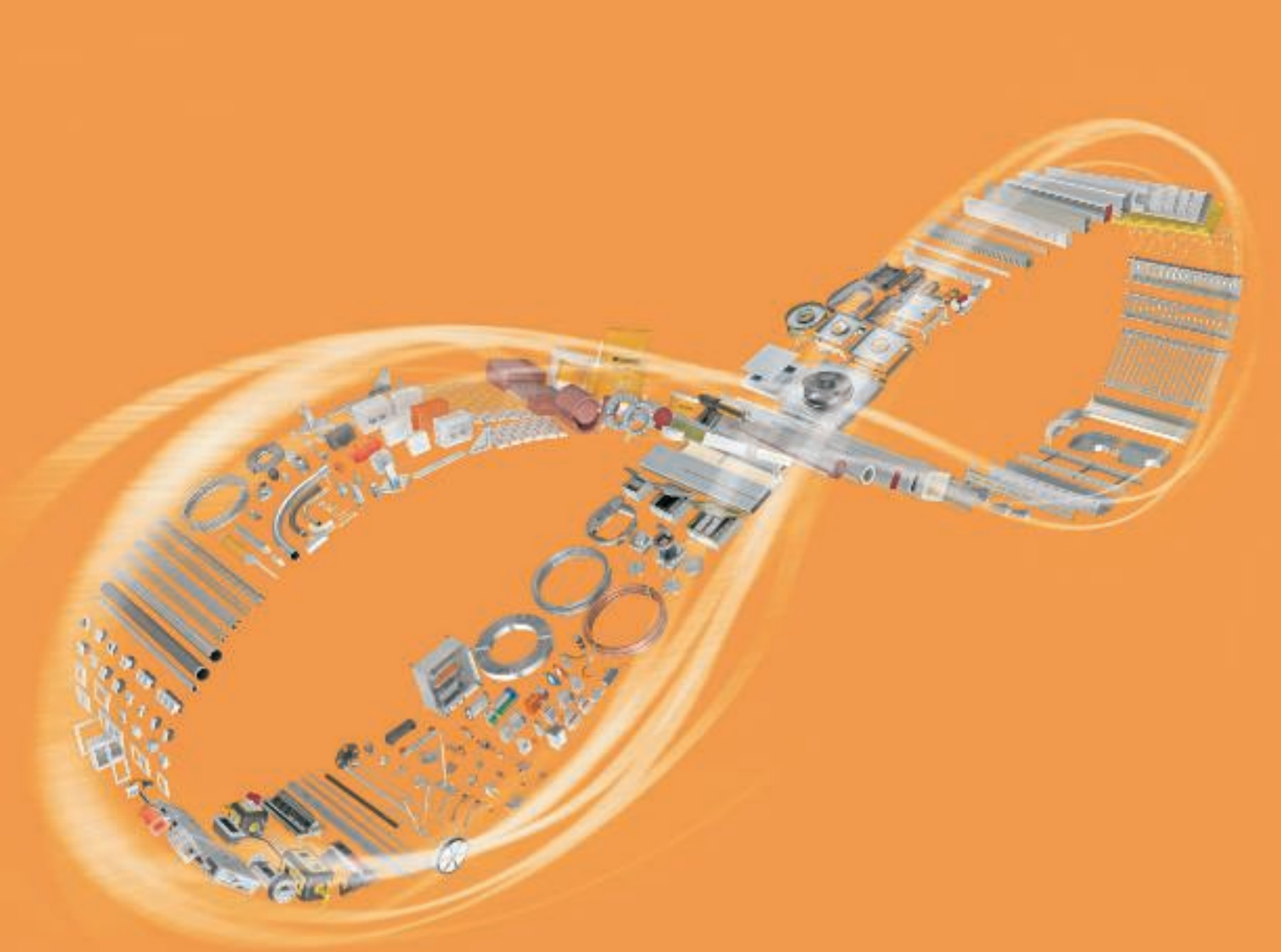


Catalogue 2014



Product innovations

THINK CONNECTED.



Endless possibilities. New products.





With more than 30,000 products, OBO opens up endless possibilities for the electrical infrastructure of a building. And this year again, we have expanded our range further. Our new or further developed products help to make an electrical installation safer, more convenient and more economic in all

areas of life. The product innovations catalogue is divided into seven OBO product areas and also has many practical tips regarding the installation. Benefit from the numerous advantages of our new products both at the planning stage as well as in daily installation situations.

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VBS product innovations

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|  | Screwless terminal, universal | 2-pin 3-pin 5-pin | 9 |
|  | Cable gland, separable | Sealing insert, closed Sealing insert, 1 cable Sealing insert, multiple | 10 |
|  | Accessories | Spreading pliers for sealing insert | 10 |

Screwless connection terminal for fine-wire cables

Simply plugged-in



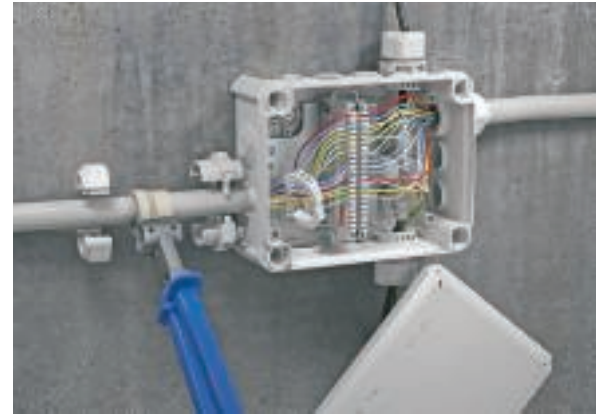
This is the easiest way to connect or disconnect cables and strands: OBO's new screwless connection terminals for flexible and rigid cables. The terminals available in three sizes for two, three and five terminal points, have a connection

cross-section of 0.2 to 2.5 square millimetres. Using these, it is particularly easy to install rigid cables. They can be plugged-in without even handling the release lever.



Cable gland for repairs

Easy to separate



Protracted dismantling of cables when changing cable glands is a thing of the past – the separate cable gland from OBO enables you to exchange them during the running production process, without any disruption. No more long disassembly and installation: Using the spreading pliers supplied, the separable seals can be put around the cable easily. Separable locknuts complete the system. With a connection thread size of M25x1.5, the cable glands are suitable for cable diameters of 7 to 20 millimetres. The range also comprises of multiple cable seals as well as a seal to "drill yourself". Because of the high protection class of IP 67 the glands can be used under the hardest conditions.



Junction box systems

Junction box without Wieland sockets, 3-pin 10 x



| Type | Version | Entries | Colour | Shipping box pcs | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------------|----------------|---------|------------|------------------|-----------|--------------------|------------------|
| T 100 WB3-10 | Wieland socket | 4 | Light grey | 40 | 1 | 15,300 | 2007 80 8 |

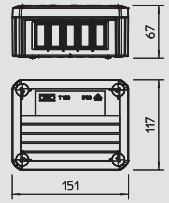
PP Polypropylene /pc.

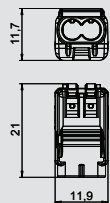
All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.

The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.

Caution:

According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.





Screwless terminal, universal, 2-pin

| Type | Colour | Shipping box pcs | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|-------------|------------------|-----------|--------------------|------------------|
| | | | | | |
| 61 225 FL | Transparent | 2000 | 100 | 0,200 | 2054 45 0 |

PC Polycarbonate /100 pc.

Tested according to EN 60998 Screwless terminal to connect single-strand cables to multiple-strand cables. The type of cable can either be flexible or rigid.

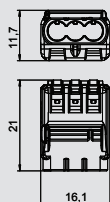
If rigid cables are used, an opening of the release lever is not necessary. The wire can be plugged into the terminal directly.
To extract the wires, simply open the release lever. The strand can then be easily pulled-out.
Nominal cross-section:
2 x 0.2 mm² - 2.5 mm² multiple cables or single-strand cables
Nominal voltage 450 V
Nominal current 24 A
Stripping length: 9 mm (+1 mm)
Inspection opening: phase tester and testing pin (max. Ø 2 mm) easily accessible at the top of the terminal
Max. admissible ambient temperature according to EN 60998: 85°C.

Technical data UL (USA)
Nominal voltage 600V
Nominal current 20A
Attachment area AWG 14-24
Ambient temperature. max. 120°C



Available from 01/07/2014

VBS



Screwless terminal, universal, 3-pin

| Type | Colour | Shipping box pcs | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|-------------|------------------|-----------|--------------------|------------------|
| | | | | | |
| 61 325 FL | Transparent | 1500 | 100 | 0,270 | 2054 45 4 |

PC Polycarbonate /100 pc.

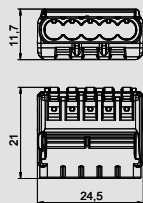
Tested according to EN 60998 Screwless terminal to connect single-strand cables to multiple-strand cables. The type of cable can either be flexible or rigid.

If rigid cables are used, an opening of the release lever is not necessary. The wire can be plugged into the terminal directly.
To extract the wires, simply open the release lever. The strand can then be easily pulled-out.
Nominal cross-section:
3 x 0.2 mm² - 2.5 mm² multiple cables or single-strand cables
Nominal voltage 450 V
Nominal current 24 A
Stripping length: 9 mm (+1 mm)
Inspection opening: phase tester and testing pin (max. Ø 2 mm) easily accessible at the top of the terminal
Max. admissible ambient temperature according to EN 60998: 85°C.

Technical data UL (USA)
Nominal voltage 600V
Nominal current 20A
Attachment area AWG 14-24
Ambient temperature. max. 120°C



Available from 01/07/2014



Screwless terminal, universal, 5-pin

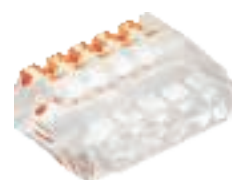
| Type | Colour | Shipping box pcs | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|-------------|------------------|-----------|--------------------|------------------|
| | | | | | |
| 61 525 FL | Transparent | 1000 | 100 | 0,410 | 2054 45 8 |

PC Polycarbonate /100 pc.

Tested according to EN 60998 Screwless terminal to connect single-strand cables to multiple-strand cables. The type of cable can either be flexible or rigid.

If rigid cables are used, an opening of the release lever is not necessary. The wire can be plugged into the terminal directly.
To extract the wires, simply open the release lever. The strand can then be easily pulled-out.
Nominal cross-section:
5 x 0.2 mm² - 2.5 mm² multiple cables or single-strand cables
Nominal voltage 450 V
Nominal current 24 A
Stripping length: 9 mm (+1 mm)
Inspection opening: phase tester and testing pin (max. Ø 2 mm) easily accessible at the top of the terminal
Max. admissible ambient temperature according to EN 60998: 85°C.

Technical data UL (USA)
Nominal voltage 600V
Nominal current 20A
Attachment area AWG 14-24
Ambient temperature. max. 120°C



Available from 01/07/2014

Cable fastening systems



Separable cable gland, sealing insert closed

| Type | Thread | Sealing range D mm | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------|---------|-----------------------|------------|--------------|-----------------------|-----------|
| V-TEC TB25 | M25x1.5 | – | Light grey | 5 | | 2024 91 0 |

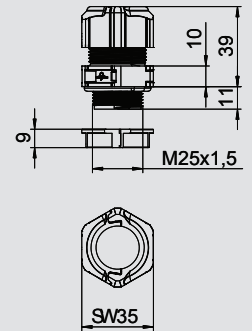
PC Polycarbonate

/pc.

The V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable.

The fact that the cable gland is separable means that it is easy and quick to install for instance pre-terminated cables. A further benefit is the option of retrofitting cables in existing installations. It is also unbeatable as a "repair gland", there is no need of disassembling pre-mounted cables, it can be installed without interrupting the production process.

The closed sealing insert provides the option to universally drill the required sealing diameter(s). The ideal aiding tools are the spreading pliers which can be used to open the sealing insert. Placing the individual cables becomes easy quick.



Separable cable gland, sealing insert, 1 cable

| Type | Thread | Sealing range D mm | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------|-----------------------|------------|--------------|-----------------------|-----------|
| V-TEC TB25 07-10 | M25x1.5 | 7-10.5 | Light grey | 5 | | 2024 91 3 |
| V-TEC TB25 09-13 | M25x1.5 | 9-13 | Light grey | 5 | | 2024 91 6 |
| V-TEC TB25 11-15 | M25x1.5 | 11.5-15.5 | Light grey | 5 | | 2024 91 9 |
| V-TEC TB25 14-18 | M25x1.5 | 14-18 | Light grey | 5 | | 2024 92 2 |
| V-TEC TB25 17-20 | M25x1.5 | 17-20.5 | Light grey | 5 | | 2024 92 5 |

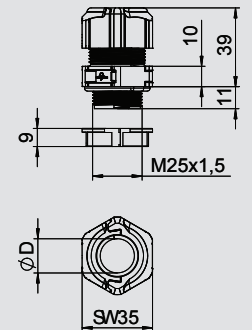
PC Polycarbonate

/pc.

The V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable.

The fact that the cable gland is separable means that it is easy and quick to install for instance pre-terminated cables. A further benefit is the option of retrofitting cables in existing installations. It is also unbeatable as a "repair gland", there is no need of disassembling pre-mounted cables, it can be installed without interrupting the production process.

The various sealing inserts provide the option to seal cables of 7 to 20.5 mm depending on the selected sealing insert. The ideal aiding tools are the spreading pliers which can be used to open the sealing insert. Placing the individual cables becomes easy and quick.



Separable cable gland, sealing insert, multiple

| Type | Thread | Sealing range D mm | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------------|---------|-----------------------|------------|--------------|-----------------------|-----------|
| V-TEC TB25 3x9 | M25x1.5 | – | Light grey | 5 | | 2024 92 8 |
| V-TEC TB25 4x8 | M25x1.5 | – | Light grey | 5 | | 2024 93 1 |

PC Polycarbonate

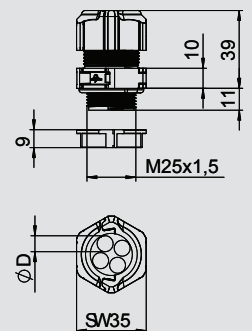
/pc.

The V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable.

The fact that the cable gland is separable means that it is easy and quick to install for instance pre-terminated cables. A further benefit is the option of retrofitting cables in existing installations. It is also unbeatable as a "repair gland", there is no need of disassembling pre-mounted cables, it can be installed without interrupting the production process.

Further multiple sealing inserts upon request.

When using a multiple sealing insert, several cables/wires can be led and sealed through a gland. Not required drill holes have to be closed with a plug. The ideal aiding tools are the spreading pliers which can be used to open the sealing insert. Placing the individual cables becomes easy and quick.



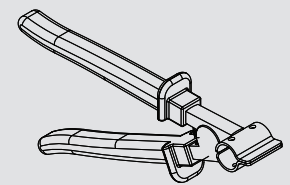
Spreading pliers for sealing insert

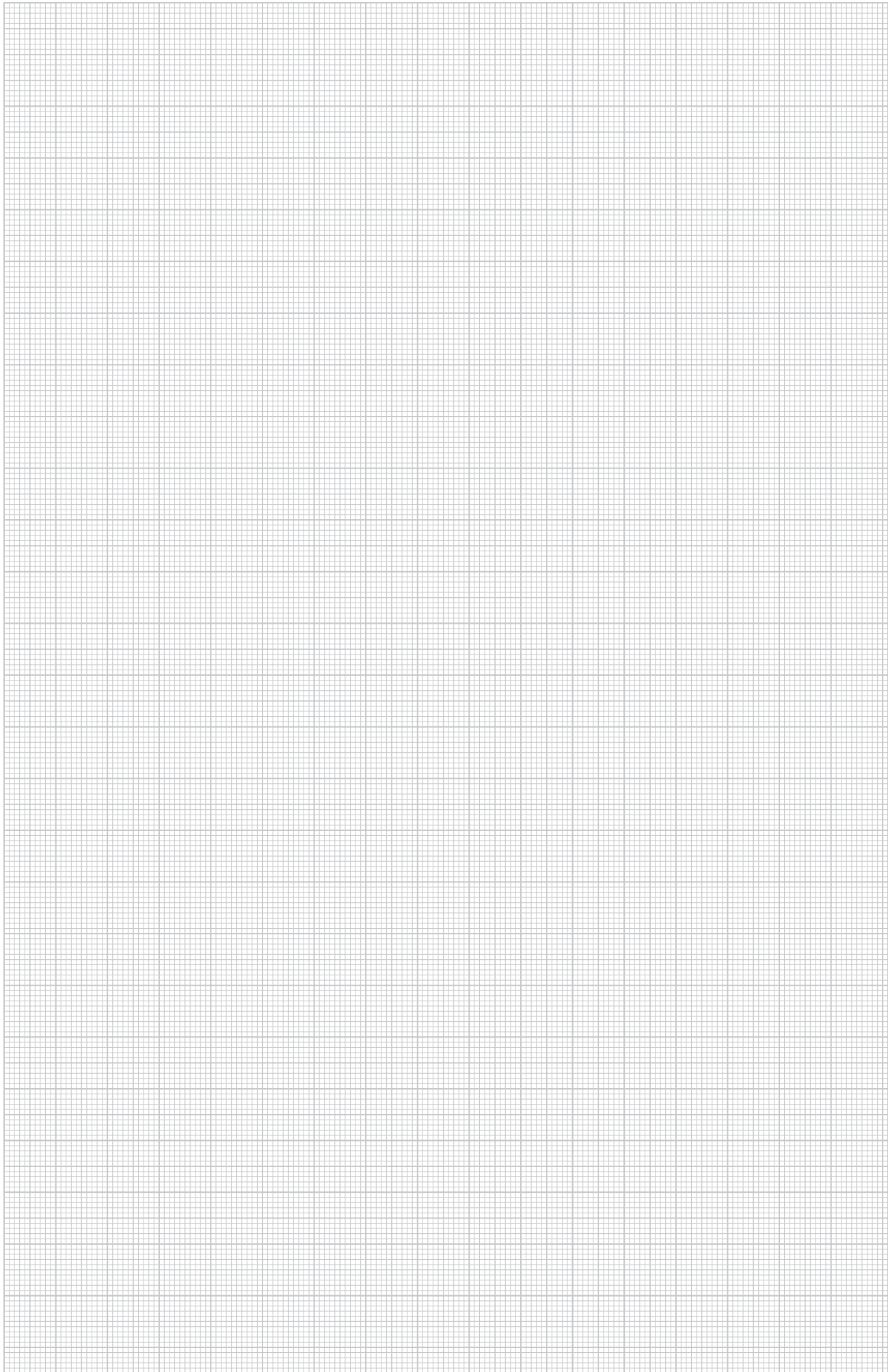
| Type | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|--------------|-----------------------|-----------|
| V-TEC TBZ | 1 | | 2024 90 0 |

/pc.









The ideal aiding tools are the spreading pliers which can be used to open the sealing insert. The ideal aiding tools are the spreading pliers which can be used to open the sealing insert.

Place the cable into the spreading pliers, insert the spreading pliers into the sealing separation and then open them. Now the cable can easily be placed into the sealing.





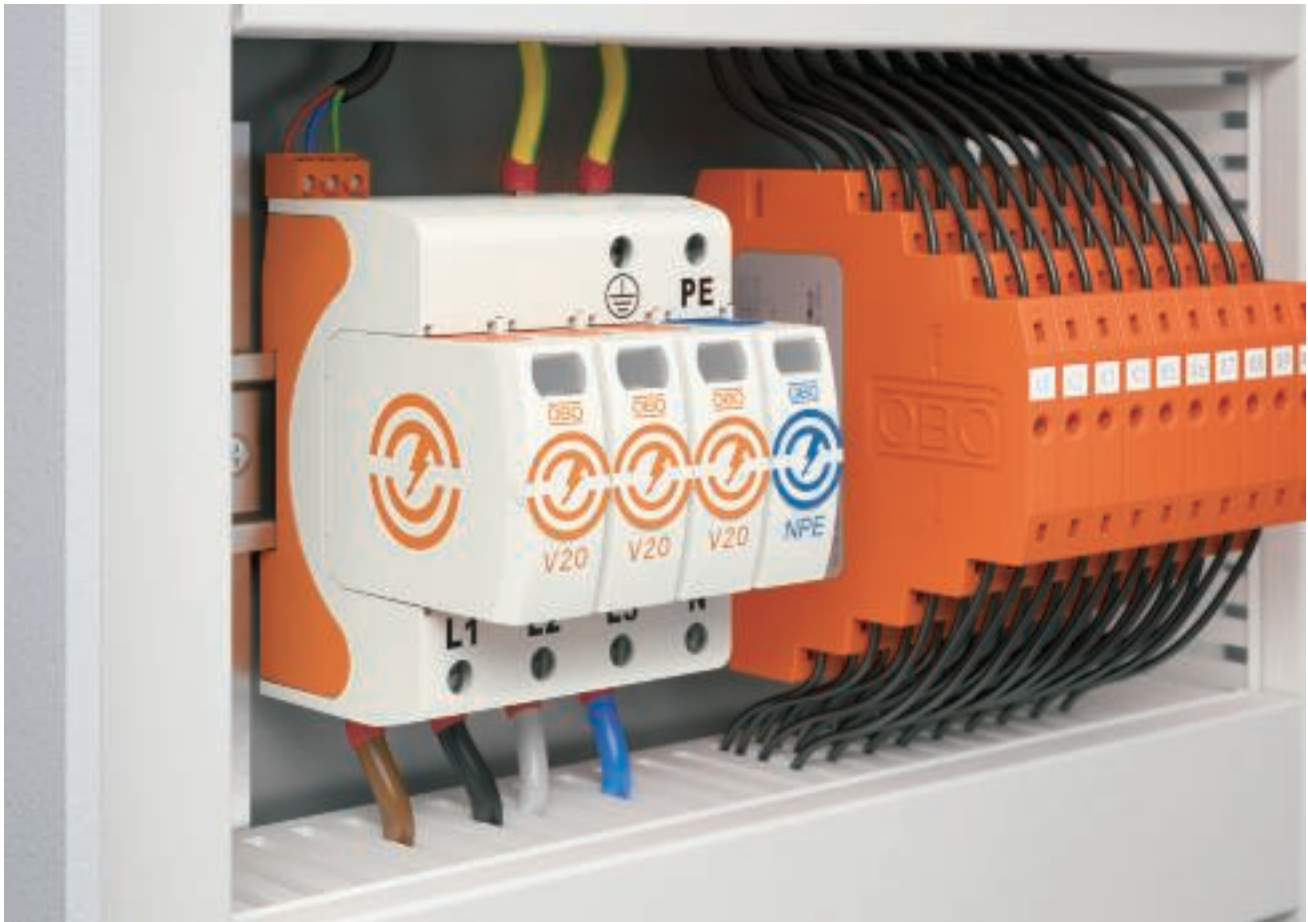
TBS product innovations

| | | | |
|---|--|--|----------|
|  | New arrestor series | Surge arrestors Combination arrestors | 22 44 |
|  | Connection terminal for special wiring | | 49 |
|  | Surge protection for LED systems | | 50 |
|  | PV housing for WR | 900 V 1000 V | 51 |
|  | Lightning current meter | | 53 |
|  | Underfloor test box | | 53 |
|  | Roof cable holder | | 53 |
|  | Connection component | | 53 |
|  | Tele lightning protection system | 10 metre mast + stand 12 metre mast + stand 14 metre mast + stand 19 metre mast + stand | 54 |

New V20/V50 arrester series

When the electric tension rises...





A new look and even more performance capacity – these are the new arrester series of the V50 combination and the V20 surge arresters. They fit perfectly into OBO's comprehensive protection system against lightning and surge voltage. Newly developed soft-release contacts in combination with a locking mechanism protect the upper parts of the protection elements even under the harshest mechanical strains. They provide a

lightning current carrying capacity for buildings to lightning protection class III. The halogen-free and UL-listed plastic material fulfils the newest standards in installation technology.

From now, OBO products for lightning and surge protection are very easy to identify. The brand logo's new design for lightning and surge protection has a high recognition value in every installation.



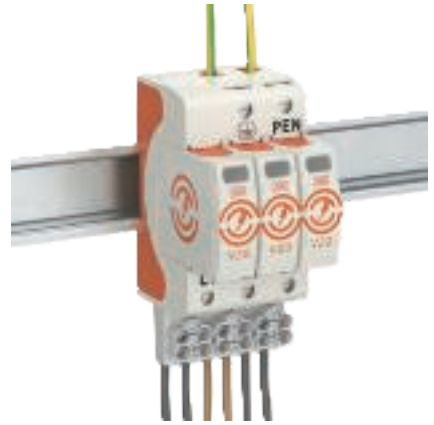
With OBO, the electrical installation is protected both comprehensively and in four ways against lightning and surge voltages. The solutions range from air-termination and down conductor systems to earthing and equipotential bonding systems and to surge protection systems. They provide an aligned protection for all areas of the building.

Connection terminal for arrestors

Triple connection



Now the connection of cables with a cross-section of up to 1.5 mm² works without difficulty. A connection point can accept up to three cables and can be connected to the surge arrester. In this way, the connection terminals facilitate an EMV-optimal through-wiring to DIN VDE 0100-534 of lightning current and surge arrestors of up to a maximum nominal current of 50 A.



PV system solutions

Protection for the inverter

PV systems on roofs or in other exposed locations are at risk of lightning strikes and surge voltages. The investment into a PV system requires therefore special protection both on the direct as well as on the alternating current voltage side. To secure inverters with

up to three separate MPP trackers OBO offers a number of solutions. A selection of pre-installed housings provide up to six attachment points with cross-sections of 6 mm². There is room for both PV combination arrestors, type 1 + 2, as well as surge arrestors. Thanks

to their weatherproof material of protection class IP 66, the housings are also suitable for the use outside. With the help of the supplied cable gland pack, the installation can be completed in no time on site.



Surge protection for LED street lamps

Small protects large

Energy saving LED lights used as street lighting are becoming increasingly popular. But their free-standing poles are at risk in two ways: from lightning and from surge voltages via the power supply. For the protection of sensitive electronic drivers and LED lights inside street lamps OBO has now develo-

ped a tailor-made surge arrester. The type 2 arrester ÜSM-LED 230 has a high level of conducting capacity of up to 20 kA. Having a very low protection level of below 1.3 kV, it is also suitable for the protection of very sensitive electronic components. Thanks to its compact design, it can be mounted in

the pole end area or in the street lamp head. The arrestors ÜSM-LED 230 fulfil the requirements for type 2 protective devices according to the current EN 61643-11 product norm.



New cut-off unit class H

Perfect transition

Perfect connection of conductors and earthing systems – the new cut-off unit from OBO makes the ideal transition between both systems under the ground possible. Using the cut-off unit, which has been tested to class H, the lightning protection system can be maintained and inspected without difficulties. It can be installed in concrete, under the ground, in gravel or in paved surfaces. The separation units can withstand heavy loads of up to four tonnes. Detailed mounting instructions are available as a download for norm conforming and easy installation



Expansion roof cable holder

Right for every roof

OBO now offers its tried-and-tested roof cable holders for flat roofs in the colour light grey. The holders made from UV-resistant polyamide can be installed discretely and they adjust to light foil roofs perfectly. They are suitable for the mounting of round cables with diameters of 8 to 10 millimetres.



New connection component

Fully integrated



Protection against lightning for every part of the building: Be it a metal front or parapet, thanks to the new aluminium connection component, almost any natural part of the building can be used as a lightning protection system. The component facilitates the connection with the respective system for lightning protection. Up to two conductors can be attached. It is particularly suited for the connection of interception tip and conductor, for instance as protection against lightning for parapet metal sheets. This new connection component is tested to Class N (50 kA).



Digital lightning current meter

Captured in a flash



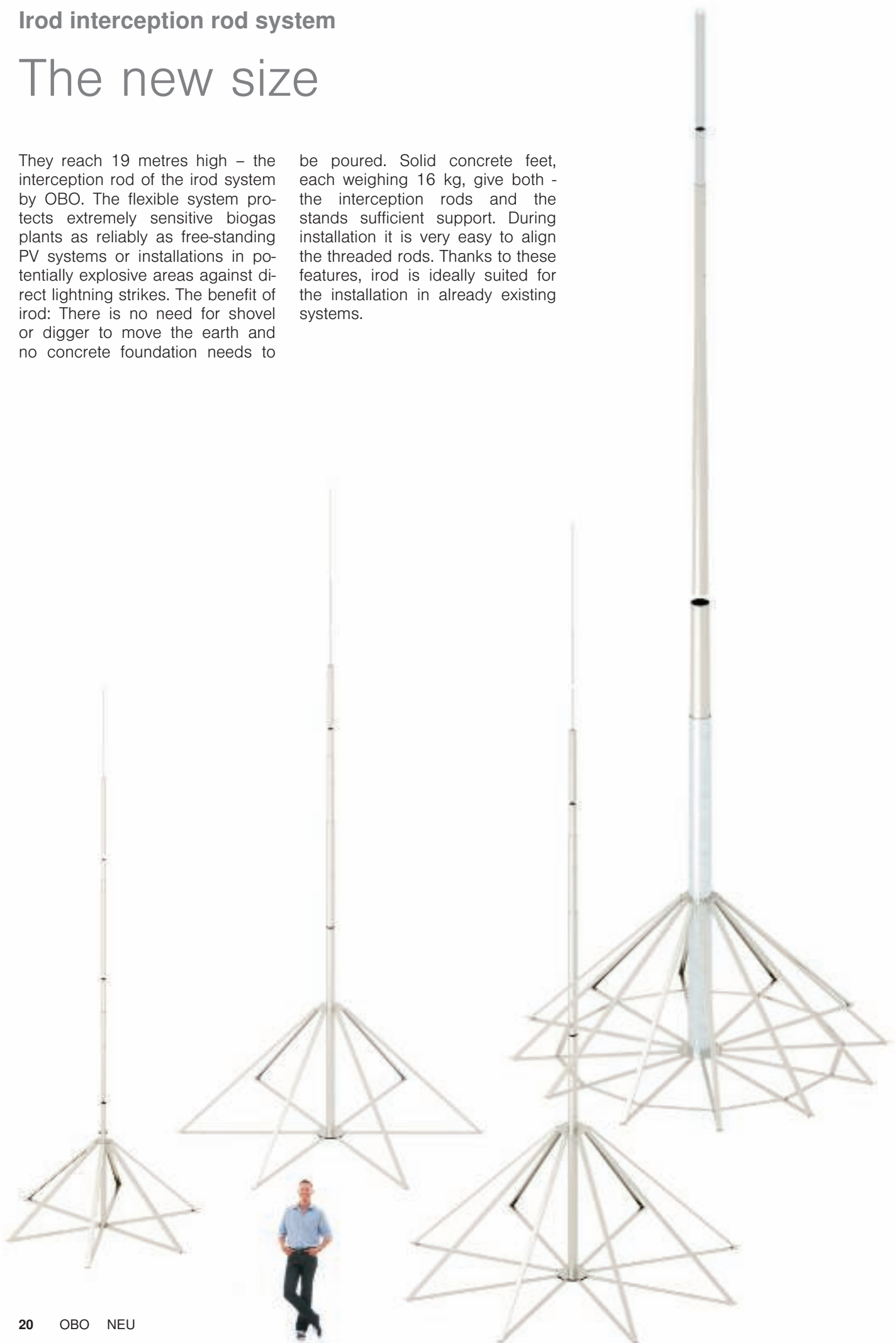
Now lightning is counted. Not only does OBO offer several protection systems against lightning and surge voltages, but the number of strikes can now also be measured. The lightning current meter LC-01 measures and saves the number of pulses and lightning currents. The readings are clearly shown on the digital display. Pulse currents of 0.3 to 100 kA are captured. Thanks to its high protection class IP 67 the meter is suitable for both the installation indoors and outdoors.

Irod interception rod system

The new size

They reach 19 metres high – the interception rod of the irod system by OBO. The flexible system protects extremely sensitive biogas plants as reliably as free-standing PV systems or installations in potentially explosive areas against direct lightning strikes. The benefit of irod: There is no need for shovel or digger to move the earth and no concrete foundation needs to

be poured. Solid concrete feet, each weighing 16 kg, give both – the interception rods and the stands sufficient support. During installation it is very easy to align the threaded rods. Thanks to these features, irod is ideally suited for the installation in already existing systems.





1 | OBO_Neuheiten_2014_en / 26/03/2014 (LLExport_01669) / 26/03/2014

Surge arrester V20 in 75 V, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

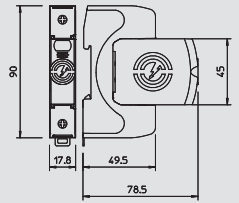


Surge arrester V20, 1- pin, 75 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-75 | 75 | 1 | IP20 | 1 | | 5095 14 1 |

Available from 01/08/2014

/pc.

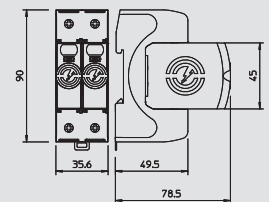


Surge arrester V20, 2- pin, 75 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2-75 | 75 | 2 | IP20 | 1 | | 5095 14 2 |

Available from 01/08/2014

/pc.

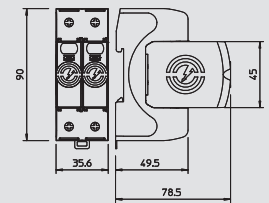


Surge arrester V20, 1-pin + NPE, 75 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE-75 | 75 | 1+N/PE | IP20 | 1 | | 5095 22 1 |

Available from 01/08/2014

/pc.



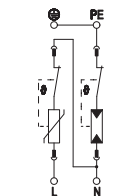
V20-1-75



V20-2-75



V20-1+NPE-75



| | | | | | |
|--|-----------|-----------------|------------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 75 | 75 | 75 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 15 | 15 | 15 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 0,5 | 0,5 | 0,5 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 2 | 1+N/PE |
| Size | | | 1 TE | 2 TE | 2 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | | | |
| Switching power DC | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multewire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 14 1 | 5095 14 2 | 5095 22 1 |



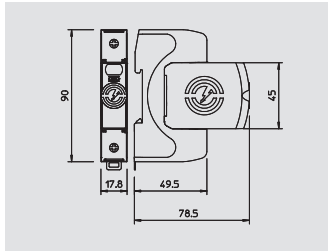
Surge arrester V20 in 150 V, type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

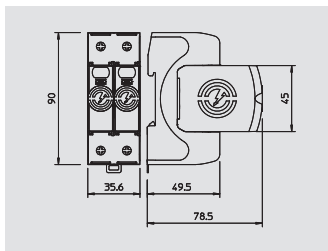


Surge arrester V20, 1- pin, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-150 | 150 | 1 | IP20 | 1 | | 5095 15 1 |

Available from 01/08/2014

/pc.

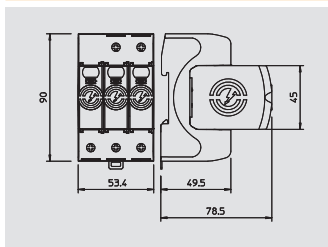


Surge arrester V20, 2- pin, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2-150 | 150 | 2 | IP20 | 1 | | 5095 15 2 |

Available from 01/08/2014

/pc.



Surge arrester V20, 3- pin, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3-150 | 150 | 3 | IP20 | 1 | | 5095 15 3 |

Available from 01/08/2014

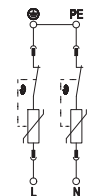
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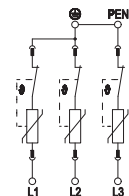
V20-1-150



V20-2-150



V20-3-150



| | | | | | |
|--|-----------|-----------------|----------------|----------------|----------------|
| Maximum continuous voltage AC | U_c | V | 150 | 150 | 150 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 0,8 | 0,8 | 0,8 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 2 | 3 |
| Size | | | 1 TE | 2 TE | 3 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | | | |
| Switching power DC | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 15 1 | 5095 15 2 | 5095 15 3 |

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Surge arrester V20 in 150 V with NPE, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

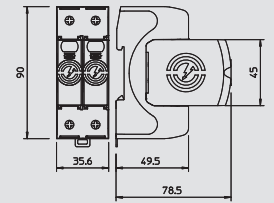


Surge arrester V20, 1-pin + NPE, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE-150 | 150 | 1+N/PE | IP20 | 1 | | 5095 23 1 |

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/pc.

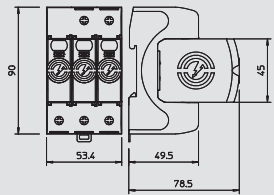


Surge arrester V20, 2-pin + NPE, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+NPE-150 | 150 | 2+N/PE | IP20 | 1 | | 5095 23 2 |

Available from 01/08/2014

/pc.

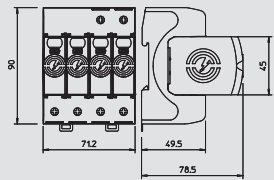


Surge arrester V20, 3-pin + NPE, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE-150 | 150 | 3+N/PE | IP20 | 1 | | 5095 23 3 |

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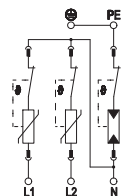
/pc.



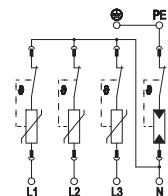
V20-1+NPE-150



V20-2+NPE-150



V20-3+NPE-150



| | | | | | |
|--|-----------|-----------------|------------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 150 | 150 | 150 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 0,8 | 0,8 | 0,8 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 2+N/PE | 3+N/PE |
| Size | | | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | | | |
| Switching power DC | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 23 1 | 5095 23 2 | 5095 23 3 |

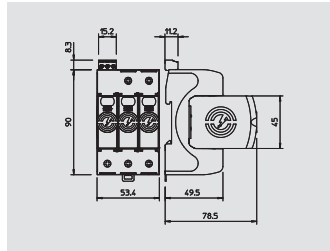
Surge arrester V20 in 150 V with NPE + remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

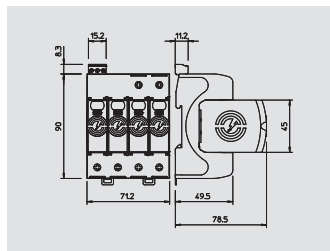


Surge arrester V20, 1-pin + NPE and FS, 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+NPE+FS-150 | 150 | 2+N/PE | IP20 | 1 | | 5095 32 2 |

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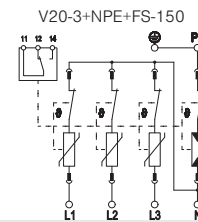
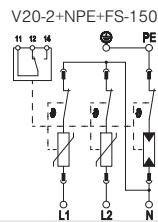


Surge arrester V20, 3-pin + NPE and FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE+FS-150 | 150 | 3+N/PE | IP20 | 1 | | 5095 32 1 |

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| | | | | |
|--|-----------|-----------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_C | V | 150 | 150 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 |
| Protection level | | kV | 0,8 | 0,8 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 2+N/PE | 3+N/PE |
| Size | | | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 |
| Item No. | | | 5095 32 2 | 5095 32 1 |

Surge arrester V20 in 280 V, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

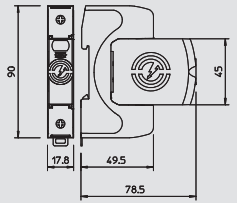


Surge arrester V20, 1-pin, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-280 | 280 | 1 | IP20 | 1 | | 5095 16 1 |

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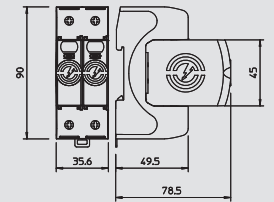


Surge arrester V20, 2-pin, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2-280 | 280 | 2 | IP20 | 1 | | 5095 16 2 |

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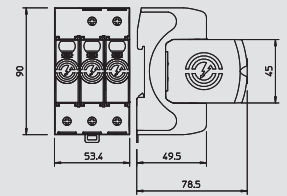


Surge arrester V20, 3-pin, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3-280 | 280 | 3 | IP20 | 1 | | 5095 16 3 |

Available from 01/08/2014

/pc.

