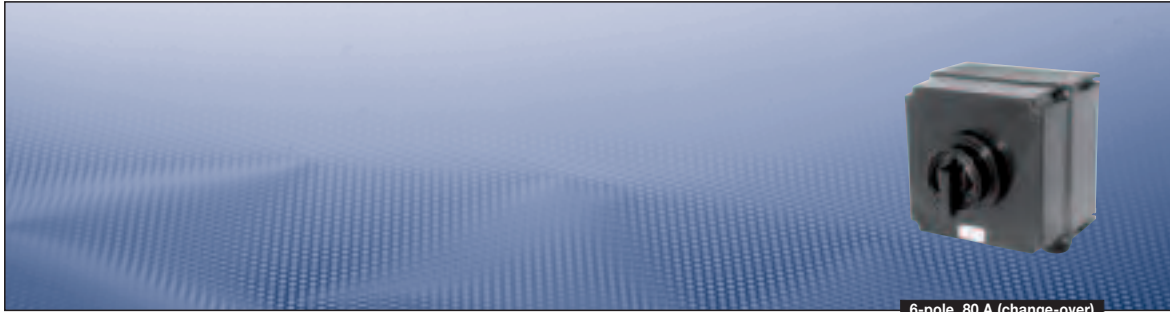


GHG 263 0048 R...



X = fixing dimensions

Dimensions in mm



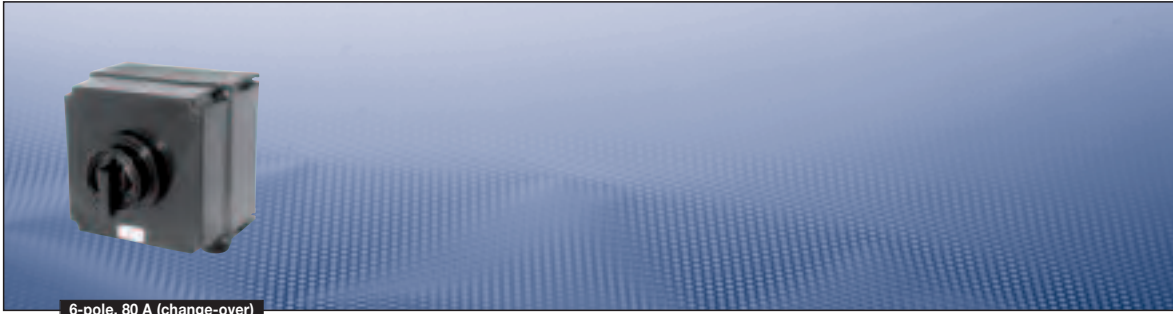
6-pole, 80 A (change-over)

Technical data

Ex-Main current switch 80 A		
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 1091	
Permissible ambient temperature	-20 °C to +40 °C ¹⁾	
Rated voltage	up to max. 690 V	
Rated current	max. 80 A	
Frequency	50/60 Hz	
Rated making-/breaking capacity AC-3 accd. to EN 60947-3	U _e 230 V / I _e 80 A	
	U _e 400 V / I _e 80 A	
	U _e 500 V / I _e 80 A	
	U _e 690 V / I _e 63 A	
Back-up fuse	up to 400 V AC: 80 A gL	
	up to 500 V AC: 80 A gL	
	up to 690 V AC: 63 A gL	
Connecting terminals	Main contact	2 x 16 mm ²
	Auxiliary-/Signal contact	2 x 4 mm ²
Insulation class	I	
Degree of protection accd. EN 60529	IP66	
Cable glands/enclosure drilling	M25 (d = 8 - 17 mm) see ordering details	
	M50 (d = 21 - 35 mm) see ordering details	
	Option: metal flange with thread	
Weight	3-pole	approx. 6.50 kg
	4-pole	approx. 9.00 kg
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	

¹⁾ Other ambient temperatures on request

Ex-Main current switches



6-pole, 80 A (change-over)

Ordering details

Version	Cable entry	Order No.
Ex-Main current switch 80 A		
Version with 2 auxiliary contacts (1 x NO; 1 x NC)		
4-pole	0 - I without auxiliary contact	2 x M50, 1 x M25 screw plug ON-OFF switch GHG 264 0022 R9015
3-pole	I - 0 - II	3 x M50, 1 x M25 screw plug change-over switch GHG 264 0019 R0003
3-pole	I - 0 - II	2 x M50, 1 x M25 screw plug reversing switch GHG 264 0019 R0004

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Mounting plate for Ex-main current switch 80 A 3- and 4-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

Accessories for mounting plates

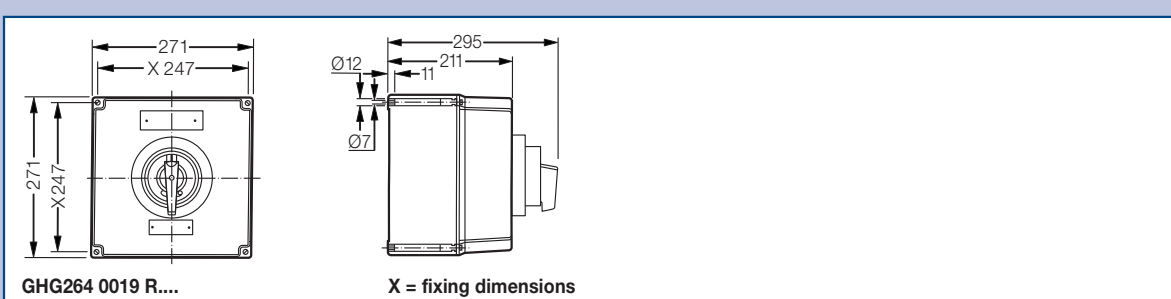
Type	OU	Order No.
Label holder with label (unlabeled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

Type	Application	OU	Order No.
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above

Dimension drawing



Dimensions in mm

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EX - POWER CIRCUIT BREAKERS

Up to 630 A

CEAG power circuit breakers enable making or breaking of circuits under normal operating conditions as well as cutting in, briefly conducting and cutting out currents under exceptional conditions, such as short circuiting.

Full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts according to EN 60204-1 are just some of the eminent features offered by CEAG power circuit breakers.

Versions up to 180 A guarantee the optional high degree of protection IP65.

The switch position is always clearly indicated and easily seen.

The main current switches feature an installation-friendly design and easily accessible connection terminals.

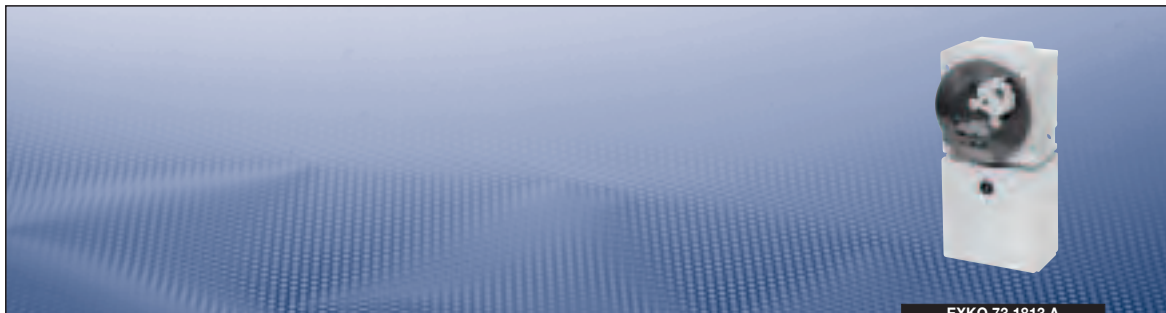
Metal versions can be equipped with metal screw-on flanges allowing simple integration in system as well as cost-efficient later extensions. These can be optionally supplied with snap-on moulded plastic or brass flanges.

The described power circuit breakers are also available for Explosion Group IIB, which is sufficient for many of the applications.

Internationally approved.



- Full AC-3 motor switching capacity
- High degree of IP protection
- Simple integration in systems



EXKO 73 1813 A

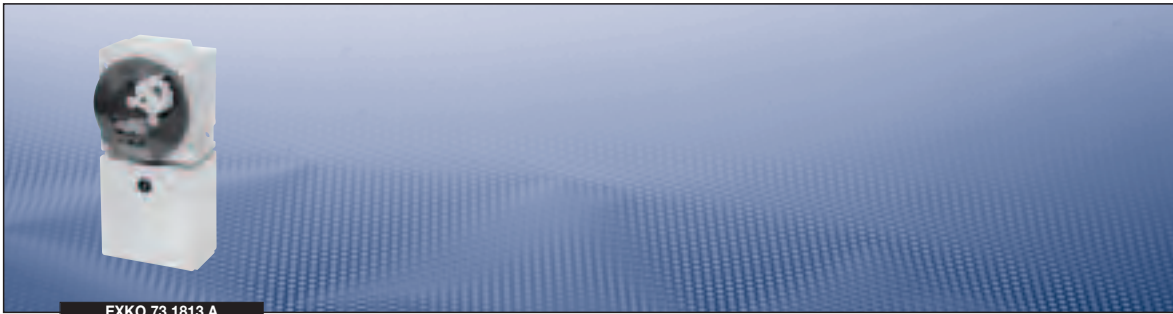
Technical data

Ex-Power circuit breaker 63 A		
Marking to 94/9/EC		Ⓔ II 2 G Ex de ia/ib [ia/ib] IIC T4 – T6 ¹⁾ Ⓔ II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6/T5/T4 Ex tD A21 IP66 T80 °C / T95 °C / T130 °C
Permissible ambient temperature		–20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 63 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 63 A U _e 400 V / I _e 63 A U _e 500 V / I _e 63 A U _e 690 V / I _e 63 A
Back-up fuse		up to 400 V AC: 80 A gL up to 500 V AC: 80 A gL up to 690 V AC: 80 A gL
Connecting terminals	Main contact	2 x 35 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (optional IP 65)
Cable glands/enclosure drilling		M50 (d = 21 - 35 mm) see ordering details
Weight	3-pole	approx. 17 kg
	4-pole	approx. 18 kg
Enclosure material		aluminium, polyester powder-coated connection box steel, powder-coated
Colour	Enclosure	pebble gray (RAL 7032)
	Cover	dark grey (RAL 7022)

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

Ex-Main circuit breaker



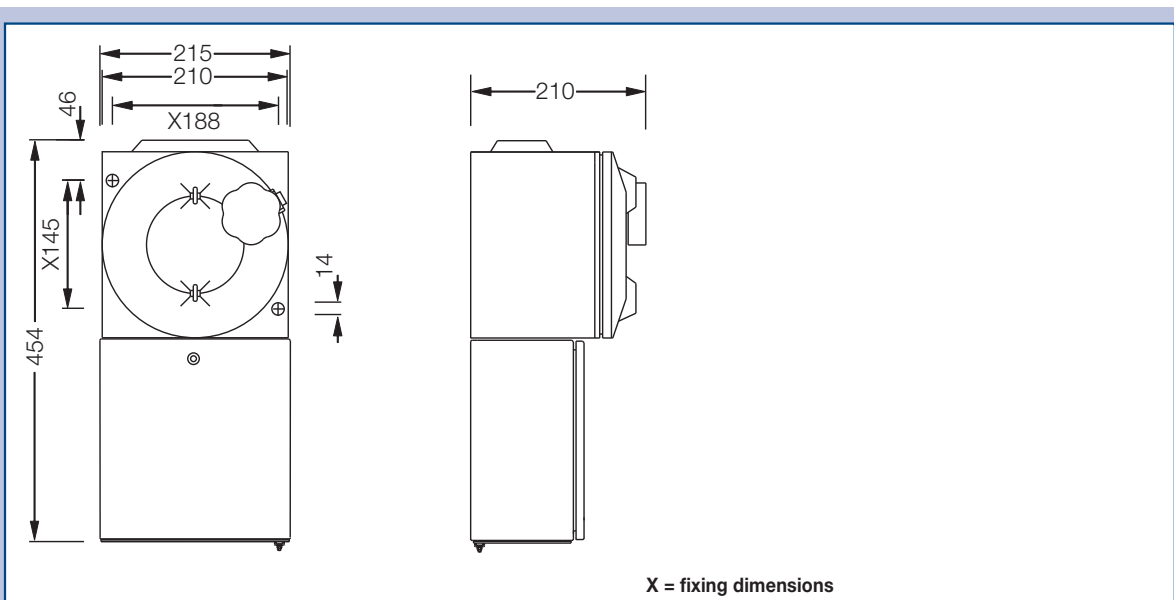
EXKO 73 1813 A

Ordering details

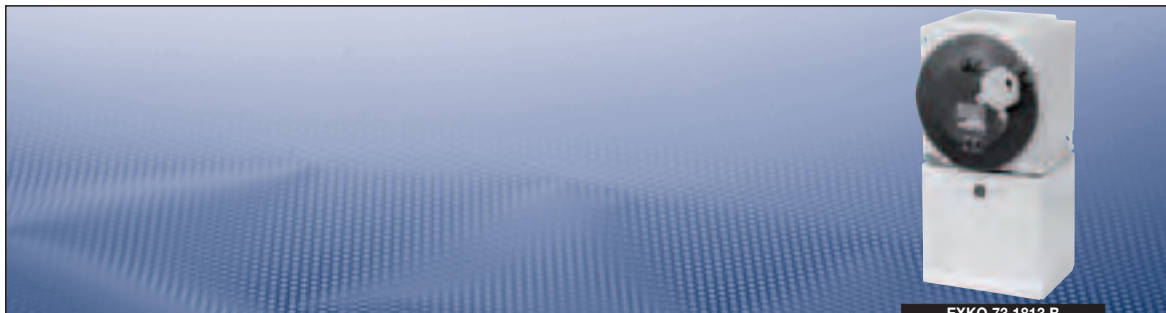
Version	Cable entry	Order No.
Ex-Power circuit breaker 63 A		
3-pole	2 x M50	EXKO 73 1813 A0001
4-pole	2 x M50	EXKO 73 1814 A0001

Customized version on request

Dimension drawing



Dimensions in mm



EXKO 73 1813 B

Technical data

Ex-Power circuit breaker 125 A		
Marking to 94/9/EC		Ⓔ II 2 G Ex de ia/ib [ia/ib] IIC T4 – T6 ¹⁾ Ⓔ II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6/T5/T4 Ex tD A21 IP66 T80 °C / T95 °C / T130 °C
Permissible ambient temperature		–20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 125 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 125 A U _e 400 V / I _e 125 A U _e 500 V / I _e 125 A U _e 690 V / I _e 125 A
Back-up fuse		up to 400 V AC: 160 A gL up to 500 V AC: 160 A gL up to 690 V AC: 160 A gL
Connecting terminals	Main contact	50/35 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (optional IP 65)
Cable glands/enclosure drilling		M50 (d = 21 - 35 mm) see ordering details
Weight	3-pole	approx. 48 kg
	4-pole	approx. 52 kg
Enclosure material		aluminium, polyester powder-coated connection box steel, powder-coated
Colour	Enclosure	pebble gray (RAL 7032)
	Cover	dark grey (RAL 7022)

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

Ex-Main circuit breaker



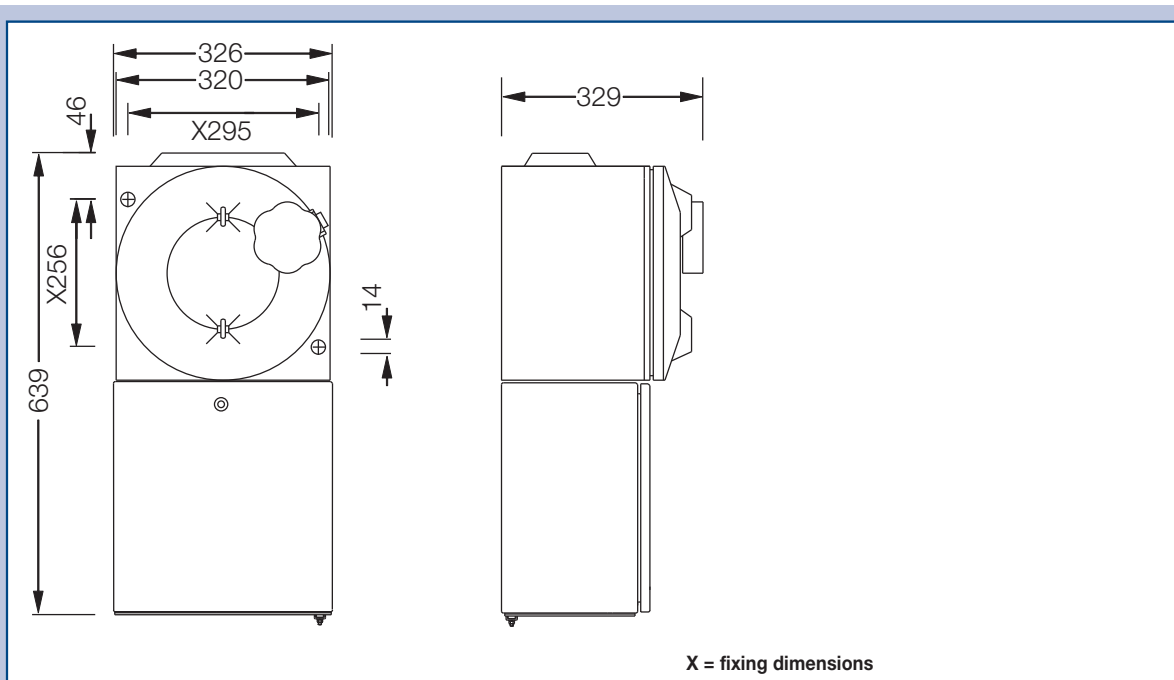
EXKO 73 1813 B

Ordering details

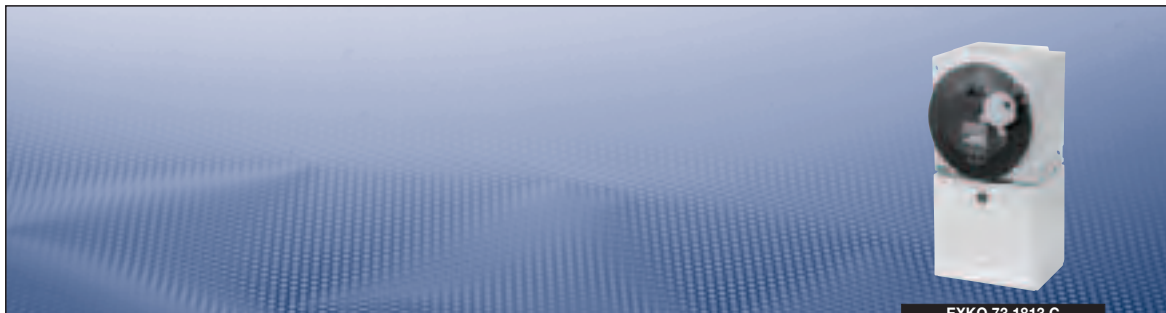
Version	Cable entry	Order No.
Ex-Power circuit breaker 125 A		
3-pole	2 x M50	EXKO 73 1813 B0001
4-pole	2 x M50	EXKO 73 1814 B0001

Customized version on request

Dimension drawing



Dimensions in mm



EXKO 73 1813 C

Technical data

Ex-Power circuit breaker 160 A		
Marking to 94/9/EC		Ⓔ II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6 ¹⁾ Ⓔ II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6/T5/T4 Ex tD A21 IP66 T80 °C / T95 °C / T130 °C
Permissible ambient temperature		-20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 180 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 180 A U _e 400 V / I _e 180 A U _e 500 V / I _e 150 A U _e 690 V / I _e 125 A
Back-up fuse		up to 400 V AC: 210 A gL up to 500 V AC: 210 A gL up to 690 V AC: 210 A gL
Connecting terminals	Main contact	95/50 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (optional IP 65)
Cable glands/enclosure drilling		M50 (d = 21 - 35 mm) see ordering details
Weight	3-pole	approx. 48 kg
	4-pole	approx. 52 kg
Enclosure material		aluminium, polyester powder-coated connection box steel, powder-coated
Colour	Enclosure	pebble gray (RAL 7032)
	Cover	dark grey (RAL 7022)

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

Ex-Main circuit breaker



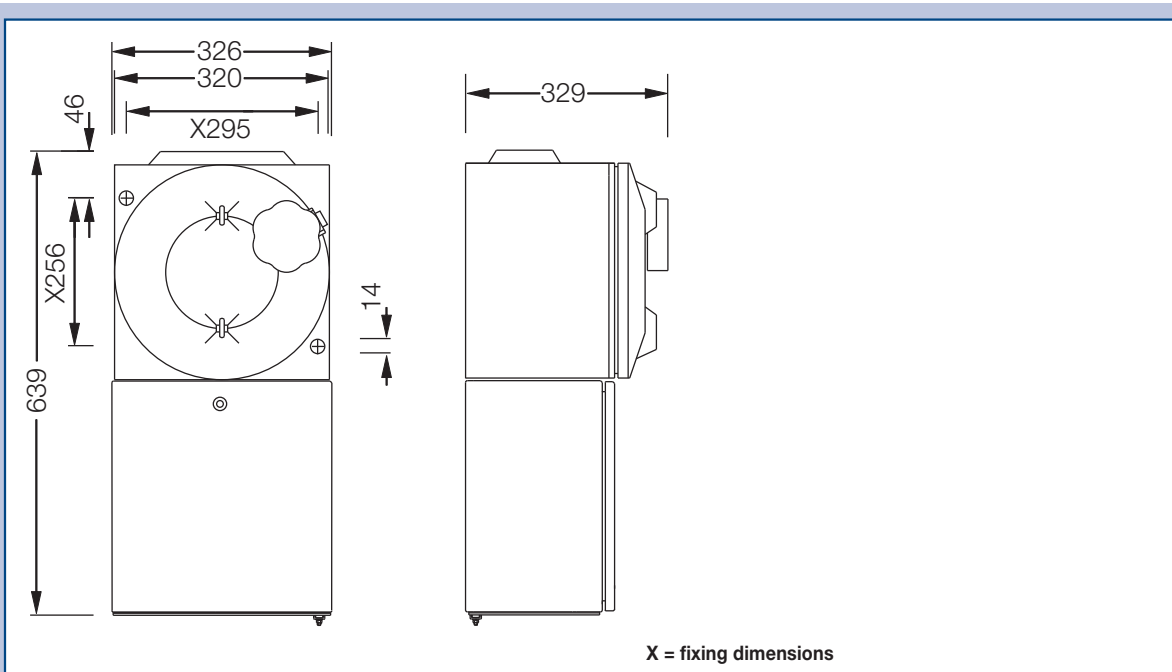
EXKO 73 1813 C

Ordering details

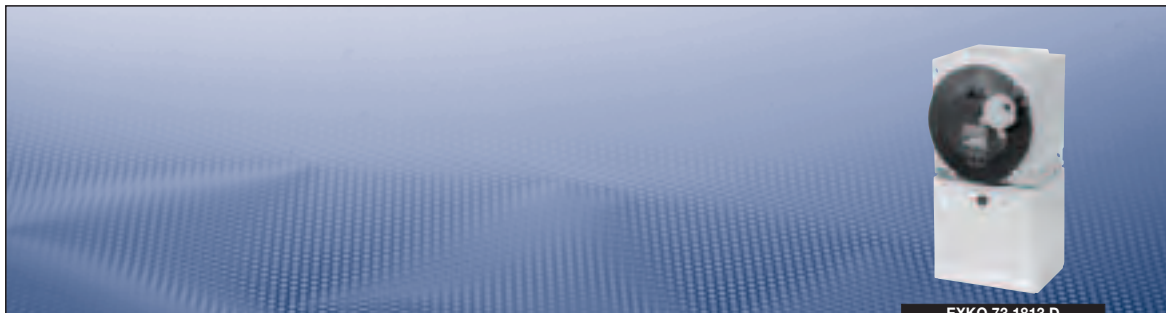
Version	Cable entry	Order No.
Ex-Power circuit breaker 160 A		
3-pole	2 x M50	EXKO 73 1813 C0001
4-pole	2 x M50	EXKO 73 1814 C0001

Customized version on request

Dimension drawing



Dimensions in mm



EXKO 73 1813 D

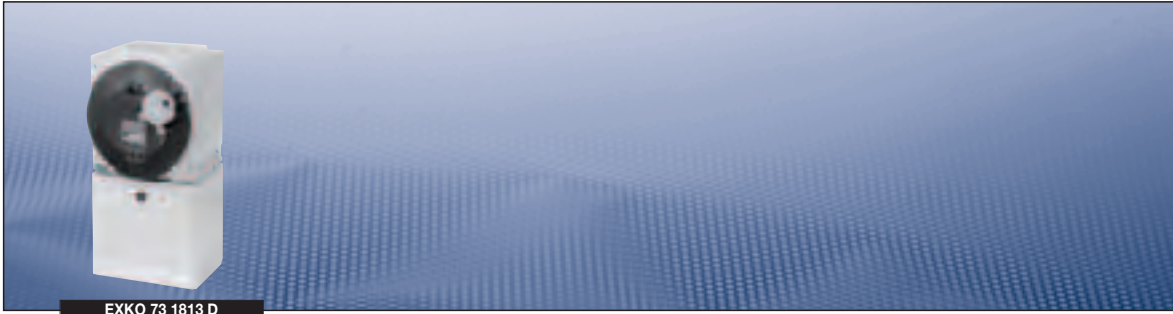
Technical data

Ex-Power circuit breaker 250 A		
Marking to 94/9/EC		Ⓜ II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6 ¹⁾ Ⓜ II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6/T5/T4 Ex tD A21 IP66 T80 °C / T95 °C / T130 °C
Permissible ambient temperature		-20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 250 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 250 A U _e 400 V / I _e 250 A U _e 500 V / I _e 250 A U _e 690 V / I _e 250 A
Back-up fuse		up to 400 V AC: 250 A gL up to 500 V AC: 250 A gL up to 690 V AC: 250 A gL
Connecting terminals	Main contact	150/95 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (optional IP 65)
Cable glands/enclosure drilling		M63 (d = 27 - 48 mm) see ordering details
Weight	3-pole	approx. 50 kg
	4-pole	approx. 55 kg
Enclosure material		aluminium, polyester powder-coated connection box steel, powder-coated
Colour	Enclosure	pebble gray (RAL 7032)
	Cover	dark grey (RAL 7022)

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

Ex-Main circuit breaker



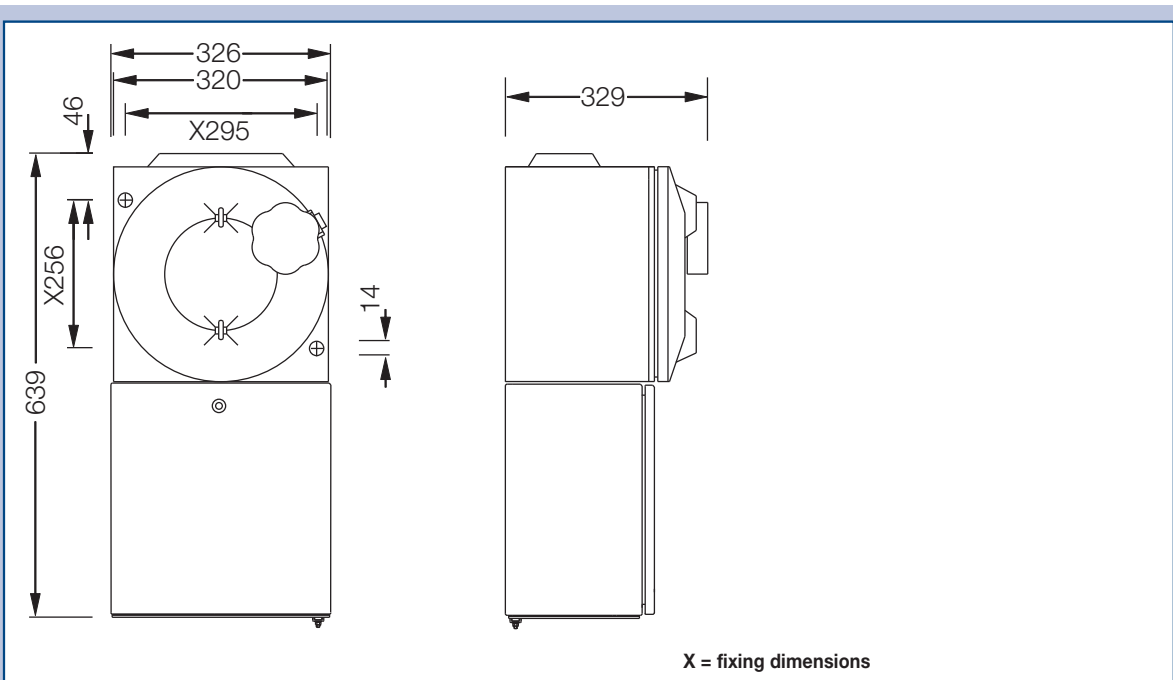
EXKO 73 1813 D

Ordering details

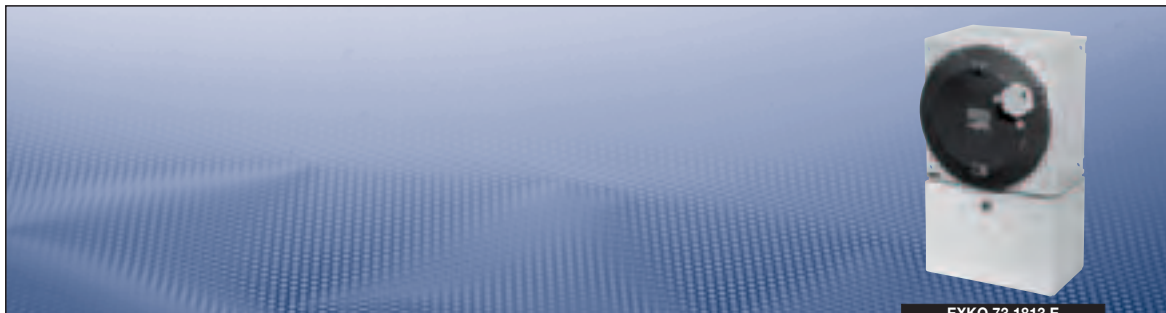
Version	Cable entry	Order No.
Ex-Main current switch 250 A		
3-pole	2 x M63	EXKO 73 1813 D0001
4-pole	4 x M63	EXKO 73 1814 D0001

Customized version on request

Dimension drawing



Dimensions in mm



EXKO 73 1813 E

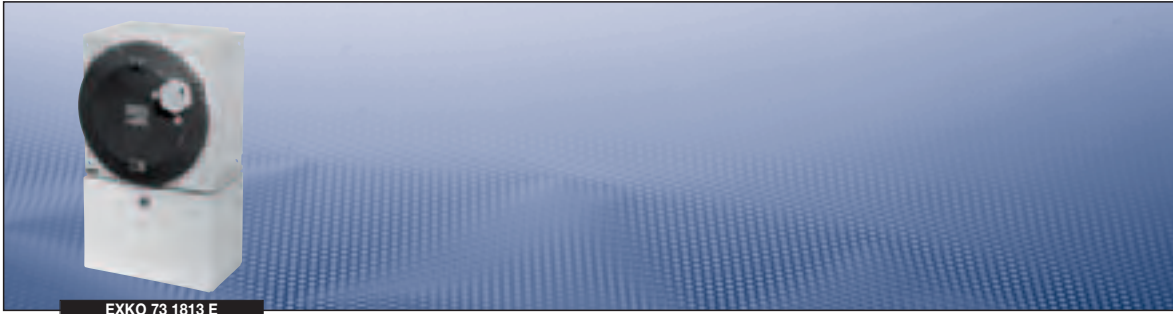
Technical data

Ex-Power circuit breaker 400 A		
Marking to 94/9/EC		Ⓜ II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6 ¹⁾ Ⓜ II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6/T5/T4 Ex tD A21 IP66 T80 °C / T95 °C / T130 °C
Permissible ambient temperature		-20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 400 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 400 A U _e 400 V / I _e 400 A U _e 500 V / I _e 400 A U _e 690 V / I _e 400 A
Back-up fuse		up to 400 V AC: 500 A gL up to 500 V AC: 500 A gL up to 690 V AC: 500 A gL
Connecting terminals	Main contact	150/95 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (optional IP 65)
Cable glands/enclosure drilling		M63 (d = 27 - 48 mm) see ordering details
Weight	3-pole	approx. 85 kg
	4-pole	approx. 90 kg
Enclosure material		aluminium, polyester powder-coated connection box steel, powder-coated
Enclosure colour	Enclosure	pebble gray (RAL 7032)
	Cover	dark grey (RAL 7022)

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

Ex-Main circuit breaker



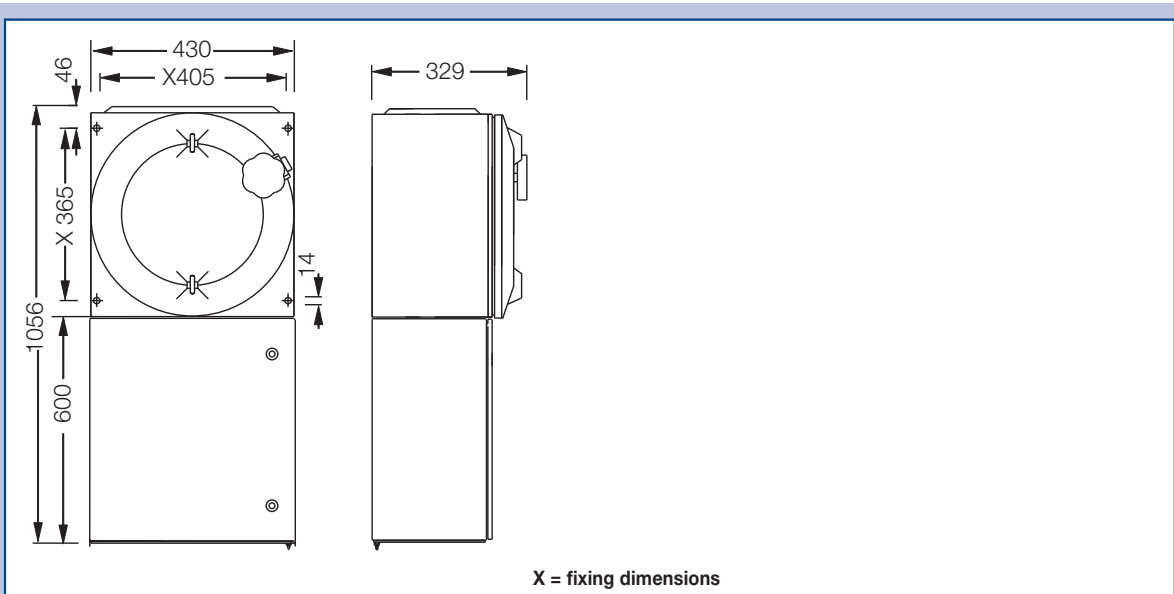
EXKO 73 1813 E

Ordering details

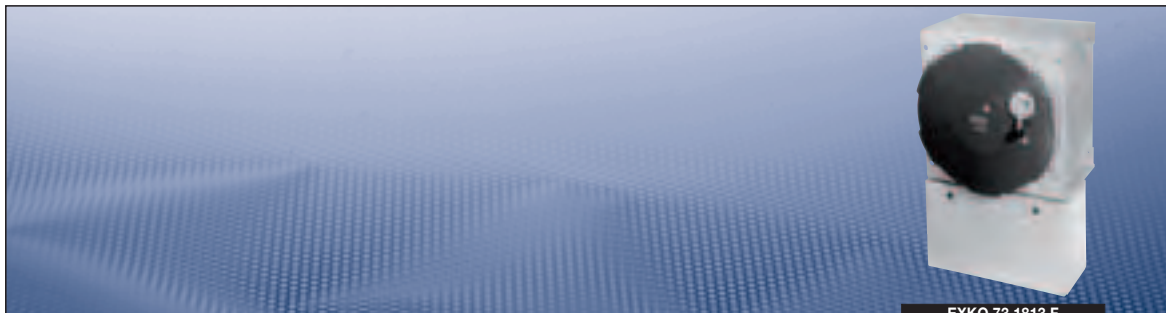
Version	Cable entry	Order No.
Ex-Main current switch 400 A		
3-pole	4 x M63	EXKO 73 1813 E0001
4-pole	4 x M63	EXKO 73 1814 E0001

Customized version on request

Dimension drawing



Dimensions in mm



EXKO 73 1813 F

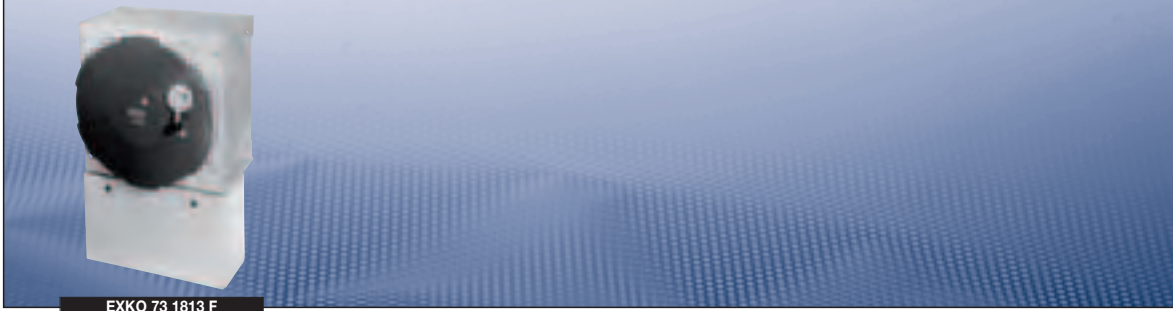
Technical data

Ex-Power circuit breaker 630 A		
Marking to 94/9/EC		Ⓜ II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6 ¹⁾ Ⓜ II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEX Certificate of Conformity		BKI 06.0006
Marking accd. to IECEx		Ex de ia/ib [ia/ib] IIC T6/T5/T4 Ex tD A21 IP66 T80 °C / T95 °C / T130 °C
Permissible ambient temperature		-20 °C to +40 °C ²⁾
Rated voltage		up to max. 690 V
Rated current		max. 630 A
Frequency		50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-3		U _e 230 V / I _e 630 A U _e 400 V / I _e 630 A U _e 500 V / I _e 630 A U _e 690 V / I _e 630 A
Back-up fuse		up to 400 V AC: 800 A gL up to 500 V AC: 800 A gL up to 690 V AC: 800 A gL
Connecting terminals	Main contact	240/120 mm ²
Insulation class		I
Degree of protection accd. EN 60529		IP54 (IP65 optional)
Cable glands/enclosure drilling		M80 (d = 62 - 68 mm) see ordering details
Weight	3-pole	approx. 245 kg
	4-pole	approx. 250 kg
Enclosure material		aluminium, polyester powder-coated connection box steel, powder-coated
Enclosure colour	Enclosure	pebble gray
	Cover	dark grey

¹⁾ Also available with Explosion Group IIB

²⁾ Other ambient temperatures on request

Ex-Main circuit breaker



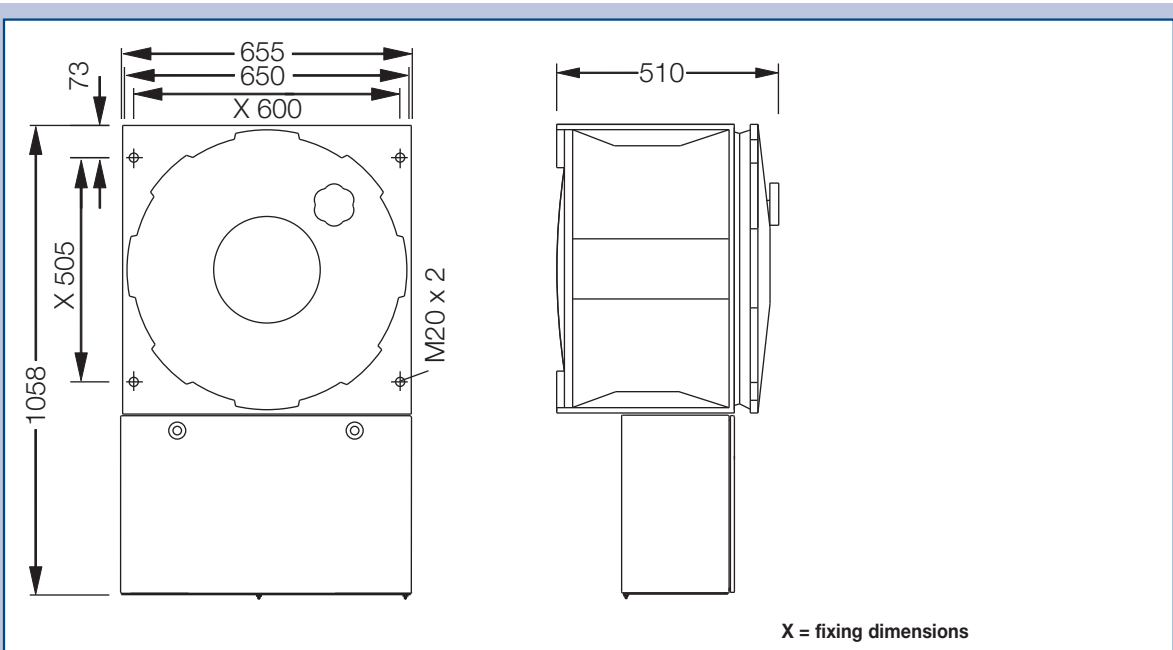
EXKO 73 1813 F

Ordering details

Version	Cable entry	Order No.
Ex-Main current switch 630 A		
3-pole	4 x M80	EXKO 73 1813 F0001
4-pole	4 x M80	EXKO 73 1814 F0001

Customized version on request

Dimension drawing



Dimensions in mm

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EX - MANUAL MOTOR STARTERS

Up to 25 A

Motors have to be protected against overloads, phase failures and overheating: CEAG's power circuit breaker and manual motor starter features phase-failure protection as well as thermal and electromagnetic tripping for reliable motor protection.

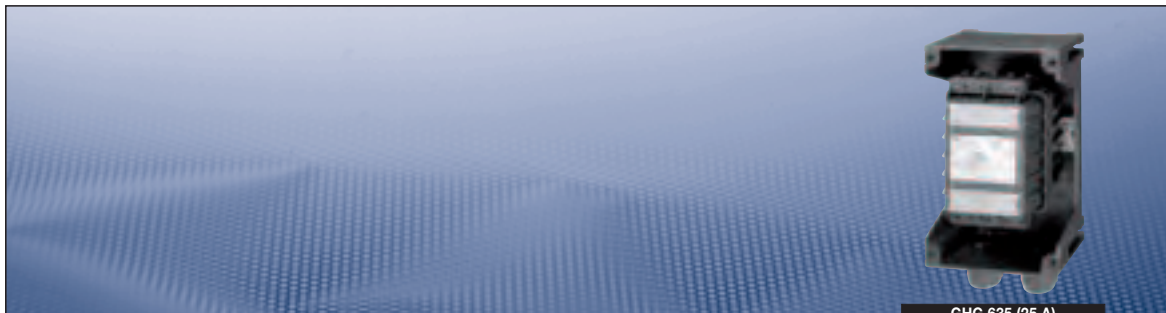
An optional under-voltage trip or auxiliary contact complements the safety package. The switch position is always indicated by the switch handle – practically excluding wrong operation.

A special safety feature offered by the manual motor starter: It can only be switched on on-site – where the drive is. An operating-current trip for remote switch-off is optional. CEAG manual motor starters have such a precise tripping time that they are equally suited for the protection of Ex-e as well as Ex-d motors – just to put you on the safe side.

Internationally approved.



- Full AC-3 motor switching capacity
- Decisive cost savings with CEAG's mounting system
- Easily accessible connection terminals
- High degree of protection IP66
- Isolating properties according to DIN EN 60947-4-1
- Clear indication of switch position
- Phase-failure protection
- Integrated locking facility



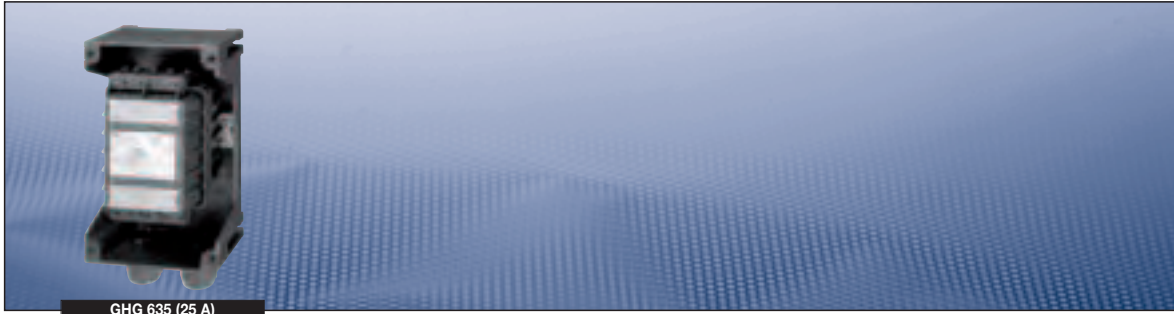
GHG 635 (25 A)

Technical data

Ex-Manual motor starters GHG 635 (25 A)	
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T5/T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1162
Permissible ambient temperature	
at T6 I _e ≤ 16 A	-20 °C to +40 °C
at T5 I _e > 16 A; ≤ 25 A	-20 °C to +55 °C
Rated voltage	up to max. 690 V
Rated current	max. 25 A
Rated current auxiliary contact	max. 2 A
Frequency	50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-4-1	U _e 690 V / I _e 25 A
Back-up fuse	see table
Undervoltage trip	tripping at 15 % - 75 % U _n can be switched on at U > 80 % U _c
Main contact	10 mm ²
Auxiliary contact	2 x 0.75 - 4.0 mm ²
Thermal tripping characteristic	T II
Insulation class	I
Degree of protection accd. EN 60529	IP66
Cable glands/enclosure drilling	
0.1 - 6.3 A	2 x M25 (d = 8 - 17 mm) ¹⁾
6.3 - 25 A	2 x M32 (d = 12 - 21 mm) ¹⁾
Weight	2.5 kg
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black
Padlock facility	can be locked in OFF position with 3 commercially available padlocks

¹⁾ Version with aux. contact or under voltage trip with additional cable gland M25

Ex-Manual motor starter



GHG 635 (25 A)

Ordering coding for special version

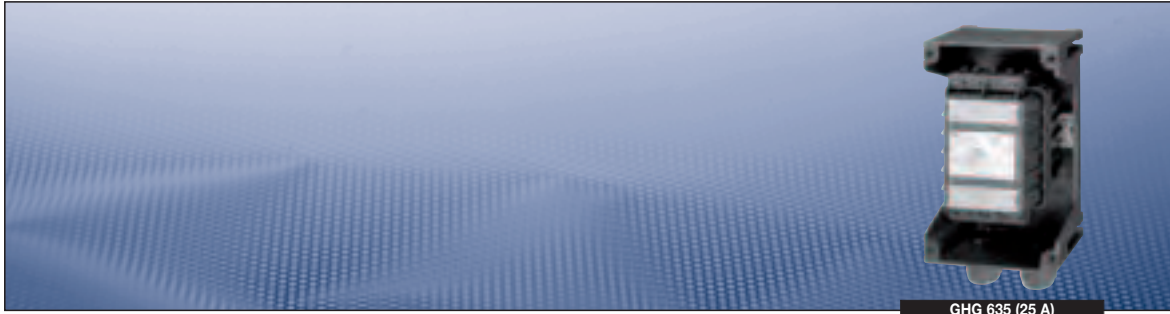
Description	Version	Undervoltage trip	Auxiliary contact	R...
GHG 635 1	A	B	C	R...

Coding				
A	Version	1	=	Standard version
B	Undervoltage trip	0	=	without undervoltage trip
		1	=	undervoltage trip 230 V
		2	=	undervoltage trip 400 V
		3	=	undervoltage trip 440 V
		4	=	undervoltage trip 500 V
		5	=	undervoltage trip 24 V
		6	=	undervoltage trip 48 V
		7	=	undervoltage trip 60 V
		8	=	undervoltage trip 110 V
C	Auxiliary contact	9	=	undervoltage trip 415 V
		1	=	without auxiliary contact
		2	=	with auxiliary contact 1 NO + 1 NC
		3	=	with auxiliary contact 2 NO

Short-circuit protection up to 100 kA and maximum backup fuse

Setting range	230 V AC		400 V AC		500 V AC		690 V AC		Temp.-class	Order No.
	Ics	gL, aM	Ics	gL, aM	Ics	gL, aM	Ics	gL, aM		
0.1 A ... 0.16 A									T6	GHG 635 1 1 0 1 R0101
0.16 A ... 0.25 A									T6	GHG 635 1 1 0 1 R0102
0.25 A ... 0.40 A			short-circuit proof						T6	GHG 635 1 1 0 1 R0103
0.40 A ... 0.63 A			no backup-fuse						T6	GHG 635 1 1 0 1 R0104
0.63 A ... 1.0 A			required						T6	GHG 635 1 1 0 1 R0105
1.0 A ... 1.6 A									T6	GHG 635 1 1 0 1 R0106
1.6 A ... 2.5 A						40 kA	25 A		T6	GHG 635 1 1 0 1 R0107
2.5 A ... 4.0 A					40 kA	35/40 A	10 kA	40 A	T6	GHG 635 1 1 0 1 R0108
4.0 A ... 6.3 A					30 kA	50 A	3 kA	40 A	T6	GHG 635 1 1 0 1 R0109
6.3 A ... 9.0 A					30 kA	80 A	3 kA	50 A	T6	GHG 635 1 1 0 1 R0110
9.0 A ... 12.5 A			50 kA	80 A	20 kA	80 A	3 kA	50 A	T6	GHG 635 1 1 0 1 R0111
12.5 A ... 16.0 A			50 kA	100 A	20 kA	100 A	3 kA	50 A	T6	GHG 635 1 1 0 1 R0112
16.0 A ... 20.0 A			50 kA	100 A	20 kA	100 A	2 kA	50 A	T5	GHG 635 1 1 0 1 R0113
20.0 A ... 25.0 A	50 kA	125 A	50 kA	125 A	20 kA	125 A	2 kA	50 A	T5	GHG 635 1 1 0 1 R0114

Customized version on request



GHG 635 (25 A)

Accessories

Mounting plate for Ex-main current switch 25 A

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	screw-on	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	GHG 610 1953 R0110
Size 3	Trellis mounting	screw-on	GHG 610 1953 R0118

Accessories for mounting plates

Type	OU	Order No.
Label holder with label (unlabelled) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Installation kit for pipes 1" (of 27 - 30 mm) for mounting plates for pipe mounting	10	GHG 610 1953 R0020

Accessories for canopies plates

Type	Application	OU	Order No.
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vertical	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106

Please note that we can only deliver in the ordering units (OU) stated in the tables above

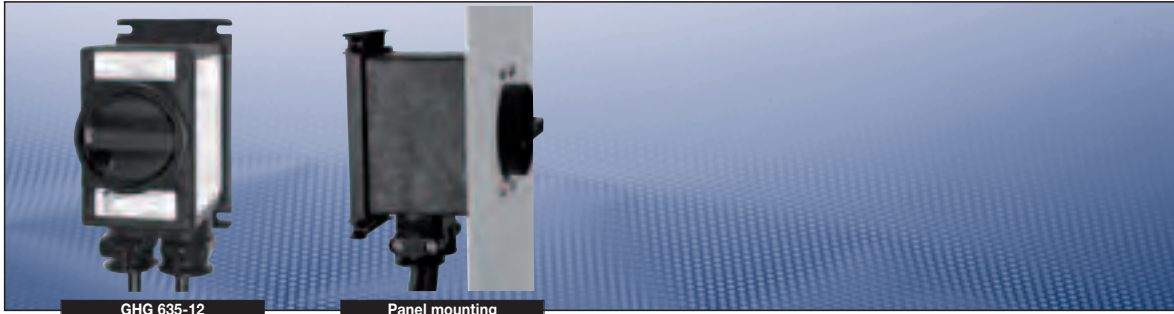
Dimension drawing / Wiring diagram

GHG 635

X = fixing dimensions

Dimensions in mm

Ex-Manual motor starter



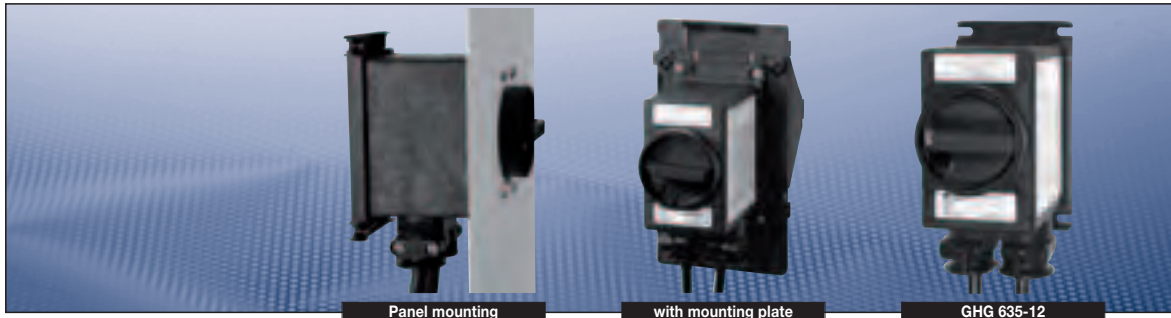
GHG 635-12

Panel mounting

Technical data

Ex-Manual motor starter GHG 635-12

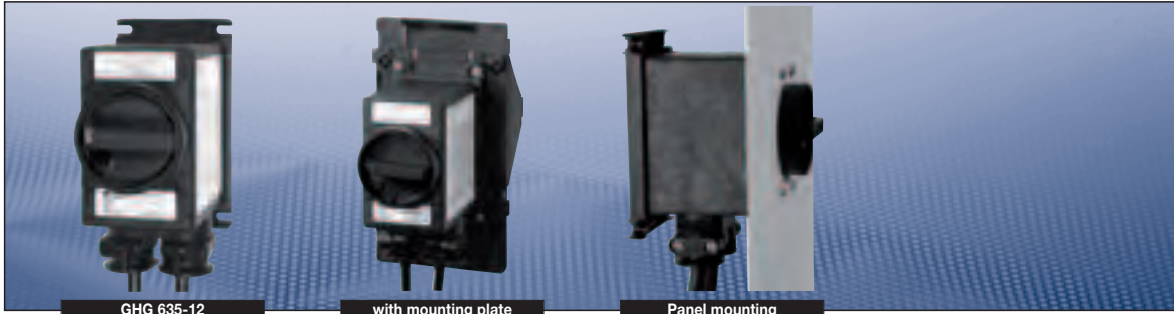
Marking to 94/9/EC	Ⓔ II 2 G Ex d IIC T6 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 05 ATEX 1020
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	up to 650 V
Rated current	0.1 up to 16 A
Frequency	50/60 Hz
Rated making-/breaking capacity AC-3 accd. to EN 60947-4-1	U _e 650 V / I _e 16 A
Rated voltage undervoltage trip	230/400 V 50/60 Hz (Standard version) 440 V / 500 V / 24 V / 48 V / 60 V on request
Undervoltage trip	tripping at 35 % – 70 % U _c can be switched on at U > 85 % U _c
Back-up fuse	up to 400 V AC short circuit proof up to 50 kA up to 6.3 A; 30 kA up to 16 A
Thermal tripping characteristic	T II
Insulation class	I
Degree of protection accd. EN 60529	IP66
Connecting cable	H07RN-F (standard 3 m, other length on request)
Weight	1 kg (without cable)
Enclosure material	Glass-fibre reinforced polyamide
Enclosure colour	black



Ordering details

Setting range	Undervoltage trip	Cord length	Order No.
Ex-Manual motor starter GHG 635-12			
0.1 - 0.16 A	no	2 x 3 m	GHG 635 1200 R0001
	230 V	2 x 3 m	GHG 635 1210 R0001
	400 V	2 x 3 m	GHG 635 1220 R0001
0.16 - 0.25 A	no	2 x 3 m	GHG 635 1200 R0002
	230 V	2 x 3 m	GHG 635 1210 R0002
	400 V	2 x 3 m	GHG 635 1220 R0002
0.25 - 0.40 A	no	2 x 3 m	GHG 635 1200 R0003
	230 V	2 x 3 m	GHG 635 1210 R0003
	400 V	2 x 3 m	GHG 635 1220 R0003
0.40 - 0.63 A	no	2 x 3 m	GHG 635 1200 R0004
	230 V	2 x 3 m	GHG 635 1210 R0004
	400 V	2 x 3 m	GHG 635 1220 R0004
0.63 - 1.0 A	no	2 x 3 m	GHG 635 1200 R0005
	230 V	2 x 3 m	GHG 635 1210 R0005
	400 V	2 x 3 m	GHG 635 1220 R0005
1.0 - 1.6 A	no	2 x 3 m	GHG 635 1200 R0006
	230 V	2 x 3 m	GHG 635 1210 R0006
	400 V	2 x 3 m	GHG 635 1220 R0006
1.6 - 2.5 A	no	2 x 3 m	GHG 635 1200 R0007
	230 V	2 x 3 m	GHG 635 1210 R0007
	400 V	2 x 3 m	GHG 635 1220 R0007
2.5 - 4.0 A	no	2 x 3 m	GHG 635 1200 R0008
	230 V	2 x 3 m	GHG 635 1210 R0008
	400 V	2 x 3 m	GHG 635 1220 R0008
4.0 - 6.3 A	no	2 x 3 m	GHG 635 1200 R0009
	230 V	2 x 3 m	GHG 635 1210 R0009
	400 V	2 x 3 m	GHG 635 1220 R0009
6.3 - 9 A	no	2 x 3 m	GHG 635 1200 R0010
	230 V	2 x 3 m	GHG 635 1210 R0010
	400 V	2 x 3 m	GHG 635 1220 R0010
9 - 12.5 A	no	2 x 3 m	GHG 635 1200 R0011
	230 V	2 x 3 m	GHG 635 1210 R0011
	400 V	2 x 3 m	GHG 635 1220 R0011
12.5 - 16 A	no	2 x 3 m	GHG 635 1200 R0012
	230 V	2 x 3 m	GHG 635 1210 R0012
	400 V	2 x 3 m	GHG 635 1220 R0012

Ex-Manual motor starter



GHG 635-12

with mounting plate

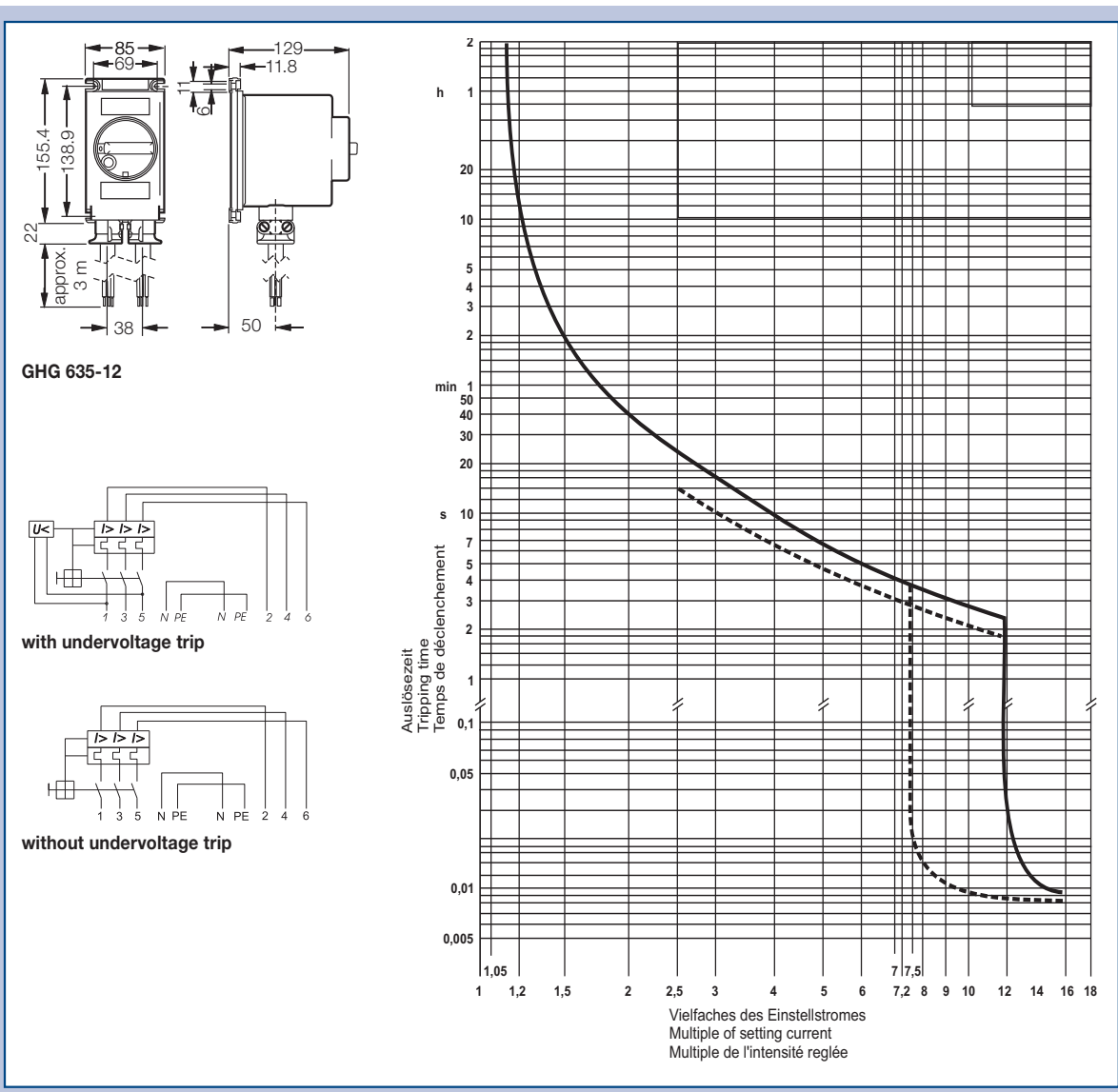
Panel mounting

Accessories

Mounting plate Ex-manual motor starter GHG 635-12

Type	Content	Order No.
Mounting plate	Mounting plate for pipe mounting (1" or 2") and square profile 41 x 41 mm or U-profile 60 x 40 mm incl. snap-on fixing clips	GHG 630 1926 R0001
Screws size 1	5 self-tapping screws for panel mounting 1 - 2 mm wall thickness	GHG 630 1925 R0001
Screws size 2	5 self-tapping screws for panel mounting 2 - 3 mm wall thickness	GHG 630 1925 R0002

Dimension drawing | Wiring diagram



Order No.	Page	Order No.	Page	Order No.	Page
PX 819105	5.21	SGTE 0 22 1 1 2	9.63	XLHS16060200	7.53
PX 819106	5.21	SGTE 0 23 1 1 2	9.63	XLHS16076200	7.53
PX 819107	5.21	SGTE 0 24 1 1 2	9.63	XLHS16076203-B-HASP	7.53
PX 819108	5.21	SIL 1 10	9.69	XLHS17650200	7.53
PX 869101	5.7	SIL 3 11	9.69	XLHS17660200	7.53
PX 869111	5.53	SIL 4 34	9.69	XLHS17676200	7.53
PX 869115	5.53	SLT 0 13 10	9.56	XLVPS2016083-B-HASP	7.56
PX 869121	5.31	SLT 0 14 10	9.56	XLVPS2416061-B-HASP	7.58
PX 869122	5.31	SLT 0 15 10	9.56	XLVS10906050	7.54
PX 869125	5.31	SLT 0 20 0	9.56	XLVS11208060	7.54
PX 869126	5.31	SLT 0 20 10	9.56	XLVS11212060	7.54
PX 869131	5.55	SLT 0 21 10	9.56	XLVS11212080	7.54
PX 869132	5.55	SLT 0 22 10	9.56	XLVS11612060	7.55
PX 869135	5.55	SLT 0 23 10	9.56	XLVS11612080	7.55
PX 869142	5.63	SLT 0 24 10	9.56	XLVS11616060	7.55
PX 869144	5.63	STBPS1151509-UL	7.64	XLVS11616080	7.55
PX 869145	5.63	STBPS151509UL	7.66	XLVS11620060	7.56
PX 869150	5.58	STBS1121208	7.66	XLVS11620080	7.56
PX 869161	5.23	STBS1151208	7.66	XLVS12016060	7.56
PX 869162	5.23	STBS1151509	7.66	XLVS12016080	7.56
PX 869165	5.23	STBS1163812	7.67	XLVS12020060	7.57
PX 869166	5.23	STBS11638121UL	7.67	XLVS12020080	7.57
PX 869171	5.25	STBS1191509	7.66	XLVS12020081-B	7.57
PX 869172	5.25	STBS1191910	7.67	XLVS12024080	7.57
PX 869173	5.25	STBS1252512	7.67	XLVS12416060	7.58
PX 869174	5.25	STBS1254013	7.67	XLVS12416080	7.58
PX 869175	5.25	STBS13838220	7.68	XLVS12420060	7.58
PX 869181	5.33	STBS13838223	7.65	XLVS12420080	7.58
PX 869182	5.33	STBS14060220	7.68	XLVS12422083-B	7.59
PX 869185	5.33	STBS16040220	7.68	XLVS12424060	7.59
PX 869186	5.33	STBS3838223	7.68	XLVS12424080	7.59
SCT 4 04 07	9.67	XLHPS 3020153-B-HASP	7.50	XLVS12430080	7.59
SCT 4 24 07	9.67	XLHPS6050203-HASP	7.52	XLVS13020080	7.60
SCT 5 05 07	9.67	XLHS11208063-B	7.54	XLVS13024080	7.60
SCT 5 26 07	9.67	XLHS12315130	7.50	XLVS13030080	7.60
SCT 6 01 02	9.67	XLHS12626150	7.50	XLVS21616061-HASP	7.55
SCT 6 02 02	9.67	XLHS13020150	7.50	NOR 000 005 140 011	4.47
SCT 6 03 01	9.67	XLHS13030150	7.50	NOR 000 005 140 906	4.47
SCT 6 21 02	9.67	XLHS13030200	7.50	NOR 000 000 514 687	4.47
SCT 6 22 02	9.67	XLHS14030150	7.50	NOR 000 005 140 776	4.47
SCT 6 23 01	9.67	XLHS14030200	7.50	NOR 000 000 514 530	4.47
SCT 7 07 01	9.67	XLHS14040150	7.51		
SCT 7 27 01	9.67	XLHS14040200	7.51		
SGT 0 13 01 3 1	9.63	XLHS14050150	7.51		
SGT 0 14 01 3 1	9.63	XLHS14050200	7.51		
SGT 0 15 01 3 1	9.63	XLHS14050201-B-HASP	7.51		
SGT 0 25 01 3 1	9.63	XLHS15040150	7.51		
SGT 0 26 01 3 1	9.63	XLHS15040200	7.51		
SGT 0 27 01 3 1	9.63	XLHS15050150	7.52		
SGT 0 28 01 3 1	9.63	XLHS15050200	7.52		
SGT 0 29 01 3 1	9.63	XLHS15060200	7.52		
SGTE 0 13 1 1 2	9.63	XLHS16040150	7.52		
SGTE 0 14 1 1 2	9.63	XLHS16040200	7.52		
SGTE 0 15 1 1 2	9.63	XLHS16050150	7.52		
SGTE 0 20 1 1 2	9.63	XLHS16050200	7.52		
SGTE 0 21 1 1 2	9.63	XLHS16060150	7.53		

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12

EX-CONTROL AND DISTRIBUTION SYSTEMS

EX-DISTRIBUTION IN PLASTIC DESIGN

11.6

EX-DISTRIBUTION IN STAINLESS STEEL

11.12

EX-D BUILT-IN COMPONENTS

11.16

EX-E EMPTY ENCLOSURES

11.58

EX-D/E SWITCH- AND CONTROL-EQUIPMENT

11.63

EX-D ENCLOSURES AND DISTRIBUTIONS FOR GAS GROUP IIB

11.74

EX-D ENCLOSURES AND DISTRIBUTIONS FOR GAS GROUP IIC

11.86

EX-D CONTROL- AND SIGNAL UNITS

11.94

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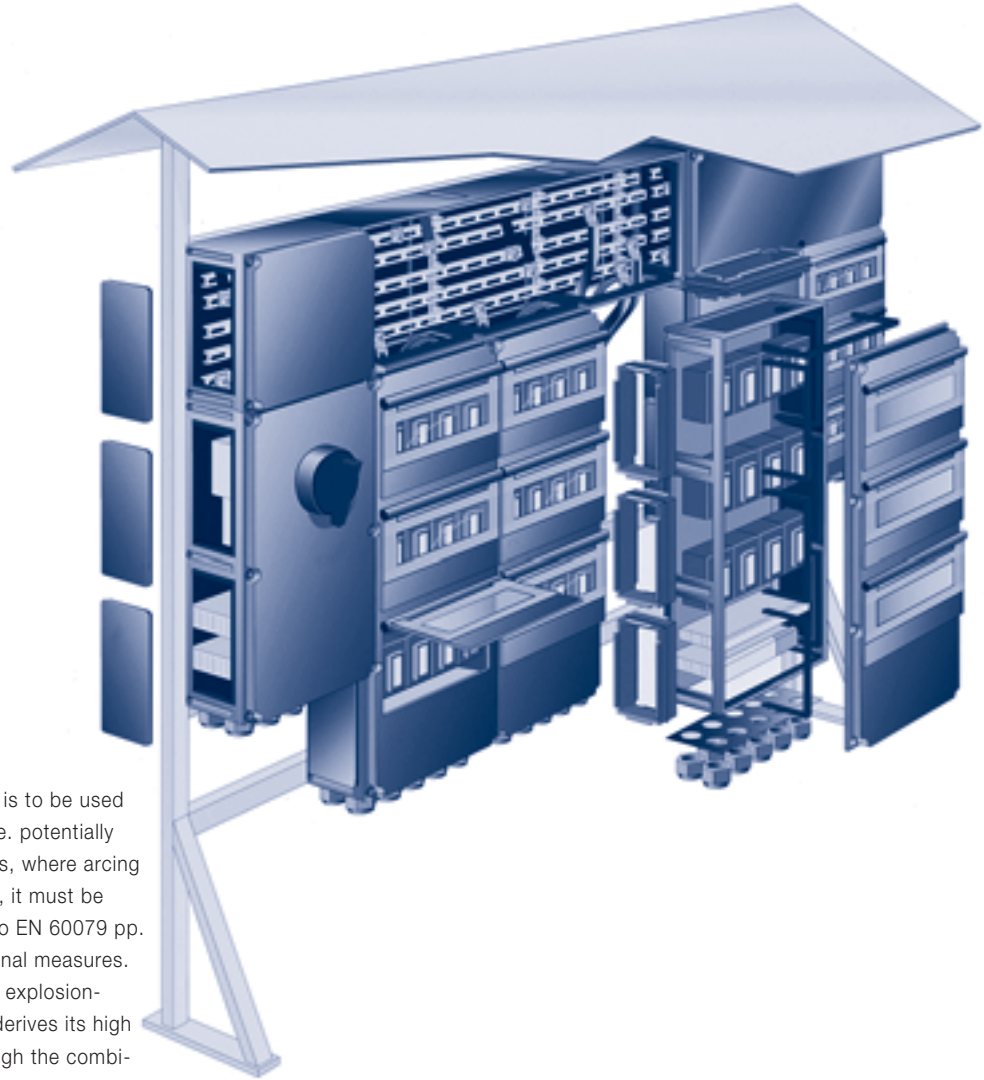
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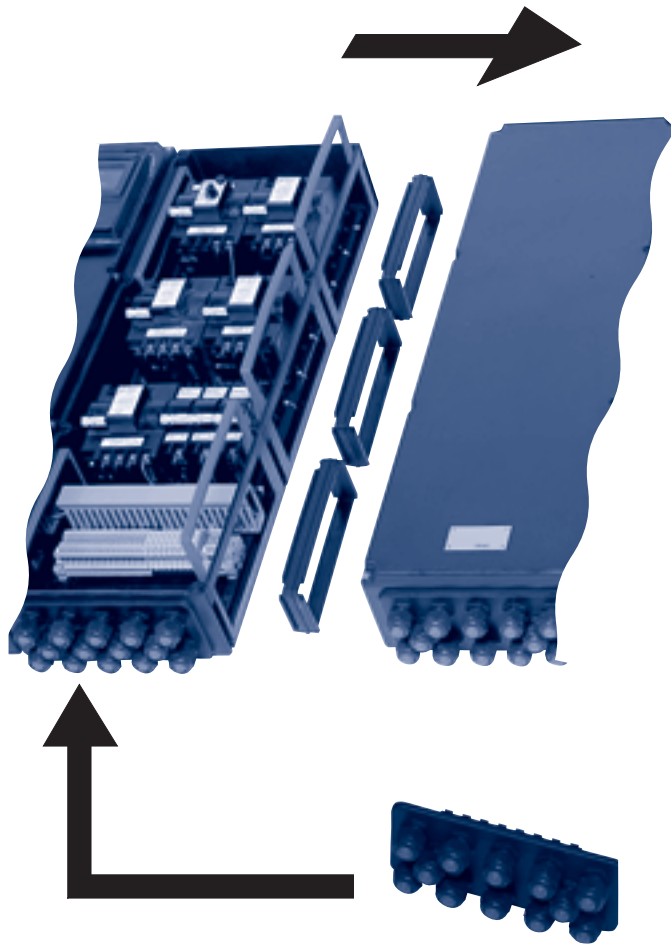


Distributions

If electrical apparatus is to be used in hazardous areas, i.e. potentially explosive atmospheres, where arcing or sparking can occur, it must be protected according to EN 60079 pp. by special constructional measures. Cooper Crouse-Hinds explosion-protected apparatus derives its high degree of safety through the combination of various types of protection. Thus, flameproof encapsulated devices (Ex-d), for instance, are also integrated in enclosures of the "Increased Safety" type (Ex-e). As these components are of modular design, they can be combined according to customers' requirements. The modules are inserted by simple snap-on rail mounting. Electrical apparatus with metal enclosures may be used in type "flameproof enclosure" (EE-d) without any volume limit. Up to three high-capacity apparatus with non-metal enclosures may take up an enclosure volume of up to 2000 cm³. However, the heat generated in the enclosure must be dissipated, so that the temperature on the external surface of the enclosure does not exceed the limit set by the respective temperature class.