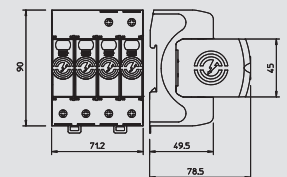


Surge arrester V20, 4-pin, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-4-280 | 280 | 4 | IP20 | 1 | | 5095 16 4 |

Available from 01/08/2014

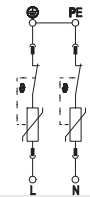
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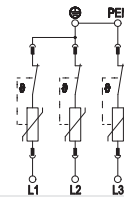
V20-1-280



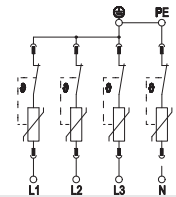
V20-2-280



V20-3-280



V20-4-280



| | | | | | | |
|--|-----------|-----------------|------------------|------------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 280 | 280 | 280 | 280 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 | 40 |
| Protection level | | kV | 1,3 | 1,3 | 1,3 | 1,3 |
| Network form | | | All | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 2 | 3 | 4 |
| Size | | | 1 TE | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual | Visual |
| Switching power AC | | | | | | |
| Switching power DC | | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 | 35 |
| Item No. | | | 5095 16 1 | 5095 16 2 | 5095 16 3 | 5095 16 4 |



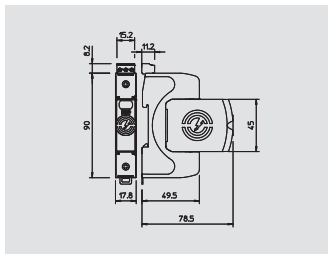
Surge arrester V20 in 280 V with remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

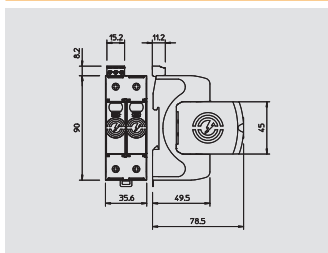


Surge arrester V20, 1- pin with FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+FS-280 | 280 | 1 | IP20 | 1 | | 5095 28 1 |

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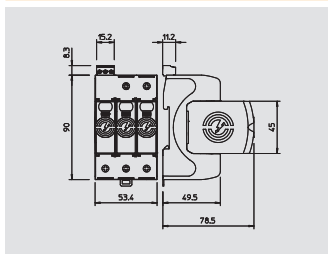


Surge arrester V20, 2- pin with FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+FS-280 | 280 | 2 | IP20 | 1 | | 5095 28 2 |

Available from 01/08/2014

/pc.

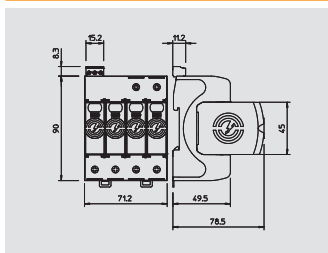


Surge arrester V20, 3- pin with FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+FS-280 | 280 | 3 | IP20 | 1 | | 5095 28 3 |

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Surge arrester V20, 4- pin with FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-4+FS-280 | 280 | 4 | IP20 | 1 | | 5095 28 4 |

Available from 01/08/2014

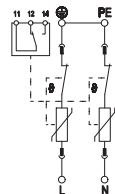
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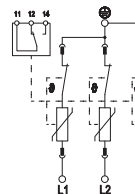
V20-1+FS-280



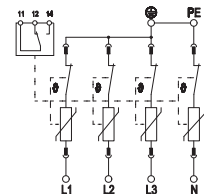
V20-2+FS-280



V20-3+FS-280



V20-4+FS-280



| | | | | | | |
|--|------------------|----|----------------------------|----------------------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U _C | V | 280 | 280 | 280 | 280 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I _n | kA | 20 | 20 | 20 | 20 |
| Maximum discharge current | I _{max} | kA | 40 | 40 | 40 | 40 |
| Protection level | | kV | 1,3 | 1,3 | 1,3 | 1,3 |
| Network form | | | All | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 2 | 3 | 4 |
| Size | | | 1 TE | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | A | | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 | IP20 |
| Operating temperature range | T _u | °C | -40 - +80 | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | mm ² | | 25 | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | mm ² | | 35 | 35 | 35 | 35 |
| Item No. | | | 5095 28 1 | 5095 28 2 | 5095 28 3 | 5095 28 4 |

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Surge arrester V20 in 280 V with NPE, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

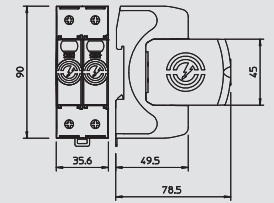


Surge arrester V20, 1-pin + NPE, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE-280 | 280 | 1+N/PE | IP20 | 1 | | 5095 25 1 |

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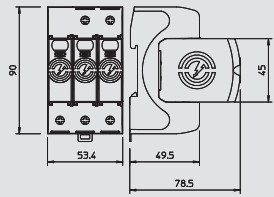


Surge arrester V20, 2-pin + NPE, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+NPE-280 | 280 | 2+N/PE | IP20 | 1 | | 5095 25 2 |

Available from 01/08/2014

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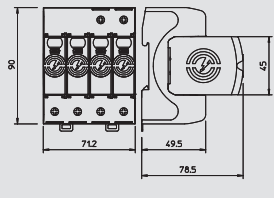


Surge arrester V20, 3-pin + NPE, 280 V

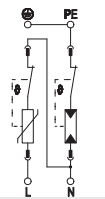
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE-280 | 280 | 3+N/PE | IP20 | 1 | | 5095 25 3 |

Available from 01/08/2014

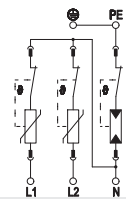
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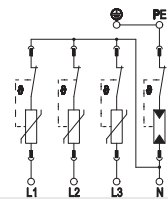
V20-1+NPE-280



V20-2+NPE-280



V20-3+NPE-280



| | | | | | |
|--|-----------|-----------------|------------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 280 | 280 | 280 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 1,3 | 1,3 | 1,3 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 2+N/PE | 3+N/PE |
| Size | | | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | | | |
| Switching power DC | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multewire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 25 1 | 5095 25 2 | 5095 25 3 |



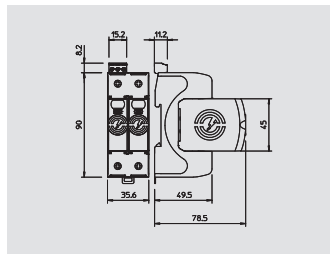
Surge arrester V20 in 280 V with NPE + remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

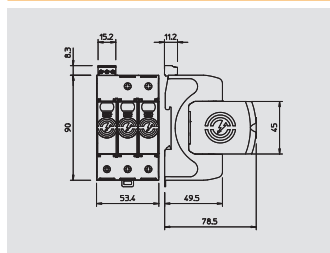


Surge arrester V20, 1-pin + NPE and FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE+FS-280 | 280 | 1+N/PE | IP20 | 1 | | 5095 33 1 |

Available from 01/08/2014

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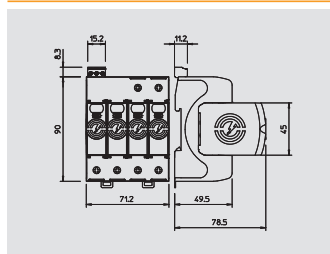


Surge arrester V20, 2-pin + NPE and FS, 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+NPE+FS-280 | 280 | 2+N/PE | IP20 | 1 | | 5095 33 2 |

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Surge arrester V20, 3-pin + NPE and FS, 280 V

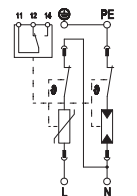
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE+FS-280 | 280 | 3+N/PE | IP20 | 1 | | 5095 33 3 |

Available from 01/08/2014

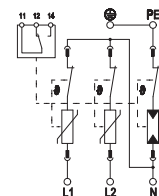
/pc.



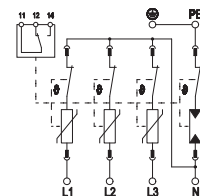
V20-1+NPE+FS-280



V20-2+NPE+FS-280



V20-3+NPE+FS-280



| | | | | | |
|--|-----------|-----------------|----------------------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_c | V | 280 | 280 | 280 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 1,3 | 1,3 | 1,3 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 2+N/PE | 3+N/PE |
| Size | | | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 33 1 | 5095 33 2 | 5095 33 3 |

Surge arrester V20 in 320 V, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

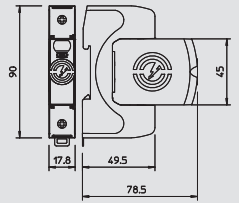


Surge arrester V20, 1-pin, 320 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-320 | 320 | 1 | IP20 | 1 | | 5095 17 1 |

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/pc.

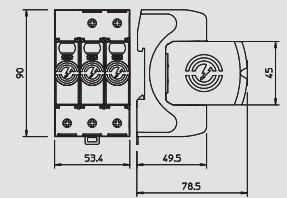


Surge arrester V20, 3-pin, 320 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3-320 | 320 | 3 | IP20 | 1 | | 5095 17 3 |

Available from 01/08/2014

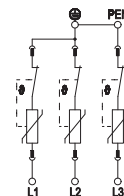
/pc.



V20-1-320



V20-3-320



| | | | | |
|--|-----------|-----------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 320 | 320 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 |
| Protection level | | kV | 1,4 | 1,4 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 3 |
| Size | | | 1 TE | 3 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | | |
| Switching power DC | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 |
| Max. cable cross-section rigid (single wire/multewire) | | mm ² | 35 | 35 |
| Item No. | | | 5095 17 1 | 5095 17 3 |



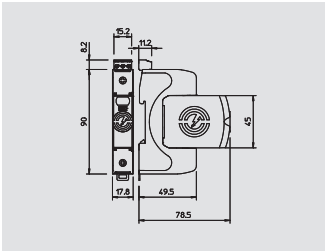
Surge arrester V20 in 320 V with remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

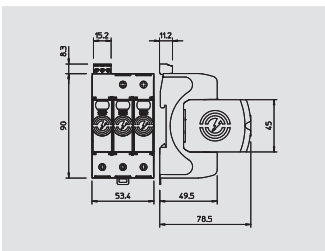


Surge arrester V20, 1- pin with FS, 320 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+FS-320 | 320 | 1 | IP20 | 1 | | 5095 29 1 |

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Surge arrester V20, 3- pin with FS, 320 V

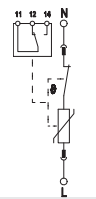
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+FS-320 | 320 | 3 | IP20 | 1 | | 5095 29 3 |

Available from 01/08/2014

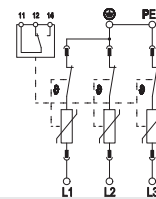
/pc.



V20-1+FS-320



V20-3+FS-320



| | | | | |
|--|-----------|-----------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_C | V | 320 | 320 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 |
| Protection level | | kV | 1,3 | 1,3 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 3 |
| Size | | | 1 TE | 3 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 |
| Item No. | | | 5095 29 1 | 5095 29 3 |

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Surge arrester V20 in 320 V with NPE, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

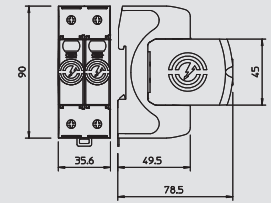


Surge arrester V20, 1-pin + NPE, 320 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE-320 | 320 | 1+N/PE | IP20 | 1 | | 5095 26 1 |

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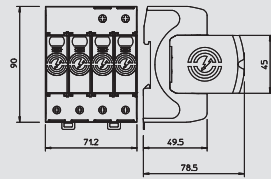


Surge arrester V20, 3-pin + NPE, 320 V

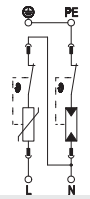
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE-320 | 320 | 3+N/PE | IP20 | 1 | | 5095 26 3 |

Available from 01/08/2014

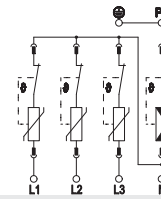
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V20-1+NPE-320



V20-3+NPE-320



| | | | | |
|--|-----------|-----------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 320 | 320 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 |
| Protection level | | kV | 1,4 | 1,4 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 3+N/PE |
| Size | | | 2 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | | |
| Switching power DC | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 |
| Item No. | | | 5095 26 1 | 5095 26 3 |



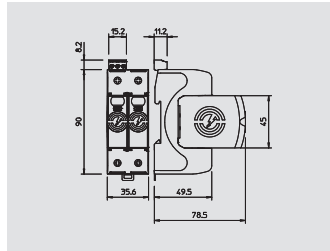
Surge arrester V20 in 320 V with NPE + remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

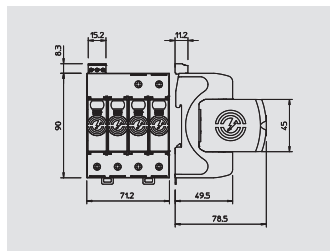


Surge arrester V20, 1-pin + NPE and FS, 320 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE+FS-320 | 320 | 1+N/PE | IP20 | 1 | | 5095 34 1 |

Available from 01/08/2014

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Surge arrester V20, 3-pin + NPE and FS, 320 V

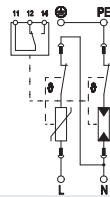
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE+FS-320 | 320 | 3+N/PE | IP20 | 1 | | 5095 34 3 |

Available from 01/08/2014

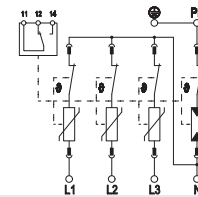
/pc.



V20-1+NPE+FS-320



V20-3+NPE+FS-320



| | | | | |
|--|-----------------|----|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_c | V | 320 | 320 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 |
| Protection level | | kV | 1,4 | 1,4 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 3+N/PE |
| Size | | | 2 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | mm ² | | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | mm ² | | 35 | 35 |
| Item No. | | | 5095 34 1 | 5095 34 3 |

Surge arrester V20 in 385 V, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

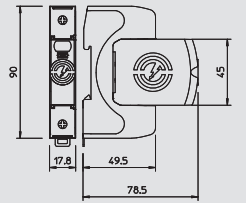


Surge arrester V20, 1-pin, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-385 | 385 | 1 | IP20 | 1 | | 5095 19 1 |

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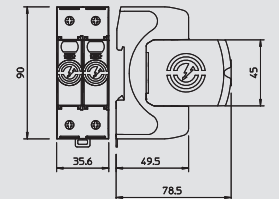


Surge arrester V20, 2-pin, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2-385 | 385 | 2 | IP20 | 1 | | 5095 19 2 |

Available from 01/08/2014

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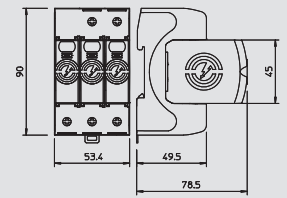


Surge arrester V20, 3-pin, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3-385 | 385 | 3 | IP20 | 1 | | 5095 19 3 |

Available from 01/08/2014

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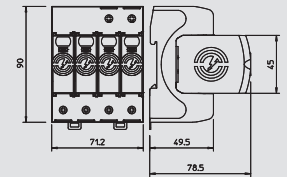


Surge arrester V20, 4-pin, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-4-385 | 385 | 4 | IP20 | 1 | | 5095 19 4 |

Available from 01/08/2014

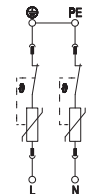
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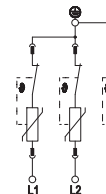
V20-1-385



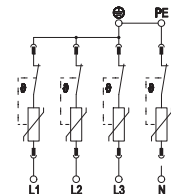
V20-2-385



V20-3-385



V20-4-385



| | | | | | | |
|--|-----------|-----------------|------------------|------------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 385 | 385 | 385 | 385 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 | 40 |
| Protection level | | kV | 1,7 | 1,7 | 1,7 | 1,7 |
| Network form | | | All | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 2 | 3 | 4 |
| Size | | | 1 TE | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual | Visual |
| Switching power AC | | | | | | |
| Switching power DC | | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 | 35 |
| Item No. | | | 5095 19 1 | 5095 19 2 | 5095 19 3 | 5095 19 4 |



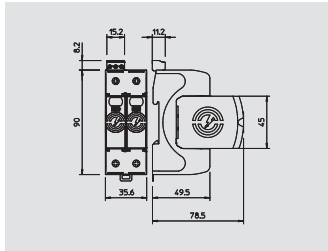
Surge arrester V20 in 385 V with remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

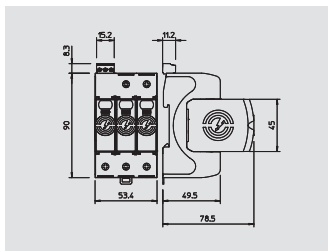


Surge arrester V20, 2- pin with FS, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+FS-385 | 385 | 2 | IP20 | 1 | | 5095 30 2 |

Available from 01/08/2014

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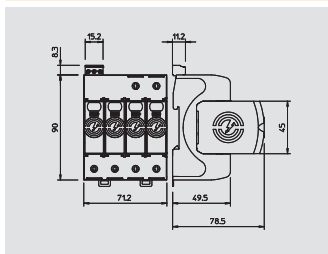


Surge arrester V20, 3-pin with FS, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+FS-385 | 385 | 3 | IP20 | 1 | | 5095 30 3 |

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Surge arrester V20, 4-pin with FS, 385 V

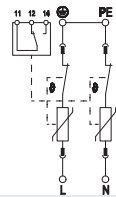
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-4+FS-385 | 385 | 4 | IP20 | 1 | | 5095 30 4 |

Available from 01/08/2014

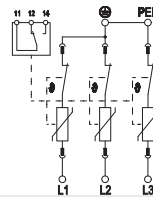
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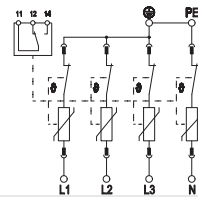
V20-2+FS-385



V20-3+FS-385



V20-4+FS-385



| | | | | | |
|--|-----------|-----------------|----------------------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_C | V | 385 | 385 | 385 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 1,7 | 1,7 | 1,7 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 2 | 3 | 4 |
| Size | | | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 30 2 | 5095 30 3 | 5095 30 4 |

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Surge arrester V20 in 385 V with NPE, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

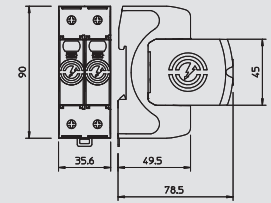


Surge arrester V20, 1-pin + NPE, 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1+NPE-385 | 385 | 1+N/PE | IP20 | 1 | | 5095 27 1 |

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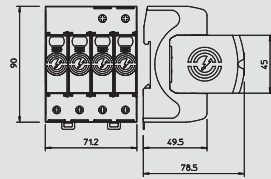


Surge arrester V20, 3-pin + NPE, 385 V

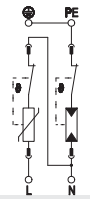
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE-385 | 385 | 3+N/PE | IP20 | 1 | | 5095 27 3 |

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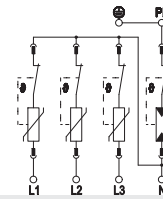
/pc.



V20-1+NPE-385



V20-3+NPE-385



| | | | | |
|--|-----------|-----------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 385 | 385 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 |
| Maximum discharge current | I_{max} | kA | 40 | 40 |
| Protection level | | kV | 1,7 | 1,7 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 3+N/PE |
| Size | | | 2 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | | |
| Switching power DC | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 |
| Item No. | | | 5095 27 1 | 5095 27 3 |



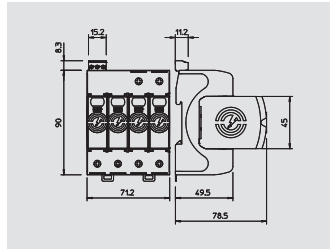
Surge arrester V20 in 385 V with NPE + remote signalling (FS), type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.



Surge arrester V20, 3-pin + NPE and FS, 385 V

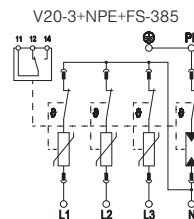
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+NPE+FS-385 | 385 | 3+N/PE | IP20 | 1 | | 5095 35 3 |

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| | | | |
|--|-----------|-----------------|----------------------------|
| Maximum continuous voltage AC | U_C | V | 385 |
| Test class (EN 61643-11) | | | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 |
| Maximum discharge current | I_{max} | kA | 40 |
| Protection level | | kV | 1,7 |
| Network form | | | All |
| Mounting type | | | Hat rail 35 mm |
| Pole version | | | 3+N/PE |
| Size | | | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG |
| Protection rating | | | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 |
| Signalling on device | | | Visual |
| Switching power AC | | | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 |
| Item No. | | | 5095 35 3 |

Surge arrester V20 in 440 V, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

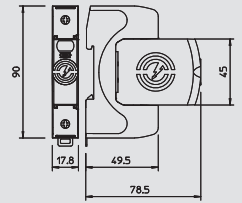


Surge arrester V20, 1-pin, 440 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-440 | 440 | 1 | IP20 | 1 | | 5095 20 1 |

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V20-1-440



| | | | |
|--|-----------|-----------------|------------------|
| Maximum continuous voltage AC | U_c | V | 440 |
| Test class (EN 61643-11) | | | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 |
| Maximum discharge current | I_{max} | kA | 40 |
| Protection level | | kV | 2 |
| Network form | | | All |
| Mounting type | | | Hat rail 35 mm |
| Pole version | | | 1 |
| Size | | | 1 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG |
| Protection rating | | | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 |
| Signalling on device | | | Visual |
| Switching power AC | | | |
| Switching power DC | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 |
| Item No. | | | 5095 20 1 |



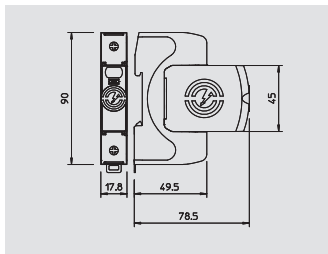
Surge arrester V20 in 550 V, type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

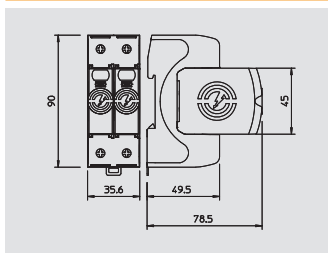


Surge arrester V20, 1-pin, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-1-550 | 550 | 1 | IP20 | 1 | | 5095 21 1 |

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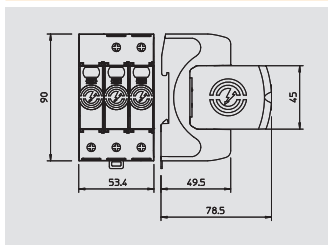


Surge arrester V20, 2-pin, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2-550 | 550 | 2 | IP20 | 1 | | 5095 21 2 |

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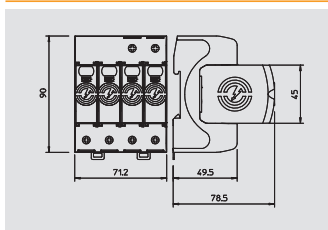


Surge arrester V20, 3-pin, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3-550 | 550 | 3 | IP20 | 1 | | 5095 21 3 |

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Surge arrester V20, 4-pin, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-4-550 | 550 | 4 | IP20 | 1 | | 5095 21 4 |

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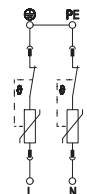
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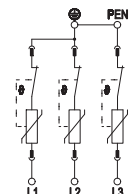
V20-1-550



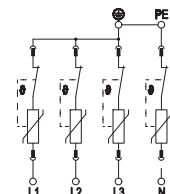
V20-2-550



V20-3-550



V20-4-550



| | | | | | | |
|--|------------------|-----------------|----------------|----------------|----------------|----------------|
| Maximum continuous voltage AC | U _C | V | 550 | 550 | 550 | 550 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I _n | kA | 15 | 15 | 15 | 15 |
| Maximum discharge current | I _{max} | kA | 40 | 40 | 40 | 40 |
| Protection level | | kV | 2,4 | 2,4 | 2,4 | 2,4 |
| Network form | | | All | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1 | 2 | 3 | 4 |
| Size | | | 1 TE | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 | IP20 |
| Operating temperature range | T _u | °C | -40 - +80 | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual | Visual |
| Switching power AC | | | | | | |
| Switching power DC | | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 | 35 |
| Item No. | | | 5095 21 1 | 5095 21 2 | 5095 21 3 | 5095 21 4 |

Surge arrester V20 in 550 V with remote signalling (FS), type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

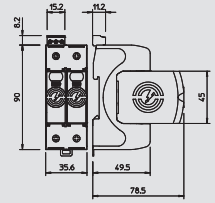


Surge arrester V20, 2- pin with FS, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-2+FS-550 | 550 | 2 | IP20 | 1 | | 5095 31 2 |

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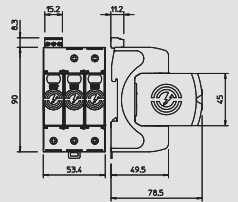


Surge arrester V20, 3-pin with FS, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-3+FS-550 | 550 | 3 | IP20 | 1 | | 5095 31 3 |

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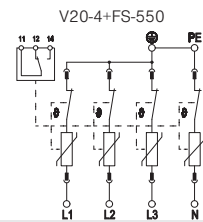
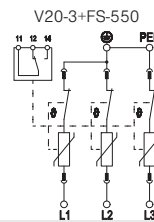
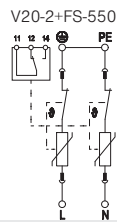
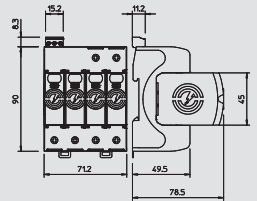


Surge arrester V20, 4-pin with FS, 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-4+FS-550 | 550 | 4 | IP20 | 1 | | 5095 31 4 |

Available from 01/08/2014

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| | | | | | |
|--|-----------|-----------------|----------------------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_c | V | 550 | 550 | 550 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 15 | 15 | 15 |
| Maximum discharge current | I_{max} | kA | 40 | 40 | 40 |
| Protection level | | kV | 2,4 | 2,4 | 2,4 |
| Network form | | | All | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 2 | 3 | 4 |
| Size | | | 2 TE | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 125 A gL/gG | 125 A gL/gG | 125 A gL/gG |
| Protection rating | | | IP20 | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 |
| Max. cable cross-section rigid (single wire/multewire) | | mm ² | 35 | 35 | 35 |
| Item No. | | | 5095 31 2 | 5095 31 3 | 5095 31 4 |



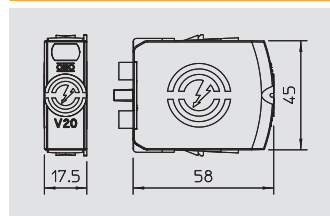
Surge arrester V20 upper parts, type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

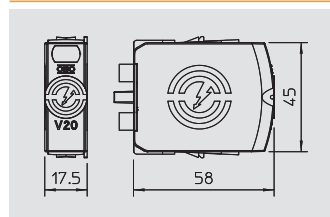


Upper part V20 75 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------|------------------------------------|--------------|-------------------|--------------|-----------------------|-----------|
| V20-0-75 | 75 | 1 | IP20 | 1 | | 5095 36 0 |

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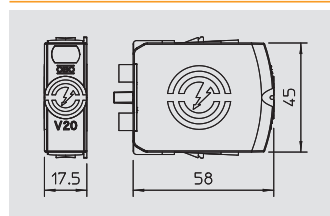


Upper part V20 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|------------------------------------|--------------|-------------------|--------------|-----------------------|-----------|
| V20-0-150 | 150 | 1 | IP20 | 1 | | 5095 36 2 |

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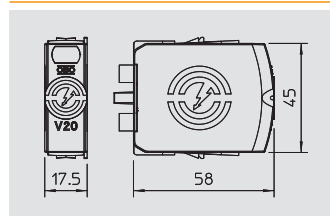


Upper part V20 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|------------------------------------|--------------|-------------------|--------------|-----------------------|-----------|
| V20-0-280 | 280 | 1 | IP20 | 1 | | 5095 36 4 |

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Upper part V20 320 V

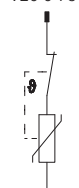
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|------------------------------------|--------------|-------------------|--------------|-----------------------|-----------|
| V20-0-320 | 320 | 1 | IP20 | 1 | | 5095 36 6 |

Available from 01/08/2014

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V20-0-75



V20-0-150



V20-0-280



V20-0-320



| | | | | | | |
|----------------------------------|----------|----|-----------|-----------|-----------|-----------|
| Maximum continuous voltage AC | U_c | V | 75 | 150 | 280 | 320 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_{nT} | kA | 15 | 20 | 20 | 20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual | Visual |
| Protection level | | kV | 0,5 | 0,8 | 1,3 | 1,4 |
| Protection rating | | | IP20 | IP20 | IP20 | IP20 |
| Item No. | | | 5095 36 0 | 5095 36 2 | 5095 36 4 | 5095 36 6 |



Surge arrester V20 upper parts, type 2



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

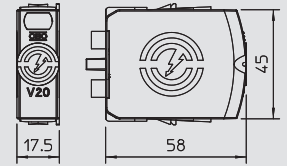


Upper part V20 385 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-0-385 | 385 | 1 | IP20 | 1 | | 5095 36 8 |

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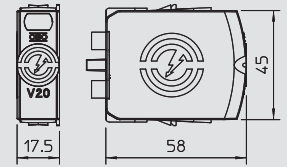


Upper part V20 440 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-0-440 | 440 | 1 | IP20 | 1 | | 5095 37 0 |

Available from 01/08/2014

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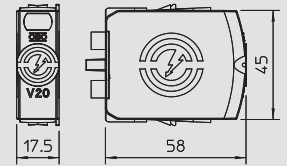


Upper part V20 550 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V20-0-550 | 550 | 1 | IP20 | 1 | | 5095 37 2 |

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V20-0-385



V20-0-440



V20-0-550



| | | | | | |
|----------------------------------|-------|----|------------------|------------------|------------------|
| Maximum continuous voltage AC | U_c | V | 385 | 440 | 550 |
| Test class (EN 61643-11) | | | Type 2 | Type 2 | Type 2 |
| Nominal discharge current (8/20) | I_n | kA | 20 | 20 | 20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual | Visual |
| Protection level | | kV | 1,7 | 2 | 2,4 |
| Protection rating | | | IP20 | IP20 | IP20 |
| Item No. | | | 5095 36 8 | 5095 37 0 | 5095 37 2 |



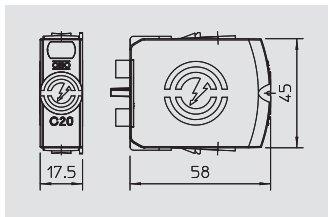
NPE discharge gap C25 in 280 V, type 2

Surge arrester, type 2



- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pin through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variant have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.



Upper part C25 280 V

| Type | Maximum continuous voltage AC | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|-------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| C20-0-255 | 255 | N/PE | IP20 | 1 | | 5095 60 0 |

Available from 01/10/2014

/pc.

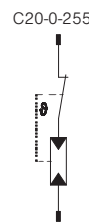


TBS



14_OBO_Neuheiten_2014 / en / 26/03/2014 (LLExpert_01669) / 26/03/2014

| | | | |
|----------------------------------|-------|----|------------------|
| Maximum continuous voltage AC | U_c | V | 255 |
| Test class (EN 61643-11) | | | Type 2 |
| Operating temperature range | T_u | °C | -40 - +80 |
| Nominal discharge current (8/20) | I_n | kA | 20 |
| Signalling on device | | | Visual |
| Protection level | | kV | 1,5 |
| Protection rating | | | IP20 |
| Item No. | | | 5095 60 0 |



Combination arrester V50 in 280 V, type 1+2



Lightning current combination arrester, type 2

- For the equipotential bonding of lightning current to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pin and up to 50 kA (10/350) in total
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variants have a potential-free changeover contact for remote signalling

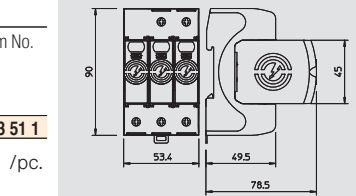
Application: Lightning current equipotential bonding for buildings of class III and IV.



Combination arrester V50, 3-pole 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-3-280 | 280 | 3 | IP20 | 1 | | 5093 51 1 |

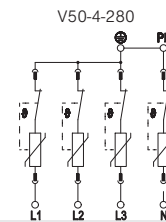
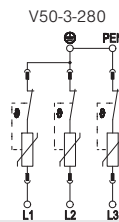
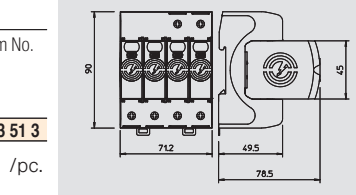
Available from 01/08/2014



Combination arrester V50, 4-pole 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-4-280 | 280 | 4 | IP20 | 1 | | 5093 51 3 |

Available from 01/08/2014



| | | | | | |
|--|-----------|-----------------|------------------|--|------------------|
| Maximum continuous voltage AC | U_C | V | 280 | | |
| Test class (EN 61643-11) | | | Type 1 and 2 | | |
| Lightning surge current (10/350) | | kA | 12,5 | | |
| Nominal discharge current (8/20) | I_n | kA | 30 | | |
| Maximum discharge current | I_{max} | kA | 50 | | |
| Protection level | | kV | 1,3 | | |
| Network form | | | All | | |
| Mounting type | | | Hat rail 35 mm | | |
| Pole version | | | 3 | | |
| Size | | | 3 TE | | |
| Max. mains-side overcurrent protection | | A | 160 A gL/gG | | |
| Protection rating | | | IP20 | | |
| Operating temperature range | T_u | °C | -40 - +80 | | |
| Signalling on device | | | Visual | | |
| Switching power AC | | | | | |
| Switching power DC | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | | |
| Max. cable cross-section rigid (single wire/multewire) | | mm ² | 35 | | |
| Item No. | | | 5093 51 1 | | 5093 51 3 |



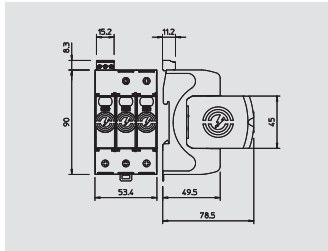
Combination arrester V50 in 280 V, with remote signalling (FS), type 1+2

Lightning current combination arrester, type 2



- For the equipotential bonding of lightning current to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pin and up to 50 kA (10/350) in total
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

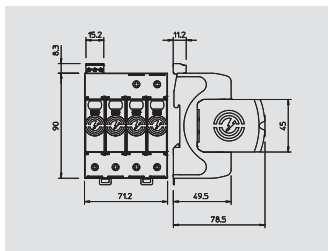


Combination arrester V50, 3-pin with FS 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-3+FS-280 | 280 | 3 | IP20 | 1 | | 5093 51 6 |

Available from 01/08/2014

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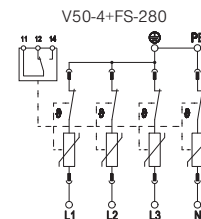
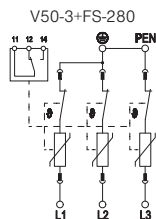


Combination arrester V50, 4-pin with FS 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-4+FS-280 | 280 | 4 | IP20 | 1 | | 5093 51 8 |

Available from 01/08/2014

/pc.



| | | | | |
|--|-----------------|----|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_C | V | 280 | |
| Test class (EN 61643-11) | | | Type 1 and 2 | Type 1 and 2 |
| Lightning surge current (10/350) | | kA | 12,5 | 12,5 |
| Nominal discharge current (8/20) | I_n | kA | 30 | 30 |
| Maximum discharge current | I_{max} | kA | 50 | 50 |
| Protection level | | kV | 1,3 | 1,3 |
| Network form | | | All | All |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 3 | 4 |
| Size | | | 3 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 160 A gL/gG | 160 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | mm ² | | 25 | 25 |
| Max. cable cross-section rigid (single wire/multewire) | mm ² | | 35 | 35 |
| Item No. | | | 5093 51 6 | 5093 51 8 |

Combination arrester V50 in 280 V with NPE, type 1+2



Lightning current combination arrester, type 2

- For the equipotential bonding of lightning current to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pin and up to 50 kA (10/350) in total
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

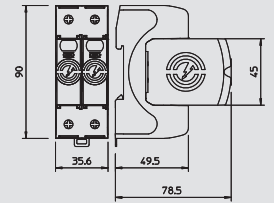


Combination arrester V50, 1-pin + NPE 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-1+NPE-280 | 280 | 1+N/PE | IP20 | 1 | | 5093 52 2 |

Available from 01/10/2014

/pc.

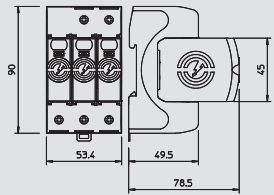


Combination arrester V50, 2-pin + NPE 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-2+NPE-280 | 280 | 2+N/PE | IP20 | 1 | | 5093 52 4 |

Available from 01/10/2014

/pc.

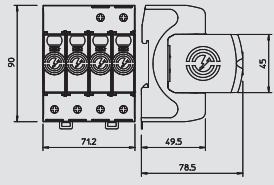


Combination arrester V50, 3-pin + NPE 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-3+NPE-280 | 280 | 3+N/PE | IP20 | 1 | | 5093 52 6 |

Available from 01/10/2014

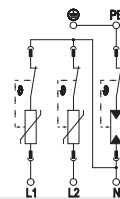
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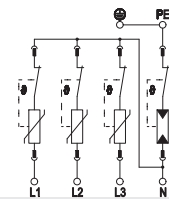
V50-1+NPE-280



V50-2+NPE-280



V50-3+NPE-280



| | | | | | | |
|--|-----------|-----------------|------------------|------------------|------------------|--|
| Maximum continuous voltage AC | U_C | V | 280 | | | |
| Test class (EN 61643-11) | | | Type 1 and 2 | Type 1 and 2 | Type 1 and 2 | |
| Lightning surge current (10/350) | | kA | 12,5 | 12,5 | 12,5 | |
| Nominal discharge current (8/20) | I_n | kA | 30 | 30 | 30 | |
| Maximum discharge current | I_{max} | kA | 50 | 50 | 50 | |
| Protection level | | kV | 1,3 | 1,3 | 1,3 | |
| Network form | | | All | All | All | |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm | Hat rail 35 mm | |
| Pole version | | | 1+N/PE | 2+N/PE | 3+N/PE | |
| Size | | | 2 TE | 3 TE | 4 TE | |
| Max. mains-side overcurrent protection | | A | 160 A gL/gG | 160 A gL/gG | 160 A gL/gG | |
| Protection rating | | | IP20 | IP20 | IP20 | |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 | -40 - +80 | |
| Signalling on device | | | Visual | Visual | Visual | |
| Switching power AC | | | | | | |
| Switching power DC | | | | | | |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 | 25 | |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 | 35 | |
| Item No. | | | 5093 52 2 | 5093 52 4 | 5093 52 6 | |



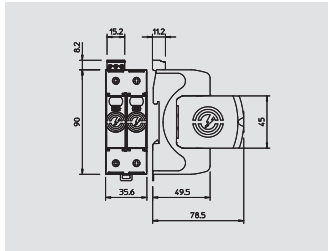
Combination arrester V50 in 280 V with NPE + FS, type 1+2

Lightning current combination arrester, type 2



- For the equipotential bonding of lightning current to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pin and up to 50 kA (10/350) in total
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

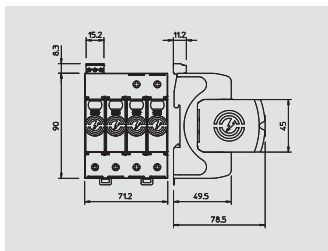


Combination arrester V50, 1-pin + NPE with FS 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-1+NPE+FS-280 | 280 | 1+N/PE | IP20 | 1 | | 5093 53 1 |

Available from 01/10/2014

/pc.



Combination arrester V50, 3-pin + NPE with FS 280 V

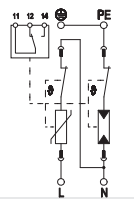
| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-3+NPE+FS-280 | 280 | 3+N/PE | IP20 | 1 | | 5093 53 3 |

Available from 01/10/2014

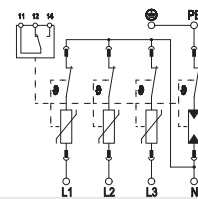
/pc.