Product Range

The extensive Cooper Crouse-Hinds product range offers everything you're looking for – just in time: no matter whether you need a flameproof encapsulated component, an encapsulation of the components in a flameproof enclosure – or a combination of both. Whatever material you care for, CEAG has it: Distributions are available in the most diverse materials, such as glass-fibre reinforced polyester, electro-polished stainless steel or die-cast light alloy in explosion group IIB and IIC or alternatively polyester powder-coated steel. The explosion-protected CEAG distributions are certified for hazardous areas of Zones 1 and 2. We also have the right solution for Zones 21 and 22 for you.

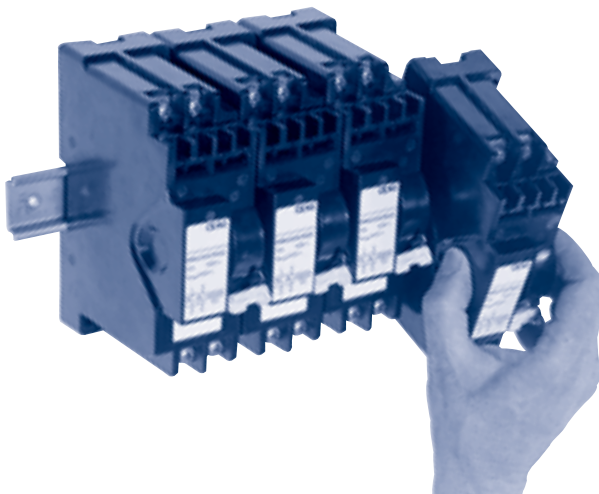


Snappy snap-on

The Cooper Crouse-Hinds GmbH gives you explosion protection in a snap – even with distributions. The enclosures and the main switches are of modular design in standardised sizes and can thus be combined as desired using the reliable flange snap-on mounting technique. Cable entries of all kinds can be mounted individually on the screwless plastic or brass flanges. And since these flanges can be inserted in a snap, cable entries can be easily mounted at any time. The same applies to other extensions or modifications. The snap-on technique gives you greater flexibility and cost-effectiveness for installations in hazardous areas.

Modular design

The modular distribution design makes modifications and extensions a snap: Remove the flange, insert the new enclosure, connect the apparatus, done! Moreover, you can do this as often as your system demands. The only limitation is space.



Rational component replacement

Components which can be quickly and reliably removed and inserted with the snap-on technique provide you with a rational method of replacing components for servicing as well as a simple and easy means of system extension.

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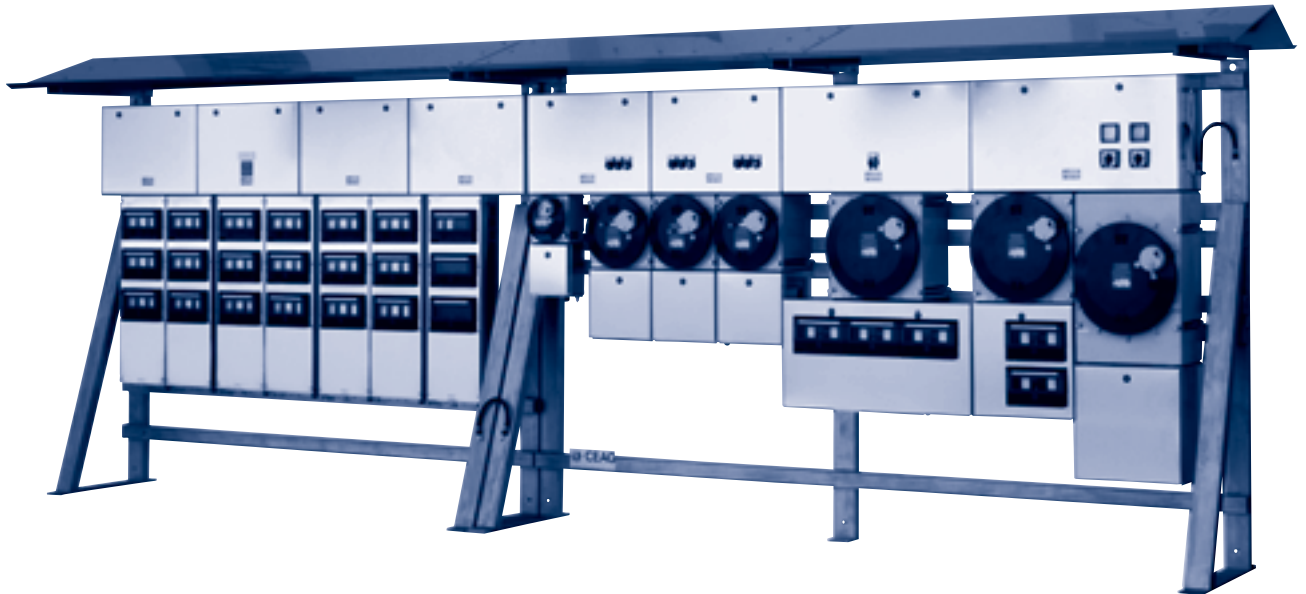
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Frameworks

Modular CEAG enclosures of different series can be combined into large distribution systems on standardised wall-mounting or free-standing frameworks. The frameworks come in standardised sizes to accommodate the enclosure modules and can be extended as required. For outdoor installations, we recommend canopies to protect the distribution system from the sun and rain. Smaller distributions are mounted on flat or U-rails. All enclosures are made of galvanised steel or – as an option – stainless steel.

Bus bars

Inexpensive installations: Using the CEAG bus-bar system, a number of circuits can be simply and quickly connected for high cost-effectiveness. If required, individually encapsulated control and indicating units, such as pushbuttons, control switches or measuring instruments, can also be connected to the bus bars.



Worldwide approvals

We have years of experience with explosion- protection approvals worldwide and we carefully monitor the latest trends and developments. For our customers, this means not only better consultation, but future-proof products, such as ATEX-compatible systems and components. IECEx-Scheme conform products will be taken for granted.



Actuating flaps

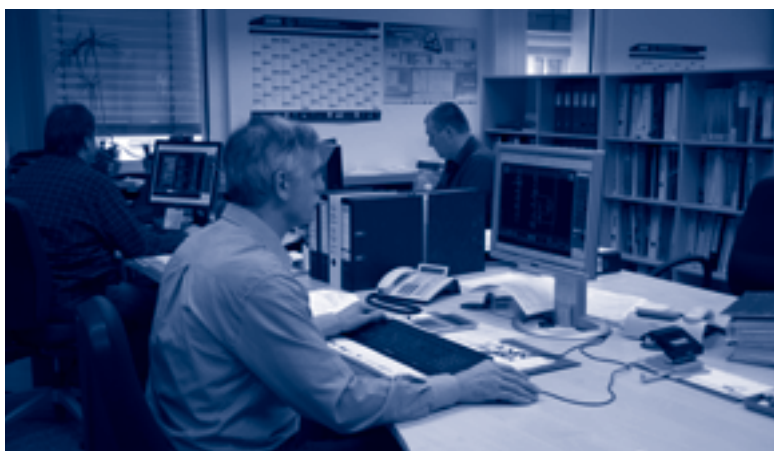
Via actuating flaps, integrated in the enclosure cover, switches and relays can be actuated without opening the enclosure. The switch positions of the built-in components can be seen from the outside. As an added security measure, the actuating flaps can be locked.

Explosion groups IIB and IIC

CEAG offers a complete product line of Ex-d distributions for gas explosion groups IIB and IIC. All common industrial switchgear that gives off arcs or sparks can be built into flame-proof enclosures. The distributions for explosion group IIC are designed for easy installation via "Increased Safety" type connection boxes. Enclosures in explosion group IIB are interconnected via flameproof cable bushings.

Planning and customized solutions

Regardless of whether you have an idea in mind or functional descriptions and wiring diagrams on paper, talk to our experienced project specialists. Our highly-qualified engineers and master technicians will provide you with expert advice and an offer. If you wish, they will also compile the needed documentation for your project (including a parts list as well as dimension, wiring and terminal diagrams as necessary) – on paper or as data files. You can rely on our flexible production for the assembly of your system. All systems and their components are 100% inspected and tested. You're welcome to perform a final acceptance test – including a complete electrical function test – in our laboratory.



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E X - D I S T R I B U T I O N S

Moulded plastic in modular design

Cooper Crouse-Hinds GmbH makes explosion protection a snap – and that also applies to distributions.

Electrical distributions for Ex-areas must be protected according to EN 60079 pp by constructional measures. Thus, the Cooper Crouse-Hinds GmbH flameproof moulded-plastic distributions provide type Ex-e protection.

The enclosure and main-switch modules are available in the following materials: fibreglass reinforced polyester, electro-polished stainless steel and polyester powder-coated steel. Moulded plastic enclosures are flame-retardant according to UL 94 VO. All modules come in standardised sizes and can be interconnected as desired.

Cable entries of all kinds can be mounted individually on the screwless plastic or brass flanges. Since these flanges can be inserted in a snap, cable entries can be easily mounted at any time. The same applies to other extensions or modifications.

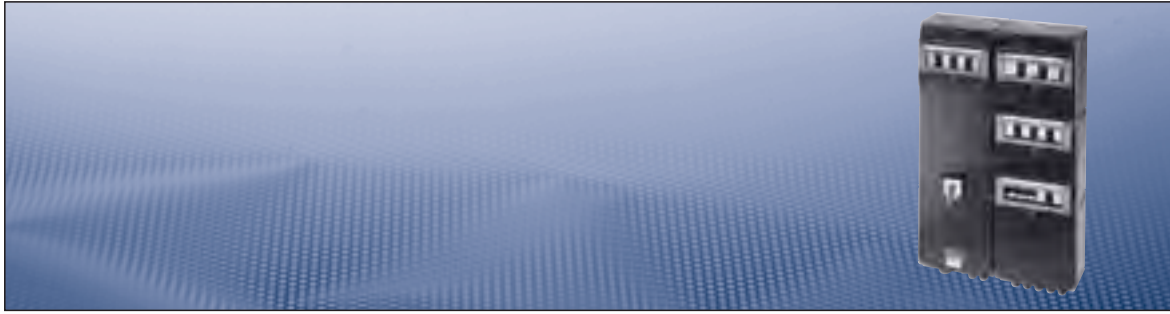
A bus-bar system can be used to provide power to the individual components. The flameproof encapsulated modules (Ex-d) can be combined according to customers' specifications. Five enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, contactors, motor starters, over current trips, star-delta time relays or main switches. The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. Lockable actuating flaps allow operation without opening the enclosure.

Internationally approved.

- Modular slip-on assembly
- High IP66 protection
- Snap-on components
- Retrofitting



**MCB distribution for lighting circuits,
heating circuits, socket distributions**



Technical data

MCB distribution for lighting circuits | heating circuits | socket distributions

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/lb m [ia/lb] IIC T6, T5, T4 / Ⓔ II 2 D Ex tD A21 IP66/IP65 T95 °C
EC Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
IECEX Certificate of Conformity	IECEX BKI 06.0007
Marking accd. to IECEX	Ex de ia/lb m [ia/lb] T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	690 V
Rated current	180 A
Insulation class	I
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP65
Weight	see ordering details
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

Ordering details MCB distribution for lighting circuits

Version	Type	MCB 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A	10 mm ²	1 x M40 (17 - 28 mm Ø) 8 x M25 (8 - 17 mm Ø)	20 kg	EXKO 214 600 G 0000
80 A	2	12 x 16 A	16 mm ²	1 x M50 (22 - 35 mm Ø) 12 x M25 (8 - 17 mm Ø)	32 kg	EXKO 214 600 G 0001
80 A	3	24 x 16 A	16 mm ²	1 x M50 (22 - 35 mm Ø) 24 x M25 (8 - 17 mm Ø)	56 kg	EXKO 214 600 G 0002

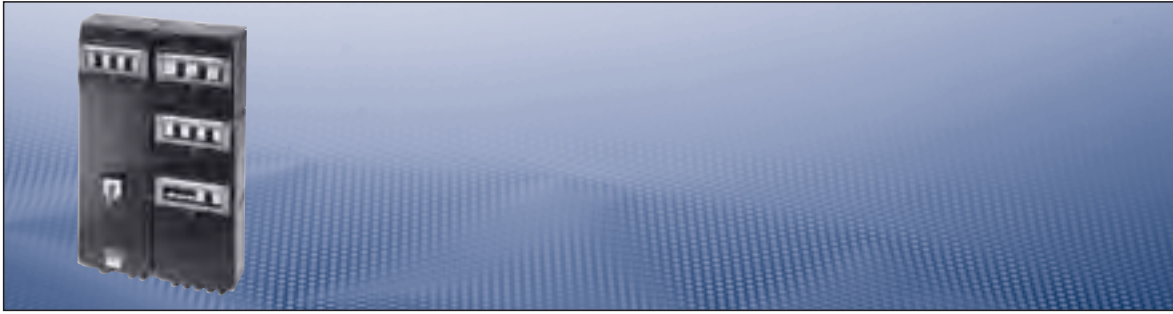
Ordering details MCB distribution for heating circuits

Version	Type	MCB with RCD 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A, 30 mA	10 mm ²	1 x M40 (17 - 28 mm Ø) 8 x M25 (8 - 17 mm Ø)	20 kg	EXKO 214 600 G 0003
80 A	2	12 x 16 A, 30 mA	16 mm ²	1 x M50 (22 - 35 mm Ø) 12 x M25 (8 - 17 mm Ø)	32 kg	EXKO 214 600 G 0004
80 A	3	24 x 16 A, 30 mA	16 mm ²	1 x M50 (22 - 35 mm Ø) 24 x M25 (8 - 17 mm Ø)	56 kg	EXKO 214 600 G 0005

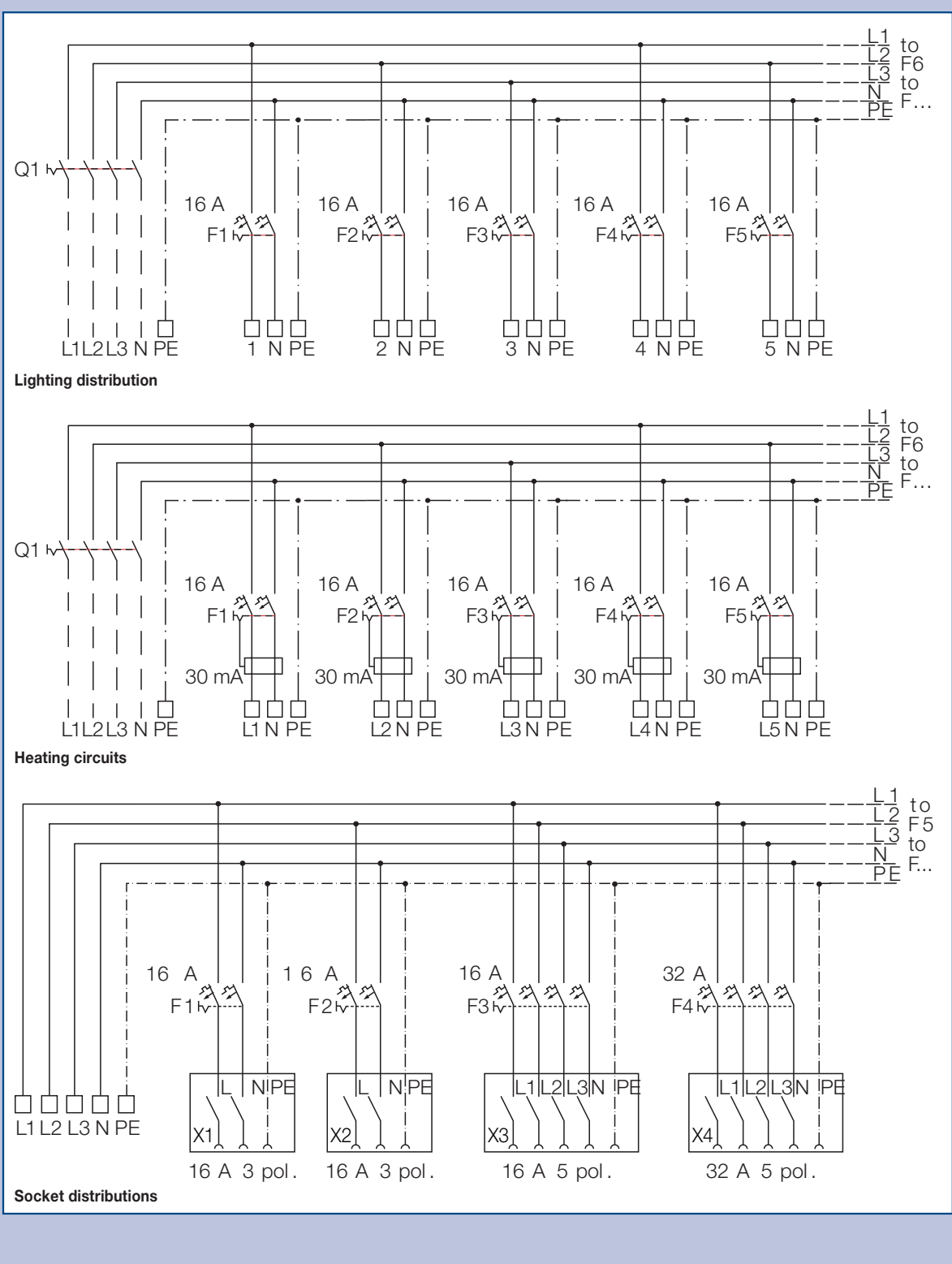
Ordering details MCB distribution for sockets

Version	Type	Socket outlets	Cable glands	Weight approx.	Order No.
2 x 16 A	1	2 x 16 A 3-pole	1 x M40 (17 - 28 mm Ø)	10 kg	EXKO 233 800 C 0001
2 x 16 A 1 x 32 A	2	1 x 16 A 3-pole 1 x 16 A 5-pole			
		1 x 32 A 5-pole	1 x M40	20 kg	EXKO 233 800 C 0002
4 x 16 A	3	2 x 16 A 3-pole 2 x 16 A 5-pole	1 x M40	25 kg	EXKO 233 800 C 0003

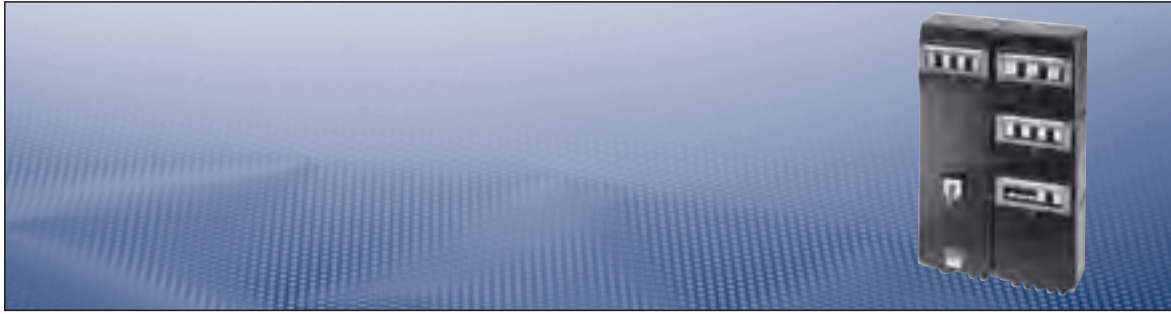
**MCB distribution for lighting circuits,
heating circuits, socket distributions**



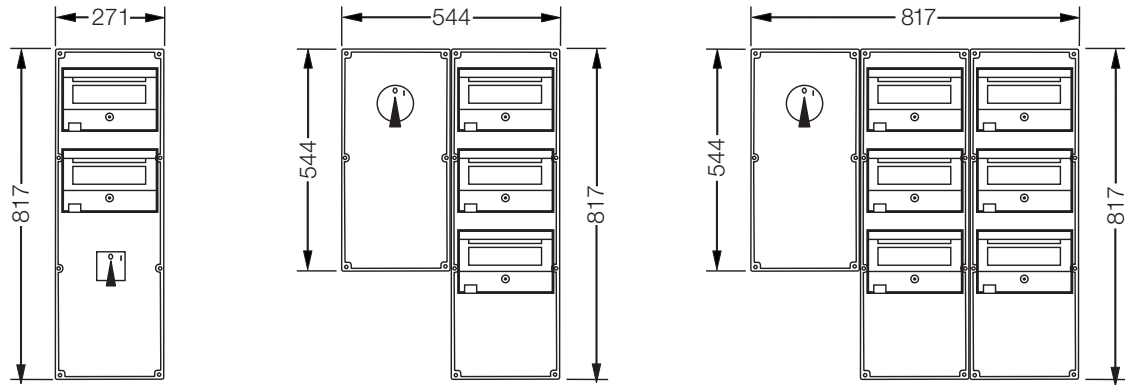
Wiring diagram lighting distribution | heating circuit distribution | socket distribution



**MCB distribution for lighting circuits,
heating circuits, socket distributions**



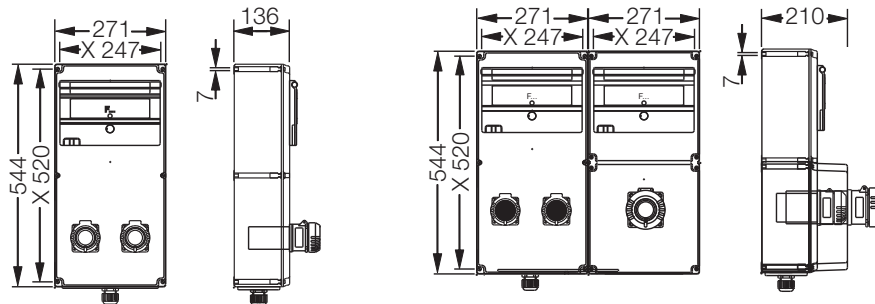
Dimension drawing lighting distribution | heating circuit distribution | socket distribution



Type 1
Lighting distribution/heating circuit distribution

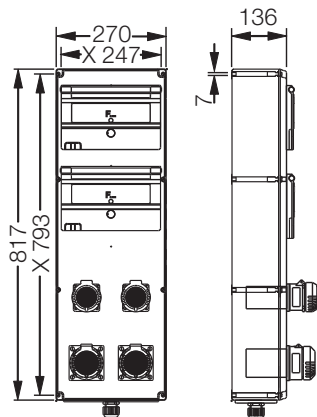
Type 2

Type 3



Type 1

Type 2



Type 3
Socket distributions

X = fixing dimension

Dimensions in mm

Complete motor starter distributions



Technical data

Complete motor starter distributions

Marking to 94/9/EC	Ⓔ II 2 G Ex de ia/ib m [ia/ib] IIC T6, T5, T4 / Ⓔ II 2 D Ex tD A21 IP66/IP65 T95 °C
EC Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
IECEX Certificate of Conformity	IECEX BKI 06.0007
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	690 V
Rated current	up to 180 A
Insulation class	I
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP66
Weight	see ordering details
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

Ordering details complete motor starter distributions

Version Motor capacity to AC 3	Type	Connection terminals	Cable glands	Weight approx.	Order No.
Direct circuit					
4 KW	1	10 mm ²	3 x M25 (8 - 17 mm Ø)	20 kg	EXKO 208 900 A 0001
5.5 KW	2	16 mm ²	3 x M25 (8 - 17 mm Ø)	32 kg	EXKO 208 900 A 0002
7.5 KW	2	16 mm ²	3 x M25 (8 - 17 mm Ø)	36 kg	EXKO 208 900 A 0003
Reversing circuit					
4 KW	2	10 mm ²	3 x M25 (8 - 17 mm Ø)	20 kg	EXKO 208 900 B 0001
5.5 KW	2	16 mm ²	3 x M25 (8 - 17 mm Ø)	32 kg	EXKO 208 900 B 0002
7.5 KW	2	16 mm ²	3 x M25 (8 - 17 mm Ø)	36 kg	EXKO 208 900 B 0003
Star-delta starter					
4 KW	2	10 mm ²	4 x M25 (8 - 17 mm Ø)	20 kg	EXKO 208 900 C 0001
5.5 KW	2	16 mm ²	4 x M25 (8 - 17 mm Ø)	32 kg	EXKO 208 900 C 0002
7.5 KW	2	16 mm ²	4 x M25 (8 - 17 mm Ø)	32 kg	EXKO 208 900 C 0003
11 KW	3	16 mm ²	1 x M25 (8 - 17 mm Ø) 3 x M25 (8 - 17 mm Ø)	56 kg	EXKO 208 900 C 0004

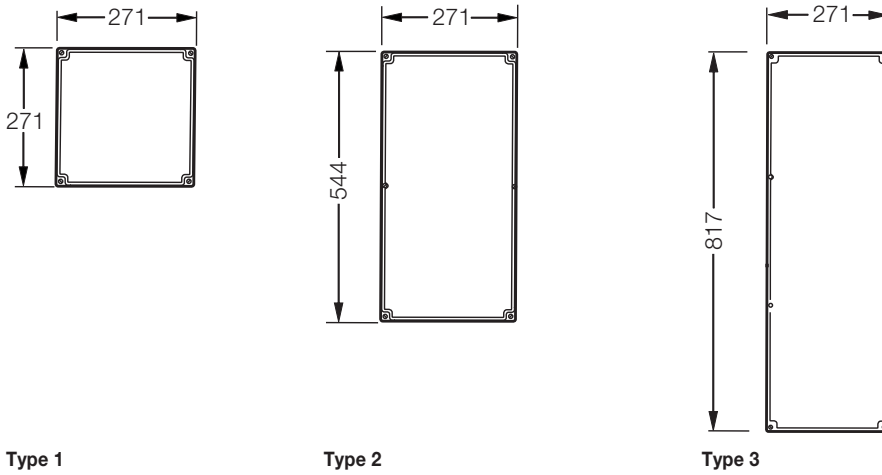
The motor starters are completely wired for connection by customer.



EXKO 208900 A 0003

EXKO 208900 C 0001

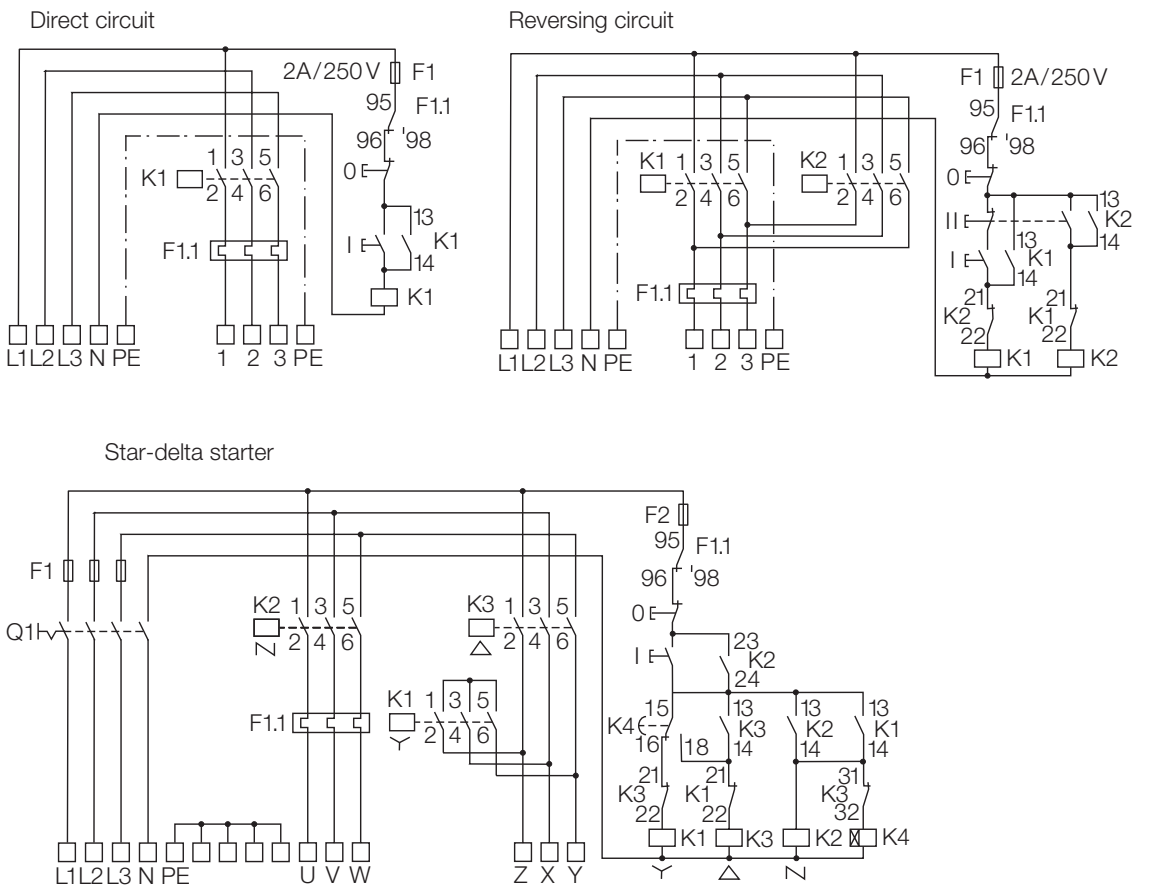
Dimension drawing | Wiring diagram



Type 1

Type 2

Type 3



Dimensions in mm

E X - D I S T R I B U T I O N S

Stainless steel in modular design

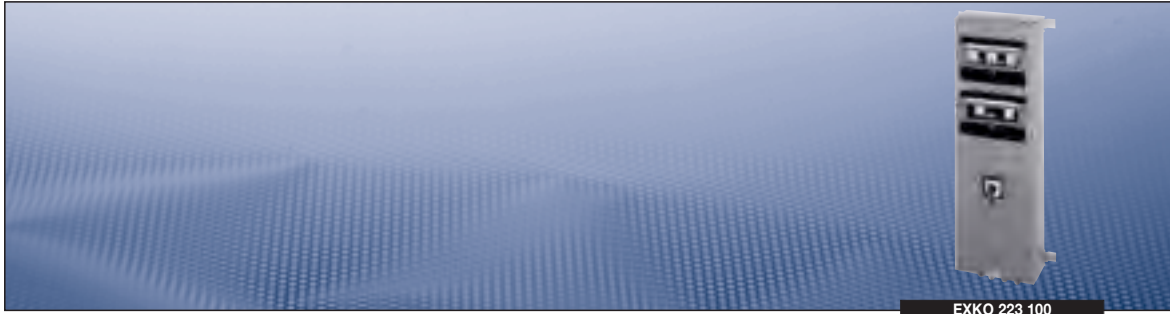
Distributions made of stainless steel for protection against aggressive environments are used for lighting, heating, motor and socket circuits in potentially explosive atmospheres. The distributions contain components with flameproof enclosures. These flameproof components, such as MCBs, fuses etc., provide thermal and magnetic protection and can be snapped on individually on the DIN rails. The distribution systems are available in stainless steel enclosures of various sizes. On standardised wall-mounting or free-standing frameworks, the enclosures can be combined into large distribution systems. The frameworks come in standardised sizes to accommodate the enclosures and can be extended as required. MCBs, RCDs and other components can be operated via lockable actuating flaps, integrated in the enclosure cover, without opening the enclosure. CEAG fuse and MCB distributions provide cost-effective solutions. They fulfil all the requirements specified by the chemical, petrochemical and offshore industries.

Internationally approved.



- Combinable for larger distributions
- Actuating flaps for easy operation
- Snap-on components
- Protection type IP66
- Retrofitting

**MCB distribution for lighting circuits,
heating circuits, socket distributions**



EXKO 223 100

Technical data

MCB distribution for lighting circuits | heating circuits | socket distributions

Marking to 94/9/EC	Ⓜ II 2 G Ex de ia/lb m [ia/lb] IIC T6, T5, T4 Ⓜ II D Ex tD A21 IP66/IP65 T80 °C, T95 °C
EC Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
IECEX Certificate of Conformity	IECEX BKI 06.0007
Marking accd. to IECEX	Ex de ia/lb m [ia/lb] T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	690 V
Rated current	180 A
Insulation class	I
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP66
Enclosure material	Stainless steel AISI 316 L
Enclosure colour	electro-polished

Ordering details MCB distribution for lighting circuits

Version	Type	MCB 2-pole	Conection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A	10 mm ²	1 x M40 (17 - 28 mm Ø) 8 x M25 (8 - 17 mm Ø)	22 kg	EXKO 223 100 Q 0000
80 A	2	12 x 16 A	16 mm ²	1 x M50 (22 - 35 mm Ø) 12 x M25 (8 - 17 mm Ø)	34 kg	EXKO 223 100 Q 0001
80 A	3	24 x 16 A	16 mm ²	1 x M50 (22 - 35 mm Ø) 24 x M25 (8 - 17 mm Ø)	58 kg	EXKO 223 100 Q 0002

Ordering details MCB distribution for heating circuits

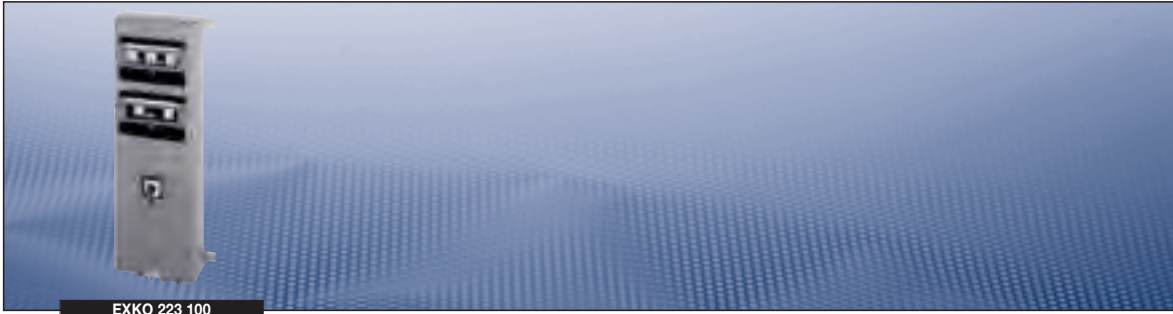
Version	Type	MCB wit RCD 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A, 30 mA	10 mm ²	1 x M40 (17 - 28 mm Ø) 8 x M25 (8 - 17 mm Ø)	22 kg	EXKO 223 100 Q 0003
80 A	2	12 x 16 A, 30 mA	16 mm ²	1 x M50 (22 - 35 mm Ø) 12 x M25 (8 - 17 mm Ø)	34 kg	EXKO 223 100 Q 0004
80 A	3	24 x 16 A, 30 mA	16 mm ²	1 x M50 (22 - 35 mm Ø) 24 x M25 (8 - 17 mm Ø)	58 kg	EXKO 223 100 Q 0005

Ordering details MCB distribution for sockets

Version	Type	Socket outlets	Cable glands	Weight approx.	Order No.
2 x 16 A	1	2 x 16 A 3-pole	1 x M40 (17 - 28 mm Ø)	12 kg	EXKO 223 800 C 0004
2 x 16 A 1 x 32 A	2	1 x 16 A 3-pole 1 x 16 A 5-pole 1 x 32 A 5-pole	1 x M40	22 kg	EXKO 223 800 C 0005
4 x 16 A	3	2 x 16 A 3-pole 2 x 16 A 5-pole	1 x M40	27 kg	EXKO 223 800 C 0006

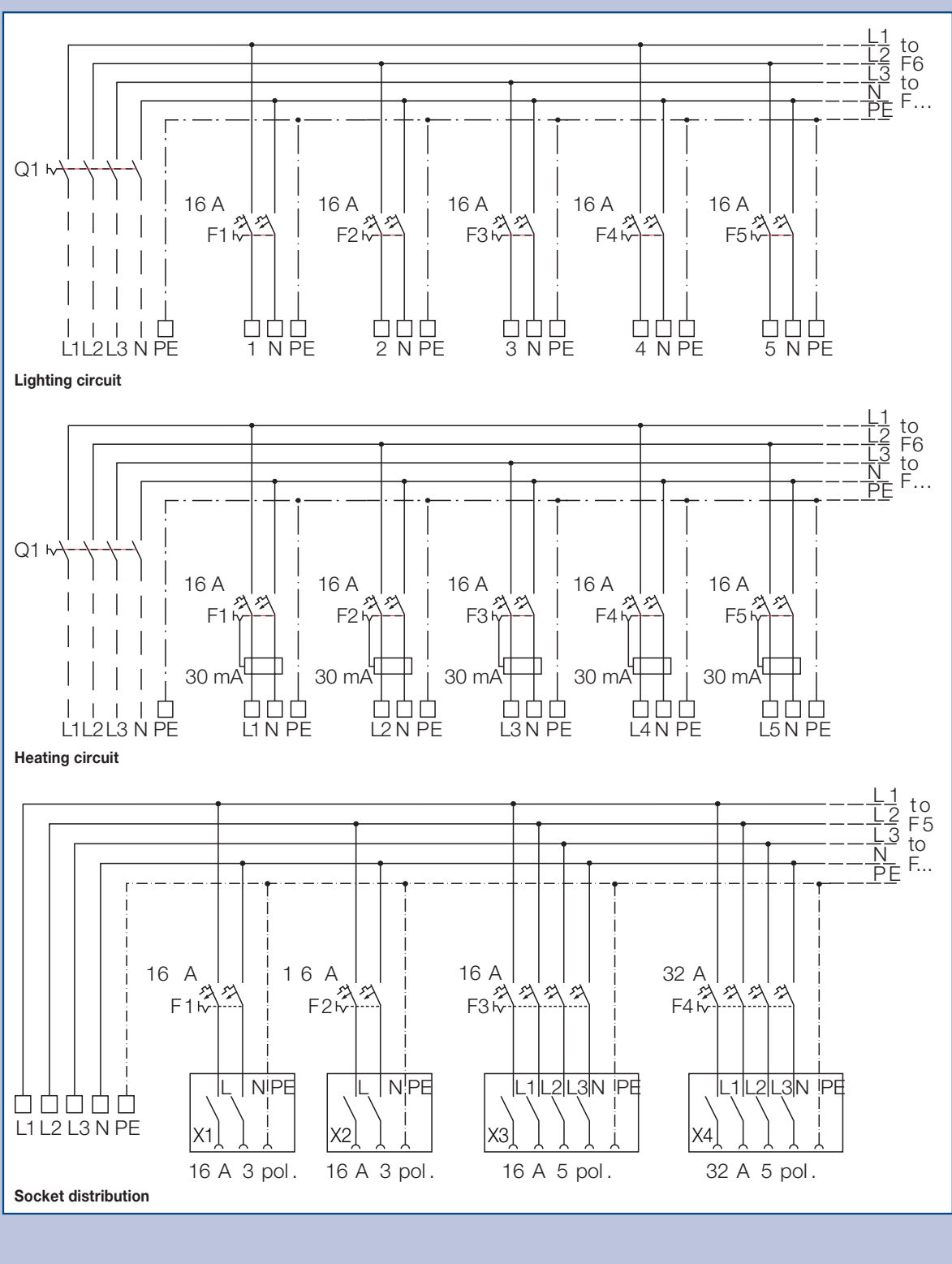
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12

**MCB distribution for lighting circuits,
heating circuits, socket distributions**

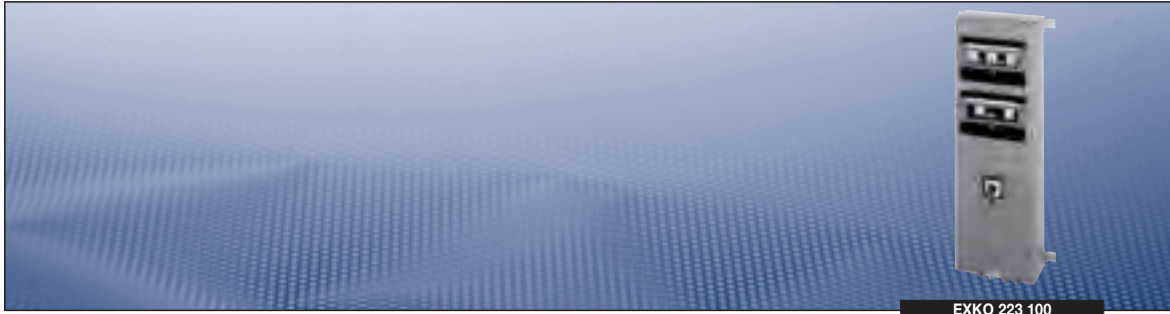


EXKO 223 100

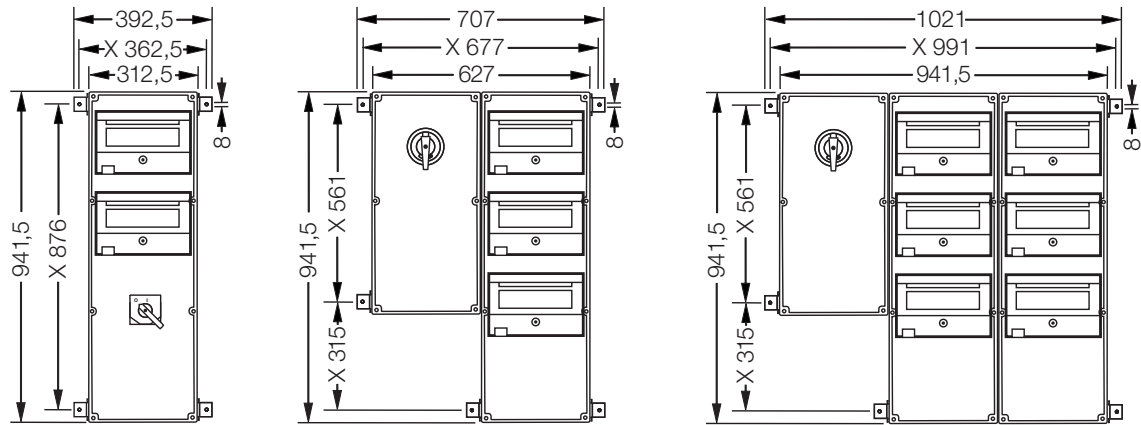
Wiring diagram lighting distribution | heating circuit distribution | socket distribution



**MCB distribution for lighting circuits,
heating circuits, socket distributions**



Dimension drawing lighting distribution | heating circuit distribution | socket distribution

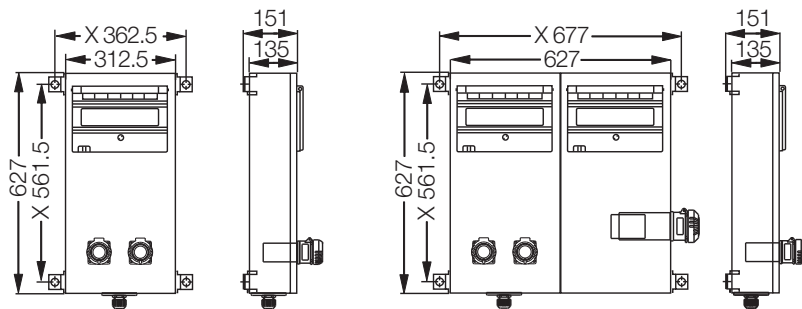


Type 1
Lighting distribution/Heating circuit distribution

Type 2
Heating circuit distribution

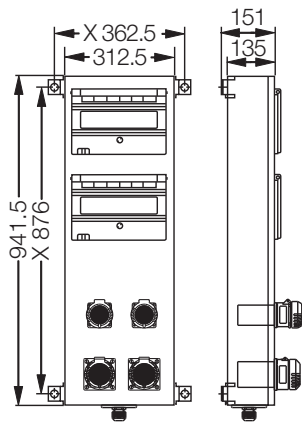
Type 3
Socket distribution

X = fixing dimensions



Type 1

Type 2



Type 3
Socket distribution

X = fixing dimensions

Dimensions in mm

1
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7
8
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10
11
12

EX - D - BUILT - IN COMPONENTS

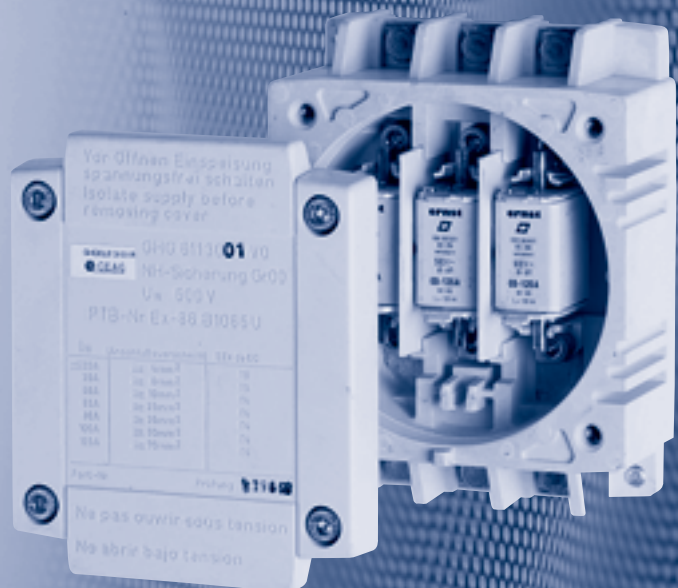
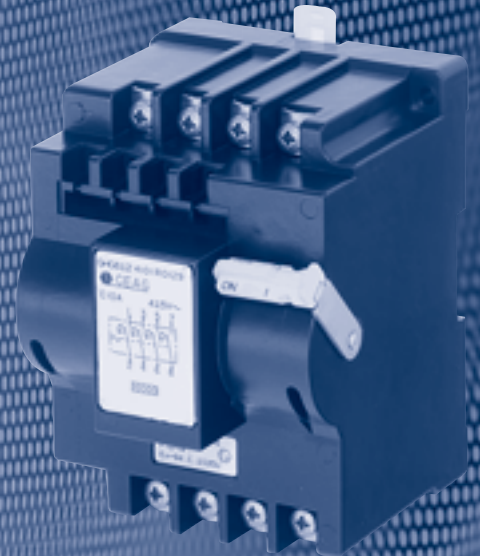
Flameproof encapsulation





If electrical apparatus is to be used in hazardous areas, i.e. potentially explosive atmospheres, where arcing or sparking can occur, it must be protected according to EN 60079 pp by special constructional measures. The Cooper Crouse-Hinds GmbH explosion-protected apparatus, such as the modules in Ex-e distributions, derives its high degree of safety through the combination of various types of protection. Thus, flameproof encapsulated components (Ex-d), for instance, are also integrated in enclosures of the type "Increased Safety" (Ex-e). As these components are of modular design, they can be combined according to customers' requirements. Five enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, contactors, motor starters, over-current trips, star-delta time relays or main switches. Protected by a transparent flap, all modules can be conveniently monitored and operated.

The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. That makes servicing and extension work simpler and faster – and thus more cost-efficient.

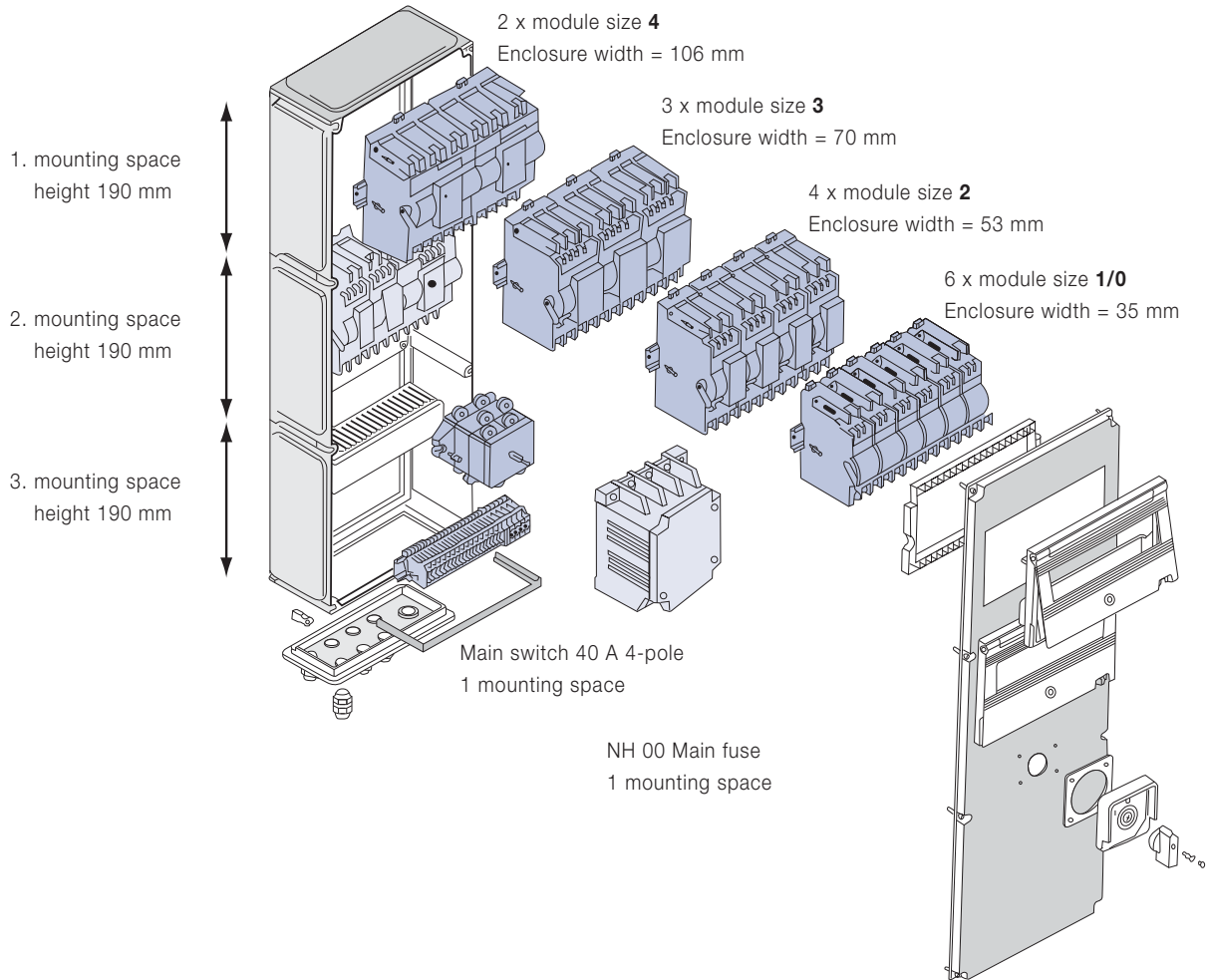
We've also provided for your personal safety: MCBs, RCDs, and power circuit breakers can be equipped with a lock in the OFF position. That protects you during your work on the system against inadvertent switching on – better safe than sorry!

International certification.



-  Snap-on
-  Individually combinable
-  Operation via actuating flap
-  Optimum space utilisation with 5 enclosure sizes

Enclosure module size 4
with 3 mounting spaces

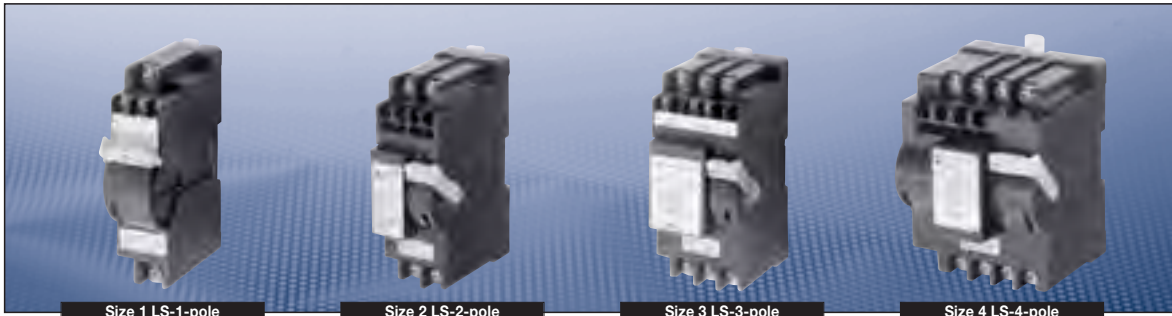


Individual modular distributions

Cooper Crouse-Hinds explosion protected Ex-e moulded-plastic distributions can be individually assembled and equipped with various components. Enclosure modules of size 1, 2, 3 and 4 are available for combining flameproof encapsulated modules (Ex-d) according to customers' specifications. Five enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs,

contactors, motor starters, over-current trips, star-delta time relays or main switches. Different module sizes can be placed side by side in one mounting space. The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. Lockable actuating flaps allow easy operation without opening the enclosure.

Ex-d-Built-in components



Size 1 LS-1-pole

Size 2 LS-2-pole

Size 3 LS-3-pole

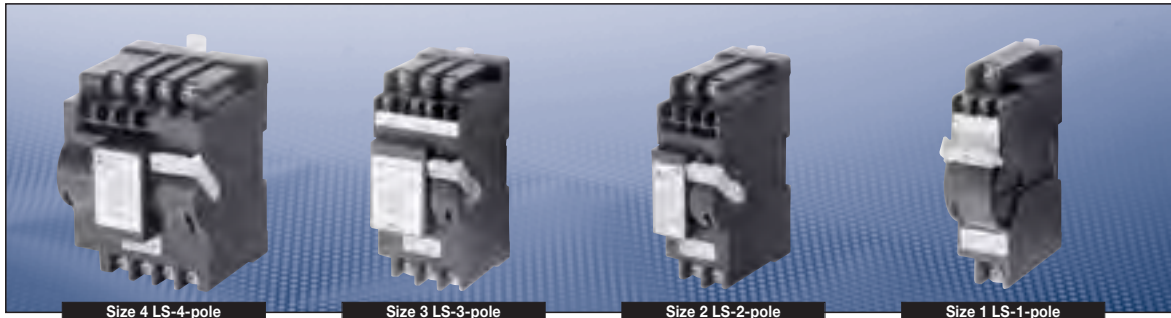
Size 4 LS-4-pole

Technical data

MCB 0.5 A to 40 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BKI 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C / -55 °C to +40 °C (option)	
Rated voltage	Main contact	max. 440 V AC
	Auxiliary contact	max. 250 V AC
Rated current	Main contact	0.5 A to 40 A
	Auxiliary contact	max. 5 A
Rated switching capacity 2/3 phase		10 kA
	230 V AC (133/230 V AC) kA/cos φ	10/0.5
	400 V AC (230/400 V AC) kA/cos φ	10/0.5
Back-up fuse	depend on rated current up to 100 A	
Connection terminals	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Weight	1 pole	0.55 kg size 1
	2 pole	0.95 kg size 2
	3 pole	1.25 kg size 3
	4 pole	1.57 kg size 4
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	auxiliary-signal contact	
Padlocking facility	in OFF position with a commercially available padlock	

¹⁾ Depend on installation



Ex-Built-in components

MCB 0.5 A to 40 A

GHG 612 XXXX R0YYY

1. Contacts

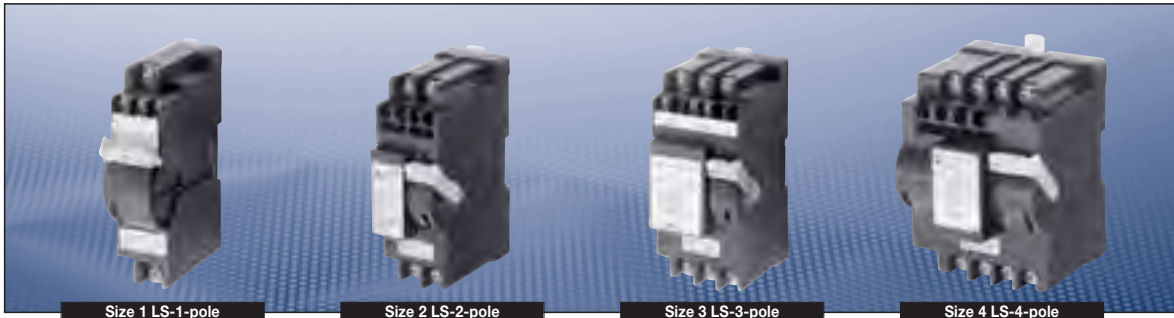
1. Contacts

Contacts	Termination diagram ¹⁾	1 pole (xxxx)	Module size ²⁾	2 pole (xxxx)	Module size ²⁾	3 pole (xxxx)	Module size ²⁾	4 pole (xxxx)	Module size ²⁾
Only main contact	A1 to A5	1141	1	2141	2	3141	3	4141	4
+ auxiliary contact (1 change-over)	B3	1142	1	2142	2	3142	3	4142	4
+ auxiliary contact (1NO+1NC)	B1, B2			3150	3				
+ auxiliary contact (2NO)	B4					4168	4		
+ N + auxiliary contact (1NO+1NC)	A5, B1, B2					4166	4		
+ signal contact (1 change-over)	C3	2148	2	3157	3	4147	4	4143	4
+ signal contact (1NC) + auxiliary contact (1NO)	C2 + B1					4148	4		
+ signal contact (1NO) + auxiliary contact (1NO)	C1 + B1					4161	4	4160	4
+ signal contact (1NC) + auxiliary contact (1NC)	C2 + B2					4163	4		
+ overload release (12 - 60 V)	D	2150	2	3147	3				
+ overload release (110 - 415 V)	D	2151	2	3146	3	4146	4		
+ undervoltage trip	E			3148	3	4144	4		
+ signal contact (1 change-over)	C3								
+ auxiliary contact (1 change-over)	B3			3143	3	4164	4		
+ overload release (110 - 415 V)	D								
+ signal contact (1 change-over)	C3			4159	4				
+ overload release (12 - 60 V)	D								
+ auxiliary contact (1 change-over)	B3			3149	3				
+ overload release (110 - 415 V)	D								
+ signal contact (1 change-over)	C3								
+ auxiliary contact (1 change-over)	B3			4165	4				
+ overload release (12 - 60 V)	D								
+ signal contact (1 change-over)	C3								
+ auxiliary contact (1 change-over)	B3			4169	4				
+ undervoltage trip	E								
+ signal contact (1 change-over)	C3					4167	4		
+ undervoltage trip	E								
+ signal contact (1 change-over)	C3								
+ auxiliary contact (1 change-over)	B3					4174	4		

¹⁾ Termination diagram see page 11.20

²⁾ Module size see dimension drawing page 11.21

Ex-d-Built-in components



Ex-Built-in components

MCB 0.5 A to 40 A

GHG 612 XXXX R0YYY

2. Tripping current

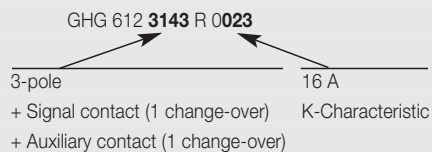
2. Tripping current, characteristic, max. back-up fuse, power dissipation per pole

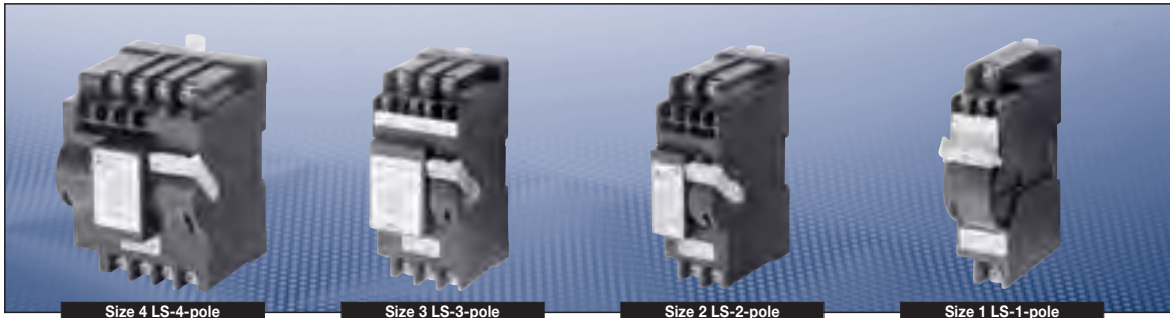
Tripping current	Characteristic K		Characteristic Z		Characteristic B		Characteristic C	
	Max. back-up fuse	YYY	Max. back-up fuse	YYY	Max. back-up fuse	YYY	Max. back-up fuse	YYY
	gL		gL		gL		gL	
0,5 A	not necessary	013	not necessary	081			not necessary	121
0,75 A		014		082		122		
1,0 A		015		083		123		
1,6 A		016		084		124		
2 A		017		085		125		
3 A	20 A	018	20 A	086		20 A	126	
4 A	25 A	019	20 A	087		20 A	127	
6 A	63 A	020	35 A	088	63 A	101	40 A	128
8 A	63 A	021	40 A	089			63 A	129
10 A	63 A	022	63 A		100 A	102	100 A	130
13 A					100 A	103	100 A	131
16 A	80 A	023	63 A	090	100 A	104	100 A	132
20 A	81 A	024	80 A	091	100 A	105	100 A	133
25 A	100 A	025	80 A	092	100 A	106	100 A	134
32 A	100 A	026	100 A	093	100 A	107	100 A	135
40 A	125 A	027	100 A	094	125 A	108	125 A	

Back-up fuse is only required if at the installation point the max. prospective, unaffected short-circuit current will exceed the rated switching capacity.

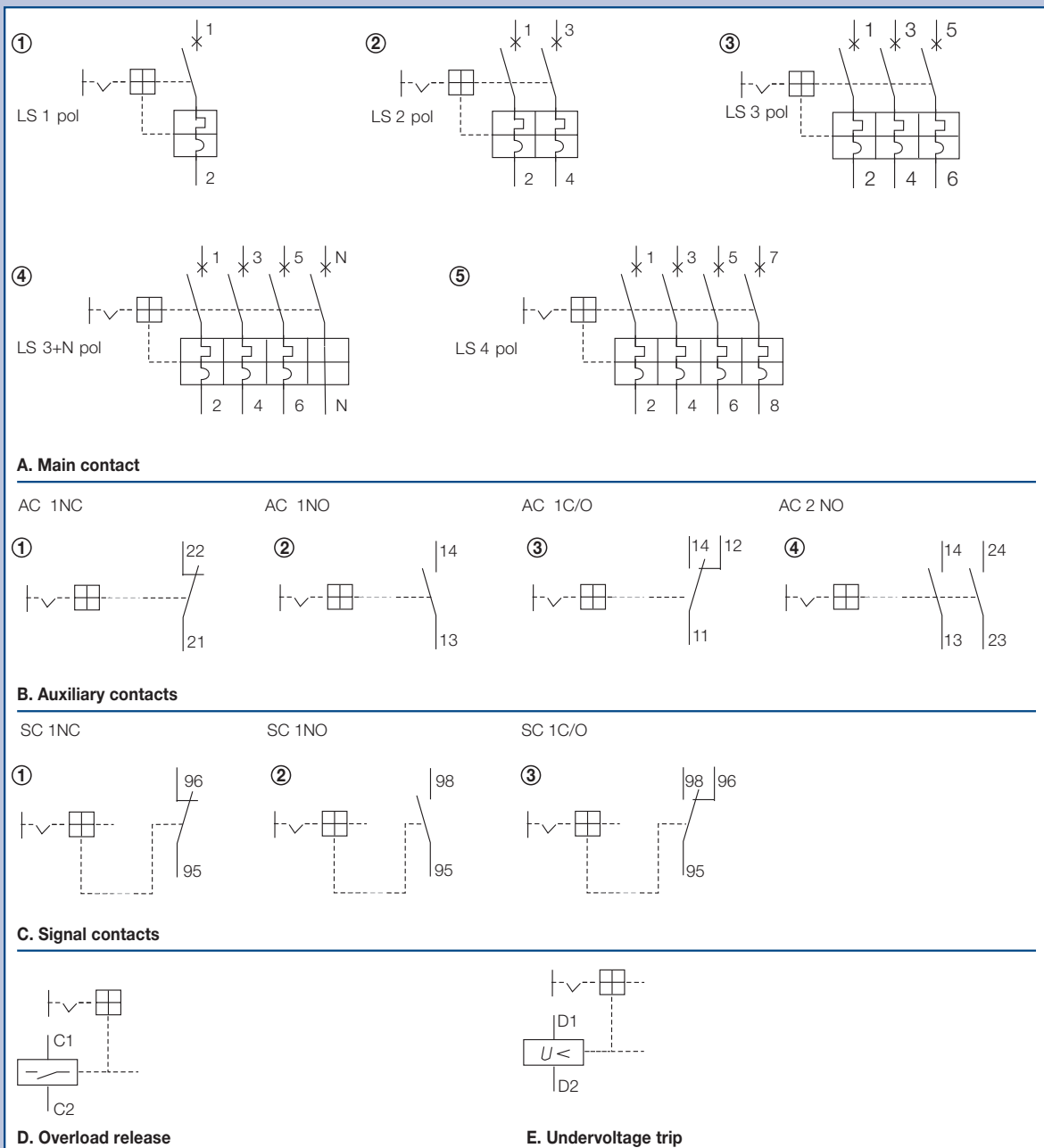
Example

GHG 612 XXXX R 0YYY



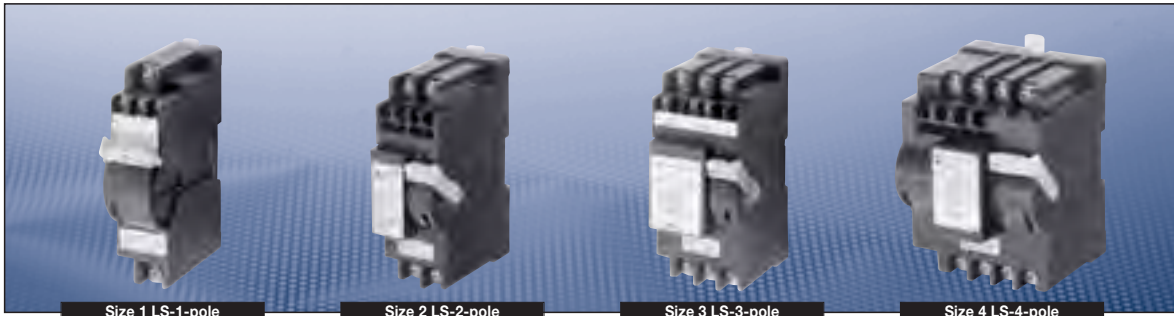


Termination diagram

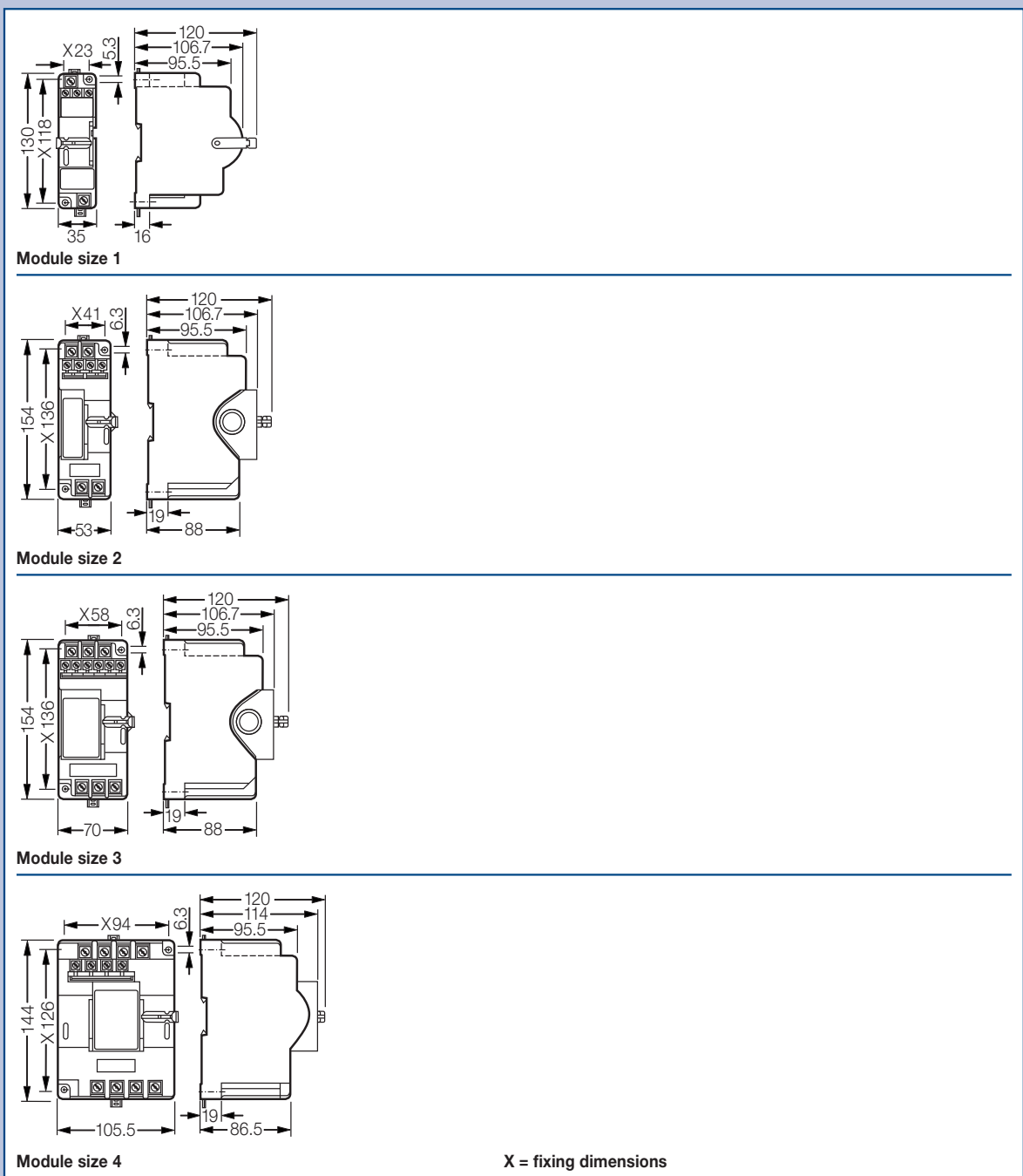


MC = Main contact
 AC = Auxiliary contact
 SC = Signal contact
 OR = Overload release
 UT = Undervoltage trip

Ex-d-Built-in components



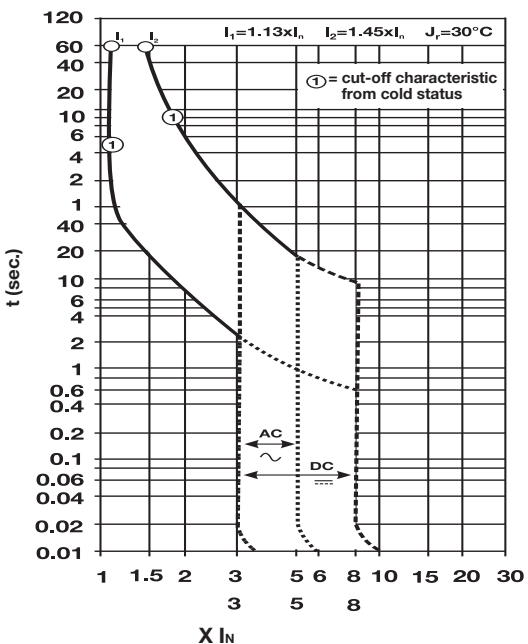
Dimension drawing



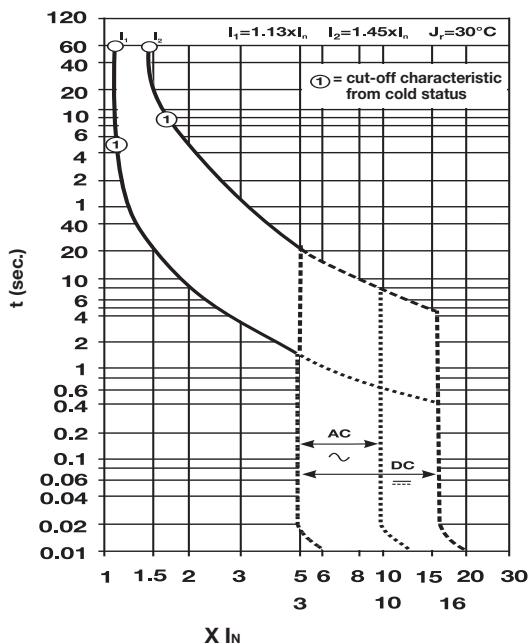
Dimensions in mm



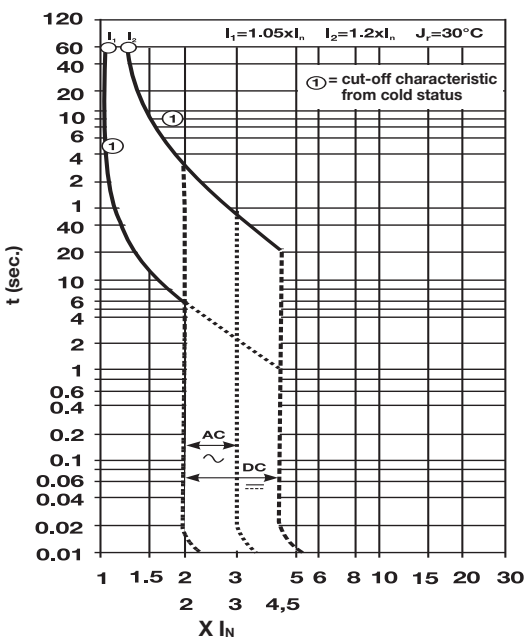
Tripping characteristic



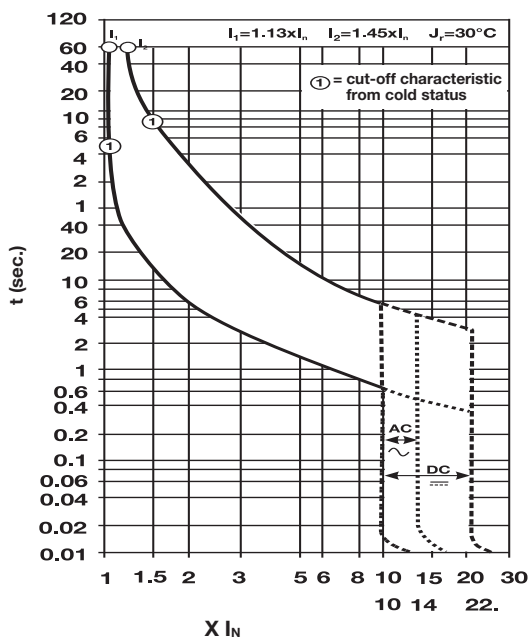
B-Characteristic



C-Characteristic



Z-Characteristic

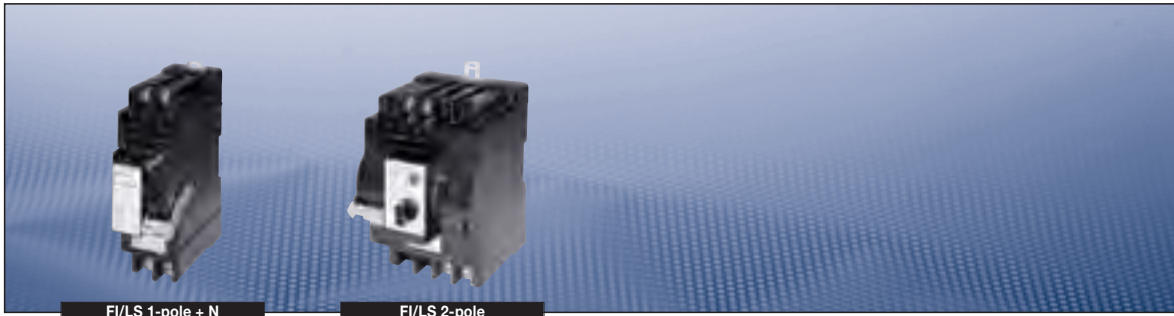


K-Characteristic

Dimensions in mm

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Ex-d-Built-in components

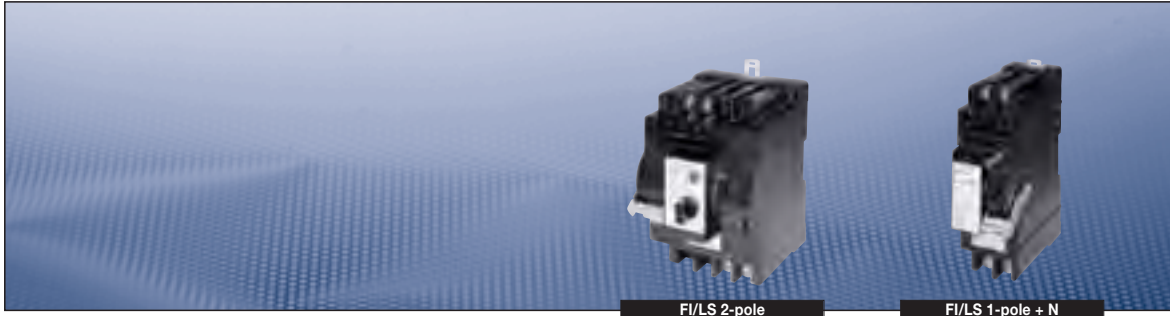


Technical data

MCB 0.5 A to 40 A with RCD

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BKI 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C / -55 °C to +40 °C (option)	
Rated voltage	Main contact	max. 440 V AC
	Auxiliary contact	max. 250 V AC
Rated current	RCD	25 A; 40 A
	Main contact	1,0 A to 40 A
	Auxiliary contact	max. 5 A
Rated switching capacity 2/3 phase	6 KA (1-pole + N) / 10 KA (2-pole)	
Back-up fuse	RCD	63 A gL
	MCB	depend on rated current up to 100 A
Terminal cross-section	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Weight	1 pole + N	0.95 kg size 2
	2 pole	1.57 kg size 4
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	auxiliary-/signal contact	
Padlocking facility	in OFF position with a commercially available padlock	

¹⁾ Depend on installation



FI/LS 2-pole

FI/LS 1-pole + N

Ex-Built-in components

MCB 0.5 A to 40 A with RCD

GHG 612 XXXX RXYYY

1. Contacts

2. Release current

1. MCB with RCD 6 kA

Pole	Characteristic	Contacts	Termination diagram	Module size	XXXX RX
1 pole + N	B, C, K		1	2 53.0 mm	2143 R 2
1 pole + N	B, C, K	Signal contact (1 change-over)	2	3 70.0 mm	3144 R 2
1 pole + N	B, C, K	Auxiliary contact (1 change-over)	3		3159 R 2
2 pole	K		4	4 105.5 mm	4156 R 0
2 pole	K	Auxiliary contact (1 change-over)	5		4157 R 0
2 pole	K	Signal contact (1 change-over)	6		4158 R 0
2 pole	B, C				4156 R 2
2 pole	B, C	Auxiliary contact (1 change-over)	5		4157 R 2
2 pole	B, C	Signal contact (1 change-over)	6		4158 R 2

1. MCB with RCD 10 kA

Pole	Characteristic	Contacts	Termination diagram	Module size	XXXX RX
1 pole + N	B, C		1	2 53,0 mm	2143 R 5
1 pole + N	B, C	Signal contact (1 change-over)	2	3 70.0 mm	3144 R 5
1 pole + N	B, C	Auxiliary contact (1 change-over)	3		3159 R 5
2 pole	K		4	4 105.5 mm	4156 R 5
2 pole	K	Auxiliary contact (1 change-over)	5		4157 R 5
2 pole	K	Auxiliary contact (1 change-over)	6		4158 R 5

2. Release current and characteristic

Tripping current	Characteristic C (YYY)		Characteristic B (YYY)		Characteristic K (YYY)		Characteristic C (YYY) 100 mA
	30 mA	300 mA	30 mA	300 mA	30 mA	300 mA	
2 A	004	024			084	104	204
4 A	005	025			085	105	205
6 A	006	026	046	066	086	106	206
8 A	007	027	047	067	087	107	207
10 A	008	028	048	068	088	108	208
16 A	009	029	049	069	089	109	209
20 A	010	030	050	070	090	110	210
25 A	011	031	051	071	091	111	211
32 A	012	032	052	072	092	112	212
40 A			053	073	093	113	213

Example

GHG 612 XXXX R XYYY

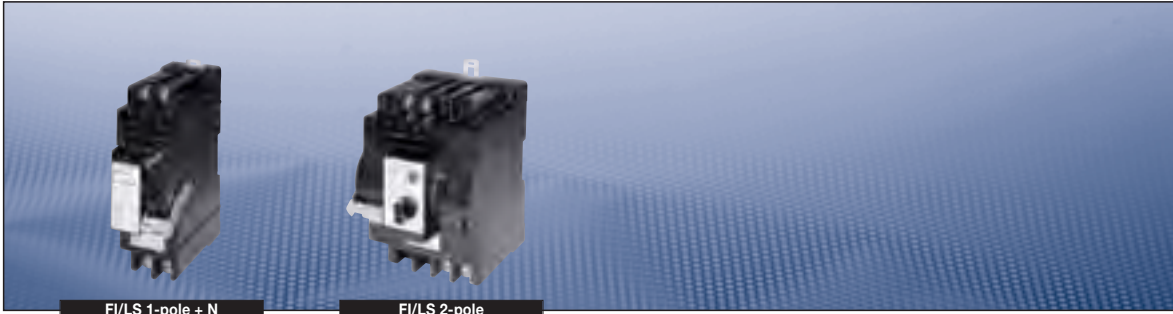
GHG 612 4157 R 0090

K-Characteristic 6 kA; with auxiliary contact

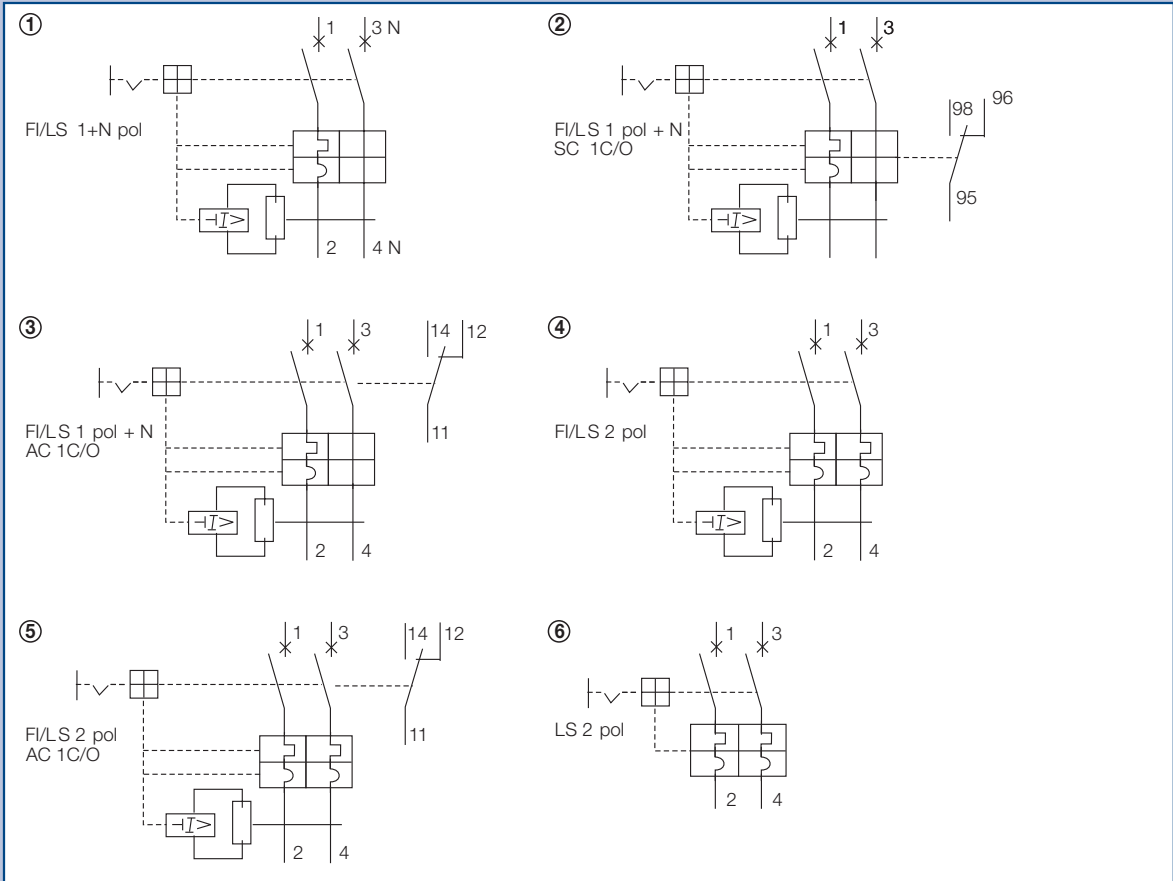
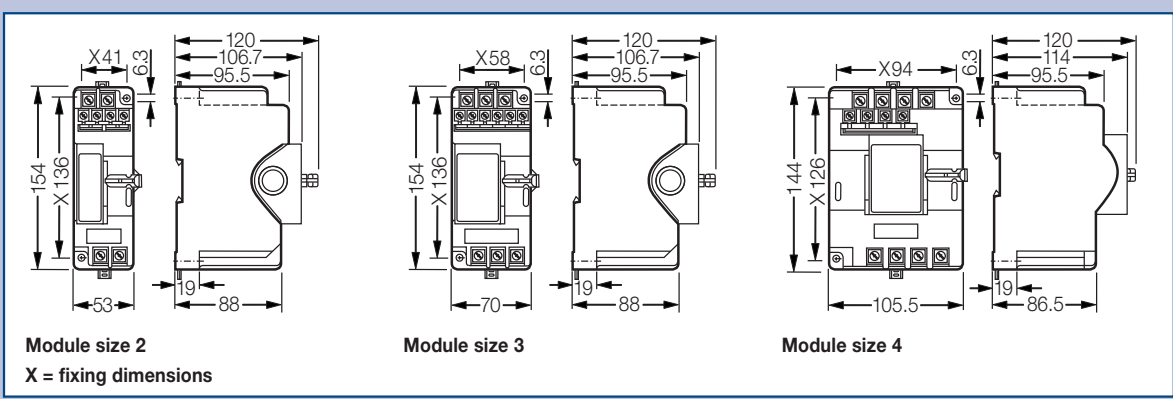
20 A; 30 mA; K

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Ex-d-Built-in components



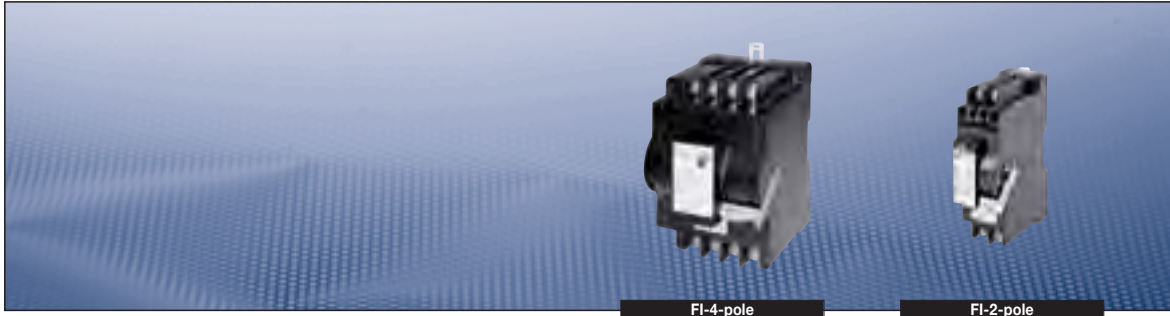
Dimension drawing | Termination diagram



Tripping characteristic see page 11.23

- MC = Main contact
- AC = Auxiliary contact
- SC = Signal contact

Dimensions in mm

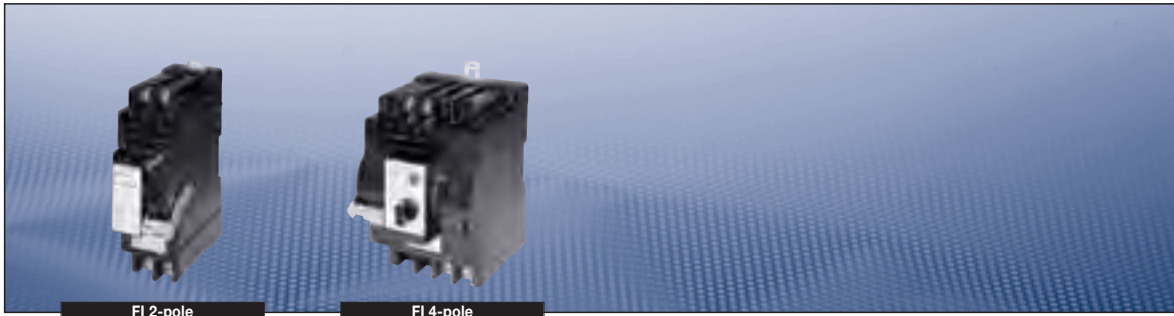


Technical data

RCD from 30 mA		
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BK1 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C / -55 °C to +40 °C (option)	
Rated voltage	Main contact	max. 440 V AC
	Auxiliary contact	max. 250 V AC
Rated current	RCD	25 A; 40 A; 63 A
	Auxiliary contact	max. 5 A
Rated switching capacity	10 kA	
Back-up fuse	RCD	63 A gL
	Release current FI	30 mA to 500 mA
Terminal cross-section	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact	2 x 2,5 mm ² fine wire with wire end sleeve/single wire
Weight	2 pole	0.95 kg size 2
	4 pole	1.57 kg size 4
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	Auxiliary contact	
Padlocking facility	in OFF position with a commercially available padlock	

¹⁾ Depend on installation

Ex-d-Built-in components



FI 2-pole

FI 4-pole

Ex-Built-in components

RCD from 30 mA

GHG 612 XXXX RYYYY

1. Contacts

2. Release current

1. Contacts

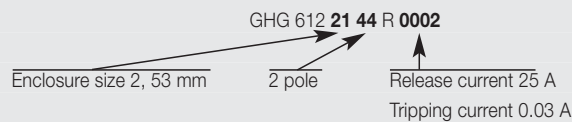
Contacts	Characteristic	Enclosure width	XXXX
2 pole	only main contact	Enclosure size 2, 53.0 mm	2144
2 pole	auxiliary contact (1 change-over) (F200)		2147
4 pole	only main contact	Enclosure size 4, 105.4 mm	4149
4 pole	auxiliary contact (1 change-over) (F200)		4150

2. Release current and tripping current

Release current	Tripping current	Power dissipation in W		YYYY
		2 pole	4 pole	
25 A	0.03 A	2.0	4.8	0002
40 A	0.03 A	4.8	8.4	0003
63 A	0.03 A	7.2	13.2	0004
25 A	0.1 A	2.0	4.8	0005
40 A	0.1 A	4.8	8.4	0006
63 A	0.1 A	7.2	13.2	0007
25 A	0.3 A	2.0	4.8	0008
40 A	0.3 A	4.8	8.4	0009
63 A	0.3 A	7.2	13.2	0010
25 A	0.5 A	2.0	4.8	0011
40 A	0.5 A	4.8	8.4	0012
63 A	0.5 A	7.2	13.2	0013

Example

GHG 612 XXXX RYYYY

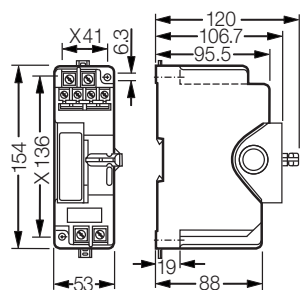




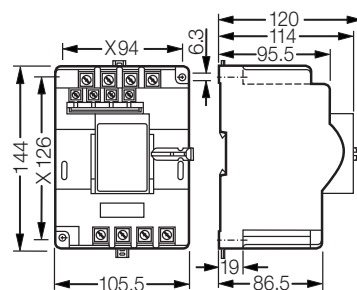
FI-2-pole

FI-4-pole

Dimension drawing | Termination diagram

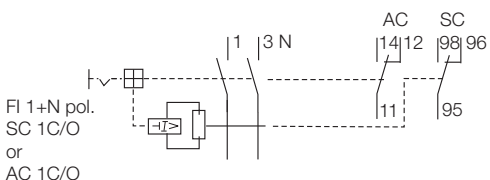


Module size 2

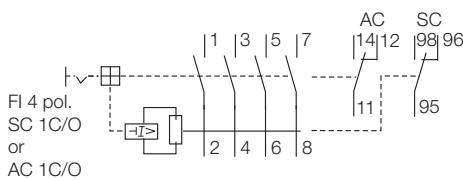


Module size 4

X = fixing dimensions



1-pole + N + AC or SC



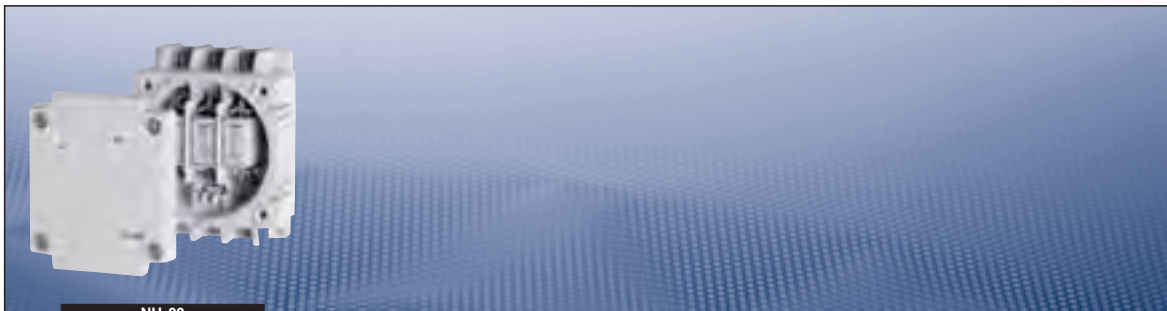
4-pole + AC or SC

- MC = Main contact
- AC = Auxiliary contact
- SC = Signal contact

Dimensions in mm

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Ex-Built-in components



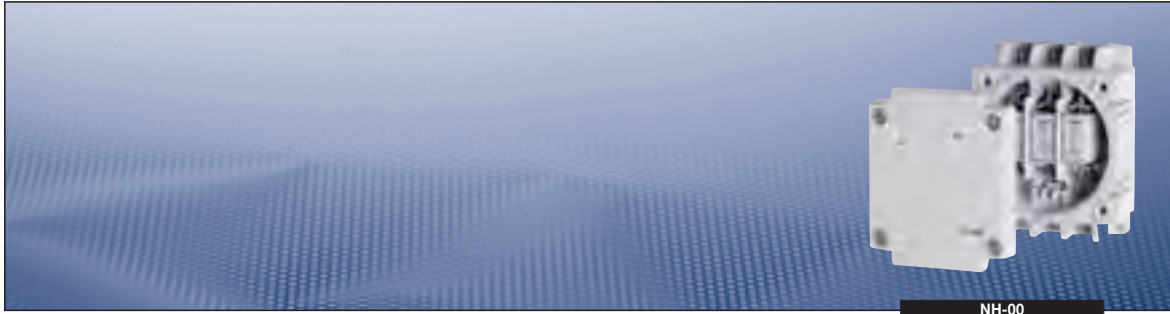
NH-00

Technical data

NH 00 Main fuse up to 125 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 99 ATEX 1066 U	
IECEX Certificate of Conformity	IECEX BKI 07.0035 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +55 °C	
Rated voltage	690 V	
	Signal contact	max. 250 V AC
Rated current	2 A to 125 A	
	Signal contact	max. 5 A
Rated switching capacity	100 kA	
Terminal cross-section	up to 95 mm ²	
Signal contact	2 x 2.5 mm ² fine wire	
Pin wire cross-section	up to 25 A 4 mm ²	
	up to 35 A 6 mm ²	
	up to 50 A 10 mm ²	
	up to 63 A 25 mm ²	
	up to 100 A 50 mm ²	
	up to 125 A 70 mm ²	
Weight	approx. 3.5 kg (without fuse)	
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	white	
Options	Signal contact	

¹⁾ Depend on installation



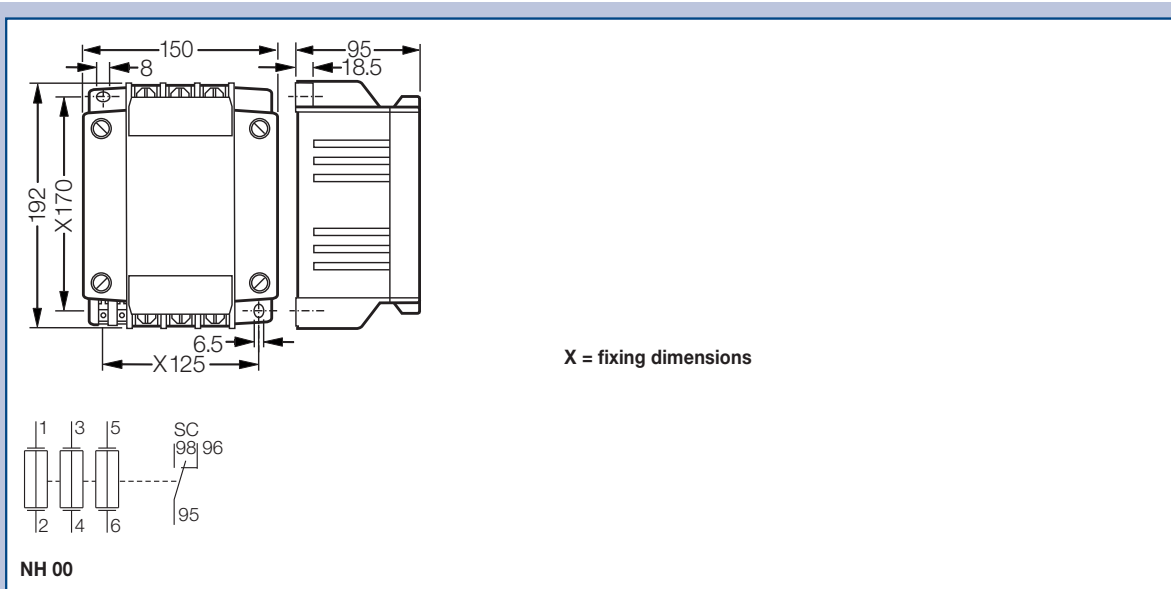
NH-00

Ordering details NH 00 Main fuse up to 125 A

Version	Rated current	Mounting width	Order No.
Equipped without signal contact (SPP 2 pcs.)			
3-pole	2 A - 125 A	150 mm	GHG 610 1940 R0001
Equipped with signal contact (1 change-over) (SPP 2 pcs.)			
3-pole	2 A - 125 A	150 mm	GHG 610 1940 R0002

Delivery with fuses on request

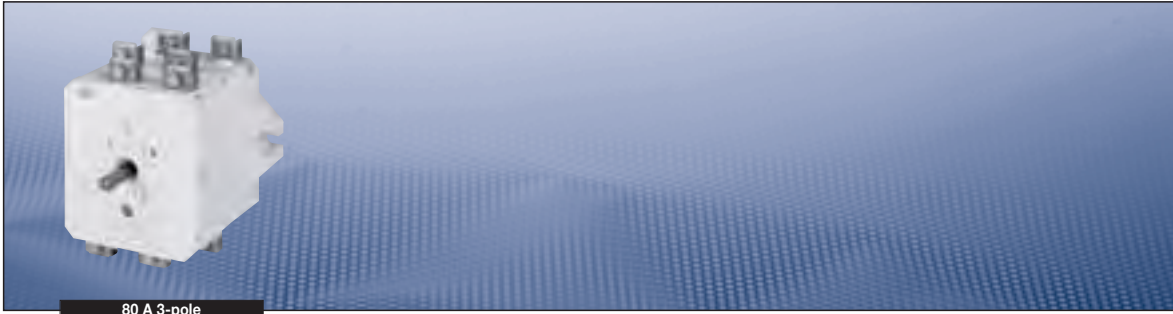
Dimension drawing | Termination diagram



SC = Signal contact

Dimensions in mm

Ex-Built-in components



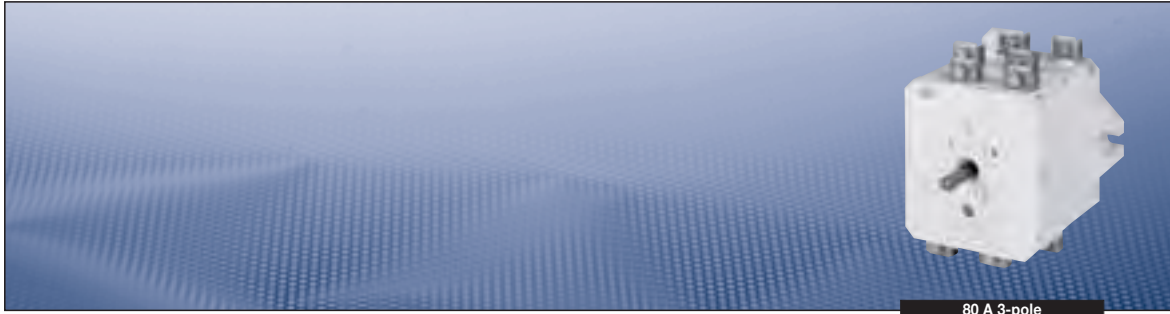
80 A 3-pole

Technical data

Main switch up to 180 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I					
EC Type Examination Certificate						
Switch 20 A	PTB 98 ATEX 1117 U					
Switch 40 A	PTB 99 ATEX 1031 U					
Switch 80 A	PTB 00 ATEX 1069 U					
Switch 125 A to 180 A	PTB 99 ATEX 1062 U					
IECEX Certificate of Conformity						
Switch 20 A	IECEX BKI 07.0004 U					
Switch 40 A	IECEX BKI 07.0006 U					
Switch 80 A	IECEX BKI 07.0006 U					
Switch 125 A to 180 A	IECEX BKI 07.0003 U					
Marking accd. to IECEx	Ex de (ia/ib) IIC					
Application temperature ¹⁾	-20 °C up to +40 °C					
Rated voltage	690 V					
Type of switch	20 A	40 A	80 A	125 A	180 A	
Rated current	20 A	40 A	80 A	125 A	180 A	
Rated making-/rated breaking capacity AC-3 accd. to EN 60947-5-1 AC-3	U _e 400 V	I _e 20 A	I _e 40 A	I _e 80 A	I _e 125 A	I _e 180 A
	U _e 500 V	I _e 16 A	I _e 40 A	I _e 80 A	I _e 125 A	I _e 150 A
	U _e 690 V	I _e 10 A	I _e 32 A	I _e 63 A	I _e 110 A	I _e 125 A
Back-up fuse	up to 500 V 35 A gL					
	up to 500 V 80 A gL					
	up to 500 V 160 A gL					
	up to 500 V 200 A gL					
	up to 500 V 250 A gL					
Terminal cross-section	Switch 20 A	2 x 1.5 to 4 mm ²				
	Switch 40 A	2 x 4 to 16 mm ²				
	Switch 80 A	2 x 4 to 25 mm ² with cable lug 1 x 35 mm ²				
	Switch 125 A	2 x 4 to 70 mm ² with cable lug 1 x 120 mm ²				
	Switch 180 A	2 x 50 to 150 mm ²				
Weight	1.0 kg	1.2 kg	3.68 kg	6.3 kg	6.5 kg	
Enclosure material	glass-fibre reinforced polyester					
Enclosure colour	white					

¹⁾ Depend on installation



80 A 3-pole

Ordering details Main switch up to 180 A

Version	Rated current	Order No.
Type 3-pole		
3-pole	20 A	GHG 260 1004 R0005
3-pole	40 A	GHG 260 1005 R0005
3-pole	80 A	GHG 260 1006 R0005
3-pole	125 A	GHG 260 1007 R0003
3-pole	180 A	GHG 260 1008 R0003
Type 4-pole		
4-pole	20 A	GHG 260 1004 R0006
4-pole	40 A	GHG 260 1005 R0006
4-pole	80 A	GHG 260 1006 R0006
4-pole	125 A	GHG 260 1007 R0004
4-pole	180 A	GHG 260 1008 R0004

Dimension drawing | Termination diagram

Main switch

Dimensions	Switch			
	20 A	40 A	80 A	125 A/180 A
A	21.5	34	38.5	16
B	83	87	130	159
C	50	73	131	146
D	70.4	118	165	194
X	72	115	141	170
F	80	128	161	193
G	6.3	6.3	9.5	12

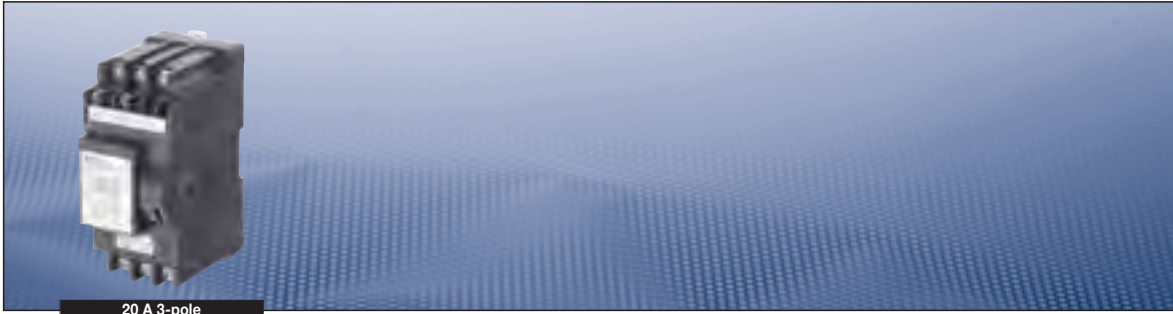
3 pol

4 pol

Dimensions in mm

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Ex-Built-in components



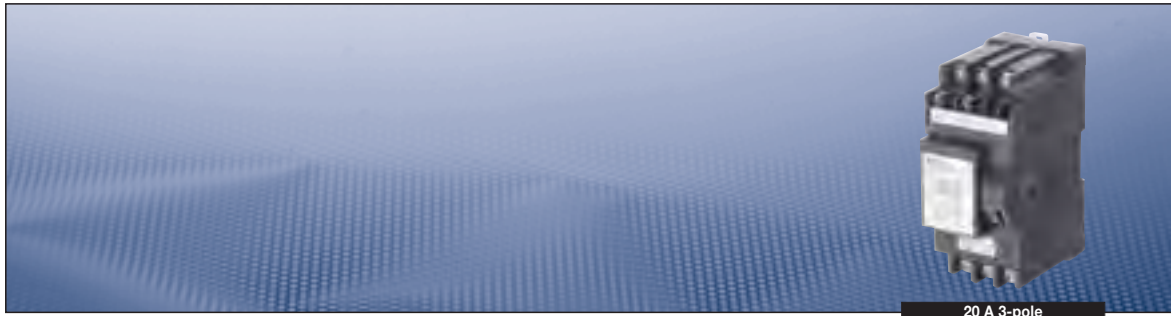
20 A 3-pole

Technical data

Air-break contactor 20 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BKI 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C -55 °C to +40 °C (option)	
Rated voltage	Main contact	max. 690 V/AC
	Auxiliary contact	max. 250 V/AC
	Control A1-A2	12 V up to 690 V/AC 50-60 Hz / 12 V up to 250 V/DC
Rated current	Main contact	max. 20 A
	Auxiliary contact	max. 6 A
Rated making-/rated breaking capacity accd. to EN 60947-4-1 AC-3	U _e 230 V / P _e 2,2 KW	
	U _e 400 V / P _e 4 KW	
	U _e 690 V / P _e 4 KW	
Rated making-/rated breaking capacity auxiliary contact accd. to EN 60947-4-1 AC-11	U _e 230 V / I _e 4 A	
Terminal cross-section		
	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
	Control contact A1-A2	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Weight	1.26 kg size 3	
Enclosure material	glass-fibre reinforced polyester	
Enclosure colour	black	
Options	Auxiliary contact	

¹⁾ Depend on installation



20 A 3-pole

Ex-Built-in components

Air-break contactor 20 A

GHG 618 3104 RXXXX ← Auxiliary contact

One auxiliary contact for mounting width 70mm

Control voltage A1-A2	Auxiliary contacts (XXXX)	
	1 NO	1 NC
24 V AC	0101	0201
42 V AC	0102	0202
48 V AC	0103	0203
110 V AC	0104	0204
220 V AC	0105	0205
240 V AC	0106	0206
380 V AC	0107	0207
400 V AC	0110	0210
12 V DC	0131	0231
24 V DC	0132	0232
42 V DC	0133	0233
48 V DC	0134	0234
60 V DC	0135	0235
110 V DC	0136	0236
220 V DC	0137	0237

GHG 618 3105 RXXXX ← Auxiliary contact

Two auxiliary contacts mounting width 70mm

Control voltage A1-A2	Auxiliary contacts (XXXX)		
	1 NO / 1 NC	2 NC	2 NO
24 V AC	0101	0201	0301
42 V AC	0102	0202	0302
48 V AC	0103	0203	0303
110 V AC	0104	0204	0304
220 / 230 V AC	0105	0205	0305
230 / 240 V AC	0106	0206	0306
400 V AC	0107	0207	0307
440 V AC	0108	0208	0308
24 V DC	0111	0211	0311
12 V DC	0112	0212	0312
48 V DC	0114	0214	0314
60 V DC	0115	0215	0315
110 V DC	0116	0216	0316
220 V DC	0117	0217	0317

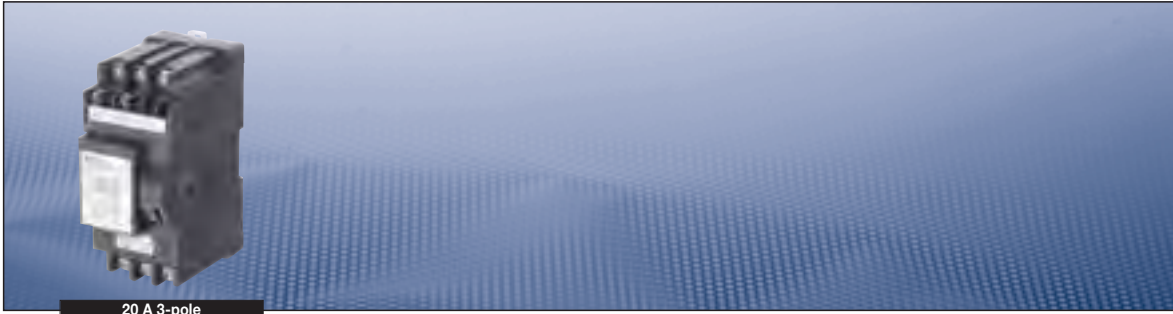
Example

GHG 618 31 05 R XXXX

GHG 618 3105 R **0206**

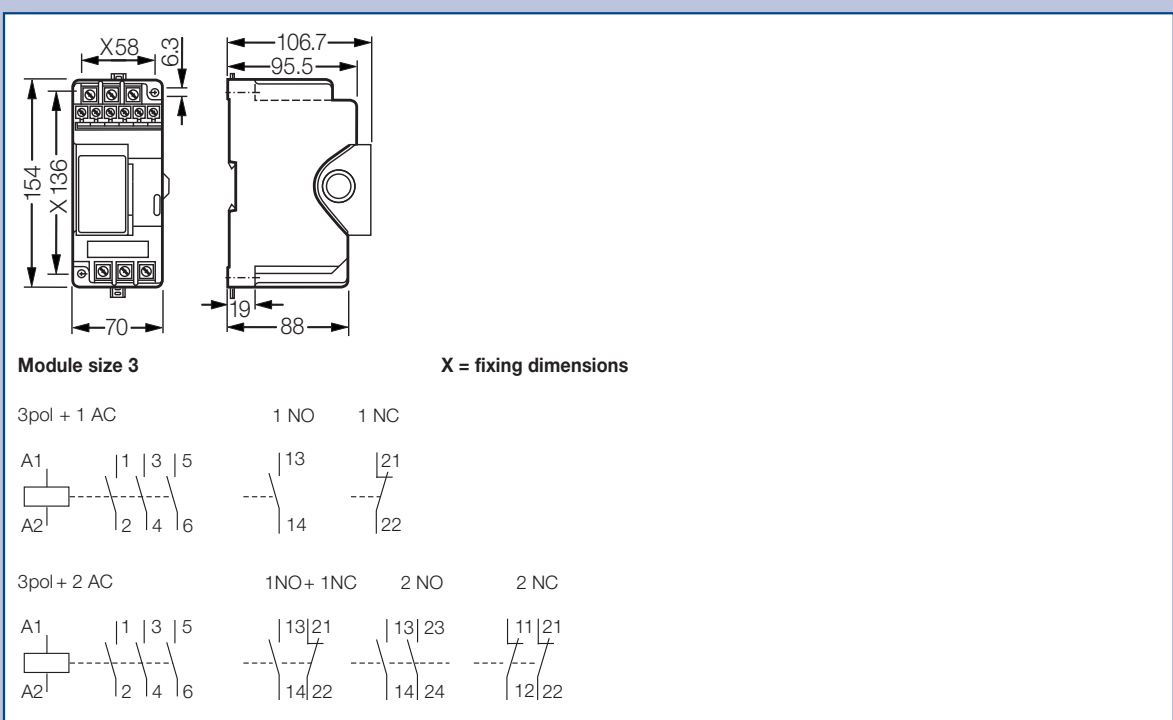
↑
Air-break contactor coil voltage 230/240 V 2 NC

| Ex-Built-in components |



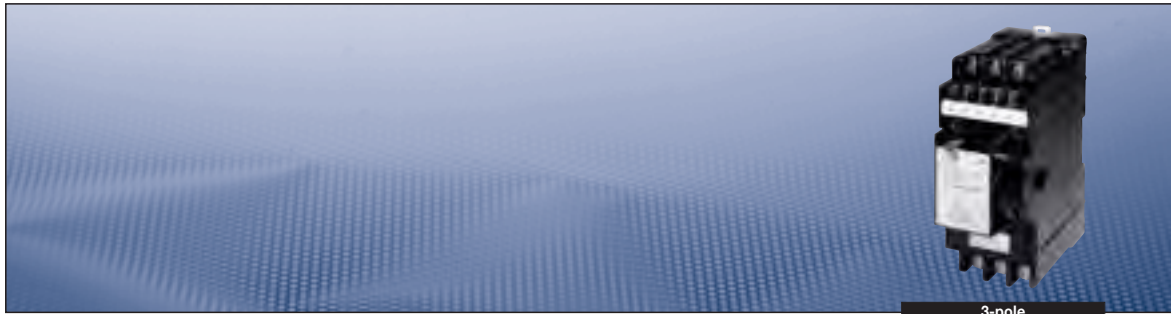
20 A 3-pole

Dimension drawing | Main contact | Auxiliary contact



AC = Auxiliary contact

Dimensions in mm



3-pole

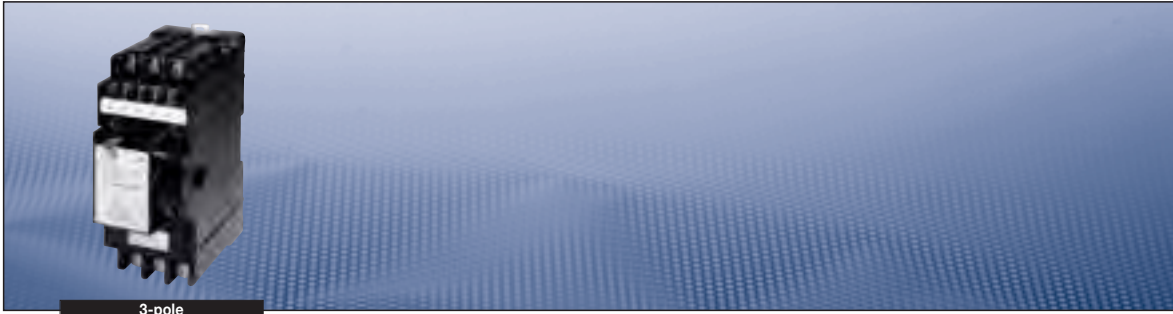
Technical data

Motor starter for direct on-line starting with thermal release 4 kW

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BK1 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C	
Rated voltage	Main contact	max. 690 V/AC / 50-60 Hz
	Control contact A1-A2	12 V to 690 V/AC / 12 V bis 230 V/DC
Rated current	Main contact	max. 20 A
	Auxiliary contact	max. 6 A
Rated making-/rated breaking capacity accd. to EN 60947-4-1 AC-3	U _e 230 V / P _e 2,2 KW	
	U _e 400 V / P _e 4 KW	
	U _e 690 V / P _e 4 KW	
Rated making-/rated breaking capacity auxiliary contact accd. to EN 60947-4-1 AC-15	U _e 230 V / I _e 4 A	
Back-up fuse	20 A gL	
Terminal cross-section	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact/ Control contact A1-A2	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
	Signal contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Weight	1.72 kg size 3	
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	Auxiliary contact	

¹⁾ Depend on installation

| Ex-Built-in components |



3-pole

Ex-Built-in components

Motor starter for direct on-line starting with thermal release 4 kW

GHG 618 3102 RXXYY

1. Rated current

2. Coil voltage

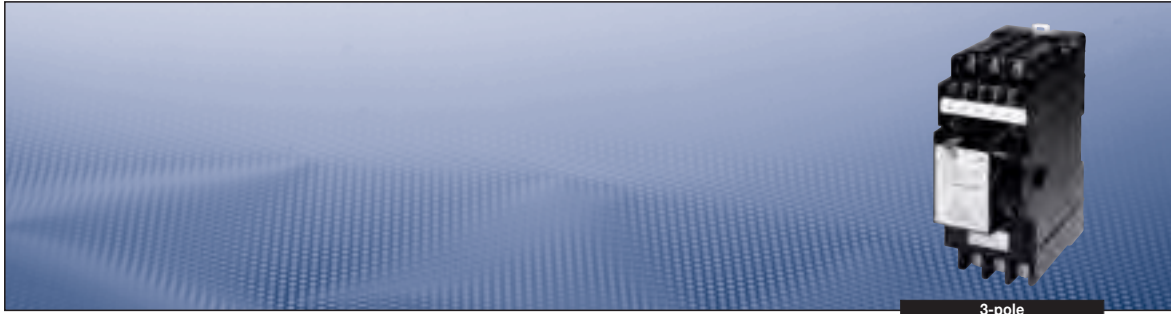
Ordering details Type: 3-pole

1. Rated current	XX	2. Contact voltage A1-A2	YY
Module size 3 (70 mm)			
0.11 A - 0.16 A	01	110 V AC	04
0.16 A - 0.23 A	02	230 V AC	05
0.23 A - 0.36 A	03	240 V AC	06
0.36 A - 0.54 A	04	120 V AC	07
0.54 A - 0.80 A	05	400 V AC	08
0.80 A - 1.20 A	06	440 V AC	09
1.20 A - 1.8 A	07	380 / 400 V AC	10
1.8 A - 2.6 A	08	24 V DC	32
2.6 A - 3.7 A	09	48 V DC	34
3.7 A - 5.5 A	10	110 V DC	36
5.5 A - 8.0 A	11		
8.0 A - 11.5 A	12		

Example

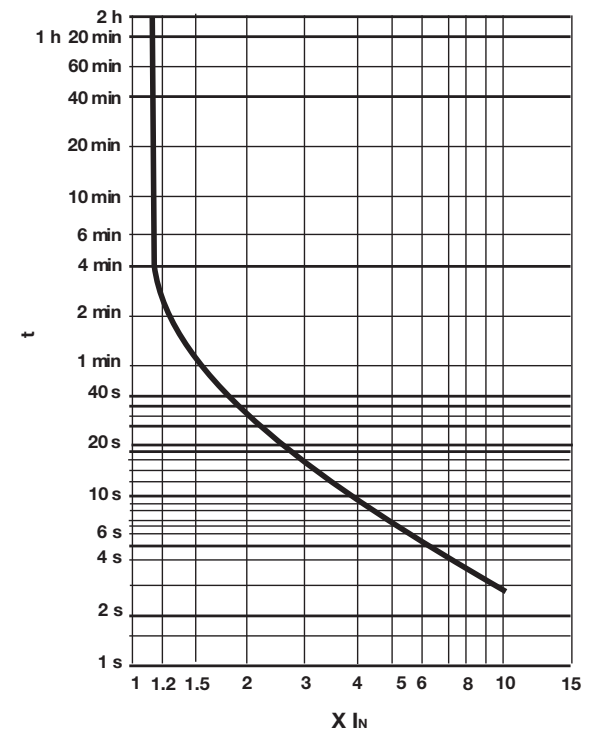
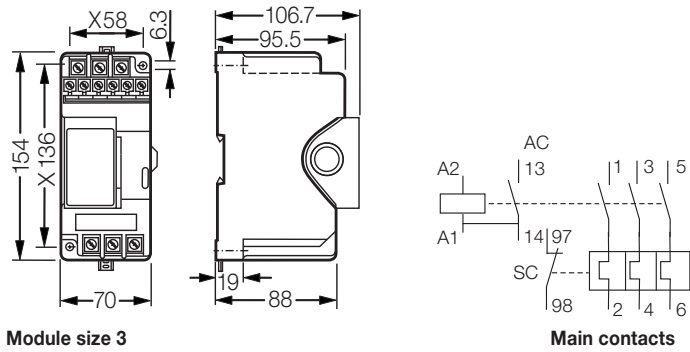
GHG 618 3102 RXXYY

GHG 618 31 02 R **08** **05**
 ↑ ↑
 Rated current 230 V Coil voltage 230 V



3-pole

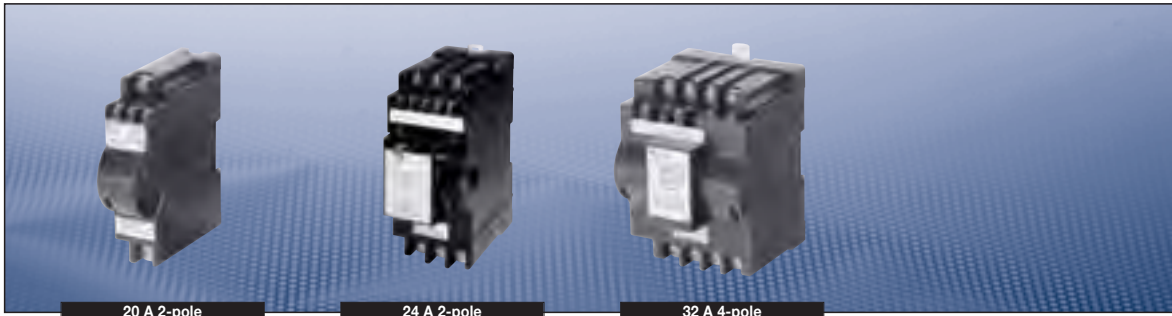
Dimension drawing | Main contacts



AC = Auxiliary contact
 SC = Signal contact

Dimensions in mm

Ex-d-Built-in components

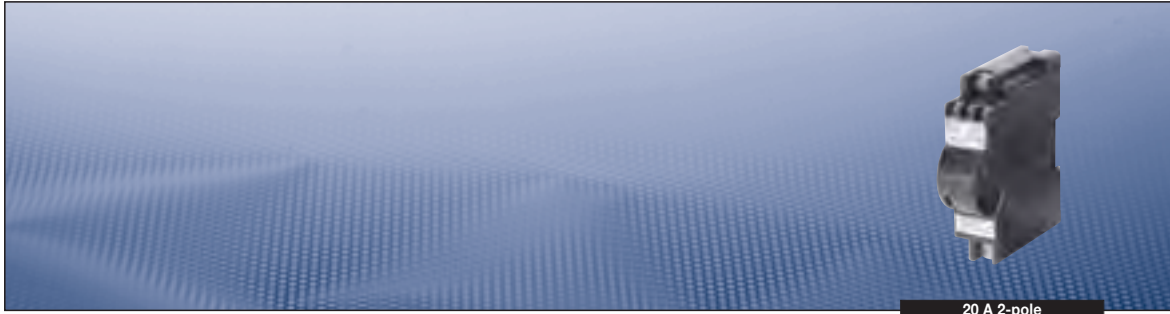


Technical data

Installation contactor 20 A up to 32 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I		
EC Type Examination Certificate	PTB 98 ATEX 1087 U		
IECEX Certificate of Conformity	IECEX BKI 07.0038 U		
Marking accd. to IECEx	Ex de IIC		
Application temperature ¹⁾	-20 °C to +40 °C -55 °C to +40 °C (option)		
Contactor	20 A	24 A	32 A
Rated voltage			
Main contact	max. 250 V	440 V	440 V
Auxiliary contact	-	440 V	440 V
Control voltage	24 V to 400 V AC		
Rated current			
Main contact NC	20 A	24 A	32 A
Main contact NO	20 A	24 A	32 A
Auxiliary contact			6 A
Rated making-/rated breaking capacity accd. to EN 60947-4-1			
Main contact AC1 - U _e 230 V	P _e 4.0 kW	P _e 9.0 kW	P _e 15.2 kW
Main contact AC1 - U _e 400 V	-	P _e 16 kW	P _e 26 kW
Main contact AC3 - U _e 230 V	P _e 1.3 kW	P _e 2.2 kW	P _e 5.5 kW
Main contact AC3 - U _e 400 V	-	P _e 4.0 kW	P _e 11 kW
DC3 1 current path U _e 60 V/230 V	-	I _e 4 A/0.2 A	I _e 5 A/0.3 A
DC3 2 current paths U _e 60 V/230 V	-	I _e 14 A/1.0 A	I _e 16 A/1.1 A
DC3 3 current paths U _e 60 V/230 V	-	I _e 24 A/4.0 A	I _e 34 A/4.5 A
Auxiliary contact at U _e 230 V	-		I _e 4 A
Auxiliary contact at U _e 400 V	-	I _e 3 A	I _e 3 A
Back-up fuse	20 A gL	35 A gL	63 A gL
Terminal cross-section			
Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire		
Auxiliary contact/Coil connection	2 x 2.5 mm ² fine wire with wire end sleeve/single wire		
Control contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire		
Weight	0.55 kg size 0	1.2 kg size 3	1.65 kg size 4
Enclosure material	Glass-fibre reinforced polyester		
Enclosure colour	black		
Options	Auxiliary contact		

¹⁾ Depend on installation



20 A 2-pole

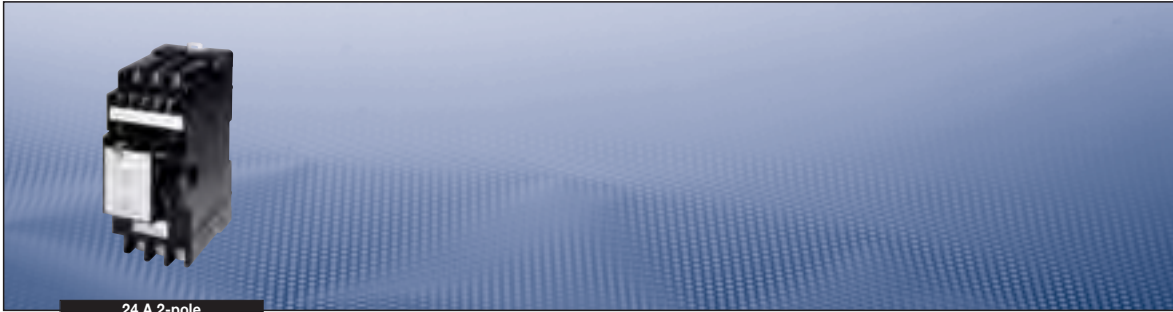
Ex-Built-in components

Installation contactor 20 A

Ordering details

Control voltage A1-A2	Contacts	Order No.
24 V AC	2 NO	GHG 618 0001 R0010
24 V AC	2 NC	GHG 618 0001 R0011
24 V AC	1 NO / 1 NC	GHG 618 0001 R0012
42 V AC	2 NO	GHG 618 0001 R0007
42 V AC	2 NC	GHG 618 0001 R0008
42 V AC	1 NO / 1 NC	GHG 618 0001 R0009
110 V AC	2 NO	GHG 618 0001 R0004
110 V AC	2 NC	GHG 618 0001 R0005
110 V AC	1 NO / 1 NC	GHG 618 0001 R0006
230 V AC	2 NO	GHG 618 0001 R0001
230 V AC	2 NC	GHG 618 0001 R0002
230 V AC	1 NO / 1 NC	GHG 618 0001 R0003
240 V AC	2 NO	GHG 618 0001 R0016
240 V AC	2 NC	GHG 618 0001 R0017
240 V AC	1 NO / 1 NC	GHG 618 0001 R0018
380 V AC	2 NO	GHG 618 0001 R0013
380 V AC	2 NC	GHG 618 0001 R0014
380 V AC	1 NO / 1 NC	GHG 618 0001 R0015

Ex-d-Built-in components



24 A 2-pole

Ex-Built-in components

Installation contactor 24 A

GHG 618 3118 RXXXX

Coil voltage / Contacts

Coil voltage and contacts

Control voltage A1-A2 AC 40 – 400 Hz/DC	Contacts (XXXX)			
	1 NO / 3 NC	2 NO / 2 NC	3 NO / 1 NC	4 NO
24 V	1301	2201	3101	4001
42 V	1302	2202	3102	4002
48 V	1303	2203	3103	4003
110-127 V	1304	2204	3104	4004
240 V	1305	2205	3105	4005
230-240 V	1306	2206	3106	4006
380-415 V	1307	2207	3107	4007

Control voltage A1-A2 AC 40 – 400 Hz/DC	Contacts (XXXX)		
	1 NO / 2 NC + 1 HSK	2 NO / 1 NC + 1 HSK	3 NO + 1 HSK
12 V	1309	2209	3109
24 V	1311	2211	3111
110 V	1314	2214	3114
220-240 V	1316	2216	3116
380-415 V	1317	2217	3117

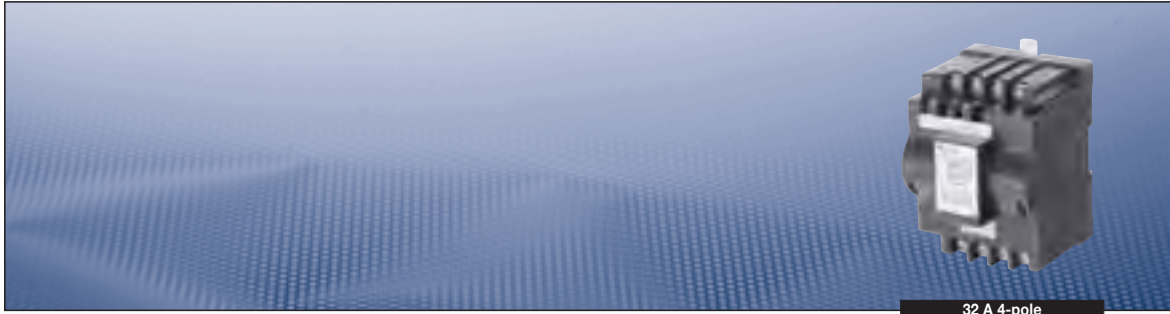
Example

GHG 618 3118 RXXXX

GHG 618 31 18 R **2206**

↑ ↑

Installation contactor 24 A Coil voltage 230 - 240 V 2NO 2NC



32 A 4-pole

Ex-Built-in components

Installation contactor 32 A

GHG 618 4109 RYYYY

Coil voltage / Contacts

Coil voltage and contacts

Control voltage A1-A2	Contacts (YYYY)		
	4 x NO	4 x NO + 1NC (AC)	4 x NO + 1NO (AC)
24 V	4001	4011	4101
48 V	4003	4013	4103
110 V	4004	4014	4104
240 V	4005	4015	4105
230 V	4006	4016	4106
380 V	4007	4017	4107
415 V	4008	4018	4108