V50-1+NPE+FS-280



V50-3+NPE+FS-280



| | | | | |
|--|-----------|-----------------|----------------------------|----------------------------|
| Maximum continuous voltage AC | U_C | V | 280 | |
| Test class (EN 61643-11) | | | Type 1 and 2 | Type 1 and 2 |
| Lightning surge current (10/350) | | kA | 12,5 | 12,5 |
| Nominal discharge current (8/20) | I_n | kA | 30 | 30 |
| Maximum discharge current | I_{max} | kA | 50 | 50 |
| Protection level | | kV | 1,3 | 1,3 |
| Network form | | | All | TN-S |
| Mounting type | | | Hat rail 35 mm | Hat rail 35 mm |
| Pole version | | | 1+N/PE | 3+N/PE |
| Size | | | 2 TE | 4 TE |
| Max. mains-side overcurrent protection | | A | 160 A gL/gG | 160 A gL/gG |
| Protection rating | | | IP20 | IP20 |
| Operating temperature range | T_u | °C | -40 - +80 | -40 - +80 |
| Signalling on device | | | Visual | Visual |
| Switching power AC | | | 230 V; 0,5 A | 230 V; 0,5 A |
| Switching power DC | | | 230 V; 0,1 A / 75 V; 0,5 A | 230 V; 0,1 A / 75 V; 0,5 A |
| Max. cable cross-section flexible (fine-wire) | | mm ² | 25 | 25 |
| Max. cable cross-section rigid (single wire/multiwire) | | mm ² | 35 | 35 |
| Item No. | | | 5093 53 1 | 5093 53 3 |



Combination arrester V50 upper parts, type 1+2



Lightning current combination arrester, type 2

- For the equipotential bonding of lightning current to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pin and up to 50 kA (10/350) in total
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Halogen-free plastic (UL 94 V-0)
- The FS variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

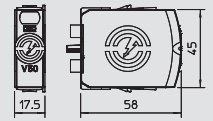


Upper part V50 150 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-0-150 | 280 | 1 | IP20 | 1 | | 5093 50 5 |

Available from 01/08/2014

/pc.

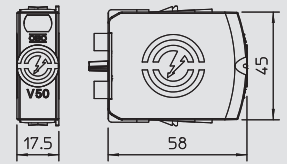


Upper part V50 280 V

| Type | Maximum continuous voltage AC V | Pole version | Protection rating | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------|---------------------------------|--------------|-------------------|-----------|--------------------|-----------|
| V50-0-280 | 280 | 1 | IP20 | 1 | | 5093 50 8 |

Available from 01/08/2014

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V50-0-150



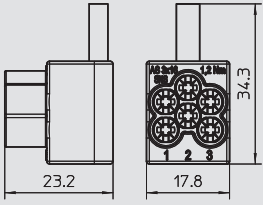
V50-0-280



| | | | | | |
|----------------------------------|-------|----|------------------|--|------------------|
| Maximum continuous voltage AC | U_C | V | 280 | | 280 |
| Test class (EN 61643-11) | | | Type 1 and 2 | | Type 1 and 2 |
| Operating temperature range | T_u | °C | -40 - +80 | | -40 - +80 |
| Nominal discharge current (8/20) | I_n | kA | 30 | | 30 |
| Signalling on device | | | Visual | | Visual |
| Protection level | | kV | 1 | | 1,3 |
| Protection rating | | | IP20 | | IP20 |
| Item No. | | | 5093 50 5 | | 5093 50 8 |



Connection terminal for special wiring



| Type | Colour | Version | Pack. | Weight | Item No. |
|----------------|------------|------------------------|-------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| AS 3x16 | Light grey | 3 x 16 mm ² | 5 | 2,474 | 5012 01 0 |

/100 pc.



Connection terminal type: AS 3x16

Connection cross-section: 3 x 1.5 - 16 sq mm rigid/ multiple strands
 3 x 1.5 - 10 sq mm fine-wire/with wire end sleeve

Stripping length: 16 mm

Rec. tightening torque: 1.2 Nm

Nominal current: 50 A

Width: 17.5 mm (1 TE)

For EMV-optimised V through-wiring to IEC 60364-5-53 (VDE 0100-534).



Surge protection for LED systems



Surge protection module type 2 to DIN EN 61643-11 for 230/400V power grids. Appropriate for the protection of LED lighting.

- With visual operation display
- In a small size for the installation in the pole or in the LED lamp head
- 1+NPE protective circuit with a maximum discharge capacity of 20 kA
- Available with or without cut-off function of the lamp in case of malfunction

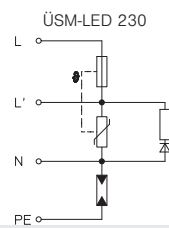
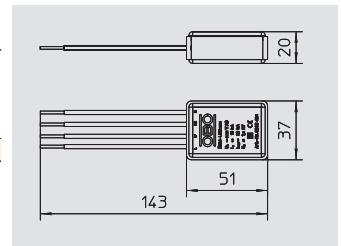
Application: Universally deployable in all lighting systems



Surge protection for LED systems

| Type | Highest continuous voltage V | Version | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------------|------------------------------|---------|-----------|--------------------|------------------|
| ÜSM-LED 230 | 255 | 1 + NPE | 1 | 3,500 | 5092 48 0 |

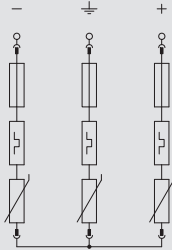
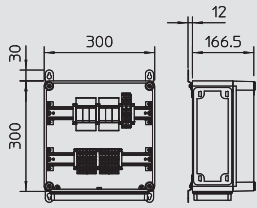
/pc.



| | | | |
|---------------------------------------|-------------|----|------------------|
| Nominal voltage | U_N | V | 230 |
| SPD to EN 61643-11 | | | Type 2 |
| SPD to IEC 61643-11 | | | class II |
| Lightning protection zone LPZ | | | 1→3 |
| Nominal discharge current (8/20) | I_n | kA | 10 |
| Arrestor surge current (8/20) [total] | I_{Total} | kA | 20 |
| Maximum discharge current | I_{max} | kA | 20 |
| Voltage protection level | U_p | kV | 1,3 |
| Response time | t_A | ns | < 25 |
| Maximum back-up fuse | | A | 16 |
| Temperature range | θ | °C | -15 - +60 |
| Division unit TE (17.5 mm) | | | Other |
| Protection rating | | | IP20 |
| Connecting cable length | | m | 0,09 |
| Item No. | | | 5092 48 0 |



PV housing for inverter with 2 MPP trackers, type 1 + 2, 900 V



| Type | Version | U max DC V | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-------------------------|--|---------------|--------------|-----------------------|------------------|
| VG-BCPV 900K 330 | For two MPP and with terminal connection | 900 | 1 | 478,000 | 5088 57 6 |

/pc.

System solution for photovoltaic inverter with 2 separate MPP trackers

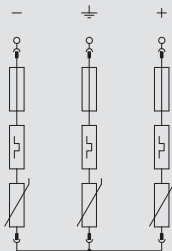
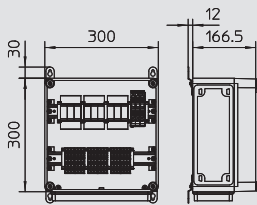
- Varistor arrester, connectable with disconnecting device in error-resistant Y circuit to VDE 0100-712 (50539-12)
- Low DC protection level: < 4.0 kV (Uoc max = 1,000 V DC with V20-C/0-500PV)
- Low DC protection level: < 3.0 kV (Uoc max = 900 V DC with V25-B+C/0-450PV)
- 5088576, 5088582: per protection device there are 6 terminals up to 6 mm² pre-mounted in the housing, up to 30 A DC per terminal
- Pre-mounted in polycarbonate housing (IP65), UV-resistant for the use outside, including cable gland kit

For DC protection of the inverter in photovoltaic systems.

If there is a danger of condensation forming through wind, ice, temperature or sunlight further measures may be necessary!



PV housing for inverter with 3 MPP trackers, type 1 + 2, 900 V



| Type | Version | U max DC V | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-------------------------|--|---------------|--------------|-----------------------|------------------|
| VG-BCPV 900K 333 | For three MPP and with terminal connection | 900 | 1 | 546,000 | 5088 57 9 |

/pc.

System solution for photovoltaic inverter with 3 separate MPP trackers

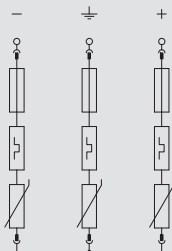
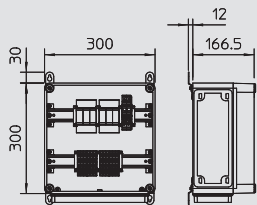
- Varistor arrester, connectable with disconnecting device in error-resistant Y circuit to VDE 0100-712 (50539-12)
- Low DC protection level: < 4.0 kV (Uoc max = 1,000 V DC with V20-C/0-500PV)
- Low DC protection level: < 3.0 kV (Uoc max = 900 V DC with V25-B+C/0-450PV)
- 5088576, 5088582: per protection device there are 6 terminals up to 6 mm² pre-mounted in the housing, up to 30 A DC per terminal
- Pre-mounted in polycarbonate housing (IP65), UV-resistant for the use outside, including cable gland kit

For DC protection of the inverter in photovoltaic systems.

If there is a danger of condensation forming through wind, ice, temperature or sunlight further measures may be necessary!



PV housing for inverter with 2 MPP trackers, type 2, 1,000 V



| Type | Version | U max DC V | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-------------------------|--|---------------|--------------|-----------------------|------------------|
| VG-CPV 1000K 330 | For two MPP and with terminal connection | 1000 | 1 | 468,000 | 5088 58 2 |

/pc.

System solution for photovoltaic inverter with 2 separate MPP trackers

- Varistor arrester, connectable with disconnecting device in error-resistant Y circuit to VDE 0100-712 (50539-12)
- Low DC protection level: < 4.0 kV (Uoc max = 1,000 V DC with V20-C/0-500PV)
- Low DC protection level: < 3.0 kV (Uoc max = 900 V DC with V25-B+C/0-450PV)
- 5088576, 5088582: per protection device there are 6 terminals up to 6 mm² pre-mounted in the housing, up to 30 A DC per terminal
- Pre-mounted in polycarbonate housing (IP65), UV-resistant for the use outside, including cable gland kit

For DC protection of the inverter in photovoltaic systems.

If there is a danger of condensation forming through wind, ice, temperature or sunlight further measures may be necessary!



Surge protection for PV systems

PV housing for inverter with 3 MPP trackers, type 2, 1,000 V



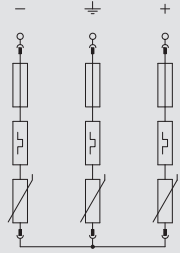
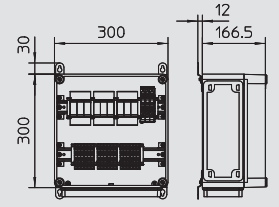
| Type | Version | U max DC V | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-------------------------|--|------------|-----------|--------------------|------------------|
| VG-CPV 1000K 333 | For three MPP and with terminal connection | 1000 | 1 | 528,000 | 5088 58 5 |

/pc.

System solution for photovoltaic inverter with 3 separate MPP trackers

- Varistor arrester, connectable with disconnecting device in error-resistant Y circuit to VDE 0100-712 (50539-12)
- Low DC protection level: < 4.0 kV (Uoc max = 1,000 V DC with V20-C/0-500PV)
- Low DC protection level: < 3.0 kV (Uoc max = 900 V DC with V25-B+C/0-450PV)
- 5088576, 5088582: per protection device there are 6 terminals up to 6 mm² pre-mounted in the housing, up to 30 A DC per terminal
- Pre-mounted in polycarbonate housing (IP65), UV-resistant for the use outside, including cable gland kit

For DC protection of the inverter in photovoltaic systems.
If there is a danger of condensation forming through wind, ice, temperature or sunlight further measures may be necessary!



PV housing for inverter with 2 MPP trackers, type 1 + 2, 900 V



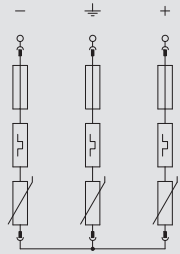
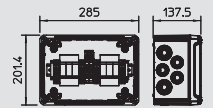
| Type | Version | U max DC V | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------------------|--|------------|-----------|--------------------|------------------|
| VG-BCPV900K 22 | For two MPP and with terminal connection | 900 | 1 | 220,000 | 5088 56 6 |

/pc.

System solution for photovoltaic inverter with 2 separate MPP trackers

- Varistor arrester, connectable with disconnecting device in error-resistant Y circuit to VDE 0100-712 (50539-12)
- Low DC protection level: < 4.0 kV (Uoc max = 1,000 V DC with V20-C/0-500PV)
- Low DC protection level: < 3.0 kV (Uoc max = 900 V DC with V25-B+C/0-450PV)
- 5088576, 5088582: per protection device there are 6 terminals up to 6 mm² pre-mounted in the housing, up to 30 A DC per terminal
- Pre-mounted in polycarbonate housing (IP65), UV-resistant for the use outside, including cable gland kit

For DC protection of the inverter in photovoltaic systems.
If there is a danger of condensation forming through wind, ice, temperature or sunlight further measures may be necessary!



PV housing for inverter with 2 MPP trackers, type 2, 1,000 V



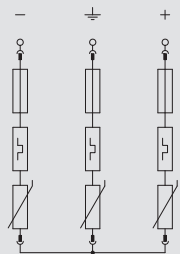
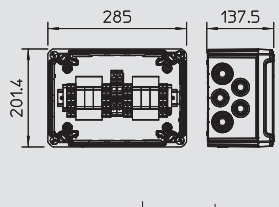
| Type | Version | U max DC V | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------------------|--|------------|-----------|--------------------|------------------|
| VG-CPV1000K 22 | For two MPP and with terminal connection | 1000 | 1 | 216,600 | 5088 56 8 |

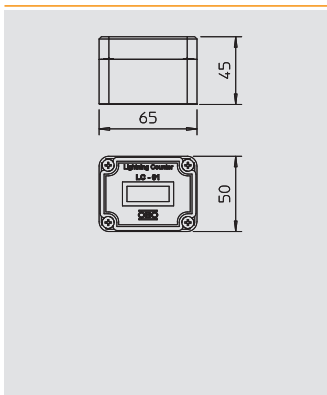
/pc.

System solution for photovoltaic inverter with 2 separate MPP trackers

- Varistor arrester, connectable with disconnecting device in error-resistant Y circuit to VDE 0100-712 (50539-12)
- Low DC protection level: < 4.0 kV (Uoc max = 1,000 V DC with V20-C/0-500PV)
- Low DC protection level: < 3.0 kV (Uoc max = 900 V DC with V25-B+C/0-450PV)
- 5088576, 5088582: per protection device there are 6 terminals up to 6 mm² pre-mounted in the housing, up to 30 A DC per terminal
- Pre-mounted in polycarbonate housing (IP65), UV-resistant for the use outside, including cable gland kit

For DC protection of the inverter in photovoltaic systems.
If there is a danger of condensation forming through wind, ice, temperature or sunlight further measures may be necessary!





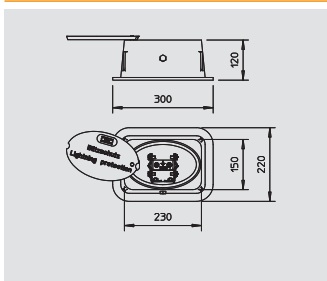
Lightning current meter

| Type | Measuring range | Pack. | Weight | Item No. |
|--------------|-----------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| LC-01 | 0.3 kA-100 kA | 1 | 15,000 | 5091 72 0 |

Plastic /pc.

The LC-01 lightning current meter measures and save pulse currents. This ensures constant monitoring in order to notice if any lightning has struck the protection system.

- Usable both inside and outside due to its protection class of IP 67
- Cable clip for round cables 6-10 mm or flat cables 30 x 3.5 mm
- Direct mounting to the arrester or the PE cable of the surge protection
- Long lifespan
- LCD display
- Internal battery

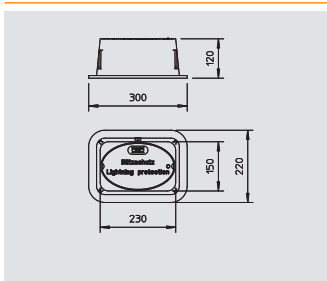


Underfloor test box with integrated cut-off unit

| Type | Pack. | Weight | Item No. |
|----------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| 5700 SP | 1 | 770,000 | 5106 00 3 |

Cast iron /pc.

- Without base
- Cast iron, painted black
- With built-in cut-off unit for round cables Rd 8-10 and flat cables to FL 40
- To VDE 0185-561-5 (IEC 62561-5) suitable for heavy loads (up to 40 kN/ 4.0 t)

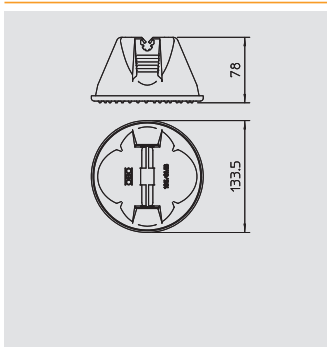


Underfloor test box without integrated cut-off unit

| Type | Pack. | Weight | Item No. |
|-------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| 5700 | 1 | 720,000 | 5106 00 2 |

Cast iron /pc.

- Without base
- Cast iron, painted black
- Without cut-off unit
- To VDE 0185-561-5 (IEC 62561-5) suitable for heavy loads (up to 40 kN/ 4.0 t)

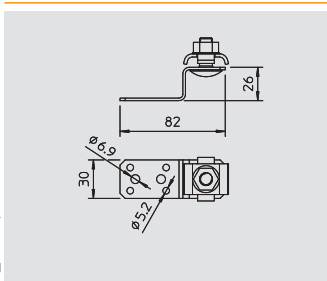


Roof cable holder

| Type | Fit | Colour | Pack. | Weight | Item No. |
|----------------------|-------|--------|-------|-------------|------------------|
| | mm | | pcs | kg/100 pcs. | |
| 165 MBG-8 GR | Rd 8 | Grey | 12 | 106,000 | 5218 69 3 |
| 165 MBG-10 GR | Rd 10 | Grey | 12 | 106,000 | 5218 67 7 |

PA/PE Polyamide/Polyethylene /100 pc.

- Closed form with base
- With double cable holder
- Filling weight 1 kg (frost resistant concrete)
- Case made from polyethylene, light grey, UV-stabilised and weatherproof
- Base made from polyamide PA 6, light grey, UV-stabilised and weatherproof
- Base suitable for nearly all roofing membrane systems (Bitumen, PVC)



Connection component

| Type | Fit | Pack. | Weight | Item No. |
|----------------|------|-------|-------------|------------------|
| | mm | pcs | kg/100 pcs. | |
| 287 DCT | Rd 8 | 10 | 6,450 | 5320 70 7 |

Al Aluminium /100 pc.

- Conforming to VDE 0185-305 (IEC 62305) standards
- Quick mounting thanks to an M10x30 screw from rustproof stainless steel
- 4 mounting holes Ø 5.2 mm
- 2 mounting holes Ø 6.9 mm



Lightning protection systems

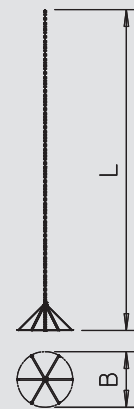
Tele lightning protection system, 10 metre pole + stand



| Type | Dimension D | Dimension B | Length | Materials combination | Pack. | Weight | Item No. |
|----------------|-------------|-------------|--------|-----------------------|-------|-------------|------------------|
| | Ø mm | mm | mm | | pcs | kg/100 pcs. | |
| irod 10 | 48.3 | 1800 | 10000 | Alu/ V2A | 1 | 6.500,000 | 5400 81 0 |

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants
- Consisting of interception rod and interception rod stand
- Please order concrete foot, edge protection and threaded rods separately



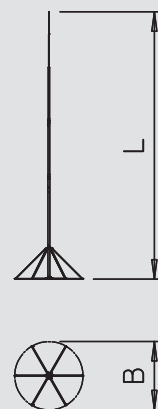
Tele lightning protection system, 12 metre pole + stand



| Type | Dimension D | Dimension B | Length | Materials combination | Pack. | Weight | Item No. |
|----------------|-------------|-------------|--------|-----------------------|-------|-------------|------------------|
| | Ø mm | mm | mm | | pcs | kg/100 pcs. | |
| irod 12 | 85 | 3000 | 12000 | Alu/ V2A | 1 | 10.900,000 | 5400 81 2 |

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants, gas pressure regulation plants, control and greenfield photovoltaic systems
- Consisting of interception rod and interception rod stand
- Please order concrete foot, edge protection and threaded rods separately



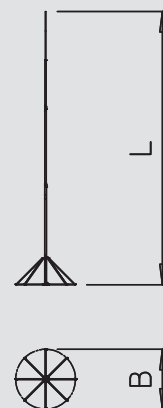
Tele lightning protection system, 14 metre pole + stand



| Type | Dimension D | Dimension B | Length | Materials combination | Pack. | Weight | Item No. |
|----------------|-------------|-------------|--------|-----------------------|-------|-------------|------------------|
| | Ø mm | mm | mm | | pcs | kg/100 pcs. | |
| irod 14 | 85 | 3200 | 14000 | Alu/ V2A | 1 | 15.400,000 | 5400 81 4 |

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants
- Consisting of interception rod and interception rod stand
- Please order concrete foot, edge protection and threaded rods separately



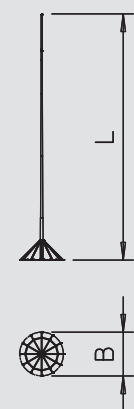
Tele lightning protection system, 19 metre pole + stand

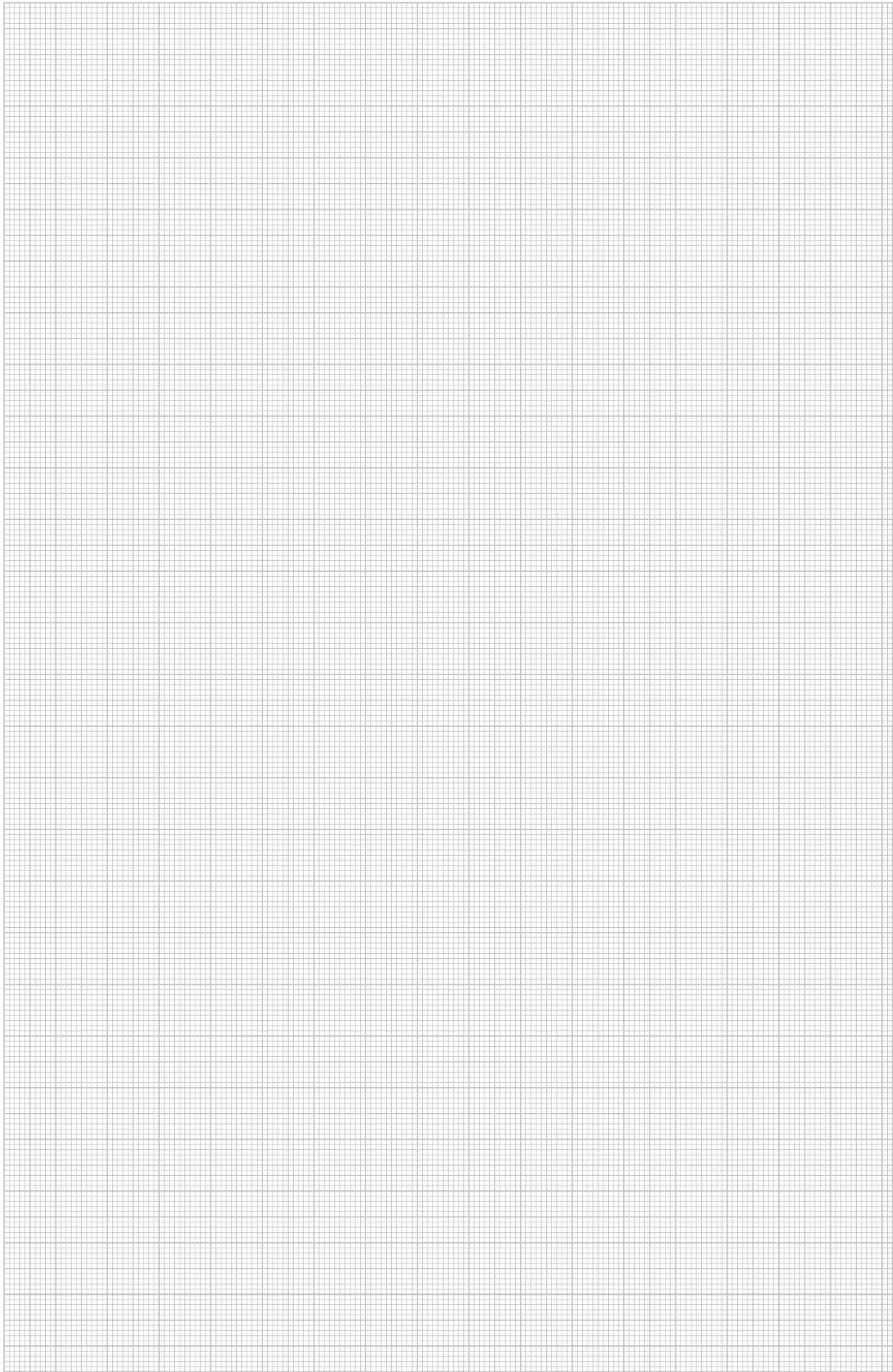


| Type | Dimension D | Dimension B | Length | Materials combination | Pack. | Weight | Item No. |
|----------------|-------------|-------------|--------|-----------------------|-------|-------------|------------------|
| | Ø mm | mm | mm | | pcs | kg/100 pcs. | |
| irod 19 | 198 | 3400 | 19500 | Alu/ V2A/ St (FT) | 1 | 41.500,000 | 5400 81 7 |





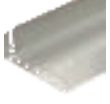

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants, gas-pressure regulation plants, control and greenfield photovoltaic systems
- Consisting of interception rod and interception rod stand
- Please order concrete foot and edge protection separately
- Including 800-mm threaded rods





KTS product innovations

| | | | |
|--|--------------------------------------|-----------------------|----|
|  | Cable tray SKSM, side height 60 mm | V2A V4A | 60 |
|  | Cable tray MKSMU, side height 60 mm | V2A | 62 |
|  | Cable tray SKSMU, side height 60 mm | V2A | 63 |
|  | Cable tray MKSM, side height 110 mm | V2A | 64 |
|  | Cable tray MKSMU, side height 110 mm | V2A MKSMU fittings | 65 |
|  | Cable tray BKRS, side height 110 mm | Accessories | 67 |

Walk-on cable tray system BKRS

Foot-sure through day-to-day industrial operations



Be it in the automotive industry or in plant construction – with the heavy, walk-on cable tray system BKRS OBO is expanding its range for electrical installations linked to automated production lines. The new system with base perforation has a side height of 110 millimetres. In addition, the tray has connector perforations on both

ends. The trays' covers are non-slip, stable and strengthened with profiled sheet metal and provide – the perfect surface for harsh industrial conditions. In combination with the cover the walk-on cable tray has a magnetic shield insulation of 50 dB, without cover 20 dB.





Extensive system accessories such as connectors, dust protection components, guard plates, - barrier strips and fastening material complete the range and ensure a flexible and installation-friendly system.



Magic cable tray VA

Magic in stainless steel

The versatile cable trays from the Magic system are now also available in two stainless steel versions, V2A and V4A. Be it a perforated or non-perforated type, the robust trays are suitable for use in the harshest conditions. The widths of the trays range from 100 to 600 millimetres. The sides are available in heights between 60 and 110

millimetres. Like all trays from the Magic range, the stainless steel versions also have the patented Magic quick connection: Without any screws it is possible to connect cable trays with other cable trays or fittings with trays in no time at all.



Cable tray systems



Cable tray SKSM, side height 60 mm, V2A

| Type | Width mm | Plate thickness mm | Length mm | Useful cross- section cm ² | Dimen- sion x mm | Dimen- sion y mm | Dimen- sion L mm | Weight kg/100 m | Item No. |
|-----------------|-------------|--------------------------|--------------|--|------------------------|------------------------|------------------------|--------------------|-----------|
| SKSM 610 VA4301 | 100 | 1.5 | 3050 | 58 | — | 62 | 30 | 249,180 | 6059 49 0 |
| SKSM 620 VA4301 | 200 | 1.5 | 3050 | 118 | 96 | 162 | 80 | 331,470 | 6059 49 4 |
| SKSM 630 VA4301 | 300 | 1.5 | 3050 | 178 | 196 | 262 | 180 | 387,540 | 6059 49 6 |
| SKSM 640 VA4301 | 400 | 1.5 | 3050 | 238 | 296 | 362 | 280 | 443,930 | 6059 49 8 |
| SKSM 650 VA4301 | 500 | 1.5 | 3050 | 298 | 396 | 462 | 380 | 500,660 | 6059 50 0 |
| SKSM 660 VA4301 | 600 | 1.5 | 3050 | 358 | 496 | 562 | 480 | 556,720 | 6059 50 2 |

V2A Stainless steel, grade 304

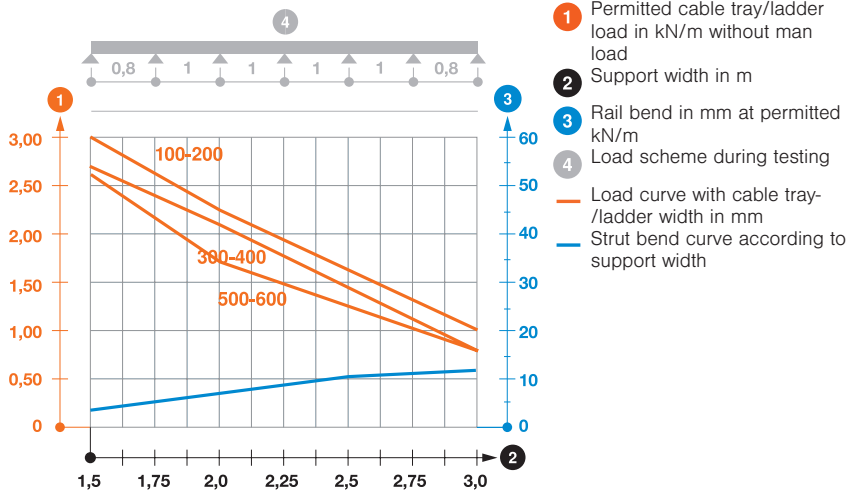
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SKSM 60 = heavy-duty Magic cable tray system with 60 mm side height.

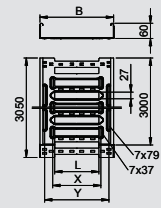
Cable tray with quick connection system, including all the relevant connection components for time-saving and economic installation, with beaded straight base perforation, 7 x 79 mm, for bracket mounting. All widths with cross beading for stabilisation and duct ventilation. Continuous side perforation, 7 x 20 mm, as additional connector perforation. From a cable tray width of 200 mm, they are suitable for use under sprinkler systems according to VdS guideline 2092 permeable cable tray system with 30% hole surface. The stock length is 3,050 mm, the usable length when combined is 3,000 mm.

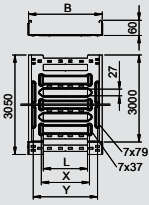
The spring element FED 60 can be ordered separately as an accessory part (spare) for the Magic cable trays of side height 60 mm, 85 mm and 110 mm under the article number 6068859. Continuous equipotential bonding is guaranteed without additional components. VDE-tested cable tray system.

Load diagram, cable tray, type SKSM 60



- 1 Permitted cable tray/ladder load in kN/m without man load
- 2 Support width in m
- 3 Rail bend in mm at permitted kN/m
- 4 Load scheme during testing
- Load curve with cable tray-/ladder width in mm
- Strut bend curve according to support width





Cable tray SKSM, side height 60 mm, V4A

| Type | Width mm | Plate thickness mm | Length mm | Useful cross- section cm ² | Dimen- sion x mm | Dimen- sion y mm | Dimen- sion L mm | Weight kg/100 m | Item No. |
|-----------------|-------------|--------------------------|--------------|--|------------------------|------------------------|------------------------|--------------------|-----------|
| SKSM 610 VA4571 | 100 | 1.5 | 3050 | 58 | — | 62 | 30 | 253,340 | 6059 50 7 |
| SKSM 620 VA4571 | 200 | 1.5 | 3050 | 118 | 96 | 162 | 80 | 331,470 | 6059 51 1 |
| SKSM 630 VA4571 | 300 | 1.5 | 3050 | 178 | 196 | 262 | 180 | 387,540 | 6059 51 3 |
| SKSM 640 VA4571 | 400 | 1.5 | 3050 | 238 | 296 | 362 | 280 | 443,930 | 6059 51 5 |
| SKSM 650 VA4571 | 500 | 1.5 | 3050 | 298 | 396 | 462 | 380 | 509,000 | 6059 51 7 |
| SKSM 660 VA4571 | 600 | 1.5 | 3050 | 358 | 396 | 562 | 480 | 556,720 | 6059 51 9 |



V4A Stainless steel, 316Ti

/m

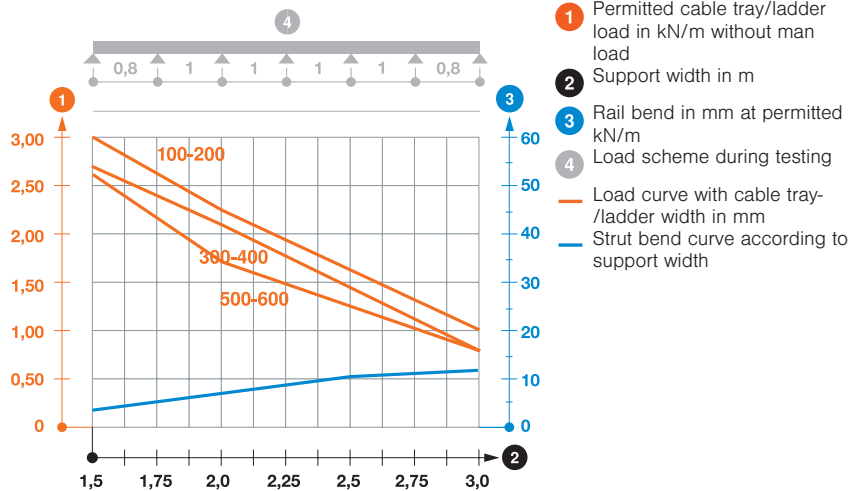
SKSM 60 = heavy-duty Magic cable tray system with 60 mm side height.

Cable tray with quick connection system, including all the relevant connection components for time-saving and economic installation, with beaded straight base perforation, 7 x 79 mm, for bracket mounting. All widths with cross beading for stabilisation and duct ventilation. Continuous side perforation, 7 x 20 mm, as additional connector perforation. From a cable tray width of 200 mm, they are suitable for use under sprinkler systems according to VdS guideline 2092 permeable cable tray system with 30% hole surface.

The stock length is 60 mm, the usable length when combined is 60 mm.

The spring element FED 60 can be ordered separately as an accessory part (spare) for the Magic cable trays of side height 60 mm, 85 mm and 110 mm under the article number 6068859. Continuous equipotential bonding is guaranteed without additional components. VDE-tested cable tray system.

Load diagram, cable tray, type SKSM 60



Cable tray systems



Cable tray MKSMU, side height 60 mm, V2A

| Type | Width mm | Plate thickness mm | Length mm | Useful cross- section cm ² | Weight kg/100 m | Item No. |
|------------------|-------------|--------------------------|--------------|--|--------------------|-----------|
| MKSMU 610 VA4301 | 100 | 1 | 3050 | 58 | 192,450 | 6059 26 5 |
| MKSMU 620 VA4301 | 200 | 1 | 3050 | 118 | 271,150 | 6059 26 9 |
| MKSMU 630 VA4301 | 300 | 1 | 3050 | 178 | 350,490 | 6059 27 1 |
| MKSMU 640 VA4301 | 400 | 1 | 3050 | 238 | 429,500 | 6059 27 3 |
| MKSMU 650 VA4301 | 500 | 1 | 3050 | 298 | 508,520 | 6059 27 5 |
| MKSMU 660 VA4301 | 600 | 1 | 3050 | 358 | 587,200 | 6059 27 7 |

V2A Stainless steel, grade 304

/m

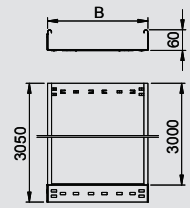
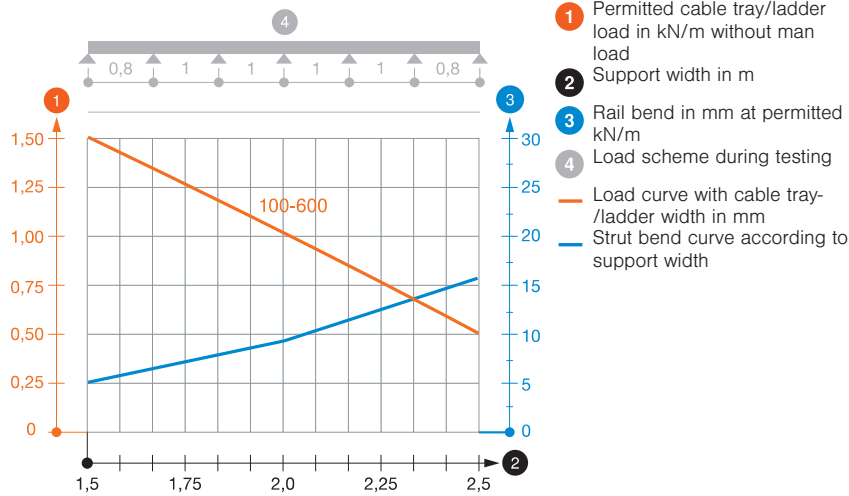
MKSMU 60 = medium-duty Magic cable tray system, unperforated, with a side height of 60 mm. Unperforated cable tray with quick connection system, including all the relevant connection components for time-saving and economic installation.

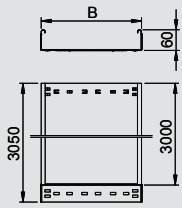
The stock length is 60 mm, the usable length when combined is 60 mm.

The spring element FED 60 can be ordered separately as an accessory part (spare) for the Magic cable trays with a side height of 60 mm, 85 mm and 110 mm under the article number 6068859.

The continuous equipotential bonding is guaranteed without additional components. VDE-tested cable tray system.

Load diagram, cable tray, type MKSMU 60





Cable tray SKSMU, side height 60 mm, V2A

| Type | Width mm | Plate thickness mm | Length mm | Useful cross- section cm ² | Weight kg/100 m | Item No. |
|------------------|-------------|--------------------------|--------------|--|--------------------|-----------|
| SKSMU 610 VA4301 | 100 | 1.5 | 3050 | 58 | 288,850 | 6059 72 2 |
| SKSMU 620 VA4301 | 200 | 1.5 | 3050 | 118 | 407,210 | 6059 72 6 |
| SKSMU 630 VA4301 | 300 | 1.5 | 3050 | 178 | 525,570 | 6059 72 8 |
| SKSMU 640 VA4301 | 400 | 1.5 | 3050 | 238 | 644,260 | 6059 73 0 |
| SKSMU 650 VA4301 | 500 | 1.5 | 3050 | 298 | 762,620 | 6059 73 2 |
| SKSMU 660 VA4301 | 600 | 1.5 | 3050 | 358 | 881,000 | 6059 73 4 |



V2A Stainless steel, grade 304

/m

SKSMU 60 = heavy-duty Magic cable tray system, unperforated, with 60 mm side height.

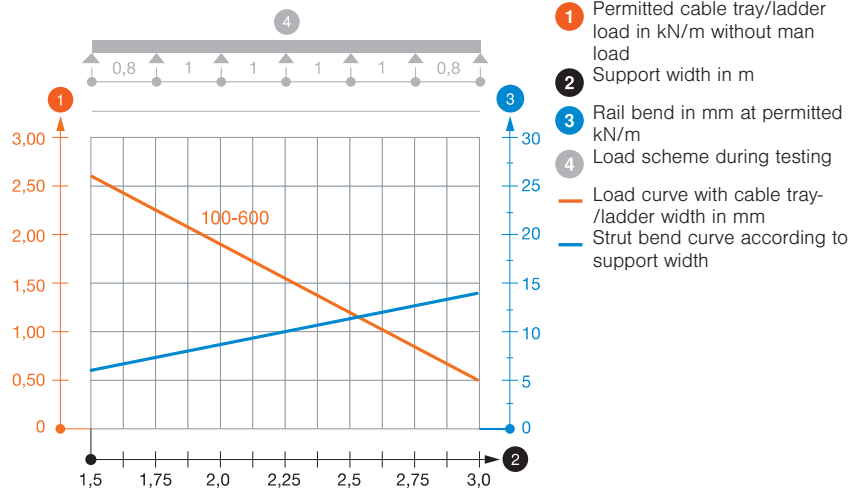
Unperforated cable tray with quick connection system, including all the relevant connection components for time-saving and economic installation.

The stock length is 60 mm, the usable length when combined is 60 mm.

The spring element FED 60 can be ordered separately as an accessory part (spare) for the Magic cable trays with a side height of 60 mm, 85 mm and 110 mm under the article number 6068859.

The continuous equipotential bonding is guaranteed without additional components. VDE-tested cable tray system.

Load diagram, cable tray, type SKSMU 60



Cable tray systems



Cable tray MKSM, side height 110 mm, V2A

| Type | Width mm | Plate thickness mm | Length mm | Useful cross- section cm ² | Dimen- sion x mm | Dimen- sion y mm | Dimen- sion L mm | Weight kg/100 m | Item No. |
|-----------------|-------------|--------------------------|--------------|--|------------------------|------------------------|------------------------|--------------------|-----------|
| MKSM 110 VA4301 | 100 | 1 | 3050 | 108 | — | 62 | 30 | 236,720 | 6059 19 0 |
| MKSM 120 VA4301 | 200 | 1 | 3050 | 218 | 96 | 162 | 80 | 291,800 | 6059 19 4 |
| MKSM 130 VA4301 | 300 | 1 | 3050 | 328 | 196 | 262 | 180 | 329,180 | 6059 19 6 |
| MKSM 140 VA4301 | 400 | 1 | 3050 | 438 | 296 | 362 | 280 | 366,900 | 6059 19 8 |
| MKSM 150 VA4301 | 500 | 1 | 3050 | 548 | 396 | 462 | 380 | 404,590 | 6059 20 0 |
| MKSM 160 VA4301 | 600 | 1 | 3050 | 655 | 496 | 562 | 480 | 441,970 | 6059 20 2 |

V2A Stainless steel, grade 304

/m

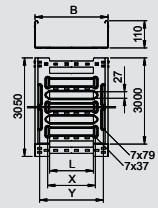
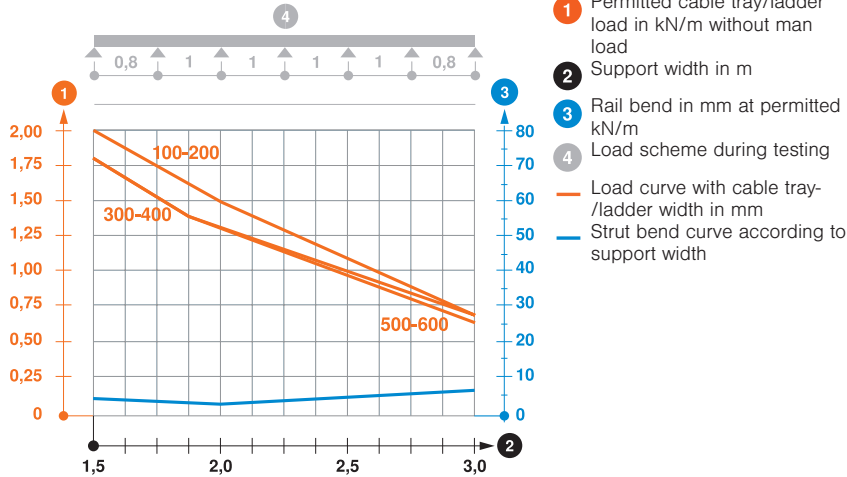
MKSM 110 = medium-duty Magic cable tray system with a side height of 110 mm.

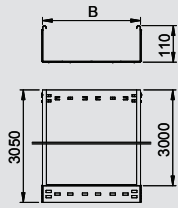
Cable tray with quick connection system, including all the relevant connection components for time-saving and economic installation, with beaded straight base perforation, 7 x 79 mm, for bracket mounting. All widths with cross beading for stabilisation and duct ventilation. Continuous side perforation, 7 x 20 mm, as additional connector perforation. From a cable tray width of 200 mm, they are suitable for use under sprinkler systems according to VdS guideline 2092 permeable cable tray system with 30% hole surface.

The stock length is 60 mm, the usable length when combined is 60 mm.

The spring element FED 60 can be ordered separately as an accessory part (spare) for the Magic cable trays of side height 60 mm, 85 mm and 110 mm under the article number 6068859. Continuous equipotential bonding is guaranteed without additional components. VDE-tested cable tray system.

Load diagram, cable tray, type MKSM 110





Cable tray MKSMU, side height 110 mm, V2A

| Type | Width mm | Plate thickness mm | Length mm | Useful cross- section cm ² | Weight kg/100 m | Item No. |
|------------------|-------------|--------------------------|--------------|--|--------------------|-----------|
| MKSMU 110 VA4301 | 100 | 1 | 3050 | 108 | 271,150 | 6059 41 6 |
| MKSMU 120 VA4301 | 200 | 1 | 3050 | 218 | 350,160 | 6059 42 0 |
| MKSMU 130 VA4301 | 300 | 1 | 3050 | 328 | 428,900 | 6059 42 2 |
| MKSMU 140 VA4301 | 400 | 1 | 3050 | 438 | 507,860 | 6059 42 4 |
| MKSMU 150 VA4301 | 500 | 1 | 3050 | 548 | 586,880 | 6059 42 6 |
| MKSMU 160 VA4301 | 600 | 1 | 3050 | 655 | 665,900 | 6059 42 8 |



V2A Stainless steel, grade 304 /m

MKSMU 110 = medium-duty Magic cable tray system, unperforated, with a side height of 110 mm.

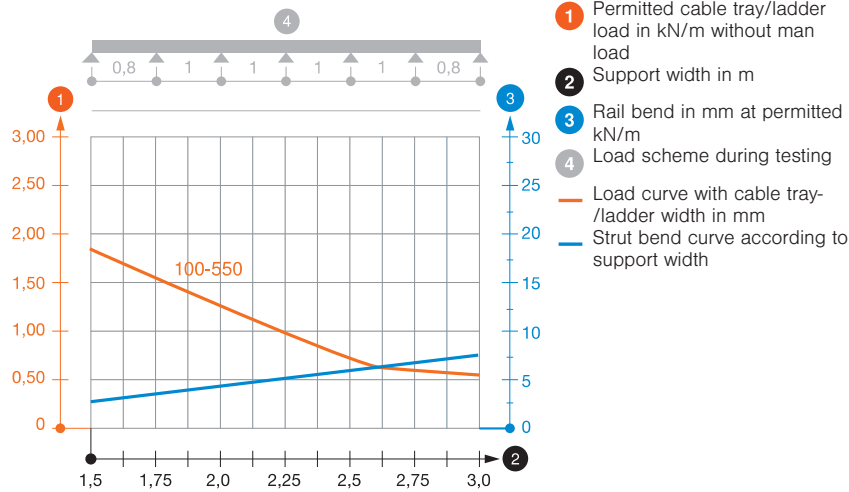
Unperforated cable tray with quick connection system, including all the relevant connection components for time-saving and economic installation.

The stock length is 60 mm, the usable length when combined is 60 mm.

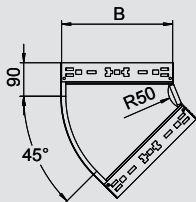
The spring element FED 60 can be ordered separately as a accessory part (spare) for the Magic cable trays with a side height of 60 mm, 85 mm and 110 mm under the article number 6068859.

The continuous equipotential bonding is guaranteed without additional components. VDE-tested cable tray system.

Load diagram, cable tray, type MKSMU 110

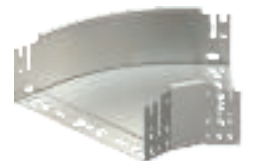


- 1 Permitted cable tray/ladder load in kN/m without man load
- 2 Support width in m
- 3 Rail bend in mm at permitted kN/m
- 4 Load scheme during testing
- Load curve with cable tray-/ladder width in mm
- Strut bend curve according to support width



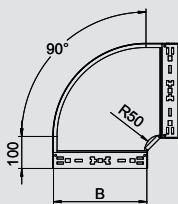
45° bend, V2A

| Type | Width mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|-------------|--------------|-----------------------|-----------|
| RBM 45 110VA4301 | 100 | 1 | 70,500 | 6041 80 0 |
| RBM 45 120VA4301 | 200 | 1 | 109,900 | 6041 80 2 |
| RBM 45 130VA4301 | 300 | 1 | 156,100 | 6041 80 4 |
| RBM 45 140VA4301 | 400 | 1 | 206,500 | 6041 80 6 |
| RBM 45 150VA4301 | 500 | 1 | 268,300 | 6041 80 8 |
| RBM 45 160VA4301 | 600 | 1 | 337,700 | 6041 81 0 |



V2A Stainless steel, grade 304 /pc.

45° bend with quick connector system. For all cable tray types of 110 mm side height.



90° bend, V2A

| Type | Width mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|-------------|--------------|-----------------------|-----------|
| RBM 90 110VA4301 | 100 | 1 | 90,900 | 6041 88 0 |
| RBM 90 120VA4301 | 200 | 1 | 154,900 | 6041 88 2 |
| RBM 90 130VA4301 | 300 | 1 | 233,400 | 6041 88 4 |
| RBM 90 140VA4301 | 400 | 1 | 323,600 | 6041 88 6 |
| RBM 90 150VA4301 | 500 | 1 | 433,100 | 6041 88 8 |
| RBM 90 160VA4301 | 600 | 1 | 558,000 | 6041 89 0 |



V2A Stainless steel, grade 304 /pc.

90° bend with quick connector system. For all cable tray types of 110 mm side height.



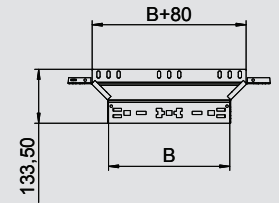
Cable tray systems

Add-on tee, V2A



| Type | Width | Pack. | Weight | Item No. |
|-----------------|-------|-------|-------------|-----------|
| | mm | pcs | kg/100 pcs. | |
| RAAM 110 VA4301 | 100 | 1 | 53,700 | 6041 96 0 |
| RAAM 120 VA4301 | 200 | 1 | 66,300 | 6041 96 2 |
| RAAM 130 VA4301 | 300 | 1 | 79,200 | 6041 96 4 |
| RAAM 140 VA4301 | 400 | 1 | 92,200 | 6041 96 6 |
| RAAM 150 VA4301 | 500 | 1 | 105,100 | 6041 96 8 |
| RAAM 160 VA4301 | 600 | 1 | 118,400 | 6041 97 0 |

V2A Stainless steel, grade 304 /pc.
Add-on tee with quick connector system. For all cable tray types of 110 mm side height.

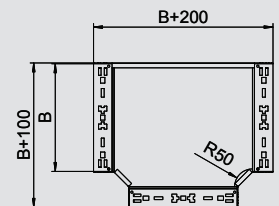


T branch piece, V2A

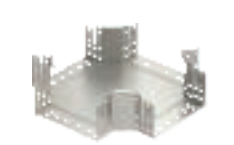


| Type | Width | Pack. | Weight | Item No. |
|----------------|-------|-------|-------------|-----------|
| | mm | pcs | kg/100 pcs. | |
| RTM 110 VA4301 | 100 | 1 | 113,600 | 6042 05 0 |
| RTM 120 VA4301 | 200 | 1 | 185,500 | 6042 05 2 |
| RTM 130 VA4301 | 300 | 1 | 275,600 | 6042 05 4 |
| RTM 140 VA4301 | 400 | 1 | 380,300 | 6042 05 6 |
| RTM 150 VA4301 | 500 | 1 | 510,100 | 6042 06 0 |
| RTM 160 VA4301 | 600 | 1 | 659,500 | 6042 06 2 |

V2A Stainless steel, grade 304 /pc.
Tee with quick connector system. For all cable tray types of 110 mm side height.

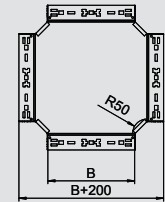


Cross-over, V2A



| Type | Width | Pack. | Weight | Item No. |
|----------------|-------|-------|-------------|-----------|
| | mm | pcs | kg/100 pcs. | |
| RKM 110 VA4301 | 100 | 1 | 124,700 | 7027 20 1 |
| RKM 120 VA4301 | 200 | 1 | 192,300 | 7027 20 5 |
| RKM 130 VA4301 | 300 | 1 | 277,600 | 7027 20 7 |
| RKM 140 VA4301 | 400 | 1 | 374,800 | 7027 20 9 |
| RKM 150 VA4301 | 500 | 1 | 499,800 | 7027 21 1 |
| RKM 160 VA4301 | 600 | 1 | 644,300 | 7027 21 3 |

V2A Stainless steel, grade 304 /pc.
Cross-over with quick connector system. For all cable tray types of 110 mm side height.

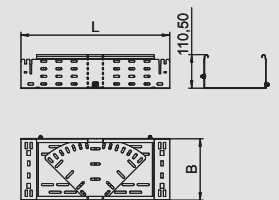


Bend, variable, V2A



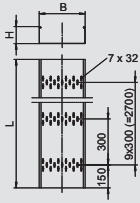
| Type | Dimension L | Width | Plate thickness | Pack. | Item No. |
|------------------|-------------|-------|-----------------|-------|-----------|
| | mm | mm | mm | pcs | |
| RBMV 110 VA 4301 | 340 | 100 | 1 | 1 | 6040 72 0 |
| RBMV 120 VA 4301 | 490 | 200 | 1 | 1 | 6040 72 4 |
| RBMV 130 VA 4301 | 640 | 300 | 1.25 | 1 | 6040 72 6 |
| RBMV 140 VA 4301 | 820 | 400 | 1.25 | 1 | 6040 72 8 |
| RBMV 150 VA 4301 | 960 | 500 | 1.5 | 1 | 6040 73 0 |
| RBMV 160 VA 4301 | 1120 | 600 | 1.5 | 1 | 6040 73 2 |

V2A Stainless steel, grade 304 /pc.
Magic bend 0°-90°, variable, with quick connector system. For all cable tray types of 110 mm side height.



KTS





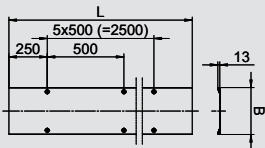
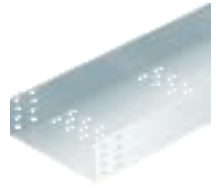
Cable tray BKRS, side height 110 mm

| Type | Dimension B mm | Dimension L mm | Dimension H mm | Plate thickness mm | Pack. m | Item No. |
|--------------|-------------------|-------------------|-------------------|-----------------------|------------|-----------|
| BKRS 1110 FS | 100 | 3000 | 110 | 2 | 3 | 6061 98 1 |
| BKRS 1120 FS | 200 | 3000 | 110 | 2 | 3 | 6061 98 3 |
| BKRS 1130 FS | 300 | 3000 | 110 | 2 | 3 | 6061 98 5 |
| BKRS 1140 FS | 400 | 3000 | 110 | 2 | 3 | 6061 98 7 |
| BKRS 1150 FS | 500 | 3000 | 110 | 2 | 3 | 6061 98 9 |
| BKRS 1160 FS | 600 | 3000 | 110 | 2 | 3 | 6061 99 1 |

St Steel **FS** Strip-galvanised /m

Heavy-duty, walk-on cable tray system BKRS with base perforation, in 110 mm side height. Magnetic shield insulation without cover 20 dB, with cover 50 dB.

The cable tray has connector perforations on both sides. Straight connectors should be ordered separately and in the appropriate quantity.

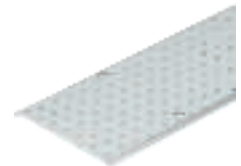


Cover for BKRS

| Type | Dimension B mm | Dimension L mm | Plate thickness mm | Pack. m | Weight kg/100 m | Item No. |
|----------------|-------------------|-------------------|-----------------------|------------|--------------------|-----------|
| DF BKR10 FS AL | 100 | 3000 | 2 | 3 | 272,340 | 6049 18 1 |
| DF BKR20 FS AL | 200 | 3000 | 2 | 3 | 503,670 | 6049 18 3 |
| DF BKR30 FS AL | 300 | 3000 | 2 | 3 | 735,000 | 6049 18 5 |
| DF BKR40 FS AL | 400 | 3000 | 2 | 3 | 966,670 | 6049 18 7 |
| DF BKR50 FS AL | 500 | 3000 | 2 | 3 | 1.197,670 | 6049 18 9 |
| DF BKR60 FS AL | 600 | 3000 | 2 | 3 | 1.429,000 | 6049 19 1 |

/m

Cable tray cover for the walk-on cable BKRS cable tray system. The basic cover is strip galvanised in a material thickness of 2 mm with additional aluminium chequer riveted on in a thickness of 4 mm, sturdy and non-slip. Turn buckle fastening with a turn buckle distance of 500 mm.

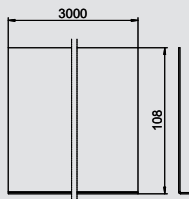


Dust protection element for BKRS

| Type | Dimension B mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------------|-------------------|--------------|-----------------------|-----------|
| SSE BKR 100 FS | 100 | 1 | 1,630 | 6049 26 1 |
| SSE BKR 200 FS | 200 | 1 | 3,250 | 6049 26 3 |
| SSE BKR 300 FS | 300 | 1 | 4,870 | 6049 26 5 |
| SSE BKR 400 FS | 400 | 1 | 6,490 | 6049 26 7 |
| SSE BKR 500 FS | 500 | 1 | 8,120 | 6049 26 9 |
| SSE BKR 600 FS | 600 | 1 | 9,740 | 6049 27 1 |

St Steel **FS** Strip-galvanised /pc.

Dust protection element for the insertion between aluminium chequer plate and basic cover in BKRS walk-on cable tray systems providing protection against dust, chips, etc.

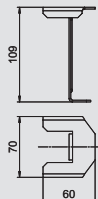


Collision guard for BKRS

| Type | Length mm | Height mm | Thickness mm | Pack. m | Item No. |
|-----------|--------------|--------------|-----------------|------------|-----------|
| SB BKS FS | 3000 | 108 | 1 | 3 | 6049 25 2 |

St Steel **FS** Strip-galvanised /m

Collision guard, to be attached at the side as a collision guard for the walk-on BKRS cable tray system. The side height is 108 mm.



Cover support for BKRS

| Type | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------------|--------------|-----------------------|-----------|
| DST110 BKRS FS | 10 | 10,800 | 6049 25 6 |

St Steel **FS** Strip-galvanised /pc.

Cover support for the walk-on BKRS cable tray system, for additional support of covers and fitting covers at a side height of 110 mm.



Walk-on cable tray systems

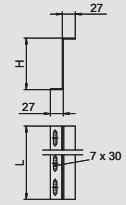
Barrier strip for BKRS



| Type | Dimension L mm | Dimension H mm | Pack. m | Weight kg/100 m | Item No. |
|------------------------|-------------------|-------------------|------------|--------------------|------------------|
| TSG110Z BKRS FS | 3000 | 109 | 3 | 240,670 | 6062 39 1 |

St Steel **FS** Strip-galvanised /m

Barrier strip for the BKRS walk-on cable tray system. Attachment with truss-head screws M 6 x 12 in the base perforation.



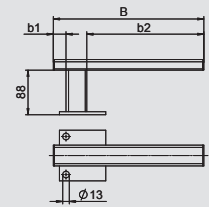
Support bracket for BKRS



| Type | Dimension B mm | Dimension b1 mm | Dimension b2 mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|---------------------|-------------------|--------------------|--------------------|--------------|-----------------------|------------------|
| STA BKS10 FT | 97 | 13 | 43 | 1 | 69,500 | 6044 56 1 |
| STA BKS20 FT | 197 | 13 | 143 | 1 | 84,900 | 6044 56 3 |
| STA BKS30 FT | 297 | 25 | 231 | 1 | 100,300 | 6044 56 5 |
| STA BKS40 FT | 397 | 25 | 331 | 1 | 115,600 | 6044 56 7 |
| STA BKS50 FT | 497 | 125 | 331 | 1 | 131,000 | 6044 56 9 |
| STA BKS60 FT | 597 | 225 | 331 | 1 | 146,400 | 6044 57 1 |

St Steel **FT** Hot-dip galvanised /pc.

Support bracket for holding up the BKRS cable tray system from the floor.



Non-slip strips for BKRS



| Type | Pack. m | Weight kg/100 m | Item No. |
|----------------|------------|--------------------|------------------|
| ARS BKR | 11 | 10,070 | 6049 25 9 |

GUM Rubber /m

Self-adhesive, anti-slip strip to stick onto the Z barrier strip in walk-on cable trays, for securing laid-on but not yet attached covers.

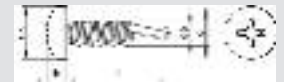
Drilling screw

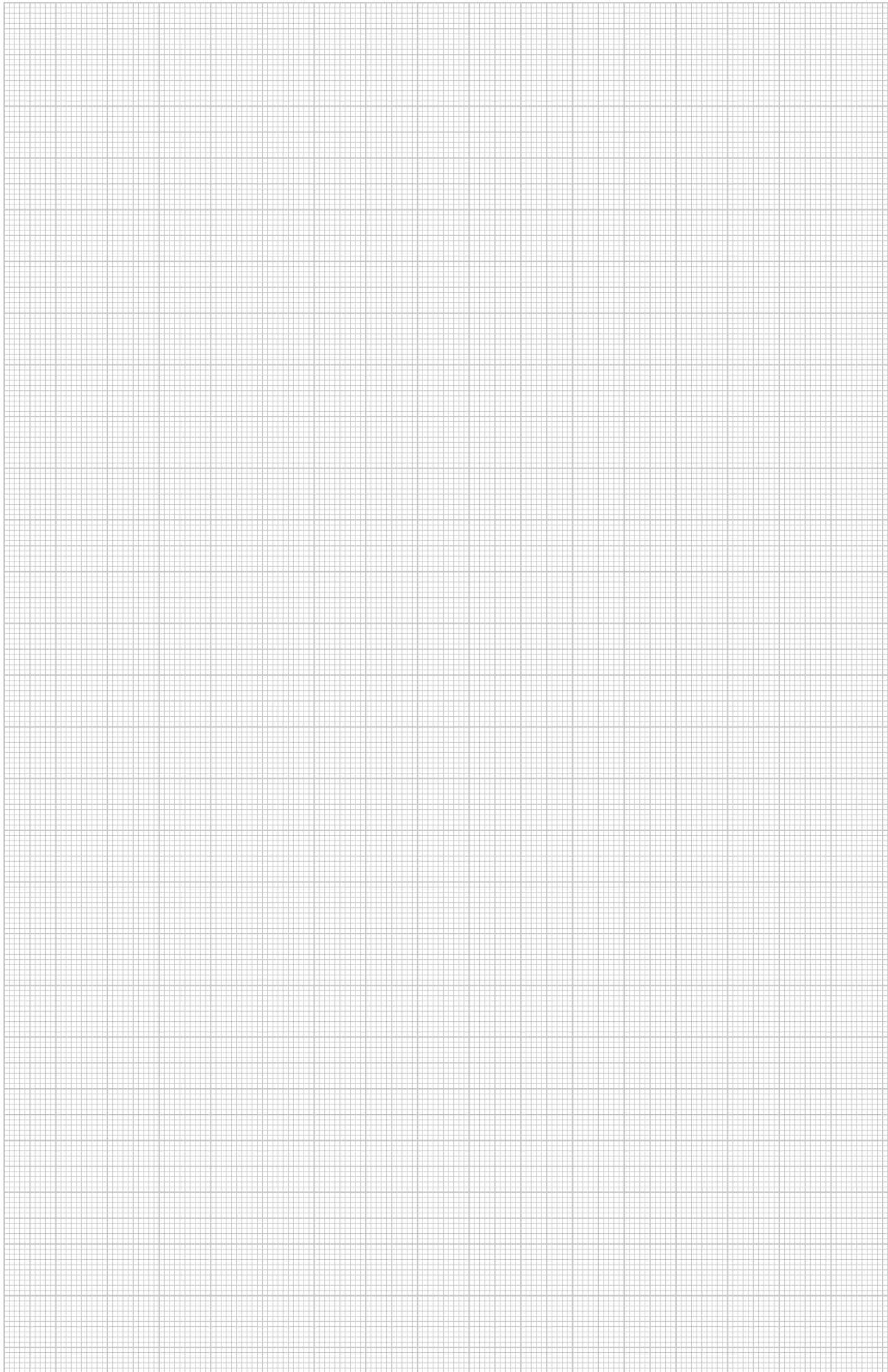


| Type | Dimension mm | Pack. pcs | Item No. |
|------------------|-----------------|--------------|------------------|
| BS BKS KP | — | 100 | 6049 25 0 |



St Steel **G** Electrogalvanised /100 pc.

Norm-conforming drilling screw for quick and easy fastening of walk-on cable trays onto support brackets type STA ,or for mounting the collision guard type SB.





BSS product innovations

| | | | |
|---|------------------------|---|----------------|
|  | BSS system PYROLIQ® | Casting compound Sealing compound Labelling panel | 74 74 75 |
|  | Junction box FireBox T | With impact-proof cover Plug-in seal Mounting plate | 76 |



FireBox T with impact-proof cover

It can stand a lot

When the going gets tough, the junction boxes of the FireBox T series can endure a lot with their impact-proof cover. The high covers made from resistant polycarbonate achieve an impact resistance of IK09 to IK10 and are therefore particularly suitable for use in the area of tunnel construction, where

dampness, dirt and shock waves put continuous strain onto the installation. A further benefit is the enlarged wiring space. Like all FireBox elements, the new covers also are tested for their function maintenance to DIN 4102, part 12. OBO FireBox junction boxes with impact-proof covers ensure the

function of electrical systems in tunnels and other heavily used locations. Additional information regarding the application in tunnels can be found at www.obo.de under the section "Solutions for tunnel construction" and in the OBO brochure with the same title.

Mounting plates for FireBox T

Wired better vertically



OBO is offering new mounting plates in two versions for the secure installation of junction boxes to cable trays and cable ladders with a side rail of 60 millimetres. The vertical mounting ensures better wiring. Using the mounting plates the cables are not led across the rail, so there is no danger of bending in case of a fire. Profiled metal sheet provides a high level of stability.



Sealing compound system PYROLIQ®

Little effort – great protection



In an industrial environment, in the shipbuilding industry or offshore – under the harshest environmental conditions, casting cables is the most secure way. The sealing compound system PYROLIQ® by OBO insulates reliably against water, wind and fire. It is gas-tight and watertight as well as fire-resistant. The fire resistance class A60 according to maritime testing criteria and the certificate by Germanischer Lloyd (GL) document its high level of safety. Further benefits are: Compared to modular sealing, the application of PYROLIQ® only requires little planning yet provides great protection.

The casting compound system consists of few components: The dry compound in the plastic container is to be mixed with tap water and will create a gas-tight and watertight insulation of class A60 to IMO resolution A.754(18) after 72 hours of hardening. Further accessories are expanding foam modules to replace lost casing which prevent the casting compound from leaking. The modules expand by a factor of 10 when sprinkled with the impregnating fluid. They are hardly inflammable, fire-retardant and self-extinguishing.

Flame-resistant, 2-compound sealant for insulations in sealing

compound systems are watertight and resistant against common technical oils and weak or thinned acids. Optionally, the sealing is also available for water-filled openings. Electrically conductive sealants enable the embedding of the cable shield network in EMV conforming installations. Dampening shield forming strips, for the application in casting compound systems when flammable pipes are inserted, also form part of the PYROLIQ® system.

Sealing compound system PYROLIQ®



Sealing compound

| Type | Contents | Pack. | Weight | Item No. |
|----------|----------|-------|-------------|-----------|
| | kg | pcs | kg/100 pcs. | |
| VMS-TE 1 | 2.5 | 1 | 250,000 | 7203 84 0 |
| VMS-TE 2 | 12.5 | 1 | 1.250,000 | 7203 84 3 |

Special mortar /pc.

Dry compound in plastic container to mix with tap water. Makes a gas-tight and watertight seal of class A-60 to IMO resolution A.754(18). Including measuring cup.

The mixing ratio of water to powder is 1:2. The mixed compound is pumpable for approx. 45 minutes. The mixture is chemically hardened after 72t hours.

Stored in a dry and frost-free environment, the dry compound will keep for 3 years.



Expanding module, small

| Type | Dimension | Pack. | Weight | Item No. |
|-----------|--------------|-------|-------------|-----------|
| | mm | pcs | kg/100 pcs. | |
| VMS-QMK 1 | 120 x 25 x 6 | 20 | | 7203 84 6 |

Foam /pc.

Expanding foam modules to replace a casing in the sealing compound system if part of the casing has been lost. The modules expand by the factor 10 when sprinkled with the impregnating fluid, closing gaps and joints between the cables installed.

After the cables have been impregnated they are hardly flammable, fire-retardant and self-extinguishing.

Stored in a dry environment, the expanding modules have an unlimited lifespan.



Expanding module, large

| Type | Dimension | Pack. | Weight | Item No. |
|-----------|--------------|-------|-------------|-----------|
| | mm | pcs | kg/100 pcs. | |
| VMS-QMG 1 | 800 x 25 x 6 | 15 | | 7203 84 9 |

Foam /pc.

Expanding foam modules to replace a casing in the sealing compound system if part of the casing has been lost. The modules expand by the factor 10 when sprinkled with the impregnating fluid, closing gaps and joints between the cables installed.

After the cables have been impregnated they are hardly flammable, fire-retardant and self-extinguishing.

Stored in a dry environment, the expanding modules have an unlimited lifespan.



Impregnation fluid

| Type | Contents | Pack. | Weight | Item No. |
|----------|----------|-------|-------------|-----------|
| | ml | pcs | kg/100 pcs. | |
| VMS-IF 1 | 1000 | 1 | 100,000 | 7203 85 2 |

/pc.

Fluid to sprinkle the expanding module.

When 5 long expanding modules are used, approx. 1 l impregnation fluid is required.

Stored in a frost-free environment it has a lifespan of 2 years.



Sealing compound for external use

| Type | Contents | Pack. | Weight | Item No. |
|----------|----------|-------|-------------|-----------|
| | kg | pcs | kg/100 pcs. | |
| VMS-VA 1 | 1 | 1 | 100,000 | 7203 85 8 |

Special mortar /pc.

Flame-retardant sealing compound for insulations in sealing compound systems. Watertight and against common technical oils as well as weak/diluted acids resistant. Halogen-free and cold-hardening.

2 components (hardener and resin) in tin with lid to push through. Lifespan of 12 months in original and closed packaging at temperature between +10 and +40 °C.



Sealing compound, water-repellent

| Type | Contents | Pack. | Weight | Item No. |
|----------|----------|-------|-------------|-----------|
| | kg | pcs | kg/100 pcs. | |
| VMS-VW 1 | 1 | 1 | 100,000 | 7203 86 4 |

Special mortar /pc.

Flame-retardant sealing compound for insulations in sealing compound systems for the application in water-filled openings.

Watertight and against common technical oils as well as weak/diluted acids resistant. Halogen-free and cold-hardening. 2 components (hardener and resin) in tin with lid to push through.

Lifespan of 6 months in original and closed packaging at temperature between +10 and +40 °C.

Sealing compound system PYROLIQ®

Sealing compound, conductive

| Type | Contents | Pack. | Weight | Item No. |
|----------|----------|-------|-------------|-----------|
| | kg | pcs | kg/100 pcs. | |
| VMS-VL 1 | 1 | 1 | 100,000 | 7203 86 7 |

Special mortar /pc.

Electrically conductive sealing compound for insulations in sealing compound systems and for the integration of the woven cable shield in EMV compliant installations. 2 components (hardener and resin) in tin with lid to push through . Lifespan of 6 months when stored in frost-free storage.



Pipe insulating strip

| Type | Dimension | Pack. | Weight | Item No. |
|--------|----------------|-------|-------------|-----------|
| | mm | pcs | kg/100 pcs. | |
| VMS-RS | 1000 x 100 x 3 | 3 | | 7203 87 0 |

Intumescent material /pc.

Insulation forming strip for the application in sealing compound system when feeding through flammable pipes.

Please protect against sunlight. When stored in a dry environment it has an unlimited lifespan.



Identification plate

| Type | Language | Pack. | Weight | Item No. |
|-----------|----------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| VMS-KS DE | German | 1 | 2,400 | 7203 87 4 |
| VMS-KS EN | English | 1 | 2,400 | 7203 87 8 |

PVC Polyvinylchloride /pc.

Identification plate to self-labelling the insulation of the sealing compound system to the IMO A.754(18) with a waterproof and lightproof felt tip pen.

Including 2 cable ties for fastening onto the cable or onto the cable tray system in the area of the insulation.



Junction box FireBox T with impact-proof cover



FireBox T100ED external fastening

| Type | Nominal cross section mm ² | Number of terminals | Entries | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------------------|---------------------------------------|---------------------|--------------------|---------------|-----------|--------------------|------------------|
| T100ED 6-5 AS | 6 | 5 | 8 x M25 2 x M32 | Pastel orange | 1 | 44,500 | 7205 62 0 |
| T100ED 10-5 AS | 10 | 5 | 8 x M25 2 x M32 | Pastel orange | 1 | 46,600 | 7205 62 3 |

PP/PC Polypropylene / polycarbonate /pc.

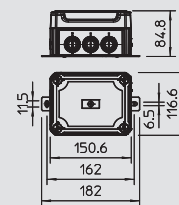
Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for electrical function maintenance according to DIN 4102 Part 12. Function maintenance classes E30 to E90

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.

Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible. High protection rating IP66, impact resistance class IK09.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte.

Number of terminals including protective conductor terminal
Internal clearance: 136 x 102 x 57 mm



FireBox T160ED external fastening

| Type | Nominal cross section mm ² | Number of terminals | Entries | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------------------|---------------------------------------|---------------------|--------------------|---------------|-----------|--------------------|------------------|
| T160ED 16-5 AS | 16 | 5 | 7 x M25 5 x M32 | Pastel orange | 1 | 65,000 | 7205 62 6 |

PP/PC Polypropylene / polycarbonate /pc.

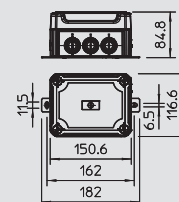
Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for electrical function maintenance according to DIN 4102 Part 12. Function maintenance classes E30 to E90

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.

Power cable nominal cross-sections: up to 16 mm². Several rigid copper wires with smaller cross-sections per terminal possible.

High protection rating IP66, impact resistance class IK10. Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte.

Number of terminals including protective conductor terminal
Internal clearance: 176 x 135 x 67 mm



FireBox T100ED external fastening with fuse holder

| Type | Nominal cross section mm ² | Number of terminals | Entries | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------------|---------------------------------------|---------------------|--------------------|---------------|-----------|--------------------|------------------|
| T100ED 6-6 AFS | 6 | 6 | 8 x M25 2 x M32 | Pastel orange | 1 | 49,200 | 7205 63 0 |
| T100ED 10-6 AFS | 10 | 6 | 8 x M25 2 x M32 | Pastel orange | 1 | 49,300 | 7205 63 3 |

PP/PC Polypropylene / polycarbonate /pc.

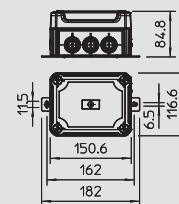
Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for electrical function maintenance according to DIN 4102 Part 12. Function maintenance classes E30 to E90

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fuse holder TE-FH 520 for VDE-conformant, reaction-free protection of consumers and 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.

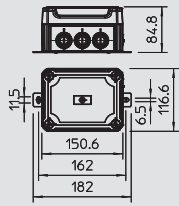
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.

High protection rating IP66, impact resistance class IK09. Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte.

Number of terminals including protective conductor terminal
Internal clearance: 136 x 102 x 57 mm



Junction box FireBox T with impact-proof cover



FireBox T100ED for data technology, external fastening

| Type | Nominal cross section mm ² | Number of terminals | Entries | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------------|---------------------------------------|---------------------|--------------------|---------------|-----------|--------------------|------------------|
| T100ED 4-10 ADS | 4 | 10 | 8 x M25 2 x M32 | Pastel orange | 1 | 51,600 | 7205 64 0 |



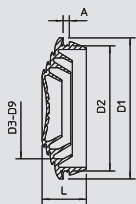
PP/PC Polypropylene / polycarbonate /pc.

Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for electrical function maintenance according to DIN 4102 Part 12. Function maintenance classes E30 to E90

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminals. Supplied with 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.

For data cables with wire Ø 0.8 mm. Up to 6 rigid copper wires (0.5 mm²) possible on each terminal. High protection rating IP66, impact resistance class IK09. Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte.

Number of terminals including protective conductor terminal
Internal clearance: 136 x 102 x 57 mm



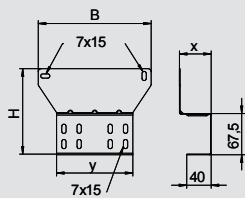
Plug-in seal for FireBox

| Type | Size | For Ø mm | Colour | Pack. pcs | Weight kg/100 pcs. | Item No. |
|------------------|------|----------|---------------|-----------|--------------------|------------------|
| EDK 25 OR | M25 | 0-22 | Pastel orange | 10 | 0,165 | 7205 67 5 |
| EDK 32 OR | M32 | 0-27 | Pastel orange | 10 | 274,000 | 7205 67 7 |
| EDK 40 OR | M40 | 0-34 | Pastel orange | 10 | 0,420 | 7205 67 9 |



EVA Ethylene vinyl acetate /100 pc.

The soft plug-in seal can be cut back step by step to suit the relevant cable diameter.



Mounting plate FireBox T100

| Type | Height mm | Dimension B mm | Dimension x mm | Dimension y mm | Suitable for junction box | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------------|-----------|----------------|----------------|----------------|---------------------------|-----------|--------------------|------------------|
| MP T610 | 141 | 185 | 52 | 125 | T100E...A | 1 | 23,600 | 7205 48 0 |
| MP T616 | 159 | 220 | 63 | 165 | T160E...A | 1 | 34,500 | 7205 48 4 |







St Steel **DD** Zinc-aluminium coated, double-dip /pc.

Mounting plate for the fastening of junction boxes of the FireBox T series (with external fastening) onto cable trays or cable ladders with a side height of 60 mm. The angled construction from sheet steel reinforced through crimps enables the secure mounting of function maintenance cables, without having to bend the cable over the side rail. Including fastening material.

BSS



LFS product innovations

| | | | |
|---|----------------------------|---|----|
|  | Cover Rapid 80 | PC, clear, fluted inside opal, smooth | 84 |
|  | Industrial service pole | Pole 4,000 mm Pole 6,000 mm Floor plate Compressed-air tap | 85 |
|  | Floor/ceiling service pole | Floor plate Clamping device | 88 |
|  | Floor service pole | | 89 |



Rapid 80 covers for backlighting

A highlight in the room

Plastic device installation trunking is always a good choice for the routing of cables in walls both in offices and living spaces. When mounted at a suitable height, it allows flexible and quick access to energy and data. OBO now offers attractive design options with translucent covers for Rapid 80 device installation trunking or ISS

service poles. Lighting elements can be integrated into the 76.5 millimetre large system openings. In combination with covers in a clear or opal look, discreet and indirect lighting effects can be created. The free-standing ISS service poles from OBO in particular become an eye-catcher.

OBO offers the new covers in two variants. The transparent version has longitudinal fluting inside. The opal model is smooth and the translucent look provides atmospheric accents. The use of coloured lighting offers even more opportunities for the individual wall design. The covers made from polycarbonate are easy to handle and are available in 2,000 millimetre lengths.