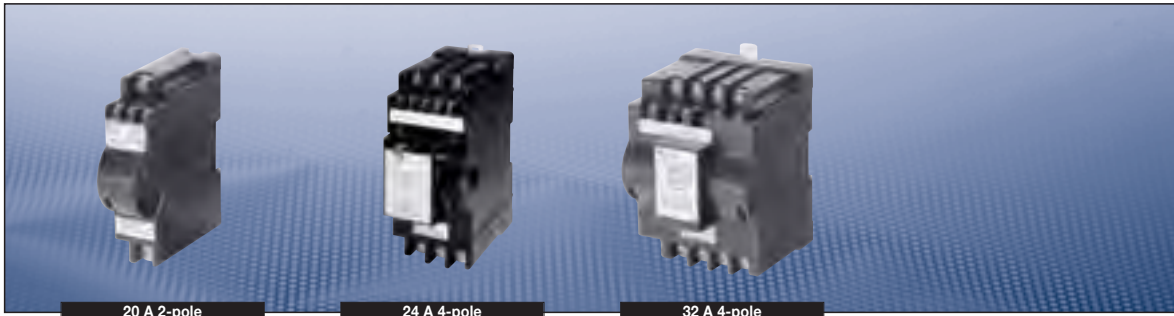
Example

GHG 618 41 09 RXXXX



MC = Main contact
AC = Auxiliary contact

Ex-d-Built-in components

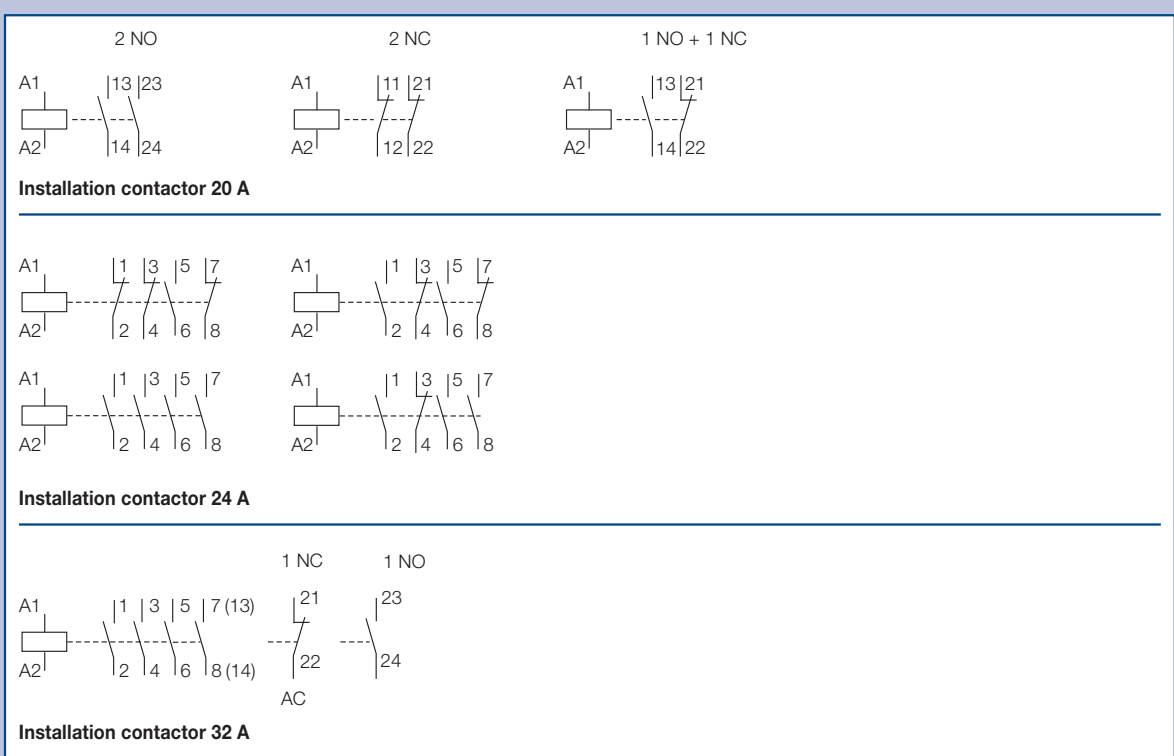


20 A 2-pole

24 A 4-pole

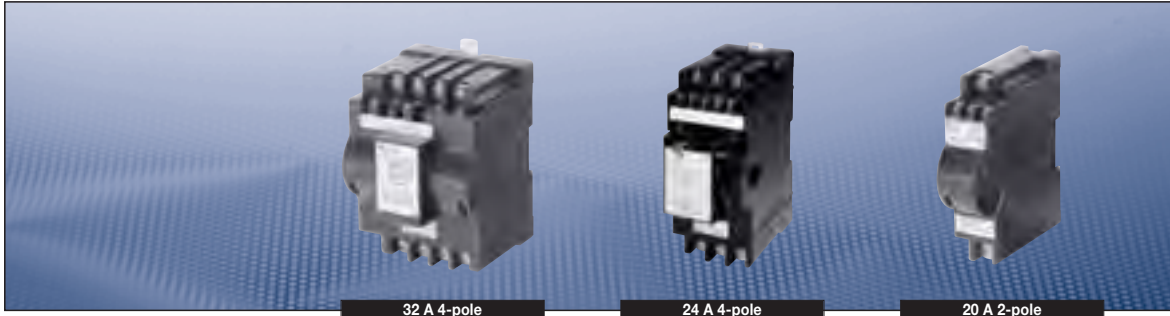
32 A 4-pole

Termination diagram



AC = Auxiliary contact

Dimensions in mm

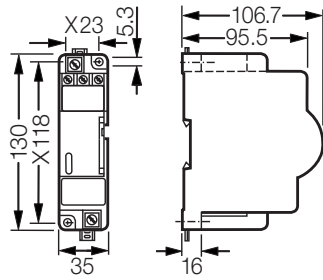


32 A 4-pole

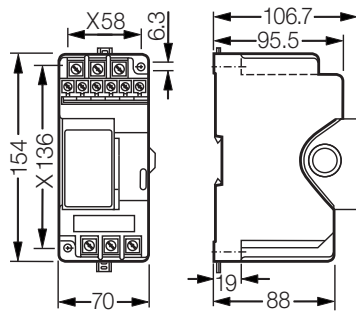
24 A 4-pole

20 A 2-pole

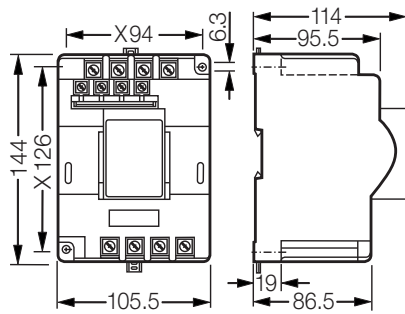
Dimension drawing



Module size 0



Module size 3



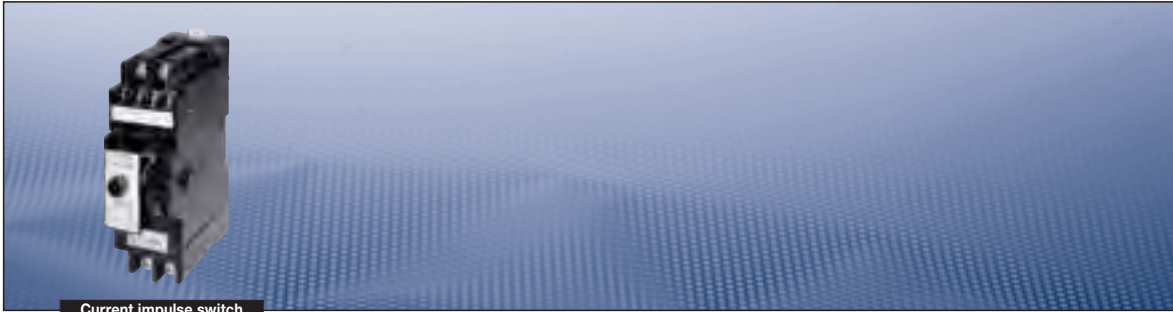
Module size 4

X = fixing dimensions

Dimensions in mm

1
2
3
4
5
6
7
8
9
10
11
12

Ex-d-Built-in components



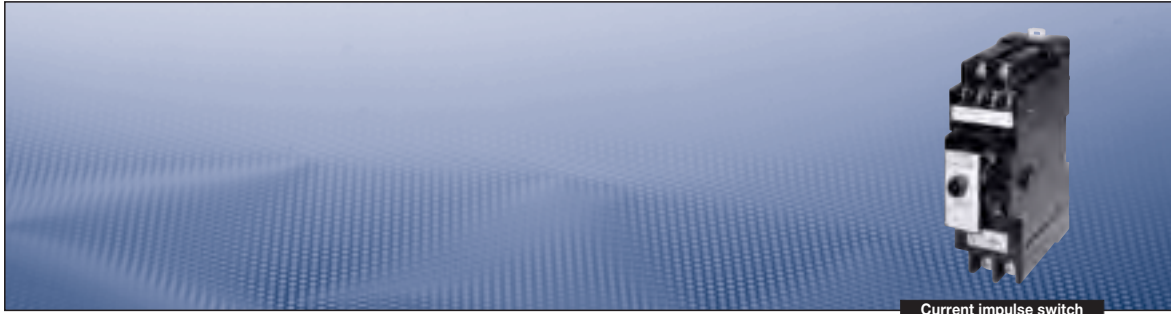
Current impulse switch

Technical data

Current impulse switch up to 16 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BKI 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C	
Rated voltage	Main contact	400 V AC
	Control contact A1-A2	230 V AC
Rated current	Contact	16 A
Rated making-/rated breaking capacity AC-3 accd. to EN 60947-4-1 AC-3		U _e 250 V / I _e 16 A
		U _e 400 V / I _e 10 A
Back-up fuse	16 A gL	
Terminal cross-section	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Control contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Weight	0.95 kg size 2	
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	

¹⁾ Depend on installation

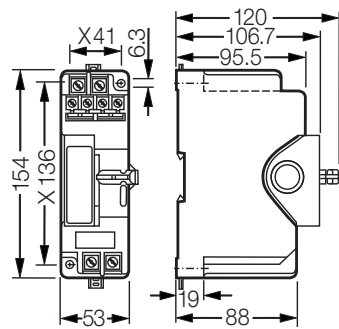


Current impulse switch

Ordering details

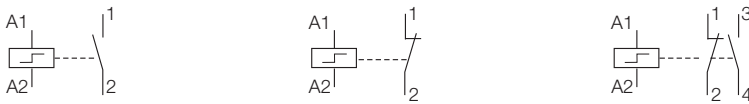
Rated current	Contact	Voltage	Mounting width	Order No.
16 A	1 NO	230 V AC 50 Hz	53 mm	GHG 618 0002 R0004
16 A	2 NC	230 V AC 50 Hz	53 mm	GHG 618 0002 R0008
16 A	1 NO + 1NC	230 V AC 50 Hz	53 mm	GHG 618 0002 R0012

Dimension drawing | Termination diagram



Module size 2

X = fixing dimensions



Termination diagram current impulse switch

Dimensions in mm

Ex-d-Built-in components



Manual motor starter

Technical data

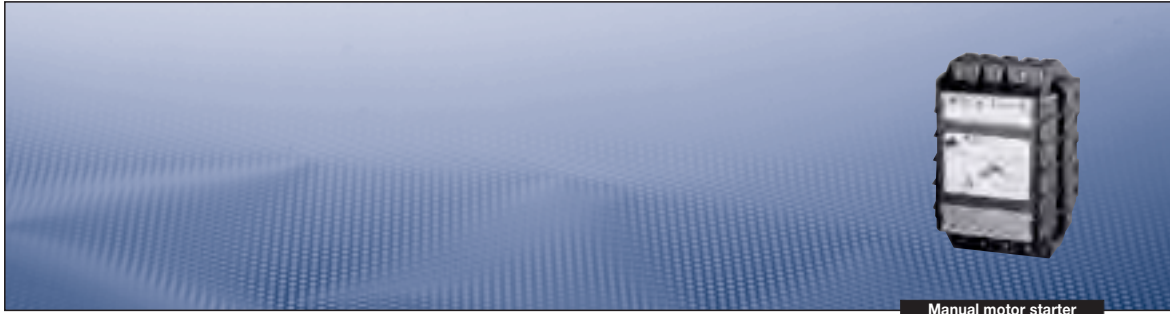
Manual motor starter 0.1 A up to 25 A

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I		
EC Type Examination Certificate	PTB 99 ATEX 1007 U		
IECEX Certificate of Conformity	IECEX BKI 07.0038 U		
Marking accd. to IECEX	Ex de IIC		
Application temperature ¹⁾	-20 °C to +55 °C		
Rated voltage	Main contact	690 V AC, 50/60 Hz, 440 V DC	
	Auxiliary contact	110 V; 230; 400 V; 500 V 50/60 Hz	
Rated current	25 A		
Rated current	Auxiliary contact	230 V/2 A	400 V/0.5 A
Rated making-/rated breaking capacity AC-3			
accd. to EN 60947-4-1 AC-3			
U _e 690 V / I _e 25 A			
Thermal tripping characteristic			
T II			
Tripping time at 6x I _e			
≥ 5 sec.			
Back-up fuse	Main contact	see table	
	Auxiliary contact	not required	
Terminal cross-section	Main contact	2 x (0.75 to 4.0 mm ²)	
	Auxiliary contact	2 x 2.5 mm ²	
Dimensions (L x W x H)			
Mounting width 106 mm			
Weight			
1.3 kg			
Enclosure material			
Glass-fibre reinforced polyester			
Enclosure colour			
black			
Mounting			
35 mm top hat rail (DIN-rail)			
Options			
Auxiliary contact			

¹⁾ Depend on installation

Short-circuit protection up to 100 kA and max. back-up fuse protection

Setting range	230 V AC		400 V AC		500 V AC		690 V AC	
	Ics	gL, aM	Ics	gL, aM	Ics	gL, aM	Ics	gL, aM
0.1 ... 0.16 A								
1.0 ... 1.6 A		short-circuit proof, no back-up fuse required						
1.6 ... 2.5 A							40 kA	25 A
2.5 ... 4.0 A					60 kA	35/40 A	10 kA	40 A
4.0 ... 6.3 A					40 kA	50 A	7 kA	40 A
6.3 ... 9.0 A					30 kA	80 A	5 kA	50 A
9.0 ... 12.5 A			75 kA	80 A	27 kA	80 A	4.5 kA	50 A
12.5 ... 16.0 A			60 kA	100 A	25 kA	100 A	4.0 kA	50 A
16.0 ... 20.0 A			55 kA	100 A	22 kA	100 A	3.5 kA	50 A
20.0 ... 25.0 A	50 kA	125 A	50 kA	125 A	20 kA	125 A	3.0 kA	50 A



Manual motor starter

Ex-Built-in components

Manual motor starter 0.1 A to 25 A

GHG 635 XXXX RYYYY

1. Auxiliary contacts

2. Setting range

Ordering details

Setting range	Undervoltage trip (UT)	Auxiliary contacts XXXX				Setting range YYYY
		without AC	1NO / 1NC AC	2NO AC	1NC AC	
0.10 – 0.16 A	–	–	1032	1033	–	0001
0.16 – 0.25 A	–	–	1032	1033	–	0002
0.25 – 0.40 A	–	1031	1032	1033	–	0003
0.40 – 0.63 A	–	1031	1032	1033	–	0004
0.63 – 1.00 A	–	1031	1032	1033	1034	0005
1.00 – 1.60 A	–	1031	1032	1033	1034	0006
1.60 – 2.50 A	–	1031	1032	1033	–	0007
2.50 – 4.00 A	–	1031	1032	1033	–	0008
4.00 – 6.30 A	–	1031	1032	1033	–	0009
6.30 – 9.00 A	–	1031	1032	1033	–	0010
9.00 – 12.50 A	–	1031	1032	1033	–	0011
12.50 – 16.00 A	–	1031	1032	1033	–	0012
16.00 – 20.00 A	–	1031	1032	1033	–	0013
20.00 – 25.00 A	–	–	1032	1033	–	0014
0.25 – 0.40 A	230 V	–	–	–	–	0103
0.40 – 0.63 A	230 V	1031	–	–	–	0104
0.63 – 1.00 A	230 V	–	1032	–	–	0105
1.00 – 1.60 A	230 V	1031	1032	–	–	0106
1.60 – 2.50 A	230 V	1031	1032	–	–	0107
2.50 – 4.00 A	230 V	1031	1032	–	–	0108
4.00 – 6.30 A	230 V	–	1032	–	–	0109
6.30 – 9.00 A	230 V	1031	1032	–	–	0110
9.00 – 12.50 A	230 V	1031	–	–	–	0111
16.00 – 20.00 A	230 V	–	–	–	–	–
20.00 – 25.00 A	230 V	–	–	–	–	–
0.25 – 0.40 A	400 V	–	1032	–	–	0203
2.50 – 4.00 A	400 V	1031	1032	–	–	0208
4.00 – 6.30 A	400 V	–	1032	–	–	0209

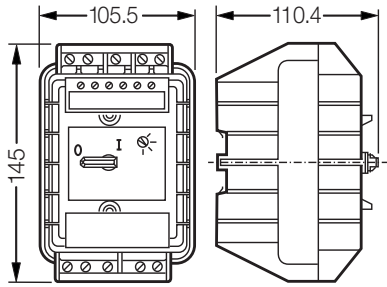
AC = Auxiliary contact

| Ex-d-Built-in components |

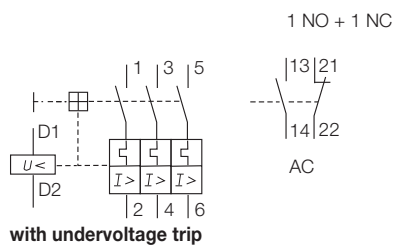
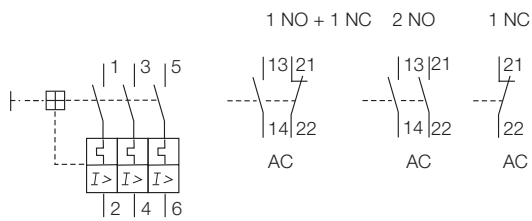


Manual motor starter

Dimension drawing

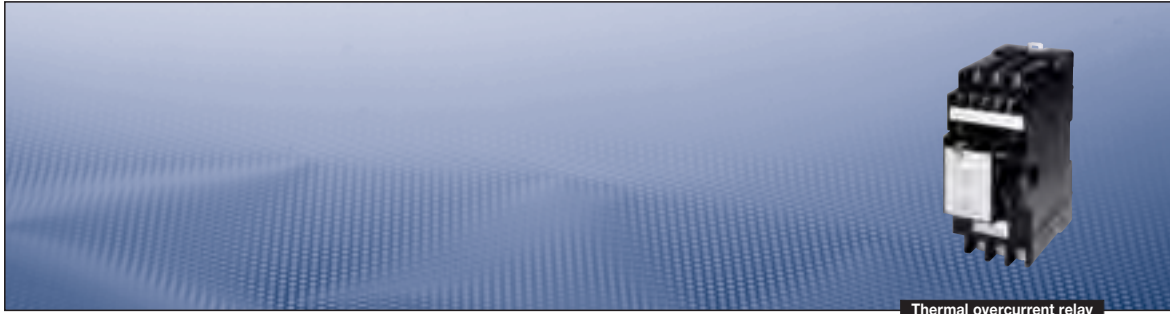


Manual motor starter 25 A



AC = Auxiliary contact

Dimensions in mm



Thermal overcurrent relay

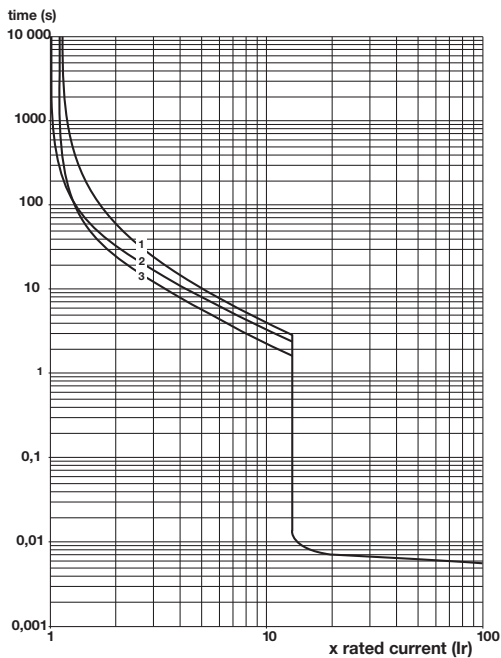
Technical data

Thermal overcurrent relay

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex ed I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BK1 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C	
Rated voltage	690 V AC, 50/60 Hz	
Release current	Thermal tripping with phase failure function, manual reset	
Rated voltage	Auxiliary contact	690 V AC
Rated current	Auxiliary contact	6 A
Terminal cross-section	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Dimensions (L x W x H)	Mounting width 70 mm	
Weight	1.1 kg size 3	
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	Auxiliary contact	

¹⁾ Depend on installation

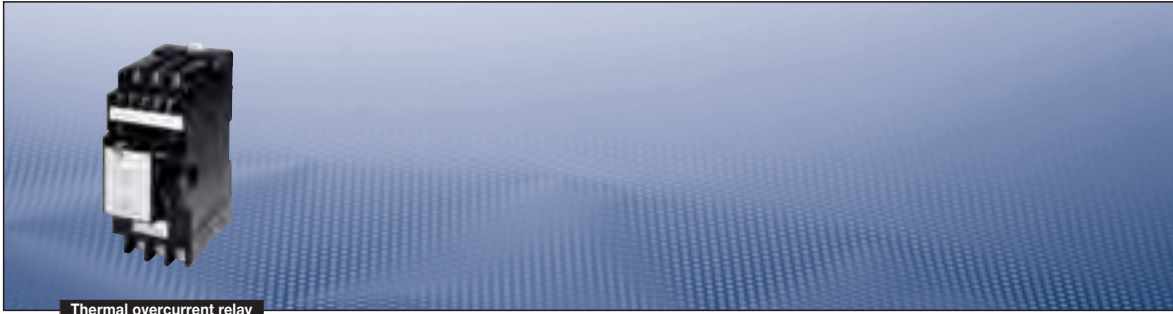
Tripping characteristic



Mean tripping time at 20°C in relationship to the multiple rated current

- 1. 3-pole load at cold condition
- 2. 2-pole load at cold condition
- 3. 3-pole load at warm condition

Ex-d-Built-in components



Thermal overcurrent relay

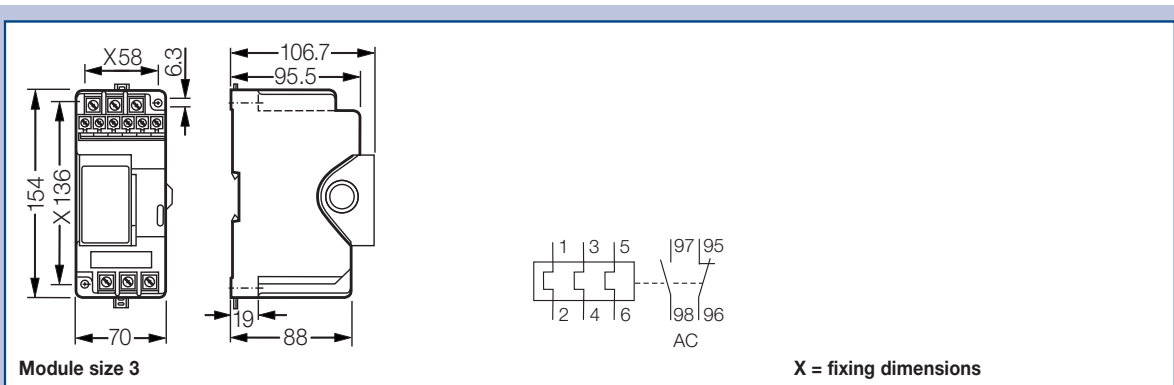
Ex-Built-in components

Thermal overcurrent relay

Release current

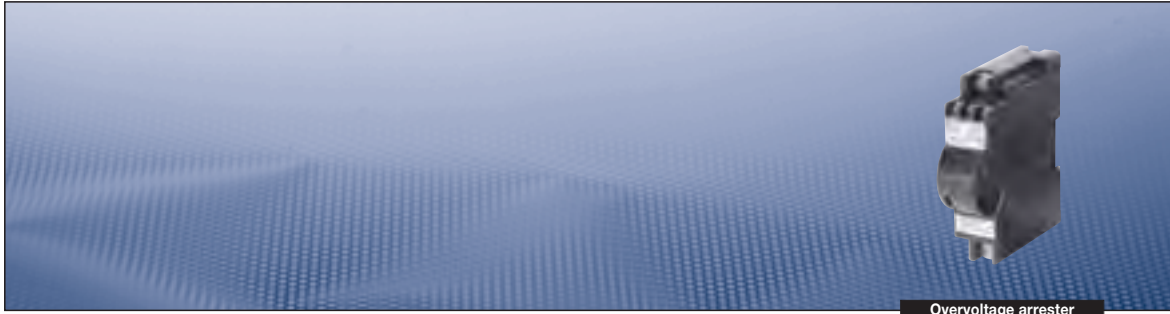
Release current	Order No.
0.1 A - 0.16 A	GHG 618 3103 R0012
0.16 A - 0.23 A	GHG 618 3103 R0001
0.23 A - 0.36 A	GHG 618 3103 R0002
0.36 A - 0.54 A	GHG 618 3103 R0003
0.54 A - 0.8 A	GHG 618 3103 R0004
0.8 A - 1.2 A	GHG 618 3103 R0005
1.2 A - 1.8 A	GHG 618 3103 R0006
1.8 A - 2.6 A	GHG 618 3103 R0007
2.6 A - 3.7 A	GHG 618 3103 R0008
3.7 A - 5.5 A	GHG 618 3103 R0009
5.5 A - 8.0 A	GHG 618 3103 R0010
8.0 A - 11.5 A	GHG 618 3103 R0011

Dimension drawing | Termination diagram



AC = Auxiliary contact

Dimensions in mm



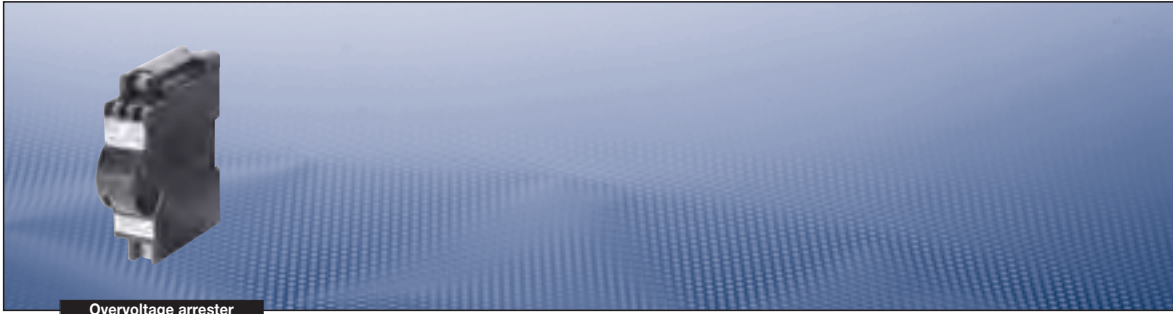
Overvoltage arrester

Technical data

Overvoltage arrester	
Marking to 94/9/EC	Ex II 2 G Ex de IIC / Ex I M 2 Ex de I
EC Type Examination Certificate	PTB 98 ATEX 1087 U
IECEX Certificate of Conformity	IECEX BK1 07.0038 U
Marking accd. to IECEX	Ex de IIC
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	275 V
Rated discharge surge current I_{sn}	max. 5 kA
Rated forward surge current I_s	max. 25 kA
Response time	25 ns
Residual voltage U_r	approx. 1000 V
Extinction voltage U_e to earth	280 V AC
Tripping current of cut-off device	5 A
Short-circuit protection	25 kA eff
Back-up fuse	max. 63 A gL
Terminal cross-section	2 x 10 mm ² fine wire with wire end sleeve/single wire
Dimensions (L x W x H)	Mounting width 35 mm
Weight	0.52 kg size 1
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black
Options	tripping indication in inspection window

¹⁾ Depend on installation

Ex-d-Built-in components

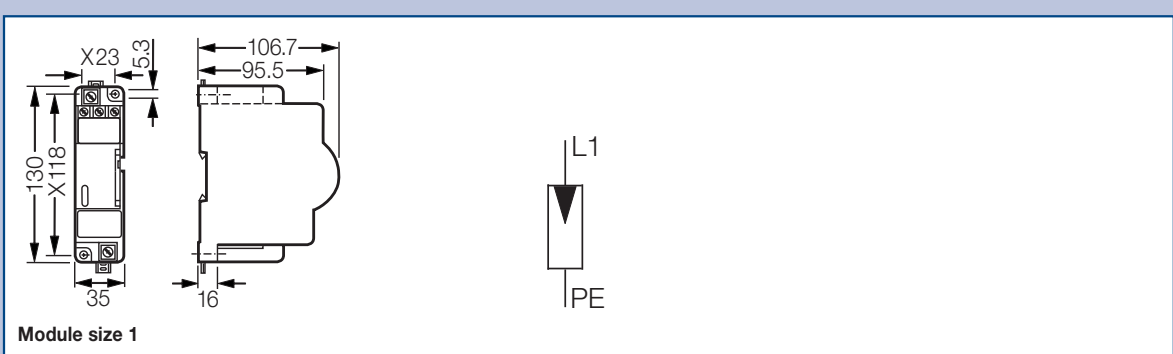


Overvoltage arrester

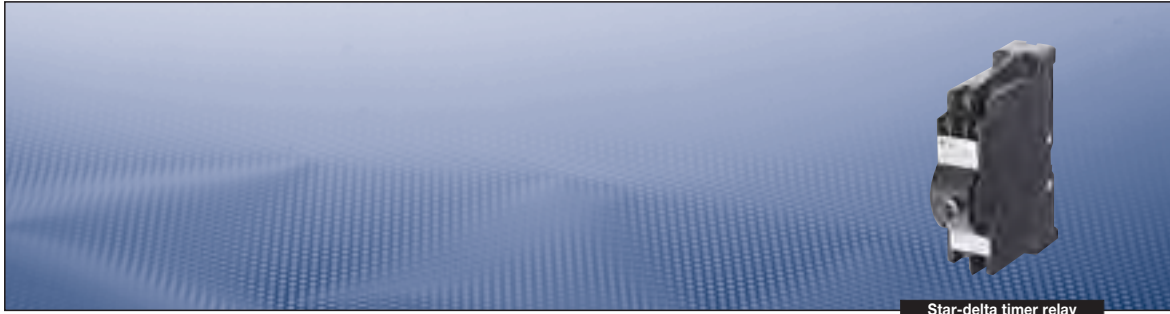
Ordering details

Version	Mounting width	Order No.
Type: 1-pole Equipped with optional tripping indication		
1-pole overvoltage arrester	35 mm	GHG 612 1003 R0001

Dimension drawing | Termination diagram



Dimensions in mm



Star-delta timer relay

Technical data

Star-delta timer relay

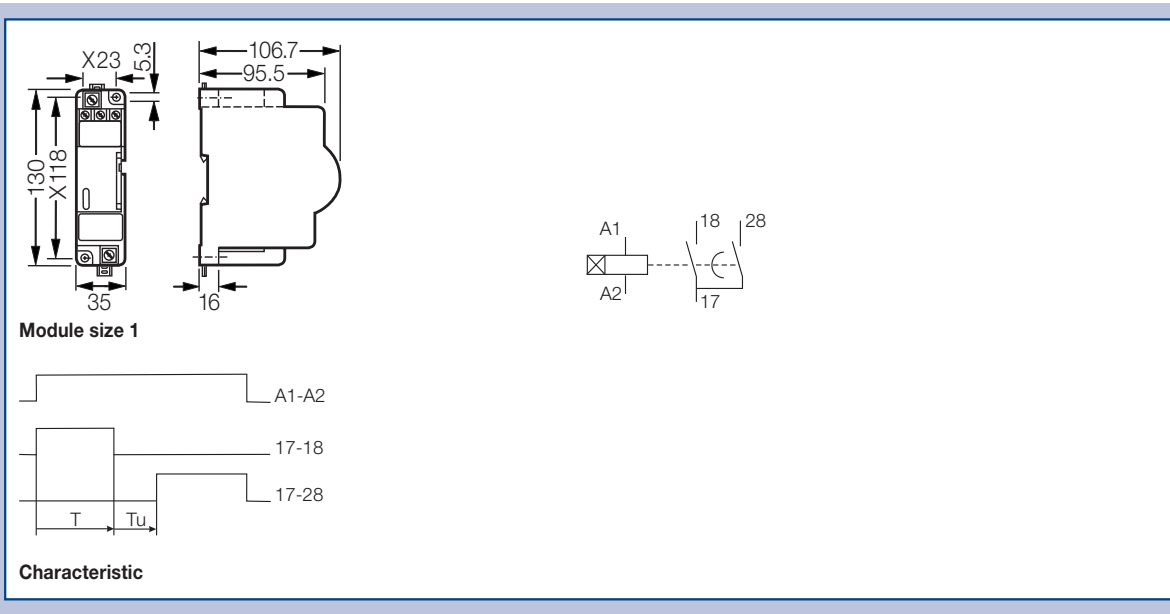
Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BK1 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C	
Rated voltage	Main contact	max. 250 V
	Control contact A1-A2	110 V - 127 V AC; 220 V - 240 V AC; 24 V AC/DC
Rated continuous I _n	3 A	
Power dissipation per pole	2 W	
Rated switching capacity AC-15	230 V/3 A	
Tripping time	1.5 s to 30 s continuously externally adjustable	
Terminal cross-section	Main contact	2 x 10 mm ² fine wire with wire end sleeve/single wire
	Auxiliary contact/ Control contact A1-A2	2 x 2.5 mm ² fine wire with wire end sleeve/single wire
Dimensions (L x W x H)	Mounting width 35 mm	
Weight	0.53 kg size 0	
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	Auxiliary contact	

¹⁾ Depend on installation

Ordering details

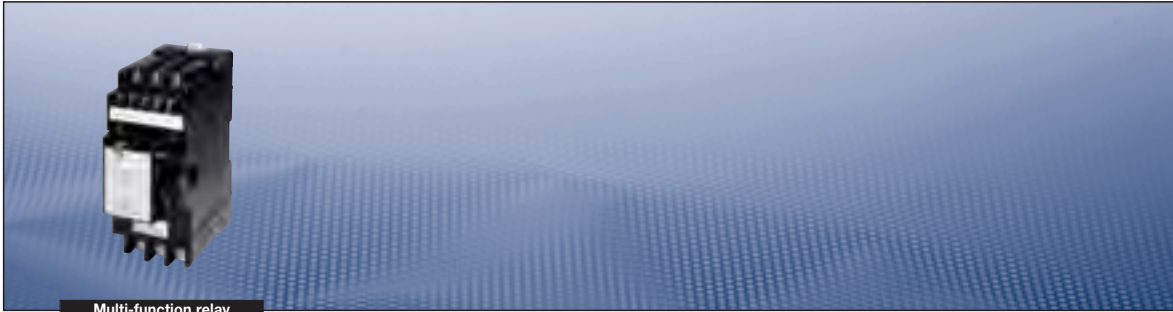
Version	Rated current	Response time	Mounting width	Order No.
Type: 1-pole Equipped with 1 change-over				
1-pole	3 A	1,5 s - 30 s	35 mm	GHG 618 1102 R 0001

Dimension drawing | Termination diagram



Dimensions in mm

Ex-d-Built-in components



Multi-function relay

Technical data

Multi-function relay

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC / Ⓔ I M 2 Ex de I	
EC Type Examination Certificate	PTB 98 ATEX 1087 U	
IECEX Certificate of Conformity	IECEX BKI 07.0038 U	
Marking accd. to IECEX	Ex de IIC	
Application temperature ¹⁾	-20 °C to +40 °C	
Rated voltage	max. 440 V AC	
Rated switching capacity	24 V AC to 440 V AC or 24 V DC to 240 V DC	
Rated current	6 A	
Power dissipation per pole	2 W	
Rated switching capacity AC-11	440 V/3 A	
Rated switching capacity DC-22	24 V / 1 A; 60 V / 0.35 A; 220 V / 0.20 A	
Terminal cross-section	Main contact	2 x 10 mm ²
	Auxiliary contact/	
	Control contact A1-A2	2 x 2.5 mm ²
Dimensions (L x W x H)	Mounting width 70 mm	
Weight	1.26 kg, size 2	
Enclosure material	Glass-fibre reinforced polyester	
Enclosure colour	black	
Options	Control contact	

¹⁾ Depend on installation

Ex-Built-in components

Multi-function relay

GHG 618 2910 RXXYY

1. Control function

2. Response time/time range

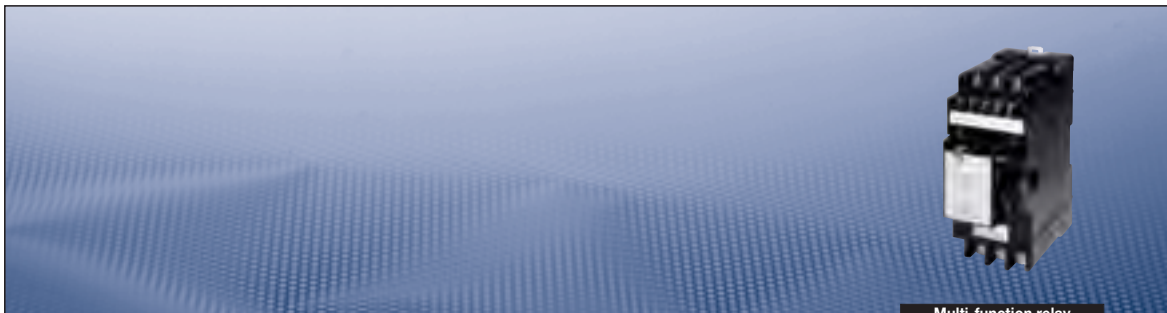
1. Control function

Control function	XX
delayed response	11
delayed OFF response	12
delayed ON and OFF response	16
impulse ON	21
impulse OFF	22
flashing	42
pulsing	81
pulse shaper	82

2. Response time/time range

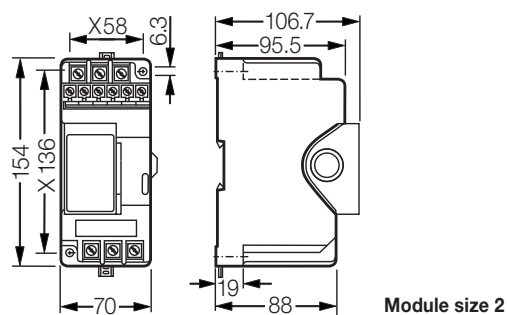
Response time/time range	YY
0.15 min - 3 min	01
3 s - 60 s	02
0.5 s - 10 s	03
0.15 s - 3 s	04
0.05 s - 1 s	05
0.5 s - 10 min	06
3 - 60 min	07
0.15 h - 3 h	08
0.5 h - 10 h	09
3 h - 60 h	10

Note: The time setting within the time ranges is performed via potentiometer 10 K Ω (GHG 417 1901 R 0194) to be connected externally.

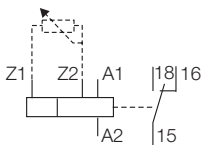


Multi-function relay

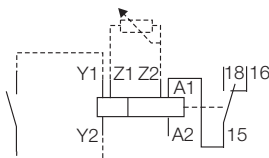
Dimension drawing | Termination diagram | Function diagram



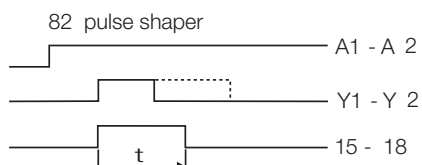
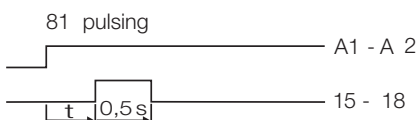
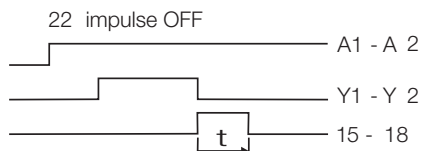
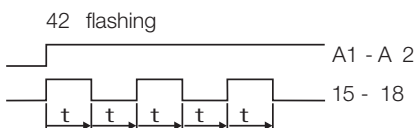
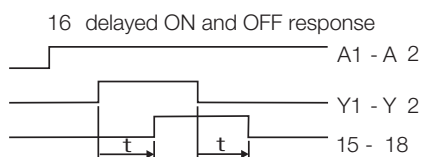
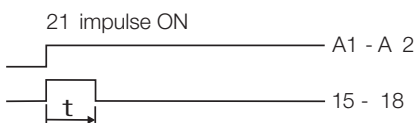
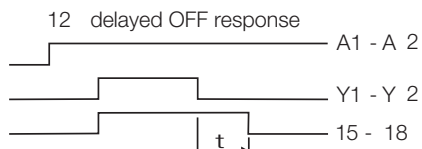
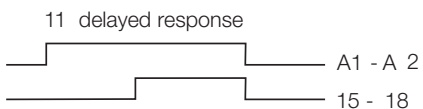
Termination diagram multi-function relay



Contacts for function 11, 21, 42 and 81

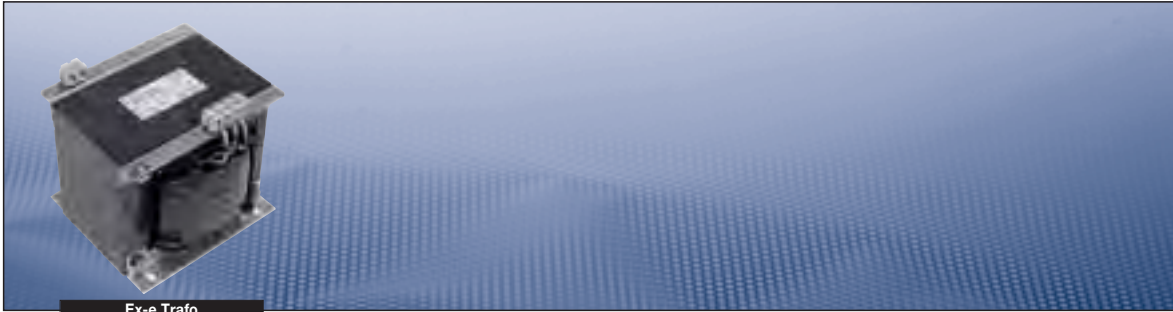


Contacts for function 12, 16, 22 and 81



Dimensions in mm

Ex-e Built-in components



Ex-e Trafo

Technical data

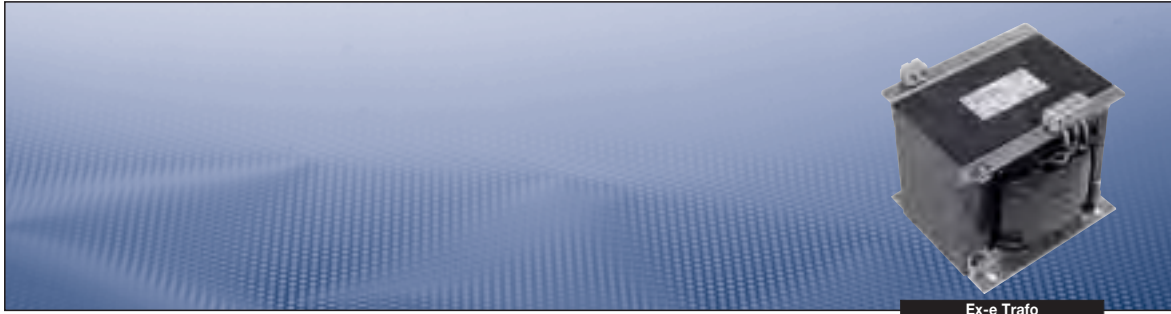
Ex-e safety and isolating transformer

Marking to 94/9/EC	Ⓔ II 2 G Ex e II T1, T2, T3 or T4
EC-Type Examination Certificate	PTB 04 ATEX 3019 X
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	110 V to 690 V
Frequency	50 – 60 Hz
Power consumption	100 VA up to 1200 VA
Short-circuit voltage	4.2 %
Duty type	S1
Thermal class	E
Back up fuse	max. 1.5 x of secondary rated current
Connecting terminals	2.5 – 16 mm ² , Option direct wire connections
Insulation class	I
Degree of protection accd. EN 60529	¹⁾

¹⁾ The transformer may only be mounted in a certified enclosure with minimum degree of protection IP54

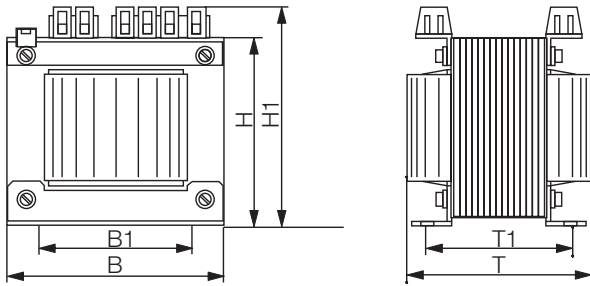
Ordering details

Type	Prim. / sec.	Max. input power	Order No.
Ex-e safety and isolating transformer			
Ex-e Trafo	110 V / 24 V	100 VA	GHG 410 1992 R0001
Ex-e Trafo	220 V / 24 V	100 VA	GHG 410 1992 R0002
Ex-e Trafo	230 V / 24 V	100 VA	GHG 410 1992 R0003
Ex-e Trafo	230 V / 48 V	100 VA	GHG 410 1992 R0004
Ex-e Trafo	400 V / 24 V	100 VA	GHG 410 1992 R0005
Ex-e Trafo	500 V / 24 V	100 VA	GHG 410 1992 R0006
Ex-e Trafo	230 V / 230 V	100 VA	GHG 410 1992 R0007
Ex-e Trafo	400 V / 230 V	100 VA	GHG 410 1992 R0008
Ex-e Trafo	500 V / 120 V	100 VA	GHG 410 1992 R0009
Ex-e Trafo	230 V / 24 V	200 VA	GHG 410 1992 R0010
Ex-e Trafo	400 V / 24 V	200 VA	GHG 410 1992 R0011
Ex-e Trafo	400 V / 230 V	200 VA	GHG 410 1992 R0012
Ex-e Trafo	230 V / 24 V	400 VA	GHG 410 1992 R0013
Ex-e Trafo	400 V / 24 V	400 VA	GHG 410 1992 R0014
Ex-e Trafo	400 V / 230 V	400 VA	GHG 410 1992 R0015
Ex-e Trafo	230 V / 24 V	550 VA	GHG 410 1992 R0016
Ex-e Trafo	400 V / 24 V	550 VA	GHG 410 1992 R0017
Ex-e Trafo	400 V / 230 V	550 VA	GHG 410 1992 R0018
Ex-e Trafo	230 V / 24 V	1200 VA	GHG 410 1992 R0019
Ex-e Trafo	400 V / 24 V	1200 VA	GHG 410 1992 R0020
Ex-e Trafo	400 V / 230 V	1200 VA	GHG 410 1992 R0021



Ex-e Trafo

Dimension drawing

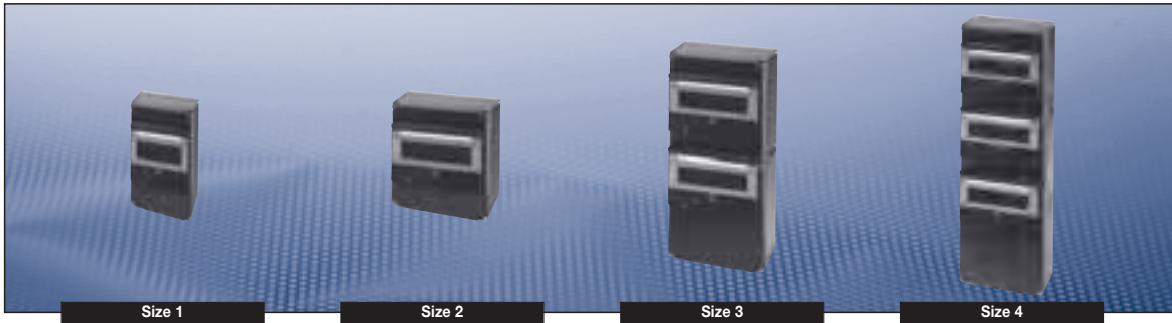


Ex-e Trafo

Power (VA)	B	B1	T	T1	H	H1	H1 (mini terminal)	H1 (4 mm ²)	H1 (16 mm ²)
100	105	84	80	66	91	108	124	128	
200	120	90	102	88	106	123	139	143	
400	135	104	128	106	120	137	153	157	
550	150	122	150	126	134	151	167	171	
1200	174	135	170	136	154	171	187	191	

Dimensions in mm

Ex-e-Empty enclosures in plastic design



Technical data

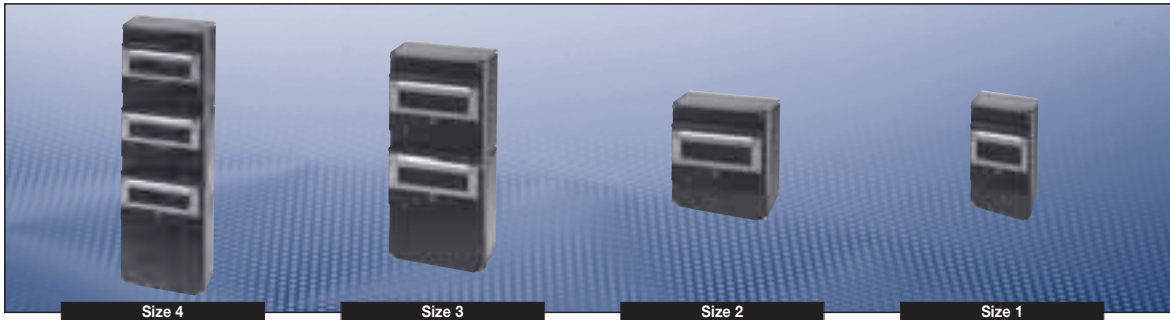
Empty enclosures made of moulded plastic

Marking to 94/9/EC	⊕ II 2 G Ex de IIC T6, T5, T4 / ⊕ II 2 D Ex tD A21 IP66 T80 °C / T95 °C ¹⁾
EC Type Examination Certificate	PTB 99 ATEX 1044
IECEX Certificate of Conformity	IECEX BKI 06.0007
Marking accd. to IECEX	Ex de ia/ib m [ia/ib] T4 ... T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	180 A
Insulation class	I
Terminal cross-section	up to 240 mm ²
Cable gland	acc. to customer specification
Degree of protection acc. to EN 60529	IP66
Weight	see ordering details
Enclosure material	Glass-fibre reinforced polyester
Enclosure colour	black

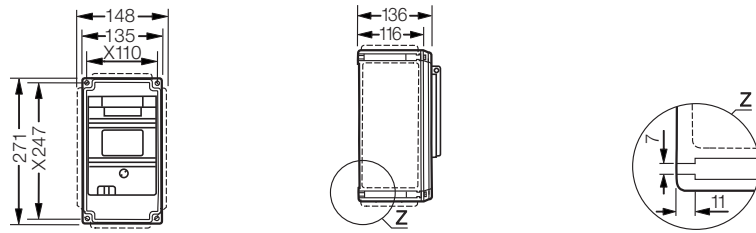
¹⁾ depends on installed components

Ordering details

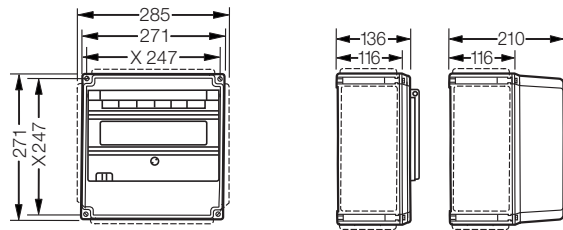
Version	Mounting width	Weight approx.	Order No.
Size 1: 1 Mounting space 106 mm			
Cover closed	106 mm	1.5 kg	GEH 001 00
Cover cut-out with small actuating flap	106 mm	1.9 kg	GEH 001 01
Size 2: 1 Mounting space 213 mm			
Cover closed	213 mm	2.5 kg	GEH 002 00
Cover cut-out with 1 actuating flap	213 mm	3.2 kg	GEH 002 01
Cover raised for insertion of main switch = 80 A		3.3 kg	GEH 002 02
Size 3: 2 Mounting space 213 mm			
Cover closed	2 x 213 mm	4.5 kg	GEH 003 00
Cover cut-out with 1 actuating flap	2 x 213 mm	5.2 kg	GEH 003 01
Cover cut-out with 2 actuating flaps	2 x 213 mm	5.9 kg	GEH 003 02
Cover with 1 actuating flap and main switch ≤ 40 A	1 x 213 mm	6.2 kg	GEH 003 03
Cover raise for insertion of main switch ≥ 80 A to 180 A		5.5 kg	GEH 003 04
Size 4: 3 Mounting space 213 mm			
Cover closed	3 x 213 mm	5.5 kg	GEH 004 00
Cover cut-out with 1 actuating flap	3 x 213 mm	6.2 kg	GEH 004 01
Cover cut-out with 2 actuating flaps	3 x 213 mm	6.9 kg	GEH 004 02
Cover cut-out with 3 actuating flaps	3 x 213 mm	7.6 kg	GEH 004 03
Cover with 2 actuating flaps and main switch ≤ 40 A	1 x 213 mm	8.1 kg	GEH 004 04



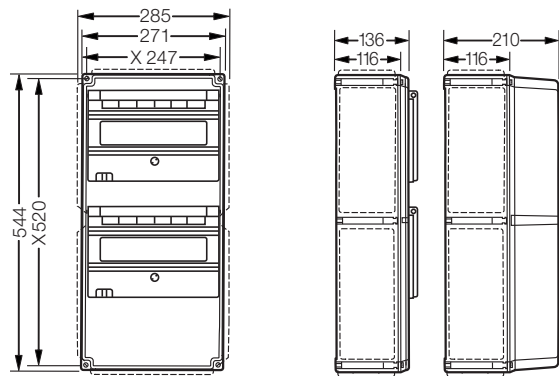
Dimension drawing



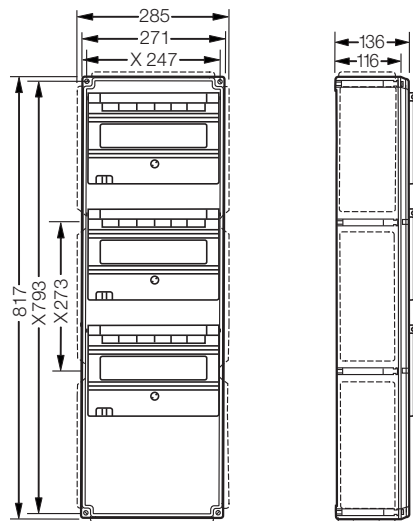
Size 1



Size 2



Size 3

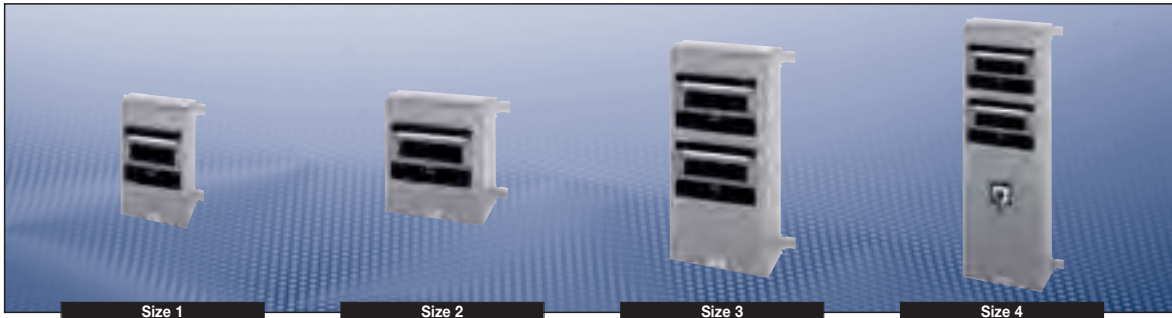


Size 4

X = fixing dimensions

Dimensions in mm

Ex-e-Empty enclosures in stainless steel



Technical data

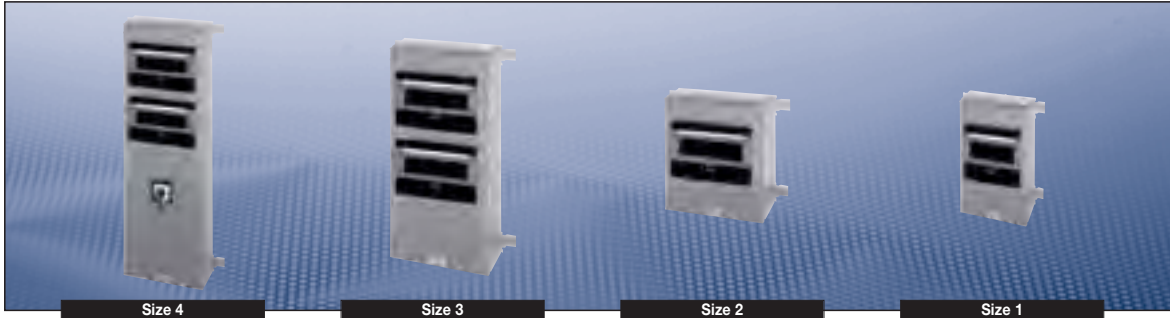
Empty enclosures made of stainless steel

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIC T6, T5, T4 / Ⓔ II 2 D Ex tD A21 IP66 T80 °C / T95 °C ¹⁾
EC Type Examination Certificate	PTB 99 ATEX 1044
IECEX Certificate of Conformity	IECEX BKI 06.0007
Marking accd. to IECEX	Ex de ia/ib m [ia/ib] T4 ... T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	440 V
Rated current	180 A
Insulation class	I
Terminal cross-section	up to 240 mm ²
Cable gland	acc. to customer specification
Degree of protection acc. to EN 60529	IP66
Enclosure material	Stainless steel AISI 316 L
Enclosure colour	electro-polished

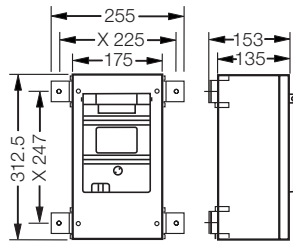
¹⁾ depends on installed components

Ordering details

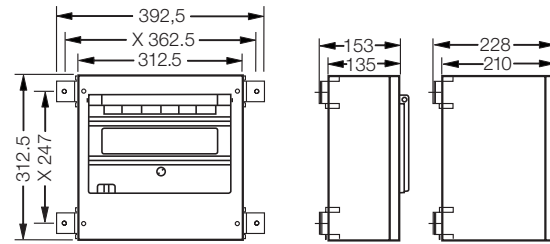
Version	Mounting width	Weight approx.	Order No.
Size 1: 1 Mounting space 106 mm			
Cover closed	106 mm	3.5 kg	GEH 100 00
Cover cut-out with small actuating flap	106 mm	3.8 kg	GEH 100 01
Size 2: 1 Mounting space 213 mm			
Cover closed	213 mm	7.5 kg	GEH 200 00
Cover cut-out with 1 actuating flap	213 mm	8.1 kg	GEH 200 01
Size 3: 2 Mounting space 213 mm			
Cover closed	2 x 213 mm	11.5 kg	GEH 300 00
Cover cut-out with 1 actuating flap	2 x 213 mm	12.1 kg	GEH 300 01
Cover cut-out with 2 actuating flaps	2 x 213 mm	12.7 kg	GEH 300 02
Cover with 1 actuating flap and main switch ≤ 40 A	1 x 213 mm	12.9 kg	GEH 300 03
Size 4: 3 Mounting space 213 mm			
Cover closed	3 x 213 mm	16.5 kg	GEH 400 00
Cover cut-out with 1 actuating flap	3 x 213 mm	17.1 kg	GEH 400 01
Cover cut-out with 2 actuating flaps	3 x 213 mm	17.7 kg	GEH 400 02
Cover cut-out with 3 actuating flaps	3 x 213 mm	18.4 kg	GEH 400 03
Cover with 2 actuating flap and main switch ≤ 40 A	2 x 213 mm	18.6 kg	GEH 400 04



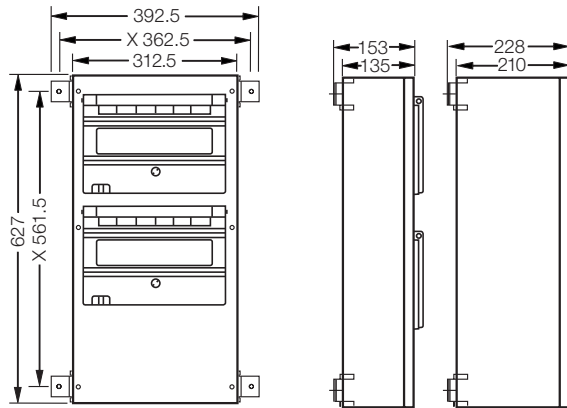
Dimension drawing



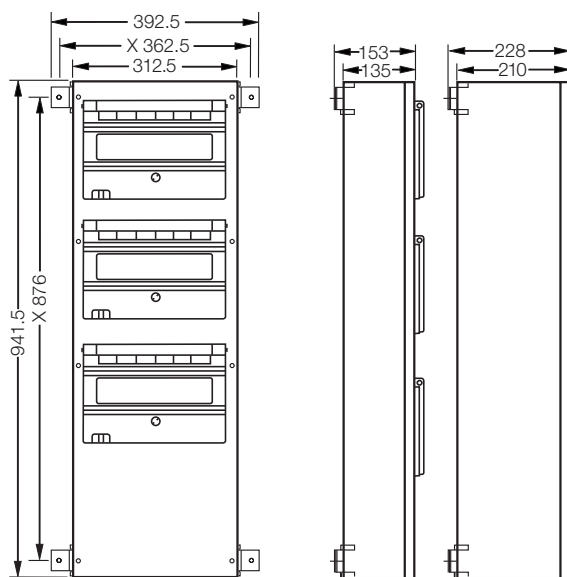
Size 1



Size 2



Size 3

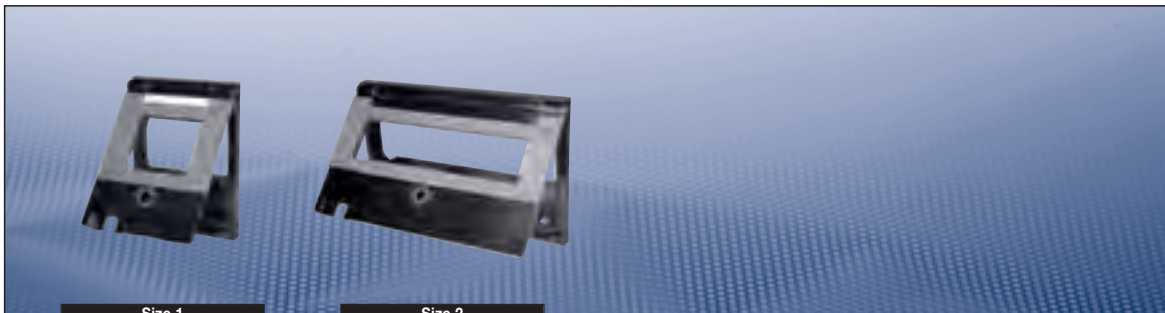


Size 4

X = fixing dimensions

Dimensions in mm

Ex-e-Actuating flap



Technical data

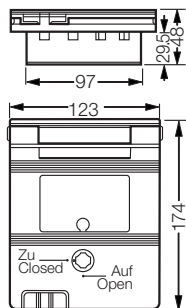
Actuating flap

Marking to 94/9/EC	ⒺⒻ II 2 G Ex e II / ⒺⒻ II 2 D tD A21 IP65
EC Type Examination Certificate	PTB 99 ATEX 3107U
Degree of protection acc. to EN 60529	IP65 (on installed condition)
Weight	flap size 1 0.48 kg flap size 2 0.78 kg

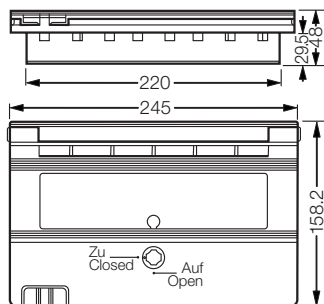
Ordering details

Version	Mounting width	Weight approx.	Order No.
Size 1: 1 Mounting space 106 mm			
Lockable	123 mm	0.48 kg	BKL 100 00
Size 2: 1 Mounting space 213 mm			
Lockable	245 mm	0.78 kg	BKL 200 00

Dimension drawing



Size 1



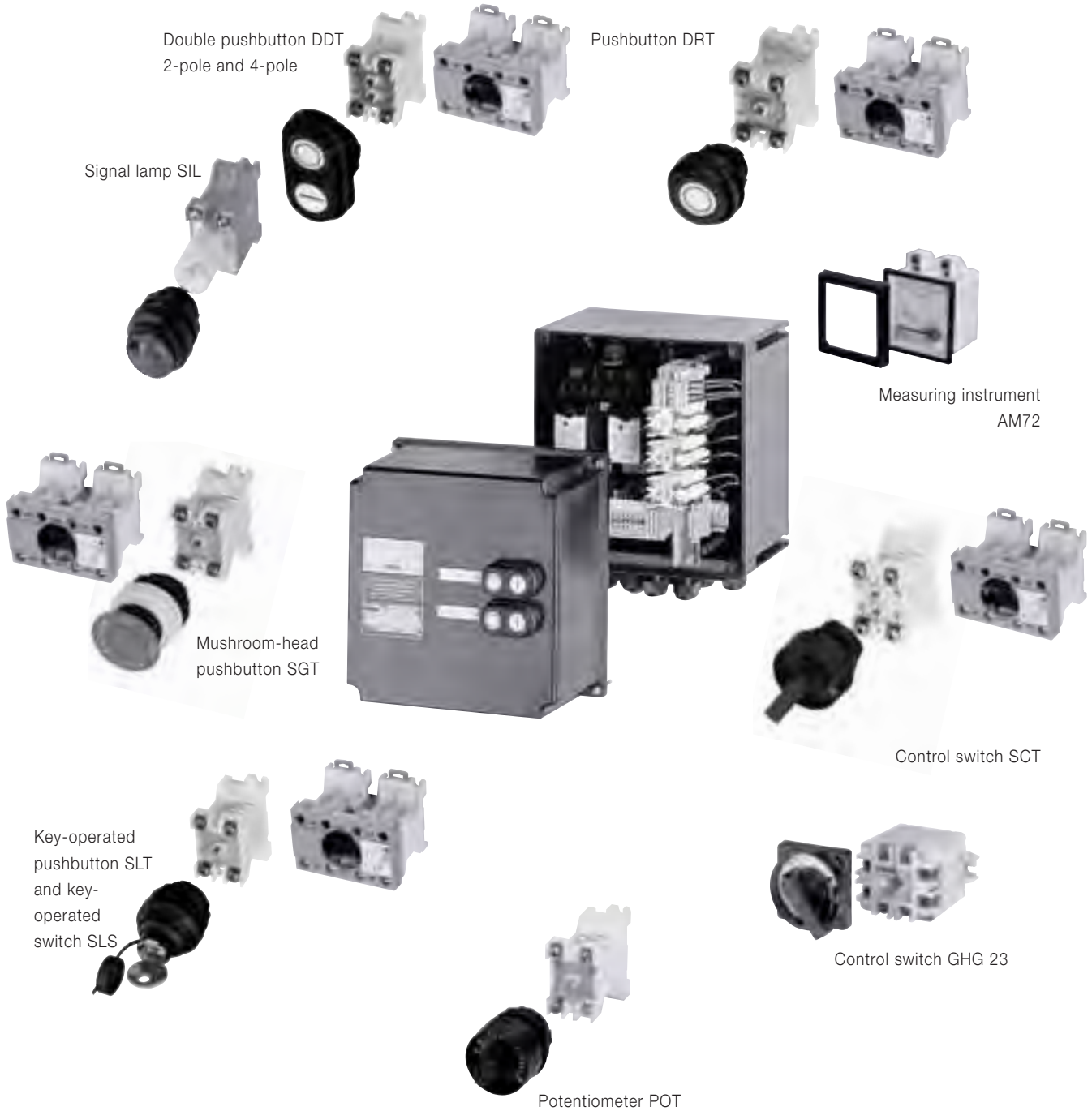
Size 2

Dimensions in mm

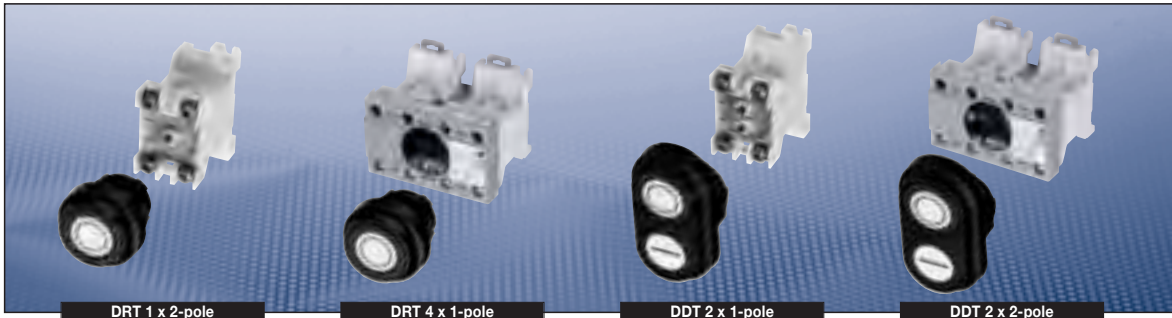
Customised enclosure, covered by Type Examination Certificates, can be individually combined from CEAG's numerous built-in components.

For the selection of control units and components, please see page 9.52 to 9.74.

A coding system for these components with unique designations can be used for planning, selection and ordering.



Ex d/e Switch- and Control-Equipment



Technical data

Ex-Pushbutton DRT and Double pushbutton DDT

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-1: U _e 400 V / I _e 16 A AC-11: U _e 400 V / I _e 4 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric Silicone or Viton on request

2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

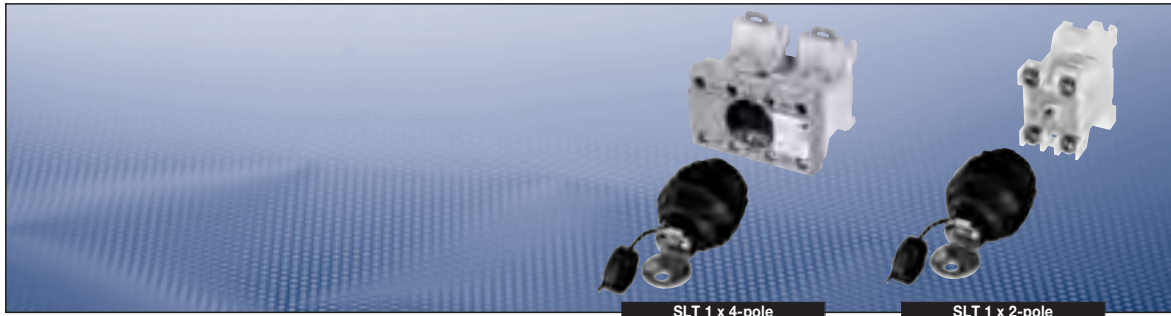
4-pole Version

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton.

The actuator will be in the middle of the two mounting areas.

For detailed information see page 9.52 – 9.74.



Technical data

Ex-Key operated pushbutton SLT

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity	AC-1: U_e 400 V / I_e 16 A
accd. to EN 60947-5-1	AC-11: U_e 400 V / I_e 4 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric Silicone or Viton on request
Latch point	CEAG 1 (others on request)

2-pole Version

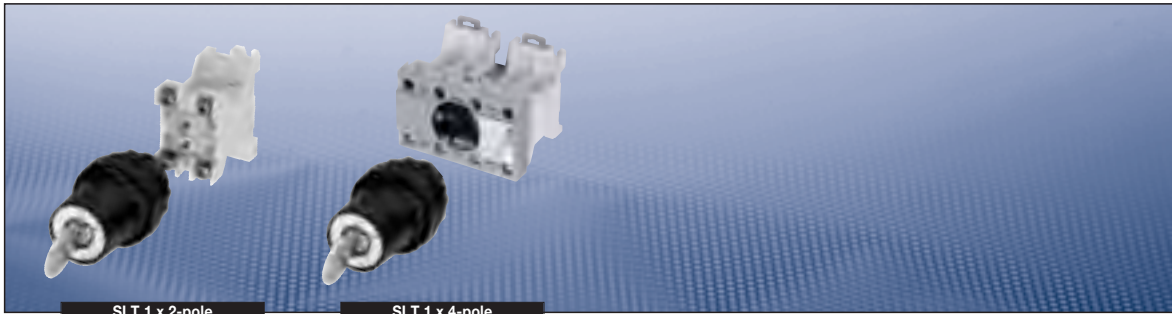
Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

4-pole Version

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton.
The actuator will be in the middle of the two mounting areas.
For detailed information see page 9.52 – 9.74.

Ex d/e Switch- and Control-Equipment



SLT 1 x 2-pole

SLT 1 x 4-pole

Technical data

Ex-built-in Components for individual control stations Key switch SLS

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-1: U _e 400 V / I _e 16 A AC-11: U _e 400 V / I _e 4 A
Switching system	engaging – engaging – engaging
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Latch point	CEAG 1 (others on request)

2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

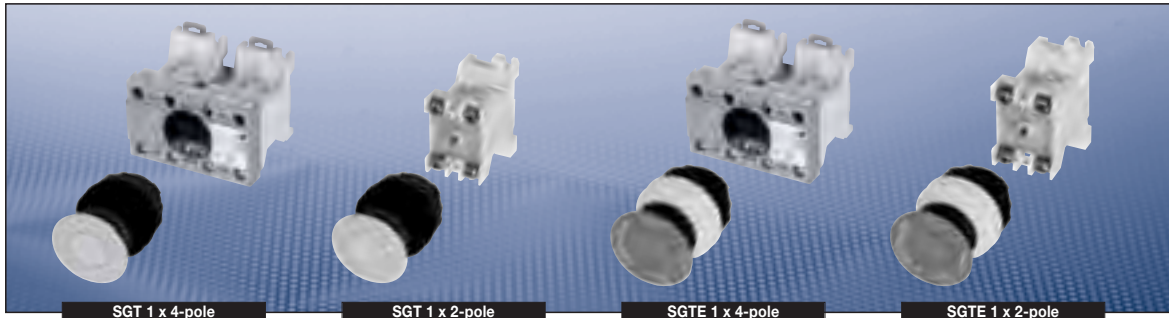
4-pole Version

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton.

The actuator will be in the middle of the two mounting areas.

For detailed information see page 9.52 – 9.74.



Technical data

Ex-Mushroom Head Pushbutton (Emergency Stop „SGTE“ and Normal Version „SGT“)

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity	AC-1: U _e 400 V / I _e 16 A
accd. to EN 60947-5-1	AC-11: U _e 400 V / I _e 4 A
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric Silicone or Viton on request

2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

4-pole Version

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

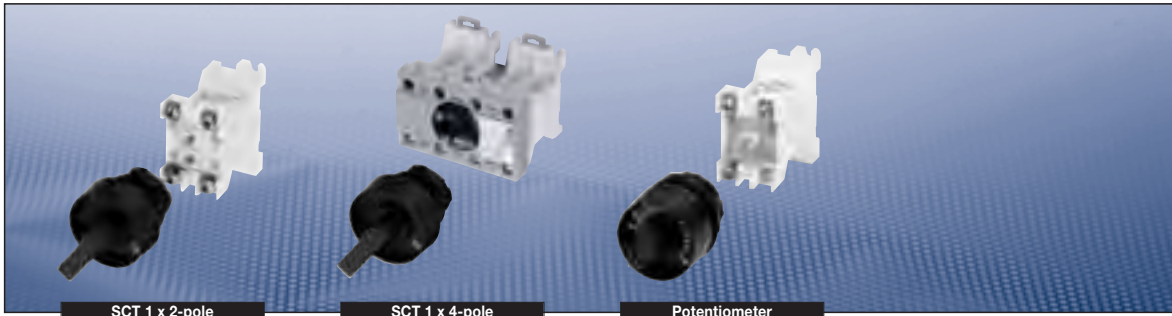
¹⁾ The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton.

The actuator will be in the middle of the two mounting areas.

The pushbutton „Emergency Stop“ will be equipped with a black plate in the centre of the pushbutton actuator.

For detailed information see page 9.52 – 9.74.

Ex d/e Switch- and Control-Equipment



Technical data

Ex-Mini-control switch SCT

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Switch rating	400 V / 16 A AC-1 / 400 V / 4 A AC-11
Degree of protection accd. EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey

2-pole Version

Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

4-pole Version

Connecting terminals	4 x 2.5 mm ²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

¹⁾ The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton.

The actuator will be in the middle of the two mounting areas.

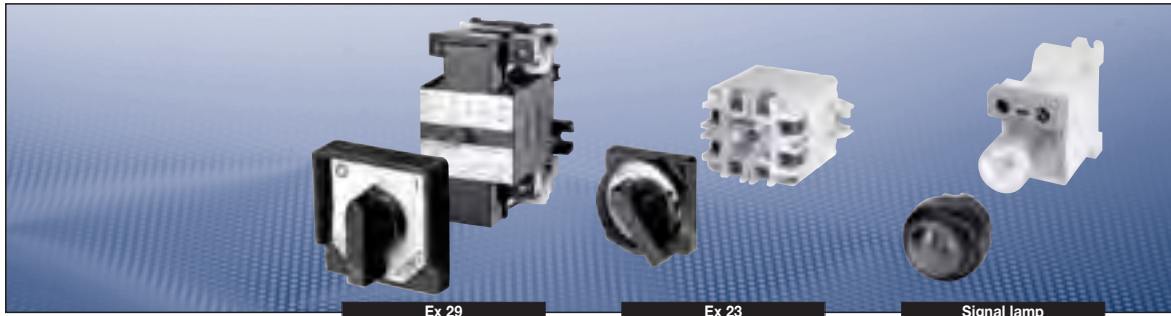
For detailed information see page 9.52 – 9.74.

Technical data

Ex-Potentiometer POT

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex de I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	up to 250 V
Power consumption	max. 1 W
Resistance range	100 – 10000 Ohm
Tolerance	± 20 %
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	DIN rail mounting
Enclosure colour	grey
Angle of rotation	270°
Scale	0 - 100 %

For detailed information see page 9.52 – 9.74.



Technical data

Ex-Signal lamp SIL

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC / Ⓔ II 2 G Ex d ia IIC
EC-Type Examination Certificate	PTB 98 ATEX 1040 U
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage (Ex ed IIC)	20 V to 250 V AC/DC
(Ex d ia IIC)	10 V to 28 V DC
(Ex ed IIC)	12 V to 30 V AC/DC
Rated current (20 V to 250 V)	approx. 4 - 15 mA
(10 V to 28 V Ex d ia IIC)	max. 25 mA
12 V to 30 V	max. 24 mA
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	DIN rail mounting
Enclosure colour	grey

For detailed information see page 9.52 – 9.74.

Technical data

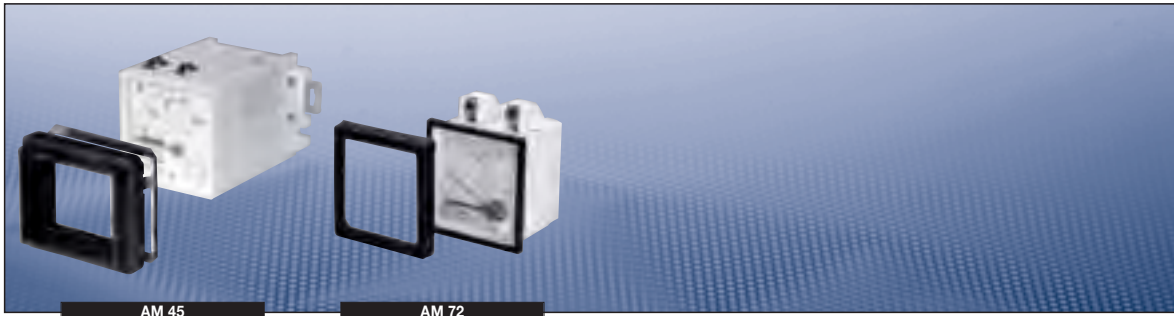
Ex-built-in Components for individual control stations
Control switch Ex 23 and Ex 29

	Ex 23	Ex 29
Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6/ I M 2 Ex e I	
EC-Type Examination Certificate	PTB 98 ATEX 1116 U	PTB 98 ATEX 1118 U
Application temperature	-20 °C to +40 °C -55 °C to +45 °C (option)	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage		up to 500 V
Rated current	10 A	16 A ¹⁾
Rated current gold contacts		0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-15: U _e 230 V / I _e 6 A DC-13: U _e 24 V / I _e 2 A	U _e 400 V / I _e 4 A U _e 230 V / I _e 0,5 A
Connecting terminals	2 x 0.5 - 2.5 mm ²	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Weight	1 tier: approx. 0.2 kg 2 tiers: approx. 0.35 kg 3 tiers:	approx. 0.25 kg approx. 0.40 kg approx. 0.55 kg
Type of mounting	DIN rail mounting	
Enclosure colour	grey	black

¹⁾ 12 A cable section must be 2.5 mm²

For detailed information see page 9.52 – 9.74.

Ex d/e Switch- and Control-Equipment



AM 45

AM 72

Technical data

Ex-Measuring instrument AM 45/AM 72		
	moving iron	moving coil
Marking to 94/9/EC	⊕ II 2 G Ex e IIC / I M 2 Ex e I	⊕ II 2 G Ex ib IIC / I M 2 Ex ib I
EC-Type Examination Certificate	PTB 99 ATEX 2032 U	
Application temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	up to 420 V (AM 45) up to 750 V (AM 72)	
Power consumption	max. 0.31 A	
Overload range	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	10 fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 24 mA
Inductance L_i	≤ 0.1 mH	
Capacitance C_i	≤ 0.1 nF	
Winding specification of moving coil	26.5 windings	
Internal resistance	2.5 Ω ± 30 %	
Open circuit voltage max. U_i	30 V	
Short circuit current max. I_i	150 mA	
Accuracy	Class 2.5	Class 1.5
Circuit	moving iron	moving coil
Connecting terminals	2 x 1.5 - 4 mm ²	
Degree of protection accd. EN 60529	IP 65	
Display size	50 x 45 mm (AM 45) 72 x 72 mm (AM 72)	
Weight	0.35 kg	
Type of mounting	DIN rail mounting	
Enclosure material	grey	

For detailed information see page 9.52 – 9.74.

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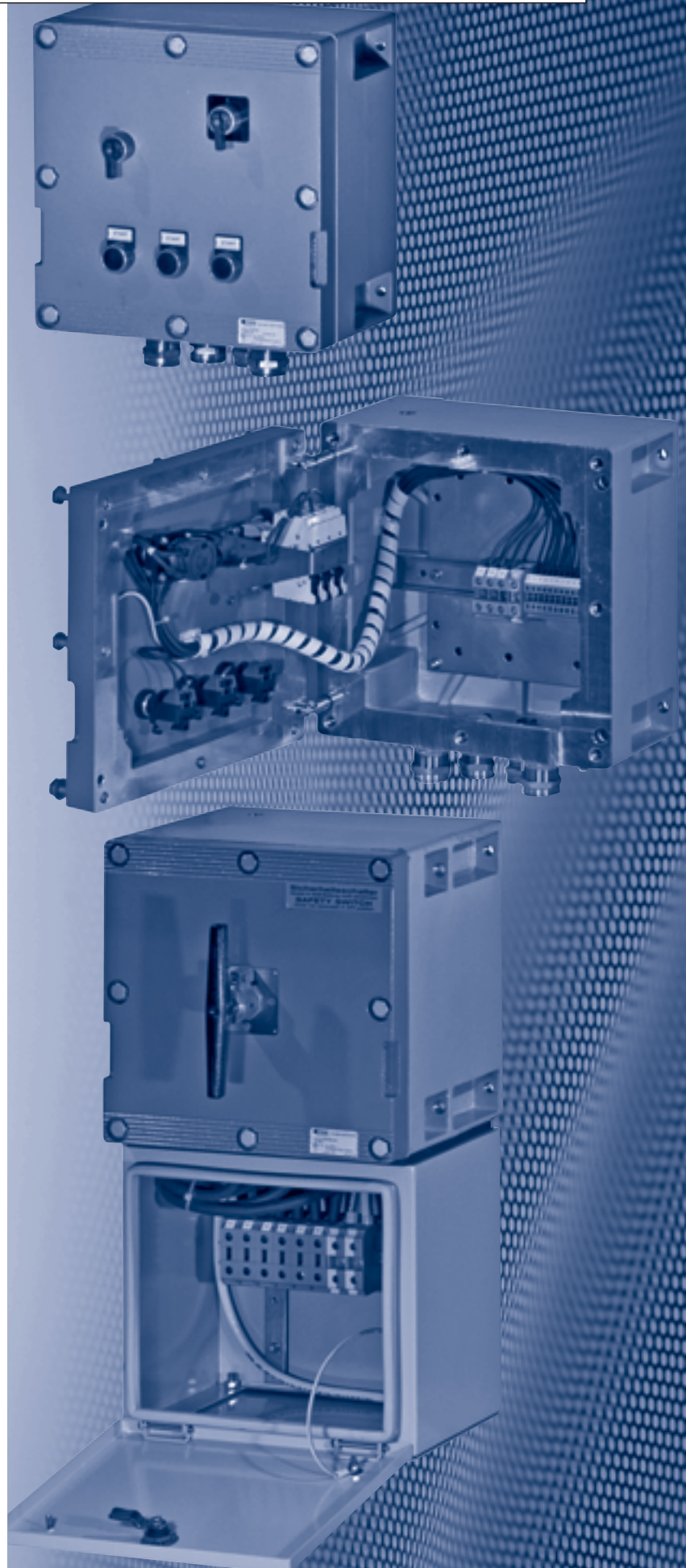
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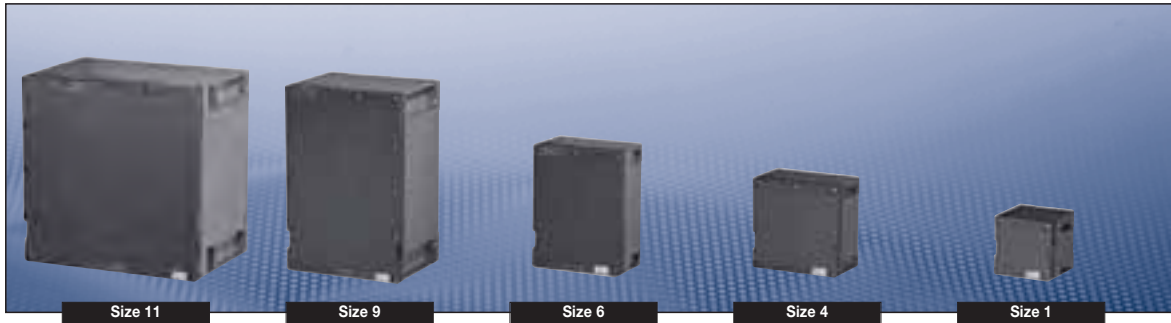
E X - D I S T R I B U T I O N S

The New Series of Enclosures GHG 64 for gases in explosion group IIB (IIB + H₂)

Whether offshore applications, the usage in harsh environments of chemical plants or refineries: The new powder coated light metal enclosures of the GHG 64 series provide the highest standard of explosion protection. The flat flame path, the modular design as well as the extended temperature range (from -55 °C up to +55 °C) are highlights of the GHG 64 series. In addition, the enclosure can be equipped with an high amount of the new Ex-d actuators, due to the compact design of the enclosures. The enclosures design is optimised to merge the contrasts of weight reduction and strength increase. The extraordinary rugged hinges are particularly designed to open the cover even if the GHG 64 is mounted directly side by side. Therefore, just unfasten the captive screws and by means of the innovative pull and swing hinges the cover can easily be opened. This simplifies maintenance and speeds up both repair work and there placement of built-in components. Furthermore, the individual enclosures can be coupled together using flameproof bushings. With eleven enclosure sizes to choose from, customised solutions for any specific application can be provided.



- Temperautre range from -55 °C to +55 °C
- Ex d II B + H₂
- Rated voltage up to 690 V
rated current up to 1150 A
- Hinged cover with 110°
opening angle
- Designed for easy maintenance
- Degree of protection IP65 (IP66 optional)
- Broad range of new Ex-d actuators and
built-in components



Technical data

Ex d light alloy empty enclosure GHG 64

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIB / IIB + H ₂ , T5, T6 / Ⓔ II 2 D tD A21 IP66
EC-Type Examination Certificate	PTB 08 ATEX 1042U
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	1150 A
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP65 (IP66 as option)
Weight	see ordering details
Enclosure material	aluminium die-cast housing, powder coated
Enclosure colour	RAL 7032/7022

Ordering details empty enclosures (II B)

Version	Power dissipation (T _{amb.} = 40 °C)		Weight	Dimensions L x W x D	Order No.
	T6	T5			
Ex d light alloy empty enclosures					
Size 1	94 W	134 W	10.5 kg	210 x 210 x 191 mm	GHG 640 1901 R0001
Size 2	112 W	158 W	14 kg	320 x 210 x 191 mm	GHG 640 1902 R0001
Size 3	140 W	195 W	17 kg	320 x 210 x 284 mm	GHG 640 1903 R0001
Size 4	152 W	214 W	18 kg	320 x 320 x 191 mm	GHG 640 1904 R0001
Size 5	197 W	280 W	21 kg	320 x 320 x 284 mm	GHG 640 1905 R0001
Size 6	240 W	335 W	22 kg	430 x 320 x 191 mm	GHG 640 1906 R0001
Size 7	270 W	390 W	27 kg	430 x 320 x 284 mm	GHG 640 1907 R0001
Size 8	270 W	390 W	35 kg	430 x 430 x 284 mm	GHG 640 1908 R0001
Size 9	390 W	430 W	53 kg	650 x 430 x 284 mm	GHG 640 1909 R0001
Size 10	470 W	640 W	73 kg	650 x 430 x 439 mm	GHG 640 1910 R0001
Size 11	470 W	640 W	105 kg	650 x 650 x 442 mm	GHG 640 1911 R0001








EX - BUILT - IN CONTROL UNITS

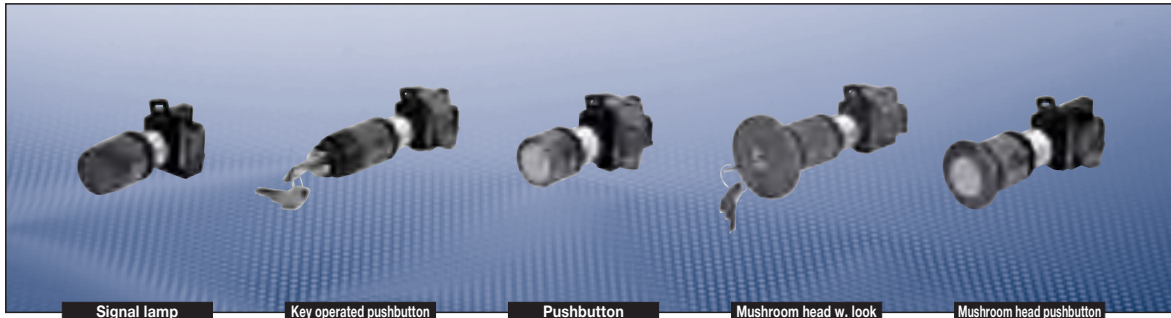
Modular Design
- Low Maintenance and Safe -

In addition to the known bus bar and connection boxes, a wide variety of new built-in components, such as switches, indicating devices, actuators and contact blocks, allow a multitude of combinations for customised complex controls. Threaded Ex-d holes in accordance with your specifications are drilled into the enclosure covers in our works. The desired components are simply crewed into those drillings.

Each part can be easily exchanged due to the modular layout of the actuators and contact blocks: Simply by opening the bayonet coupling between the actuator and the contact block. The contact blocks provide all combinations of N/O and N/C from 1 pole up to 4 poles. Durable LED indicator lamps ensure safe operation on a lasting basis. Actuating elements for various MCBs resp. RCDs and mushroom-head pushbuttons, key-operated switches or photo-cell inserts complete the product range.



-  Pushbuttons (up to 4 poles with any combination of N/O and N/C)
-  Pushbuttons with emergency stop function
-  Key-operated switches / pushbuttons
-  Indicating lamp in various colours
-  Padlocking facilities
-  Type labels
-  Actuators for circuit breakers

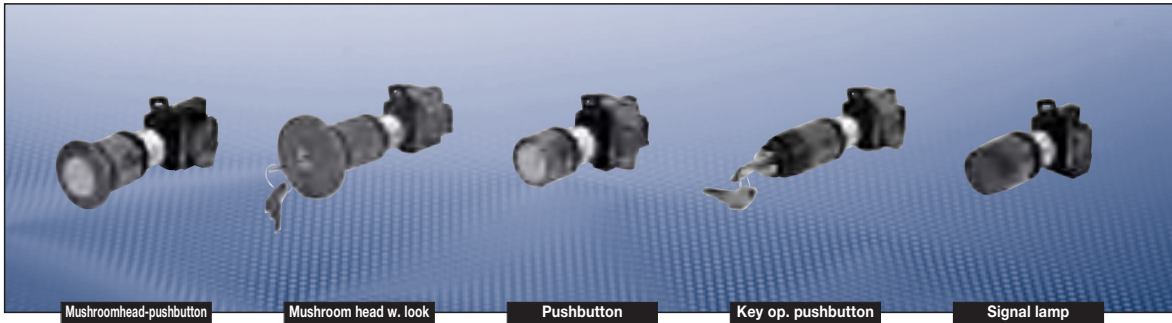


Technical data

Ex-d built-in control units / signal units / actuators for GHG 64

Marking to 94/9/EC	Ⓔ II 2 G Ex d II
EC-Type Examination Certificate	PTB 06 ATEX 1009U
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage switch	690 V
Rated voltage indication lamp	230 V
Rated current (switch)	63 A
Degree of protection acc. to EN 60529	IP65 (IP66 as option)
Ex-d fixing thread	M22 x 1.5

Ex-built-in control units



Ordering details

Version	Order No.
Contact block	
1 NO	GHG 640 9617 P0001
1 NC	GHG 640 9617 P0002
1 NO + 1 NC	GHG 640 9617 P0003
2 NO	GHG 640 9617 P0004
2 NC	GHG 640 9617 P0005
2 NO + 1 NC	GHG 640 9617 P0006
1 NO + 2 NC	GHG 640 9617 P0007
2 NO + 2 NC	GHG 640 9617 P0008
3 NO + 1 NC	GHG 640 9617 P0009
1 NO + 3 NC	GHG 640 9617 P0010
4 NO	GHG 640 9617 P0011
4 NC	GHG 640 9617 P0012
Signal lamp unit	
Green	GHG 640 9614 P0001
Red	GHG 640 9614 P0002
Yellow	GHG 640 9614 P0003
Blue	GHG 640 9614 P0004
Clear	GHG 640 9614 P0005
Mushroom head pushbutton / emergency stop pushbutton	
D 36 mm with lock	GHG 640 9603 P0001
D 50 mm with lock	GHG 640 9603 P0002
with rotary latch	GHG 640 9604 P0001
Emergency stop pushbutton	GHG 640 9606 P0001
Pushbutton	
Yellow	GHG 640 9607 P0001
Blue	GHG 640 9607 P0002
Red	GHG 640 9607 P0003
Green	GHG 640 9607 P0004
White	GHG 640 9607 P0005
Black	GHG 640 9607 P0006
Key-operated pushbutton	
with 2 keys	GHG 640 9608 P0001
Actuator	
Rotary actuator for MCBs	GHG 640 9602 P0001
Rotary actuator for 20 A / 32 - 63 A	GHG 640 9612 P0001
Locking device	
Pushbutton pressed	GHG 640 9614 P0001
Pushbutton unpressed	GHG 640 9614 P0001
MCB actuator	GHG 640 9614 P0003

Ex-d(e) control units, control switches, terminal boxes and distribution can be built in accordance with the EC-Type Examination Certificate PTB 08 ATEX 1043X.

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E X - D I S T R I B U T I O N S

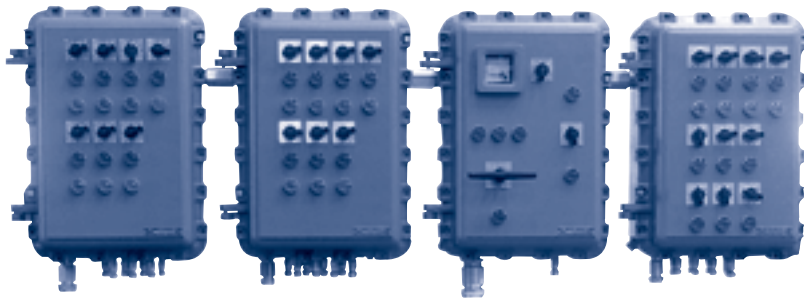
**with metal EJ enclosures
for gases in explosion group IIB**

Apparatus which gives off arcs or sparks can be integrated in distributions at low cost using flameproof enclosures. Built-in electrical components can be actuated by means of control units mounted from the outside on the covers.

The extensive product line for use in explosion group IIB for the hazardous areas of Zones 1 and 2 fulfils the requirements of ATEX directive 94/9/EC. Due to the most diverse demands, individualised distribution systems can be put together. Enclosures are connected via flame-proof cable entries. The design and equipment of the distributions depends on customers' requirements.



- Modular design
- Rated current up to 1200 A
- Suited for tropical and maritime climates through powder coating
- Apparatus can be operated from the outside
- Direct cable entries



The distributions and built-in components are combined to customers' specifications for wall-mounting or free-standing frameworks, depending on the installation site.

Free-standing frameworks are designed according to the distributions or special apparatus required and fitted with standardised U-rails. For outdoor installations, we recommend a canopy to protect the distribution from the sun and rain.

The frameworks all feature a grey epoxyresin finish identical with that of the EJ enclosures. Hot-dip galvanised steel frameworks are available on request.

The modular design makes it possible to put together distributions and built-in components using standardised enclosure sizes.

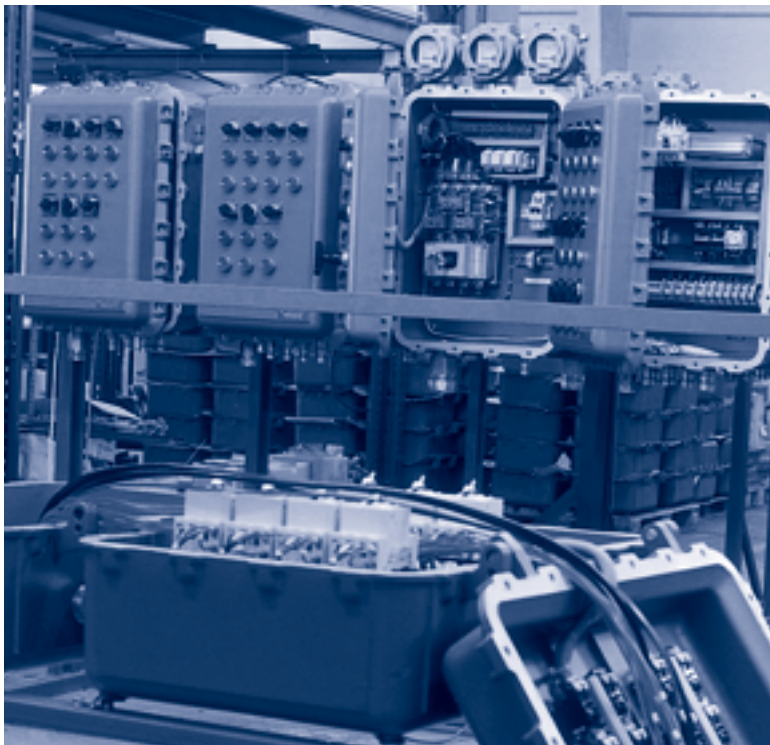
The enclosures are interconnected with cable bushings and/or bus bars and are especially designed to facilitate bus-bar allocation when putting distributions together.

Electrical components built into the enclosures can be actuated from the outside via control units mounted on the front panels.

Ex-d cable entries must be used where required.

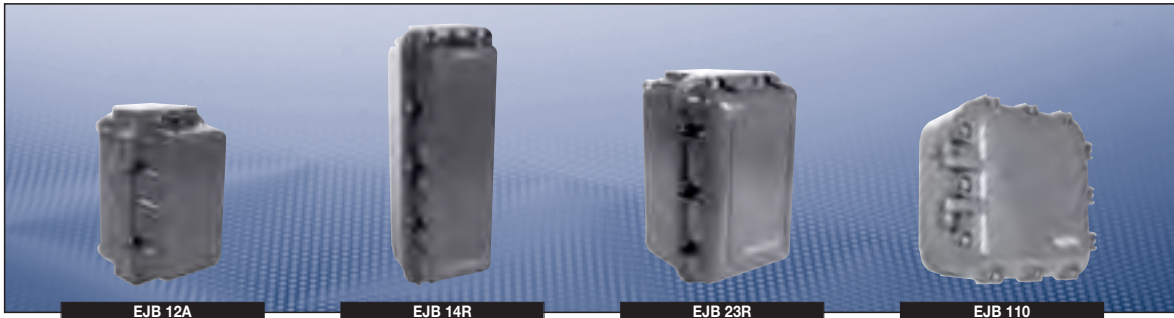
EJB enclosures are made of copper-free aluminium (<0.1%) and EJW enclosures of welded steel. All enclosures are coated with a grey epoxy resin.

Covers and enclosures are mounted on a flameproof flange plate and screwed down with stainless steel screws.



Enclosures of the types EJB 12R to EJB 23R are fitted with hinges for easy opening and closing.

Ex-Control and distribution systems

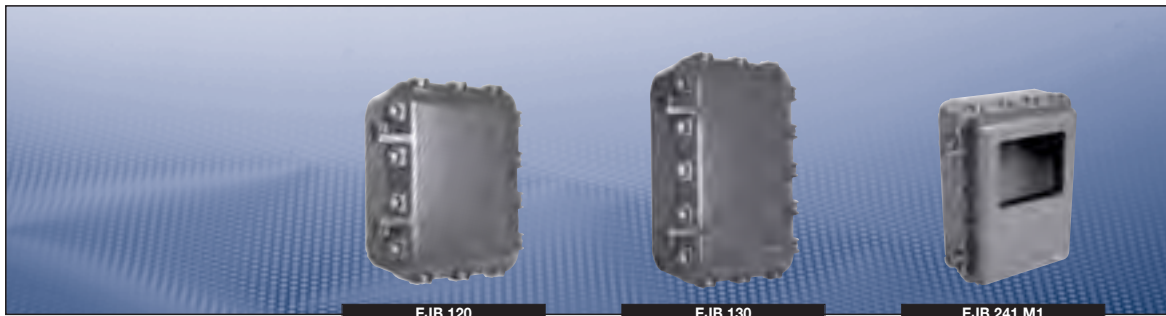


Technical data

Ex EJB Enclosures light alloy/sheet steel

Marking to 94/9/EC	Ⓔ II 2 G Ex de IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	690 V
Rated current	1200 A
Insulation class	I
Degree of protection acc. to EN 60529	IP65
Weight	see ordering details
Enclosure material	EJB in aluminium EJB 241 M1 and M2 cast iron EJW welded steel Front panels cast iron
Enclosure colour	epoxy-resin finish, grey

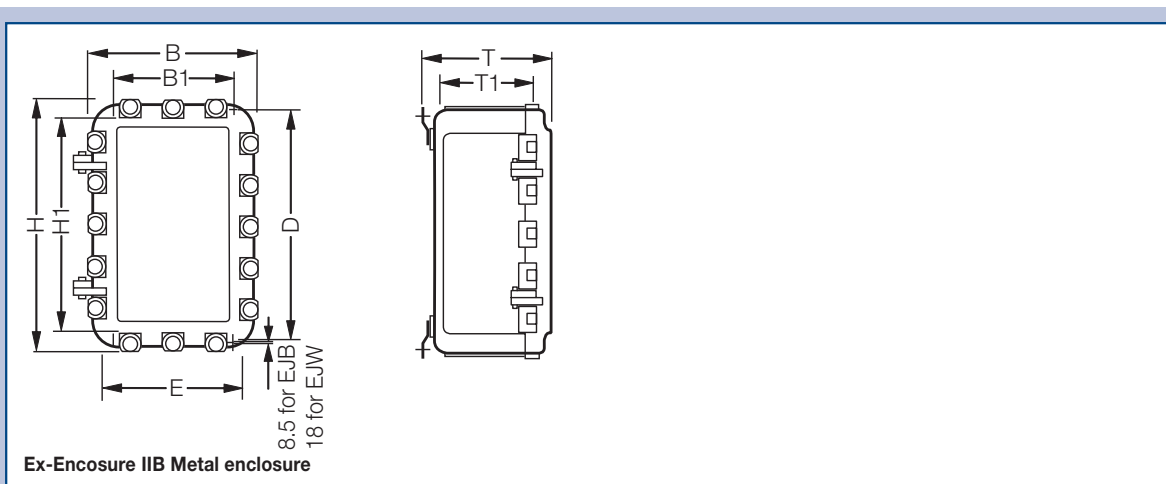
¹⁾ Depend on installation



Ordering details

Version	Power dissipation in W			Rated current in A	Weight kg	Fixing dimensions mm		Enclosure size mm			Intern. space mm			Order No.
	T6	T5	T4			D	E	H	B	T	H1	B1	T1	
EJB 12 R	30	60	100	40	3.0	242	166	215	131	102	178	89	57	NOR 000 001 170 438
EJB 12 A	30	60	100	40	3.6	242	166	215	131	162	178	89	110	NOR 000 001 170 446
EJB 14 R	80	140	240	65	8.3	436	178	412	150	143	358	103	85	NOR 000 001 170 462
EJB 23 R	60	140	240	100	11.0	354	240	336	217	212	276	163	152	NOR 000 001 170 488
EJB 110	125	170	295	160	22.0	310	310	373	373	230	305	305	162	NOR 000 001 170 496
EJB 120	150	270	480	300	28.5	414	310	474	373	230	405	305	162	NOR 000 001 170 503
EJB 120 M3	150	270	480	300	28.5	414	310	474	373	230	405	305	162	NOR 000 111 170 601
EJB 120 M4	150	270	480	300	28.5	414	310	474	373	230	405	305	162	NOR 000 111 170 606
EJB 121	150	280	500	350	32.0	414	310	474	373	295	405	305	235	NOR 000 001 170 511
EJB 130	200	340	590	450	35.3	520	310	577	373	230	518	305	162	NOR 000 001 170 529
EJB 131	200	350	610	500	39.0	520	310	577	373	295	518	305	235	NOR 000 001 170 537
EJB 240	250	400	700	800	52.3	624	414	680	474	230	619	405	162	NOR 000 001 170 545
EJB 241	250	400	700	850	56.8	624	414	680	474	295	619	405	235	NOR 000 001 170 553
EJB 241 M1	250	400	700	850	54.0	624	414	680	474	295	619	405	235	NOR 000 111 170 469
EJB 241 M2	250	400	700	850	51.0	624	414	680	474	295	619	405	235	NOR 000 111 170 451
EJW 250	250	340	560	1200	145.0	852	387	890	425	280	810	345	199	NOR 000 001 190 139
EJW 251	380	520	850	1200	167.0	852	387	890	425	440	810	345	320	NOR 000 001 190 197
EJW 350	380	520	850	1200	168.0	852	502	890	540	322	810	460	250	NOR 000 001 190 171
EJW 351	450	600	1000	1200	175.0	852	502	890	540	446	810	460	375	NOR 000 001 190 062
EJW 561	600	730	1000	1200	380.0	1242	687	1280	765	386	1200	685	325	NOR 000 001 190 064

Dimension drawing



Dimensions in mm

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Motor starter

Technical data

Ex EJB Light-alloy motor starter

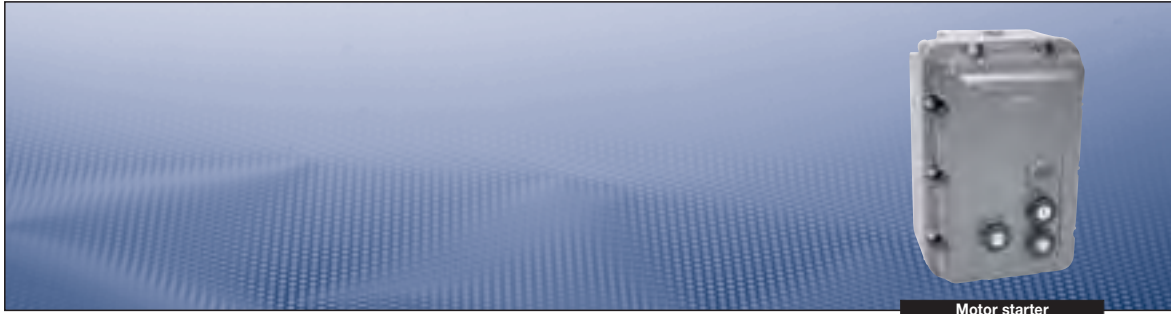
Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB T6
EC Type Examination Certificate	LOM 03 ATEX 2004 X
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	690 V
Rated current	63 A
Insulation class	I
Terminal cross-section	up to max. 240 mm ²
Degree of protection acc. to EN 60529	IP65
Dimensions (L x W x H)	see dimension drawing
Weight	see ordering details
Enclosure material	EJB in aluminium Front panels cast iron
Enclosure colour	epoxy-resin finish, grey

Ordering details

Motor capacity	Main switch	Cable gland	Weight	Version	Order No.
Type: Direct circuit					
4.0 kW	25 A	2 x M 25 Ex-d	4.0 kg	1	EXKO 732 101 M
4.0 kW	25 A	2 x M 25 Ex-d	12.0 kg	2	EXKO 732 102 M
5.5 kW	40 A	2 x M 25 Ex-d	12.0 kg	2	EXKO 732 103 M
8.0 kW	40 A	2 x M 25 Ex-d	16.8 kg	3	EXKO 732 104 M
12.5 kW	63 A	2 x M 32 Ex-d	17.2 kg	3	EXKO 732 105 M
15.0 kW	63 A	2 x M 32 Ex-d	18.8 kg	3	EXKO 732 106 M

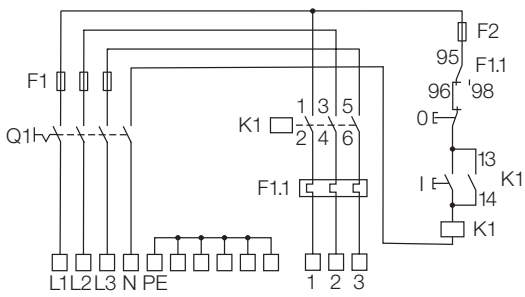
Type: Star-delta starter					
12.5 kW	40 A	2 x M 25 Ex-d	17.2 kg	2	EXKO 732 113 M
18.5 kW	40 A	2 x M 32 Ex-d	19.7 kg	2	EXKO 732 114 M
25.0 kW	40 A	2 x M 32 Ex-d	25.3 kg	3	EXKO 732 115 M

Type: Reversing circuit					
4.0 kW	25 A	2 x M 25 Ex-d	4.0 kg	1	EXKO 732 107 M
4.0 kW	25 A	2 x M 25 Ex-d	12.0 kg	2	EXKO 732 108 M
5.5 kW	40 A	2 x M 25 Ex-d	12.0 kg	2	EXKO 732 109 M
8.0 kW	40 A	2 x M 25 Ex-d	16.8 kg	3	EXKO 732 110 M
12.5 kW	63 A	2 x M 32 Ex-d	17.2 kg	3	EXKO 732 111 M
15.0 kW	63 A	2 x M 32 Ex-d	18.8 kg	3	EXKO 732 112 M

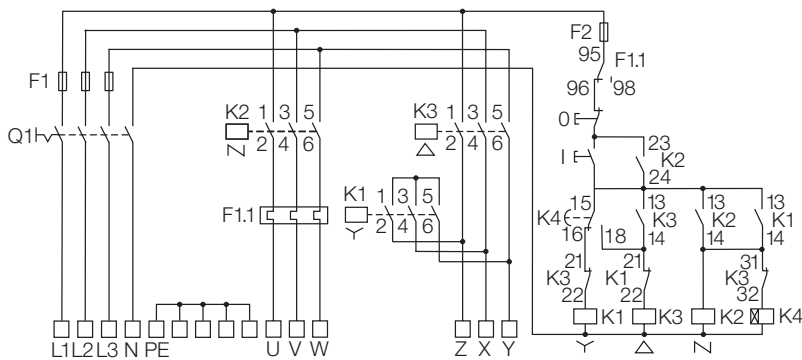


Motor starter

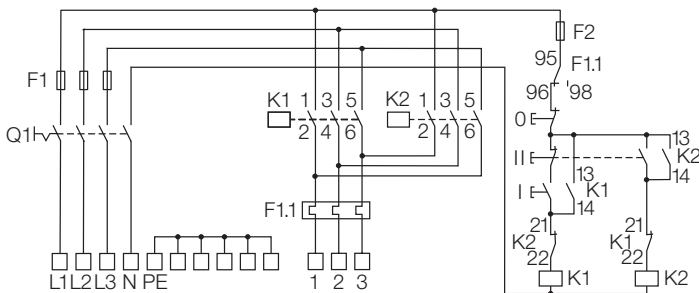
Wiring diagram | Dimension drawing



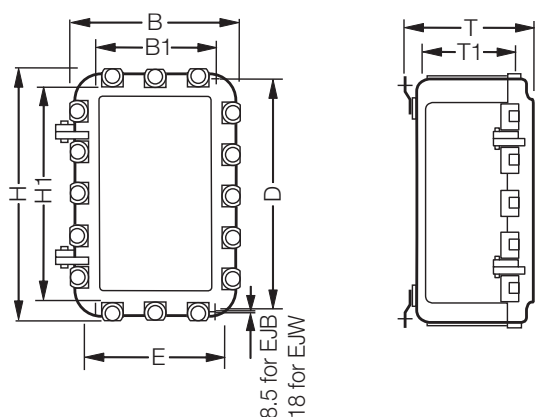
Direct on-line starter



Star-delta starter



Reversing circuit

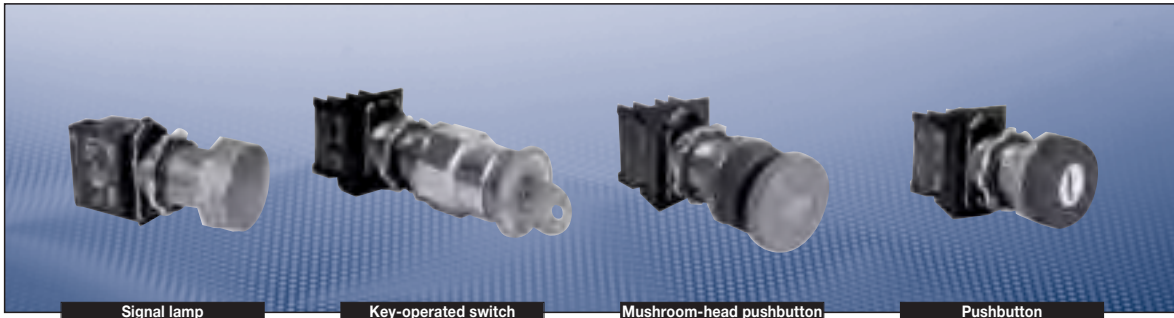


Version	Fixing dimensions mm		Enclosure size mm			Internal space mm		
	D	E	H	B	T	H1	B1	T1
1	242	166	215	131	102	178	89	57
2	436	178	412	150	143	358	103	85
3	354	240	336	217	212	276	163	152

Dimensions in mm

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■ Built-in components ■



Signal lamp

Key-operated switch

Mushroom-head pushbutton

Pushbutton

Technical data

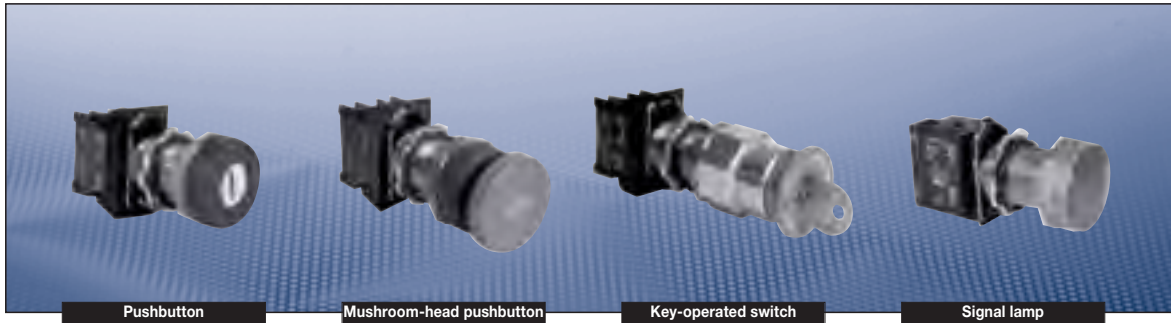
Signal lamp

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	500 V
Rated power	3 W
Terminal cross-section	2 x 2.5 mm ²
Degree of protection acc. to EN 60529	IP65
Weight	see ordering details
Enclosure material	body material aluminium window material white, yellow, red or green polycarbonate
Lamp cap	Ba 9 s

Pushbutton | Mushroom-head pushbutton | Key-operated switch | Contact block

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	500 V
Rated current	10 A
Terminal cross-section	2 x 2.5 mm ²
Degree of protection acc. to EN 60529	IP65
Weight	see ordering details
Enclosure material	Aluminium

¹⁾ Depend on installation



Ordering details

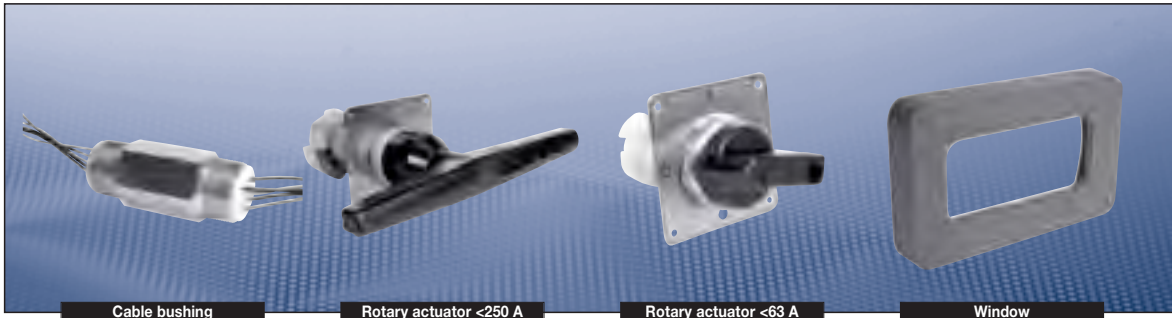
Version	Colour	Order No.
Signal lamps		
Incandescent lamp 240 V, 3 W	white, yellow, red, yellow-green	NOR 000 001 170 016
Incandescent lamp 130 V, 2.6 W	white, yellow, red, yellow-green	NOR 000 001 170 017
Incandescent lamp 24 V, 1.2 W	white, yellow, red, yellow-green	NOR 000 001 170 018
Transformer incandescent lamp 380-400/6V, 1.2 W	white, yellow, red, yellow-green	NOR 000 001 170 019
LED 230 V	white, yellow, red, yellow-green	NOR 000 001 170 116
LED 130 V	white, yellow, red, yellow-green	NOR 000 001 170 117
LED 24 V	white, yellow, red, yellow-green	NOR 000 001 170 118

Version	Colour	Marking	Order No.
Pushbutton and mushroom-head pushbutton with contact block 1NC + 1NO			
Pushbutton	white	I 0 STOP START	NOR 000 001 170 004
Pushbutton lockable in pushed position with padlock	white	0 STOP OFF	NOR 000 001 170 005
Pushbutton lockable in un-pushed position with padlock	white	I 0 STOP START	NOR 000 001 170 006
Mushroom-head pushbutton	red, yellow	0 STOP OFF	NOR 000 001 170 007
Mushroom-head pushbutton lockable in un-pushed position with padlock	red, yellow	0 STOP OFF	NOR 000 001 170 008
Mushroom-head pushbutton lockable in un-pushed position with padlock	red, yellow	0 STOP OFF	NOR 000 001 170 009
Key-operated switch			NOR 000 001 170 010
Mushroom-head pushbutton with key release			NOR 000 001 170 011
Pushbutton		RESET	NOR 000 001 170 012

Version	Colour	Marking	Order No.
Contact block (without pushbutton)			
1 NC			NOR 000 001 170 013
1 NO			NOR 000 001 170 014
Pushbutton label	green, red, yellow, black	II Arrow ON RESET TEST	NOR 000 001 170 015

Version	Order No.
Key operated switch	
0-1, 2 P 12 A	NOR 000 001 170 020
0-1, 2 P 25 A	NOR 000 001 170 021
0-1, 3 P 25 A	NOR 000 001 170 022
1-2, 1 P 12 A	NOR 000 001 170 023
1-2, 2 P 12 A	NOR 000 001 170 024
1-0-2, 1 P 12 A	NOR 000 001 170 025

Built-in components



Technical data

Window

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Degree of protection acc. to EN 60529	IP65
Dimensions (L x W x H)	60 x 60 mm
	75 x 75 mm
	110 x 50 mm
	110 x 75 mm
Enclosure material	frame material aluminium
	window material borosilicate glass
Enclosure colour	grey epoxy resin finish

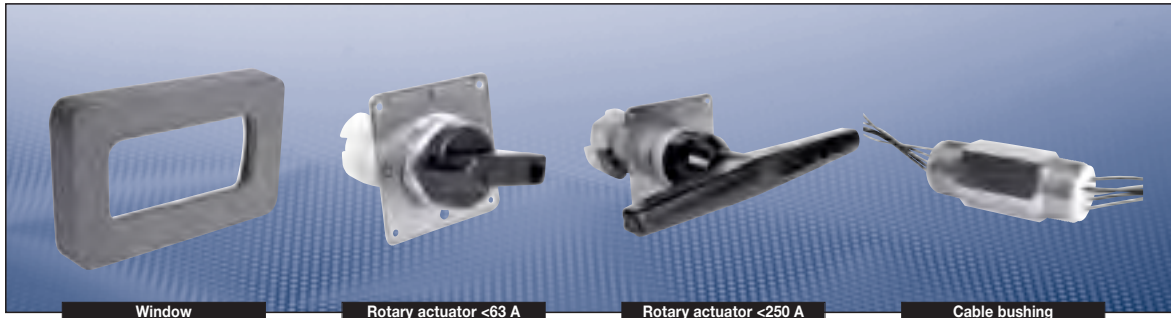
Rotary actuator

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	500 V
Rated current	25 A
	63 A
	250 A
	500 A
Degree of protection acc. to EN 60529	IP65
Enclosure material	aluminium
Enclosure colour	stainless-steel finish
Options	Locking facility for units up to 40 A on front panel, for units > 40 A on enclosure panel

Cable bushing

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	690 V
Rated current	50 A
	75 A
	150 A
Line cross section	4 x 10 mm ² + 1 x 6 mm ² up to 9 x 1.5 mm ² + as required (50 A)
	4 x 16 mm ² + 1 x 10 mm ² up to 9 x 1.5 mm ² + as required (75 A)
	4 x 50 mm ² + 1 x 10 mm ² up to 47 x 1.5 mm ² + as required (150 A)
Degree of protection acc. to EN 60529	IP65
Material	bichromatised hexagonal steel
Cable sealing	high-thermal and chemical-resistant compound

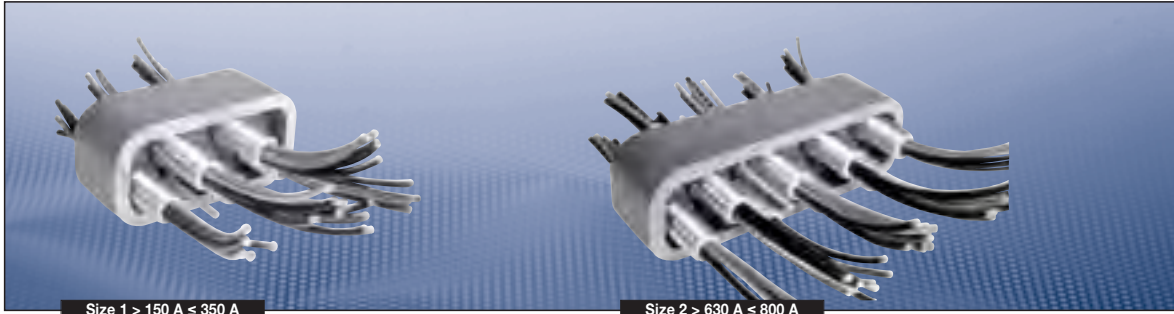
¹⁾ Depend on installation



Ordering details

Version	Order No.		
Rotary switch			
Rotary switch, 1-0-2, 2 P, 12 A	NOR 000 001 170 026		
Rotary switch, 0-1, 2 P, 12 A	NOR 000 001 170 027		
Rotary switch, 0-1-M, 2 P, 12 A	NOR 000 001 170 028		
Rotary actuator for main switch			
Main switch, 25 A to < 63 A	NOR 000 001 170 029		
Main switch, 63 A to < 100 A	NOR 000 001 170 030		
Main switch, 100 A to < 250 A	NOR 000 001 170 031		
Main switch, 250 A to < 1000 A	NOR 000 001 170 032		
Plain labels for switch			
Plain labels for switch, 60 x 60	NOR 000 001 170 033		
Plain labels for switch, 70 x 70	NOR 000 001 170 034		
Plain labels for switch, 85 x 85	NOR 000 001 170 035		
Rotary actuator for MCBs			
Rotary control switch for MCBs 1 pole ABB	NOR 000 001 170 933		
Rotary control switch for MCBs Multipole ABB	NOR 000 001 170 925		
Rotary control switch for MCBs 1 pole M&G	NOR 000 001 170 600		
Rotary control switch for MCBs Multipole M&G	NOR 000 001 170 569		
Rotary control switch for MCBs POWER	NOR 000 001 170 565		
Cable bushing			
50 A 4 x 10 mm ² + 1 x 6 mm ²	3/4" NPT	3P+N+PE	NOR 000 001 170 892
75 A 4 x 16 mm ² + 1 x 10 mm ²	1" NPT	3P+N+PE	NOR 000 001 170 909
150 A 4 x 50 mm ² + 1 x 10 mm ²	1 1/2" NPT	3P+N+PE	NOR 000 001 170 917
Window			
60 x 60 mm, Type M 6060			NOR 000 001 170 000
75 x 75 mm, Type M 7575			NOR 000 001 170 001
110 x 50 mm, Type M 11050			NOR 000 001 170 002
110 x 75 mm, Type M 11075			NOR 000 001 170 003
Blanking plug			
Blanking plug			NOR 000 001 170 154

Built-in components

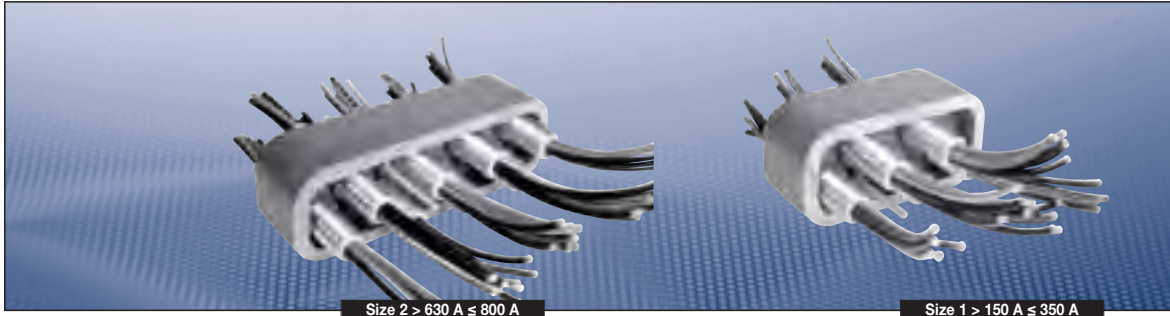


Technical data

Bus bar for interconnection of enclosures

Marking to 94/9/EC	Ⓔ II 2 G Ex d IIB
EC Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature ¹⁾	-20 °C to +40 °C
Rated voltage	690 V AC
Rated current	150 A 350 A 500 A 800 A
Wire cross-section	
Size 1 to 150 A 3P+N+PE	4 x 10 mm ² + 1 x 6 mm ² , to 9 x 1.5 mm ² + depends on use
Size 1 to 350 A 3P+N+PE	Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N) 350 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail
Size 1 to 500 A	Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N) 500 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail
Size 2 to 800 A	Aluminium coupler 310 x 102 mm, comprising 7 bars, (3P+N) 800 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail
Degree of protection acc. to EN 60529	IP65
Dimensions (L x W x H)	60 x 60 mm 75 x 75 mm 110 x 50 mm 110 x 75 mm
Enclosure material	Duroplastic
Cable sealing	high-thermal and chemical-resistant compound

¹⁾ Depend on installation



Ordering details

Version	Enclosure size	Order No.
Bus bars for interconnection of enclosures		
Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N+PE) ≤ 350 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail	1	NOR 000 001 170 036
Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N+PE) > 350 A ≤ 500 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail	1	NOR 000 001 170 037
Aluminium coupler 310 x 102 mm, comprising 4 bars, (3P+N+PE) > 500 A ≤ 630 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail	2	NOR 000 001 170 038
Aluminium coupler 310 x 102 mm, comprising 3 x 2 + 1 bars, (3P+N+PE) > 630 A ≤ 800 A, 1 auxiliary bushing max. 19 x 1.5 mm ² , 1 PE-Rail	2	NOR 000 001 170 039

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EX-D ENCLOSURES AND DISTRIBUTIONS

**made of metal
for gases of explosion group IIC**

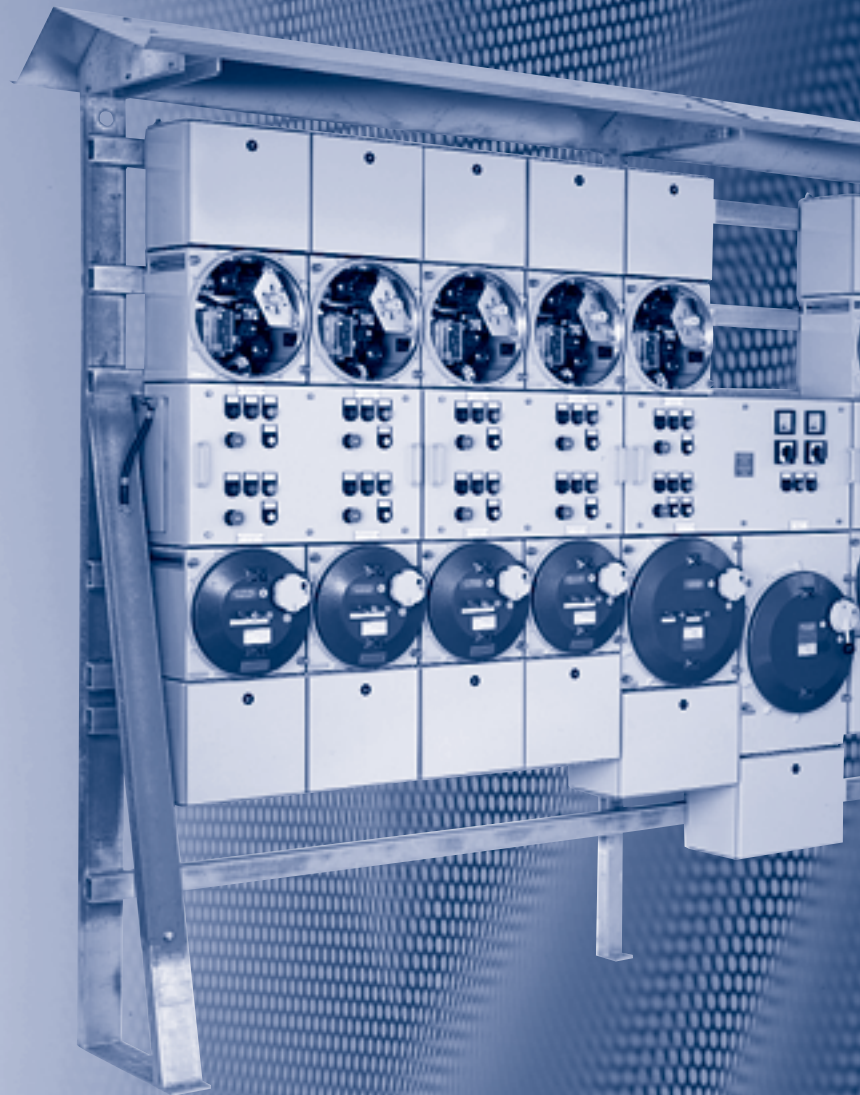
To use MCBs, fuses, contactors etc. which give off arcs in potentially hazardous areas, they must be integrated in Ex-d distributions.

For just this purpose, the Cooper Crouse-Hinds GmbH offers a distribution system comprising flameproof aluminium enclosures and Ex-e steel terminal boxes with a polyester powder coating suited for tropical and marine climates. Seven enclosure sizes can be combined into large distributions allowing integration of built-in components up to 630 A and 690 V.

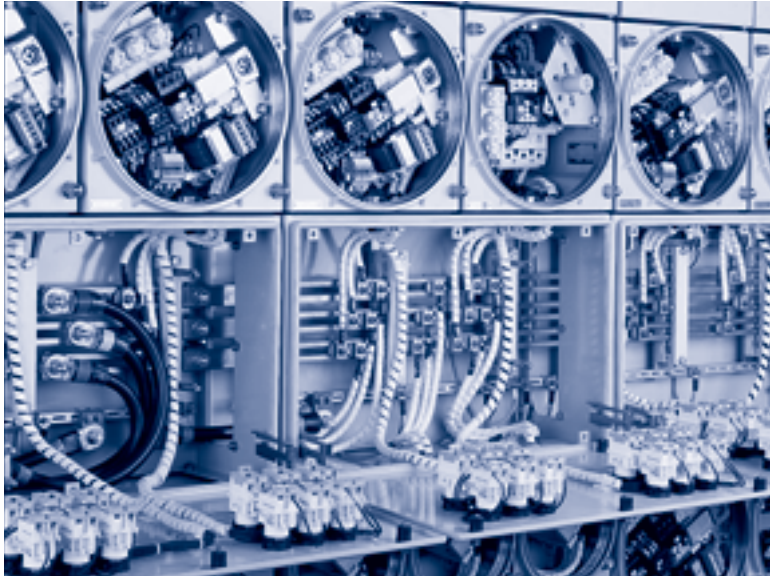
To simplify the integration of large installations, bus-bar systems for up to 630 A are used.

Customer-specified distributions are planned individually, taking explosion-protection requirements into account.

Explosion-protected signal lamps, indicating and control components are built into connection and bus-bar boxes, as required. Alternatively, these boxes can be supplied as separate terminal and control boxes. CEAG explosion-protected metal distributions fulfil all the requirements specified by the chemical, petrochemical and offshore industries.



- Modular design
- Rated current up to 630 A
- Generously dimensioned terminal compartment
- Suited for tropical and maritime climates through powder coating
- Cable entries via removable flanges
- Main switch can be actuated from outside
- Metal parts without finish are corrosion resistant
- Explosion group IIC

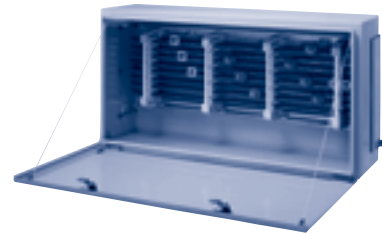
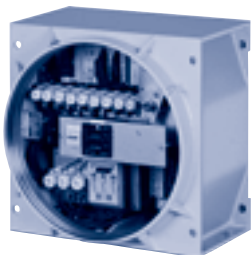


The modular design provides an economical and clearly arranged method of putting together distributions on the unit construction system using connection and bus bar boxes in the type of protection "Increased Safety". The individual flameproof distribution enclosures are joined together via the flange openings of the Ex-e connection boxes and the bus bar boxes. It is also possible to put together completely flameproof distributions by using flameproof cable glands.

The flameproof enclosures are also available as empty enclosures with and without Ex-e connection boxes as well as with and without main switches for equipping by the customer. In this case, please note that national standards require a special inspection by an authorized expert. Also single or multi-wire bushings with connectors can be mounted on the distributions, if required. Alternatively, these leads can be connected to a terminal rail.

Any conventional industrial switchgear that gives off arcs or sparks during operation can be built into these flameproof enclosures. The power dissipation must not exceed the values stated in the PTB certificate.

The various circuits can be connected quickly and economically via a bus-bar system.

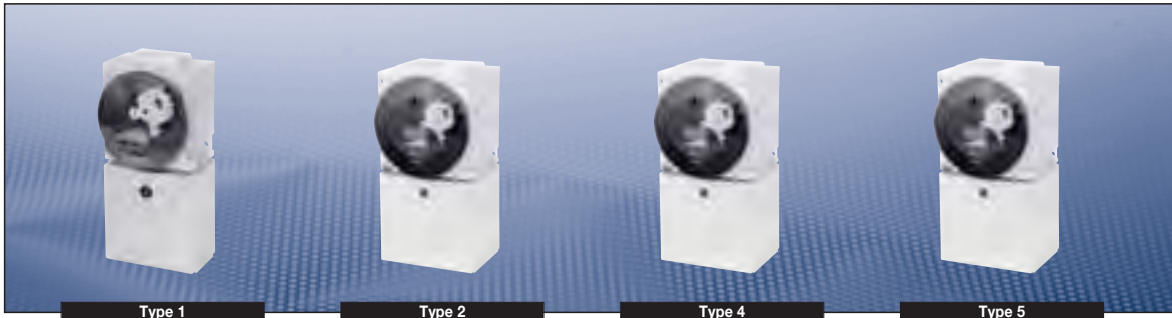


If required, individually encapsulated control and indicating units, such as pushbuttons, control switches or Ex-e measuring instruments as well as Ex-i digital indicating instruments can be built into the Ex-e connection or bus-bar boxes.



The enclosures can be combined into large distribution system on standardized wall mounting or free-standing frameworks. The frameworks come in standardized sizes to accommodate the enclosure modules and can be extended as required. For outdoor installations, we recommend canopies to protect the distribution system from the sun and rain. Smaller distributions are mounted on flat or U-rails. All enclosures are made of hot-dip galvanized steel.

Ex-Control and distribution systems



Technical data

Ex d Light alloy enclosure for motor starter

Marking to 94/9/EC	Ex II 2 G Ex de ia/ib [ia/ib] II C T4 Ex II 2 D IP66 T80 °C ... T130 °C ¹⁾
EC Type Examination Certificate	PTB 99 ATEX 1057
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	690 V
Rated current	630 A
Insulation class	I
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP54 (IP66 on request)
Weight	see ordering details
Enclosure material	aluminium die-cast housing
Enclosure colour	pebbles grey, cover dark grey

¹⁾ Dust certification only in combination with IP66

Ordering details

Version Motor capacity to AC 3	Type	Main switch	Cable glands	Weight approx.	Degree of protection EN 60529	Order No.
Direct circuit						
11 kW	1	25 A	3 x M25	14.5 kg	IP54	EXKO 71 5000 F 0000
15 kW	2	25 A	2 x M32 / 1 x M25	24.5 kg	IP54	EXKO 71 5000 H 0000
22 kW	4	40 A	2 x M40 / 1 x M25	37.5 kg	IP54	EXKO 71 5000 K 0000
Reversing circuit						
11 kW	1	25 A	3 x M25	14.5 kg	IP54	EXKO 71 5100 F 0000
15 kW	2	25 A	2 x M32 / 1 x M25	24.5 kg	IP54	EXKO 71 5100 H 0000
22 kW	4	40 A	2 x M40 / 1 x M25	39.5 kg	IP54	EXKO 71 5100 K 0000
Star-delta starter						
7.5 kW	2	40 A	4 x M25	25 kg	IP54	EXKO 71 5200 B 0000
12.5 kW	2	40 A	4 x M25	25 kg	IP54	EXKO 71 5200 D 0000
18.5 kW	4	40 A	3 x M32 / 1 x M25	37 kg	IP54	EXKO 71 5200 F 0000
30.0 kW	4	63 A	3 x M32 / 1 x M25	39 kg	IP54	EXKO 71 5200 H 0000
37.0 kW	5	100 A	1 x M40 / 2 x M32	64 kg	IP54	EXKO 71 5200 K 0000
			1 x M25			
55.0 kW	5	100 A	1 x M40 / 2 x M32	64 kg	IP54	EXKO 71 5200 M 0000
			1 x M25			

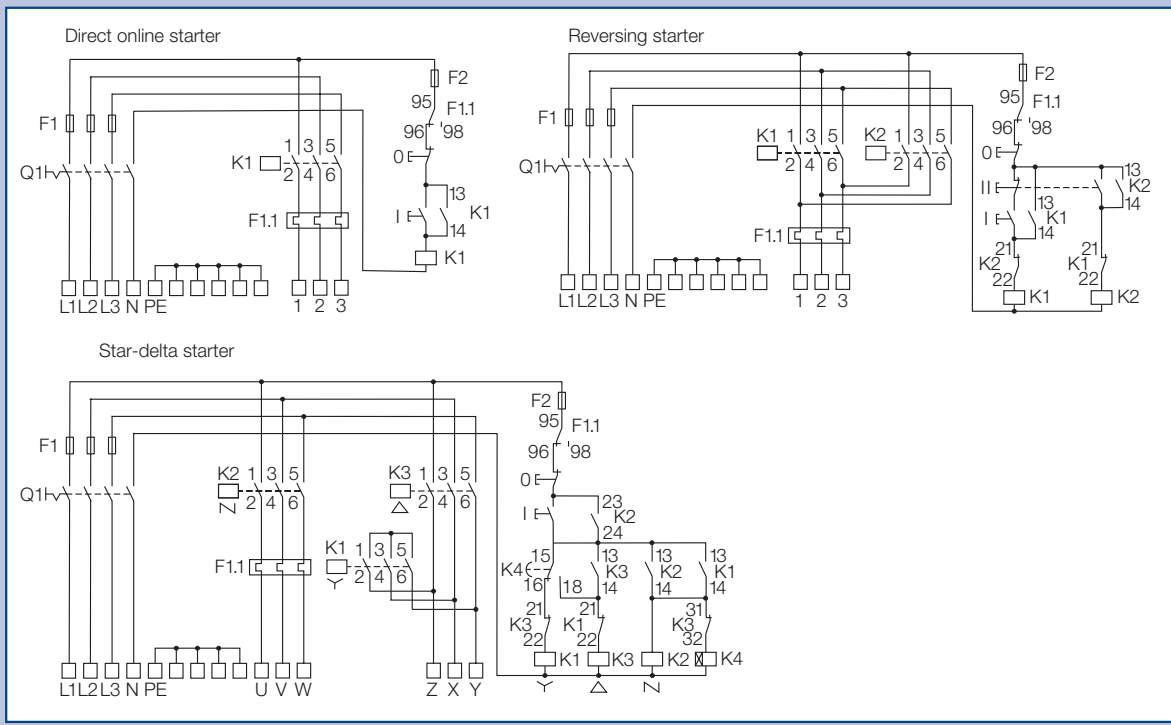
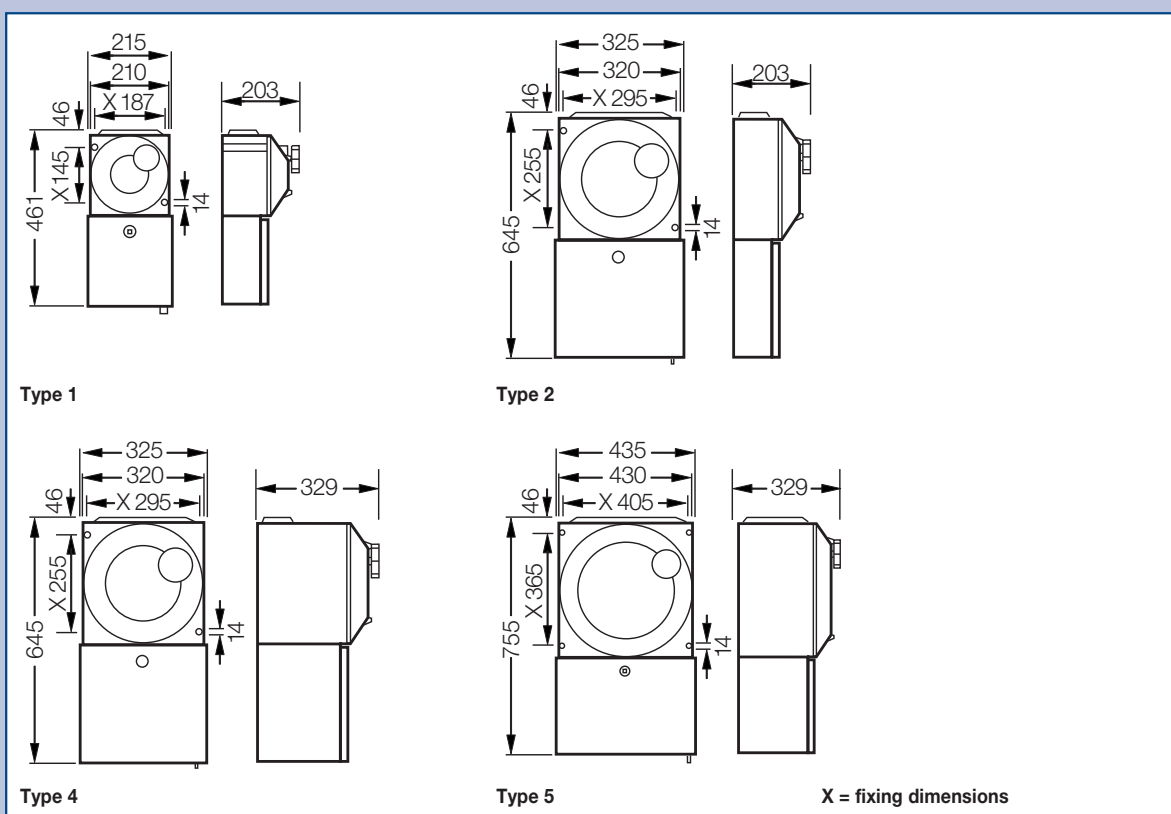
The motor starter is ready pre-wired for customised use with terminals.