ISS service poles for the industry

Flexible at modern assembly workstations

The ISS industry service pole from OBO can create flexible connections at assembly workstations. It can bundle power, data and compressed-air connections. The sturdy pole can be retrofitted quickly and safely when a new assembly operation is allocated to the workstation, for instance when production processes are changed.

OBO offers a wide range of installation systems for the mounting of devices, from standard accessory mounting boxes to systems for the Modul 45 range. In order to be able to install cables and wires of different voltage levels, it is possible to divide the installation space with a partition. The attachment of all kinds of fastening aids on all four sides via sliding blocks. A compressed-air tap enables the extraction of compressed air from the service profile. The heavy stand facilitates the sound mounting of the ISS service pole on the floor. At the top, the pole can be adjusted to the required height via a solid ceiling fastening, and also be attached as well as connected to power and data cables from suspended ceiling if necessary. Via specific brackets it is possible to feed power and data through walk-on cable tray systems into the ISS pole.



Oval-shaped ISS service pole

Vertical elegance

The OBO ISS service pole in an oval shape looks particularly good in offices. As a floor-ceiling service pole it is available with a clamping device or with a flexible hose to the ceiling. The service half-pole in a height of 685 millimetres is also oval-shaped. It can be mounted near to the workstation and facilitates fast access to power and data.

The oval-shaped ISS service pole has a 76.5 millimetre system opening and is therefore suitable for the installation of the complete 71GD accessory mounting box series from OBO. In either anodised aluminium or pure white the elegant service pole blends into any office environment. Floor plate, rubber support and ceiling panel - form part of the system accessories.



ISS clamping device

Puts pressure onto the ceiling

Even more sturdy, more solid: The new clamping device from OBO tightens ISS service poles securely against the ceiling. The holding force is calculated according to the current guideline DIN EN 50085-2 part 4 against rotation. The clamping device scores points through

a solid execution, easy handling and safety. A spring element maintains the pressure against the ceiling safely. The new model can be easily exchanged against the previously clamping devices



Modern offices have solutions from OBO that route power and data via the floor, the ceiling or wall – from the foyer to the individual workstation. The versatile system can be adjusted to any operation or room environment exactly. At the same time, surge protection, lightning protection and fire protection systems provide a maximum of safety in any situation. An overview over products and applications is available in the OBO brochure "Solutions for office and administration buildings".

Plastic device installation trunking systems

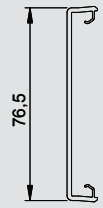


Trunking cover Rapid 80, PC, clear, fluted inside

| Type | Colour | Length | Pack. | Weight | Item No. |
|------------------|-------------|--------|-------|----------|------------------|
| | | mm | m | kg/100 m | |
| GK-OTKKPI | Transparent | 2000 | 16 | 21,800 | 6278 79 0 |

PC Polycarbonate /m

Trunking cover for closing Rapid 80 GK (PVC), GS (steel) and GA (aluminium) device installation trunking as well as ISS service poles with a 76.5 mm system opening. The GK-OTKKPI cover is made from clear, transparent plastic and the inside is fluted (longitudinal) and is therefore suitable for integrating lighting in the trunking and service pole. The delivered length is 2000 .

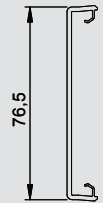


Cover Rapid 80, opal, smooth

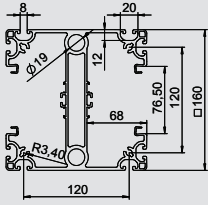
| Type | Colour | Length | Pack. | Weight | Item No. |
|----------------|-------------|--------|-------|----------|------------------|
| | | mm | m | kg/100 m | |
| GK-OTGO | Transparent | 2000 | 16 | 21,800 | 6278 69 0 |

PC Polycarbonate /m

Trunking cover for closing Rapid 80 GK (PVC), GS (steel) and GA (aluminium) device installation trunking as well as ISS service poles with a 76.5 mm system opening. The GK-OTGO cover is made from translucent but milky plastic (looking like cut glass) and is therefore suitable for integrating lighting in the trunking or service poles. The delivered length is 2000 .



Service pole, industry, 4,000 mm



| Type | Surface finish | Length mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------------|----------------|--------------|--------------|-----------------------|-----------|
| ISS160160IP4 EL | Anodised | 4000 | 1 | 4.055,000 | 6290 40 4 |

Al Aluminium EL Anodised /pc.

ISS service pole for the equipment of assembly workstations in production sites. The anodised heavy-duty aluminium profile has a 76.5 mm system opening on two opposite lying sides for accepting front-locking mounting accessory boxes of the series 71GD... or mounting supports of the series 71MT... All four sides of the profile have a groove in the standard nominal size 8 for installing various expansion parts for additional functions (Building Kit Systems). Supplied are the pole profile as well as the necessary covers for the system openings in 2,000 mm lengths and a PE bag with 20 additional locking brackets, type RKV3V, to enable you to create partial lengths of the covers. Two closed channels inside the profile can optionally be used for the routing of compressed air.



LFS



Service pole system, industry

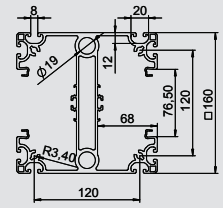
Service pole, industry, 6,000 mm



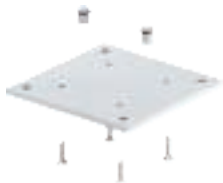
| Type | Surface finish | Length mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-----------------|----------------|--------------|--------------|-----------------------|-----------|
| ISS160160IP6 EL | Anodised | 6000 | 1 | 6.020,000 | 6290 40 6 |

Al Aluminium EL Anodised /pc.

ISS service pole for the equipment of assembly workstations in production sites. The anodised heavy-duty aluminium profile has a 76.5 mm system opening on two opposite lying sides for accepting front-locking mounting accessory boxes of the series 71GD... or mounting supports of the series 71MT... All four sides of the profile have a groove in the standard nominal size 8 for installing various expansion parts for additional functions (Building Kit Systems). Supplied are the pole profile as well as the necessary covers for the system openings in 2,000 mm lengths and a PE bag with 20 additional locking brackets, type RKV3V, to enable you to create partial lengths of the covers. Two closed channels inside the profile can optionally be used for the routing of compressed air.



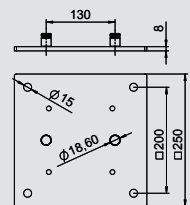
Floor plate



| Type | Colour | Length mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|-------------|-----------------|--------------|--------------|-----------------------|-----------|
| ISS160160BP | White aluminium | 250 | 1 | 382,000 | 6290 41 6 |

St Steel /pc.

Plate to fasten the ISS industrial pole to the floor. Supplied are 4 fastening screws to mount the floor plate onto the pole profile and 2 sealing plugs to close the compressed-air channels airtight.



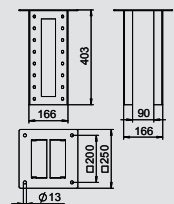
Ceiling fastening

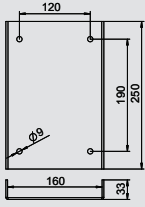


| Type | Colour | Length mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|----------------|-----------------|--------------|--------------|-----------------------|-----------|
| ISS160160DB WA | White aluminium | 403 | 1 | 443,600 | 6290 43 6 |

St Steel /pc.

Ceiling fastening for fixing the ISS service pole to the ceiling. Supplied are 2 u-shaped profiles made from 3 mm sheet steel, the fastening plate for the ceiling and the required installation accessories, including the sliding blocks. The ceiling fastening can be height-adjusted on the pole profile.





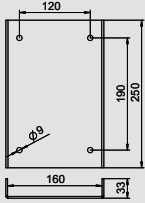
Collision guard RAL 9006

| Type | Colour | Length | Pack. | Weight | Item No. |
|-----------------------|-----------------|--------|-------|-------------|------------------|
| | | mm | pcs | kg/100 pcs. | |
| ISS160160AS WA | White aluminium | 250 | 1 | 264,000 | 6290 42 2 |

St Steel

/pc.

Collision guard as mechanical protection of the ISS industrial pole in the bottom area. Supplied are 2 u-shaped protection profiles made from 3 mm sheet steel and 8 fastening screws with sliding blocks for the mounting on the service pole profile.



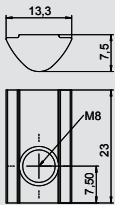
Collision guard, orange

| Type | Colour | Length | Pack. | Weight | Item No. |
|------------------------|-------------------|--------|-------|-------------|------------------|
| | | mm | pcs | kg/100 pcs. | |
| ISS160160AS HRO | Bright red orange | 250 | 1 | 264,000 | 6290 42 3 |

St Steel

/pc.

Collision guard as mechanical protection of the ISS industrial pole in the bottom area. Supplied are 2 u-shaped protection profiles made from 3 mm sheet steel and 8 fastening screws with sliding blocks for the mounting on the service pole profile.



Slot nut

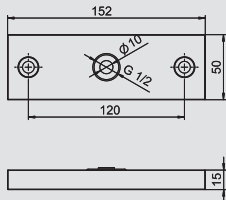
| Type | Surface finish | Length | Pack. | Weight | Item No. |
|---------------|----------------|--------|-------|-------------|------------------|
| | | mm | pcs | kg/100 pcs. | |
| NS8 ST | Galvanised | 23 | 10 | 0,930 | 6290 49 9 |

St Steel

VZ Galvanised

/pc.

Sliding block with M8 thread for the mounting of extension units and accessories on the ISS service pole profile. The pressure piece to the bottom side means the sliding block can be swivelled-in in a self-holding manner. Automatic twist lock through profile to the upper side.



Compressed-air tap

| Type | Pack. | Weight | Item No. |
|---------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| ISS160160DLA | 1 | 30,000 | 6290 49 5 |

/pc.

Tap to pick off compressed air from the ISS industrial pole profile. The compressed-air tap has a G 1/2 (ISO 228-1) threaded hole to accept a standard compressed-air coupling. The unit can be mounted onto the pole profile using sliding blocks and fastening screws. For the creation of an appropriate outlet for the compressed air a drilling template is supplied.



Floor-ceiling service poles, aluminium

Floor/ceiling service pole

| Type | Colour | Surface finish | Length mm | Pack. pcs | Weight kg/100 pcs. | Item No. |
|--------------|------------|----------------|--------------|--------------|-----------------------|-----------|
| ISSOG70140EL | — | Anodised | 3300 | 1 | 700,000 | 6289 08 8 |
| ISSOG70140RW | Pure white | — | 3300 | 1 | 700,000 | 6289 09 0 |

Al Aluminium EL Anodised /pc.

ISS service pole, oval shape, aluminium, with a 76.5 mm system opening.

Set consists of:

1 single-compartment column with clamping attachment

Total length: 3300 mm–3500 mm

1 single-compartment pole with clamping device

1 trunking installation profile

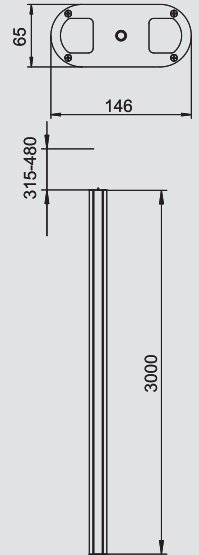
Length 3000 mm

1 aluminium cover

Length: 3000 mm

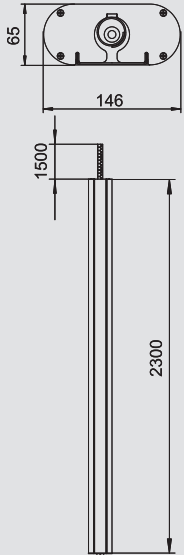
The area for device installation is suitable for accepting front-locking accessory mounting boxes of the series 71GD...

The service pole is pre-mounted and ready for use immediately. The following accessories can be used, depending on the mounting situation.



LFS

Floor-ceiling service poles, aluminium



Floor/ceiling service pole with hose

| Type | Colour | Surface finish | Length mm | Pack. | Weight | Item No. |
|---------------|------------|----------------|-----------|-------|-------------|-----------|
| | | | | pcs | kg/100 pcs. | |
| ISSOG70140FEL | — | Anodised | 3300 | 1 | 560,000 | 6289 09 2 |
| ISSOG70140FRW | Pure white | — | 3300 | 1 | 560,000 | 6289 09 4 |

Al Aluminium **EL** Anodised /pc.

ISS service pole, oval shape, aluminium, with a flexible hose to the ceiling.

Set consists of:

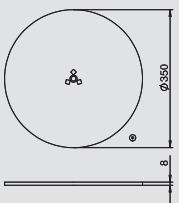
1 single-compartment pole with flexible hose to the ceiling

Total length of the aluminium profile: 2,300 mm

1 ceiling attachment with flexible hose

Length 2,300 mm

In the areas for device installation, the service pole has a 76.5 mm system opening and is suitable for accepting front-locking accessory mounting boxes of the series 71GD... The floor plate as well as the hose attachment to the ceiling, type SAISSF, need to be ordered separately. You can find the floor plate and any additional accessories in the following.

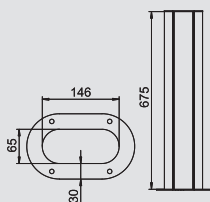


Floor plate for ISSOG70140

| Type | Colour | Pack. | Weight | Item No. |
|-----------|-----------------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| SFISSFRW | Pure white | 1 | 600,000 | 6290 19 6 |
| SFISSFWAL | White aluminium | 1 | 600,000 | 6290 19 7 |

St Steel /pc.

Floor plate as stand for service poles with hose to ceiling, type ISS110100F, 140100F and ISSRM45F.



Floor service pole

| Type | Colour | Surface finish | Pack. | Weight | Item No. |
|----------------|------------|----------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| ISSOGHS70140EL | — | Anodised | 1 | 220,500 | 6289 09 6 |
| ISSOGHS70140RW | Pure white | — | 1 | 220,500 | 6289 09 8 |

Al Aluminium **EL** Anodised /pc.

ISS aluminium service pole with a 76.5 mm system opening. Set consists of:

1 single-compartment pole with stand

Total length: 675 mm

1 aluminium cover

Length: 675 mm

The design of this ISS service pole is based on the oval-shaped aluminium profile of ISSOG70140 floor-ceiling poles. The 76.5 mm system opening is suitable for directly accepting mounting box accessories of series 71GD... for the equipment with switching and connection devices.



LFS



Floor-ceiling service poles, aluminium

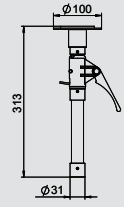


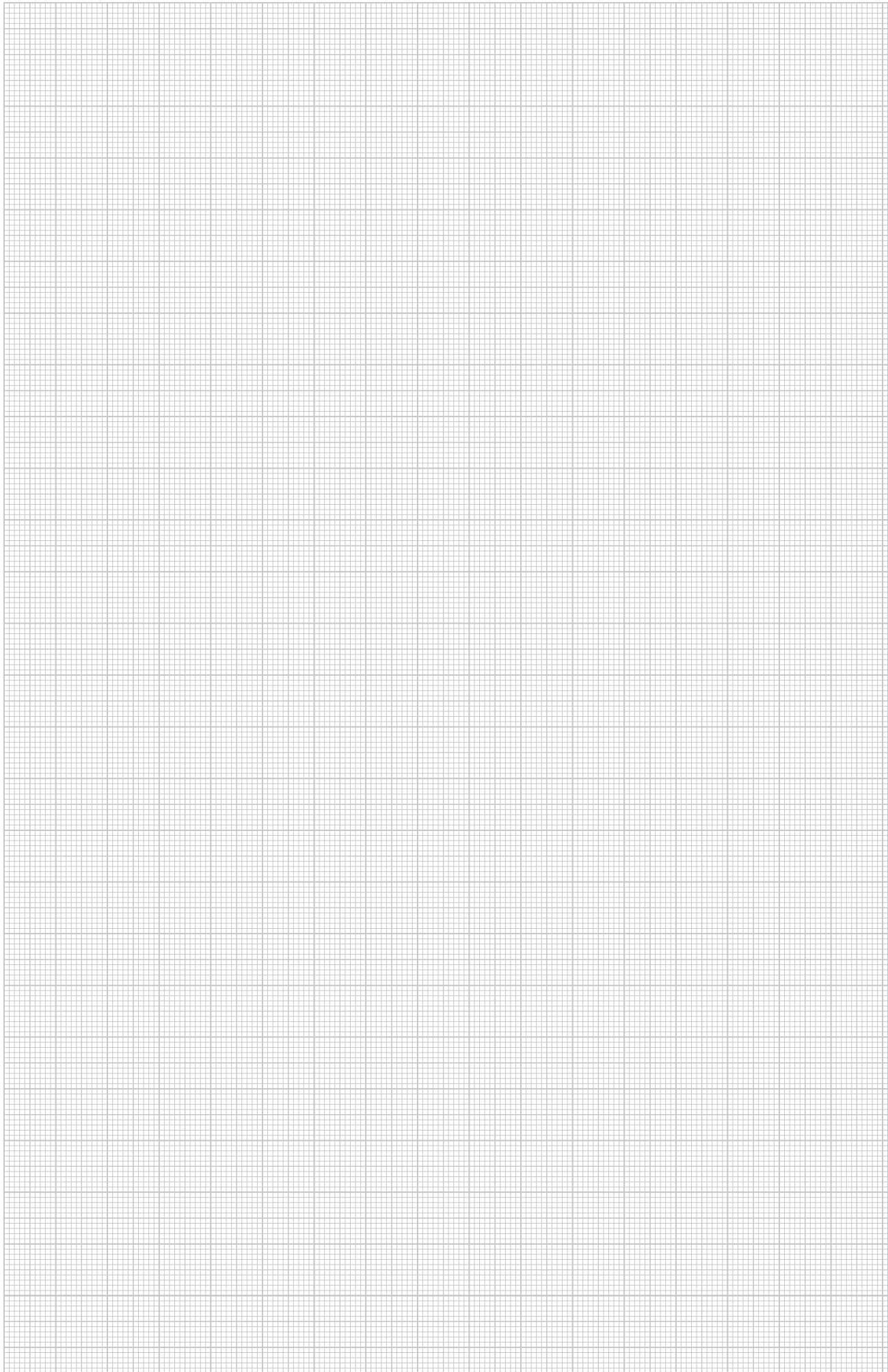
Clamping device

| Type | Colour | Pack. | Weight | Item No. |
|-------|--------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| ISSDV | – | 1 | 70,000 | 6290 18 9 |

/pc.

Clamping device for tensioning the floor-ceiling service poles against the ceiling. The area for height adjustment lies between 313 mm (basis length) and 480 mm.





EGS product innovations

| | | | |
|---|--|---|------------|
|  | Socket, protective contact | Direction of insertion 0° Direction of insertion 33° | 96 96 |
|  | Socket, with earthing pin | Direction of insertion 0° Direction of insertion 33° | 97 97 |
|  | Socket, protective contact, encoded version | Direction of insertion 0° Direction of insertion 33° | 99 |
|  | Socket with earthing pin, encoded version | Direction of insertion 0° Direction of insertion 33° | 100 100 |
|  | Sockets, 0° direction of insertion | Connect 45 Connect 80 | 102 102 |
|  | Sockets, 33° direction of insertion | Connect 45 | 103 |
|  | Sockets, 0° direction of insertion With earthing pin | Connect 45 Connect 80 | 102 102 |
|  | Sockets, 33° direction of insertion With earthing pin | Connect 45 | 103 |
|  | International sockets | | 106 |
|  | Modul 45 switching and connection systems | Blind cover Antenna connection Cable outlet Mounting support | 108 |
|  | VH-4 power supply unit | Pure white Cover plate Balancer | 109 |



Modul 45 additions to the range

One system, many possibilities

The right solution for any system environment – this is what the Modul 45® series offers. OBO is expanding its product range with a new generation of sockets. Sockets of the Modul 45connect® series for the moun-

ting in device installation ducts Rapid 45 and Rapid 80 have been added to the range. Available are single, double and triple sockets with protective contacts and earthing pins. The current colour palette comprises six

popular shades, such as mint green, signal red and pure orange for marking the safety power supplies. Encoded sockets also form part of the additions to the system. They enable the safe separation of specific circuits.

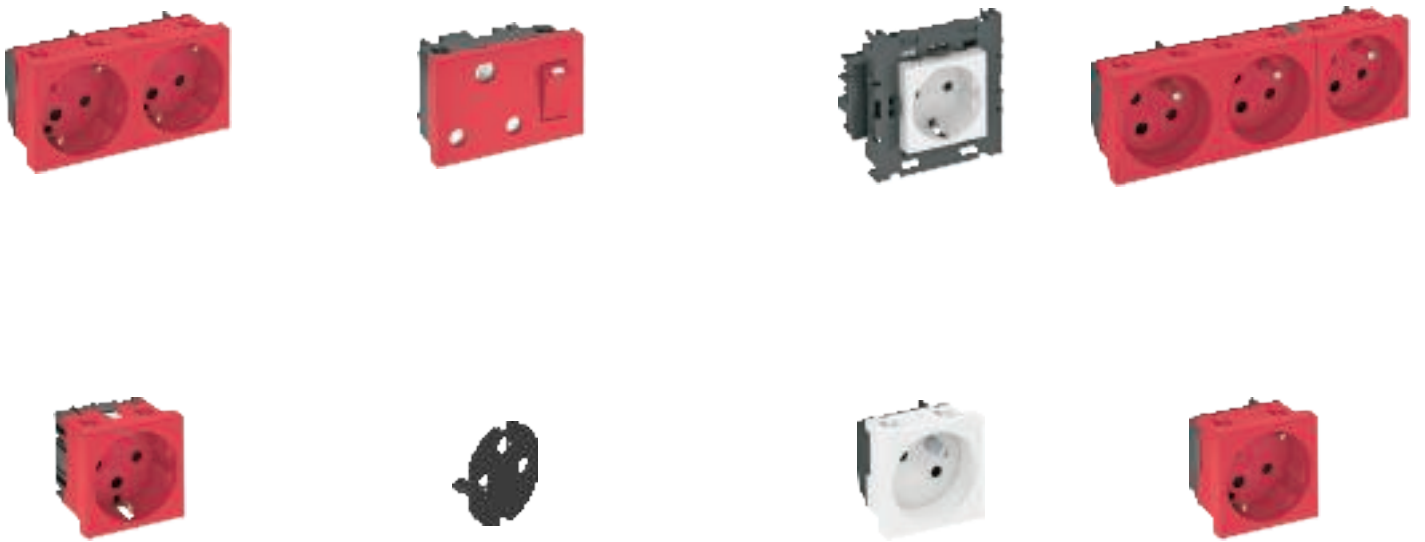




The area of application for Modul 45 installation devices grows continuously. The series and its compact format is perfectly suited for the international market also. It comprises norm-conforming sockets for China, India and South

Africa as well as countries with British standard. All sockets of the Modul 45 series offer plenty of installation comfort – from the integrated connection terminal for screwless mounting to the compact design with locking fastening.

The high quality of the entire range is ensured by OBO thanks to manufacturing all system components itself.



New socket generation - Modul 45, VDE + NF

Socket 0°, protective contact, single

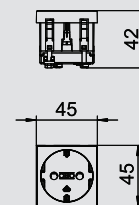


| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0 RW1 | Pure white | 1 | 4,200 | 6120 00 8 |
| STD-D0 ROR1 | Pure orange | 1 | 4,200 | 6120 01 0 |
| STD-D0 MZGN1 | Mint green | 1 | 4,200 | 6120 01 2 |
| STD-D0 SRO1 | Signal red | 1 | 4,200 | 6120 01 4 |
| STD-D0 SWGR1 | Black-grey | 1 | 4,200 | 6120 01 6 |
| STD-D0 AL1 | Aluminium painted | 1 | 4,200 | 6120 01 8 |

PC Polycarbonate

/pc.

Protective contact socket single 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Socket 0°, protective contact, double

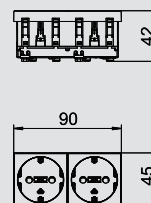


| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0 RW2 | Pure white | 1 | 8,000 | 6120 02 2 |
| STD-D0 ROR2 | Pure orange | 1 | 8,000 | 6120 02 4 |
| STD-D0 MZGN2 | Mint green | 1 | 8,000 | 6120 02 6 |
| STD-D0 SRO2 | Signal red | 1 | 8,000 | 6120 02 8 |
| STD-D0 SWGR2 | Black-grey | 1 | 8,000 | 6120 03 0 |
| STD-D0 AL2 | Aluminium painted | 1 | 8,000 | 6120 03 2 |

PC Polycarbonate

/pc.

Protective contact socket double 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Socket 0°, protective contact, triple

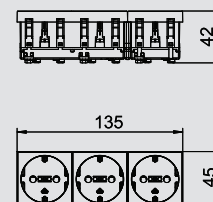


| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0 RW3 | Pure white | 1 | 12,200 | 6120 04 2 |
| STD-D0 ROR3 | Pure orange | 1 | 12,200 | 6120 04 4 |
| STD-D0 MZGN3 | Mint green | 1 | 12,200 | 6120 04 6 |
| STD-D0 SRO3 | Signal red | 1 | 12,200 | 6120 04 8 |
| STD-D0 SWGR3 | Black-grey | 1 | 12,200 | 6120 05 0 |
| STD-D0 AL3 | Aluminium painted | 1 | 12,200 | 6120 05 2 |

PC Polycarbonate

/pc.

Protective contact socket triple 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Socket 33°, protective contact, single

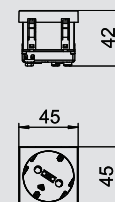


| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D3 RW1 | Pure white | 1 | 4,000 | 6120 07 2 |
| STD-D3 ROR1 | Pure orange | 1 | 4,000 | 6120 07 4 |
| STD-D3 MZGN1 | Mint green | 1 | 4,000 | 6120 07 6 |
| STD-D3 SRO1 | Signal red | 1 | 4,000 | 6120 07 8 |
| STD-D3 SWGR1 | Black-grey | 1 | 4,000 | 6120 08 0 |
| STD-D3 AL1 | Aluminium painted | 1 | 4,000 | 6120 08 2 |

PC Polycarbonate

/pc.

Protective contact socket single 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Socket 33°, protective contact, double

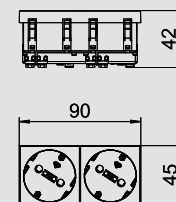


| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D3 RW2 | Pure white | 1 | 7,800 | 6120 10 2 |
| STD-D3 ROR2 | Pure orange | 1 | 7,800 | 6120 10 4 |
| STD-D3 MZGN2 | Mint green | 1 | 7,800 | 6120 10 6 |
| STD-D3 SRO2 | Signal red | 1 | 7,800 | 6120 10 8 |
| STD-D3 SWGR2 | Black-grey | 1 | 7,800 | 6120 11 0 |
| STD-D3 AL2 | Aluminium painted | 1 | 7,800 | 6120 11 2 |

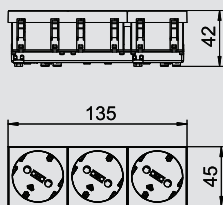
PC Polycarbonate

/pc.

Protective contact socket double 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



New socket generation - Modul 45, VDE + NF



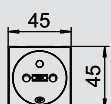
Socket 33°, protective contact, triple

| Type | Colour | | Pack. | Weight | Item No. |
|--------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| STD-D3 RW3 | Pure white | | 1 | 11,000 | 6120 12 2 |
| STD-D3 ROR3 | Pure orange | | 1 | 11,000 | 6120 12 4 |
| STD-D3 MZGN3 | Mint green | | 1 | 11,000 | 6120 12 6 |
| STD-D3 SRO3 | Signal red | | 1 | 11,000 | 6120 12 8 |
| STD-D3 SWGR3 | Black-grey | | 1 | 11,000 | 6120 13 0 |
| STD-D3 AL3 | Aluminium painted | | 1 | 11,000 | 6120 13 2 |

PC Polycarbonate

/pc.

Protective contact socket triple 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



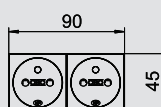
Socket 0°, with earthing pin, single

| Type | Colour | | Pack. | Weight | Item No. |
|--------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| STD-F0 RW1 | Pure white | | 1 | 4,000 | 6120 15 2 |
| STD-F0 ROR1 | Pure orange | | 1 | 4,000 | 6120 15 4 |
| STD-F0 MZGN1 | Mint green | | 1 | 4,000 | 6120 15 5 |
| STD-F0 SRO1 | Signal red | | 1 | 4,000 | 6120 15 8 |
| STD-F0 SWGR1 | Black-grey | | 1 | 4,000 | 6120 16 0 |
| STD-F0 AL1 | Aluminium painted | | 1 | 4,000 | 6120 16 2 |

PC Polycarbonate

/pc.

Socket with earthing pin single 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



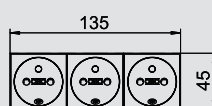
Socket 0°, with earthing pin, double

| Type | Colour | | Pack. | Weight | Item No. |
|--------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| STD-F0 RW2 | Pure white | | 1 | 7,700 | 6120 17 2 |
| STD-F0 ROR2 | Pure orange | | 1 | 7,700 | 6120 17 4 |
| STD-F0 MZGN2 | Mint green | | 1 | 7,700 | 6120 17 6 |
| STD-F0 SRO2 | Signal red | | 1 | 7,700 | 6120 17 8 |
| STD-F0 SWGR2 | Black-grey | | 1 | 7,700 | 6120 18 0 |
| STD-F0 AL2 | Aluminium painted | | 1 | 7,700 | 6120 18 2 |

PC Polycarbonate

/pc.

Socket with earthing pin double 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



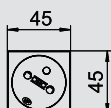
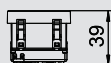
Socket 0°, with earthing pin, triple

| Type | Colour | | Pack. | Weight | Item No. |
|--------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| STD-F0 RW3 | Pure white | | 1 | 11,800 | 6120 19 2 |
| STD-F0 ROR3 | Pure orange | | 1 | 11,800 | 6120 19 4 |
| STD-F0 MZGN3 | Mint green | | 1 | 11,800 | 6120 19 6 |
| STD-F0 SRO3 | Signal red | | 1 | 11,800 | 6120 19 8 |
| STD-F0 SWGR3 | Black-grey | | 1 | 11,800 | 6120 20 0 |
| STD-F0 AL3 | Aluminium painted | | 1 | 11,800 | 6120 20 1 |

PC Polycarbonate

/pc.

Socket with earthing pin triple 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



Socket 33°, with earthing pin, single

| Type | Colour | | Pack. | Weight | Item No. |
|--------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| STD-F3 RW1 | Pure white | | 1 | 3,800 | 6120 22 2 |
| STD-F3 ROR1 | Pure orange | | 1 | 3,800 | 6120 22 4 |
| STD-F3 MZGN1 | Mint green | | 1 | 3,800 | 6120 22 6 |
| STD-F3 SRO1 | Signal red | | 1 | 3,800 | 6120 22 8 |
| STD-F3 SWGR1 | Black-grey | | 1 | 3,800 | 6120 23 0 |
| STD-F3 AL1 | Aluminium painted | | 1 | 3,800 | 6120 23 2 |

PC Polycarbonate

/pc.

Socket with earthing pin single 33°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



New socket generation - Modul 45, VDE + NF

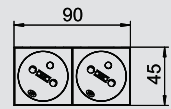
Socket 33°, with earthing pin, double



| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| STD-F3 RW2 | Pure white | 1 | 7,500 | 6120 24 2 |
| STD-F3 ROR2 | Pure orange | 1 | 7,500 | 6120 24 4 |
| STD-F3 MZGN2 | Mint green | 1 | 7,500 | 6120 24 6 |
| STD-F3 SRO2 | Signal red | 1 | 7,500 | 6120 24 8 |
| STD-F3 SWGR2 | Black-grey | 1 | 7,500 | 6120 25 0 |
| STD-F3 AL2 | Aluminium painted | 1 | 7,500 | 6120 25 2 |

PC Polycarbonate /pc.

Socket with earthing pin double 33°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



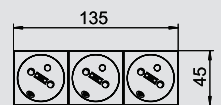
Socket 33°, with earthing pin, triple



| Type | Colour | Pack. | Weight | Item No. |
|--------------|-------------------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| STD-F3 RW3 | Pure white | 1 | 10,500 | 6120 26 2 |
| STD-F3 ROR3 | Pure orange | 1 | 10,500 | 6120 26 4 |
| STD-F3 MZGN3 | Mint green | 1 | 10,500 | 6120 26 6 |
| STD-F3 SRO3 | Signal red | 1 | 10,500 | 6120 26 8 |
| STD-F3 SWGR3 | Black-grey | 1 | 10,500 | 6120 27 0 |
| STD-F3 AL3 | Aluminium painted | 1 | 10,500 | 6120 27 2 |

PC Polycarbonate /pc.

Socket with earthing pin triple 33°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V ~, with connection terminals to IEC 60884-1.



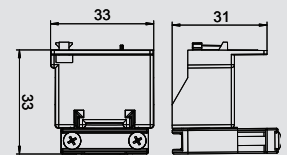
Strain relief for Modul 45 sockets 0°



| Type | Colour | Pack. | Weight | Item No. |
|----------|--------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| ZL-STD 0 | Black | 1 | 1,200 | 6120 78 2 |

PC Polycarbonate /pc.

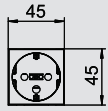
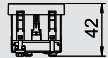
Strain relief for Modul 45 sockets, type STD, connectable at side, for the fastening of a 3-core cable, max. Ø 10 mm, suitable for protective contact sockets at direction of insertion 0° and sockets with earthing pin at direction of insertion 0°.



Available from 01/09/2014

New socket generation - Modul 45 encoded, VDE + NF

Socket 0°, protective contact, encoded version, single



| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-D0K SRO1 | Signal red | 1 | 4,200 | 6120 29 2 |

PC Polycarbonate /pc.

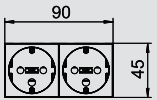
Power socket single 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.

The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



Socket 0°, protective contact, encoded version, double



| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-D0K SRO2 | Signal red | 1 | 8,000 | 6120 29 4 |

PC Polycarbonate /pc.

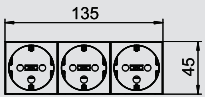
Power socket double 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.

The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



Socket 0°, protective contact, encoded version, double



| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-D0K SRO3 | Signal red | 1 | 12,200 | 6120 29 6 |

PC Polycarbonate /pc.

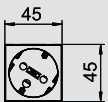
Power socket triple 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.

The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



Socket 33°, protective contact, encoded version, single



| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-D3K SRO1 | Signal red | 1 | 4,000 | 6120 30 2 |

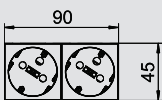
PC Polycarbonate /pc.

Protective contact socket single 33°, encode version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



Socket 33°, protective contact, encoded version, double



| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-D3K SRO2 | Signal red | 1 | 7,700 | 6120 30 4 |

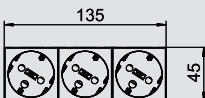
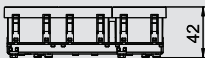
PC Polycarbonate /pc.

Protective contact socket double 33°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



Socket 33°, protective contact, encoded version, triple

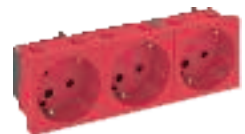


| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-D3K SRO3 | Signal red | 1 | 11,000 | 6120 30 6 |

PC Polycarbonate /pc.

Protective contact socket triple 33°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



New socket generation - Modul 45 encoded, VDE + NF

Socket 0°, with earthing pin, encoded version, single

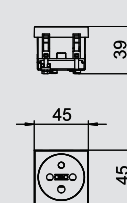


| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-F0K SRO1 | Signal red | 1 | 4,000 | 6120 31 2 |

PC Polycarbonate /pc.

Socket with earthing pin single 0°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



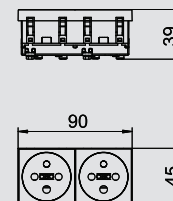
Socket 0°, with earthing pin, encoded version, double

| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-F0K SRO2 | Signal red | 1 | 7,800 | 6120 31 4 |

PC Polycarbonate /pc.

Socket with earthing pin double 0°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



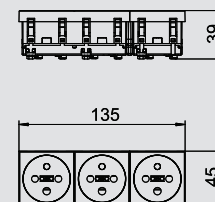
Socket 0°, with earthing pin, encoded version, triple

| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-F0K SRO3 | Signal red | 1 | 11,800 | 6120 31 6 |

PC Polycarbonate /pc.

Socket with earthing pin triple 0°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



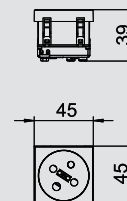
Socket 33°, with earthing pin, encoded version, single

| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-F3K SRO1 | Signal red | 1 | 3,800 | 6120 32 2 |

PC Polycarbonate /pc.

Socket with earthing pin single 33°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



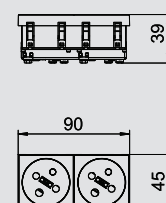
Socket 33°, with earthing pin, encoded version, double

| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-F3K SRO2 | Signal red | 1 | 7,500 | 6120 32 4 |

PC Polycarbonate /pc.

Socket with earthing pin double 33°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



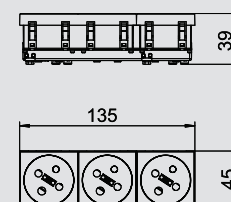
Socket 33°, with earthing pin, encoded version, triple

| Type | Colour | Pack. | Weight | Item No. |
|---------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-F3K SRO3 | Signal red | 1 | 10,500 | 6120 32 6 |

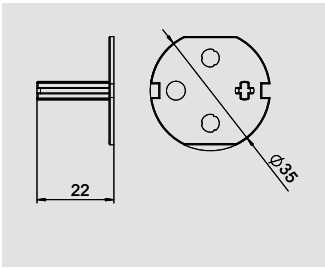
PC Polycarbonate /pc.

Socket with earthing pin triple 33°, encoded version, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. The socket can only be used in conjunction with an encoding pin, type CST-STD.

Note: The encoding pin is not contained in the scope of supply.



New socket generation - Modul 45 encoded, VDE + NF



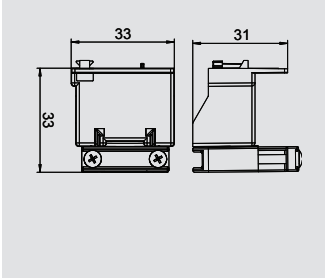
Encoding pin

| Type | Colour | Pack. | Weight | Item No. |
|----------------|--------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| CST-STD | Black | 1 | 0,200 | 6120 79 9 |

PC Polycarbonate

/pc.

Encoding pin as socket attachment for the use of encoded sockets, type STD.



Strain relief for Modul 45 sockets 0°

| Type | Colour | Pack. | Weight | Item No. |
|-----------------|--------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| ZL-STD 0 | Black | 1 | 1,200 | 6120 78 2 |

PC Polycarbonate

/pc.

Strain relief for Modul 45 sockets, type STD, connectable at side, for the fastening of a 3-core cable, max. Ø 10 mm, suitable for protective contact sockets at direction of insertion 0° and sockets with earthing pin at direction of insertion 0°.



Available from 01/09/2014

New socket generation - Modul 45connect, VDE + NF

Socket 0°, Connect 45, protective contact, single



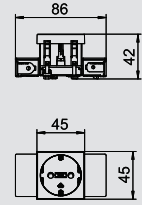
| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0C RW1 | Pure white | 1 | 6,700 | 6120 34 0 |
| STD-D0C ROR1 | Pure orange | 1 | 6,700 | 6120 34 4 |
| STD-D0C MZGN1 | Mint green | 1 | 6,700 | 6120 34 6 |
| STD-D0C SRO1 | Signal red | 1 | 6,700 | 6120 34 8 |
| STD-D0C SWGR1 | Black-grey | 1 | 6,700 | 6120 35 0 |
| STD-D0C AL1 | Aluminium painted | 1 | 6,700 | 6120 35 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Protective contact socket with connection to side, single 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct system.