Further switching capacities up to 630 A on request.

Please state motor operating voltage and rated current in your order.



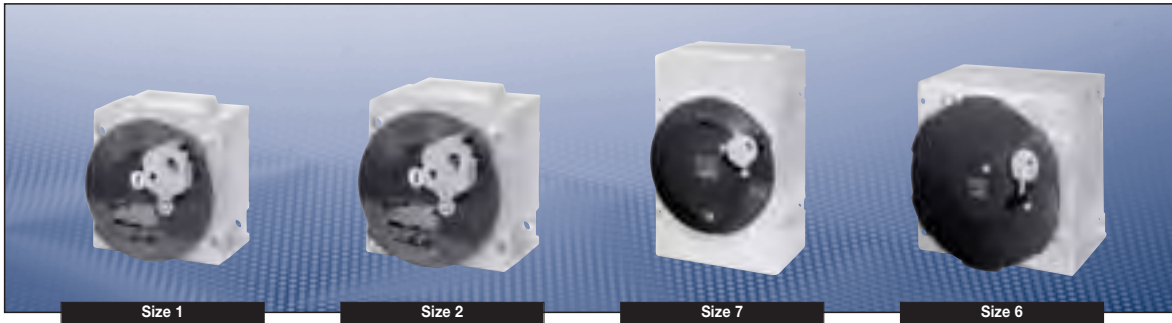
Dimension drawing | Wiring diagram



Dimensions in mm

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Ex-Control and distribution systems



Technical data

Ex d Light alloy empty enclosures

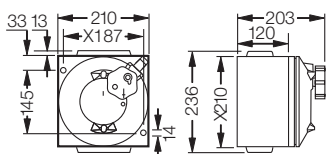
Marking to 94/9/EC	Ex II 2 G Ex de ia/ib [ia/ib] II Ex II 2 D Ex tD A21 IP66
EC Type Examination Certificate	PTB 98 ATEX 1054 U
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	630 A
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP54 (IP66 on request)
Weight	see ordering details
Enclosure material	aluminium die-cast housing
Enclosure colour	coating suited for tropical and marine climates finish polyester coating in RAL 7032/7022

Ordering details

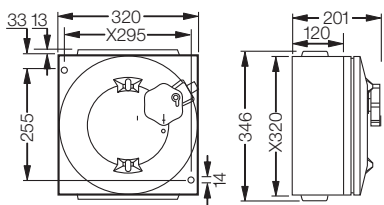
Version	Power dissipation		Rated current	Weight	Order No.
	T6	T5			
Ex d light alloy empty enclosures					
Size 1	80 W	120 W	125 A	8 kg	on request
Size 2	150 W	210 W	260 A	16 kg	on request
Size 4	210 W	280 W	400 A	23 kg	on request
Size 5	300 W	420 W	400 A	40 kg	on request
Size 7	300 W	420 W	400 A	55 kg	on request
Size 6	700 W	975 W	630 A	195 kg	on request



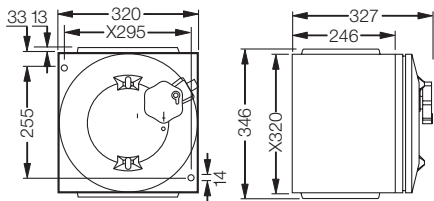
Dimension drawing



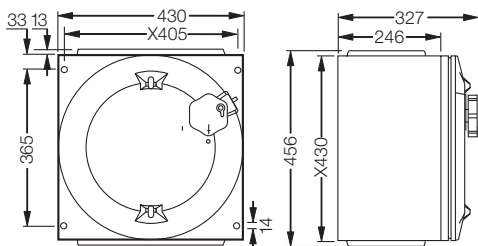
Size 1



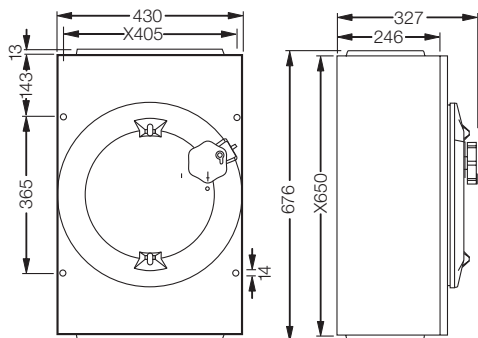
Size 2



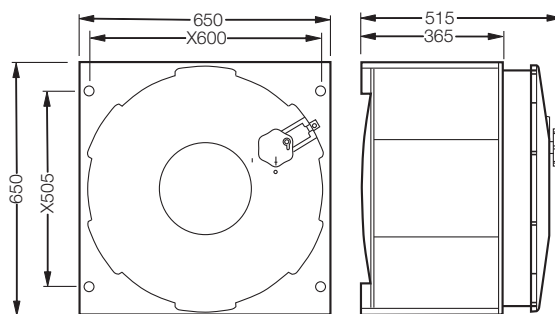
Size 4



Size 5



Size 7

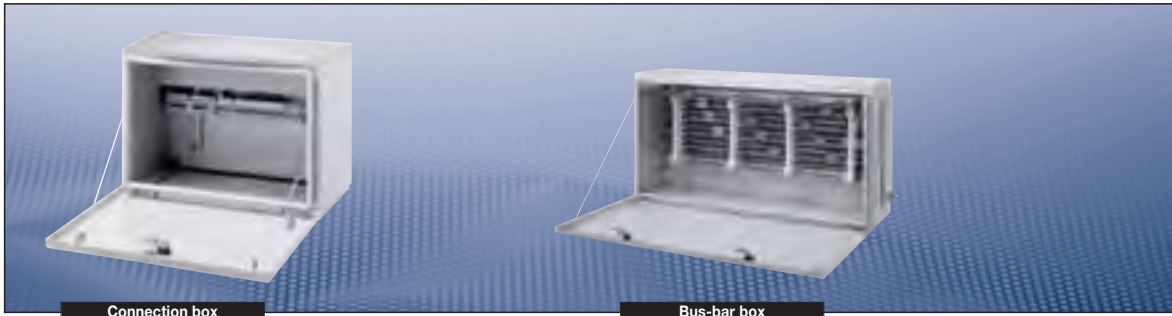


Size 6

X = fixing dimensions

Dimensions in mm

Ex-Control and distribution systems



Connection box

Bus-bar box

Technical data

Steel-connection box

Marking to 94/9/EC	Ex II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6 Ex II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C
EC Type Examination Certificate	PTB 00 ATEX 1073
Permissible ambient temperature	-55 °C to +40 °C
Rated voltage	690 V
Rated current	630 A
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP54 (IP65 on request)
Weight	see ordering details
Enclosure material	steel
Enclosure colour	finish polyester powder coating in RAL 7032

Steel-bus-bar box

Marking to 94/9/EC	Ex II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6 Ex II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C
EC Type Examination Certificate	PTB 00 ATEX 1073
Permissible ambient temperature	-55 °C to +40 °C
Rated voltage	690 V
Rated current	250 A 400 A 630 A
Rated short-circuit current	35 kA 53 kA 59.2 kA
Rated thermal short-time current	9.4 kA (1s) 10.7 kA (1s) 13.2 kA (1s)
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP54 (IP66 on request)
Weight	see ordering details
Enclosure material	steel
Enclosure colour	finish polyester powder coating in RAL 7032

Ordering details

Version	Max. no. of built-in control units	Version size	Length of terminal rail	Weight	Order No.
Steel-connection box					
AK 1-2	4	1	1 x 190 mm	4.3 kg	on request
AK 2-2	15	2	2 x 200 mm	7.0 kg	on request
AK 4-1	15	4	3 x 300 mm	9.5 kg	on request
AK 5-1	21	5	3 x 410 mm	11.5 kg	on request
AK 6-1	52	6	3 x 630 mm	23.5 kg	on request
Steel-bus-bar box					
SSK 1	20	1	1 x 295 mm	11.0 kg	on request
SSK 2	28	2	2 x 405 mm	15.0 kg	on request
SSK 3	52	3	2 x 625 mm	23.0 kg	on request
SSK 4	72	4	2 x 845 mm	31.0 kg	on request

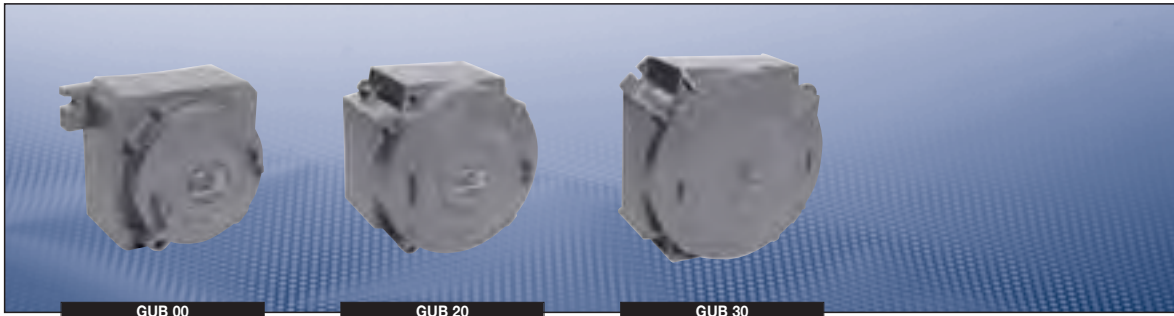


Dimension drawing

	Steel-connection box	Steel-bus-bar box
Size 1		
Size 2		
Size 3		
Size 4		
Size 5		
Size 6		

Dimensions in mm

Ex-Panels and Racks



Technical data

Ex d Light Alloy Enclosure

Marking 94/9/EC	II 2 G Ex d IIC T6 - T4 II 2 D IP67 T ¹⁾
EC-Type Examination Certificate	LOM 03 ATEX 3107U
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	690 V
Rated current	max. 250 A
Insulation class	I
Degree of protection accd. EN 60529	IP67
Cable glands/enclosure drilling	¹⁾
Dimensions (L x W x H)	¹⁾
Weight	¹⁾
Enclosure material	light alloy
Enclosure colour	grey coating

¹⁾ see table

Ordering details

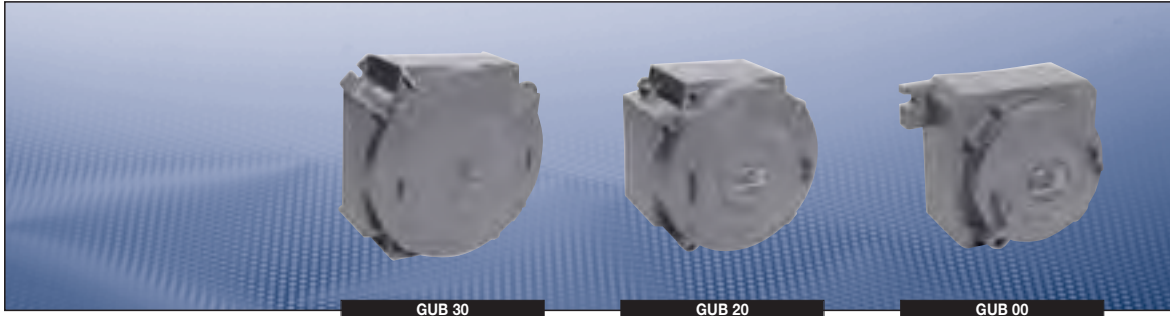
Type	Dissipated power			Rated current max.	Weight approx.	Order No.
	T6	T5	T4			
Ex d Light Alloy Enclosure GUB						
GUB 00	60	85	150	60 A	3.20 kg	NOR 000 001 160 116
GUB 20	100	145	255	150 A	6.20 kg	NOR 000 001 160 124
GUB 30	140	200	360	250 A	10.20 kg	NOR 000 001 160 132

Max. entries per side

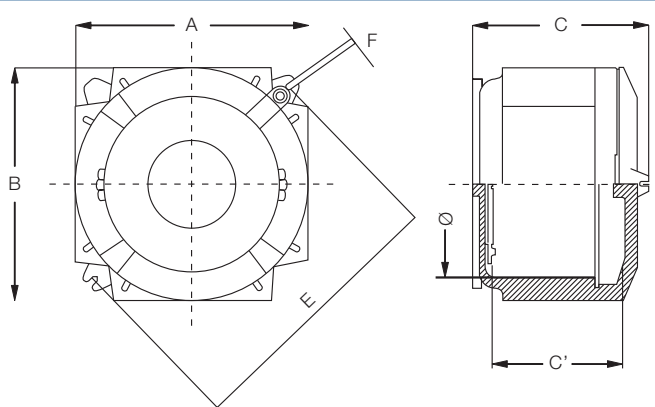
Type	1/2"	3/4"	1"	1 1/4"	1 1/2"	2 "	2 1/2"
GUB 00	4	3	2	2	2	-	-
GUB 20	6	5	3	2	2	1	1
GUB 30	10	8	5	3	3	2	2

These enclosures can provide according to LOM 04 ATEX 2018 certification with the following electrical apparatus:

Bus-bars, Terminals, Low voltage transformers, Air circuit breakers, Automatic circuit breakers, Control and operations circuits, Servomotors without ventilation, Starters and ballasts for discharge lamps, Electronic apparatus, Associated SI apparatus, etc., According customer needs.



Dimension drawing

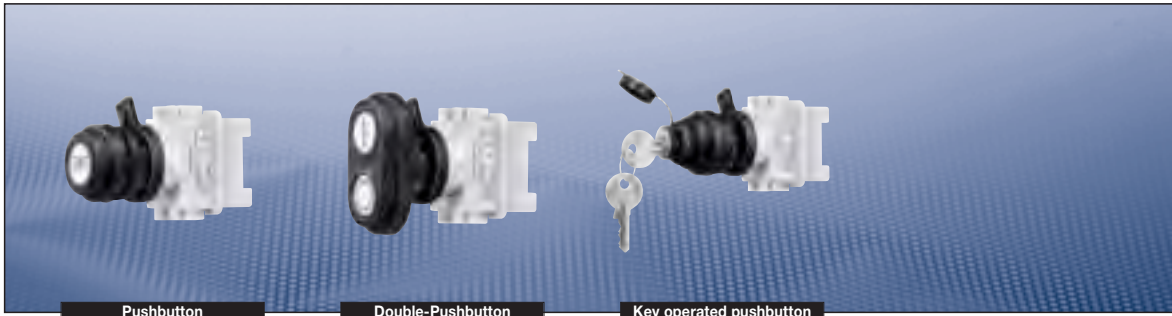


Ex d Light Alloy Enclosure GUB

Type	External		Internal		Mounting			
	A	B	C	A'	B'	C'	E	F
GUB 00	170	170	135	125	125	74	210	9
GUB 20	215	215	195	175	175	139	250	11
GUB 30	333	333	180	295	295	120	370	11

Dimensions in mm

Ex-Control and signal units



Technical data

Ex-Control and signal units for panel mounting

Pushbutton Type 418 811 and Double pushbutton Type 418 814

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ IM 2 Ex e I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 60 V / I _e 0.8 A U _e 110 V / I _e 0.5 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.20 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric silicone or viton on request

¹⁾ If protective covers are used

Technical data

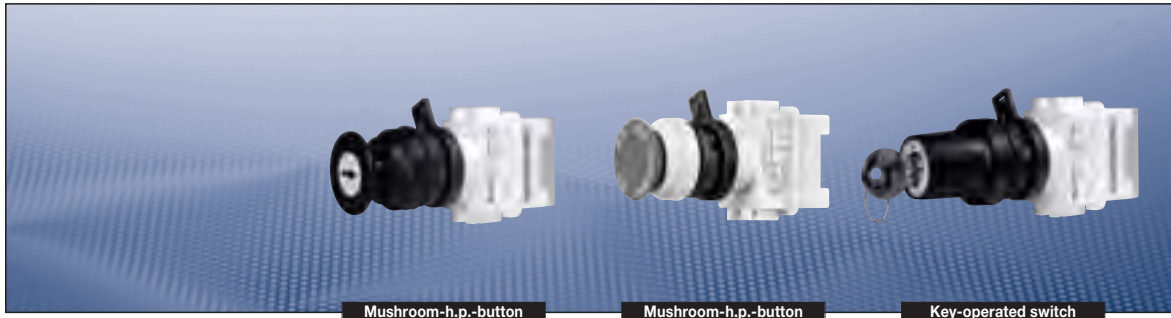
Ex-Control and signal units for panel mounting

Key operated pushbutton Type 418 812

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ IM 2 Ex e I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 60 V / I _e 0.8 A U _e 110 V / I _e 0.5 A
Connecting terminals	2 x 2.5 mm ²
Degree of protection accd. EN 60529	IP66 ¹⁾
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Gasket material	Neoprene (Standard), Fluoric silicone or viton on request
Latch point	CEAG 1 (others on request)

¹⁾ If protective covers are used

For detailed information, see page 9.80 - 9.107.



Mushroom-h.p.-button

Mushroom-h.p.-button

Key-operated switch

Technical data

Ex-Control and signal units for panel mounting

Key operated switch Type 418 8195

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex e I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 60 V / I _e 0.8 A U _e 110 V / I _e 0.5 A
Connecting terminals	2 x 2.5 mm ²
Switching system	engaging - engaging - engaging
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Latch point	CEAG 1 (others on request)

¹⁾ If protective covers are used

Technical data

Ex-Control and signal units for panel mounting

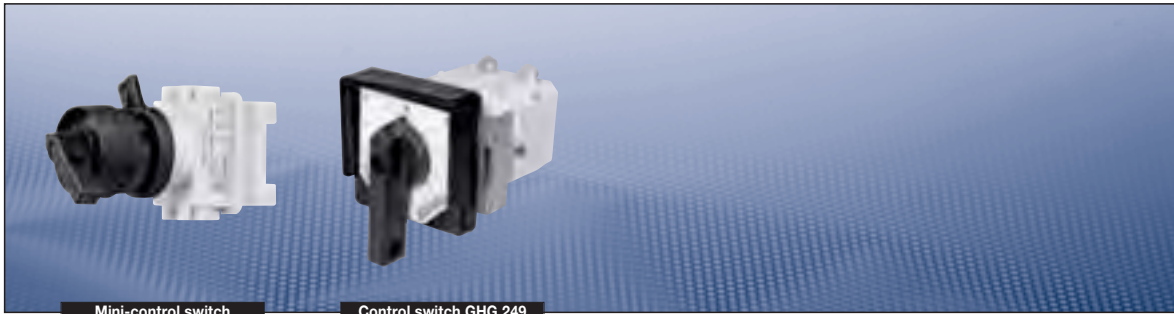
Mushroom head pushbutton (Emergency stop and normal version)

Marking to 94/9/EC	Ⓔ II 2 G Ex ed IIC T6 / Ⓔ I M 2 Ex e I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-1: U _e 400 V / I _e 16 A AC-11: U _e 400 V / I _e 4 A
Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Gasket material	Neoprene (Standard), fluoric silicone or viton on request

¹⁾ If protective covers are used

For detailed information, see page 9.80 - 9.107.

Ex-Control and signal units



Mini-control switch

Control switch GHG 249

Technical data

Ex-Control and signal units for panel mounting

Mini-Control switch Type 418 8190

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ I M 2 Ex e I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making-/rated breaking capacity accd. to EN 60947-5-1	AC-15: U _e 250 V / I _e 6 A U _e 500 V / I _e 4 A DC-13: U _e 24 V / I _e 6 A U _e 60 V / I _e 0.8 A U _e 110 V / I _e 0.5 A
Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey

¹⁾ If protective covers are used

Technical data

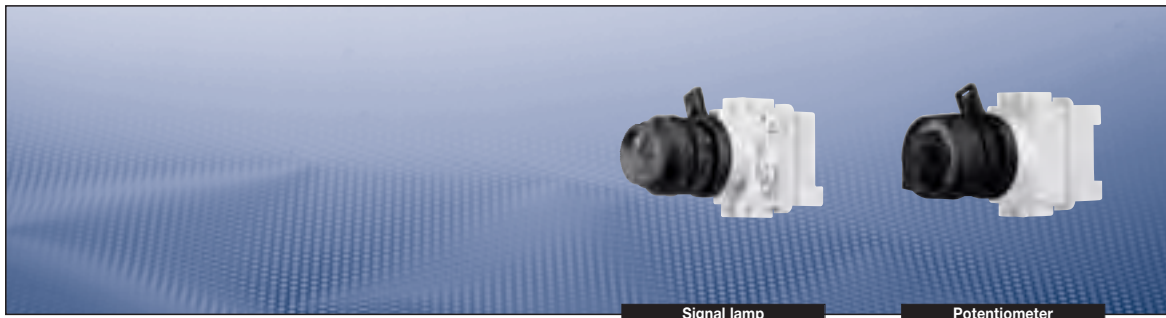
Ex-Control and signal units for panel mounting

Control switch GHG 249

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ I M 2 Ex e I
EC-Type Examination Certificate	PTB 98 ATEX 1117 U ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +45 °C (Option)
Rated voltage	up to 690 V AC
Rated current	up to 20 A
Rated current gold contacts	up to 0.4 A
Switch rating	AC-1 690 V/20 A AC-3 400 V/20 A / 500 V/16 A AC-11 230 V/ 8 A / 500 V/ 6 A DC-11 24 V/ 6 A / 230 V/0.4 A
Connecting terminals	2 x 2.5 mm ² multi wire, 6 mm ² single wire
Weight	0.55 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey

¹⁾ Must be installed in a certified enclosure

For detailed information, see page 9.80 - 9.107.



Signal lamp

Potentiometer

Technical data

Ex-Control and signal units for panel mounting

Potentiometer Type 418 8131

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC T6 / ⊕ I M 2 Ex e I
EC-Type Examination Certificate	PTB 97 ATEX 1081 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	up to 250 V AC
Power consumption	max. 1 W
Resistance range	100 - 10000 Ω
Tolerance	± 20 %
Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey
Angle of rotation	270°
Scale	0 - 100 %

¹⁾ If protective covers are used

Technical data

Ex-Control and signal units for panel mounting

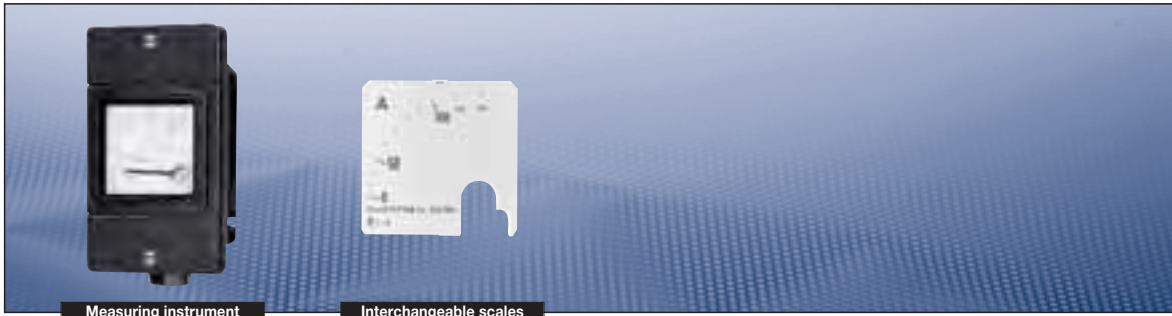
Signal lamp Type 418 8170

Marking to 94/9/EC	⊕ II 2 G Ex ed IIC / ⊕ II 2 G Ex d ia IIC
EC-Type Examination Certificate	PTB 98 ATEX 1040 U PTB 99 ATEX 1034 ¹⁾
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (Option)
Rated voltage	(Ex ed IIC) 20 V to 250 V AC/DC (Ex d ia IIC) 10 V to 28 V DC (Ex ed IIC) 12 V to 30 V AC/DC
Rated current	(20 V to 250 V) approx. 4 - 15 mA (10 V to 28 V Ex d ia IIC) max. 25 mA (12 V to 30 V) max. 24 mA
Connecting terminals	2 x 2.5 mm ²
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	Ø 30.5 mm fixing hole
Enclosure colour	grey

¹⁾ If protective covers are used

For detailed information, see page 9.80 - 9.107.

Ex-Control and signal units



Measuring instrument

Interchangeable scales

Technical data

Type 413 84 with measuring instrument AM 72		
	Moving iron	Moving coil
Marking to 94/9/EC	⊕ II G Ex e II / ⊕ I M 2 Ex e I	⊕ II G Ex ib IIC / ⊕ I M 2 Ex ib I
EC-Type Examination Certificate	PTB 00 ATEX 3117	
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)	
Rated voltage	up to 750 V	
Power consumption	max. 0.31 VA	
Overload range	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	10-fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 24 mA
Inductance Li		< 0.1 mH
Capacitance Ci		< 0.1 nF
Winding specification of moving coil		26.5 windings
Internal resistance		2.5 Ω ± 30 %
Open circuit voltage max. Ui		≤ 30 V
Short circuit current max. Ii		≤ 150 mA
Accuracy	Class 2.5	Class 1.5
Connecting terminals	2 x 1.5 - 4 mm ²	
Degree of protection accd. EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x M25 (Ø 8 - 17 mm)	
Dimensions (L x W x H)	160 x 95 x 62 mm	
Display size AM 72	72 x 72 mm	
Weight	0.8 kg	
Type of mounting	DIN rail mounting	
Enclosure colour	grey	

For detailed information, see page 9.80 - 9.107.

| Keyword register (In alphabetical order) |

Item	Chapter.Page	Item	Chapter.Page
Accessories for control station	9.109	Control switch plastic	9.112
Acoustic sounder	5.52	Control switch plastic with instrument	9.112
Adapter ISO - NPT	8.33	Coupler 24 V, 42 V 16 A, zone 1	6.63
Adapter NPT - ISO	8.33	Coupler 690 V, 125 A, industrial application	6.114
Aura Super Ex lamp 18 - 58 W	2.16; 2.22; 2.29; 2.36; 2.60	Coupler 690 V, 16 A, industrial application	6.103
Automatic light switch	2.68	Coupler 690 V, 16 A, zone 1	6.64
		Coupler 690 V, 16 A, zone 2	6.87
Ballast enclosure	4.29	Coupler 690 V, 32 A, industrial application	6.107
Base unit	6.52	Coupler 690 V, 32 A, zone 1	6.68
Battery charger	1.8	Coupler 690 V, 32 A, zone 2	6.91
Battery lamp	1.6; 1.10	Coupler 690 V, 63 A, industrial application	6.111
Battery N	2.43		
Battery NIB	2.23; 2.36	Distribution box	7.4
Battery supplied floodlight	4.41	Double sided through-wiring	2.3
Beacon	5.20	Double-Pushbutton	9.52; 9.81; 11.66; 11.80; 11.102
Bell (Ring)	5.51	Drainage plug	8.8
Bi-Pin lamp light fitting eLLk 92	2.12		
Bi-Pin lamp light fitting nLLK 08 Zone 2	2.56	Earth tags for cable glands	8.17; 8.21; 8.28
Blanking plug	8.5	Earthing washer for lead sheath cables	8.16
Break glass switch	5.4	Electronic ballasts (EVG)	2.7
Breathing and drainage plug	8.8	Emergency floodlight	4.41
Breathing plug	8.8	Emergency light fittings eLLB 20 NIB	2.32
Build in components	9.52 pp.	Emergency light fittings eLLK 92 NIB	2.18
Bulkhead light fitting	4.4	Emergency light fittings nLLK 08 N	2.62
		Emergency luminaire	3.4; 3.7; 3.14; 3.16
Cable entry metal	8.10; 8.23	Emergency recessed ceiling light fitting RLF 250 N	2.42
Cable entry plastic	8.2	Emergency stop pushbutton	9.60; 9.91; 11.69; 11.80; 11.103
Cable glands metal	8.10; 8.23	Enclosures (light alloy) for control panels up to 9 units	9.46
Cable glands plastic	8.2; 9.78	Enclosures (metal) for control panels up to 4 units	9.39
Cable reel	6.131	Enclosures (plastic) for control panels up to 4 units	9.36
Canopy	7.80	Enclosures (plastic) for control panels up to 64 units	9.42
Cap lamp	1.22	Enclosures (st. steel) for control panels up to 64 units	9.48
Cap light	1.22	Enlargement cable gland	8.4
Ceiling light fitting	4.4; 4.11	EOL (END OF LIFE)	2.7
Ceiling light fixture eLLB 20	2.26	Escape sign luminaire	3.4; 3.7; 3.14
Ceiling light fixture RFL 250	2.38	Ex-D terminal box	7.33
Ceiling mounted fluorescent light fitting eLLK 92	2.12	Ex-E cable gland	8.4
Ceiling mounted fluorescent light fitting nLLK 08 Zone 2	2.56	Ex-I cable gland	8.4
Ceiling mounting bracket	2.16; 2.23; 2.29; 2.36; 2.60	Exit lamp	3.4; 3.7; 3.14
CG-S Modules	2.11	Exlink 4 pole	6.7
Change-Over switch	9.5; 9.126	Exlink 7 pole	6.28
Charger	1.8; 1.13; 1.19	Exlink Ethernet	6.24
Clean room light fitting eLLB	2.26	Exlink terminal box	6.46
Compact lamp luminaire	3.20; 4.10	Exlink USB	6.24
Connector	6.7	Extension cable drum	6.131
Control and indicating elements	9.80; 9.52	Eye bolt	2.16; 2.23; 2.29; 2.36; 2.60
Control station light alloy with Measuring instrument	9.24		
Control station plastic with Measuring instrument	9.11	Fibre optic light	1.30
Control station stainless steel with Measuring instrument	9.30	Fire alarm call points	5.4
Control stations for individual configuration	9.31	Fixing materials	7.78
Control stations light alloy	9.20	Flameproof light fitting AB 12/ EVF	2.46
Control stations light alloy up to 2 units	9.22; 9.126	Flange socket 24 V, 42 V, 16 A, zone 1	6.63
Control stations light alloy up to 4 units	9.23	Flange socket 690 V, 125 A, industrial application	6.114
Control stations plastic	9.6	Flange socket 690 V, 16 A, industrial application	6.103
Control stations plastic up to 3 modules	9.7	Flange socket 690 V, 16 A, zone 1	6.64
Control stations plastic up to 4 modules	9.13	Flange socket 690 V, 16 A, zone 2	6.87
Control stations stainless steel	9.26	Flange socket 690 V, 32 A, industrial application	6.107
Control stations stainless steel up to 2 units	9.28	Flange socket 690 V, 32 A, zone 1	6.68
Control stations stainless steel up to 4 units	9.29	Flange socket 690 V, 32 A, zone 2	6.91
Control switch	9.72; 9.64; 9.98; 11.71; 11.104	Flange socket 690 V, 63 A, industrial application	6.111
Control switch Ex-d light alloy	9.126	Flanges	9.78
Control switch light alloy	9.120	Flashing xenon	5.21
Control switch light alloy with instrument	9.120	Flashlight	3.20; 5.20

| Keyword register (In alphabetical order) |

Item	Chapter.Page	Item	Chapter.Page
Floodlight	4.24; 4.31; 4.38; 4.52; 4.54	Metal cable gland adaptor ISO-NPT	8.33
Fluorescent light fitting eLLK 92	2.12	Metal cable gland armoured ISO thread	8.14; 8.25
Fluorescent light fitting nLLK 08 Zone 2	2.56	Metal cable gland armoured NPT thread	8.15; 8.25
		Metal cable gland armoured PG thread	8.26
Gaskets for cable glands	8.9; 8.17; 8.22; 8.29	Metal cable gland reducing ring	8.33
Glass tube light fitting AB 12/ EVF	2.46	Metal cable gland screw plug	8.33
		Metal cable gland unarmoured ISO thread	8.12; 8.19; 8.24
Hand lamp	1.12; 1.16; 1.24	Metal cable gland unarmoured NPT thread	8.13; 8.19; 8.24
Heat detector	5.68	Metal cable gland unarmoured PG thread	8.24
Helmet light	1.22	Metal ceiling light fitting eLLB 20	2.26
Hexagon screw SW 13	2.16; 2.23; 2.29; 2.36; 2.60	Metal ceiling light fitting RFL 250	2.38
Horns	5.54	Metal ceiling light fitting RFL 250	2.38
HPS lamp	4.4; 4.20; 4.24; 4.31; 4.41; 4.52	Metal halide lamp	4.24; 4.38; 4.48; 4.54
		Miners lamp	1.22
Indication lamp	9.69; 9.103; 11.71; 11.105	Mini connector	6.7
Indication lamps	5.12	Mini-Control switch	9.64; 9.95; 11.70; 11.104
Individual control units	9.31	Monitoring functions	2.19
Induction lamp	4.18; 4.38	Motor circuit breaker	10.84; 11.48
Inlet	6.7	Motor terminal box	7.72
Inlet 690 V, 125 A, industrial application	6.114	Mounting bracket	4.40
Inlet 690 V, 16 A, industrial application	6.103	Mounting frame for ceiling mounting	2.40; 2.43
Inlet 690 V, 32 A, industrial application	6.107	Mounting plate	4.29
Inlet 690 V, 63 A, industrial application	6.111	Mounting plates	7.78
Inspection lamp	1.12; 1.16	Multi Purpose Terminal	6.52
Installation box	7.4	Multiple cable glands	8.4
Installation switch	9.5	Mushroom head pushbutton	9.60; 9.91; 11.69; 11.80; 11.103
Instrument scales	9.108		
Instrumentation box	7.36	One sided through-wiring	2.3
Intermediate motor terminal box	7.72	On-Off switch	9.5; 9.126
		Outlet 250 V 21-pole, 10 A, zone 1	6.80
Junction box eXLink	6.46	Outlet 24 V, 42 V 16 A, zone 1	6.63
Junction boxes	7.4	Outlet 415 V 16 A, zone 1 Ex-d	6.85
		Outlet 500 V 7-pole, 20 A, zone 1	6.82
Key operated pushbutton	9.56; 9.85; 11.67; 11.102; 11.102	Outlet 690 V, 125 A, industrial application	6.114
Key switch	9.58; 9.88; 11.68; 11.80; 11.103	Outlet 690 V, 125 A, zone 1	6.77
		Outlet 690 V, 125 A, zone 2	6.98
Labels	9.77; 9.109; 9.110	Outlet 690 V, 16 A, industrial application	6.103
Led status lamps	5.12	Outlet 690 V, 16 A, zone 1	6.64
LED-Lamp	3.4; 3.7; 3.14	Outlet 690 V, 16 A, zone 2	6.87
Light sensitive relay	2.68	Outlet 690 V, 32 A, industrial application	6.107
Lock nut for cable glands	8.9; 8.17; 8.21; 8.28	Outlet 690 V, 32 A, zone 1	6.68
Locking facility	9.77; 9.110	Outlet 690 V, 32 A, zone 2	6.91
Locking mechanism	2.5	Outlet 690 V, 63 A, industrial application	6.111
Loudspeaker	5.55; 5.60	Outlet 690 V, 63 A, zone 1	6.74
Luminaire wall suspension 30°	2.16; 2.23; 2.60	Outlet 690 V, 63 A, zone 2	6.95
Machine lamp	1.24	Pendant light fitting	4.8; 4.10; 4.20; 4.34; 4.48
Main current switches 10 A, Ex	10.59	Photo Cell	2.68
Main current switches 20 A, Ex	10.61	Pictogram lamp	3.4; 3.7; 3.14
Main current switches 40 A, Ex	10.64	Pipe clamp	2.16; 2.23; 2.29; 2.36; 2.60
Main current switches 80 A, Ex	10.67	Pipe lamp	1.24; 3.16
Main current switches, Ex	10.58	Pipe mounting plate	7.78
Maintenance socket distribution	6.126	Plastic cable gland	8.2
Maintenance sockets	6.118; 6.126	Plug	6.7
Maintenance sockets 16 A	6.119	Plug 24 V, 42 V 16 A, zone 1	6.63
Maintenance sockets 32 A	6.122	Plug 250 V 21-pole, 10 A, zone 1	6.80
Maintenance sockets 63 A	6.124	Plug 415 V 16 A, zone 1 Ex-d	6.85
Manual motor starter up to 25 A	10.84; 11.48	Plug 500 V 7-pole, 20 A, zone 1	6.82
Mast light fitting eLLM 92	2.14	Plug 690 V, 125 A, industrial application	6.114
Mast light fitting nLLM 08 Zone 2	2.58	Plug 690 V, 125 A, zone 1	6.77
Measuring instrument	9.70; 9.105; 11.72; 11.100	Plug 690 V, 125 A, zone 2	6.98
Mercury vapour lamp	4.31; 4.34; 4.38; 4.48	Plug 690 V, 16 A, industrial application	6.103
Metal cable gland	8.10; 8.23	Plug 690 V, 16 A, zone 1	6.64

1
2
3
4
5
6
7
8
9
10
11
12

Keyword register (In alphabetical order)

Item	Chapter.Page	Item	Chapter.Page
Plug 690 V, 16 A, zone 2	6.87	Safety switch 40 A, Industrial use	10.40
Plug 690 V, 32 A, industrial application	6.107	Safety switch 400 A, Ex	10.24
Plug 690 V, 32 A, zone 1	6.68	Safety switch 400 A, Industrial use	10.53
Plug 690 V, 32 A, zone 2	6.91	Safety switch 630 A, Ex	10.26
Plug 690 V, 63 A, industrial application	6.111	Safety switch 630 A, Industrial use	10.55
Plug 690 V, 63 A, zone 1	6.74	Safety switch 80 A, Ex	10.13
Plug 690 V, 63 A, zone 2	6.95	Safety switch 80 A, Ex variable speed drives	10.32
Plug terminal	6.52	Safety switch 80 A, Industrial use	10.43
Plugs and sockets for zone 1	6.58	Safety switch, Ex	10.4
Pocket torch	1.6; 1.10	Safety switch, Industrial use	10.34
Polar curves	2.7	Screw plug ISO thread	8.5; 8.32; 9.78
Pole mounted emergency light fitting eLLM 92 NIB	2.21	Screw plug NPT thread	8.32
Pole mounted light fitting eLLM 92	2.14	Sealing system	2.4
Pole mounted light fitting nLLM 08 Zone 2	2.58	Searchlight	1.16
Portable light fixture	4.8	Self-Contained battery light fitting eLLK 92 NIB	2.18
Portable power socket	6.128	Self-Contained battery light fitting nLLK 08 N Zone 2	2.62
Potentiometer	9.68; 9.101; 11.70; 11.105	Sequenced beacon	5.34
Power circuit breakers 125 A, Ex	10.73	Shelter	7.80
Power circuit breakers 160 A, Ex	10.75	Shrouds for cable glands	8.16; 8.27
Power circuit breakers 250 A, Ex	10.77	Signal lamp	9.69; 9.103; 11.71; 11.105
Power circuit breakers 400 A, Ex	10.79	Signal light	3.4; 3.7; 3.14; 3.20
Power circuit breakers 400 A, Ex	10.81	Slip fitter	4.29
Power circuit breakers 63 A, Ex	10.71	Socket distribution	6.126
Power circuit breakers, Ex	10.70	Sodium lamp	4.20; 4.24; 4.31; 4.34; 4.41; 4.48
Power light	4.24; 4.31; 4.38; 4.54	Sounders	5.52
Protective cover	7.80	Speaker	5.60
Pushbutton	9.52; 9.81; 11.66; 11.80; 11.102	Special spanner for fastening of cable glands	8.9
Pushbutton Ex-d light alloy	9.126	Spotlight	4.24; 4.31; 4.44
Pushbutton unit	9.6; 9.126	Stabex	1.6; 1.10
Pushbutton unit for individual configuration	9.31	Stainless steel floodlight	4.54
Quick mounting plates	7.78	Status lamps	5.12
Receptacle	6.7	Steady lamp	5.38; 3.20
Recessed ceiling emergency light fitting eLLB 20 NIB	2.32	Strain relief	8.16; 8.27
Recessed ceiling emergency light fitting RLF 250 N	2.42	Strobe	5.20
Recessed ceiling light fitting eLLB 20	2.26	Switch	9.5
Recessed ceiling light fitting RFL 250	2.38	Swivel bracket	4.29
Reducing ring ISO thread	8.5; 8.31	Tank inspection lamp	1.30
Reducing ring NPT thread	8.31	Tank light fixture	4.44
Reflector for luminaire	2.49; 2.53	Temperature detector	5.68
Repair socket distribution	6.126	Terminal box Ex-d	7.33
Repair sockets	6.118; 6.126	Terminal box up to 12 terminals	7.12; 7.28
Repair sockets 16 A	6.119	Terminal box up to 16 terminals	7.15
Repair sockets 32 A	6.122	Terminal box up to 188 terminals	7.23
Repair sockets 63 A	6.124	Terminal box up to 24 terminals	7.15; 7.29; 7.66
Ring (Bell)	5.51	Terminal box up to 26 terminals	7.17
Rotating beacon	5.34	Terminal box up to 296 terminals	7.23
Safety switch 10 A, Ex	10.5	Terminal box up to 40 terminals	7.20
Safety switch 10 A, Industrial use	10.35	Terminal box up to 48 terminals	7.17; 7.29
Safety switch 100 A, Industrial use	10.45	Terminal box up to 6 terminals	7.12
Safety switch 125 A, Ex	10.15	Terminal box up to 82 terminals	7.20; 7.29; 7.67
Safety switch 160 A, Industrial use	10.48	Terminal enclosure stainless steel	7.36
Safety switch 180 A, Ex	10.18	Terminal enclosure up to 102 terminals	7.40; 7.44; 7.50; 7.55; 7.64
Safety switch 20 A, Ex	10.7	Terminal enclosure up to 1026 terminals	7.42; 7.46; 7.53; 7.60
Safety switch 20 A, Ex variable speed drives	10.28	Terminal enclosure up to 384 terminals	7.41; 7.45; 7.52; 7.58; 7.65; 7.68
Safety switch 210 A, Ex	10.20	Terminal enclosure up to 450 terminals	7.43; 7.47; 7.59
Safety switch 25 A, Industrial use	10.37	Terminal module	6.52
Safety switch 250 A, Ex	10.22	Terminals	9.75
Safety switch 250 A, Industrial use	10.50	Thermal detector	5.68
Safety switch 40 A, Ex	10.10	Torch	1.6; 1.10
Safety switch 40 A, Ex variable speed drives	10.30	Torchlights	1.6; 1.10

Keyword register (In alphabetical order)

Item	Chapter.Page	Item	Chapter.Page
Transformer plug 16 A, zone 1	6.61		
Transformer plug 32 A, zone 1	6.72		
Trellis mounting plate	7.78		
Trumpet shaped cable gland	8.7; 9.78		
Tube light	1.24; 3.16		
Tubular Light fitting AB12/ EVF	2.46		
Vessel light fixture	4.44		
Voice sounder	5.55		
Wall bracket	2.40; 2.43		
Wall mounting plate	7.78		
Wall socket 250 V 21-pole, 10 A, zone 1	6.80		
Wall socket 24 V, 42 V 16 A, zone 1	6.63		
Wall socket 415 V 16 A, zone 1 Ex-d	6.85		
Wall socket 500 V 7-pole, 20 A, zone 1	6.82		
Wall socket 690 V, 125 A, industrial application	6.114		
Wall socket 690 V, 125 A, zone 1	6.77		
Wall socket 690 V, 125 A, zone 2	6.98		
Wall socket 690 V, 16 A, industrial application	6.103		
Wall socket 690 V, 16 A, zone 1	6.64		
Wall socket 690 V, 16 A, zone 2	6.87		
Wall socket 690 V, 32 A, industrial application	6.107		
Wall socket 690 V, 32 A, zone 1	6.68		
Wall socket 690 V, 32 A, zone 2	6.91		
Wall socket 690 V, 63 A, industrial application	6.111		
Wall socket 690 V, 63 A, zone 1	6.74		
Wall socket 690 V, 63 A, zone 2	6.95		
Warning lamp	1.16		
Wire guard for luminaire	2.53		
Xenon status lamps	5.12		
Y-Adapter	6.41		
Y-Junction box	6.41		
Zone 0 light	1.30; 1.10		
Zone 1 fluorescent light fitting eLLK 92	2.12		
Zone 2 fluorescent light fitting nLLK 08	2.56		

1

2

3

4

5

6

7

8

9

10

11

12

| Keyword register (Chapter in alphabetical order) |

Chapter Item	Chapter.Page	Chapter Item	Chapter.Page
Portable Ex-Lamps			
1. Battery charger	1.8	2. One sided through-wiring	2.3
1. Battery lamp	1.6; 1.10	2. Photo Cell	2.68
1. Cap lamp	1.22	2. Pipe clamp	2.16; 2.23; 2.29; 2.36; 2.60
1. Cap light	1.22	2. Polar curves	2.7
1. Charger	1.8; 1.13; 1.19	2. Pole mounted emergency light fitting eLLM 92 NIB	2.21
1. Fibre optic light	1.30	2. Pole mounted light fitting eLLM 92	2.14
1. Hand lamp	1.12; 1.16; 1.24	2. Pole mounted light fitting nLLM 08 Zone 2	2.58
1. Helmet light	1.22	2. Recessed ceiling emergency light fitting eLLB 20 NIB	2.32
1. Inspection lamp	1.12; 1.16	2. Recessed ceiling emergency light fitting RLF 250 N	2.42
1. Machine lamp	1.24	2. Recessed ceiling light fitting eLLB 20	2.26
1. Miners lamp	1.22	2. Recessed ceiling light fitting RFL 250	2.38
1. Pipe lamp	1.24; 3.16	2. Reflector for luminaire	2.49; 2.53
1. Pocket torch	1.6; 1.10	2. Sealing system	2.4
1. Searchlight	1.16	2. Self-Contained battery light fitting eLLK 92 NIB	2.18
1. Stabex	1.6; 1.10	2. Self-Contained battery light fitting nLLK 08 N Zone 2	2.62
1. Tank inspection lamp	1.30	2. Tubular Light fitting AB12/ EVF	2.46
1. Torch	1.6; 1.10	2. Wall bracket	2.40; 2.43
1. Torchlights	1.6; 1.10	2. Wire guard for luminaire	2.53
1. Tube light	1.24; 3.16	2. Zone 1 fluorescent light fitting eLLK 92	2.12
1. Warning lamp	1.16	2. Zone 2 fluorescent light fitting nLLK 08	2.56
1. Zone 0 light	1.30; 1.10		
Ex-Fluorescent light fittings		Ex-Signal- and escape sing luminaires	
2. Aura Super Ex lamp 18 - 58 W	2.16; 2.22; 2.29; 2.36; 2.60	3. Compact lamp luminaire	3.20; 5.10
2. Automatic light switch	2.68	3. Emergency luminaire	3.4; 3.7; 3.14; 3.16
2. Battery N	2.43	3. Escape sign luminaire	3.4; 3.7; 3.14
2. Battery NIB	2.23; 2.36	3. Exit lamp	3.4; 3.7; 3.14
2. Bi-Pin lamp light fitting eLLK 92	2.12	3. Flashlight	3.20; 4.20
2. Bi-Pin lamp light fitting nLLK 08 Zone 2	2.56	3. LED-Lamp	3.4; 3.7; 3.14
2. Ceiling light fixture eLLB 20	2.26	3. Pictogram lamp	3.4; 3.7; 3.14
2. Ceiling light fixture RFL 250	2.38	3. Signal light	3.4; 3.7; 3.14; 3.20
2. Ceiling mounted fluorescent light fitting eLLK 92	2.12		
2. Ceiling mounted fluorescent light fitting nLLK 08 Zone 2	2.56	Ex-Pendant light fittings and floodlights	
2. Ceiling mounting bracket	2.16; 2.23; 2.29; 2.36; 2.60	4. Ballast enclosure	4.29
2. CG-S Modules	2.11	4. Battery supplied floodlight	4.41
2. Clean room light fitting eLLB	2.26	4. Bulkhead light fitting	4.4
2. Double sided through-wiring	2.3	4. Ceiling light fitting	4.4; 4.11
2. Electronic ballasts (EVG)	2.7	4. Emergency floodlight	4.41
2. Emergency light fittings eLLB 20 NIB	2.32	4. Floodlight	4.24; 4.31; 4.38; 4.52; 4.54
2. Emergency light fittings eLLK 92 NIB	2.18	4. HPS lamp	4.4; 4.20; 4.24; 4.31; 4.41; 4.52
2. Emergency light fittings nLLK 08 N	2.62	4. Induction lamp	4.18; 4.38
2. Emergency recessed ceiling light fitting RLF 250 N	2.42	4. Mercury vapour lamp	4.31; 4.34; 4.38; 4.48
2. EOL (END OF LIFE)	2.7	4. Metal halide lamp	4.24; 4.38; 4.48; 4.54
2. Eye bolt	2.16; 2.23; 2.29; 2.36; 2.60	4. Mounting bracket	4.40
2. Flameproof light fitting AB 12/ EVF	2.46	4. Mounting plate	4.29
2. Fluorescent light fitting eLLK 92	2.12	4. Pendant light fitting	4.8; 4.10; 4.20; 4.34; 4.48
2. Fluorescent light fitting nLLK 08 Zone 2	2.56	4. Portable light fixture	4.8
2. Glass tube light fitting AB 12/ EVF	2.46	4. Power light	4.24; 4.31; 4.38; 4.54
2. Hexagon screw SW 13	2.16; 2.23; 2.29; 2.36; 2.60	4. Slip fitter	4.29
2. Light sensitive relay	2.68	4. Sodium lamp	4.20; 4.24; 4.31; 4.34; 4.41; 4.48
2. Locking mechanism	2.5	4. Spotlight	4.24; 4.31; 4.44
2. Luminaire wall suspension 30°	2.16; 2.23; 2.60	4. Stainless steel floodlight	4.54
2. Mast light fitting eLLM 92	2.14	4. Swivel bracket	4.29
2. Mast light fitting nLLM 08 Zone 2	2.58	4. Tank light fixture	4.44
2. Metal ceiling light fitting eLLB 20	2.26	4. Vessel light fixture	4.44
2. Metal ceiling light fitting RFL 250	2.38		
2. Metal ceiling light fitting RFL 250	2.38	Ex-Audio/visual-signalling	
2. Monitoring functions	2.19	5. Acoustic sounder	5.52
2. Mounting frame for ceiling mounting	2.40; 2.43	5. Beacon	5.20
		5. Bell (Ring)	5.51

| Keyword register (Chapter in alphabetical order) |

Chapter Item	Chapter.Page	Chapter Item	Chapter.Page
5. Break glass switch	5.4	6. Maintenance sockets 63 A	6.124
5. Fire alarm call points	5.4	6. Mini connector	6.7
5. Flashing xenon	5.21	6. Multi Purpose Terminal	6.52
5. Heat detector	5.68	6. Outlet 250 V 21-pole, 10 A, zone 1	6.80
5. Horns	5.54	6. Outlet 24 V, 42 V 16 A, zone 1	6.63
5. Indication lamps	5.12	6. Outlet 415 V 16 A, zone 1 Ex-d	6.85
5. Led status lamps	5.12	6. Outlet 500 V 7-pole, 20 A, zone 1	6.82
5. Loudspeaker	5.55; 5.60	6. Outlet 690 V, 125 A, industrial application	6.114
5. Ring (Bell)	5.51	6. Outlet 690 V, 125 A, zone 1	6.77
5. Rotating beacon	5.34	6. Outlet 690 V, 125 A, zone 2	6.98
5. Sequenced beacon	5.34	6. Outlet 690 V, 16 A, industrial application	6.103
5. Sounders	5.52	6. Outlet 690 V, 16 A, zone 1	6.64
5. Speaker	5.60	6. Outlet 690 V, 16 A, zone 2	6.87
5. Status lamps	5.12	6. Outlet 690 V, 32 A, industrial application	6.107
5. Steady lamp	5.38; 3.20	6. Outlet 690 V, 32 A, zone 1	6.68
5. Strobe	5.20	6. Outlet 690 V, 32 A, zone 2	6.91
5. Temperature detector	5.68	6. Outlet 690 V, 63 A, industrial application	6.111
5. Thermal detector	5.68	6. Outlet 690 V, 63 A, zone 1	6.74
5. Voice sounder	5.55	6. Outlet 690 V, 63 A, zone 2	6.95
5. Xenon status lamps	5.12	6. Plug	6.7
Electrical connectivity			
6. Base unit	6.52	6. Plug 24 V, 42 V 16 A, zone 1	6.63
6. Cable reel	6.131	6. Plug 250 V 21-pole, 10 A, zone 1	6.80
6. Connector	6.7	6. Plug 415 V 16 A, zone 1 Ex-d	6.85
6. Coupler 24 V, 42 V 16 A, zone 1	6.63	6. Plug 500 V 7-pole, 20 A, zone 1	6.82
6. Coupler 690 V, 125 A, industrial application	6.114	6. Plug 690 V, 125 A, industrial application	6.114
6. Coupler 690 V, 16 A, industrial application	6.103	6. Plug 690 V, 125 A, zone 1	6.77
6. Coupler 690 V, 16 A, zone 1	6.64	6. Plug 690 V, 125 A, zone 2	6.98
6. Coupler 690 V, 16 A, zone 2	6.87	6. Plug 690 V, 16 A, industrial application	6.103
6. Coupler 690 V, 32 A, industrial application	6.107	6. Plug 690 V, 16 A, zone 1	6.64
6. Coupler 690 V, 32 A, zone 1	6.68	6. Plug 690 V, 16 A, zone 2	6.87
6. Coupler 690 V, 32 A, zone 2	6.91	6. Plug 690 V, 32 A, industrial application	6.107
6. Coupler 690 V, 63 A, industrial application	6.111	6. Plug 690 V, 32 A, zone 1	6.68
6. Exlink 4 pole	6.7	6. Plug 690 V, 32 A, zone 2	6.91
6. Exlink 7 pole	6.28	6. Plug 690 V, 63 A, industrial application	6.111
6. Exlink Ethernet	6.24	6. Plug 690 V, 63 A, zone 1	6.74
6. Exlink terminal box	6.46	6. Plug 690 V, 63 A, zone 2	6.95
6. Exlink USB	6.24	6. Plug terminal	6.52
6. Extension cable drum	6.131	6. Plugs and sockets for zone 1	6.58
6. Flange socket 24 V, 42 V, 16 A, zone 1	6.63	6. Portable power socket	6.128
6. Flange socket 690 V, 125 A, industrial application	6.114	6. Receptacle	6.7
6. Flange socket 690 V, 16 A, industrial application	6.103	6. Repair socket distribution	6.126
6. Flange socket 690 V, 16 A, zone 1	6.64	6. Repair sockets	6.118; 6.126
6. Flange socket 690 V, 16 A, zone 2	6.87	6. Repair sockets 16 A	6.119
6. Flange socket 690 V, 32 A, industrial application	6.107	6. Repair sockets 32 A	6.122
6. Flange socket 690 V, 32 A, zone 1	6.68	6. Repair sockets 63 A	6.124
6. Flange socket 690 V, 32 A, zone 2	6.91	6. Socket distribution	6.126
6. Flange socket 690 V, 63 A, industrial application	6.111	6. Terminal module	6.52
6. Inlet	6.7	6. Transformer plug 16 A, zone 1	6.61
6. Inlet 690 V, 125 A, industrial application	6.114	6. Transformer plug 32 A, zone 1	6.72
6. Inlet 690 V, 16 A, industrial application	6.103	6. Wall socket 250 V 21-pole, 10 A, zone 1	6.80
6. Inlet 690 V, 32 A, industrial application	6.107	6. Wall socket 24 V, 42 V 16 A, zone 1	6.63
6. Inlet 690 V, 63 A, industrial application	6.111	6. Wall socket 415 V 16 A, zone 1 Ex-d	6.85
6. Junction box eXLink	6.46	6. Wall socket 500 V 7-pole, 20 A, zone 1	6.82
6. Maintenance socket distribution	6.126	6. Wall socket 690 V, 125 A, industrial application	6.114
6. Maintenance sockets	6.118; 6.126	6. Wall socket 690 V, 125 A, zone 1	6.77
6. Maintenance sockets 16 A	6.119	6. Wall socket 690 V, 125 A, zone 2	6.98
6. Maintenance sockets 32 A	6.122	6. Wall socket 690 V, 16 A, industrial application	6.103
		6. Wall socket 690 V, 16 A, zone 1	6.64
		6. Wall socket 690 V, 16 A, zone 2	6.87
		6. Wall socket 690 V, 32 A, industrial application	6.107
		6. Wall socket 690 V, 32 A, zone 1	6.68
		6. Wall socket 690 V, 32 A, zone 2	6.91
		6. Wall socket 690 V, 63 A, industrial application	6.111

1
2
3
4
5
6
7
8
9
10
11
12

| Keyword register (Chapter in alphabetical order) |

Chapter Item	Chapter.Page	Chapter Item	Chapter.Page
6.	Wall socket 690 V, 63 A, zone 1	6.74	
6.	Wall socket 690 V, 63 A, zone 2	6.95	
6.	Y-Adapter	6.41	
6.	Y-Junction box	6.41	
Ex-Junction boxes and terminal enclosures			
7.	Canopy	7.80	
7.	Distribution box	7.4	
7.	Ex-D terminal box	7.33	
7.	Fixing materials	7.78	
7.	Installation box	7.4	
7.	Instrumentation box	7.36	
7.	Intermediate motor terminal box	7.72	
7.	Junction boxes	7.4	
7.	Motor terminal box	7.72	
7.	Mounting plates	7.78	
7.	Pipe mounting plate	7.78	
7.	Protective cover	7.80	
7.	Quick mounting plates	7.78	
7.	Shelter	7.80	
7.	Terminal box Ex-d	7.33	
7.	Terminal box up to 12 terminals	7.12; 7.28	
7.	Terminal box up to 16 terminals	7.15	
7.	Terminal box up to 188 terminals	7.23	
7.	Terminal box up to 24 terminals	7.15; 7.29; 7.66	
7.	Terminal box up to 26 terminals	7.17	
7.	Terminal box up to 296 terminals	7.23	
7.	Terminal box up to 40 terminals	7.20	
7.	Terminal box up to 48 terminals	7.17; 7.29	
7.	Terminal box up to 6 terminals	7.12	
7.	Terminal box up to 82 terminals	7.20; 7.29; 7.67	
7.	Terminal enclosure stainless steel	7.36	
7.	Terminal enclosure up to 102 terminals	7.40; 7.44; 7.50; 7.55; 7.64	
7.	Terminal enclosure up to 1026 terminals	7.42; 7.46; 7.53; 7.60	
7.	Terminal enclosure up to 384 terminals	7.41; 7.45; 7.52; 7.58; 7.65; 7.68	
7.	Terminal enclosure up to 450 terminals	7.43; 7.47; 7.59	
7.	Trellis mounting plate	7.78	
7.	Wall mounting plate	7.78	
Ex-Cable glands			
8.	Adapter ISO - NPT	8.33	
8.	Adapter NPT - ISO	8.33	
8.	Blanking plug	8.5	
8.	Breathing and drainage plug	8.8	
8.	Breathing plug	8.8	
8.	Cable entry metal	8.10; 8.23	
8.	Cable entry plastic	8.2	
8.	Cable glands metal	8.10; 8.23	
8.	Cable glands plastic	8.2; 9.78	
8.	Drainage plug	8.8	
8.	Earth tags for cable glands	8.17; 8.21; 8.28	
8.	Earthing washer for lead sheath cables	8.16	
8.	Enlargement cable gland	8.4	
8.	Ex-E cable gland	8.4	
8.	Ex-I cable gland	8.4	
8.	Gaskets for cable glands	8.9; 8.17; 8.22; 8.29	
8.	Lock nut for cable glands	8.9; 8.17; 8.21; 8.28	
8.	Metal cable gland	8.10; 8.23	
8.	Metal cable gland adaptor ISO-NPT	8.33	
8.	Metal cable gland armoured ISO thread	8.14; 8.25	
8.	Metal cable gland armoured NPT thread	8.15; 8.25	
8.	Metal cable gland armoured PG thread	8.26	
8.	Metal cable gland reducing ring	8.33	
8.	Metal cable gland screw plug	8.33	
8.	Metal cable gland unarmoured ISO thread	8.12; 8.19; 8.24	
8.	Metal cable gland unarmoured NPT thread	8.13; 8.19; 8.24	
8.	Metal cable gland unarmoured PG thread	8.24	
8.	Multiple cable glands	8.4	
8.	Plastic cable gland	8.2	
8.	Reducing ring ISO thread	8.5; 8.31	
8.	Reducing ring NPT thread	8.31	
8.	Screw plug ISO thread	8.5; 8.32; 9.78	
8.	Screw plug NPT thread	8.32	
8.	Shrouds for cable glands	8.16; 8.27	
8.	Special spanner for fastening of cable glands	8.9	
8.	Strain relief	8.16; 8.27	
8.	Trumpet shaped cable gland	8.7; 9.78	
Ex-Control units and control stations			
9.	Accessories for control station	9.109	
9.	Build in components	9.52 pp.	
9.	Change-Over switch	9.5; 9.126	
9.	Control and indicating elements	9.80; 9.52	
9.	Control station light alloy with Measuring instrument	9.24	
9.	Control station plastic with Measuring instrument	9.11	
9.	Control station stainless steel with Measuring instrument	9.30	
9.	Control stations for individual configuration	9.31	
9.	Control stations light alloy	9.20	
9.	Control stations light alloy up to 2 units	9.22; 9.126	
9.	Control stations light alloy up to 4 units	9.23	
9.	Control stations plastic	9.6	
9.	Control stations plastic up to 3 modules	9.7	
9.	Control stations plastic up to 4 modules	9.13	
9.	Control stations stainless steel	9.26	
9.	Control stations stainless steel up to 2 units	9.28	
9.	Control stations stainless steel up to 4 units	9.29	
9.	Control switch	9.72; 9.64; 9.98; 11.71; 11.104	
9.	Control switch Ex-d light alloy	9.126	
9.	Control switch light alloy	9.120	
9.	Control switch light alloy with instrument	9.120	
9.	Control switch plastic	9.112	
9.	Control switch plastic with instrument	9.112	
9.	Double-Pushbutton	9.52; 9.81; 11.66; 11.80; 11.102	
9.	Emergency stop pushbutton	9.60; 9.91; 11.69; 11.80; 11.103	
9.	Enclosures (light alloy) for control panels up to 9 units	9.46	
9.	Enclosures (metal) for control panels up to 4 units	9.39	
9.	Enclosures (plastic) for control panels up to 4 units	9.36	
9.	Enclosures (plastic) for control panels up to 64 units	9.42	
9.	Enclosures (st. steel) for control panels up to 64 units	9.48	
9.	Flanges	9.78	
9.	Indication lamp	9.69; 9.103; 11.71; 11.105	

| Keyword register (Chapter in alphabetical order) |

Chapter Item	Chapter.Page	Chapter Item	Chapter.Page
9. Individual control units	9.31	Ex-Distributions	
9. Installation switch	9.5	11. Complete Distributions	11.6
9. Instrument scales	9.108	11. MCB distributions	11.7; 11.13
9. Key operated pushbutton	9.56; 9.85; 11.67; 11.102; 11.102	11. Lighting circuit distribution	11.7; 11.13
		11. Heating circuit distribution	11.7; 11.13
		11. Socket outlet distribution	11.7; 11.13
9. Key switch	9.58; 9.88; 11.68; 11.80; 11.103	11. Motor starter distribution	11.10; 11.79
9. Labels	9.77; 9.109; 9.110	11. Complete motor starter distribution	11.10; 11.79
9. Locking facility	9.77; 9.110	11. Delta-Star starter distribution	11.10; 11.79
9. Measuring instrument	9.70; 9.105; 11.72; 11.100	11. Reversing circuit motor distribution	11.10; 11.79
9. Mini-Control switch	9.64; 9.95; 11.70; 11.98	11. MCB 0.5 - 40 A	11.18
9. Mushroom head pushbutton	9.60; 9.91; 11.69; 11.80; 11.103	11. MCB with RCD 0.5 - 40 A	11.24
		11. RCD 30 mA	11.27
9. On-Off switch	9.5; 9.126	11. Main fuse enclosure 2 - 125 A	11.30
9. Potentiometer	9.68; 9.101; 11.70; 11.105	11. Fuse enclosure 2 - 125 A	11.30
9. Pushbutton	9.52; 9.81; 11.66; 11.80; 11.102	11. Main current switch 20 - 180 A	11.32
9. Pushbutton Ex-d light alloy	9.126	11. Power switch 20 - 180 A	11.32
9. Pushbutton unit	9.6; 9.126	11. Air break contactor 20 A	11.34
9. Pushbutton unit for individual configuration	9.31	11. Power relays 20 A	11.34
9. Signal lamp	9.69; 9.103; 11.71; 11.105	11. Motor starter for direct on-line starting 4 kW	11.37
9. Switch	9.5	11. Installation contactor 20 - 32 A	11.40
9. Terminals	9.75	11. Power relays 20 A - 32 A	11.40
		11. Current impulse switch	11.46
Safety and main current switches		11. Thermal over-current relay	11.51
10. Main current switches 10 A, Ex	10.59	11. Overvoltage arrester	11.53
10. Main current switches 20 A, Ex	10.61	11. Surge protection	11.53
10. Main current switches 40 A, Ex	10.64	11. Star-delta timer relay	11.55
10. Main current switches 80 A, Ex	10.67	11. Multi-function relay	11.56
10. Main current switches, Ex	10.58	11. Universal relay	11.56
10. Manual motor starter up to 25 A	10.84; 11.48	11. Transformer 100 - 1200 VA	11.58
10. Motor circuit breaker	10.84; 11.48	11. Safety transformer	11.58
10. Power circuit breakers 125 A, Ex	10.73	11. Isolating transformer	11.58
10. Power circuit breakers 160 A, Ex	10.75	11. Empty enclosures	11.60; 11.90
10. Power circuit breakers 250 A, Ex	10.77	11. Enclosures for Ex-components	11.60; 11.86
10. Power circuit breakers 400 A, Ex	10.79	11. Actuating flap	11.64
10. Power circuit breakers 400 A, Ex	10.81	11. Service flap	11.64
10. Power circuit breakers 63 A, Ex	10.71	11. Maintenance flap	11.64
10. Power circuit breakers, Ex	10.70	11. Flameproof distributions IIB	11.74
10. Safety switch 10 A, Ex	10.5	11. Ex-d distributions IIB	11.74
10. Safety switch 10 A, Industrial use	10.35	11. Ex-d enclosures IIB EJB	11.76
10. Safety switch 100 A, Industrial use	10.45	11. Metal enclosures Ex-d IIB	11.76
10. Safety switch 125 A, Ex	10.15	11. Ex-d EJB motor starter IIB	11.78
10. Safety switch 160 A, Industrial use	10.48	11. Cable bushing Ex-d	11.82
10. Safety switch 180 A, Ex	10.18	11. Rotary actuator Ex-d	11.82
10. Safety switch 20 A, Ex	10.7	11. Window Ex-d	11.82
10. Safety switch 20 A, Ex variable speed drives	10.28	11. Bus bar Ex-d up to 800 A	11.84
10. Safety switch 210 A, Ex	10.20	11. Enclosure connector up to 800 A	11.84
10. Safety switch 25 A, Industrial use	10.37	11. Ex-d distributions IIC	11.88
10. Safety switch 250 A, Ex	10.22	11. Ex-d enclosures IIC	11.88; 11.105
10. Safety switch 250 A, Industrial use	10.50	11. Metal enclosures Ex-d IIC	11.88; 11.90
10. Safety switch 40 A, Ex	10.10	11. Steel connection box	11.98
10. Safety switch 40 A, Ex variable speed drives	10.30	11. Steel bus bar box	11.98
10. Safety switch 40 A, Industrial use	10.40	11. Bus bar box	11.98
10. Safety switch 400 A, Ex	10.24	11. Connection box	11.98
10. Safety switch 400 A, Industrial use	10.53		
10. Safety switch 630 A, Ex	10.26		
10. Safety switch 630 A, Industrial use	10.55		
10. Safety switch 80 A, Ex	10.13		
10. Safety switch 80 A, Ex variable speed drives	10.32		
10. Safety switch 80 A, Industrial use	10.43		
10. Safety switch, Ex	10.4		
10. Safety switch, Industrial use	10.34		