Socket 0°, Connect 45, protective contact, double



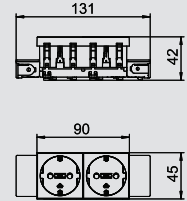
| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0C RW2 | Pure white | 1 | 10,100 | 6120 36 2 |
| STD-D0C ROR2 | Pure orange | 1 | 10,100 | 6120 36 4 |
| STD-D0C MZGN2 | Mint green | 1 | 10,100 | 6120 36 6 |
| STD-D0C SRO2 | Signal red | 1 | 10,100 | 6120 36 8 |
| STD-D0C SWGR2 | Black-grey | 1 | 10,100 | 6120 37 0 |
| STD-D0C AL2 | Aluminium painted | 1 | 10,100 | 6120 37 2 |

Available from 01/07/2014

PC Polycarbonate

/pc.

Protective contact socket with connection to side, double 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct systems.



Socket 0°, Connect 45, protective contact, triple



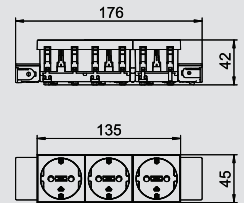
| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0C RW3 | Pure white | 1 | 16,500 | 6120 38 2 |
| STD-D0C ROR3 | Pure orange | 1 | 16,500 | 6120 38 4 |
| STD-D0C MZGN3 | Mint green | 1 | 16,500 | 6120 38 6 |
| STD-D0C SRO3 | Signal red | 1 | 16,500 | 6120 38 8 |
| STD-D0C SWGR3 | Black-grey | 1 | 16,500 | 6120 39 0 |
| STD-D0C AL3 | Aluminium painted | 1 | 16,500 | 6120 39 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Protective contact socket with connection to side, triple 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct systems.



Socket 0°, Connect 80, protective contact, single



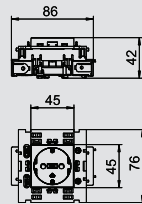
| Type | Colour | Pack. | Weight | Item No. |
|----------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0C8 RW1 | Pure white | 1 | 8,500 | 6120 41 2 |
| STD-D0C8 ROR1 | Pure orange | 1 | 8,500 | 6120 41 4 |
| STD-D0C8 MZGN1 | Mint green | 1 | 8,500 | 6120 41 6 |
| STD-D0C8 SRO1 | Signal red | 1 | 8,500 | 6120 41 8 |
| STD-D0C8 SWGR1 | Black-grey | 1 | 8,500 | 6120 42 0 |
| STD-D0C8 AL1 | Aluminium painted | 1 | 8,500 | 6120 42 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Protective contact socket with connection to side, single 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 80 device installation duct systems.



Socket 0°, Connect 80, protective contact, double



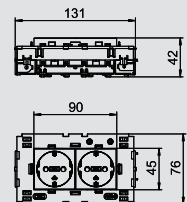
| Type | Colour | Pack. | Weight | Item No. |
|----------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0C8 RW2 | Pure white | 1 | 13,000 | 6120 43 2 |
| STD-D0C8 ROR2 | Pure orange | 1 | 13,000 | 6120 43 4 |
| STD-D0C8 MZGN2 | Mint green | 1 | 13,000 | 6120 43 6 |
| STD-D0C8 SRO2 | Signal red | 1 | 13,000 | 6120 43 8 |
| STD-D0C8 SWGR2 | Black-grey | 1 | 13,000 | 6120 44 0 |
| STD-D0C8 AL2 | Aluminium painted | 1 | 13,000 | 6120 44 2 |

Available from 01/09/2014

PC Polycarbonate

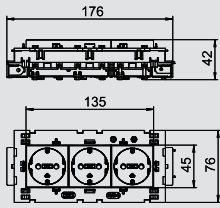
/pc.

Protective contact socket with connection to side, double 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 80 device installation duct systems.



New socket generation - Modul 45connect, VDE + NF

Socket 0°, Connect 80, protective contact, triple



| Type | Colour | Pack. | Weight | Item No. |
|----------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D0C8 RW3 | Pure white | 1 | 20,000 | 6120 45 2 |
| STD-D0C8 ROR3 | Pure orange | 1 | 20,000 | 6120 45 4 |
| STD-D0C8 MZGN3 | Mint green | 1 | 20,000 | 6120 45 6 |
| STD-D0C8 SRO3 | Signal red | 1 | 20,000 | 6120 45 8 |
| STD-D0C8 SWGR3 | Black-grey | 1 | 20,000 | 6120 46 0 |
| STD-D0C8 AL3 | Aluminium painted | 1 | 20,000 | 6120 46 2 |

PC Polycarbonate

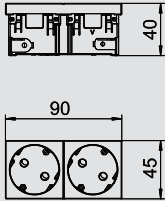
/pc.

Protective contact socket with connection to side, triple 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct systems.



Available from 01/09/2014

Socket 33°, Connect 45, protective contact, double



| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D3C RW2 | Pure white | 1 | 8,500 | 6120 48 2 |
| STD-D3C ROR2 | Pure orange | 1 | 8,500 | 6120 48 4 |
| STD-D3C MZGN2 | Mint green | 1 | 8,500 | 6120 48 6 |
| STD-D3C SRO2 | Signal red | 1 | 8,500 | 6120 48 8 |
| STD-D3C SWGR2 | Black-grey | 1 | 8,500 | 6120 49 0 |
| STD-D3C AL2 | Aluminium painted | 1 | 8,500 | 6120 49 2 |

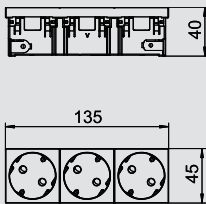
PC Polycarbonate

/pc.

Power socket with side connection double 33°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Socket 33°, Connect 45, protective contact, triple



| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-D3C RW3 | Pure white | 1 | 11,500 | 6120 50 2 |
| STD-D3C ROR3 | Pure orange | 1 | 11,500 | 6120 50 4 |
| STD-D3C MZGN3 | Mint green | 1 | 11,500 | 6120 50 6 |
| STD-D3C SRO3 | Signal red | 1 | 11,500 | 6120 50 8 |
| STD-D3C SWGR3 | Black-grey | 1 | 11,500 | 6120 51 0 |
| STD-D3C AL3 | Aluminium painted | 1 | 11,500 | 6120 51 2 |

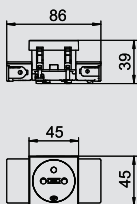
PC Polycarbonate

/pc.

Power socket with side connection triple 33°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Socket 0°, Connect 45, with earthing pin, single



| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F0C RW1 | Pure white | 1 | 6,500 | 6120 53 2 |
| STD-F0C ROR1 | Pure orange | 1 | 6,500 | 6120 53 4 |
| STD-F0C MZGN1 | Mint green | 1 | 6,500 | 6120 53 6 |
| STD-F0C SRO1 | Signal red | 1 | 6,500 | 6120 53 8 |
| STD-F0C SWGR1 | Black-grey | 1 | 6,500 | 6120 54 0 |
| STD-F0C AL1 | Aluminium painted | 1 | 6,500 | 6120 54 2 |

PC Polycarbonate

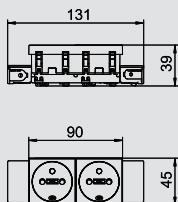
/pc.

Earthing pin socket with connection to side, single 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct systems.



Available from 01/09/2014

Socket 0°, Connect 45, with earthing pin, double



| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F0C RW2 | Pure white | 1 | 9,900 | 6120 55 2 |
| STD-F0C ROR2 | Pure orange | 1 | 9,900 | 6120 55 4 |
| STD-F0C MZGN2 | Mint green | 1 | 9,900 | 6120 55 6 |
| STD-F0C SRO2 | Signal red | 1 | 9,900 | 6120 55 8 |
| STD-F0C SWGR2 | Black-grey | 1 | 9,900 | 6120 56 0 |
| STD-F0C AL2 | Aluminium painted | 1 | 9,900 | 6120 56 2 |

PC Polycarbonate

/pc.

Earthing pin socket with connection to side, double 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct systems.



Available from 01/09/2014

New socket generation - Modul 45connect, VDE + NF

Socket 0°, Connect 45, with earthing pin, triple



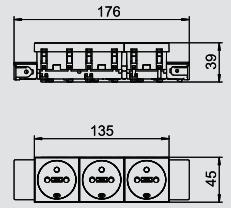
| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F0C RW3 | Pure white | 1 | 13,900 | 6120 57 2 |
| STD-F0C ROR3 | Pure orange | 1 | 13,900 | 6120 57 4 |
| STD-F0C MZGN3 | Mint green | 1 | 13,900 | 6120 57 6 |
| STD-F0C SRO3 | Signal red | 1 | 13,900 | 6120 57 8 |
| STD-F0C SWGR3 | Black-grey | 1 | 13,900 | 6120 58 0 |
| STD-F0C AL3 | Aluminium painted | 1 | 13,900 | 6120 58 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Earthing pin socket with connection to side, triple 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 45 device installation duct systems.



Socket 0°, Connect 80, with earthing pin, single



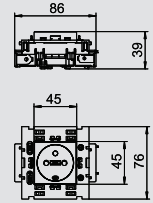
| Type | Colour | Pack. | Weight | Item No. |
|----------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F0C8 RW1 | Pure white | 1 | 8,500 | 6120 60 2 |
| STD-F0C8 ROR1 | Pure orange | 1 | 8,500 | 6120 60 4 |
| STD-F0C8 MZGN1 | Mint green | 1 | 8,500 | 6120 60 6 |
| STD-F0C8 SRO1 | Signal red | 1 | 8,500 | 6120 60 8 |
| STD-F0C8 SWGR1 | Black-grey | 1 | 8,500 | 6120 61 0 |
| STD-F0C8 AL1 | Aluminium painted | 1 | 8,500 | 6120 61 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Earthing pin socket with connection to side, single 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 80 device installation duct systems.



Socket 0°, Connect 80, with earthing pin, double



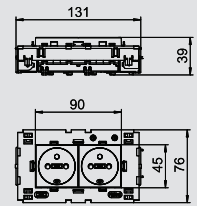
| Type | Colour | Pack. | Weight | Item No. |
|----------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F0C8 RW2 | Pure white | 1 | 13,000 | 6120 62 2 |
| STD-F0C8 ROR2 | Pure orange | 1 | 13,000 | 6120 62 4 |
| STD-F0C8 MZGN2 | Mint green | 1 | 13,000 | 6120 62 6 |
| STD-F0C8 SRO2 | Signal red | 1 | 13,000 | 6120 62 8 |
| STD-F0C8 SWGR2 | Black-grey | 1 | 13,000 | 6120 63 0 |
| STD-F0C8 AL2 | Aluminium painted | 1 | 13,000 | 6120 63 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Earthing pin socket with connection to side, double 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 80 device installation duct systems.



Socket 0°, Connect 45, with earthing pin, triple



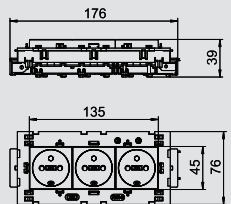
| Type | Colour | Pack. | Weight | Item No. |
|----------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F0C8 RW3 | Pure white | 1 | 17,500 | 6120 64 2 |
| STD-F0C8 ROR3 | Pure orange | 1 | 17,500 | 6120 64 4 |
| STD-F0C8 MZGN3 | Mint green | 1 | 17,500 | 6120 64 6 |
| STD-F0C8 SRO3 | Signal red | 1 | 17,500 | 6120 64 8 |
| STD-F0C8 SWGR3 | Black-grey | 1 | 17,500 | 6120 65 0 |
| STD-F0C8 AL3 | Aluminium painted | 1 | 17,500 | 6120 65 2 |

Available from 01/09/2014

PC Polycarbonate

/pc.

Earthing pin socket with connection to side, triple 0°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1, suitable for the installation in Rapid 80 device installation duct systems.



Socket 33°, Connect 45, with earthing pin, double

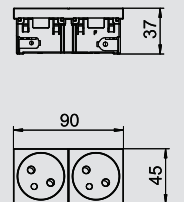


| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|--------|-----------|
| | | | | |
| STD-F3C RW2 | Pure white | 1 | 8,500 | 6120 67 2 |
| STD-F3C ROR2 | Pure orange | 1 | 8,500 | 6120 67 4 |
| STD-F3C MZGN2 | Mint green | 1 | 8,500 | 6120 67 6 |
| STD-F3C SRO2 | Signal red | 1 | 8,500 | 6120 67 8 |
| STD-F3C SWGR2 | Black-grey | 1 | 8,500 | 6120 68 0 |
| STD-F3C AL2 | Aluminium painted | 1 | 8,500 | 6120 68 2 |

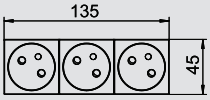
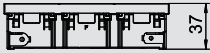
PC Polycarbonate

/pc.

Socket with earthing pin and side connection, double 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



New socket generation - Modul 45connect, VDE + NF



Socket 33°, Connect 45, with earthing pin, triple

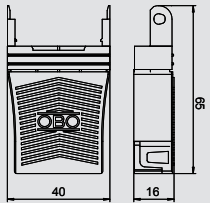
| Type | Colour | Pack. | Weight | Item No. |
|---------------|-------------------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| STD-F3C RW3 | Pure white | 1 | 11,500 | 6120 69 2 |
| STD-F3C ROR3 | Pure orange | 1 | 11,500 | 6120 69 4 |
| STD-F3C MZGN3 | Mint green | 1 | 11,500 | 6120 69 6 |
| STD-F3C SRO3 | Signal red | 1 | 11,500 | 6120 69 8 |
| STD-F3C SWGR3 | Black-grey | 1 | 11,500 | 6120 70 0 |
| STD-F3C AL3 | Aluminium painted | 1 | 11,500 | 6120 70 2 |



PC Polycarbonate

/pc.

Socket with earthing pin and side connection, triple 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.



Strain relief for Modul 45connect® sockets

| Type | Colour | Pack. | Weight | Item No. |
|----------|--------|-------|-------------|-----------|
| | | pcs | kg/100 pcs. | |
| ZL-STD C | Black | 1 | 1,500 | 6120 78 4 |



PC Polycarbonate

/pc.

Strain relief for Modul 45connect sockets, type STD, connectable at side, for the fastening of two 3-core cables, max. Ø 10 mm, suitable for protective contact sockets and sockets with earthing pin.

New socket generation - international sockets

Socket 0°, British Standard, single

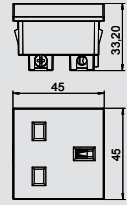


| Type | Colour | Pack. | Weight | Item No. |
|--------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-BS0 RW1 | Pure white | 1 | 4,000 | 6120 72 2 |

/pc.

Socket, single 0°, British Standard, conforming to BS 1363, with increased touch protection, with screw terminals, 2-pin, 13 A, 250 V \sim .

Available from 01/09/2014



Socket 0°, British Standard, single

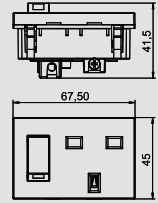


| Type | Colour | Pack. | Weight | Item No. |
|-----------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-BS0G RW1.5 | Pure white | 1 | 6,000 | 6120 72 4 |

/pc.

Socket, single 0°, with switch, British Standard, conforming to BS 1363, with increased touch protection, with screw terminals, 2-pin, 13 A, 250 V \sim .

Available from 01/09/2014



Socket 0°, South Africa/India, 16 A, single

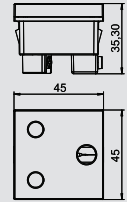


| Type | Colour | Pack. | Weight | Item No. |
|--------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-SA0 RW1 | Pure white | 1 | 5,000 | 6120 73 0 |

/pc.

Socket, single 0°, South Africa/India, conforming to BS 546, with increased touch protection, with screw terminals, 2-pin, 16 A, 250 V \sim .

Available from 01/09/2014



Socket 0°, with switch, South Africa/India, 16 A, single

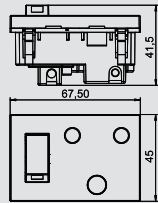


| Type | Colour | Pack. | Weight | Item No. |
|-----------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-SA0G RW1.5 | Pure white | 1 | 6,700 | 6120 73 4 |

/pc.

Socket, single 0°, with switch, South Africa/India, conforming to BS 546, with increased touch protection, with screw terminals, 2-pin, 16 A, 250 V \sim .

Available from 01/09/2014



Socket 0°, South Africa/India, 16 A, encoded version, single

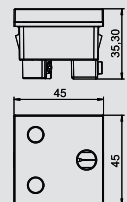


| Type | Colour | Pack. | Weight | Item No. |
|----------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-SA0K SR01 | Signal red | 1 | 5,000 | 6120 73 2 |

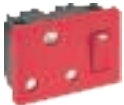
/pc.

Socket, single 0°, South Africa/India, encoded version, conforming to BS 546, with increased touch protection, with screw terminals, 2-pin, 16 A, 250 V \sim .

Available from 01/09/2014



Socket 0°, with switch, South Africa/India, 16 A, encoded version, single

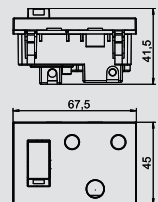


| Type | Colour | Pack. | Weight | Item No. |
|-------------------------|------------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| STD-SA0GK SR01.5 | Signal red | 1 | 6,700 | 6120 73 6 |

/pc.

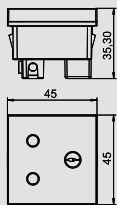
Socket, single 0°, with switch, South Africa/India, encoded version, conforming to BS 546, with increased touch protection, with screw terminals, 2-pin, 16 A, 250 V \sim .

Available from 01/09/2014



New socket generation - international sockets

Socket 0°, India, 6 A, single



| Type | Colour | Pack. | Weight | | Item No. |
|--------------------|------------|-------|--------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| STD-IN0 RW1 | Pure white | 1 | 4,300 | | 6120 72 6 |

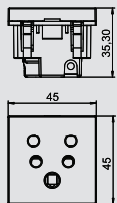
/pc.

Socket, single 0°, India, conforming to BS 546, with increased touch protection, with screw terminals, 2-pin, 6 A, 250 V \sim .



Available from 01/09/2014

Socket 0°, India, combination IA6A3-EURO, single



| Type | Colour | Pack. | Weight | | Item No. |
|---------------------|------------|-------|--------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| STD-IN0M RW1 | Pure white | 1 | 5,300 | | 6120 72 8 |

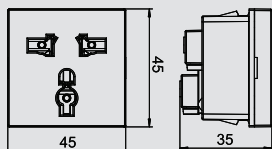
/pc.

Socket, single 0°, India, combination IA6A3/Euro plug, with increased touch protection, with screw terminals, 2-pin, 6 A, 250 V \sim .



Available from 01/09/2014

Socket 0°, multi-standard, single



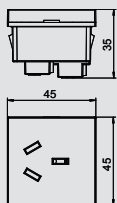
| Type | Colour | Pack. | Weight | | Item No. |
|--------------------|------------|-------|--------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| STD-MS0 RW1 | Pure white | 1 | 4,000 | | 6120 73 8 |

/pc.

Socket, single 0°, multi-standard version, with increased touch protection, with screw terminals, 2-pin, 5/6/10/13 A, 250 V \sim .



Socket 0°, China, 10 A, single



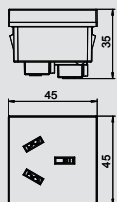
| Type | Colour | Pack. | Weight | | Item No. |
|-----------------------|------------|-------|--------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| STD-CN0A10 RW1 | Pure white | 1 | 4,000 | | 6120 74 0 |

/pc.

Socket, single 0°, China, with increased touch protection, with screw terminals, 2-pin, 10 A, 250 V \sim .



Socket 0°, China, 16 A, single



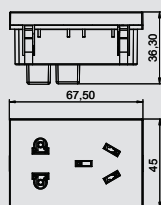
| Type | Colour | Pack. | Weight | | Item No. |
|-----------------------|------------|-------|--------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| STD-CN0A16 RW1 | Pure white | 1 | 4,100 | | 6120 74 2 |

/pc.

Socket, single 0°, China, with increased touch protection, with screw terminals, 2-pin, 16 A, 250 V \sim .



Socket 0°, China, combination CN-NEMA-EURO, single



| Type | Colour | Pack. | Weight | | Item No. |
|-----------------------|------------|-------|--------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| STD-CN0M RW1.5 | Pure white | 1 | 5,800 | | 6120 74 4 |

/pc.

Socket, single 0°, China, combination China-10A/NEMA-1/Euro plug, with increased touch protection, with screw terminals, 2-pin, 10 A, 250 V \sim .



Modul 45 switching and connection systems

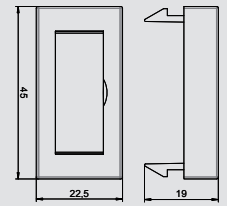
Blanking cover with labelling panel, 1/2 module



| Type | Colour | | Pack. | Weight | Item No. |
|----------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| ADP-BF RW0.5 | Pure white | | 1 | 0,400 | 6117 41 0 |
| ADP-BF SWGR0.5 | Black-grey | | 1 | 0,400 | 6117 41 1 |
| ADP-BF AL0.5 | Aluminium painted | | 1 | 0,400 | 6117 41 2 |

PC Polycarbonate /pc.

Blanking cover with labelling panel, suited for labelling devices in Rapid 45 device installation duct systems and ISS service poles with a 45 mm system opening.



Antenna connection, 1 module, TV / Radio / SAT, antenna socket

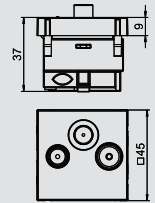


| Type | Colour | | Pack. | Weight | Item No. |
|---------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| ANT-3SD RW1 | Pure white | | 1 | 11,000 | 6105 28 2 |
| ANT-3SD SWGR1 | Black-grey | | 1 | 11,000 | 6105 28 4 |
| ANT-3SD AL1 | Aluminium painted | | 1 | 11,000 | 6105 28 6 |

PC Polycarbonate /pc.

Socket for antenna, BK and satellite reception systems with connection for TV and radio.

Frequency: 5-2150 MHz
Heat attenuation: 5-862 MHz - 1dB
950-2150 MHz - 2 dB
Return channel attenuation: 14 dB
EMC protection class A



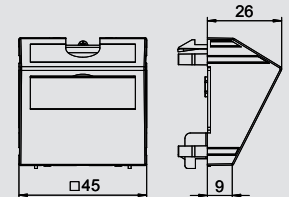
Cable outlet for 3-11 mm cross-section



| Type | Colour | | Pack. | Weight | Item No. |
|---------------|-------------------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| KAL-K11 RW1 | Pure white | | 1 | 3,500 | 6117 42 0 |
| KAL-K11 SWGR1 | Black-grey | | 1 | 3,500 | 6117 42 1 |
| KAL-K11 AL1 | Aluminium painted | | 1 | 3,500 | 6117 42 2 |

PC Polycarbonate /pc.

Two-part cable outlet with labelling panel, consisting of a cable support with strain relief and a cover. The strain relief is suited for cable cross-sections of 3 to 11 mm. The locking fastening is suitable for horizontal and vertical installation in the system environment.



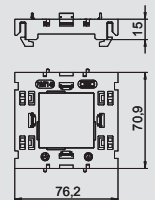
Mounting support, single, for Modul 45®

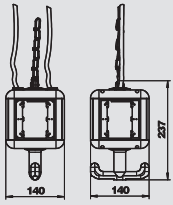


| Type | Colour | | Pack. | Weight | Item No. |
|----------|-----------|--|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| 71MT1 45 | Iron grey | | 10 | 2,000 | 6288 57 2 |

PA Polyamide /pc.

Front-locking single mounting support for Modul 45 data technology systems and Modul 45connect protective contact sockets with Wieland connection.



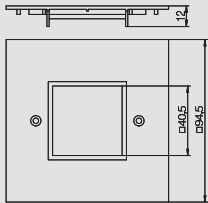


VH4 power supply unit, empty housing

| Type | Designation | Colour | Pack. | Weight | Item No. |
|------------|------------------------|------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-4 LG RW | IP20, with grip, empty | Pure white | 1 | 72,000 | 6109 80 1 |

PA Polyamide /pc.

Empty housing with suspension lug and grip hook, for the installation of four electrical resources, with included partition. Without cover plates.

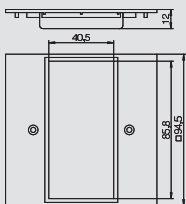


Cover plate VH, for Modul 45 devices, single

| Type | Designation | Colour | Pack. | Weight | Item No. |
|----------|-------------|------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-P4 RW | 1x Modul 45 | Pure white | 1 | 2,000 | 6109 84 1 |

PA Polyamide /pc.

Cover plate to install a single Modul 45 socket.

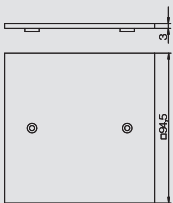


Cover plate VH, for Modul 45 devices, double

| Type | Designation | Colour | Pack. | Weight | Item No. |
|----------|-------------|------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-P5 RW | 2x Modul 45 | Pure white | 1 | 1,830 | 6109 83 5 |

PA Polyamide /pc.

Cover plate to install a double Modul 45 socket.

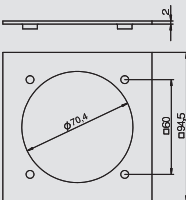


VH cover plate as blanking cover

| Type | Designation | Colour | Pack. | Weight | Item No. |
|----------|-------------|------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-P1 RW | blank | Pure white | 1 | 3,000 | 6109 84 3 |

PA Polyamide /pc.

Cover plate as blanking cover.



Cover plate VH, for CEE connection unit

| Type | Designation | Colour | Pack. | Weight | Item No. |
|----------|-------------|------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-P3 RW | 1x CEE | Pure white | 1 | 2,000 | 6109 83 7 |

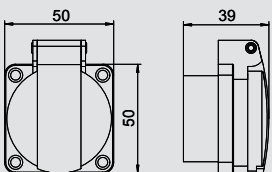
PA Polyamide /pc.

Cover plate with a $\varnothing 70$ mm opening for the installation of a CEE socket 16/32 A with 60 mm fastening track, including four fastening screws.

Information on equipment:

Max. 2 CEE sockets 16/32 A in a power supply unit VH-4

Max. 4 CEE sockets 16/32 A in a power supply unit VH-8



Surface-mounted socket 0° with hinged cover, protective contact, single

| Type | Designation | Colour | Pack. | Weight | Item No. |
|-----------|------------------------------|--------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| ASD-D0 SW | prot. contact w. hinged cov. | Black | 1 | 1,000 | 6109 87 3 |

/pc.

Protective contact surface-mounted socket 0° with hinged cover, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. Protection rating: IP 44



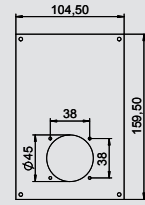
Industrial and special connector systems



Cover plate VHF, for 1x surface-mounted socket, type ASD

| Type | Designation | Colour | Pack. | Weight | Item No. |
|---------|-------------|-------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VHF-P12 | – | Rape yellow | 1 | 7,400 | 6109 85 6 |

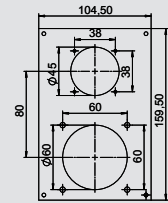
PVC Polyvinylchloride /pc.
 Cover plate with a Ø 45-mm opening for the installation of a surface-mounted socket (type ASD-...) with 38 mm fastening track, including 4 screws for fastening the device.



Cover plate VHF, for 1x surface-mounted socket, type ASD and 1x CEE connection

| Type | Designation | Colour | Pack. | Weight | Item No. |
|---------|-------------|-------------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VHF-P13 | – | Rape yellow | 1 | 7,400 | 6109 85 8 |

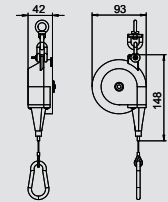
PVC Polyvinylchloride /pc.
 Cover plate with a Ø 45 mm opening for the installation of one surface-mounted socket (type ASD-...) with 38 mm fastening track and a Ø 60 mm opening for the installation of one CEE socket 16/32 A with 60 mm fastening track, including 8 screws for fastening the device.



Balancer for VH up to 1.5 kg loads

| Type | Designation | Colour | Pack. | Weight | Item No. |
|--------------|----------------------------|--------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-BAL1.5 SW | up to 1.5 kg load capacity | Black | 1 | 40,500 | 6109 88 3 |

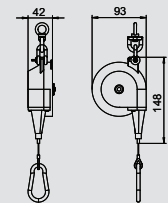
Balancer with an adjustable load of 0.5 to 1.5 kg, maximum cable extension 0.9 m.

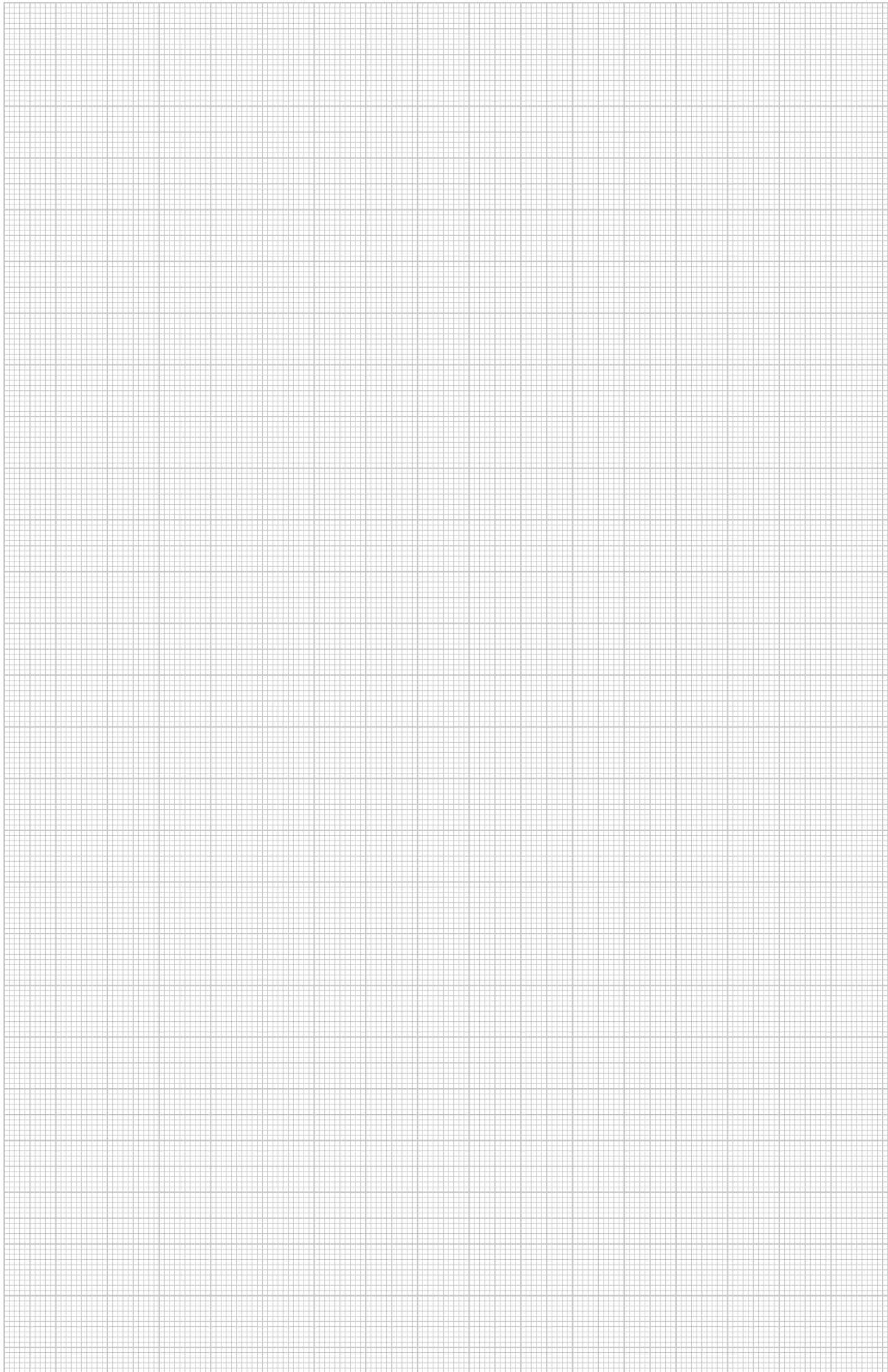


Balancer for VH up to 2.5 kg loads



| Type | Designation | Colour | Pack. | Weight | Item No. |
|--------------|----------------------------|--------|-------|-------------|-----------|
| | | | pcs | kg/100 pcs. | |
| VH-BAL2.5 SW | up to 2.5 kg load capacity | Black | 1 | 40,500 | 6109 88 5 |

Balancer with an adjustable load of 1.5 to 2.5 kg, maximum cable extension 0.9 m.



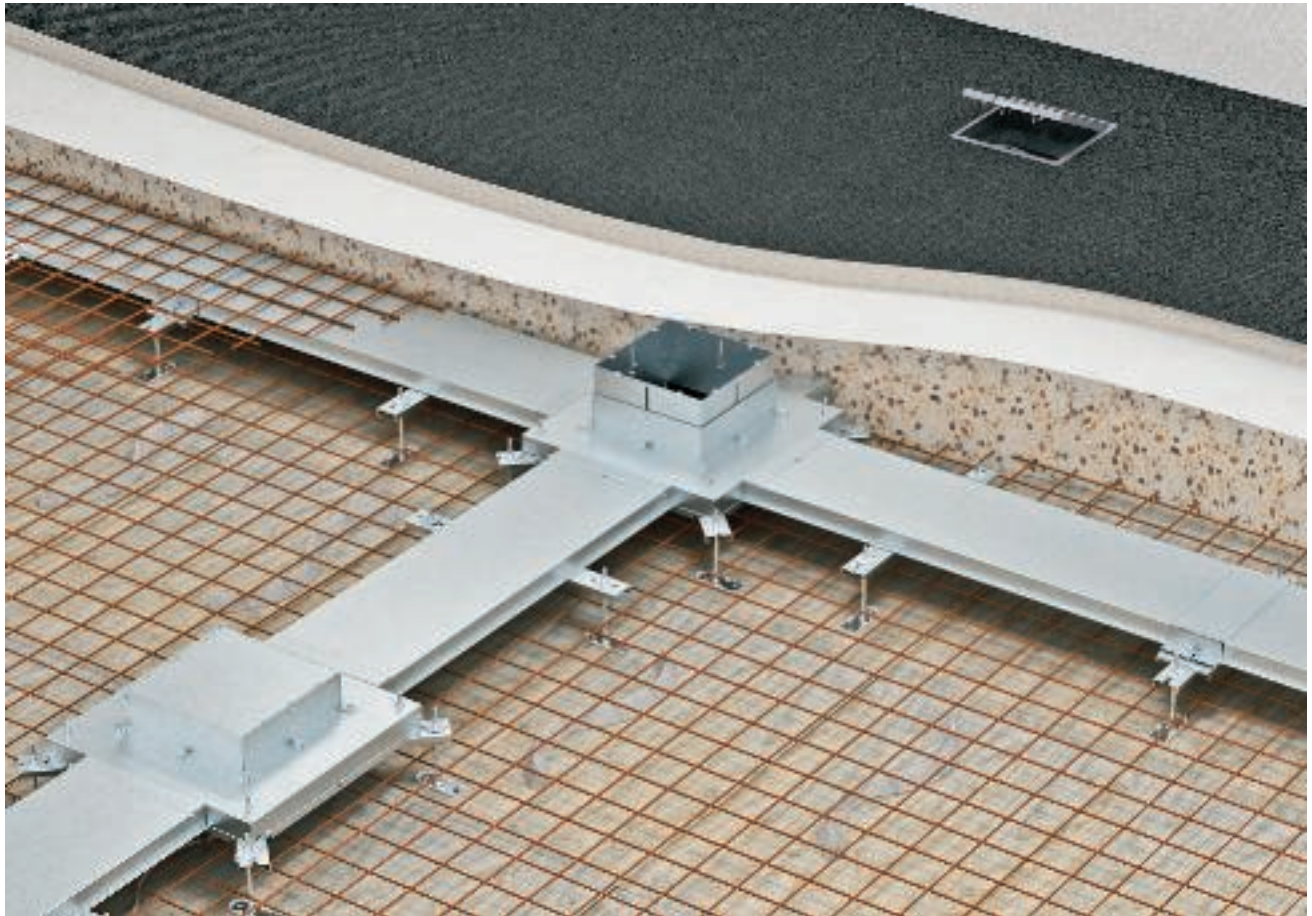


UFS product innovations

| | | | |
|---|-----------------------------|---|-------------------|
|  | IBK in-concrete duct system | Duct height 38 mm Duct height 48 mm IBK accessories | 116 117 118 |
|  | Terrazzo lined body | For height-adjustable cassettes RK...9 For height-adjustable cassettes RK...R9 | 119 119 |

New products in IBK in-concrete system

Slender system in a concrete surface



The re-worked design is now even better: OBO has further developed the IBK system for the special installation in concrete and has simplified the fitting. Using the IBK system, large floor areas can be fitted with electrical installation equipment even when there is only a little screed cover or none at all. Duct lengths and box bodies form a tight grid cable routing lines in

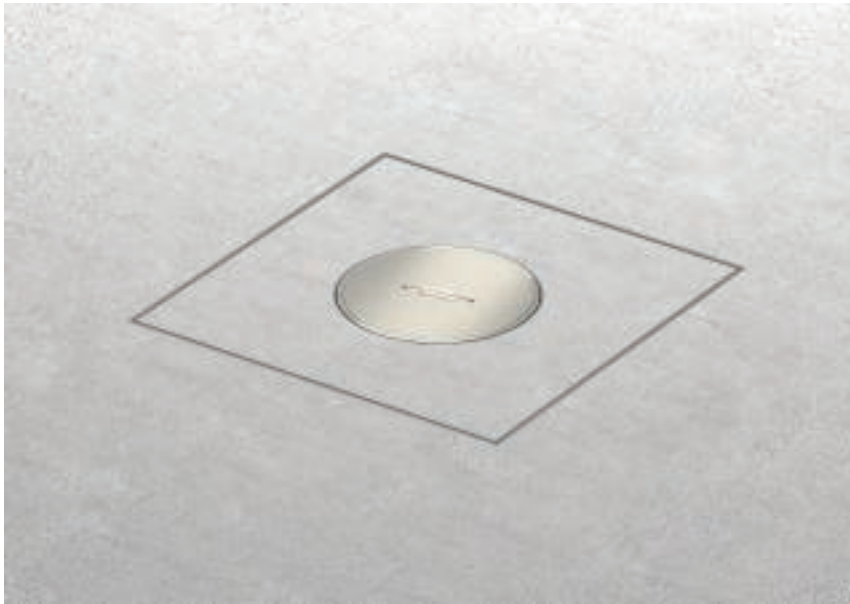
the concrete surface. The IBK boxes are intended for the later, direct installation of devices.

The new IBK system is suitable for duct heights of 38 mm or 48 mm. Components of this system are in-concrete boxes for the installation device units GES9 and GESR9 as well as both the established 3-compartment underfloor installati-

on ducts and accessories. The system elements are made from zinc-plated steel sheet and can withstand even high mechanical stress during the construction phase. Thanks to new height-adjustable units for the IBK system components, installation and height-adjustment in the reinforcement have now become even easier.

Screed protection cover for polished screed and terrazzo

Realising new floorings simply



Polished or natural screed, or a terrazzo look - surface-finished screeds are a new trend in interior design. Next to the versatile design possibilities, this type of flooring is popular with constructors and architects also due to its cost effectiveness. Surface-finished screeds can be used for flooring designs in both residential buildings and in commercially used spaces.

OBO Bettermann offers a new underfloor solution for the special processing steps of the screed layer: the screed protection cover for surface-flush and jointless installations of stainless-steel cassettes into the floor.

The casing is laid onto the underfloor box with mounting lid, floatin-

gly, and closes the gaps between box and cassette frame. The casing side wall has been aligned to the treatment of surface-finished screeds so the unreduced screed layer can be used over the underfloor box. An aluminium protection cover, which closes the stainless-steel cassette flush, can be polished over with the screed layer.

The high-quality screed floorings can be enhanced even more with modern electrical installations from the floor using the new screed protection cover. The stainless-steel cassettes offer installation space for up to 12 sockets or numerous data and multimedia connections of the OBO Modul 45 series.