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
818002	5.36	1 1700 000 317	1.27	1 2190 236 101	2.28
1 1118 000 001	1.14	1 1700 000 510	1.27	1 2190 236 102	2.35
1 1118 000 010	1.14	1 1700 000 511	1.27	1 2190 236 111	2.28
1 1118 000 050	1.14	1 1700 000 512	1.27	1 2190 236 112	2.35
1 1125 000 111	1.14	1 1700 000 513	1.27	1 2190 236 703	2.28
1 1145 000 792	1.20	1 1700 000 514	1.27	1 2190 236 713	2.28
1 1145 000 795	1.20	1 1700 000 515	1.27	1 2190 236 723	2.28
1 1147 000 001	1.20	1 1700 000 516	1.27	1 2190 236 733	2.28
1 1147 000 002	1.20	1 1700 000 517	1.27	1 2190 258 001	2.28
1 1147 000 003	1.20	1 1700 000 900	1.28	1 2190 258 011	2.28
1 1147 000 004	1.20	1 1700 000 901	1.28	1 2190 258 101	2.28
1 1147 000 005	1.20	1 1700 000 905	1.28	1 2190 258 111	2.28
1 1147 000 006	1.20	1 1700 000 906	1.28	1 2190 258 703	2.28
1 1147 000 200	1.20	1 1700 000 911	1.28	1 2190 258 713	2.28
1 1147 080 000	1.20	1 1700 000 915	1.28	1 2190 258 723	2.28
1 1229 000 416	1.23	1 1700 000 916	1.28	1 2190 258 733	2.28
1 1350 000 001	1.11	1 1700 000 917	1.28	1 2190 418 001	2.28
1 1358 000 001	1.8	1 1700 000 918	1.28	1 2190 418 002	2.35
1 1358 000 070	1.8	1 1700 000 919	1.28	1 2190 418 011	2.28
1 1359 000 001	1.8	1 1700 000 920	1.28	1 2190 418 012	2.35
1 1359 000 010	1.8	1 1700 000 921	1.28	1 2190 418 101	2.28
1 1360 000 001	1.8	1 1700 000 922	1.28	1 2190 418 102	2.35
1 1360 000 006	1.8	1 1700 000 923	1.28	1 2190 418 111	2.28
1 1360 002 001	1.8	1 1700 000 924	1.28	1 2190 418 112	2.35
1 1360 002 001	1.14	1 1700 000 925	1.28	1 2190 418 703	2.28
1 1518 000 111	1.14	1 1700 000 930	1.28	1 2190 418 713	2.28
1 1540 000 443	1.20	1 1700 000 931	1.28	1 2190 418 723	2.28
1 1540 000 483	1.14	1 1700 000 940	1.28	1 2190 418 733	2.28
1 1540 000 493	1.8	1 1700 000 950	1.28	1 2190 436 001	2.28
1 1700 000 000	1.27	1 1700 000 951	1.28	1 2190 436 002	2.35
1 1700 000 001	1.27	1 1700 000 960	1.28	1 2190 436 011	2.28
1 1700 000 003	1.27	1 1700 000 961	1.28	1 2190 436 012	2.35
1 1700 000 005	1.27	1 1700 000 962	1.28	1 2190 436 101	2.28
1 1700 000 006	1.27	1 2035 300 000	1.14	1 2190 436 102	2.35
1 1700 000 010	1.27	1 2035 520 000	1.23	1 2190 436 111	2.28
1 1700 000 011	1.27	1 2041 450 000	1.20	1 2190 436 112	2.35
1 1700 000 015	1.27	1 2041 810 000	1.14	1 2190 436 703	2.28
1 1700 000 016	1.27	1 2041 820 000	1.11	1 2190 436 713	2.28
1 1700 000 107	1.27	1 2061 000 040	1.20	1 2190 436 723	2.28
1 1700 000 200	1.27	1 2061 001 400	1.20	1 2190 436 733	2.28
1 1700 000 201	1.27	1 2190 218 001	2.28	1 2191 000 001	3.9
1 1700 000 202	1.27	1 2190 218 002	2.35	1 2191 000 002	3.9
1 1700 000 205	1.27	1 2190 218 011	2.28	1 2191 000 003	3.9
1 1700 000 206	1.27	1 2190 218 012	2.35	1 2191 000 004	3.9
1 1700 000 210	1.27	1 2190 218 101	2.28	1 2191 000 101	3.9
1 1700 000 211	1.27	1 2190 218 102	2.35	1 2191 000 102	3.9
1 1700 000 212	1.27	1 2190 218 111	2.28	1 2191 000 103	3.9
1 1700 000 215	1.27	1 2190 218 112	2.35	1 2191 000 104	3.9
1 1700 000 216	1.27	1 2190 218 703	2.28	1 2191 011 001	3.15
1 1700 000 310	1.27	1 2190 218 713	2.28	1 2191 011 002	3.15
1 1700 000 311	1.27	1 2190 218 723	2.28	1 2191 011 003	3.15
1 1700 000 312	1.27	1 2190 218 733	2.28	1 2191 011 004	3.15
1 1700 000 313	1.27	1 2190 236 001	2.28	1 2191 011 101	3.15
1 1700 000 314	1.27	1 2190 236 002	2.35	1 2191 011 102	3.15
1 1700 000 315	1.27	1 2190 236 011	2.28	1 2191 011 103	3.15
1 1700 000 316	1.27	1 2190 236 012	2.35	1 2191 011 104	3.15

Order No.	Page	Order No.	Page	Order No.	Page
1 2191 020 001	3.9	1 2265 881 103	2.15	1 2283 418 012	2.40
1 2191 020 002	3.9	1 2265 881 211	2.15	1 2283 418 201	2.43
1 2191 020 003	3.9	1 2266 875 101	2.15	1 2283 418 202	2.43
1 2191 020 004	3.9	1 2266 875 103	2.15	1 2283 418 203	2.43
1 2191 020 101	3.9	1 2266 875 109	2.15	1 2283 418 204	2.43
1 2191 020 102	3.9	1 2266 875 111	2.15	1 2283 418 301	2.43
1 2191 020 103	3.9	1 2266 881 103	2.15	1 2283 418 302	2.43
1 2191 020 104	3.9	1 2266 881 211	2.15	1 2283 418 303	2.43
1 2191 021 001	3.15	1 2267 875 101	2.15	1 2283 418 304	2.43
1 2191 021 002	3.15	1 2267 875 103	2.15	1 2283 436 001	2.40
1 2191 021 003	3.15	1 2267 875 111	2.15	1 2283 436 002	2.40
1 2191 021 004	3.15	1 2267 881 103	2.15	1 2283 436 011	2.40
1 2191 021 101	3.15	1 2267 881 211	2.15	1 2283 436 012	2.40
1 2191 021 102	3.15	1 2268 875 101	2.15	1 2283 436 201	2.43
1 2191 021 103	3.15	1 2269 875 101	2.15	1 2283 436 202	2.43
1 2191 021 104	3.15	1 2273 879 101	2.22	1 2283 436 203	2.43
1 2191 030 001	3.9	1 2273 879 401	2.22	1 2283 436 204	2.43
1 2191 030 002	3.9	1 2283 218 001	2.40	1 2283 436 301	2.43
1 2191 030 003	3.9	1 2283 218 002	2.40	1 2283 436 302	2.43
1 2191 030 004	3.9	1 2283 218 003	2.40	1 2283 436 303	2.43
1 2191 030 101	3.9	1 2283 218 004	2.40	1 2283 436 304	2.43
1 2191 030 102	3.9	1 2283 218 201	2.43	1 2283 458 001	2.40
1 2191 030 103	3.9	1 2283 218 202	2.43	1 2283 458 002	2.40
1 2191 030 104	3.9	1 2283 218 203	2.43	1 2283 458 011	2.40
1 2191 031 001	3.15	1 2283 218 204	2.43	1 2283 458 012	2.40
1 2191 031 002	3.15	1 2283 218 301	2.43	1 2341 000 001	4.52
1 2191 031 003	3.15	1 2283 218 302	2.43	1 2341 000 002	4.52
1 2191 031 004	3.15	1 2283 218 303	2.43	1 2341 000 003	4.52
1 2191 031 101	3.15	1 2283 218 304	2.43	1 2341 000 004	4.52
1 2191 031 102	3.15	1 2283 236 001	2.40	1 2341 000 005	4.52
1 2191 031 103	3.15	1 2283 236 002	2.40	1 2341 000 051	4.52
1 2191 031 104	3.15	1 2283 236 003	2.40	1 2341 000 052	4.52
1 2260 879 101	2.22	1 2283 236 004	2.40	1 2341 000 053	4.52
1 2260 879 103	2.22	1 2283 236 201	2.43	1 2341 000 054	4.52
1 2260 879 111	2.22	1 2283 236 202	2.43	1 2341 000 055	4.52
1 2260 879 401	2.22	1 2283 236 203	2.43	1 2341 000 101	4.52
1 2260 879 403	2.22	1 2283 236 204	2.43	1 2341 000 102	4.52
1 2260 879 411	2.22	1 2283 236 301	2.43	1 2341 000 103	4.52
1 2261 879 101	2.22	1 2283 236 302	2.43	1 2341 000 104	4.52
1 2261 879 103	2.22	1 2283 236 303	2.43	1 2341 000 105	4.52
1 2261 879 111	2.22	1 2283 236 304	2.43	1 2342 000 001	4.52
1 2261 879 401	2.22	1 2283 258 001	2.40	1 2342 000 002	4.52
1 2261 879 403	2.22	1 2283 258 002	2.40	1 2342 000 003	4.52
1 2261 879 411	2.22	1 2283 258 003	2.40	1 2342 000 004	4.52
1 2263 875 101	2.15	1 2283 258 004	2.40	1 2342 000 005	4.52
1 2263 875 103	2.15	1 2283 336 001	2.40	1 2342 000 051	4.52
1 2263 875 111	2.15	1 2283 336 002	2.40	1 2342 000 052	4.52
1 2263 875 125	2.15	1 2283 336 011	2.40	1 2342 000 053	4.52
1 2264 875 101	2.15	1 2283 336 012	2.40	1 2342 000 054	4.52
1 2264 875 103	2.15	1 2283 358 001	2.40	1 2342 000 055	4.52
1 2264 875 111	2.15	1 2283 358 002	2.40	1 2342 000 101	4.52
1 2265 875 101	2.15	1 2283 358 011	2.40	1 2342 000 102	4.52
1 2265 875 103	2.15	1 2283 358 012	2.40	1 2342 000 103	4.52
1 2265 875 109	2.15	1 2283 418 001	2.40	1 2342 000 104	4.52
1 2265 875 111	2.15	1 2283 418 002	2.40	1 2342 000 105	4.52
1 2265 875 126	2.15	1 2283 418 011	2.40	1 3032 000 001	1.31

1
2
3
4
5
6
7
8
9
10
11
12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
1 3041 000 011	4.32	2 2061 080 000	1.14	4 0040 004 623	3.18
1 3041 000 012	4.32	2 2218 602 000	2.23	4 0071 344 115	3.22
1 3041 200 011	4.31	2 2480 000 122	2.36	12 KLM 1 A 012 02	9.76
1 3041 200 012	4.31	2 2480 002 000	2.36	6 KLM 1 B 006 01	9.76
1 3041 205 011	4.31	2 2480 002 000	2.29	AB 05 111 011 0001	4.6
1 3041 205 012	4.31	2 2480 054 000	2.36	AB 05 111 011 0002	4.6
1 3041 210 011	4.31	2 2480 092 000	2.36	AB 05 111 031 0001	4.6
1 3041 210 012	4.31	2 2480 092 00	4.9	AB 05 111 041 0001	4.6
1 3465 136 001	2.59	2 2480 462 000	2.36	AB 05 111 041 0002	4.6
1 3465 136 011	2.59	2 2480 464 000	2.36	AB 05 111 111 0001	4.6
1 3465 136 021	2.59	2 2480 472 000	2.36	AB 05 111 111 0002	4.6
1 3465 158 001	2.59	2 2480 474 000	2.36	AB 05 111 331 0001	4.6
1 3465 158 011	2.59	2 2480 482 000	2.36	AB 05 111 441 0001	4.6
1 3465 158 021	2.59	2 2480 484 000	2.36	AB 05 211 031 0001	4.6
1 3465 218 001	2.59	2 2483 027 000	2.23	AB 05 211 041 0001	4.6
1 3465 218 011	2.59	2 2710 904 000	2.36	AB 05 211 331 0001	4.6
1 3465 218 021	2.59	3 0231 001 011	1.23	AB 05 211 441 0001	4.6
1 3465 218 101	2.59	3 1350 001 024	1.11	AB 05 531 011 0001	4.6
1 3465 218 912	2.59	3 1360 006 900	1.8	AB 05 531 021 0001	4.6
1 3465 218 922	2.59	3 1360 030 006	1.8	AB 05 531 111 0001	4.6
1 3465 236 001	2.59	3 2283 000 001	2.41	AB 05 531 221 0001	4.6
1 3465 236 011	2.59	3 2283 000 002	2.41	AB 05 611 011 0001	4.6
1 3465 236 021	2.59	3 2283 000 003	2.41	AB 05 611 021 0001	4.6
1 3465 236 101	2.59	3 2283 000 004	2.41	AB 05 611 111 0001	4.6
1 3465 236 912	2.59	3 2283 000 005	2.41	AB 05 611 221 0001	4.6
1 3465 236 922	2.59	3 2283 000 007	2.41	AM45 1 02	9.71
1 3465 258 001	2.59	3 2283 000 008	2.41	AM45 1 05	9.71
1 3465 258 011	2.59	3 2283 000 009	2.41	AM45 5 33	9.71
1 3465 258 021	2.59	3 2283 000 010	2.41	AM45 6 33	9.71
1 3465 258 912	2.59	3 2283 000 011	2.41	AM45 7 33	9.71
1 3465 258 922	2.59	3 2283 000 012	2.41	AM45 8 33	9.71
1 3469 218 001	2.64	3 2283 000 013	2.41	AM72 2 33	9.71
1 3469 218 011	2.64	3 2283 000 014	2.41	BKL 100 00	11.64
1 3469 218 031	2.64	3 2341 001 001	4.52	BKL 200 00	11.64
1 3469 218 131	2.64	3 2342 001 001	4.52	CAP 183 134	8.19
1 3469 236 011	2.64	3 2346 001 002	4.57	CAP 183 144	8.19
1 3469 236 131	2.64	3 2369 100 001	4.47	CAP 183 154	8.19
1 3470 218 001	2.64	3 2369 100 002	4.47	CAP 183 164	8.19
1 3470 218 011	2.64	3 2475 900 001	2.49	CAP 183 174	8.19
1 3470 218 031	2.64	3 2475 900 002	2.49	CAP 183 184	8.19
1 3470 218 131	2.64	3 2475 900 003	2.49	CAP 183 194	8.19
1 3470 236 001	2.64	3 2475 900 012	4.61	CAP 190 124	8.32
1 3470 236 011	2.64	3 2475 900 014	4.61	CAP 190 164	8.32
1 3470 236 031	2.64	3 2475 900 015	4.62	CAP 190 194	8.32
1 3470 236 131	2.64	3 2475 900 016	4.62	CAP 190 204	8.32
2 1118 020 000	1.14	3 2475 900 017	4.61	CAP 190 254	8.32
2 1145 017 000	1.20	3 2475 900 018	4.62	CAP 190 294	8.32
2 1147 300 000	1.20	3 2475 900 001	2.53	CAP 190 324	8.32
2 1147 400 000	1.20	3 2475 900 002	2.53	CAP 190 394	8.32
2 1147 500 000	1.20	3 2475 900 083	2.36	CAP 190 404	8.32
2 1147 512 000	1.20	3 2475 900 084	2.22	CAP 190 494	8.32
2 1147 701 000	1.20	3 2475 900 085	2.64	CAP 190 504	8.32
2 1147 791 000	1.20	3 2475 900 087	2.36	CAP 190 594	8.32
2 1229 456 000	1.23	3 2475 900 088	2.36	CAP 190 634	8.32
2 1261 191 000	1.23	3 2475 900 088	2.49	CAP 190 694	8.32
2 1359 200 000	1.8	3 2485 000 005	2.60	CAP 190 794	8.32

Order No.	Page	Order No.	Page	Order No.	Page
CAP 190 894	8.32	CAP 239 112	8.18	CAP 740 714	8.33
CAP 190 994	8.32	CAP 239 114	8.18	CAP 740 724	8.33
CAP 191 094	8.32	CAP 239 212	8.18	CAP 740 834	8.31
CAP 191 194	8.32	CAP 239 312	8.29	CAP 740 844	8.31
CAP 191 294	8.32	CAP 280 104	8.17	CAP 740 864	8.31
CAP 221 004	8.19	CAP 280 114	8.17	CAP 740 984	8.33
CAP 221 204	8.19	CAP 280 124	8.17	CAP 740 994	8.33
CAP 221 245	8.18	CAP 280 134	8.17	CAP 741 104	8.31
CAP 221 249	8.9	CAP 280 144	8.17	CAP 741 114	8.31
CAP 221 294	8.17	CAP 280 154	8.17	CAP 741 124	8.31
CAP 221 604	8.19	CAP 280 164	8.17	CAP 741 254	8.33
CAP 221 645	8.18	CAP 280 174	8.17	CAP 741 264	8.33
CAP 221 649	8.9	CAP 280 184	8.17	CAP 741 374	8.31
CAP 221 694	8.17	CAP 280 194	8.17	CAP 741 384	8.31
CAP 222 004	8.19	CAP 280 204	8.17	CAP 741 524	8.33
CAP 222 045	8.18	CAP 280 214	8.17	CAP 741 534	8.33
CAP 222 049	8.9	CAP 506 040	8.20	CAP 741 644	8.31
CAP 222 094	8.17	CAP 506 050	8.27	CAP 741 794	8.33
CAP 222 504	8.19	CAP 506 060	8.27	CAP 741 804	8.33
CAP 222 545	8.18	CAP 506 070	8.16	CAP 744 704	8.33
CAP 222 549	8.9	CAP 506 080	8.16	CAP 744 884	8.31
CAP 222 594	8.17	CAP 506 090	8.16	CAP 744 894	8.31
CAP 223 204	8.19	CAP 506 100	8.16	CAP 744 964	8.33
CAP 223 245	8.18	CAP 506 110	8.16	CAP 744 974	8.33
CAP 223 249	8.9	CAP 506 120	8.16	CAP 745 154	8.31
CAP 223 294	8.17	CAP 506 130	8.16	CAP 745 164	8.31
CAP 224 004	8.19	CAP 560 630	8.16	CAP 745 234	8.33
CAP 224 045	8.18	CAP 560 730	8.16	CAP 745 244	8.33
CAP 224 049	8.9	CAP 560 830	8.16	CAP 745 424	8.31
CAP 224 094	8.17	CAP 560 930	8.16	CAP 745 434	8.31
CAP 225 004	8.19	CAP 561 030	8.16	CAP 745 444	8.31
CAP 225 045	8.18	CAP 561 130	8.16	CAP 745 504	8.33
CAP 225 049	8.9	CAP 561 230	8.16	CAP 745 514	8.33
CAP 225 094	8.17	CAP 561 330	8.16	CAP 745 574	8.31
CAP 226 304	8.19	CAP 567 024	8.17	CAP 745 584	8.31
CAP 226 345	8.18	CAP 567 034	8.17	CAP 745 594	8.31
CAP 226 349	8.9	CAP 567 044	8.17	CAP 745 604	8.31
CAP 226 394	8.17	CAP 567 054	8.17	CAP 745 654	8.31
CAP 229 010	8.18	CAP 567 064	8.17	CAP 745 664	8.31
CAP 229 012	8.18	CAP 567 074	8.17	CAP 745 694	8.31
CAP 229 014	8.18	CAP 567 084	8.17	CAP 745 704	8.31
CAP 229 020	8.18	CAP 567 094	8.17	CAP 745 734	8.31
CAP 229 034	8.18	CAP 567 104	8.17	CAP 745 774	8.33
CAP 229 038	8.18	CAP 567 124	8.17	CAP 745 834	8.31
CAP 229 112	8.18	CAP 567 134	8.17	CAP 745 844	8.31
CAP 229 114	8.18	CAP 567 154	8.17	CAP 745 854	8.31
CAP 229 212	8.18	CAP 567 174	8.17	CAP 745 864	8.31
CAP 229 300	8.18	CAP 567 184	8.17	CAP 745 874	8.31
CAP 229 312	8.18	CAP 567 194	8.17	CAP 745 914	8.31
CAP 238 049	8.18	CAP 740 024	8.31	CAP 745 924	8.31
CAP 239 010	8.18	CAP 740 034	8.31	CAP 745 934	8.31
CAP 239 012	8.18	CAP 740 294	8.31	CAP 745 964	8.31
CAP 239 014	8.18	CAP 740 304	8.31	CAP 745 974	8.31
CAP 239 020	8.18	CAP 740 454	8.33	CAP 746 044	8.33
CAP 239 034	8.18	CAP 740 564	8.31	CAP 746 054	8.33
CAP 239 038	8.18	CAP 740 574	8.31	CAP 746 234	8.31

1

2

3

4

5

6

7

8

9

10

11

12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
CAP 746 244	8.31	CAP 819 494	8.13	CGS 123 8588 P1002	4.39
CAP 746 314	8.33	CAP 819 504	8.13	CGS 123 8688 P0001	4.26
CAP 746 504	8.31	CAP 819 594	8.13	CGS 123 8688 P1001	4.26
CAP 746 834	8.31	CAP 819 604	8.13	CGS 123 8688 P2001	4.26
CAP 810 534	8.16	CAP 819 694	8.13	CGS 123 8688 P3001	4.26
CAP 810 634	8.16	CAP 846 404	8.14	CGS 123 8788 P0001	4.26
CAP 810 734	8.16	CAP 846 504	8.14	CGS 123 8788 P1001	4.26
CAP 810 834	8.16	CAP 846 594	8.14	CGS 123 8788 P2001	4.26
CAP 810 934	8.16	CAP 846 604	8.14	CGS 123 8788 P3001	4.26
CAP 811 034	8.16	CAP 846 674	8.14	CGS 223 7990 P1000	4.26
CAP 811 134	8.16	CAP 846 694	8.14	CGS 323 7990 P1007	4.62
CAP 811 234	8.16	CAP 846 704	8.14	CGS 323 7990 P1008	4.62
CAP 811 334	8.16	CAP 846 774	8.14	CGS 323 7990 P1009	4.62
CAP 816 404	8.12	CAP 846 794	8.14	CGS 323 7990 P1010	4.62
CAP 816 504	8.12	CAP 846 804	8.14	CGS 323 7990 P1011	4.62
CAP 816 594	8.12	CAP 846 894	8.14	CGS 323 8500 P1009	4.62
CAP 816 604	8.12	CAP 846 904	8.14	DDT 0 16 001 001	9.55
CAP 816 674	8.12	CAP 846 994	8.14	DDT 0 17 001 001	9.55
CAP 816 694	8.12	CAP 847 004	8.14	DDT 0 18 001 001	9.55
CAP 816 704	8.12	CAP 847 094	8.14	DRT 0 13 001	9.55
CAP 816 774	8.12	CAP 847 204	8.14	DRT 0 14 001	9.55
CAP 816 794	8.12	CAP 847 294	8.14	DRT 0 15 001	9.55
CAP 816 804	8.12	CAP 847 304	8.14	DRT 0 20 001	9.55
CAP 816 894	8.12	CAP 847 394	8.14	DRT 0 21 001	9.55
CAP 816 904	8.12	CAP 847 404	8.14	DRT 0 22 001	9.55
CAP 816 994	8.12	CAP 847 494	8.14	DRT 0 23 001	9.55
CAP 817 004	8.12	CAP 847 504	8.14	DRT 0 24 001	9.55
CAP 817 094	8.12	CAP 847 574	8.14	Ex 23 5 034 07 1	9.74
CAP 817 204	8.12	CAP 847 594	8.14	Ex 23 6 060 02 0	9.74
CAP 817 294	8.12	CAP 848 404	8.15	Ex 29 6 060 02 0	9.74
CAP 817 304	8.12	CAP 848 504	8.15	Ex 29 6 065 01 2	9.74
CAP 817 394	8.12	CAP 848 594	8.15	EXKO 208 900 A 0001	11.10
CAP 817 404	8.12	CAP 848 604	8.15	EXKO 208 900 A 0002	11.10
CAP 817 494	8.12	CAP 848 674	8.15	EXKO 208 900 A 0003	11.10
CAP 817 504	8.12	CAP 848 694	8.15	EXKO 208 900 B 0001	11.10
CAP 817 594	8.12	CAP 848 704	8.15	EXKO 208 900 B 0002	11.10
CAP 817 604	8.12	CAP 848 774	8.15	EXKO 208 900 B 0003	11.10
CAP 817 694	8.12	CAP 848 794	8.15	EXKO 208 900 C 0001	11.10
CAP 818 404	8.13	CAP 848 804	8.15	EXKO 208 900 C 0002	11.10
CAP 818 504	8.13	CAP 848 894	8.15	EXKO 208 900 C 0003	11.10
CAP 818 594	8.13	CAP 848 904	8.15	EXKO 208 900 C 0004	11.10
CAP 818 604	8.13	CAP 848 994	8.15	EXKO 214 600 G 0000	11.7
CAP 818 674	8.13	CAP 849 004	8.15	EXKO 214 600 G 0001	11.7
CAP 818 694	8.13	CAP 849 094	8.15	EXKO 214 600 G 0002	11.7
CAP 818 704	8.13	CAP 849 204	8.15	EXKO 214 600 G 0003	11.7
CAP 818 774	8.13	CAP 849 294	8.15	EXKO 214 600 G 0004	11.7
CAP 818 794	8.13	CAP 849 404	8.15	EXKO 214 600 G 0005	11.7
CAP 818 804	8.13	CAP 849 494	8.15	EXKO 223 100 G 0003	11.13
CAP 818 894	8.13	CAP 849 504	8.15	EXKO 223 100 G 0004	11.13
CAP 818 904	8.13	CAP 849 594	8.15	EXKO 223 100 G 0005	11.13
CAP 818 994	8.13	CCL0907005	4.57	EXKO 223 100 Q 0000	11.13
CAP 819 004	8.13	CCL0907021	4.57	EXKO 223 100 Q 0001	11.13
CAP 819 094	8.13	CGS 123 8588 P0001	4.39	EXKO 223 100 Q 0002	11.13
CAP 819 204	8.13	CGS 123 8588 P0002	4.39	EXKO 223 800 C 0004	11.13
CAP 819 294	8.13	CGS 123 8588 P0003	4.39	EXKO 223 800 C 0005	11.13
CAP 819 404	8.13	CGS 123 8588 P1001	4.39	EXKO 223 800 C 0006	11.13

Order No.	Page	Order No.	Page	Order No.	Page
EXKO 224716 K 0000	10.16	EXKO 732 108 M	11.84	GHG 101 0011 R2000	6.56
EXKO 224716 L 0000	10.19	EXKO 732 109 M	11.84	GHG 101 0011 R2500	6.56
EXKO 224726 K 0000	10.16	EXKO 732 110 M	11.84	GHG 101 0011 R3150	6.56
EXKO 224726 L 0000	10.19	EXKO 732 111 M	11.84	GHG 101 0011 R4000	6.56
EXKO 233201 A0006	6.137	EXKO 732 112 M	11.84	GHG 101 0011 R5000	6.56
EXKO 233201 A0007	6.138	EXKO 732 113 M	11.84	GHG 101 0011 R6300	6.56
EXKO 233201 A0014	6.139	EXKO 732 114 M	11.84	GHG 101 0021 R0000	6.56
EXKO 233201 A0015	6.135	EXKO 732 115 M	11.84	GHG 101 0022 R0000	6.56
EXKO 233201 A0016	6.136	GEH 001 00	11.60	GHG 101 0031 R1001	6.54
EXKO 233201 A0019	6.140	GEH 001 01	11.60	GHG 101 0031 R1002	6.54
EXKO 233201 A0021	6.141	GEH 002 00	11.60	GHG 101 0031 R1003	6.54
EXKO 233201 A0025	6.142	GEH 002 01	11.60	GHG 101 0031 R1004	6.54
EXKO 233 800 C 0001	11.7	GEH 002 02	11.60	GHG 101 0031 R1005	6.54
EXKO 233 800 C 0002	11.7	GEH 003 00	11.60	GHG 101 0031 R1006	6.54
EXKO 233 800 C 0003	11.7	GEH 003 01	11.60	GHG 101 0031 R1007	6.54
EXKO 71 5000 F 0000	11.100	GEH 003 02	11.60	GHG 101 0031 R1008	6.54
EXKO 71 5000 H 0000	11.100	GEH 003 03	11.60	GHG 101 0031 R1501	6.54
EXKO 71 5000 K 0000	11.100	GEH 004 00	11.60	GHG 101 0031 R1502	6.54
EXKO 71 5100 F 0000	11.100	GEH 004 01	11.60	GHG 101 0031 R1503	6.54
EXKO 71 5100 H 0000	11.100	GEH 004 02	11.60	GHG 101 0031 R1504	6.54
EXKO 71 5100 K 0000	11.100	GEH 004 03	11.60	GHG 101 0031 R1505	6.54
EXKO 71 5200 B 0000	11.100	GEH 004 04	11.60	GHG 101 0031 R1506	6.54
EXKO 71 5200 D 0000	11.100	GEH 100 00	11.62	GHG 101 0031 R1507	6.54
EXKO 71 5200 F 0000	11.100	GEH 100 01	11.62	GHG 101 0031 R2211	6.54
EXKO 71 5200 H 0000	11.100	GEH 1 K M25 02	9.78	GHG 101 0031 R2212	6.54
EXKO 71 5200 K 0000	11.100	GEH 200 00	11.62	GHG 101 0031 R2213	6.54
EXKO 71 5200 M 0000	11.100	GEH 200 01	11.62	GHG 101 0031 R2214	6.54
EXKO 731713 S0001	10.21	GEH 300 00	11.62	GHG 101 0031 R2215	6.54
EXKO 731713 T0001	10.23	GEH 300 01	11.62	GHG 101 0031 R2216	6.54
EXKO 731713 U0001	10.25	GEH 300 02	11.62	GHG 101 0031 R2217	6.54
EXKO 731713 V0001	10.27	GEH 300 03	11.62	GHG 101 0031 R2218	6.54
EXKO 731716 S0001	10.21	GEH 400 00	11.62	GHG 101 0031 R3321	6.54
EXKO 731716 T0001	10.23	GEH 400 01	11.62	GHG 101 0031 R3322	6.54
EXKO 731723 S0001	10.21	GEH 400 02	11.62	GHG 101 0031 R3323	6.54
EXKO 731723 T0001	10.23	GEH 400 03	11.62	GHG 101 0031 R3324	6.54
EXKO 731723 U0001	10.25	GEH 400 04	11.62	GHG 101 0031 R3325	6.54
EXKO 731723 V0001	10.27	GHG 101 0002 R0001	6.56	GHG 101 0031 R3326	6.54
EXKO 731726 S0001	10.21	GHG 101 0004 R0001	6.56	GHG 101 0031 R3327	6.54
EXKO 731726 T0001	10.23	GHG 101 0005 R0000	6.56	GHG 101 0031 R4572	6.54
EXKO 73 1813 B0001	10.74	GHG 101 0011 R0032	6.56	GHG 101 0031 R4751	6.54
EXKO 73 1813 C0001	10.76	GHG 101 0011 R0050	6.56	GHG 101 0031 R4753	6.54
EXKO 73 1813 D0001	10.78	GHG 101 0011 R0063	6.56	GHG 101 0031 R4754	6.54
EXKO 73 1813 E0001	10.80	GHG 101 0011 R0080	6.56	GHG 101 0031 R4755	6.54
EXKO 73 1813 F0001	10.82	GHG 101 0011 R0100	6.56	GHG 101 0031 R4756	6.54
EXKO 73 1814 B0001	10.74	GHG 101 0011 R0125	6.56	GHG 101 0031 R4757	6.54
EXKO 73 1814 C0001	10.76	GHG 101 0011 R0160	6.56	GHG 101 0031 R6811	6.54
EXKO 73 1814 D0001	10.78	GHG 101 0011 R0200	6.56	GHG 101 0031 R6812	6.54
EXKO 73 1814 E0001	10.80	GHG 101 0011 R0250	6.56	GHG 101 0031 R6813	6.54
EXKO 73 1814 F000	10.82	GHG 101 0011 R0315	6.56	GHG 101 0031 R6814	6.54
EXKO 732 101 M	11.84	GHG 101 0011 R0400	6.56	GHG 101 0031 R6815	6.54
EXKO 732 102 M	11.84	GHG 101 0011 R0500	6.56	GHG 101 0031 R6816	6.54
EXKO 732 103 M	11.84	GHG 101 0011 R0630	6.56	GHG 101 0031 R6817	6.54
EXKO 732 104 M	11.84	GHG 101 0011 R0800	6.56	GHG 101 0032 R1001	6.55
EXKO 732 105 M	11.84	GHG 101 0011 R1000	6.56	GHG 101 0032 R1002	6.55
EXKO 732 106 M	11.84	GHG 101 0011 R1250	6.56	GHG 101 0032 R1003	6.55
EXKO 732 107 M	11.84	GHG 101 0011 R1600	6.56	GHG 101 0032 R1004	6.55

1

2

3

4

5

6

7

8

9

10

11

12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
GHG 101 0032 R1005	6.55	GHG 260 1911 R0004	6.99	GHG 292 1000 R0004	9.116
GHG 101 0032 R1006	6.55	GHG 261 0005 R0005	10.6	GHG 292 2000 R0002	9.116
GHG 101 0032 R1007	6.55	GHG 261 0005 R0009	10.6	GHG 292 2000 R0003	9.116
GHG 101 0032 R1008	6.55	GHG 261 0005 R0010	10.6	GHG 292 2000 R0004	9.116
GHG 101 0032 R1501	6.55	GHG 261 0006 R0001	10.60	GHG 292 2001 R0001	9.116
GHG 101 0032 R1502	6.55	GHG 262 0014 R0001	10.29	GHG 293 1000 R0001	9.116
GHG 101 0032 R1503	6.55	GHG 262 0016 R0001	10.62	GHG 293 1000 R0002	9.116
GHG 101 0032 R1504	6.55	GHG 262 0016 R0002	10.62	GHG 294 1000 R0001	9.124
GHG 101 0032 R1505	6.55	GHG 262 0016 R0003	10.62	GHG 294 1000 R0002	9.124
GHG 101 0032 R1506	6.55	GHG 262 0016 R0004	10.62	GHG 294 1000 R0003	9.124
GHG 101 0032 R1507	6.55	GHG 262 0016 R0005	10.62	GHG 294 1000 R0004	9.124
GHG 101 0032 R2211	6.55	GHG 262 1301 R0001	10.62	GHG 294 2000 R0002	9.124
GHG 101 0032 R2212	6.55	GHG 262 2301 R0001	10.8	GHG 294 2000 R0003	9.124
GHG 101 0032 R2213	6.55	GHG 262 2301 R0002	10.8	GHG 294 2000 R0004	9.124
GHG 101 0032 R2214	6.55	GHG 262 2301 R0007	10.8	GHG 294 2001 R0001	9.124
GHG 101 0032 R2215	6.55	GHG 262 2301 R0010	10.8	GHG 295 1000 R0001	9.124
GHG 101 0032 R2216	6.55	GHG 262 2601 R0001	10.8	GHG 295 1000 R0002	9.124
GHG 101 0032 R2217	6.55	GHG 262 2601 R0002	10.8	GHG 410 1901 R0124	9.110
GHG 101 0032 R2218	6.55	GHG 262 2601 R0005	10.8	GHG 410 1901 R0125	9.110
GHG 101 0032 R3321	6.55	GHG 263 0048 R0002	10.65	GHG 410 1901 R0126	9.110
GHG 101 0032 R3322	6.55	GHG 263 0048 R0003	10.65	GHG 410 1901 R0128	9.110
GHG 101 0032 R3323	6.55	GHG 263 0048 R0004	10.65	GHG 410 1901 R0132	9.110
GHG 101 0032 R3324	6.55	GHG 263 0048 R0005	10.65	GHG 410 1901 R0133	9.110
GHG 101 0032 R3325	6.55	GHG 263 0048 R0006	10.65	GHG 410 1901 R0134	9.110
GHG 101 0032 R3326	6.55	GHG 263 0050 R0001	10.11	GHG 410 1901 R0135	9.110
GHG 101 0032 R3327	6.55	GHG 263 0050 R0002	10.11	GHG 410 1901 R0141	9.110
GHG 101 0032 R4572	6.55	GHG 263 0050 R0006	10.11	GHG 410 1914 R0001	9.110
GHG 101 0032 R4751	6.55	GHG 263 0053 R0001	10.31	GHG 410 1920 R0001	9.110
GHG 101 0032 R4753	6.55	GHG 263 1301 R0001	10.65	GHG 410 1921 R0001	9.110
GHG 101 0032 R4754	6.55	GHG 263 2301 R0001	10.11	GHG 410 1926 R0001	9.108
GHG 101 0032 R4755	6.55	GHG 263 2301 R0002	10.11	GHG 410 1926 R0002	9.108
GHG 101 0032 R4756	6.55	GHG 263 2301 R0007	10.11	GHG 410 1926 R0003	9.108
GHG 101 0032 R4757	6.55	GHG 264 0019 R0003	10.68	GHG 410 1926 R0004	9.108
GHG 101 0032 R6811	6.55	GHG 264 0019 R0004	10.68	GHG 410 1926 R0005	9.108
GHG 101 0032 R6812	6.55	GHG 264 0020 R0001	10.14	GHG 410 1926 R0006	9.108
GHG 101 0032 R6813	6.55	GHG 264 0020 R0002	10.14	GHG 410 1926 R0007	9.108
GHG 101 0032 R6814	6.55	GHG 264 0021 R0001	10.14	GHG 410 1926 R0008	9.108
GHG 101 0032 R6815	6.55	GHG 264 0021 R0002	10.14	GHG 410 1926 R0009	9.108
GHG 101 0032 R6816	6.55	GHG 264 0022 R9015	10.68	GHG 410 1926 R0010	9.108
GHG 101 0032 R6817	6.55	GHG 264 0024 R0001	10.33	GHG 410 1926 R0011	9.108
GHG 101 0041 R0000	6.56	GHG 265 0010 R0001	10.16	GHG 410 1926 R0012	9.108
GHG 101 0042 R0000	6.56	GHG 265 0010 R0002	10.16	GHG 410 1926 R0013	9.108
GHG 101 01__ RXXXX	6.56	GHG 265 0010 R0005	10.16	GHG 410 1926 R0014	9.108
GHG 249 6 01901	9.100	GHG 266 0006 R0001	10.19	GHG 410 1926 R0015	9.108
GHG 249 6 03302	9.100	GHG 266 0006 R0002	10.19	GHG 410 1926 R0016	9.108
GHG 249 6 03714	9.100	GHG 273 2000 R0003	9.5	GHG 410 1926 R0017	9.108
GHG 260 1004 R0005	11.33	GHG 273 2000 R0017	9.5	GHG 410 1926 R0018	9.108
GHG 260 1004 R0006	11.33	GHG 273 2000 R0018	9.5	GHG 410 1926 R0019	9.108
GHG 260 1005 R0005	11.33	GHG 273 4000 R0004	9.5	GHG 410 1926 R0020	9.108
GHG 260 1005 R0006	11.33	GHG 273 4000 R0007	9.5	GHG 410 1926 R0021	9.108
GHG 260 1006 R0005	11.33	GHG 273 6000 R0003	9.5	GHG 410 1928 R0001	9.108
GHG 260 1006 R0006	11.33	GHG 273 6000 R0011	9.5	GHG 410 1928 R0002	9.108
GHG 260 1007 R0003	11.33	GHG 273 6000 R0014	9.5	GHG 410 1928 R0003	9.108
GHG 260 1007 R0004	11.33	GHG 292 1000 R0001	9.116	GHG 410 1928 R0004	9.108
GHG 260 1008 R0003	11.33	GHG 292 1000 R0002	9.116	GHG 410 1928 R0005	9.108
GHG 260 1008 R0004	11.33	GHG 292 1000 R0003	9.116	GHG 410 1928 R0006	9.108

Order No.	Page	Order No.	Page	Order No.	Page
GHG 410 1928 R0007	9.108	GHG 411 8200 R0016	9.9	GHG 413 8400 R0002	9.22
GHG 410 1928 R0008	9.108	GHG 411 8200 R0017	9.9	GHG 413 8400 R0003	9.22
GHG 410 1928 R0009	9.108	GHG 411 8200 R0018	9.9	GHG 413 8400 R0004	9.22
GHG 410 1928 R0010	9.108	GHG 411 8281 R0002	9.11	GHG 413 8481 R0002	9.24
GHG 410 1928 R0011	9.108	GHG 411 8281 R0003	9.11	GHG 413 8481 R0003	9.24
GHG 410 1928 R0012	9.108	GHG 411 8281 R0004	9.11	GHG 413 8481 R0004	9.24
GHG 410 1928 R0013	9.108	GHG 411 8281 R0005	9.11	GHG 413 8481 R0005	9.24
GHG 410 1928 R0014	9.108	GHG 411 8281 R0007	9.11	GHG 413 8481 R0007	9.24
GHG 410 1928 R0015	9.108	GHG 411 8282 R0001	9.11	GHG 413 8481 R0033	9.24
GHG 410 1928 R0016	9.108	GHG 411 8282 R0002	9.11	GHG 413 8481 R0035	9.24
GHG 410 1928 R0017	9.108	GHG 411 8282 R0003	9.11	GHG 413 8482 R0002	9.24
GHG 410 1928 R0018	9.108	GHG 411 8282 R0004	9.11	GHG 413 8482 R0003	9.24
GHG 410 1928 R0019	9.108	GHG 411 8282 R0005	9.11	GHG 413 8482 R0004	9.24
GHG 410 1928 R0021	9.108	GHG 411 8282 R0007	9.11	GHG 413 8482 R0005	9.24
GHG 410 1928 R0051	9.108	GHG 411 8282 R0008	9.11	GHG 413 8482 R0007	9.24
GHG 410 1939 R0002	9.93	GHG 411 8282 R0009	9.11	GHG 413 8482 R0008	9.24
GHG 410 1953 R0001	9.110	GHG 411 8282 R0010	9.11	GHG 413 8482 R0009	9.24
GHG 410 1992 R0001	11.58	GHG 411 8282 R0011	9.11	GHG 413 8482 R0010	9.24
GHG 410 1992 R0002	11.58	GHG 411 8282 R0012	9.11	GHG 413 8482 R0011	9.24
GHG 410 1992 R0003	11.58	GHG 411 8282 R0013	9.11	GHG 413 8482 R0012	9.24
GHG 410 1992 R0004	11.58	GHG 411 8282 R0014	9.11	GHG 413 8482 R0013	9.24
GHG 410 1992 R0005	11.58	GHG 411 8285 R0033	9.11	GHG 413 8482 R0014	9.24
GHG 410 1992 R0006	11.58	GHG 411 8286 R0035	9.11	GHG 413 8482 R0033	9.24
GHG 410 1992 R0007	11.58	GHG 411 8300 R0001	9.10	GHG 413 8500 R0001	9.23
GHG 410 1992 R0008	11.58	GHG 411 8300 R0003	9.10	GHG 413 8500 R0002	9.23
GHG 410 1992 R0009	11.58	GHG 411 8300 R0004	9.10	GHG 413 8500 R0003	9.23
GHG 410 1992 R0010	11.58	GHG 411 8300 R0023	9.10	GHG 414 8100 R0001	9.28
GHG 410 1992 R0011	11.58	GHG 412 828	9.106	GHG 414 8100 R0002	9.28
GHG 410 1992 R0012	11.58	GHG 412 8281 R0002	9.117	GHG 414 8100 R0003	9.28
GHG 410 1992 R0013	11.58	GHG 412 8281 R0003	9.117	GHG 414 8100 R0004	9.28
GHG 410 1992 R0014	11.58	GHG 412 8281 R0004	9.117	GHG 414 8181 R0002	9.30
GHG 410 1992 R0015	11.58	GHG 412 8281 R0005	9.117	GHG 414 8181 R0003	9.30
GHG 410 1992 R0016	11.58	GHG 412 8281 R0007	9.117	GHG 414 8181 R0004	9.30
GHG 410 1992 R0017	11.58	GHG 412 8282 R0002	9.117	GHG 414 8181 R0005	9.30
GHG 410 1992 R0018	11.58	GHG 412 8282 R0003	9.117	GHG 414 8181 R0007	9.30
GHG 410 1992 R0019	11.58	GHG 412 8282 R0004	9.117	GHG 414 8181 R0033	9.30
GHG 410 1992 R0020	11.58	GHG 412 8282 R0005	9.117	GHG 414 8181 R0035	9.30
GHG 410 1992 R0021	11.58	GHG 412 8282 R0006	9.117	GHG 414 8182 R0002	9.30
GHG 410 1994 R0001	9.110	GHG 412 8282 R0008	9.117	GHG 414 8182 R0003	9.30
GHG 410 1994 R0002	9.110	GHG 412 8282 R0009	9.117	GHG 414 8182 R0004	9.30
GHG 410 1994 R0003	9.110	GHG 412 8282 R0010	9.117	GHG 414 8182 R0005	9.30
GHG 410 1994 R0004	9.110	GHG 412 8282 R0011	9.117	GHG 414 8182 R0007	9.30
GHG 410 1994 R0005	9.110	GHG 412 8282 R0012	9.117	GHG 414 8182 R0008	9.30
GHG 411 8100 R0001	9.8	GHG 412 8282 R0013	9.117	GHG 414 8182 R0009	9.30
GHG 411 8100 R0002	9.8	GHG 412 8282 R0014	9.117	GHG 414 8182 R0010	9.30
GHG 411 8100 R0003	9.8	GHG 412 8282 R0015	9.117	GHG 414 8182 R0011	9.30
GHG 411 8100 R0004	9.8	GHG 412 8282 R0016	9.117	GHG 414 8182 R0012	9.30
GHG 411 8100 R0005	9.8	GHG 412 8282 R0017	9.117	GHG 414 8182 R0013	9.30
GHG 411 8100 R0006	9.8	GHG 412 8282 R0018	9.117	GHG 414 8182 R0014	9.30
GHG 411 8100 R0007	9.8	GHG 412 8282 R0019	9.117	GHG 414 8182 R0033	9.30
GHG 411 8100 R0008	9.8	GHG 412 8282 R0020	9.117	GHG 414 8200 R0001	9.29
GHG 411 8100 R0009	9.8	GHG 412 8282 R0021	9.117	GHG 414 8200 R0002	9.29
GHG 411 8100 R0018	9.8	GHG 412 8282 R0031	9.117	GHG 414 8200 R0003	9.29
GHG 411 8101 R0012	9.8	GHG 412 8285 R0033	9.117	GHG 41 812	9.86
GHG 411 8200 R0001	9.9	GHG 412 8286 R0035	9.117	GHG 418 811	9.82
GHG 411 8200 R0003	9.9	GHG 413 8400 R0001	9.22	GHG 418 811 3 R00 01	9.83

1
2
3
4
5
6
7
8
9
10
11
12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
GHG 418 811 4 R00 01	9.83	GHG 418 8195 R 5509	9.89	GHG 511 4306 R0901	6.120
GHG 418 811 5 R00 01	9.83	GHG 418 8195 R 5707	9.89	GHG 511 4306 R0902	6.120
GHG 418 8123 R0011	9.86	GHG 418 8195 R 5708	9.89	GHG 511 4306 R0903	6.120
GHG 418 8124 R0012	9.86	GHG 418 8195 R 5709	9.89	GHG 511 4306 R3001	6.65
GHG 418 8125 R0010	9.86	GHG 418 8195 R 5807	9.89	GHG 511 4306 R3003	6.65
GHG 418 8126 R0011	9.86	GHG 418 8195 R 5808	9.89	GHG 511 4306 R3901	6.120
GHG 418 8127 R0012	9.86	GHG 418 8195 R 5809	9.89	GHG 511 4306 R3902	6.120
GHG 418 8128 R0010	9.86	GHG 432 0001 R0003	9.15	GHG 511 4306 R3903	6.120
GHG 418 8131	9.102	GHG 432 0001 R0004	9.15	GHG 511 4306 R3904	6.120
GHG 418 8131 R0011	9.102	GHG 432 0001 R0005	9.15	GHG 511 4306 R3905	6.120
GHG 418 8131 R0012	9.102	GHG 432 0001 R0006	9.15	GHG 511 4306 R3906	6.120
GHG 418 8131 R0013	9.102	GHG 432 0001 R0012	9.15	GHG 511 4405 R0001	6.65
GHG 418 8131 R0014	9.102	GHG 432 0001 R0013	9.15	GHG 511 4405 R0501	6.65
GHG 418 8131 R0015	9.102	GHG 432 0001 R0014	9.15	GHG 511 4405 R3001	6.65
GHG 418 8131 R0016	9.102	GHG 432 0001 R0015	9.15	GHG 511 4406 R0001	6.65
GHG 418 8131 R0017	9.102	GHG 432 0001 R0016	9.15	GHG 511 4406 R0501	6.65
GHG 418 814	9.82	GHG 432 0001 R0017	9.15	GHG 511 4406 R3001	6.65
GHG 418 814 6 R01 01	9.83	GHG 432 0001 R0018	9.15	GHG 511 4407 R0001	6.65
GHG 418 814 7 R01 01	9.83	GHG 432 0001 R0019	9.15	GHG 511 4407 R0501	6.65
GHG 418 814 8 R01 01	9.83	GHG 432 0001 R0020	9.15	GHG 511 4407 R3001	6.65
GHG 418 815	9.92	GHG 432 0011 R0001	9.14	GHG 511 4409 R0001	6.65
GHG 418 8153 R1200	9.93	GHG 432 0011 R0002	9.14	GHG 511 4409 R3001	6.65
GHG 418 8153 R1300	9.93	GHG 432 0011 R0003	9.14	GHG 511 4506 R0001	6.65
GHG 418 8153 R2101	9.93	GHG 432 0011 R0005	9.14	GHG 511 4506 R0501	6.65
GHG 418 8153 R3101	9.93	GHG 432 0011 R0006	9.16	GHG 511 4506 R0901	6.120
GHG 418 8153 R4200	9.93	GHG 432 0011 R0008	9.16	GHG 511 4506 R0902	6.120
GHG 418 8153 R4300	9.93	GHG 432 0011 R0009	9.16	GHG 511 4506 R0903	6.120
GHG 418 8154 R1200	9.93	GHG 432 0011 R0010	9.16	GHG 511 4506 R0904	6.120
GHG 418 8154 R1300	9.93	GHG 434 0111 R0002	9.17	GHG 511 4506 R3001	6.65
GHG 418 8154 R2101	9.93	GHG 434 0111 R0010	9.17	GHG 511 4506 R3901	6.120
GHG 418 8154 R3101	9.93	GHG 434 0111 R0011	9.17	GHG 511 4506 R3902	6.120
GHG 418 8154 R4200	9.93	GHG 434 1111 R0004	9.18	GHG 511 4706 R0001	6.83
GHG 418 8154 R4300	9.93	GHG 434 1111 R0005	9.18	GHG 511 4706 R3001	6.83
GHG 418 8155 R1200	9.93	GHG 434 1111 R0009	9.18	GHG 511 4707 R0003	6.83
GHG 418 8155 R1300	9.93	GHG 440 1917 R0001	9.110	GHG 511 4707 R3003	6.83
GHG 418 8155 R2101	9.93	GHG 510 1901 R0001	6.90	GHG 511 4905 R0001	6.81
GHG 418 8155 R3101	9.93	GHG 510 1901 R0002	6.90	GHG 511 4905 R3001	6.81
GHG 418 8155 R4200	9.93	GHG 510 1901 R0003	6.90	GHG 511 4906 R0001	6.81
GHG 418 8155 R4300	9.93	GHG 510 1901 R0004	6.94	GHG 511 4906 R3001	6.81
GHG 418 8170	9.104	GHG 510 1901 R0005	6.94	GHG 511 4907 R0001	6.81
GHG 418 8170 R0051	9.104	GHG 510 1901 R0006	6.75	GHG 511 4907 R3001	6.81
GHG 418 8170 R0052	9.104	GHG 510 1901 R0007	6.99	GHG 511 7304 R0001	6.65
GHG 418 8170 R0053	9.104	GHG 510 1916 R0001	6.96	GHG 511 7306 R0001	6.65
GHG 418 819	9.96	GHG 511 3304 R0001	6.65	GHG 511 7405 R0001	6.65
GHG 418 8190 R5307	9.97	GHG 511 3306 R0001	6.65	GHG 511 7406 R0001	6.65
GHG 418 8190 R5507	9.97	GHG 511 3405 R0001	6.65	GHG 511 7407 R0001	6.65
GHG 418 8190 R6002	9.97	GHG 511 3406 R0001	6.65	GHG 511 7409 R0001	6.65
GHG 418 8190 R6102	9.97	GHG 511 3407 R0001	6.65	GHG 511 7506 R0001	6.65
GHG 418 8190 R6201	9.97	GHG 511 3409 R0001	6.65	GHG 511 8304 R0001	6.65
GHG 418 8190 R8701	9.97	GHG 511 3506 R0001	6.65	GHG 511 8306 R0001	6.65
GHG 418 8195	9.89	GHG 511 4304 R0001	6.65	GHG 511 8405 R0001	6.65
GHG 418 8195 R 5407	9.89	GHG 511 4304 R0002	6.65	GHG 511 8406 R0001	6.65
GHG 418 8195 R 5408	9.89	GHG 511 4304 R3001	6.65	GHG 511 8407 R0001	6.65
GHG 418 8195 R 5409	9.89	GHG 511 4304 R3003	6.65	GHG 511 8409 R0001	6.65
GHG 418 8195 R 5507	9.89	GHG 511 4306 R0001	6.65	GHG 511 8506 R0001	6.65
GHG 418 8195 R 5508	9.89	GHG 511 4306 R0002	6.65	GHG 512 3405 R0001	6.69

Order No.	Page	Order No.	Page	Order No.	Page
GHG 512 3406 R0001	6.69	GHG 514 4506 R0903	6.125	GHG 516 7409 R0001	6.88
GHG 512 3407 R0001	6.69	GHG 514 4506 R0904	6.125	GHG 516 7506 R0001	6.88
GHG 512 3409 R0001	6.69	GHG 514 4506 R0905	6.125	GHG 516 8304 R0001	6.88
GHG 512 3506 R0001	6.69	GHG 514 4506 R3001	6.75	GHG 516 8306 R0001	6.88
GHG 512 4405 R0001	6.69	GHG 514 4506 R3901	6.125	GHG 516 8405 R0001	6.88
GHG 512 4405 R0501	6.69	GHG 514 4506 R3902	6.125	GHG 516 8406 R0001	6.88
GHG 512 4405 R3001	6.69	GHG 514 7405 R0001	6.75	GHG 516 8407 R0001	6.88
GHG 512 4406 R0001	6.69	GHG 514 7406 R0001	6.75	GHG 516 8409 R0001	6.88
GHG 512 4406 R0501	6.69	GHG 514 7407 R0001	6.75	GHG 516 8506 R0001	6.88
GHG 512 4406 R3001	6.69	GHG 514 7409 R0001	6.75	GHG 517 3405 R0001	6.92
GHG 512 4407 R0001	6.69	GHG 514 7506 R0001	6.75	GHG 517 3406 R0001	6.92
GHG 512 4407 R0501	6.69	GHG 515 4405 R0001	6.78	GHG 517 3407 R0001	6.92
GHG 512 4407 R3001	6.69	GHG 515 4405 R0501	6.78	GHG 517 3409 R0001	6.92
GHG 512 4409 R0001	6.69	GHG 515 4405 R3001	6.78	GHG 517 3506 R0001	6.92
GHG 512 4409 R3001	6.69	GHG 515 4406 R0001	6.78	GHG 517 4405 R0001	6.92
GHG 512 4506 R0001	6.69	GHG 515 4406 R0501	6.78	GHG 517 4405 R3001	6.92
GHG 512 4506 R0501	6.69	GHG 515 4406 R3001	6.78	GHG 517 4406 R0001	6.92
GHG 512 4506 R0901	6.123	GHG 515 4407 R0001	6.78	GHG 517 4406 R3001	6.92
GHG 512 4506 R0903	6.123	GHG 515 4407 R0501	6.78	GHG 517 4407 R0001	6.92
GHG 512 4506 R0904	6.123	GHG 515 4407 R3001	6.78	GHG 517 4407 R3001	6.92
GHG 512 4506 R0905	6.123	GHG 515 4409 R0001	6.78	GHG 517 4409 R0001	6.92
GHG 512 4506 R3001	6.69	GHG 515 4409 R3001	6.78	GHG 517 4409 R3001	6.92
GHG 512 4506 R3901	6.123	GHG 515 4506 R0001	6.78	GHG 517 4506 R0001	6.92
GHG 512 4506 R3902	6.123	GHG 515 4506 R0501	6.78	GHG 517 4506 R3001	6.92
GHG 512 7405 R0001	6.69	GHG 515 4506 R3001	6.78	GHG 517 7405 R0001	6.92
GHG 512 7406 R0001	6.69	GHG 515 7405 R0001	6.78	GHG 517 7406 R0001	6.92
GHG 512 7407 R0001	6.69	GHG 515 7406 R0001	6.78	GHG 517 7407 R0001	6.92
GHG 512 7409 R0001	6.69	GHG 515 7407 R0001	6.78	GHG 517 7409 R0001	6.92
GHG 512 7506 R0001	6.69	GHG 515 7409 R0001	6.78	GHG 517 7506 R0001	6.92
GHG 512 8405 R0001	6.69	GHG 515 7506 R0001	6.78	GHG 517 8405 R0001	6.92
GHG 512 8406 R0001	6.69	GHG 516 3304 R0001	6.88	GHG 517 8406 R0001	6.92
GHG 512 8407 R0001	6.69	GHG 516 3306 R0001	6.88	GHG 517 8407 R0001	6.92
GHG 512 8409 R0001	6.69	GHG 516 3405 R0001	6.88	GHG 517 8409 R0001	6.92
GHG 512 8506 R0001	6.69	GHG 516 3406 R0001	6.88	GHG 517 8506 R0001	6.92
GHG 513 3200 R0001	6.63	GHG 516 3407 R0001	6.88	GHG 518 4405 R0001	6.96
GHG 513 3212 R0001	6.63	GHG 516 3409 R0001	6.88	GHG 518 4405 R3001	6.96
GHG 513 3300 R0001	6.63	GHG 516 3506 R0001	6.88	GHG 518 4406 R0001	6.96
GHG 513 3312 R0001	6.63	GHG 516 4304 R0001	6.88	GHG 518 4406 R3001	6.96
GHG 513 4200 R0001	6.63	GHG 516 4304 R3001	6.88	GHG 518 4407 R0001	6.96
GHG 513 4212 R0001	6.63	GHG 516 4306 R0001	6.88	GHG 518 4407 R3001	6.96
GHG 513 4300 R0001	6.63	GHG 516 4306 R3001	6.88	GHG 518 4409 R0001	6.96
GHG 513 4312 R0001	6.63	GHG 516 4405 R0001	6.88	GHG 518 4409 R3001	6.96
GHG 514 4405 R0001	6.75	GHG 516 4405 R3001	6.88	GHG 518 4506 R0001	6.96
GHG 514 4405 R0501	6.75	GHG 516 4406 R0001	6.88	GHG 518 4506 R3001	6.96
GHG 514 4405 R3001	6.75	GHG 516 4406 R3001	6.88	GHG 518 7405 R0001	6.96
GHG 514 4406 R0001	6.75	GHG 516 4407 R0001	6.88	GHG 518 7406 R0001	6.96
GHG 514 4406 R0501	6.75	GHG 516 4407 R3001	6.88	GHG 518 7407 R0001	6.96
GHG 514 4406 R3001	6.75	GHG 516 4409 R0001	6.88	GHG 518 7409 R0001	6.96
GHG 514 4407 R0001	6.75	GHG 516 4409 R3001	6.88	GHG 518 7506 R0001	6.96
GHG 514 4407 R0501	6.75	GHG 516 4506 R0001	6.88	GHG 519 4405 R0001	6.99
GHG 514 4407 R3001	6.75	GHG 516 4506 R3001	6.88	GHG 519 4405 R3001	6.99
GHG 514 4409 R0001	6.75	GHG 516 7304 R0001	6.88	GHG 519 4406 R0001	6.99
GHG 514 4409 R3001	6.75	GHG 516 7306 R0001	6.88	GHG 519 4406 R3001	6.99
GHG 514 4506 R0001	6.75	GHG 516 7405 R0001	6.88	GHG 519 4407 R0001	6.99
GHG 514 4506 R0501	6.75	GHG 516 7406 R0001	6.88	GHG 519 4407 R3001	6.99
GHG 514 4506 R0901	6.125	GHG 516 7407 R0001	6.88	GHG 519 4409 R0001	6.99

1
2
3
4
5
6
7
8
9
10
11
12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
GHG 519 4409 R3001	6.99	GHG 522 3409 R0001	6.108	GHG 525 4506 R0001	6.115
GHG 519 4506 R0001	6.99	GHG 522 3506 R0001	6.108	GHG 525 7405 R0001	6.115
GHG 519 4506 R3001	6.99	GHG 522 4405 R0001	6.108	GHG 525 7406 R0001	6.115
GHG 519 7405 R0001	6.99	GHG 522 4406 R0001	6.108	GHG 525 7407 R0001	6.115
GHG 519 7406 R0001	6.99	GHG 522 4407 R0001	6.108	GHG 525 7409 R0001	6.115
GHG 519 7407 R0001	6.99	GHG 522 4409 R0001	6.108	GHG 525 7506 R0001	6.115
GHG 519 7409 R0001	6.99	GHG 522 4506 R0001	6.108	GHG 525 8405 R0001	6.115
GHG 519 7506 R0001	6.99	GHG 522 7405 R0001	6.108	GHG 525 8406 R0001	6.115
GHG 521 2304 R0001	6.104	GHG 522 7406 R0001	6.108	GHG 525 8407 R0001	6.115
GHG 521 2306 R0001	6.104	GHG 522 7407 R0001	6.108	GHG 525 8409 R0001	6.115
GHG 521 2405 R0001	6.104	GHG 522 7409 R0001	6.108	GHG 525 8506 R0001	6.115
GHG 521 2406 R0001	6.104	GHG 522 7506 R0001	6.108	GHG 525 9405 R0001	6.115
GHG 521 2407 R0001	6.104	GHG 522 8405 R0001	6.108	GHG 525 9406 R0001	6.115
GHG 521 2409 R0001	6.104	GHG 522 8406 R0001	6.108	GHG 525 9407 R0001	6.115
GHG 521 2506 R0001	6.104	GHG 522 8407 R0001	6.108	GHG 525 9409 R0001	6.115
GHG 521 3304 R0001	6.104	GHG 522 8409 R0001	6.108	GHG 525 9506 R0001	6.115
GHG 521 3306 R0001	6.104	GHG 522 8506 R0001	6.108	GHG 530 1935 R0002	6.72
GHG 521 3405 R0001	6.104	GHG 522 9405 R0001	6.108	GHG 530 1935 R0005	6.72
GHG 521 3406 R0001	6.104	GHG 522 9406 R0001	6.108	GHG 530 1935 R0008	6.81
GHG 521 3407 R0001	6.104	GHG 522 9407 R0001	6.108	GHG 531 6469 V0000	6.61
GHG 521 3409 R0001	6.104	GHG 522 9409 R0001	6.108	GHG 531 6469 V5005	6.61
GHG 521 3506 R0001	6.104	GHG 522 9506 R0001	6.108	GHG 531 6469 V5025	6.61
GHG 521 4405 R0001	6.104	GHG 524 3405 R0001	6.112	GHG 531 6566 V0000	6.61
GHG 521 4406 R0001	6.104	GHG 524 3406 R0001	6.112	GHG 531 6566 V5005	6.61
GHG 521 4407 R0001	6.104	GHG 524 3407 R0001	6.112	GHG 531 6566 V5023	6.61
GHG 521 4409 R0001	6.104	GHG 524 3409 R0001	6.112	GHG 531 6566 V5025	6.61
GHG 521 4506 R0001	6.104	GHG 524 3506 R0001	6.112	GHG 531 7536 V0000	6.61
GHG 521 7304 R0001	6.104	GHG 524 4405 R0001	6.112	GHG 532 6469 V0000	6.72
GHG 521 7306 R0001	6.104	GHG 524 4406 R0001	6.112	GHG 532 6469 V5005	6.72
GHG 521 7405 R0001	6.104	GHG 524 4407 R0001	6.112	GHG 532 6566 V0000	6.72
GHG 521 7406 R0001	6.104	GHG 524 4409 R0001	6.112	GHG 532 6566 V5005	6.72
GHG 521 7407 R0001	6.104	GHG 524 4506 R0001	6.112	GHG 532 6566 V5023	6.72
GHG 521 7409 R0001	6.104	GHG 524 7405 R0001	6.112	GHG 532 6566 V5025	6.72
GHG 521 7506 R0001	6.104	GHG 524 7406 R0001	6.112	GHG 532 7536 V0000	6.72
GHG 521 8304 R0001	6.104	GHG 524 7407 R0001	6.112	GHG 540 1935 R0002	6.83
GHG 521 8306 R0001	6.104	GHG 524 7409 R0001	6.112	GHG 542 2200 V0000	6.63
GHG 521 8405 R0001	6.104	GHG 524 7506 R0001	6.112	GHG 542 2212 V0000	6.63
GHG 521 8406 R0001	6.104	GHG 524 8405 R0001	6.112	GHG 542 2300 V0000	6.63
GHG 521 8407 R0001	6.104	GHG 524 8406 R0001	6.112	GHG 542 2312 V0000	6.63
GHG 521 8409 R0001	6.104	GHG 524 8407 R0001	6.112	GHG 542 5200 V0000	6.63
GHG 521 8506 R0001	6.104	GHG 524 8409 R0001	6.112	GHG 542 5212 V0000	6.63
GHG 521 9304 R0001	6.104	GHG 524 8506 R0001	6.112	GHG 542 5300 V0000	6.63
GHG 521 9306 R0001	6.104	GHG 524 9405 R0001	6.112	GHG 542 5312 V0000	6.63
GHG 521 9405 R0001	6.104	GHG 524 9406 R0001	6.112	GHG 570 1901 R0001	6.22
GHG 521 9406 R0001	6.104	GHG 524 9407 R0001	6.112	GHG 570 1901 R0003	6.38
GHG 521 9407 R0001	6.104	GHG 524 9409 R0001	6.112	GHG 570 1902 R0001	6.22
GHG 521 9409 R0001	6.104	GHG 524 9506 R0001	6.112	GHG 570 1903 R0001	6.22
GHG 521 9506 R0001	6.104	GHG 525 3405 R0001	6.115	GHG 570 1903 R0002	6.22
GHG 522 2405 R0001	6.108	GHG 525 3406 R0001	6.115	GHG 570 1903 R0003	6.22
GHG 522 2406 R0001	6.108	GHG 525 3407 R0001	6.115	GHG 570 1903 R0004	6.22
GHG 522 2407 R0001	6.108	GHG 525 3409 R0001	6.115	GHG 570 1903 R0005	6.38
GHG 522 2409 R0001	6.108	GHG 525 3506 R0001	6.115	GHG 570 1903 R0006	6.38
GHG 522 2506 R0001	6.108	GHG 525 4405 R0001	6.115	GHG 570 1903 R0007	6.38
GHG 522 3405 R0001	6.108	GHG 525 4406 R0001	6.115	GHG 570 1903 R0008	6.38
GHG 522 3406 R0001	6.108	GHG 525 4407 R0001	6.115	GHG 570 1904 R0001	6.22
GHG 522 3407 R0001	6.108	GHG 525 4409 R0001	6.115	GHG 570 1904 R0002	6.22