IBK in-concrete duct system for duct height 38 mm



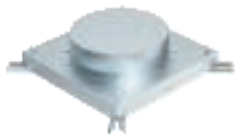
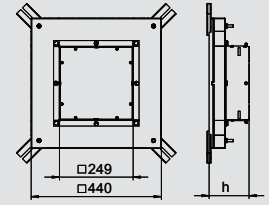
In-concrete box for GES9

| Type | Pack. | Weight | Item No. |
|--------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| IBD 35038 9 | 1 | 850,000 | 7399 85 0 |

St Steel **FS** Strip-galvanised /pc.

In-concrete box for duct height 38 mm. Side walls are prepared for duct widths 250 and 350 mm. With four adjustable placements for levelling units. With mounting opening for device insert of nominal size 9.

Available from 01/07/2014



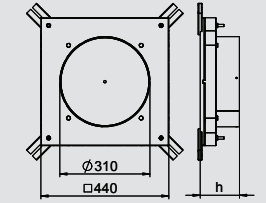
In-concrete box for GESR9

| Type | Pack. | Weight | Item No. |
|---------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| IBD 35038 R9 | 1 | 918,000 | 7399 85 6 |

St Steel **FS** Strip-galvanised /pc.

In-concrete box for duct height 38 mm. Side walls are prepared for duct widths 250 and 350 mm. With four adjustable placements for levelling units. With mounting opening for device insert of nominal size R9.

Available from 01/07/2014



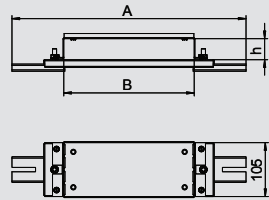
Connection element 38 mm

| Type | Pack. | Weight | Item No. |
|-------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| IBVE 25038 | 1 | 131,400 | 7399 89 0 |
| IBVE 35038 | 1 | 161,500 | 7399 89 6 |

St Steel **FS** Strip-galvanised /pc.

To connect underfloor installation ducts with in-concrete applications. With two adjustable placements for levelling units IBNEV.

Available from 01/07/2014

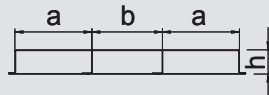


Underfloor installation duct, 3-compartment

| Type | Width | Duct height | Pack. | Weight | Item No. |
|-----------------|-------|-------------|-------|----------|------------------|
| | mm | mm | m | kg/100 m | |
| S3 25038 | 250 | 38 | 2 | 466,000 | 7400 32 8 |
| S3 35038 | 350 | 38 | 2 | 595,000 | 7400 34 6 |

St Steel **FS** Strip-galvanised /m

Underfloor installation duct for routing cables under the screed.

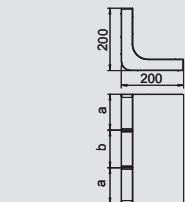


Vertical bend 38 mm

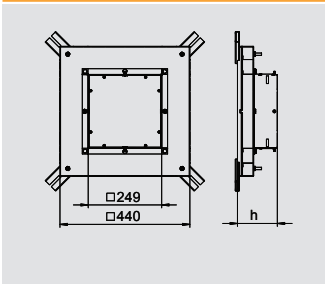
| Type | Width | Duct height | Pack. | Weight | Item No. |
|------------------|-------|-------------|-------|-------------|------------------|
| | mm | mm | pcs | kg/100 pcs. | |
| KV3 25038 | 250 | 38 | 1 | 223,000 | 7400 64 8 |
| KV3 35038 | 350 | 38 | 1 | 286,000 | 7400 66 0 |

St Steel **FS** Strip-galvanised /pc.

For vertical direction changes of screed-covered underfloor installation ducts (wall connections, supplies).



IBK in-concrete duct system for duct height 48 mm

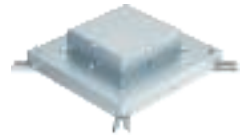


In-concrete box 48 mm for GES

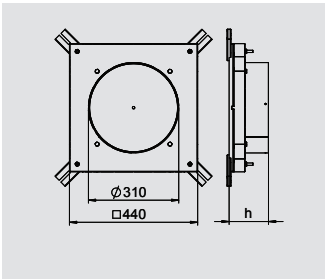
| Type | Pack. | Weight | Item No. |
|--------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| IBD 35048 9 | 1 | 872,500 | 7399 85 2 |

St Steel **FS** Strip-galvanised /pc.

In-concrete box for duct height 48 mm. Side walls are prepared for duct widths of 250 and 350 mm. With four adjustable placements for levelling units. With mounting opening for device insert of nominal size 9.



Available from 01/07/2014

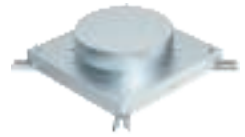


In-concrete box 48 mm for GESR9

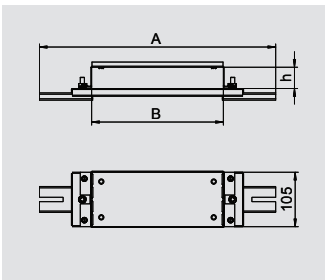
| Type | Pack. | Weight | Item No. |
|---------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| IBD 35048 R9 | 1 | 940,000 | 7399 85 8 |

St Steel **FS** Strip-galvanised /pc.

In-concrete box for duct height 48 mm. Side walls prepared for duct widths of 250 and 350 mm. With four adjustable placements for levelling units. With mounting opening for device insert of nominal size R9.



Available from 01/07/2014



Connection element 48 mm

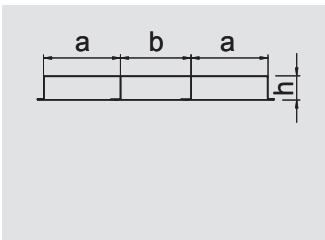
| Type | Pack. | Weight | Item No. |
|-------------------|-------|-------------|------------------|
| | pcs | kg/100 pcs. | |
| IBVE 25048 | 1 | 133,800 | 7399 89 2 |
| IBVE 35048 | 1 | 161,500 | 7399 89 8 |

St Steel **FS** Strip-galvanised /pc.

To connect underfloor installation ducts with in-concrete applications. With two adjustable placements for levelling units IBNEV.



Available from 01/07/2014

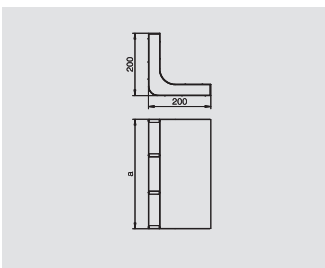


Underfloor installation duct, 3-compartment

| Type | Width mm | Duct height mm | Pack. | Weight | Item No. |
|-----------------|-------------|----------------------|-------|----------|------------------|
| | | | m | kg/100 m | |
| S3 25048 | 250 | 48 | 2 | 500,000 | 7400 33 2 |
| S3 35048 | 350 | 48 | 2 | 607,000 | 7400 34 4 |

St Steel **FS** Strip-galvanised /m

Underfloor installation duct for routing cables under the screed.

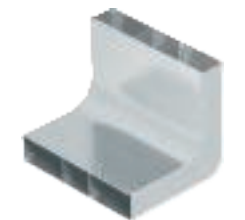


Vertical bend 48 mm

| Type | Width mm | Duct height mm | Pack. | Weight | Item No. |
|------------------|-------------|----------------------|-------|-------------|------------------|
| | | | pcs | kg/100 pcs. | |
| KV3 25048 | 250 | 48 | 1 | 233,000 | 7400 65 2 |
| KV3 35048 | 350 | 48 | 1 | 296,000 | 7400 66 4 |

St Steel **FS** Strip-galvanised /pc.

For vertical direction changes of screed-covered underfloor installation ducts (wall connections, supplies).



IBK accessories

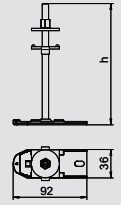


Height-adjustment unit

| Type | Pack. | Weight | Item No. |
|-----------|-------|-------------|-----------|
| | pcs | kg/100 pcs. | |
| IBNEV 110 | 1 | 30,000 | 7399 92 0 |
| IBNEV 150 | 1 | 33,000 | 7399 92 3 |
| IBNEV 190 | 1 | 36,000 | 7399 92 6 |
| IBNEV 230 | 1 | 40,000 | 7399 92 9 |

St Steel **FS** Strip-galvanised /pc.

Available from 01/07/2014 Height adjustment kit for IBK system components. For levelling boxes, connectors and supports.



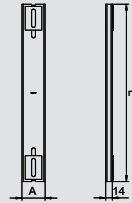
Support for 250 mm duct

| Type | Pack. | Weight | Item No. |
|----------|-------|-------------|-----------|
| | pcs | kg/100 pcs. | |
| IBST 250 | 1 | 64,200 | 7399 91 0 |

St Steel **FS** Strip-galvanised /pc.

To support and elevate underfloor installation ducts. With two adjustable placements for levelling units.

Available from 01/07/2014



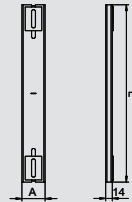
Support for 350 mm duct

| Type | Pack. | Weight | Item No. |
|----------|-------|-------------|-----------|
| | pcs | kg/100 pcs. | |
| IBST 350 | 1 | 77,500 | 7399 91 2 |

St Steel **FS** Strip-galvanised /pc.

To support and elevate underfloor installation ducts. With two adjustable placements for levelling units.

Available from 01/07/2014



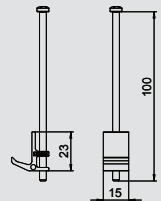
Fastening kit for GES9

| Type | Pack. | Weight | Item No. |
|----------|-------|-------------|-----------|
| | pcs | kg/100 pcs. | |
| IB BGES9 | 1 | | 7399 87 0 |

St Steel **FS** Strip-galvanised /pc.

Fastening kit for square GES9 device insert to be installed in in-concrete box

Available from 01/07/2014



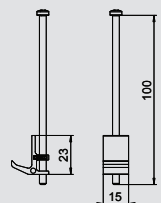
Fastening kit for GESR9

| Type | Pack. | Weight | Item No. |
|-----------|-------|-------------|-----------|
| | pcs | kg/100 pcs. | |
| IB BGESR9 | 1 | | 7399 87 2 |

St Steel **FS** Strip-galvanised /pc.

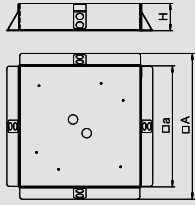
Fastening kit for round GESR9 device insert to be installed in in-concrete box

Available from 01/07/2014



Cassette casing for surface-finished screeds/terrazzo, suitable for polishing

Terrazzo casing for height-adjustable cassettes RK..9



| Type | Colour | Pack. | Weight | Item No. |
|---------------|--------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| SK RK9 | — | 1 | 195,000 | 7404 37 2 |

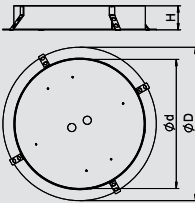
St Steel **FS** Strip-galvanised /pc.

Casing, suitable for polishing, for the direct and jointless installation of height-adjustable cassettes, nominal size 9, into surface-finished screeds/terrazzo floorings. The casing is laid floatingly onto underfloor boxes with mounting lids of nominal size 9, closing the gaps between underfloor box and cassette frame. The protection cover made from aluminium sheet is put into the cassette frame as a dummy before the screed work is done and can be polished over with the screed or terrazzo.



Available from 01/07/2014

Terrazzo casing for height-adjustable cassettes RK..R9



| Type | Colour | Pack. | Weight | Item No. |
|----------------|--------|-------|-------------|------------------|
| | | pcs | kg/100 pcs. | |
| SK RKR9 | — | 1 | 220,000 | 7404 37 6 |

St Steel **FS** Strip-galvanised /pc.

Casing, suitable for polishing, for the direct and jointless installation of round height-adjustable cassettes, nominal size 9, into surface-finished screeds/terrazzo floorings. The casing is laid floatingly onto underfloor boxes with mounting lids of nominal size 9, closing the gaps between underfloor box and cassette frame.

The protection cover made from aluminium sheet is put into the cassette frame as a dummy before the screed work is done and can be polished over with the screed or terrazzo.







Available from 01/07/2014





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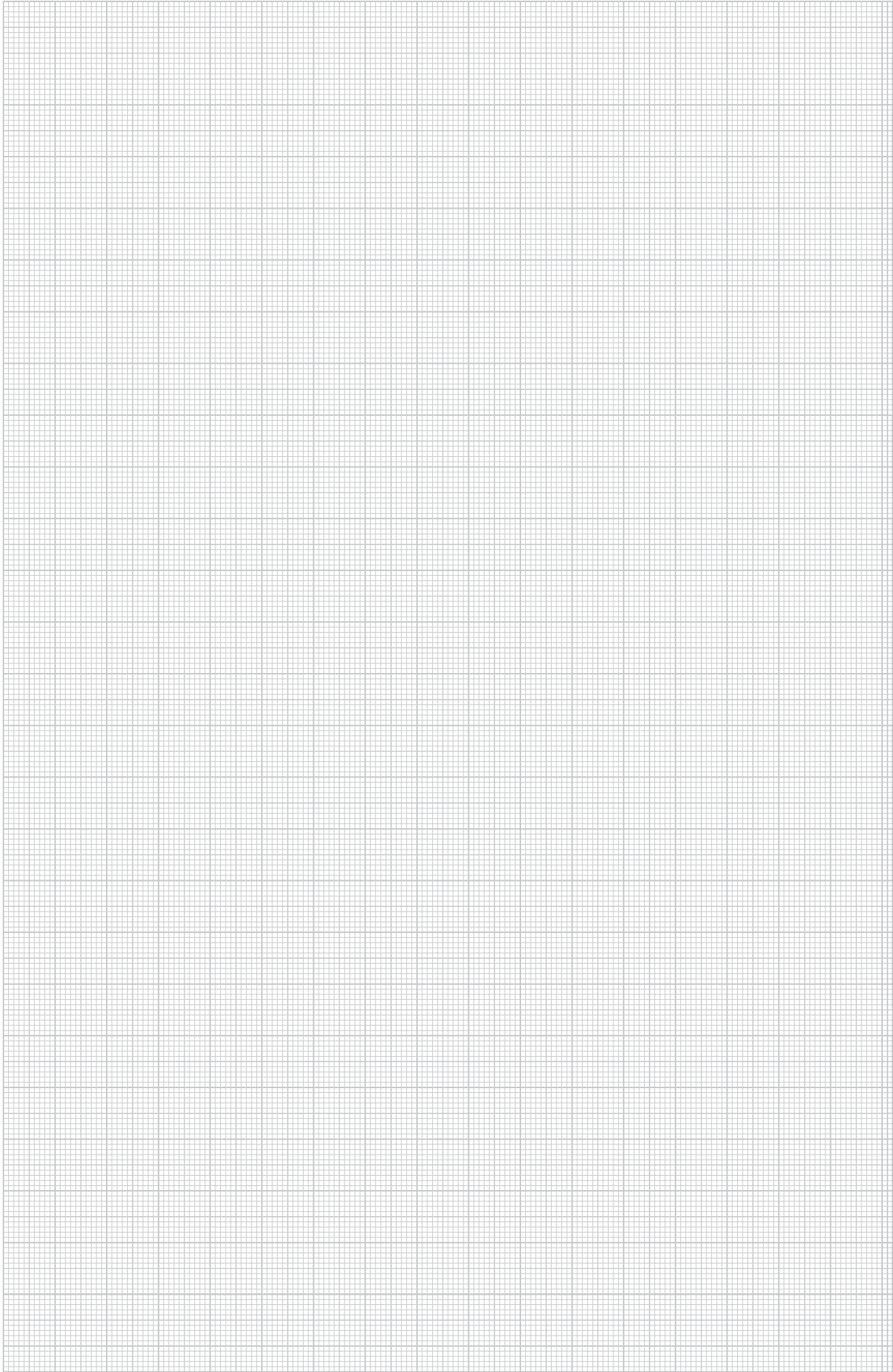
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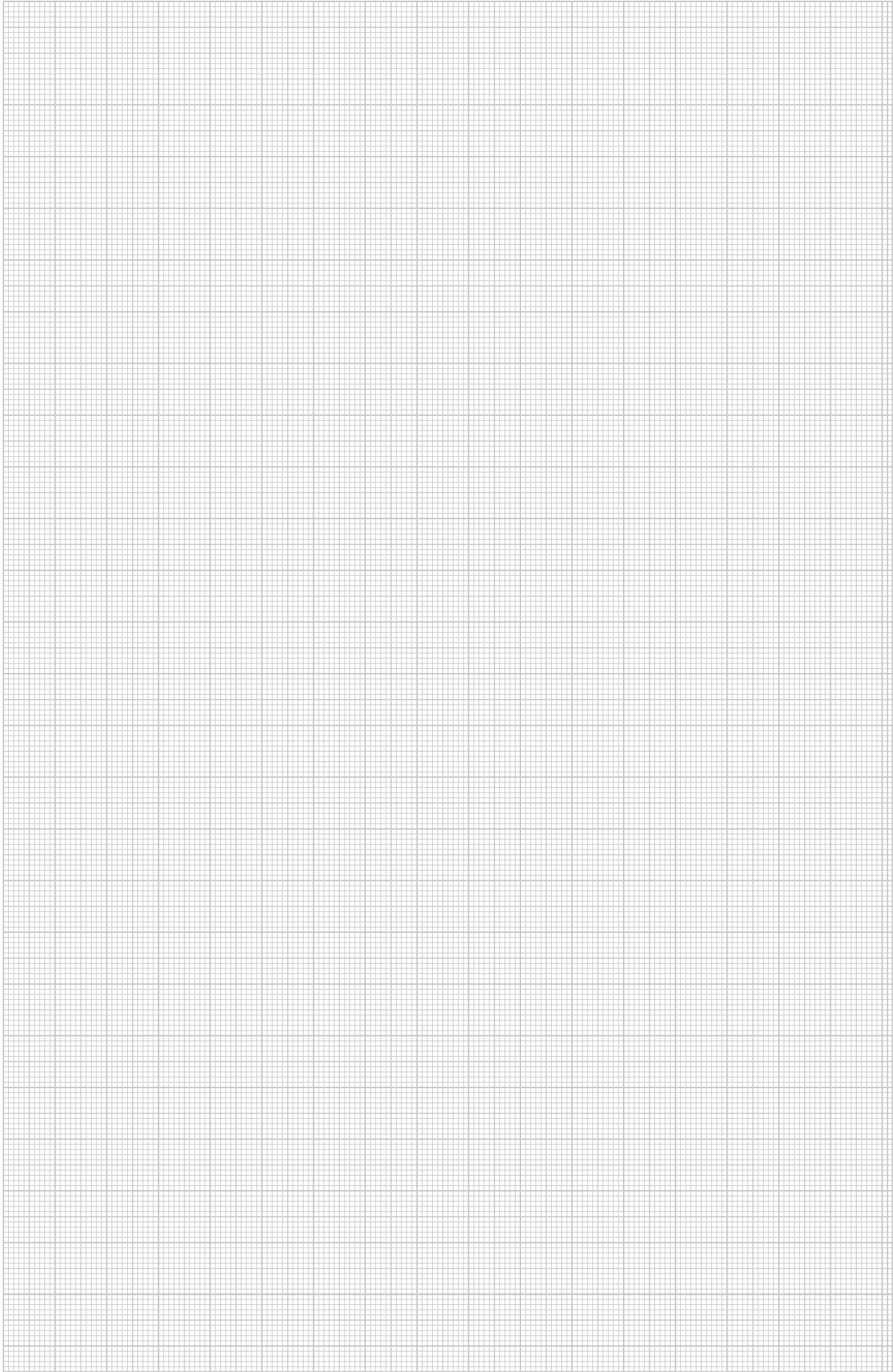
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| ADP-BF AL0.5 | Aluminium painted/ PC | 6164851 | 6117 41 2 | EGS | | 108 | irod 10 | 1800/ v2A | 6219339 | 5400 81 0 | TBS | | 54 |
| ADP-BF RW0.5 | Pure white/ PC | 6164813 | 6117 41 0 | EGS | | 108 | irod 12 | 3000/ v2A | 6219346 | 5400 81 2 | TBS | | 54 |
| ADP-BF SWGR0.5 | Black-grey/ PC | 6164820 | 6117 41 1 | EGS | | 108 | irod 14 | 3200/ v2A | 6219353 | 5400 81 4 | TBS | | 54 |
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| ANT-3SD AL1 | Aluminium painted/ PC | 6164790 | 6105 28 6 | EGS | | 108 | | | | | | | |
| ANT-3SD RW1 | Pure white/ PC | 6164752 | 6105 28 2 | EGS | | 108 | | | | | | | |
| ANT-3SD SWGR1 | Black-grey/ PC | 6164769 | 6105 28 4 | EGS | | 108 | ISS160160AS HROhellrotorange250/ St | | 6191512 | 6290 42 3 | LFS | | 87 |
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| AS 3x16 | Light grey | 6190386 | 5012 01 0 | TBS | /100 pc. | 49 | ISSDV | | 6258666 | 6290 18 9 | LFS | | 90 |
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| ASD-D0 SW | Black | 6169351 | 6109 87 3 | EGS | /pc. | 109 | ISSOG70140FRW | Pure white/ AI | 6258727 | 6289 09 4 | LFS | | 89 |
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| BKRS 1110 FS | 1003000/ St / FS | 6147007 | 6061 98 1 | KTS | /m | 67 | | | | | | | |
| BKRS 1120 FS | 2003000/ St / FS | 6147038 | 6061 98 3 | KTS | | 67 | | | | | | | |
| BKRS 1130 FS | 3003000/ St / FS | 6147045 | 6061 98 5 | KTS | | 67 | KAL-K11 AL1 | Aluminium painted/ PC | 6133857 | 6117 42 2 | EGS | | 108 |
| BKRS 1140 FS | 4003000/ St / FS | 6147052 | 6061 98 7 | KTS | | 67 | KAL-K11 RW1 | Pure white/ PC | 6133833 | 6117 42 0 | EGS | | 108 |
| BKRS 1150 FS | 5003000/ St / FS | 6147069 | 6061 98 9 | KTS | | 67 | KAL-K11 SWGR1 | Black-grey/ PC | 6133840 | 6117 42 1 | EGS | | 108 |
| BKRS 1160 FS | 6003000/ St / FS | 6147090 | 6061 99 1 | KTS | | 67 | | | | | | | |
| BS BKS KP | / St / G | 6147878 | 6049 25 0 | KTS | /100 pc. | 68 | KV3 25038 | 25038/ St / FS | 5090410 | 7400 64 8 | UFS | | 116 |
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| C20-0-255 | | 6329694 | 5095 60 0 | TBS | /pc. | 43 | LC-01 | | 6093786 | 5091 72 0 | TBS | | 53 |
| CST-STD | Black/ PC | 6333561 | 6120 79 9 | EGS | | 101 | | | | | | | |
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| DF BKR10 FS AL | 1003000 | 6146826 | 6049 18 1 | KTS | /m | 67 | MKSM 130 VA4301 | 300 1/ v2A | 5831181 | 6059 19 6 | KTS | | 64 |
| DF BKR20 FS AL | 2003000 | 6146857 | 6049 18 3 | KTS | | 67 | MKSM 140 VA4301 | 400 1/ v2A | 5831228 | 6059 19 8 | KTS | | 64 |
| DF BKR30 FS AL | 3003000 | 6146864 | 6049 18 5 | KTS | | 67 | MKSM 150 VA4301 | 500 1/ v2A | 5831235 | 6059 20 0 | KTS | | 64 |
| DF BKR40 FS AL | 4003000 | 6146871 | 6049 18 7 | KTS | | 67 | MKSM 160 VA4301 | 600 1/ v2A | 5831242 | 6059 20 2 | KTS | | 64 |
| DF BKR50 FS AL | 5003000 | 6146888 | 6049 18 9 | KTS | | 67 | MKSMU 110 VA4301 | 100 1/ v2A | 5832249 | 6059 41 6 | KTS | | 65 |
| DF BKR60 FS AL | 6003000 | 6146918 | 6049 19 1 | KTS | | 67 | MKSMU 120 VA4301 | 200 1/ v2A | 5832263 | 6059 42 0 | KTS | | 65 |
| | | | | | | | MKSMU 130 VA4301 | 300 1/ v2A | 5832300 | 6059 42 2 | KTS | | 65 |
| | | | | | | | MKSMU 140 VA4301 | 400 1/ v2A | 5832317 | 6059 42 4 | KTS | | 65 |
| DST110 BKRS FS | / St / FS | 6147786 | 6049 25 6 | KTS | /pc. | 67 | MKSMU 150 VA4301 | 500 1/ v2A | 5832324 | 6059 42 6 | KTS | | 65 |
| | | | | | | | MKSMU 160 VA4301 | 600 1/ v2A | 5832355 | 6059 42 8 | KTS | | 65 |
| | | | | | | | MKSMU 610 VA4301 | 100 1/ v2A | 5831488 | 6059 26 5 | KTS | | 62 |
| | | | | | | | MKSMU 620 VA4301 | 200 1/ v2A | 5831501 | 6059 26 9 | KTS | | 62 |
| EDK 25 OR | M25/ EVA | 6280551 | 7205 67 5 | BSS | /100 pc. | 77 | MKSMU 630 VA4301 | 300 1/ v2A | 5831518 | 6059 27 1 | KTS | | 62 |
| EDK 32 OR | M32/ EVA | 6280568 | 7205 67 7 | BSS | | 77 | MKSMU 640 VA4301 | 400 1/ v2A | 5831525 | 6059 27 3 | KTS | | 62 |
| EDK 40 OR | M40/ EVA | 6280582 | 7205 67 9 | BSS | | 77 | MKSMU 650 VA4301 | 500 1/ v2A | 5831532 | 6059 27 5 | KTS | | 62 |
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| GK-OTKKPI | Transparent 2000/ PC | 6036271 | 6278 79 0 | LFS | | 84 | MP T610 | 141 185/ St / DD | 6134946 | 7205 48 0 | BSS | /pc. | 77 |
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| | | | | | | | SSE BKR 200 FS | 200/ St / FS | 6146932 | 6049 26 3 | KTS | | 67 |
| | | | | | | | SSE BKR 300 FS | 300/ St / FS | 6146949 | 6049 26 5 | KTS | | 67 |
| RAAM 110 VA4301 | 100/ V2A | 5882176 | 6041 96 0 | KTS | | 66 | SSE BKR 400 FS | 400/ St / FS | 6146970 | 6049 26 7 | KTS | | 67 |
| RAAM 120 VA4301 | 200/ V2A | 5882183 | 6041 96 2 | KTS | | 66 | SSE BKR 500 FS | 500/ St / FS | 6146987 | 6049 26 9 | KTS | | 67 |
| RAAM 130 VA4301 | 300/ V2A | 5882190 | 6041 96 4 | KTS | | 66 | SSE BKR 600 FS | 600/ St / FS | 6146994 | 6049 27 1 | KTS | | 67 |
| RAAM 140 VA4301 | 400/ V2A | 5882206 | 6041 96 6 | KTS | | 66 | | | | | | | |
| RAAM 150 VA4301 | 500/ V2A | 5882213 | 6041 96 8 | KTS | | 66 | STA BKS10 FT | 97/ St / FT | 6147663 | 6044 56 1 | KTS | | 68 |
| RAAM 160 VA4301 | 600/ V2A | 5882220 | 6041 97 0 | KTS | | 66 | STA BKS20 FT | 197/ St / FT | 6147694 | 6044 56 3 | KTS | | 68 |
| | | | | | | | STA BKS30 FT | 297/ St / FT | 6147700 | 6044 56 5 | KTS | | 68 |
| RBM 45 110VA4301 | 100/ V2A | 5880363 | 6041 80 0 | KTS | | 65 | STA BKS40 FT | 397/ St / FT | 6147717 | 6044 56 7 | KTS | | 68 |
| RBM 45 120VA4301 | 200/ V2A | 5880370 | 6041 80 2 | KTS | | 65 | STA BKS50 FT | 497/ St / FT | 6147724 | 6044 56 9 | KTS | | 68 |
| RBM 45 130VA4301 | 300/ V2A | 5880387 | 6041 80 4 | KTS | | 65 | STA BKS60 FT | 597/ St / FT | 6147755 | 6044 57 1 | KTS | | 68 |
| RBM 45 140VA4301 | 400/ V2A | 5880417 | 6041 80 6 | KTS | | 65 | | | | | | | |
| RBM 45 150VA4301 | 500/ V2A | 5880424 | 6041 80 8 | KTS | | 65 | | | | | | | |
| RBM 45 160VA4301 | 600/ V2A | 5880431 | 6041 81 0 | KTS | | 65 | STD-BS0 RW1 | Pure white | 6049851 | 6120 72 2 | EGS | | 106 |
| RBM 90 110VA4301 | 100/ V2A | 5880783 | 6041 88 0 | KTS | | 65 | STD-BS0G RW1.5 | Pure white | 6049868 | 6120 72 4 | EGS | | 106 |
| RBM 90 120VA4301 | 200/ V2A | 5880790 | 6041 88 2 | KTS | | 65 | STD-CN0A10 RW1 | Pure white | 6050086 | 6120 74 0 | EGS | | 107 |
| RBM 90 130VA4301 | 300/ V2A | 5880806 | 6041 88 4 | KTS | | 65 | STD-CN0A16 RW1 | Pure white | 6050109 | 6120 74 2 | EGS | | 107 |
| RBM 90 140VA4301 | 400/ V2A | 5880813 | 6041 88 6 | KTS | | 65 | STD-CN0M RW1.5 | Pure white | 6050147 | 6120 74 4 | EGS | | 107 |
| RBM 90 150VA4301 | 500/ V2A | 5880820 | 6041 88 8 | KTS | | 65 | STD-D0 AL1 | Aluminium painted/ PC | 6047093 | 6120 01 8 | EGS | | 96 |
| RBM 90 160VA4301 | 600/ V2A | 5880837 | 6041 89 0 | KTS | | 65 | STD-D0 AL2 | Aluminium painted/ PC | 6047222 | 6120 03 2 | EGS | | 96 |
| | | | | | | | STD-D0 AL3 | Aluminium painted/ PC | 6047390 | 6120 05 2 | EGS | | 96 |
| RBMV 110 VA 4301 | 340 100/ V2A | 5992882 | 6040 72 0 | KTS | | 66 | STD-D0 MZGN1 | Mint green/ PC | 6047024 | 6120 01 2 | EGS | | 96 |
| RBMV 120 VA 4301 | 490 200/ V2A | 5992905 | 6040 72 4 | KTS | | 66 | STD-D0 MZGN2 | Mint green/ PC | 6047147 | 6120 02 6 | EGS | | 96 |
| RBMV 130 VA 4301 | 640 300/ V2A | 5992912 | 6040 72 6 | KTS | | 66 | STD-D0 MZGN3 | Mint green/ PC | 6047321 | 6120 04 6 | EGS | | 96 |
| RBMV 140 VA 4301 | 820 400/ V2A | 5992929 | 6040 72 8 | KTS | | 66 | STD-D0 ROR1 | Pure orange/ PC | 6046973 | 6120 01 0 | EGS | | 96 |
| RBMV 150 VA 4301 | 960 500/ V2A | 5992936 | 6040 73 0 | KTS | | 66 | STD-D0 ROR2 | Pure orange/ PC | 6047130 | 6120 02 4 | EGS | | 96 |
| RBMV 160 VA 4301 | 1120 600/ V2A | 5992943 | 6040 73 2 | KTS | | 66 | STD-D0 ROR3 | Pure orange/ PC | 6047277 | 6120 04 4 | EGS | | 96 |
| | | | | | | | STD-D0 RW1 | Pure white/ PC | 6046966 | 6120 00 8 | EGS | | 96 |
| RKM 110 VA4301 | 100/ V2A | 5928225 | 7027 20 1 | KTS | | 66 | STD-D0 RW2 | Pure white/ PC | 6047109 | 6120 02 2 | EGS | | 96 |
| RKM 120 VA4301 | 200/ V2A | 5928249 | 7027 20 5 | KTS | | 66 | STD-D0 RW3 | Pure white/ PC | 6047260 | 6120 04 2 | EGS | | 96 |
| RKM 130 VA4301 | 300/ V2A | 5928256 | 7027 20 7 | KTS | | 66 | STD-D0 SRO1 | Signal red/ PC | 6047031 | 6120 01 4 | EGS | | 96 |
| RKM 140 VA4301 | 400/ V2A | 5928263 | 7027 20 9 | KTS | | 66 | STD-D0 SRO2 | Signal red/ PC | 6047154 | 6120 02 8 | EGS | | 96 |
| RKM 150 VA4301 | 500/ V2A | 5928270 | 7027 21 1 | KTS | | 66 | STD-D0 SRO3 | Signal red/ PC | 6047345 | 6120 04 8 | EGS | | 96 |
| RKM 160 VA4301 | 600/ V2A | 5928287 | 7027 21 3 | KTS | | 66 | STD-D0 SWGR1 | Black-grey/ PC | 6047086 | 6120 01 6 | EGS | | 96 |
| | | | | | | | STD-D0 SWGR2 | Black-grey/ PC | 6047208 | 6120 03 0 | EGS | | 96 |
| RTM 110 VA4301 | 100/ V2A | 5882541 | 6042 05 0 | KTS | | 66 | STD-D0 SWGR3 | Black-grey/ PC | 6047383 | 6120 05 0 | EGS | | 96 |
| RTM 120 VA4301 | 200/ V2A | 5882558 | 6042 05 2 | KTS | | 66 | STD-DOC AL1 | Aluminium painted/ PC | 6049608 | 6120 35 2 | EGS | | 102 |
| RTM 130 VA4301 | 300/ V2A | 5882565 | 6042 05 4 | KTS | | 66 | STD-DOC AL2 | Aluminium painted/ PC | 6049738 | 6120 37 2 | EGS | | 102 |
| RTM 140 VA4301 | 400/ V2A | 5882572 | 6042 05 6 | KTS | | 66 | STD-DOC AL3 | Aluminium painted/ PC | 6050031 | 6120 39 2 | EGS | | 102 |
| RTM 150 VA4301 | 500/ V2A | 5882589 | 6042 06 0 | KTS | | 66 | STD-DOC MZGN1 | Mint green/ PC | 6049486 | 6120 34 6 | EGS | | 102 |
| RTM 160 VA4301 | 600/ V2A | 5882596 | 6042 06 2 | KTS | | 66 | STD-DOC MZGN2 | Mint green/ PC | 6049660 | 6120 36 6 | EGS | | 102 |
| | | | | | | | STD-DOC MZGN3 | Mint green/ PC | 6049790 | 6120 38 6 | EGS | | 102 |
| | | | | | | | STD-DOC ROR1 | Pure orange/ PC | 6049431 | 6120 34 4 | EGS | | 102 |
| S3 25038 | 250 38/ St / FS | 5089346 | 7400 32 8 | UFS | /m | 116 | STD-DOC ROR2 | Pure orange/ PC | 6049622 | 6120 36 4 | EGS | | 102 |
| S3 25048 | 250 48/ St / FS | 5089377 | 7400 33 2 | UFS | | 117 | STD-DOC ROR3 | Pure orange/ PC | 6049783 | 6120 38 4 | EGS | | 102 |
| | | | | | | | STD-DOC RW1 | Pure white/ PC | 6049387 | 6120 34 0 | EGS | | 102 |
| S3 35038 | 350 38/ St / FS | 5089391 | 7400 34 0 | UFS | | 116 | STD-DOC RW2 | Pure white/ PC | 6049615 | 6120 36 2 | EGS | | 102 |
| S3 35048 | 350 48/ St / FS | 5089407 | 7400 34 4 | UFS | | 117 | STD-DOC RW3 | Pure white/ PC | 6049745 | 6120 38 2 | EGS | | 102 |
| | | | | | | | STD-DOC SRO1 | Signal red/ PC | 6049509 | 6120 34 8 | EGS | | 102 |
| | | | | | | | STD-DOC SRO2 | Signal red/ PC | 6049677 | 6120 36 8 | EGS | | 102 |
| | | | | | | | STD-DOC SRO3 | Signal red/ PC | 6049974 | 6120 38 8 | EGS | | 102 |
| SB BKS FS | 3000 108/ St / FS | 6147816 | 6049 25 2 | KTS | | 67 | STD-DOC SWGR1 | Black-grey/ PC | 6049554 | 6120 35 0 | EGS | | 102 |
| | | | | | | | STD-DOC SWGR2 | Black-grey/ PC | 6049721 | 6120 37 0 | EGS | | 102 |
| | | | | | | | STD-DOC SWGR3 | Black-grey/ PC | 6050024 | 6120 39 0 | EGS | | 102 |
| | | | | | | | STD-DOC8 AL1 | Aluminium painted/ PC | 6050277 | 6120 42 2 | EGS | | 102 |
| SFISSFRW | Pure white/ St | 5459231 | 6290 19 6 | LFS | /pc. | 89 | STD-DOC8 AL2 | Aluminium painted/ PC | 6050390 | 6120 44 2 | EGS | | 102 |
| SFISSFVAL | White aluminium/ St | 5459248 | 6290 19 7 | LFS | | 89 | STD-DOC8 AL3 | Aluminium painted/ PC | 6050512 | 6120 46 2 | EGS | | 103 |
| | | | | | | | STD-DOC8 MZGN1 | Mint green/ PC | 6050222 | 6120 41 6 | EGS | | 102 |
| | | | | | | | STD-DOC8 MZGN2 | Mint green/ PC | 6050345 | 6120 43 6 | EGS | | 102 |
| SK RK9 | / St / FS | 6332038 | 7404 37 2 | UFS | | 119 | STD-DOC8 MZGN3 | Mint green/ PC | 6050468 | 6120 45 6 | EGS | | 103 |
| SK RKR9 | / St / FS | 6332045 | 7404 37 6 | UFS | | 119 | STD-DOC8 ROR1 | Pure orange/ PC | 6050208 | 6120 41 4 | EGS | | 102 |
| | | | | | | | STD-DOC8 ROR2 | Pure orange/ PC | 6050321 | 6120 43 4 | EGS | | 102 |
| | | | | | | | STD-DOC8 ROR3 | Pure orange/ PC | 6050444 | 6120 45 4 | EGS | | 103 |
| SKSM 610 VA4301 | 100 1,5/ V2A | 5832720 | 6059 49 0 | KTS | /m | 60 | STD-DOC8 RW1 | Pure white/ PC | 6050154 | 6120 41 2 | EGS | | 102 |
| SKSM 610 VA4571 | 100 1,5/ V4A | 5832843 | 6059 50 7 | KTS | | 61 | STD-DOC8 RW2 | Pure white/ PC | 6050314 | 6120 43 2 | EGS | | 102 |
| SKSM 620 VA4301 | 200 1,5/ V2A | 5832744 | 6059 49 4 | KTS | | 60 | STD-DOC8 RW3 | Pure white/ PC | 6050437 | 6120 45 2 | EGS | | 103 |
| SKSM 620 VA4571 | 200 1,5/ V4A | 5832867 | 6059 51 1 | KTS | | 61 | STD-DOC8 SRO1 | Signal red/ PC | 6050253 | 6120 41 8 | EGS | | 102 |
| SKSM 630 VA4301 | 300 1,5/ V2A | 5832782 | 6059 49 6 | KTS | | 60 | STD-DOC8 SRO2 | Signal red/ PC | 6050376 | 6120 43 8 | EGS | | 102 |
| SKSM 630 VA4571 | 300 1,5/ V4A | 5832904 | 6059 51 3 | KTS | | 61 | STD-DOC8 SRO3 | Signal red/ PC | 6050499 | 6120 45 8 | EGS | | 103 |
| SKSM 640 VA4301 | 400 1,5/ V2A | 5832799 | 6059 49 8 | KTS | | 60 | STD-DOC8 SWGR1 | Black-grey/ PC | 6050260 | 6120 42 0 | EGS | | 102 |
| SKSM 640 VA4571 | 400 1,5/ V4A | 5832911 | 6059 51 5 | KTS | | 61 | STD-DOC8 SWGR2 | Black-grey/ PC | 6050383 | 6120 44 0 | EGS | | 102 |
| SKSM 650 VA4301 | 500 1,5/ V2A | 5832805 | 6059 50 0 | KTS | | 60 | STD-DOC8 SWGR3 | Black-grey/ PC | 6050505 | 6120 46 0 | EGS | | 103 |
| SKSM 650 VA4571 | 500 1,5/ V4A | 5832928 | 6059 51 7 | KTS | | 61 | STD-DOK SRO1 | Signal red/ PC | 6049073 | 6120 29 2 | EGS | | 99 |
| SKSM 660 VA4301 | 600 1,5/ V2A | 5832836 | 6059 50 2 | KTS | | 60 | STD-DOK SRO2 | Signal red/ PC | 6049141 | 6120 29 4 | EGS | | 99 |
| SKSM 660 VA4571 | 600 1,5/ V4A | 5832959 | 6059 51 9 | KTS | | 61 | STD-DOK SRO3 | Signal red/ PC | 6049196 | 6120 29 6 | EGS | | 99 |
| SKSMU 610 VA4301 | 100 1,5/ V2A | 5830689 | 6059 72 2 | KTS | | 63 | STD-D3 AL1 | Aluminium painted/ PC | 6047567 | 6120 08 2 | EGS | | 96 |
| SKSMU 620 VA4301 | 200 1,5/ V2A | 5830702 | 6059 72 6 | KTS | | 63 | STD-D3 AL2 | Aluminium painted/ PC | 6047703 | 6120 11 2 | EGS | | 96 |
| SKSMU 630 VA4301 | 300 1,5/ V2A | 5830740 | 6059 72 8 | KTS | | 63 | STD-D3 AL3 | Aluminium painted/ PC | 6047994 | 6120 13 2 | EGS | | 97 |
| SKSMU 640 VA4301 | 400 1,5/ V2A | 5830757 | 6059 73 0 | KTS | | 63 | STD-D3 MZGN1 | Mint green/ PC | 6047505 | 6120 07 6 | EGS | | 96 |
| SKSMU 650 VA4301 | 500 1,5/ V2A | 5830764 | 6059 73 2 | KTS | | 63 | STD-D3 MZGN2 | Mint green/ PC | 6047628 | 6120 10 6 | EGS | | 96 |
| SKSMU 660 VA4301 | 600 1,5/ V2A | 5830795 | 6059 73 4 | KTS | | 63 | STD-D3 MZGN3 | Mint green/ PC | 6047925 | 6120 12 6 | | | |