Order No.	Page	Order No.	Page	Order No.	Page
GHG 570 1904 R0003	6.22	GHG 571 3204 R0001	6.12	GHG 571 6112 R1001	6.18
GHG 570 1904 R0004	6.22	GHG 571 3204 R0002	6.12	GHG 571 6112 R3001	6.18
GHG 570 1904 R0005	6.22	GHG 571 3204 R1001	6.12	GHG 571 6112 R5001	6.18
GHG 570 1904 R0006	6.22	GHG 571 3204 R1002	6.12	GHG 571 6112 R6001	6.18
GHG 570 1904 R0007	6.38	GHG 571 3204 R2001	6.20	GHG 571 6204 R1001	6.18
GHG 570 1904 R0008	6.38	GHG 571 3204 R3001	6.12	GHG 571 6204 R3001	6.18
GHG 570 1904 R0009	6.38	GHG 571 3204 R3002	6.12	GHG 571 6204 R5001	6.18
GHG 570 1904 R0010	6.38	GHG 571 3204 R4001	6.20	GHG 571 6204 R6001	6.18
GHG 570 1905 R0001	6.22	GHG 571 3206 R0001	6.12	GHG 571 6206 R1001	6.18
GHG 570 1905 R0002	6.22	GHG 571 3206 R0002	6.12	GHG 571 6206 R3001	6.18
GHG 570 1905 R0003	6.22	GHG 571 3206 R1001	6.12	GHG 571 6206 R5001	6.18
GHG 570 1905 R0004	6.22	GHG 571 3206 R1002	6.12	GHG 571 6206 R6001	6.18
GHG 570 1905 R0005	6.38	GHG 571 3206 R2001	6.20	GHG 571 6208 R1001	6.18
GHG 570 1905 R0006	6.38	GHG 571 3206 R3001	6.12	GHG 571 6208 R3001	6.18
GHG 570 1907 R0001	6.22	GHG 571 3206 R3002	6.12	GHG 571 6208 R5001	6.18
GHG 570 1907 R0002	6.22	GHG 571 3206 R4001	6.20	GHG 571 6208 R6001	6.18
GHG 570 1907 R0003	6.38	GHG 571 3208 R0001	6.12	GHG 571 6212 R1001	6.18
GHG 570 1907 R0004	6.38	GHG 571 3208 R0002	6.12	GHG 571 6212 R3001	6.18
GHG 570 1907 R0005	6.38	GHG 571 3208 R2001	6.20	GHG 571 6212 R5001	6.18
GHG 570 1908 R0001	6.22	GHG 571 3208 R3001	6.12	GHG 571 6212 R6001	6.18
GHG 570 1914 R0001	6.44	GHG 571 3208 R3002	6.12	GHG 571 7102 R0001	6.10
GHG 571 1000 R0001	6.22	GHG 571 3208 R4001	6.20	GHG 571 7102 R0002	6.10
GHG 571 1000 R1001	6.22	GHG 571 3212 R2001	6.20	GHG 571 7102 R1001	6.10
GHG 571 1000 R3001	6.22	GHG 571 3212 R4001	6.20	GHG 571 7102 R1002	6.10
GHG 571 3102 R0001	6.12	GHG 571 3602 R0001	6.12	GHG 571 7102 R2001	6.20
GHG 571 3102 R0002	6.12	GHG 571 3602 R0002	6.12	GHG 571 7102 R3001	6.10
GHG 571 3102 R1001	6.12	GHG 571 3602 R1001	6.12	GHG 571 7102 R3002	6.10
GHG 571 3102 R1002	6.12	GHG 571 3602 R1002	6.12	GHG 571 7102 R4001	6.20
GHG 571 3102 R2001	6.20	GHG 571 3602 R3001	6.12	GHG 571 7104 R0001	6.10
GHG 571 3102 R3001	6.12	GHG 571 3602 R3002	6.12	GHG 571 7104 R0002	6.10
GHG 571 3102 R3002	6.12	GHG 571 3604 R0001	6.12	GHG 571 7104 R1001	6.10
GHG 571 3102 R4001	6.20	GHG 571 3604 R0002	6.12	GHG 571 7104 R1002	6.10
GHG 571 3104 R0001	6.12	GHG 571 3604 R1001	6.12	GHG 571 7104 R2001	6.20
GHG 571 3104 R0002	6.12	GHG 571 3604 R1002	6.12	GHG 571 7104 R3001	6.10
GHG 571 3104 R1001	6.12	GHG 571 3604 R3001	6.12	GHG 571 7104 R3002	6.10
GHG 571 3104 R1002	6.12	GHG 571 3604 R3002	6.12	GHG 571 7104 R4001	6.20
GHG 571 3104 R2001	6.20	GHG 571 3606 R0001	6.12	GHG 571 7106 R0001	6.10
GHG 571 3104 R3001	6.12	GHG 571 3606 R0002	6.12	GHG 571 7106 R0002	6.10
GHG 571 3104 R3002	6.12	GHG 571 3606 R3001	6.12	GHG 571 7106 R1001	6.10
GHG 571 3104 R4001	6.20	GHG 571 3606 R3002	6.12	GHG 571 7106 R1002	6.10
GHG 571 3106 R0001	6.12	GHG 571 6102 R1001	6.18	GHG 571 7106 R2001	6.20
GHG 571 3106 R0002	6.12	GHG 571 6102 R3001	6.18	GHG 571 7106 R3001	6.10
GHG 571 3106 R1001	6.12	GHG 571 6102 R5001	6.18	GHG 571 7106 R3002	6.10
GHG 571 3106 R1002	6.12	GHG 571 6102 R6001	6.18	GHG 571 7106 R4001	6.20
GHG 571 3106 R2001	6.20	GHG 571 6104 R1001	6.18	GHG 571 7108 R0001	6.10
GHG 571 3106 R3001	6.12	GHG 571 6104 R3001	6.18	GHG 571 7108 R0002	6.10
GHG 571 3106 R3002	6.12	GHG 571 6104 R5001	6.18	GHG 571 7108 R2001	6.20
GHG 571 3106 R4001	6.20	GHG 571 6104 R6001	6.18	GHG 571 7108 R4001	6.20
GHG 571 3108 R0001	6.12	GHG 571 6106 R1001	6.18	GHG 571 7112 R2001	6.20
GHG 571 3108 R0002	6.12	GHG 571 6106 R3001	6.18	GHG 571 7112 R4001	6.20
GHG 571 3108 R2001	6.20	GHG 571 6106 R5001	6.18	GHG 571 7204 R0001	6.10
GHG 571 3108 R3001	6.12	GHG 571 6106 R6001	6.18	GHG 571 7204 R0002	6.10
GHG 571 3108 R3002	6.12	GHG 571 6108 R1001	6.18	GHG 571 7204 R1001	6.10
GHG 571 3108 R4001	6.20	GHG 571 6108 R3001	6.18	GHG 571 7204 R1002	6.10
GHG 571 3112 R2001	6.20	GHG 571 6108 R5001	6.18	GHG 571 7204 R2001	6.20
GHG 571 3112 R4001	6.20	GHG 571 6108 R6001	6.18	GHG 571 7204 R3001	6.10

1

2

3

4

5

6

7

8

9

10

11

12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
GHG 571 7204 R3002	6.10	GHG 571 8204 R0002	6.14	GHG 572 3104 R4001	6.37
GHG 571 7204 R4001	6.20	GHG 571 8204 R1001	6.14	GHG 572 3106 R0001	6.33
GHG 571 7206 R0001	6.10	GHG 571 8204 R3001	6.14	GHG 572 3106 R0002	6.33
GHG 571 7206 R0002	6.10	GHG 571 8204 R5001	6.14	GHG 572 3106 R1001	6.33
GHG 571 7206 R1001	6.10	GHG 571 8204 R6001	6.14	GHG 572 3106 R1002	6.33
GHG 571 7206 R1002	6.10	GHG 571 8206 R0001	6.14	GHG 572 3106 R2001	6.37
GHG 571 7206 R2001	6.20	GHG 571 8206 R0002	6.14	GHG 572 3106 R3001	6.33
GHG 571 7206 R3001	6.10	GHG 571 8208 R0001	6.14	GHG 572 3106 R3002	6.33
GHG 571 7206 R3002	6.10	GHG 571 8208 R0002	6.14	GHG 572 3106 R4001	6.37
GHG 571 7206 R4001	6.20	GHG 571 8212 R0001	6.14	GHG 572 3108 R0001	6.33
GHG 571 7208 R0001	6.10	GHG 571 8212 R0002	6.14	GHG 572 3108 R0002	6.33
GHG 571 7208 R0002	6.10	GHG 571 9102 R0001	6.16	GHG 572 3108 R1001	6.33
GHG 571 7208 R2001	6.20	GHG 571 9102 R0002	6.16	GHG 572 3108 R1002	6.33
GHG 571 7208 R4001	6.20	GHG 571 9102 R1001	6.16	GHG 572 3108 R2001	6.37
GHG 571 7212 R2001	6.20	GHG 571 9102 R3001	6.16	GHG 572 3108 R4001	6.37
GHG 571 7212 R4001	6.20	GHG 571 9102 R3003	6.27	GHG 572 3110 R1001	6.33
GHG 571 7602 R0001	6.10	GHG 571 9102 R3004	6.27	GHG 572 3110 R1002	6.33
GHG 571 7602 R0002	6.10	GHG 571 9102 R5001	6.16	GHG 572 3110 R2001	6.37
GHG 571 7602 R1001	6.10	GHG 571 9102 R6001	6.16	GHG 572 3110 R4001	6.37
GHG 571 7602 R1002	6.10	GHG 571 9104 R0001	6.16	GHG 572 3112 R1001	6.33
GHG 571 7602 R3001	6.10	GHG 571 9104 R0002	6.16	GHG 572 3112 R1002	6.33
GHG 571 7602 R3002	6.10	GHG 571 9104 R1001	6.16	GHG 572 3112 R2001	6.37
GHG 571 7604 R0001	6.10	GHG 571 9104 R3001	6.16	GHG 572 3112 R4001	6.37
GHG 571 7604 R0002	6.10	GHG 571 9104 R5001	6.16	GHG 572 3204 R0001	6.33
GHG 571 7604 R1001	6.10	GHG 571 9104 R6001	6.16	GHG 572 3204 R0002	6.33
GHG 571 7604 R1002	6.10	GHG 571 9106 R0001	6.16	GHG 572 3204 R1001	6.33
GHG 571 7604 R3001	6.10	GHG 571 9106 R0002	6.16	GHG 572 3204 R1002	6.33
GHG 571 7604 R3002	6.10	GHG 571 9106 R0003	6.16	GHG 572 3204 R2001	6.37
GHG 571 7606 R0001	6.10	GHG 571 9108 R0001	6.16	GHG 572 3204 R3001	6.33
GHG 571 7606 R0002	6.10	GHG 571 9108 R0002	6.16	GHG 572 3204 R3002	6.33
GHG 571 7606 R3001	6.10	GHG 571 9108 R0003	6.16	GHG 572 3204 R4001	6.37
GHG 571 7606 R3002	6.10	GHG 571 9112 R0001	6.16	GHG 572 3206 R0001	6.33
GHG 571 8102 R0001	6.14	GHG 571 9112 R0002	6.16	GHG 572 3206 R0002	6.33
GHG 571 8102 R0002	6.14	GHG 571 9112 R0003	6.16	GHG 572 3206 R1001	6.33
GHG 571 8102 R1001	6.14	GHG 571 9112 R0004	6.16	GHG 572 3206 R1002	6.33
GHG 571 8102 R3001	6.14	GHG 571 9204 R0001	6.16	GHG 572 3206 R2001	6.37
GHG 571 8102 R3003	6.27	GHG 571 9204 R1001	6.16	GHG 572 3206 R3001	6.33
GHG 571 8102 R3004	6.27	GHG 571 9204 R3001	6.16	GHG 572 3206 R3002	6.33
GHG 571 8102 R5001	6.14	GHG 571 9204 R5001	6.16	GHG 572 3206 R4001	6.37
GHG 571 8102 R6001	6.14	GHG 571 9204 R6001	6.16	GHG 572 3208 R0001	6.33
GHG 571 8104 R0001	6.14	GHG 571 9206 R0001	6.16	GHG 572 3208 R0002	6.33
GHG 571 8104 R0002	6.14	GHG 571 9206 R0002	6.16	GHG 572 3208 R1001	6.33
GHG 571 8104 R1001	6.14	GHG 571 9208 R0001	6.16	GHG 572 3208 R1002	6.33
GHG 571 8104 R3001	6.14	GHG 571 9208 R0002	6.16	GHG 572 3208 R2001	6.37
GHG 571 8104 R5001	6.14	GHG 571 9212 R0001	6.16	GHG 572 3208 R4001	6.37
GHG 571 8104 R6001	6.14	GHG 571 9212 R0002	6.16	GHG 572 3210 R1001	6.33
GHG 571 8106 R0001	6.14	GHG 572 1000 R0001	6.38	GHG 572 3210 R1002	6.33
GHG 571 8106 R0002	6.14	GHG 572 1000 R1001	6.38	GHG 572 3210 R2001	6.37
GHG 571 8106 R0003	6.14	GHG 572 1000 R3001	6.38	GHG 572 3210 R4001	6.37
GHG 571 8106 R3001	6.14	GHG 572 3104 R0001	6.33	GHG 572 3212 R1001	6.33
GHG 571 8106 R6001	6.14	GHG 572 3104 R0002	6.33	GHG 572 3212 R1002	6.33
GHG 571 8108 R0001	6.14	GHG 572 3104 R1001	6.33	GHG 572 3212 R2001	6.37
GHG 571 8108 R0002	6.14	GHG 572 3104 R1002	6.33	GHG 572 3212 R4001	6.37
GHG 571 8112 R0001	6.14	GHG 572 3104 R2001	6.37	GHG 572 3604 R0001	6.33
GHG 571 8112 R0002	6.14	GHG 572 3104 R3001	6.33	GHG 572 3604 R0002	6.33
GHG 571 8204 R0001	6.14	GHG 572 3104 R3002	6.33	GHG 572 3604 R1001	6.33

Order No.	Page	Order No.	Page	Order No.	Page
GHG 572 3604 R1002	6.33	GHG 572 7106 R3001	6.32	GHG 572 7606 R1002	6.32
GHG 572 3604 R3001	6.33	GHG 572 7106 R3002	6.32	GHG 572 7606 R3001	6.32
GHG 572 3604 R3002	6.33	GHG 572 7106 R4001	6.37	GHG 572 7606 R3002	6.32
GHG 572 3606 R0001	6.33	GHG 572 7108 R0001	6.32	GHG 572 7608 R1001	6.32
GHG 572 3606 R0002	6.33	GHG 572 7108 R0002	6.32	GHG 572 7608 R1002	6.32
GHG 572 3606 R3001	6.33	GHG 572 7108 R1001	6.32	GHG 572 8104 R0001	6.34
GHG 572 3606 R3002	6.33	GHG 572 7108 R1002	6.32	GHG 572 8104 R0002	6.34
GHG 572 6104 R1001	6.36	GHG 572 7108 R2001	6.37	GHG 572 8104 R1001	6.34
GHG 572 6104 R3001	6.36	GHG 572 7108 R4001	6.37	GHG 572 8104 R3001	6.34
GHG 572 6104 R5001	6.36	GHG 572 7110 R1001	6.32	GHG 572 8104 R5001	6.34
GHG 572 6104 R6001	6.36	GHG 572 7110 R1002	6.32	GHG 572 8104 R6001	6.34
GHG 572 6106 R1001	6.36	GHG 572 7110 R2001	6.37	GHG 572 8106 R0001	6.34
GHG 572 6106 R3001	6.36	GHG 572 7110 R4001	6.37	GHG 572 8106 R0002	6.34
GHG 572 6106 R5001	6.36	GHG 572 7112 R1001	6.32	GHG 572 8106 R1001	6.34
GHG 572 6106 R6001	6.36	GHG 572 7112 R1002	6.32	GHG 572 8106 R3001	6.34
GHG 572 6108 R1001	6.36	GHG 572 7112 R2001	6.37	GHG 572 8106 R5001	6.34
GHG 572 6108 R3001	6.36	GHG 572 7112 R4001	6.37	GHG 572 8106 R6001	6.34
GHG 572 6108 R5001	6.36	GHG 572 7204 R0001	6.32	GHG 572 8108 R0001	6.34
GHG 572 6108 R6001	6.36	GHG 572 7204 R0002	6.32	GHG 572 8108 R0002	6.34
GHG 572 6110 R1001	6.36	GHG 572 7204 R1001	6.32	GHG 572 8110 R0001	6.34
GHG 572 6110 R5001	6.36	GHG 572 7204 R1002	6.32	GHG 572 8112 R0001	6.34
GHG 572 6112 R1001	6.36	GHG 572 7204 R2001	6.37	GHG 572 8204 R0001	6.34
GHG 572 6112 R3001	6.36	GHG 572 7204 R3001	6.32	GHG 572 8204 R0002	6.34
GHG 572 6112 R5001	6.36	GHG 572 7204 R3002	6.32	GHG 572 8204 R1001	6.34
GHG 572 6112 R6001	6.36	GHG 572 7204 R4001	6.37	GHG 572 8204 R3001	6.34
GHG 572 6204 R1001	6.36	GHG 572 7206 R0001	6.32	GHG 572 8204 R5001	6.34
GHG 572 6204 R3001	6.36	GHG 572 7206 R0002	6.32	GHG 572 8204 R6001	6.34
GHG 572 6204 R5001	6.36	GHG 572 7206 R1001	6.32	GHG 572 8206 R0001	6.34
GHG 572 6204 R6001	6.36	GHG 572 7206 R1002	6.32	GHG 572 8206 R0002	6.34
GHG 572 6206 R1001	6.36	GHG 572 7206 R2001	6.37	GHG 572 8206 R1001	6.34
GHG 572 6206 R3001	6.36	GHG 572 7206 R3001	6.32	GHG 572 8206 R3001	6.34
GHG 572 6206 R5001	6.36	GHG 572 7206 R3002	6.32	GHG 572 8206 R5001	6.34
GHG 572 6206 R6001	6.36	GHG 572 7206 R4001	6.37	GHG 572 8206 R6001	6.34
GHG 572 6208 R1001	6.36	GHG 572 7208 R0001	6.32	GHG 572 8208 R0001	6.34
GHG 572 6208 R3001	6.36	GHG 572 7208 R0002	6.32	GHG 572 8208 R0002	6.34
GHG 572 6208 R5001	6.36	GHG 572 7208 R1001	6.32	GHG 572 8210 R0001	6.34
GHG 572 6208 R6001	6.36	GHG 572 7208 R1002	6.32	GHG 572 8212 R0001	6.34
GHG 572 6210 R1001	6.36	GHG 572 7208 R2001	6.37	GHG 572 9104 R0001	6.35
GHG 572 6210 R5001	6.36	GHG 572 7208 R4001	6.37	GHG 572 9104 R0002	6.35
GHG 572 6212 R1001	6.36	GHG 572 7210 R1001	6.32	GHG 572 9104 R1001	6.35
GHG 572 6212 R3001	6.36	GHG 572 7210 R1002	6.32	GHG 572 9104 R3001	6.35
GHG 572 6212 R5001	6.36	GHG 572 7210 R2001	6.37	GHG 572 9104 R5001	6.35
GHG 572 6212 R6001	6.36	GHG 572 7210 R4001	6.37	GHG 572 9104 R6001	6.35
GHG 572 7104 R0001	6.32	GHG 572 7212 R1001	6.32	GHG 572 9106 R0001	6.35
GHG 572 7104 R0002	6.32	GHG 572 7212 R1002	6.32	GHG 572 9106 R0002	6.35
GHG 572 7104 R1001	6.32	GHG 572 7212 R2001	6.37	GHG 572 9106 R1001	6.35
GHG 572 7104 R1002	6.32	GHG 572 7212 R4001	6.37	GHG 572 9106 R3001	6.35
GHG 572 7104 R2001	6.37	GHG 572 7604 R0001	6.32	GHG 572 9106 R5001	6.35
GHG 572 7104 R3001	6.32	GHG 572 7604 R0002	6.32	GHG 572 9106 R6001	6.35
GHG 572 7104 R3002	6.32	GHG 572 7604 R1001	6.32	GHG 572 9108 R0001	6.35
GHG 572 7104 R4001	6.37	GHG 572 7604 R1002	6.32	GHG 572 9108 R0002	6.35
GHG 572 7106 R0001	6.32	GHG 572 7604 R3001	6.32	GHG 572 9110 R0001	6.35
GHG 572 7106 R0002	6.32	GHG 572 7604 R3002	6.32	GHG 572 9112 R0001	6.35
GHG 572 7106 R1001	6.32	GHG 572 7606 R0001	6.32	GHG 572 9204 R0001	6.35
GHG 572 7106 R1002	6.32	GHG 572 7606 R0002	6.32	GHG 572 9204 R0002	6.35
GHG 572 7106 R2001	6.37	GHG 572 7606 R1001	6.32	GHG 572 9204 R1001	6.35

1
2
3
4
5
6
7
8
9
10
11
12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
GHG 572 9204 R3001	6.35	GHG 574 6105 R1001	6.19	GHG 574 8101 R0001	6.15
GHG 572 9204 R5001	6.35	GHG 574 6105 R3001	6.19	GHG 574 8101 R1001	6.15
GHG 572 9204 R6001	6.35	GHG 574 6105 R5001	6.19	GHG 574 8101 R3001	6.15
GHG 572 9206 R0001	6.35	GHG 574 6105 R6001	6.19	GHG 574 8101 R3002	6.26
GHG 572 9206 R0002	6.35	GHG 574 6110 R1001	6.19	GHG 574 8101 R3004	6.26
GHG 572 9206 R1001	6.35	GHG 574 6110 R3001	6.19	GHG 574 8101 R5001	6.15
GHG 572 9206 R3001	6.35	GHG 574 6110 R5001	6.19	GHG 574 8101 R6001	6.15
GHG 572 9206 R5001	6.35	GHG 574 6110 R6001	6.19	GHG 574 8105 R0001	6.15
GHG 572 9206 R6001	6.35	GHG 574 6205 R1001	6.19	GHG 574 8105 R0002	6.15
GHG 572 9208 R0001	6.35	GHG 574 6205 R3001	6.19	GHG 574 8105 R1001	6.15
GHG 572 9208 R0002	6.35	GHG 574 6205 R5001	6.19	GHG 574 8105 R3001	6.15
GHG 572 9210 R0001	6.35	GHG 574 6205 R6001	6.19	GHG 574 8105 R5001	6.15
GHG 572 9212 R0001	6.35	GHG 574 6210 R1001	6.19	GHG 574 8105 R6001	6.15
GHG 574 3101 R0001	6.13	GHG 574 6210 R3001	6.19	GHG 574 8106 R0002	6.15
GHG 574 3101 R0002	6.13	GHG 574 6210 R5001	6.19	GHG 574 8110 R0001	6.15
GHG 574 3101 R1001	6.13	GHG 574 6210 R6001	6.19	GHG 574 8110 R0002	6.15
GHG 574 3101 R1002	6.13	GHG 574 7101 R0001	6.11	GHG 574 8110 R1001	6.15
GHG 574 3101 R2001	6.21	GHG 574 7101 R0002	6.11	GHG 574 8110 R3001	6.15
GHG 574 3101 R3001	6.13	GHG 574 7101 R1001	6.11	GHG 574 8110 R5001	6.15
GHG 574 3101 R3002	6.13	GHG 574 7101 R1002	6.11	GHG 574 8110 R6001	6.15
GHG 574 3101 R4001	6.21	GHG 574 7101 R2001	6.21	GHG 574 8205 R0001	6.15
GHG 574 3105 R0001	6.13	GHG 574 7101 R3001	6.11	GHG 574 8205 R0002	6.15
GHG 574 3105 R0002	6.13	GHG 574 7101 R3002	6.11	GHG 574 8205 R1001	6.15
GHG 574 3105 R1001	6.13	GHG 574 7101 R4001	6.21	GHG 574 8205 R3001	6.15
GHG 574 3105 R1002	6.13	GHG 574 7105 R0001	6.11	GHG 574 8205 R5001	6.15
GHG 574 3105 R2001	6.21	GHG 574 7105 R0002	6.11	GHG 574 8205 R6001	6.15
GHG 574 3105 R3001	6.13	GHG 574 7105 R1001	6.11	GHG 574 8210 R0001	6.15
GHG 574 3105 R3002	6.13	GHG 574 7105 R1002	6.11	GHG 574 8210 R0002	6.15
GHG 574 3105 R4001	6.21	GHG 574 7105 R2001	6.21	GHG 574 8210 R1001	6.15
GHG 574 3110 R0001	6.13	GHG 574 7105 R3001	6.11	GHG 574 8210 R3001	6.15
GHG 574 3110 R0002	6.13	GHG 574 7105 R3002	6.11	GHG 574 8210 R5001	6.15
GHG 574 3110 R1001	6.13	GHG 574 7105 R4001	6.21	GHG 574 8210 R6001	6.15
GHG 574 3110 R1002	6.13	GHG 574 7110 R0001	6.11	GHG 574 9101 R0001	6.17
GHG 574 3110 R2001	6.21	GHG 574 7110 R0002	6.11	GHG 574 9101 R0002	6.17
GHG 574 3110 R3001	6.13	GHG 574 7110 R1001	6.11	GHG 574 9101 R1001	6.17
GHG 574 3110 R3002	6.13	GHG 574 7110 R1002	6.11	GHG 574 9101 R3001	6.17
GHG 574 3110 R4001	6.21	GHG 574 7110 R2001	6.21	GHG 574 9101 R3002	6.26
GHG 574 3205 R0001	6.13	GHG 574 7110 R3001	6.11	GHG 574 9101 R3004	6.26
GHG 574 3205 R0002	6.13	GHG 574 7110 R3002	6.11	GHG 574 9101 R5001	6.17
GHG 574 3205 R1001	6.13	GHG 574 7110 R4001	6.21	GHG 574 9101 R6001	6.17
GHG 574 3205 R1002	6.13	GHG 574 7205 R0001	6.11	GHG 574 9105 R0001	6.17
GHG 574 3205 R2001	6.21	GHG 574 7205 R0002	6.11	GHG 574 9105 R0002	6.17
GHG 574 3205 R3001	6.13	GHG 574 7205 R1001	6.11	GHG 574 9105 R1001	6.17
GHG 574 3205 R3002	6.13	GHG 574 7205 R1002	6.11	GHG 574 9105 R3001	6.17
GHG 574 3205 R4001	6.21	GHG 574 7205 R2001	6.21	GHG 574 9105 R5001	6.17
GHG 574 3210 R0001	6.13	GHG 574 7205 R3001	6.11	GHG 574 9105 R6001	6.17
GHG 574 3210 R0002	6.13	GHG 574 7205 R3002	6.11	GHG 574 9110 R0001	6.17
GHG 574 3210 R1001	6.13	GHG 574 7205 R4001	6.21	GHG 574 9110 R0002	6.17
GHG 574 3210 R2001	6.21	GHG 574 7210 R0001	6.11	GHG 574 9110 R1001	6.17
GHG 574 3210 R3001	6.13	GHG 574 7210 R0002	6.11	GHG 574 9110 R3001	6.17
GHG 574 3210 R3002	6.13	GHG 574 7210 R1001	6.11	GHG 574 9110 R5001	6.17
GHG 574 3210 R4001	6.21	GHG 574 7210 R1002	6.11	GHG 574 9110 R6001	6.17
GHG 574 6101 R1001	6.19	GHG 574 7210 R2001	6.21	GHG 574 9205 R0001	6.17
GHG 574 6101 R3001	6.19	GHG 574 7210 R3001	6.11	GHG 574 9205 R1001	6.17
GHG 574 6101 R5001	6.19	GHG 574 7210 R3002	6.11	GHG 574 9205 R3001	6.17
GHG 574 6101 R6001	6.19	GHG 574 7210 R4001	6.21	GHG 574 9205 R5001	6.17

Order No.	Page	Order No.	Page	Order No.	Page
GHG 574 9205 R6001	6.17	GHG 576 1610 R0002	6.42	GHG 610 1955 R0103	7.80
GHG 574 9210 R0001	6.17	GHG 576 2601 R0001	6.42	GHG 610 1955 R0104	7.80
GHG 574 9210 R0002	6.17	GHG 576 2601 R0002	6.42	GHG 610 1955 R0105	7.80
GHG 574 9210 R1001	6.17	GHG 576 2605 R0001	6.42	GHG 610 1955 R0106	7.80
GHG 574 9210 R3001	6.17	GHG 576 2605 R0002	6.42	GHG 610 1955 R0107	7.80
GHG 574 9210 R5001	6.17	GHG 576 80101 R0100	6.43	GHG 610 1955 R0108	7.80
GHG 574 9210 R6001	6.17	GHG 576 80101 R0110	6.43	GHG 612 1003 R0001	11.54
GHG 575 1604 R0001	6.42	GHG 576 80301 R0130	6.43	GHG 618 0001 R0001	11.41
GHG 575 1604 R0002	6.42	GHG 576 80505 R0500	6.43	GHG 618 0001 R0002	11.41
GHG 575 1604 R1001	6.42	GHG 576 80505 R0510	6.43	GHG 618 0001 R0003	11.41
GHG 575 1604 R1002	6.42	GHG 576 80505 R0530	6.43	GHG 618 0001 R0004	11.41
GHG 575 1606 R0001	6.42	GHG 576 81010 R1000	6.43	GHG 618 0001 R0005	11.41
GHG 575 1606 R0002	6.42	GHG 576 81010 R1110	6.43	GHG 618 0001 R0006	11.41
GHG 575 1606 R1001	6.42	GHG 576 83030 R1130	6.43	GHG 618 0001 R0007	11.41
GHG 575 1606 R1002	6.42	GHG 576 90101 R0100	6.43	GHG 618 0001 R0008	11.41
GHG 575 1608 R0001	6.42	GHG 576 90101 R0110	6.43	GHG 618 0001 R0009	11.41
GHG 575 1608 R0002	6.42	GHG 576 90301 R0130	6.43	GHG 618 0001 R0010	11.41
GHG 575 1612 R0001	6.42	GHG 576 90505 R0500	6.43	GHG 618 0001 R0011	11.41
GHG 575 1612 R0002	6.42	GHG 576 90505 R0510	6.43	GHG 618 0001 R0012	11.41
GHG 575 2604 R0001	6.42	GHG 576 90505 R0530	6.43	GHG 618 0001 R0013	11.41
GHG 575 2604 R0002	6.42	GHG 576 91010 R1000	6.43	GHG 618 0001 R0014	11.41
GHG 575 2606 R0001	6.42	GHG 576 91010 R1110	6.43	GHG 618 0001 R0015	11.41
GHG 575 2606 R0002	6.42	GHG 576 93030 R1130	6.43	GHG 618 0001 R0016	11.41
GHG 575 80404 R0400	6.43	GHG 590 1301 R0102	6.83	GHG 618 0001 R0017	11.41
GHG 575 80404 R0410	6.43	GHG 590 1302 R0102	6.83	GHG 618 0001 R0018	11.41
GHG 575 80404 R0430	6.43	GHG 590 1902 R0001	6.83	GHG 618 0002 R0004	11.47
GHG 575 80606 R0600	6.43	GHG 590 1903 R0001	6.83	GHG 618 0002 R0008	11.47
GHG 575 80606 R0610	6.43	GHG 591 2201 R0001	6.81	GHG 618 0002 R0012	11.47
GHG 575 80606 R0630	6.43	GHG 591 2201 R0002	6.81	GHG 618 0002 R0018	11.47
GHG 575 80808 R0800	6.43	GHG 591 2201 R0003	6.81	GHG 618 1102 R 0001	11.55
GHG 575 80808 R0810	6.43	GHG 592 2001 R0002	6.83	GHG 618 3103 R0001	11.52
GHG 575 80808 R0830	6.43	GHG 592 2001 R0022	6.83	GHG 618 3103 R0002	11.52
GHG 575 81212 R1200	6.43	GHG 610 1940 R0001	11.31	GHG 618 3103 R0003	11.52
GHG 575 81212 R1210	6.43	GHG 610 1940 R0002	11.31	GHG 618 3103 R0004	11.52
GHG 575 81212 R1230	6.43	GHG 610 1953 R0011	10.14	GHG 618 3103 R0005	11.52
GHG 575 90404 R0400	6.43	GHG 610 1953 R0020	7.80	GHG 618 3103 R0006	11.52
GHG 575 90404 R0410	6.43	GHG 610 1953 R0041	7.80	GHG 618 3103 R0007	11.52
GHG 575 90404 R0430	6.43	GHG 610 1953 R0101	7.79	GHG 618 3103 R0008	11.52
GHG 575 90606 R0600	6.43	GHG 610 1953 R0102	7.79	GHG 618 3103 R0009	11.52
GHG 575 90606 R0610	6.43	GHG 610 1953 R0103	7.79	GHG 618 3103 R0010	11.52
GHG 575 90606 R0630	6.43	GHG 610 1953 R0104	7.79	GHG 618 3103 R0011	11.52
GHG 575 90808 R0800	6.43	GHG 610 1953 R0104	10.8	GHG 618 3103 R0012	11.52
GHG 575 90808 R0810	6.43	GHG 610 1953 R0105	7.79	GHG 635 1101 R0101	10.86
GHG 575 90808 R0830	6.43	GHG 610 1953 R0106	7.79	GHG 635 1101 R0102	10.86
GHG 575 91212 R1200	6.43	GHG 610 1953 R0107	7.79	GHG 635 1101 R0103	10.86
GHG 575 91212 R1210	6.43	GHG 610 1953 R0108	7.79	GHG 635 1101 R0104	10.86
GHG 575 91212 R1230	6.43	GHG 610 1953 R0109	7.79	GHG 635 1101 R0105	10.86
GHG 576 1601 R0001	6.42	GHG 610 1953 R0110	7.79	GHG 635 1101 R0106	10.86
GHG 576 1601 R0002	6.42	GHG 610 1953 R0118	7.79	GHG 635 1101 R0107	10.86
GHG 576 1601 R1001	6.42	GHG 610 1953 R0126	7.79	GHG 635 1101 R0108	10.86
GHG 576 1601 R1002	6.42	GHG 610 1953 R0128	7.79	GHG 635 1101 R0109	10.86
GHG 576 1605 R0001	6.42	GHG 610 1953 R0130	7.79	GHG 635 1101 R0110	10.86
GHG 576 1605 R0002	6.42	GHG 610 1953 R0134	7.80	GHG 635 1101 R0111	10.86
GHG 576 1605 R1001	6.42	GHG 610 1953 R0152	6.63	GHG 635 1101 R0112	10.86
GHG 576 1605 R1002	6.42	GHG 610 1955 R0101	7.80	GHG 635 1101 R0113	10.86
GHG 576 1610 R0001	6.42	GHG 610 1955 R0102	7.80	GHG 635 1101 R0114	10.86

1
2
3
4
5
6
7
8
9
10
11
12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
GHG 640 1901 R0001	11.75	GHG 721 0001 R0011	7.18	GHG 791 0101 R0069	7.6
GHG 640 1902 R0001	11.75	GHG 721 0001 R0012	7.18	GHG 791 0101 R 5006	6.48
GHG 640 1903 R0001	11.75	GHG 721 0001 R0013	7.74	GHG 791 0101 R 5106	6.48
GHG 640 1904 R0001	11.75	GHG 721 0001 R0014	7.74	GHG 791 0101 R 5201	6.48
GHG 640 1905 R0001	11.75	GHG 721 1001 R0003	7.18	GHG 791 0101 R 5202	6.48
GHG 640 1906 R0001	11.75	GHG 721 1001 R0004	7.18	GHG 791 0101 R 5203	6.48
GHG 640 1907 R0001	11.75	GHG 721 1001 R0013	7.18	GHG 791 0101 R 5204	6.48
GHG 640 1908 R0001	11.75	GHG 721 1001 R0015	7.18	GHG 791 0101 R 5206	6.48
GHG 640 1909 R0001	11.75	GHG 721 1001 R0017	7.18	GHG 791 0101 R 5208	6.48
GHG 640 1910 R0001	11.75	GHG 721 1001 R0018	7.18	GHG 791 0101 R 5210	6.48
GHG 640 1911 R0001	11.75	GHG 721 1001 R0019	7.18	GHG 791 0101 R 5212	6.48
GHG 640 9601 P0001	2.69	GHG 723 0001 R0002	7.30	GHG 791 0101 R 5213	6.48
GHG 640 9601 P0002	2.69	GHG 723 1001 R0002	7.30	GHG 791 0101 R 5214	6.48
GHG 640 9601 P0003	2.69	GHG 723 2001 R0002	7.30	GHG 791 0101 R 5215	6.48
GHG 640 9602 P0001	11.78	GHG 731 1102 R0531	7.16	GHG 791 0101 R 5216	6.48
GHG 640 9603 P0001	11.78	GHG 731 1102 R1088	7.16	GHG 791 0101 R 5217	6.48
GHG 640 9603 P0002	11.78	GHG 731 1102 R1485	7.16	GHG 791 0101 R 5218	6.48
GHG 640 9604 P0001	11.78	GHG 731 1201 R 5001	6.49	GHG 791 0101 R 5219	6.48
GHG 640 9606 P0001	11.78	GHG 731 1201 R 5002	6.49	GHG 791 0101 R 5220	6.48
GHG 640 9607 P0001	11.78	GHG 731 1202 R0387	7.16	GHG 791 0101 R 5221	6.48
GHG 640 9607 P0002	11.78	GHG 731 1202 R0976	7.16	GHG 791 0101 R 5222	6.48
GHG 640 9607 P0003	11.78	GHG 731 1202 R1345	7.16	GHG 791 0101 R 5223	6.48
GHG 640 9607 P0004	11.78	GHG 744 0101 R0005	7.21	GHG 791 0101 R 5224	6.48
GHG 640 9607 P0005	11.78	GHG 744 2101 R0001	7.71	GHG 791 0101 R 5226	6.49
GHG 640 9607 P0006	11.78	GHG 745 0201 R0002	7.75	GHG 791 0101 R 5227	6.49
GHG 640 9608 P0001	11.78	GHG 745 0201 R0003	7.75	GHG 791 0101 R 5228	6.49
GHG 640 9612 P0001	11.78	GHG 745 0201 R0004	7.21	GHG 791 0201 R0001	7.6
GHG 640 9614 P0001	11.78	GHG 745 0201 R0012	7.21	GHG 791 0201 R0002	7.6
GHG 640 9614 P0001	11.78	GHG 745 0201 R0013	7.21	GHG 791 0201 R0003	7.6
GHG 640 9614 P0002	11.78	GHG 745 0201 R0014	7.21	GHG 791 0201 R0006	7.6
GHG 640 9614 P0003	11.78	GHG 745 0201 R0015	7.21	GHG 791 0201 R0007	7.6
GHG 640 9614 P0004	11.78	GHG 745 0201 R0016	7.21	GHG 791 0201 R0008	7.13
GHG 640 9614 P0005	11.78	GHG 745 0201 R0017	7.21	GHG 791 0201 R0009	7.13
GHG 640 9617 P0001	11.78	GHG 745 0201 R0018	7.21	GHG 791 0201 R0010	7.13
GHG 640 9617 P0002	11.78	GHG 745 0201 R0020	7.21	GHG 791 0201 R0011	7.13
GHG 640 9617 P0003	11.78	GHG 745 0201 R0021	7.21	GHG 791 0201 R0013	7.13
GHG 640 9617 P0004	11.78	GHG 745 0201 R0022	7.21	GHG 791 0201 R0014	7.13
GHG 640 9617 P0005	11.78	GHG 745 2201 R0001	7.71	GHG 791 0201 R0015	7.13
GHG 640 9617 P0006	11.78	GHG 746 0301 R0001	7.73	GHG 791 0201 R0016	7.73
GHG 640 9617 P0007	11.78	GHG 746 0301 R0002	7.24	GHG 791 0201 R 5001	6.49
GHG 640 9617 P0008	11.78	GHG 746 0301 R0008	7.73	GHG 791 0201 R 5002	6.49
GHG 640 9617 P0009	11.78	GHG 746 0301 R0020	7.73	GHG 791 0201 R 5003	6.49
GHG 640 9617 P0010	11.78	GHG 746 2301 R0001	7.71	GHG 791 0201 R 5004	6.49
GHG 640 9617 P0011	11.78	GHG 749 0401 R0001	7.24	GHG 791 0201 R 5005	6.49
GHG 640 9617 P0012	11.78	GHG 749 2401 R0001	7.71	GHG 791 0201 R 5006	6.49
GHG 660 1915 R0001	4.43	GHG 791 0101 R0001	7.6	GHG 791 0201 R 5007	6.49
GHG 660 1915 R0002	4.43	GHG 791 0101 R0002	7.6	GHG 791 0201 R 5008	6.49
GHG 690 1913 R0001	4.26	GHG 791 0101 R0003	7.13	GHG 791 0201 R 5009	6.49
GHG 690 1913 R0002	4.26	GHG 791 0101 R0004	7.13	GHG 791 0201 R 5011	6.49
GHG 690 1921 R0003	4.26	GHG 791 0101 R0005	7.13	GHG 793 0101 R0001	7.9
GHG 690 9216 P0001	4.62	GHG 791 0101 R0006	7.13	GHG 793 0101 R0002	7.9
GHG 721 0001 R0005	7.18	GHG 791 0101 R0008	7.13	GHG 870 1912 R 0001	3.22
GHG 721 0001 R0006	7.18	GHG 791 0101 R0009	7.13	GHG 870 9302 P 0002	3.22
GHG 721 0001 R0007	7.18	GHG 791 0101 R0010	7.13	GHG 871 1001 R 0001	3.22
GHG 721 0001 R0008	7.18	GHG 791 0101 R0019	7.6	GHG 871 1001 R 0101	3.22
GHG 721 0001 R0010	7.18	GHG 791 0101 R0068	7.6	GHG 871 1101 R 0001	3.22

Order No.	Page	Order No.	Page	Order No.	Page
GHG 871 1101 R 0101	3.22	GHG 960 1951 R0001	8.9	GHG 981 0030 R0002	10.46
GHG 871 1201 R 0001	3.22	GHG 960 1951 R0002	8.9	GHG 981 0031 R0001	10.49
GHG 871 1201 R 0101	3.22	GHG 960 1952 R0111	8.5	GHG 981 0031 R0002	10.49
GHG 871 1301 R 0001	3.22	GHG 960 1952 R0112	8.5	GHG 981 0032 R0001	10.49
GHG 871 1301 R 0101	3.22	GHG 960 1952 R0113	8.5	GHG 981 0032 R0002	10.49
GHG 871 2001 R 0001	3.22	GHG 960 1952 R0114	8.5	GHG 981 0037 R0001	10.38
GHG 871 2001 R 0101	3.22	GHG 960 1952 R0115	8.5	GHG 981 0037 R0002	10.38
GHG 931 0003 R0011	6.130	GHG 960 1952 R0116	8.5	GHG 981 0038 R0001	10.38
GHG 931 0003 R0012	6.130	GHG 960 1952 R0117	8.5	GHG 981 0038 R0002	10.38
GHG 931 0003 R0013	6.130	GHG 960 1954 R0002	8.8	GHG 981 0039 R0001	10.41
GHG 931 0003 R0021	6.130	GHG 960 1954 R0004	8.8	GHG 981 0039 R0002	10.41
GHG 931 0003 R0022	6.130	GHG 960 1955 R 0001	8.4	GHG 981 0042 R0001	6.127
GHG 931 0003 R0023	6.130	GHG 960 1955 R 0002	8.4	GHG 981 0043 R0001	6.127
GHG 931 0003 R0031	6.131	GHG 960 1955 R 0003	8.4	HLVS23030081-B-HASP	7.60
GHG 931 0003 R0032	6.131	GHG 960 1955 R 0004	8.4	KO 731713 W0001	10.52
GHG 931 0003 R0033	6.131	GHG 960 1955 R 0005	8.4	KO 731713 X0001	10.54
GHG 931 0003 R0034	6.131	GHG 960 1955 R 0021	8.4	KO 731713 Y0001	10.56
GHG 931 0003 R0035	6.131	GHG 960 1955 R 0022	8.4	KO 731716 W0001	10.52
GHG 931 0003 R0036	6.131	GHG 960 1955 R 0023	8.4	KO 731723 W0001	10.52
GHG 931 0004 R0001	6.131	GHG 960 1955 R 0024	8.4	KO 731723 X0001	10.54
GHG 931 0005 R0001	6.131	GHG 960 1955 R 0025	8.4	KO 731723 Y0001	10.56
GHG 931 0006 R0001	6.131	GHG 960 1955 R 0026	8.4	KO 731726 W0001	10.52
GHG 931 0007 R0001	6.131	GHG 960 1955 R 0027	8.4	NOR 000 000 115 015	7.34
GHG 960 1927 R0105	8.8	GHG 960 1955 R 0028	8.4	NOR 000 000 115 302	7.34
GHG 960 1941 R0031	8.9	GHG 960 1955 R0054	8.4	NOR 000 000 115 306	7.34
GHG 960 1941 R0032	8.9	GHG 960 1955 R0055	8.4	NOR 000 000 115 311	7.34
GHG 960 1941 R0033	8.9	GHG 960 1955 R0101	8.4	NOR 000 000 115 314	7.34
GHG 960 1941 R0034	8.9	GHG 960 1955 R0102	8.4	NOR 000 000 506 907	3.18
GHG 960 1941 R0035	8.9	GHG 960 1955 R0103	8.4	NOR 000 000 506 915	3.18
GHG 960 1941 R0036	8.9	GHG 960 1955 R0104	8.4	NOR 000 000 506 965	3.18
GHG 960 1941 R0037	8.9	GHG 960 1955 R0105	8.4	NOR 000 000 506 966	3.18
GHG 960 1941 R0038	8.9	GHG 960 1955 R0121	8.4	NOR 000 000 507 319	2.53
GHG 960 1944 R0101	8.5	GHG 960 1955 R0122	8.4	NOR 000 000 507 385	2.53
GHG 960 1944 R0102	8.5	GHG 960 1955 R0123	8.4	NOR 000 000 507 393	2.53
GHG 960 1944 R0103	8.5	GHG 960 1955 R0124	8.4	NOR 000 000 514 529	4.62
GHG 960 1944 R0104	8.5	GHG 960 1955 R0125	8.4	NOR 000 001 151 181	7.34
GHG 960 1944 R0105	8.5	GHG 960 1955 R0126	8.4	NOR 000 001 151 199	7.34
GHG 960 1944 R0106	8.5	GHG 960 1955 R0127	8.4	NOR 000 001 151 206	7.34
GHG 960 1944 R0107	8.5	GHG 960 1955 R0128	8.4	NOR 000 001 151 214	7.34
GHG 960 1944 R0108	8.5	GHG 960 1956 R0002	8.4	NOR 000 001 151 222	7.34
GHG 960 1946 R0056	8.5	GHG 960 1956 R0003	8.4	NOR 000 001 160 116	11.100
GHG 960 1946 R0059	8.5	GHG 960 1956 R0004	8.4	NOR 000 001 160 124	11.100
GHG 960 1946 R0062	8.5	GHG 960 1956 R0005	8.4	NOR 000 001 160 132	11.100
GHG 960 1946 R0065	8.5	GHG 960 1956 R0006	8.4	NOR 000 001 170 000	11.89
GHG 960 1946 R0071	8.5	GHG 960 1956 R0007	8.4	NOR 000 001 170 001	11.89
GHG 960 1946 R0072	8.5	GHG 981 0014 R0011	10.36	NOR 000 001 170 002	11.89
GHG 960 1946 R0074	8.5	GHG 981 0014 R0012	10.36	NOR 000 001 170 003	11.89
GHG 960 1946 R0077	8.5	GHG 981 0024 R0001	10.41	NOR 000 001 170 004	11.87
GHG 960 1946 R0080	8.5	GHG 981 0024 R0002	10.41	NOR 000 001 170 005	11.87
GHG 960 1946 R0083	8.5	GHG 981 0025 R0001	10.44	NOR 000 001 170 006	11.87
GHG 960 1949 R0111	8.7	GHG 981 0025 R0002	10.44	NOR 000 001 170 007	11.87
GHG 960 1949 R0112	8.7	GHG 981 0026 R0001	10.44	NOR 000 001 170 008	11.87
GHG 960 1949 R0113	8.7	GHG 981 0026 R0002	10.44	NOR 000 001 170 009	11.87
GHG 960 1949 R0114	8.7	GHG 981 0029 R0001	10.46	NOR 000 001 170 010	11.87
GHG 960 1949 R0115	8.7	GHG 981 0029 R0002	10.46	NOR 000 001 170 011	11.87
GHG 960 1949 R0116	8.7	GHG 981 0030 R0001	10.46	NOR 000 001 170 012	11.87

1

2

3

4

5

6

7

8

9

10

11

12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
NOR 000 001 170 013	11.87	NOR 000 002 260 589	8.25	NOR 000 005 070 335	2.53
NOR 000 001 170 014	11.87	NOR 000 002 260 741	8.26	NOR 000 005 070 402	2.53
NOR 000 001 170 015	11.87	NOR 000 002 260 759	8.26	NOR 000 005 070 403	2.53
NOR 000 001 170 016	11.87	NOR 000 002 260 767	8.26	NOR 000 005 070 428	2.53
NOR 000 001 170 017	11.87	NOR 000 002 260 791	8.26	NOR 000 005 070 429	2.53
NOR 000 001 170 018	11.87	NOR 000 002 260 808	8.26	NOR 000 005 110 745	4.12
NOR 000 001 170 019	11.87	NOR 000 002 260 824	8.26	NOR 000 005 110 753	4.16
NOR 000 001 170 020	11.87	NOR 000 002 260 886	8.24	NOR 000 005 110 754	4.16
NOR 000 001 170 021	11.87	NOR 000 002 260 890	8.24	NOR 000 005 110 761	4.16
NOR 000 001 170 022	11.87	NOR 000 002 260 915	8.24	NOR 000 005 110 762	4.16
NOR 000 001 170 023	11.87	NOR 000 002 260 923	8.24	NOR 000 005 110 763	4.16
NOR 000 001 170 024	11.87	NOR 000 003 110 937	9.127	NOR 000 005 110 828	4.22
NOR 000 001 170 025	11.87	NOR 000 003 110 945	9.127	NOR 000 005 110 836	4.22
NOR 000 001 170 026	11.89	NOR 000 003 110 953	9.127	NOR 000 005 110 852	4.22
NOR 000 001 170 027	11.89	NOR 000 003 110 995	9.127	NOR 000 005 110 860	4.22
NOR 000 001 170 028	11.89	NOR 000 003 230 016	6.85	NOR 000 005 110 878	4.22
NOR 000 001 170 029	11.89	NOR 000 003 230 024	6.85	NOR 000 005 110 886	4.22
NOR 000 001 170 030	11.89	NOR 000 003 230 032	6.85	NOR 000 005 110 894	4.22
NOR 000 001 170 031	11.89	NOR 000 003 230 058	6.85	NOR 000 005 110 901	4.22
NOR 000 001 170 032	11.89	NOR 000 003 230 074	6.85	NOR 000 005 110 935	4.22
NOR 000 001 170 033	11.89	NOR 000 005 009 162	4.9	NOR 000 005 110 941	4.16
NOR 000 001 170 034	11.89	NOR 000 005 009 196	4.9	NOR 000 005 110 942	4.16
NOR 000 001 170 035	11.89	NOR 000 005 060 070	4.9	NOR 000 005 110 943	4.22
NOR 000 001 170 036	11.91	NOR 000 005 060 071	4.9	NOR 000 005 110 951	4.22
NOR 000 001 170 037	11.91	NOR 000 005 060 072	4.9	NOR 000 005 110 969	4.22
NOR 000 001 170 038	11.91	NOR 000 005 060 300	2.49	NOR 000 005 110 977	4.22
NOR 000 001 170 039	11.91	NOR 000 005 060 301	2.49	NOR 000 005 120 123	4.7
NOR 000 001 170 116	11.87	NOR 000 005 060 308	2.49	NOR 000 005 120 124	4.7
NOR 000 001 170 117	11.87	NOR 000 005 060 309	2.49	NOR 000 005 120 125	4.7
NOR 000 001 170 118	11.87	NOR 000 005 060 316	2.49	NOR 000 005 120 439	4.7
NOR 000 001 170 154	11.89	NOR 000 005 060 317	2.49	NOR 000 005 129 027	4.7
NOR 000 001 170 438	11.83	NOR 000 005 060 346	2.49	NOR 000 005 140 010	4.47
NOR 000 001 170 446	11.83	NOR 000 005 060 347	2.49	NOR 000 005 140 015	4.47
NOR 000 001 170 462	11.83	NOR 000 005 060 354	2.49	NOR 000 005 140 700	4.47
NOR 000 001 170 488	11.83	NOR 000 005 060 355	2.49	NOR 000 005 140 701	4.47
NOR 000 001 170 496	11.83	NOR 000 005 060 362	2.49	NOR 000 005 140 776	4.47
NOR 000 001 170 503	11.83	NOR 000 005 060 363	2.49	NOR 000 005 140 809	4.47
NOR 000 001 170 511	11.83	NOR 000 005 060 669	2.49	NOR 000 005 140 897	4.47
NOR 000 001 170 529	11.83	NOR 000 005 060 670	2.49	NOR 000 005 140 900	4.47
NOR 000 001 170 537	11.83	NOR 000 005 060 820	3.18	NOR 000 005 140 919	4.47
NOR 000 001 170 545	11.83	NOR 000 005 060 837	3.18	NOR 000 005 160 012	3.18
NOR 000 001 170 553	11.83	NOR 000 005 070 022	2.53	NOR 000 005 160 013	3.18
NOR 000 001 170 565	11.89	NOR 000 005 070 023	2.53	NOR 000 005 160 014	3.18
NOR 000 001 170 569	11.89	NOR 000 005 070 030	2.53	NOR 000 005 160 015	3.18
NOR 000 001 170 600	11.89	NOR 000 005 070 031	2.53	NOR 000 005 170 583	4.36
NOR 000 001 170 892	11.89	NOR 000 005 070 064	2.53	NOR 000 005 170 591	4.36
NOR 000 001 170 909	11.89	NOR 000 005 070 065	2.53	NOR 000 005 170 608	4.36
NOR 000 001 170 917	11.89	NOR 000 005 070 300	2.53	NOR 000 005 170 715	4.36
NOR 000 001 170 925	11.89	NOR 000 005 070 301	2.53	NOR 000 005 180 013	4.55
NOR 000 001 170 933	11.89	NOR 000 005 070 308	2.53	NOR 000 005 180 014	4.55
NOR 000 001 190 062	11.83	NOR 000 005 070 309	2.53	NOR 000 005 180 015	4.55
NOR 000 001 190 064	11.83	NOR 000 005 070 316	2.53	NOR 000 005 190 021	4.32
NOR 000 001 190 139	11.83	NOR 000 005 070 317	2.53	NOR 000 005 190 022	4.55
NOR 000 001 190 171	11.83	NOR 000 005 070 328	2.53	NOR 000 005 190 023	4.32
NOR 000 001 190 197	11.83	NOR 000 005 070 329	2.53	NOR 000 005 190 026	4.32
NOR 000 002 230 066	6.85	NOR 000 005 070 333	2.53	NOR 000 005 192 501	4.30

Order No.	Page	Order No.	Page	Order No.	Page
NOR 000 005 192 502	4.30	NOR 000 112 260 748	8.25	NOR 000 115 110 890	4.14
NOR 000 005 192 503	4.30	NOR 000 112 260 764	8.25	NOR 000 115 110 891	4.14
NOR 000 005 192 504	4.30	NOR 000 112 260 780	8.25	NOR 000 115 110 903	4.14
NOR 000 005 192 505	4.30	NOR 000 112 260 798	8.25	NOR 000 115 110 941	4.16
NOR 000 005 192 506	4.30	NOR 000 112 260 805	8.25	NOR 000 115 110 942	4.16
NOR 000 005 192 507	4.30	NOR 000 112 260 813	8.25	NOR 000 115 110 943	4.16
NOR 000 005 192 508	4.30	NOR 000 114 110 511	9.127	NOR 000 115 110 944	4.16
NOR 000 005 194 001	4.30	NOR 000 114 110 540	9.127	NOR 000 115 110 945	4.21
NOR 000 005 194 002	4.30	NOR 000 114 110 553	9.127	NOR 000 115 170 149	4.36
NOR 000 005 194 003	4.30	NOR 000 114 110 587	9.127	NOR 000 115 170 209	4.36
NOR 000 005 194 004	4.30	NOR 000 114 110 595	9.127	NOR 000 115 170 215	4.36
NOR 000 005 194 005	4.30	NOR 000 114 110 738	9.127	NOR 000 115 170 221	4.36
NOR 000 005 194 006	4.30	NOR 000 114 110 740	9.127	NOR 000 115 170 222	4.36
NOR 000 005 194 007	4.30	NOR 000 114 110 747	9.127	NOR 000 115 170 227	4.36
NOR 000 005 194 008	4.30	NOR 000 114 110 748	9.127	NOR 000 115 170 229	4.36
NOR 000 005 194 101	4.30	NOR 000 115 110 046	4.21	NOR 000 115 170 230	4.36
NOR 000 005 194 102	4.30	NOR 000 115 110 079	4.21	NOR 000 115 170 233	4.36
NOR 000 005 194 103	4.30	NOR 000 115 110 080	4.21	NOR 000 115 170 243	4.36
NOR 000 005 194 104	4.30	NOR 000 115 110 086	4.21	NOR 000 115 170 244	4.36
NOR 000 005 194 105	4.30	NOR 000 115 110 087	4.21	NOR 000 115 170 245	4.36
NOR 000 005 194 106	4.30	NOR 000 115 110 088	4.21	NOR 000 115 170 246	4.36
NOR 000 005 194 107	4.30	NOR 000 115 110 289	4.12	NOR 000 115 170 248	4.36
NOR 000 005 194 108	4.30	NOR 000 115 110 292	4.12	NOR 000 115 170 251	4.36
NOR 000 111 150 001	7.34	NOR 000 115 110 320	4.12	NOR 000 115 170 257	4.36
NOR 000 111 150 002	7.34	NOR 000 115 110 321	4.12	NOR 000 115 170 309	4.36
NOR 000 111 150 003	7.34	NOR 000 115 110 389	4.12	NOR 000 115 170 315	4.36
NOR 000 111 150 004	7.34	NOR 000 115 110 396	4.14	NOR 000 115 170 321	4.36
NOR 000 111 150 005	7.34	NOR 000 115 110 397	4.14	NOR 000 115 170 322	4.36
NOR 000 111 150 006	7.34	NOR 000 115 110 420	4.12	NOR 000 115 170 327	4.36
NOR 000 111 150 009	7.34	NOR 000 115 110 437	4.14	NOR 000 115 170 333	4.36
NOR 000 111 170 451	11.83	NOR 000 115 110 438	4.14	NOR 000 115 170 343	4.36
NOR 000 111 170 469	11.83	NOR 000 115 110 718	4.12	NOR 000 115 170 344	4.36
NOR 000 111 170 601	11.83	NOR 000 115 110 753	4.16	NOR 000 115 170 345	4.36
NOR 000 111 170 606	11.83	NOR 000 115 110 850	4.19	NOR 000 115 170 346	4.36
NOR 000 112 260 037	8.26	NOR 000 115 110 851	4.19	NOR 000 115 170 348	4.36
NOR 000 112 260 053	8.26	NOR 000 115 110 852	4.19	NOR 000 115 170 349	4.36
NOR 000 112 260 152	8.26	NOR 000 115 110 853	4.19	NOR 000 222 260 373	8.26
NOR 000 112 260 160	8.26	NOR 000 115 110 854	4.19	NOR 000 222 260 399	8.26
NOR 000 112 260 178	8.26	NOR 000 115 110 855	4.19	NOR 000 222 260 422	8.25
NOR 000 112 260 392	8.25	NOR 000 115 110 856	4.19	NOR 000 222 260 430	8.25
NOR 000 112 260 409	8.25	NOR 000 115 110 857	4.19	NOR 000 222 260 464	8.25
NOR 000 112 260 417	8.25	NOR 000 115 110 870	4.14	NOR 000 222 260 472	8.25
NOR 000 112 260 425	8.25	NOR 000 115 110 873	4.14	NOR 000 222 260 513	8.26
NOR 000 112 260 433	8.25	NOR 000 115 110 874	4.12	NOR 000 222 260 521	8.26
NOR 000 112 260 441	8.25	NOR 000 115 110 875	4.12	NOR 000 222 260 539	8.26
NOR 000 112 260 459	8.25	NOR 000 115 110 879	4.21	NOR 000 222 260 547	8.25
NOR 000 112 260 467	8.25	NOR 000 115 110 880	4.21	NOR 000 222 260 555	8.25
NOR 000 112 260 590	8.24	NOR 000 115 110 881	4.21	NOR 000 222 260 563	8.25
NOR 000 112 260 607	8.24	NOR 000 115 110 882	4.21	NOR 000 222 260 571	8.25
NOR 000 112 260 612	8.25	NOR 000 115 110 883	4.21	NOR 000 222 260 604	8.26
NOR 000 112 260 623	8.24	NOR 000 115 110 884	4.21	NOR 000 222 260 620	8.26
NOR 000 112 260 631	8.24	NOR 000 115 110 885	4.21	NOR 000 222 260 638	8.25
NOR 000 112 260 657	8.24	NOR 000 115 110 886	4.21	NOR 000 222 260 646	8.25
NOR 000 112 260 706	8.25	NOR 000 115 110 887	4.21	NOR 000 222 260 733	8.25
NOR 000 112 260 714	8.26	NOR 000 115 110 888	4.21	NOR 000 222 260 753	8.24
NOR 000 112 260 722	8.25	NOR 000 115 110 889	4.21	NOR 000 222 260 761	8.24

1

2

3

4

5

6

7

8

9

10

11

12

Index of order code

Order No.	Page	Order No.	Page	Order No.	Page
NOR 000 222 260 779	8.24	NXTS19161200	7.46	PX 46500155	5.70
NOR 000 222 260 787	8.24	NXTS19874200	7.46	PX 46500156	5.70
NOR 000 222 260 810	8.24	NXTS19874201-HASP	7.46	PX 46500157	5.70
NOR 000 222 260 828	8.24	PX 16200174	5.9	PX 46500158	5.70
NOR 000 222 260 836	8.24	PX 17300108	5.53	PX 46500159	5.70
NOR 000 222 260 844	8.24	PX 17800002	5.43	PX 47600001	5.47
NOR 000 222 260 852	8.24	PX 26200043	5.15	PX 47600020	5.47
NOR 000 222 260 860	8.24	PX 26200055	5.15	PX 47600021	5.47
NOR 000 222 260 878	8.24	PX 26200056	5.15	PX 47600022	5.47
NOR 000 222 260 894	8.24	PX 26200057	5.15	PX 47600023	5.47
NOR 000 222 260 919	8.24	PX 26200058	5.15	PX 47600024	5.47
NOR 000 222 260 927	8.24	PX 26200059	5.15	PX 47600025	5.47
NOR 003 045 060 403	2.49	PX 26200060	5.15	PX 47600026	5.47
NOR 003 045 060 411	2.49	PX 26200061	5.15	PX 47600027	5.47
NOR 003 045 060 429	2.49	PX 26200062	5.15	PX 47600028	5.47
NOR 003 045 060 471	4.9	PX 26200063	5.15	PX 47600029	5.47
NOR 003 045 060 479	2.49	PX 27600029	5.29	PX 762311	5.39
NOR 003 045 060 495	2.49	PX 27600042	5.29	PX 800002	5.7
NOR 003 045 060 497	2.49	PX 27600043	5.29	PX 800003	5.7
NOR 003 045 060 819	4.9	PX 27600044	5.29	PX 800004	5.5
NOR 003 165 060 403	2.49	PX 27600045	5.29	PX 800005	5.5
NOR 003 165 060 411	2.49	PX 27600046	5.29	PX 800007	5.11
NOR 003 165 060 429	2.49	PX 27600047	5.29	PX 801001	5.53
NOR 003 165 060 471	4.9	PX 27600048	5.29	PX 803121	5.55
NOR 003 165 060 479	2.49	PX 27600049	5.29	PX 803122	5.55
NOR 003 165 060 495	2.49	PX 27600050	5.29	PX 803123	5.55
NOR 003 165 060 497	2.49	PX 27600051	5.29	PX 803124	5.55
NOR 003 165 060 819	4.9	PX 27600052	5.29	PX 804215	5.63
NOR 003 165 110 000	4.14	PX 27600053	5.29	PX 804225	5.63
NOR 003 165 110 001	4.14	PX 27600054	5.29	PX 805001	5.58
NXTPS13030163-HASP	7.40	PX 27600055	5.29	PX 805002	5.58
NXTPS13826201-HASP	7.44	PX 27600056	5.29	PX806003	5.51
NXTPS19161201-HASP	7.42	PX 27600057	5.29	PX 807006	5.59
NXTPS303520-HASP	7.43	PX 27600058	5.29	PX 807908	5.61
NXTPS62445203-HASP	7.45	PX 27600059	5.29	PX 807915	5.61
NXTS12215130	7.44	PX 27600060	5.29	PX 808401	5.66
NXTS12626160	7.44	PX 27800006	5.43	PX 808501	5.67
NXTS12626200	7.44	PX 28600006	5.65	PX 811050	5.27
NXTS13030160	7.44	PX 32500004	5.41	PX 811051	5.27
NXTS13030200	7.44	PX 32500028	5.41	PX 811052	5.27
NXTS13035201	7.47	PX 32500029	5.41	PX 811053	5.27
NXTS13826160	7.44	PX 32600035	5.45	PX 811101	5.25
NXTS13826200	7.44	PX 32600036	5.45	PX 811102	5.25
NXTS13845201	7.47	PX 32600037	5.45	PX 811104	5.25
NXTS13845202-HASP	7.47	PX 326023	5.45	PX 812101	5.33
NXTS14538160	7.45	PX 36200102	5.9	PX 812102	5.33
NXTS14538200	7.45	PX 42500005	5.13	PX 812103	5.33
NXTS14555201	7.47	PX 42600001	5.19	PX 812104	5.33
NXTS14848200	7.45	PX 42600007	5.19	PX 813005	5.23
NXTS15035200	7.45	PX 42600009	5.19	PX 813006	5.23
NXTS15064201	7.47	PX 46200052	5.39	PX 813007	5.23
NXTS162445203-HASP	7.41	PX 46200054	5.39	PX 813008	5.23
NXTS16245200	7.45	PX 46200096	5.39	PX 813009	5.23
NXTS17455200	7.45	PX 46500152	5.70	PX 814001	5.31
NXTS17650200	7.45	PX 46500153	5.70	PX 814002	5.31
NXTS18664200	7.46	PX 46500154	5.70	PX 815010	5.35

Order No.	Page	Order No.	Page	Order No.	Page
PX 819105	5.21	SGTE 0 22 1 1 2	9.63	XLHS16060200	7.53
PX 819106	5.21	SGTE 0 23 1 1 2	9.63	XLHS16076200	7.53
PX 819107	5.21	SGTE 0 24 1 1 2	9.63	XLHS16076203-B-HASP	7.53
PX 819108	5.21	SIL 1 10	9.69	XLHS17650200	7.53
PX 869101	5.7	SIL 3 11	9.69	XLHS17660200	7.53
PX 869111	5.53	SIL 4 34	9.69	XLHS17676200	7.53
PX 869115	5.53	SLT 0 13 10	9.56	XLVPS2016083-B-HASP	7.56
PX 869121	5.31	SLT 0 14 10	9.56	XLVPS2416061-B-HASP	7.58
PX 869122	5.31	SLT 0 15 10	9.56	XLVS10906050	7.54
PX 869125	5.31	SLT 0 20 0	9.56	XLVS11208060	7.54
PX 869126	5.31	SLT 0 20 10	9.56	XLVS11212060	7.54
PX 869131	5.55	SLT 0 21 10	9.56	XLVS11212080	7.54
PX 869132	5.55	SLT 0 22 10	9.56	XLVS11612060	7.55
PX 869135	5.55	SLT 0 23 10	9.56	XLVS11612080	7.55
PX 869142	5.63	SLT 0 24 10	9.56	XLVS11616060	7.55
PX 869144	5.63	STBPS1151509-UL	7.64	XLVS11616080	7.55
PX 869145	5.63	STBPS151509UL	7.66	XLVS11620060	7.56
PX 869150	5.58	STBS1121208	7.66	XLVS11620080	7.56
PX 869161	5.23	STBS1151208	7.66	XLVS12016060	7.56
PX 869162	5.23	STBS1151509	7.66	XLVS12016080	7.56
PX 869165	5.23	STBS1163812	7.67	XLVS12020060	7.57
PX 869166	5.23	STBS11638121UL	7.67	XLVS12020080	7.57
PX 869171	5.25	STBS1191509	7.66	XLVS12020081-B	7.57
PX 869172	5.25	STBS1191910	7.67	XLVS12024080	7.57
PX 869173	5.25	STBS1252512	7.67	XLVS12416060	7.58
PX 869174	5.25	STBS1254013	7.67	XLVS12416080	7.58
PX 869175	5.25	STBS13838220	7.68	XLVS12420060	7.58
PX 869181	5.33	STBS13838223	7.65	XLVS12420080	7.58
PX 869182	5.33	STBS14060220	7.68	XLVS12422083-B	7.59
PX 869185	5.33	STBS16040220	7.68	XLVS12424060	7.59
PX 869186	5.33	STBS3838223	7.68	XLVS12424080	7.59
SCT 4 04 07	9.67	XLHPS 3020153-B-HASP	7.50	XLVS12430080	7.59
SCT 4 24 07	9.67	XLHPS6050203-HASP	7.52	XLVS13020080	7.60
SCT 5 05 07	9.67	XLHS11208063-B	7.54	XLVS13024080	7.60
SCT 5 26 07	9.67	XLHS12315130	7.50	XLVS13030080	7.60
SCT 6 01 02	9.67	XLHS12626150	7.50	XLVS21616061-HASP	7.55
SCT 6 02 02	9.67	XLHS13020150	7.50	NOR 000 005 140 011	4.47
SCT 6 03 01	9.67	XLHS13030150	7.50	NOR 000 005 140 906	4.47
SCT 6 21 02	9.67	XLHS13030200	7.50	NOR 000 000 514 687	4.47
SCT 6 22 02	9.67	XLHS14030150	7.50	NOR 000 005 140 776	4.47
SCT 6 23 01	9.67	XLHS14030200	7.50	NOR 000 000 514 530	4.47
SCT 7 07 01	9.67	XLHS14040150	7.51		
SCT 7 27 01	9.67	XLHS14040200	7.51		
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SGT 0 14 01 3 1	9.63	XLHS14050200	7.51		
SGT 0 15 01 3 1	9.63	XLHS14050201-B-HASP	7.51		
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SGT 0 27 01 3 1	9.63	XLHS15050150	7.52		
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SGTE 0 15 1 1 2	9.63	XLHS16050150	7.52		
SGTE 0 20 1 1 2	9.63	XLHS16050200	7.52		
SGTE 0 21 1 1 2	9.63	XLHS16060150	7.53		

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