Type listing

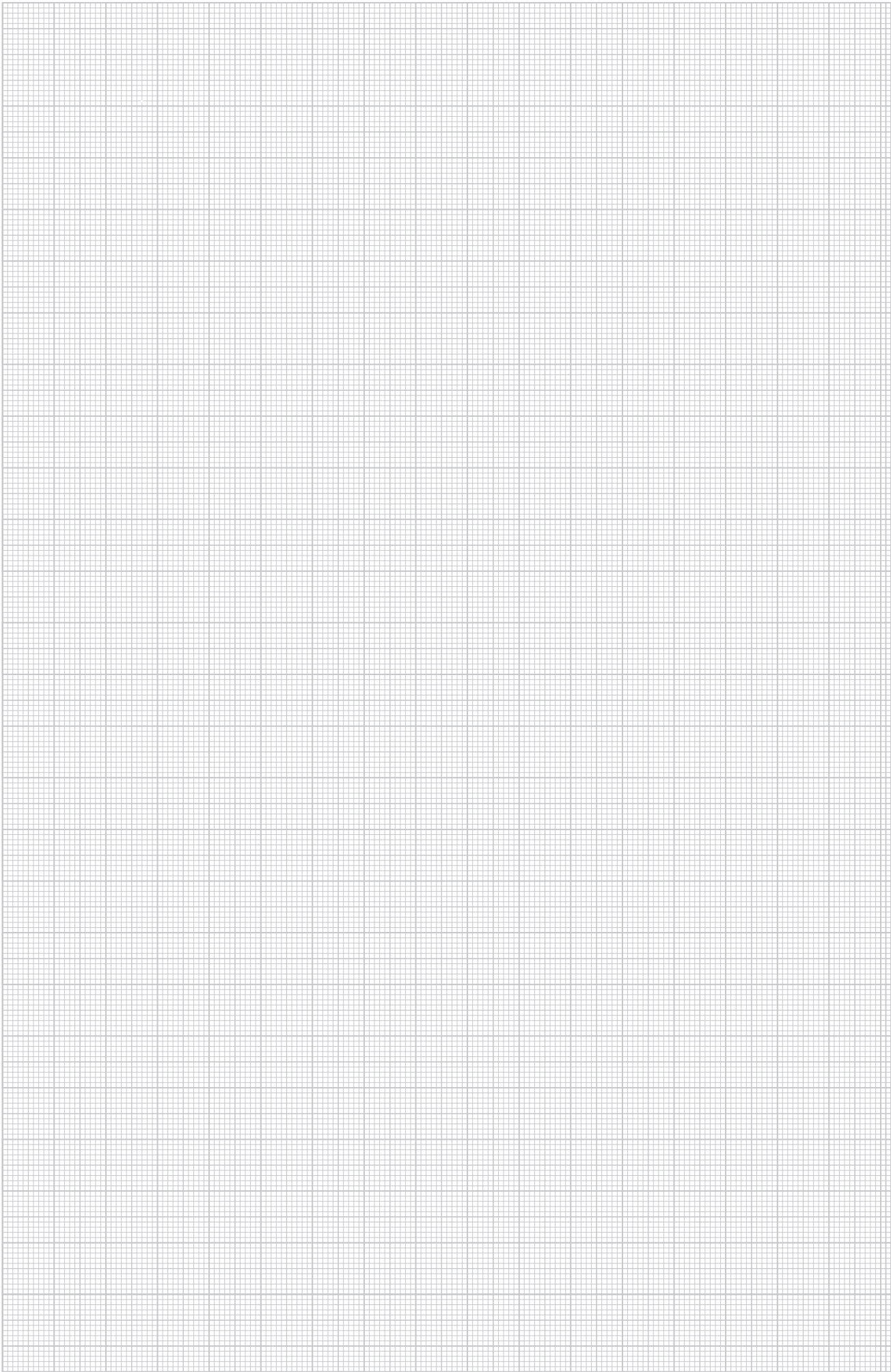
Structure of the GTIN: Country code **40**

Manufacturer code **1219**

Individual GTIN **5647589**

| Type | Dimensions/Colour/Div. | GTIN | Art. no. | PE | Price | Page | Type | Dimensions/Colour/Div. | GTIN | Art. no. | PE | Price | Page |
|----------------|------------------------|---------|-----------|-----|-------|------|------------------------------------|------------------------|---------|-----------|-----|-------|------|
| STD-D3 RW1 | Pure white/ PC | 6047444 | 6120 07 2 | EGS | /pc. | 96 | STD-F3 MZGN3 | Mint green/ PC | 6049004 | 6120 26 6 | EGS | /pc. | 98 |
| STD-D3 RW2 | Pure white/ PC | 6047574 | 6120 10 2 | EGS | | 96 | STD-F3 ROR1 | Pure orange/ PC | 6048649 | 6120 22 4 | EGS | | 97 |
| STD-D3 RW3 | Pure white/ PC | 6047864 | 6120 12 2 | EGS | | 97 | STD-F3 ROR2 | Pure orange/ PC | 6048823 | 6120 24 4 | EGS | | 98 |
| STD-D3 SRO1 | Signal red/ PC | 6047512 | 6120 07 8 | EGS | | 96 | STD-F3 ROR3 | Pure orange/ PC | 6048991 | 6120 26 4 | EGS | | 98 |
| STD-D3 SRO2 | Signal red/ PC | 6047635 | 6120 10 8 | EGS | | 96 | STD-F3 RW1 | Pure white/ PC | 6048540 | 6120 22 2 | EGS | | 97 |
| STD-D3 SRO3 | Signal red/ PC | 6047949 | 6120 12 8 | EGS | | 97 | STD-F3 RW2 | Pure white/ PC | 6048786 | 6120 24 2 | EGS | | 98 |
| STD-D3 SWGR1 | Black-grey/ PC | 6047529 | 6120 08 0 | EGS | | 96 | STD-F3 RW3 | Pure white/ PC | 6048953 | 6120 26 2 | EGS | | 98 |
| STD-D3 SWGR2 | Black-grey/ PC | 6047680 | 6120 11 0 | EGS | | 96 | STD-F3 SRO1 | Signal red/ PC | 6048717 | 6120 22 8 | EGS | | 97 |
| STD-D3 SWGR3 | Black-grey/ PC | 6047987 | 6120 13 0 | EGS | | 97 | STD-F3 SRO2 | Signal red/ PC | 6048885 | 6120 24 8 | EGS | | 98 |
| STD-D3C AL2 | Aluminium painted/ PC | 6050635 | 6120 49 2 | EGS | | 103 | STD-F3 SRO3 | Signal red/ PC | 6049011 | 6120 26 8 | EGS | | 98 |
| STD-D3C AL3 | Aluminium painted/ PC | 6050758 | 6120 51 2 | EGS | | 103 | STD-F3 SWGR1 | Black-grey/ PC | 6048724 | 6120 23 0 | EGS | | 97 |
| STD-D3C MZGN2 | Mint green/ PC | 6050581 | 6120 48 6 | EGS | | 103 | STD-F3 SWGR2 | Black-grey/ PC | 6048892 | 6120 25 0 | EGS | | 98 |
| STD-D3C MZGN3 | Mint green/ PC | 6050703 | 6120 50 6 | EGS | | 103 | STD-F3 SWGR3 | Black-grey/ PC | 6049028 | 6120 27 0 | EGS | | 98 |
| STD-D3C ROR2 | Pure orange/ PC | 6050567 | 6120 48 4 | EGS | | 103 | STD-F3C AL2 | Aluminium painted/ PC | 6048526 | 6120 68 2 | EGS | | 104 |
| STD-D3C ROR3 | Pure orange/ PC | 6050680 | 6120 50 4 | EGS | | 103 | STD-F3C AL3 | Aluminium painted/ PC | 6048663 | 6120 70 2 | EGS | | 105 |
| STD-D3C RW2 | Pure white/ PC | 6050550 | 6120 48 2 | EGS | | 103 | STD-F3C MZGN2 | Mint green/ PC | 6048465 | 6120 67 6 | EGS | | 104 |
| STD-D3C RW3 | Pure white/ PC | 6050673 | 6120 50 2 | EGS | | 103 | STD-F3C MZGN3 | Mint green/ PC | 6048595 | 6120 69 6 | EGS | | 105 |
| STD-D3C SRO2 | Signal red/ PC | 6050611 | 6120 48 8 | EGS | | 103 | STD-F3C ROR2 | Pure orange/ PC | 6048427 | 6120 67 4 | EGS | | 104 |
| STD-D3C SRO3 | Signal red/ PC | 6050734 | 6120 50 8 | EGS | | 103 | STD-F3C ROR3 | Pure orange/ PC | 6048588 | 6120 69 4 | EGS | | 105 |
| STD-D3C SWGR2 | Black-grey/ PC | 6050628 | 6120 49 0 | EGS | | 103 | STD-F3C RW2 | Pure white/ PC | 6048410 | 6120 67 2 | EGS | | 104 |
| STD-D3C SWGR3 | Black-grey/ PC | 6050741 | 6120 51 0 | EGS | | 103 | STD-F3C RW3 | Pure white/ PC | 6048533 | 6120 69 2 | EGS | | 105 |
| STD-D3K SRO1 | Signal red/ PC | 6049240 | 6120 30 2 | EGS | | 99 | STD-F3C SRO2 | Signal red/ PC | 6048472 | 6120 67 8 | EGS | | 104 |
| STD-D3K SRO2 | Signal red/ PC | 6049257 | 6120 30 4 | EGS | | 99 | STD-F3C SRO3 | Signal red/ PC | 6048601 | 6120 69 8 | EGS | | 105 |
| STD-D3K SRO3 | Signal red/ PC | 6049264 | 6120 30 6 | EGS | | 99 | STD-F3C SWGR2 | Black-grey/ PC | 6048489 | 6120 68 0 | EGS | | 104 |
| STD-FO AL1 | Aluminium painted/ PC | 6048175 | 6120 16 2 | EGS | | 97 | STD-F3C SWGR3 | Black-grey/ PC | 6048656 | 6120 70 0 | EGS | | 105 |
| STD-FO AL2 | Aluminium painted/ PC | 6048298 | 6120 18 2 | EGS | | 97 | STD-F3K SRO1 | Signal red/ PC | 6049424 | 6120 32 2 | EGS | | 100 |
| STD-FO AL3 | Aluminium painted/ PC | 6048403 | 6120 20 1 | EGS | | 97 | STD-F3K SRO2 | Signal red/ PC | 6049493 | 6120 32 4 | EGS | | 100 |
| STD-FO MZGN1 | Mint green/ PC | 6048069 | 6120 15 5 | EGS | | 97 | STD-F3K SRO3 | Signal red/ PC | 6049547 | 6120 32 6 | EGS | | 100 |
| STD-FO MZGN2 | Mint green/ PC | 6048236 | 6120 17 6 | EGS | | 97 | STD-INO RW1 | Pure white | 6049899 | 6120 72 6 | EGS | | 107 |
| STD-FO MZGN3 | Mint green/ PC | 6048359 | 6120 19 6 | EGS | | 97 | STD-INOM RW1 | Pure white | 6049905 | 6120 72 8 | EGS | | 107 |
| STD-FO ROR1 | Pure orange/ PC | 6048052 | 6120 15 4 | EGS | | 97 | STD-MSO RW1 | Pure white | 6050079 | 6120 73 8 | EGS | | 107 |
| STD-FO ROR2 | Pure orange/ PC | 6048229 | 6120 17 4 | EGS | | 97 | STD-SAO RW1 | Pure white | 6049912 | 6120 73 0 | EGS | | 106 |
| STD-FO ROR3 | Pure orange/ PC | 6048342 | 6120 19 4 | EGS | | 97 | STD-SAOG RW1.5 | Pure white | 6049981 | 6120 73 4 | EGS | | 106 |
| STD-FO RW1 | Pure white/ PC | 6048045 | 6120 15 2 | EGS | | 97 | STD-SAOGK SRO1.5 | Signal red | 6050017 | 6120 73 6 | EGS | | 106 |
| STD-FO RW2 | Pure white/ PC | 6048182 | 6120 17 2 | EGS | | 97 | STD-SAOK SRO1 | Signal red | 6049967 | 6120 73 2 | EGS | | 106 |
| STD-FO RW3 | Pure white/ PC | 6048304 | 6120 19 2 | EGS | | 97 | | | | | | | |
| STD-FO SRO1 | Signal red/ PC | 6048113 | 6120 15 8 | EGS | | 97 | | | | | | | |
| STD-FO SRO2 | Signal red/ PC | 6048243 | 6120 17 8 | EGS | | 97 | T 100 WB3-10 | / PP | 6257867 | 2007 80 8 | VBS | | 8 |
| STD-FO SRO3 | Signal red/ PC | 6048366 | 6120 19 8 | EGS | | 97 | | | | | | | |
| STD-FO SWGR1 | Black-grey/ PC | 6048168 | 6120 16 0 | EGS | | 97 | | | | | | | |
| STD-FO SWGR2 | Black-grey/ PC | 6048281 | 6120 18 0 | EGS | | 97 | T100ED 10-5 AS | / PP/PC | 6147908 | 7205 62 3 | BSS | | 76 |
| STD-FO SWGR3 | Black-grey/ PC | 6048397 | 6120 20 0 | EGS | | 97 | T100ED 10-6 AFS | / PP/PC | 6147953 | 7205 63 3 | BSS | | 76 |
| STD-FOC AL1 | Aluminium painted/ PC | 6050864 | 6120 54 2 | EGS | | 103 | T100ED 4-10 ADS | / PP/PC | 6147960 | 7205 64 0 | BSS | | 77 |
| STD-FOC AL2 | Aluminium painted/ PC | 6050987 | 6120 56 2 | EGS | | 103 | T100ED 6-5 AS | / PP/PC | 6147892 | 7205 62 0 | BSS | | 76 |
| STD-FOC AL3 | Aluminium painted/ PC | 6051090 | 6120 58 2 | EGS | | 104 | T100ED 6-6 AFS | / PP/PC | 6147946 | 7205 63 0 | BSS | | 76 |
| STD-FOC MZGN1 | Mint green/ PC | 6050819 | 6120 53 6 | EGS | | 103 | | | | | | | |
| STD-FOC MZGN2 | Mint green/ PC | 6050925 | 6120 55 6 | EGS | | 103 | T160ED 16-5 AS | / PP/PC | 6147939 | 7205 62 6 | BSS | | 76 |
| STD-FOC MZGN3 | Mint green/ PC | 6051045 | 6120 57 6 | EGS | | 104 | | | | | | | |
| STD-FOC ROR1 | Pure orange/ PC | 6050802 | 6120 53 4 | EGS | | 103 | | | | | | | |
| STD-FOC ROR2 | Pure orange/ PC | 6050918 | 6120 55 4 | EGS | | 103 | | | | | | | |
| STD-FOC ROR3 | Pure orange/ PC | 6051038 | 6120 57 4 | EGS | | 104 | TSG1 10Z BKRS FS 3000 109/ St / FS | | 6147779 | 6062 39 1 | KTS | /m | 68 |
| STD-FOC RW1 | Pure white/ PC | 6050796 | 6120 53 2 | EGS | | 103 | | | | | | | |
| STD-FOC RW2 | Pure white/ PC | 6050871 | 6120 55 2 | EGS | | 103 | | | | | | | |
| STD-FOC RW3 | Pure white/ PC | 6050994 | 6120 57 2 | EGS | | 104 | | | | | | | |
| STD-FOC SRO1 | Signal red/ PC | 6050826 | 6120 53 8 | EGS | | 103 | ÜSM-LED 230 | | 6035441 | 5092 48 0 | TBS | /pc. | 50 |
| STD-FOC SRO2 | Signal red/ PC | 6050949 | 6120 55 8 | EGS | | 103 | | | | | | | |
| STD-FOC SRO3 | Signal red/ PC | 6051052 | 6120 57 8 | EGS | | 104 | V20-0-150 | | 6163540 | 5095 36 2 | TBS | | 41 |
| STD-FOC SWGR1 | Black-grey/ PC | 6050857 | 6120 54 0 | EGS | | 103 | V20-0-280 | | 6163557 | 5095 36 4 | TBS | | 41 |
| STD-FOC SWGR2 | Black-grey/ PC | 6050970 | 6120 56 0 | EGS | | 103 | V20-0-320 | | 6163595 | 5095 36 6 | TBS | | 41 |
| STD-FOC SWGR3 | Black-grey/ PC | 6051069 | 6120 58 0 | EGS | | 104 | V20-0-385 | | 6163601 | 5095 36 8 | TBS | | 42 |
| STD-FOC8 AL1 | Aluminium painted/ PC | 6051427 | 6120 61 2 | EGS | | 104 | V20-0-440 | | 6163618 | 5095 37 0 | TBS | | 42 |
| STD-FOC8 AL2 | Aluminium painted/ PC | 6051540 | 6120 63 2 | EGS | | 104 | V20-0-550 | | 6163625 | 5095 37 2 | TBS | | 42 |
| STD-FOC8 AL3 | Aluminium painted/ PC | 6051663 | 6120 65 2 | EGS | | 104 | V20-0-75 | | 6163533 | 5095 36 0 | TBS | | 41 |
| STD-FOC8 MZGN1 | Mint green/ PC | 6051359 | 6120 60 6 | EGS | | 104 | V20-1+FS-280 | | 6162000 | 5095 28 1 | TBS | | 27 |
| STD-FOC8 MZGN2 | Mint green/ PC | 6051472 | 6120 62 6 | EGS | | 104 | V20-1+FS-320 | | 6162826 | 5095 29 1 | TBS | | 31 |
| STD-FOC8 MZGN3 | Mint green/ PC | 6051595 | 6120 64 6 | EGS | | 104 | V20-1+NPE+FS-280 | | 6163014 | 5095 33 1 | TBS | | 29 |
| STD-FOC8 ROR1 | Pure orange/ PC | 6051342 | 6120 60 4 | EGS | | 104 | V20-1+NPE+FS-320 | | 6163489 | 5095 34 1 | TBS | | 33 |
| STD-FOC8 ROR2 | Pure orange/ PC | 6051465 | 6120 62 4 | EGS | | 104 | V20-1+NPE-150 | | 6160051 | 5095 23 1 | TBS | | 24 |
| STD-FOC8 ROR3 | Pure orange/ PC | 6051588 | 6120 64 4 | EGS | | 104 | V20-1+NPE-280 | | 6161140 | 5095 25 1 | TBS | | 28 |
| STD-FOC8 RW1 | Pure white/ PC | 6051335 | 6120 60 2 | EGS | | 104 | V20-1+NPE-320 | | 6161379 | 5095 26 1 | TBS | | 32 |
| STD-FOC8 RW2 | Pure white/ PC | 6051458 | 6120 62 2 | EGS | | 104 | V20-1+NPE-385 | | 6161706 | 5095 27 1 | TBS | | 36 |
| STD-FOC8 RW3 | Pure white/ PC | 6051571 | 6120 64 2 | EGS | | 104 | V20-1+NPE-75 | | 6160020 | 5095 22 1 | TBS | | 22 |
| STD-FOC8 SRO1 | Signal red/ PC | 6051397 | 6120 60 8 | EGS | | 104 | V20-1-150 | | 6159758 | 5095 15 1 | TBS | | 23 |
| STD-FOC8 SRO2 | Signal red/ PC | 6051519 | 6120 62 8 | EGS | | 104 | V20-1-280 | | 6159802 | 5095 16 1 | TBS | | 26 |
| STD-FOC8 SRO3 | Signal red/ PC | 6051632 | 6120 64 8 | EGS | | 104 | V20-1-320 | | 6159840 | 5095 17 1 | TBS | | 30 |
| STD-FOC8 SWGR1 | Black-grey/ PC | 6051403 | 6120 61 0 | EGS | | 104 | V20-1-385 | | 6159888 | 5095 19 1 | TBS | | 34 |
| STD-FOC8 SWGR2 | Black-grey/ PC | 6051526 | 6120 63 0 | EGS | | 104 | V20-1-440 | | 6159949 | 5095 20 1 | TBS | | 38 |
| STD-FOC8 SWGR3 | Black-grey/ PC | 6051649 | 6120 65 0 | EGS | | 104 | V20-1-550 | | 6159956 | 5095 21 1 | TBS | | 39 |
| STD-FOK SRO1 | Signal red/ PC | 6049301 | 6120 31 2 | EGS | | 100 | V20-1-75 | | 6159727 | 5095 14 1 | TBS | | 22 |
| STD-FOK SRO2 | Signal red/ PC | 6049318 | 6120 31 4 | EGS | | 100 | V20-2+FS-280 | | 6162185 | 5095 28 2 | TBS | | 27 |
| STD-FOK SRO3 | Signal red/ PC | 6049363 | 6120 31 6 | EGS | | 100 | V20-2+FS-385 | | 6162840 | 5095 30 2 | TBS | | 35 |
| STD-F3 AL1 | Aluminium painted/ PC | 6048762 | 6120 23 2 | EGS | | 97 | V20-2+FS-550 | | 6162901 | 5095 31 2 | TBS | | 40 |
| STD-F3 AL2 | Aluminium painted/ PC | 6048946 | 6120 25 2 | EGS | | 98 | V20-2+NPE+FS-150 | | 6162963 | 5095 32 2 | TBS | | 25 |
| STD-F3 AL3 | | | | | | | | | | | | | |

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|------------------|------------------------|---------|-----------|-----|-------|------|----------------|------------------------|---------|-----------|-----|-------|------|
| V20-2-150 | | 6159772 | 5095 15 2 | TBS | /pc. | 23 | V-TEC TB25 4x8 | M25x1.5/ PC | 6334605 | 2024 93 1 | VBS | /pc. | 10 |
| V20-2-280 | | 6159819 | 5095 16 2 | TBS | | 26 | V-TEC TBZ | | 6334612 | 2024 90 0 | VBS | | 10 |
| V20-2-385 | | 6159895 | 5095 19 2 | TBS | | 34 | | | | | | | |
| V20-2-550 | | 6159963 | 5095 21 2 | TBS | | 39 | | | | | | | |
| V20-2-75 | | 6159741 | 5095 14 2 | TBS | | 22 | ZL-STD 0 | Black/ PC | 6333578 | 6120 78 2 | EGS | | 98 |
| V20-3+FS-280 | | 6162338 | 5095 28 3 | TBS | | 27 | ZL-STD 0 | Black/ PC | 6333578 | 6120 78 2 | EGS | | 101 |
| V20-3+FS-320 | | 6162833 | 5095 29 3 | TBS | | 31 | ZL-STD C | Black/ PC | 6333585 | 6120 78 4 | EGS | | 105 |
| V20-3+FS-385 | | 6162888 | 5095 30 3 | TBS | | 35 | | | | | | | |
| V20-3+FS-550 | | 6162949 | 5095 31 3 | TBS | | 40 | | | | | | | |
| V20-3+NPE+FS-150 | | 6163007 | 5095 32 1 | TBS | | 25 | | | | | | | |
| V20-3+NPE+FS-280 | | 6163427 | 5095 33 3 | TBS | | 29 | | | | | | | |
| V20-3+NPE+FS-320 | | 6163496 | 5095 34 3 | TBS | | 33 | | | | | | | |
| V20-3+NPE+FS-385 | | 6163502 | 5095 35 3 | TBS | | 37 | | | | | | | |
| V20-3+NPE-150 | | 6163847 | 5095 23 3 | TBS | | 24 | | | | | | | |
| V20-3+NPE-280 | | 6161331 | 5095 25 3 | TBS | | 28 | | | | | | | |
| V20-3+NPE-320 | | 6161638 | 5095 26 3 | TBS | | 32 | | | | | | | |
| V20-3+NPE-385 | | 6161829 | 5095 27 3 | TBS | | 36 | | | | | | | |
| V20-3-150 | | 6159789 | 5095 15 3 | TBS | | 23 | | | | | | | |
| V20-3-280 | | 6159826 | 5095 16 3 | TBS | | 26 | | | | | | | |
| V20-3-320 | | 6159864 | 5095 17 3 | TBS | | 30 | | | | | | | |
| V20-3-385 | | 6159901 | 5095 19 3 | TBS | | 34 | | | | | | | |
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| V20-4+FS-550 | | 6162956 | 5095 31 4 | TBS | | 40 | | | | | | | |
| V20-4-280 | | 6159833 | 5095 16 4 | TBS | | 26 | | | | | | | |
| V20-4-385 | | 6159932 | 5095 19 4 | TBS | | 34 | | | | | | | |
| V20-4-550 | | 6160013 | 5095 21 4 | TBS | | 39 | | | | | | | |
| V50-0-150 | | 6153718 | 5093 50 5 | TBS | | 48 | | | | | | | |
| V50-0-280 | | 6159598 | 5093 50 8 | TBS | | 48 | | | | | | | |
| V50-1+NPE+FS-280 | | 6159703 | 5093 53 1 | TBS | | 47 | | | | | | | |
| V50-1+NPE-280 | | 6159666 | 5093 52 2 | TBS | | 46 | | | | | | | |
| V50-2+NPE-280 | | 6159680 | 5093 52 4 | TBS | | 46 | | | | | | | |
| V50-3+FS-280 | | 6159642 | 5093 51 6 | TBS | | 45 | | | | | | | |
| V50-3+NPE+FS-280 | | 6159710 | 5093 53 3 | TBS | | 47 | | | | | | | |
| V50-3+NPE-280 | | 6159697 | 5093 52 6 | TBS | | 46 | | | | | | | |
| V50-3-280 | | 6159604 | 5093 51 1 | TBS | | 44 | | | | | | | |
| V50-4+FS-280 | | 6159659 | 5093 51 8 | TBS | | 45 | | | | | | | |
| V50-4-280 | | 6159628 | 5093 51 3 | TBS | | 44 | | | | | | | |
| VG-BCPV 900K 330 | 900 | 6037438 | 5088 57 6 | TBS | | 51 | | | | | | | |
| VG-BCPV 900K 333 | 900 | 6037476 | 5088 57 9 | TBS | | 51 | | | | | | | |
| VG-BCPV900K 22 | 900 | 6190263 | 5088 56 6 | TBS | | 52 | | | | | | | |
| VG-CPV 1000K 330 | 1000 | 6037483 | 5088 58 2 | TBS | | 51 | | | | | | | |
| VG-CPV 1000K 333 | 1000 | 6037490 | 5088 58 5 | TBS | | 52 | | | | | | | |
| VG-CPV1000K 22 | 1000 | 6329854 | 5088 56 8 | TBS | | 52 | | | | | | | |
| VH-4 LG RW | Pure white/ PA | 6101511 | 6109 80 1 | EGS | | 109 | | | | | | | |
| VH-BAL1.5 SW | Black | 6285761 | 6109 88 3 | EGS | | 110 | | | | | | | |
| VH-BAL2.5 SW | Black | 6285778 | 6109 88 5 | EGS | | 110 | | | | | | | |
| VHF-P12 | Rape yellow/ PVC | 6169368 | 6109 85 6 | EGS | | 110 | | | | | | | |
| VHF-P13 | Rape yellow/ PVC | 6169375 | 6109 85 8 | EGS | | 110 | | | | | | | |
| VH-P1 RW | Pure white/ PA | 6101573 | 6109 84 3 | EGS | | 109 | | | | | | | |
| VH-P3 RW | Pure white/ PA | 6101559 | 6109 83 7 | EGS | | 109 | | | | | | | |
| VH-P4 RW | Pure white/ PA | 6101566 | 6109 84 1 | EGS | | 109 | | | | | | | |
| VH-P5 RW | Pure white/ PA | 6101528 | 6109 83 5 | EGS | | 109 | | | | | | | |
| VMS-IF 1 | | 6331437 | 7203 85 2 | BSS | | 74 | | | | | | | |
| VMS-KS DE | / PVC | 6331505 | 7203 87 4 | BSS | | 75 | | | | | | | |
| VMS-KS EN | / PVC | 6331536 | 7203 87 8 | BSS | | 75 | | | | | | | |
| VMS-QMG 1 | 800 x 25 x 6 | 6331420 | 7203 84 9 | BSS | | 74 | | | | | | | |
| VMS-QMK 1 | 120 x 25 x 6 | 6331413 | 7203 84 6 | BSS | | 74 | | | | | | | |
| VMS-RS | 1000 x 100 x 3 | 6331499 | 7203 87 0 | BSS | | 75 | | | | | | | |
| VMS-TE 1 | | 6331376 | 7203 84 0 | BSS | | 74 | | | | | | | |
| VMS-TE 2 | | 6331383 | 7203 84 3 | BSS | | 74 | | | | | | | |
| VMS-VA 1 | | 6331444 | 7203 85 8 | BSS | | 74 | | | | | | | |
| VMS-VL 1 | | 6331482 | 7203 86 7 | BSS | | 75 | | | | | | | |
| VMS-VW 1 | | 6331475 | 7203 86 4 | BSS | | 74 | | | | | | | |
| V-TEC TB25 | M25x1.5/ PC | 6334506 | 2024 91 0 | VBS | | 10 | | | | | | | |
| V-TEC TB25 07-10 | M25x1.5/ PC | 6334520 | 2024 91 3 | VBS | | 10 | | | | | | | |
| V-TEC TB25 09-13 | M25x1.5/ PC | 6334537 | 2024 91 6 | VBS | | 10 | | | | | | | |
| V-TEC TB25 11-15 | M25x1.5/ PC | 6334544 | 2024 91 9 | VBS | | 10 | | | | | | | |
| V-TEC TB25 14-18 | M25x1.5/ PC | 6334551 | 2024 92 2 | VBS | | 10 | | | | | | | |
| V-TEC TB25 17-20 | M25x1.5/ PC | 6334568 | 2024 92 5 | VBS | | 10 | | | | | | | |
| V-TEC TB25 3x9 | M25x1.5/ PC | 6334599 | 2024 92 8 | VBS | | 10 | | | | | | | |



Terms and conditions of sale and delivery
of OBO BETTERMANN GmbH & Co. KG, OBO BETTERMANN Projekt und Systemtechnik GmbH
and OBO Befestigungselemente GmbH, Menden.

1. All our supplies and services shall be governed exclusively by the following terms and conditions, including our additional terms and conditions for cable tray business transactions. Any terms and conditions of business and purchasing of the customer shall be valid only if we have acknowledged them in writing. Our quotations are without engagement; they are mere invitations to submit contract offers. Any and all transactions and agreements, including those entered into by our employees and agents shall only be binding upon our written confirmation or invoicing. The foregoing provision shall also apply to any modifications of the agreed formal requirements.

2. The documents and data pertaining to the quotation, such as illustrations, brochures, drawings, dimensions, loading capacity values and weight details are approximate only, unless they are expressly stipulated to be binding.

Samples are non-binding samples for inspection. Any purchase according to sample will be subject to customary deviations and deviations resulting from normal production processes. The properties of the sample shall be no guaranteed quality of the purchase object unless expressly stated otherwise in the confirmation of order. Samples must be returned to us at the latest within four weeks in perfect condition. If they are not returned within this period in proper condition, we shall be entitled to charge the purchase price for the sample in accordance with our current price list. All information on our products, in particular the illustrations, drawings, weight, dimension and performance data included in our quotations and printed matter shall be regarded as approximate average values and shall not represent any quality guarantee.

With regard to products made according to customer drawings, samples and other instructions of the customer, we will not provide any warranty nor assume any liability for the due and proper functioning of the product or for any other defects if and to the extent they are based upon the customer's specifications. The customer shall indemnify us from any third party claims, including claims for product liability as may be asserted against us for damages resulting from the products unless we have caused such damages by intent or gross negligence. The customer shall warrant that the manufacture and supply of products made in accordance with his instructions will not infringe any proprietary rights of third parties. Should any proprietary rights be asserted against us, we shall be entitled, without any legal review of the third party claims, to withdraw from the contract after hearing the customer, unless the third party withdraws the claims asserted against us under its proprietary rights within eight days by written declaration. The customer shall compensate us for any damage sustained as a result of the assertion of proprietary rights. In case of withdrawal, the work we have carried out so far shall be remunerated. Further rights under the statutory provisions shall not be affected thereby.

Any moulds, tools and design data produced by us for the execution of the order shall be our exclusive property. Unless expressly agreed otherwise, the customer shall not have any claims thereto, even if he has contributed to the costs of producing any such moulds, tools and design data.

3. The packing, shipping route and means of transportation shall be left to our discretion in the absence of any other agreements. They shall be charged at their cost price. We will take back undamaged cases, when being returned carriage paid, at 2/3 of the amount invoiced. The one-way or pool pallets used for transport shall be either exchanged upon taking delivery or returned. The smallest packing units stocked and listed may not be broken up for rationalisation reasons. In case of orders for different quantities, the nearest packing unit will be supplied.

We reserve the right to deviate from the agreed delivery quantity, in particular in the case of custom-made products, to a customary extent or in conformity with national or international standards. In case of a demand for adhering to a precise quantity, an express reference is necessary and subject to confirmation.

Master and call orders shall oblige the customer to accept the total quantity on which the master/call order is based. Where no particular call orders are specified in the contract, the total quantity of the master call order must be called within twelve months. If the customer fails to adhere to call deadlines, we shall be entitled to deliver and charge the total quantity in full after four weeks from written notice with reference to the consequences of any failure to call. Our rights arising from any default of the customer shall not be affected thereby.

4. Unless otherwise agreed, our prices are quoted ex works and do not include packing and insurance. The value added tax at the rate applicable on the date of dispatch will be added to our prices. The purchaser shall ensure the correctness of his VAT identification number, which he must notify to us immediately without being asked. He shall undertake to inform both us and the competent domestic tax authority without delay of any change in his name, address and VAT identification number.

Delivery shall be franco domicile within Germany, i.e. carriage and packing prepaid, if the net order value is in excess of € 1,200. For small orders below € 100 (net excluding value added tax), we shall invoice a lower quantity surcharge of € 10 (net) per order. Upon transfer of our supplies and services to a carrier or forwarding agent, at the latest upon their leaving our warehouse or supply plant, the risk shall pass to the recipient, even in case of deliveries free place of destination.

5. Delivery periods and delivery deadlines shall be approximate only unless we have expressly stated in writing that they are binding. Delivery periods shall commence upon receipt of our confirmation of order, but not before clarification of all execution details, ex place of delivery. The customer shall only be entitled to withdraw from the contract after having granted a reasonable extension of time. We reserve the right to make partial deliveries. Claims for damages and reimbursement of expenses - for any reason whatsoever - shall be subject to the provisions set out in article 10.

In the event of any circumstances that are beyond our control within the scope of normal operating risks and obstruct or make impracticable any delivery, we shall be entitled to suspend delivery by the duration of such obstruction plus a reasonable start-up period or to withdraw from the contract for the part not yet fulfilled. The purchaser can demand a statement from us as to whether we wish to deliver within a reasonable period or withdraw. If we fail to make such a statement, the purchaser may withdraw. Our notice to the purchaser shall be deemed to be sufficient evidence that we have been prevented from delivering.

Delivery time is extended in case of such events as labour disputes, strikes and lockouts, orders from the authorities, difficulties with the procurement of materials, spoiled work or post-processing, shutdowns and staff shortage as well as shortage of means of transport, and general occurrence of unforeseen events beyond our scope of influence, by the length of duration of these events.

6. Payments shall be made upon receipt of invoice less a 3% cash discount for payment within 10 days or net after 30 days from date of invoice. Erection work and all paid labour work must be paid within 10 days without deduction of any cash discount. In case of non-cash payments, the date of the credit note will be deemed to be the date of receipt of payment. Payments received shall always be credited first against costs, then against interest and then against the earliest liability. Cheques and bills of exchange shall only be accepted as means of payment.

Any payment by bill of exchange shall be subject to a prior separate and written agreement, whereby all bill costs shall be borne by the customer and no discount can be granted. The customer shall have no right to refuse performance and no right of retention - for any legal reason whatsoever - unless we have acknowledged his claim beforehand in writing or his claim has the force of law.

The customer shall only be entitled to set off claims which have the force of law, are undisputed or acknowledged by us in writing.

7. We shall retain title to the goods supplied by us until all our claims arising from our business transactions with the customer have been satisfied - current account clause - and all bills of exchange or cheques submitted for payment by the customer have been honoured.

Any treatment or processing of goods subject to our retention of title (reserved goods) shall be carried out for us as the manufacturer in accordance with § 950 BGB (German Civil Code) without any obligation on our part. If our reserved goods are to be regarded as the main item or the main item is owned by the customer, full title to the new item shall pass to us when it is created. In other cases, we shall acquire a co-ownership interest in the new item in the proportion of the sales value of our reserved goods to the other goods used for the new item at the time of processing, intermingling, joining or mixing. The customer shall take custody of our ownership or co-ownership interest free of charge, it shall be treated as reserved goods.

Before transfer of title, our goods shall be neither pledged nor assigned as collateral without our prior consent. In addition, any third party rights or pledges shall be notified to us immediately and we shall be given all details and provided all documents necessary for intervention; otherwise the customer must bear our loss. In the latter case, our total claims against the customer shall also be immediately payable.

The customer shall be entitled to sell or to use our reserved goods in the ordinary course of business subject to the condition that the relevant claims are transferred in accordance with article 8 below. This right shall lapse upon the customer's failure to promptly meet his payment obligations towards us or in the event of any cheque or bill protests or his suspension of payments. In such cases, we shall be entitled to take back the goods provisionally at

the customer's expense and to sell them at our duly exercised discretion after a corresponding reminder has been sent to the customer. We will then pass the due amount to the customer's credit.

8. If our goods are sold before payment of our claim, the customer shall be obliged to retain our title against his purchaser until the goods have been paid for in full by the purchaser. The claim arising against the purchaser from such resale as well as any other ancillary rights or security interests of the customer resulting from the sale and any claims for compensation in case of damage to or destruction of our reserved property, including the relevant insurance sum shall hereby be assigned to us. We hereby accept this assignment. Where our co-ownership interest is sold, the relevant claims shall be assigned in the amount corresponding to the value of our interest.

The customer shall, at our request, inform us of his purchasers, notify them of the assignment made and provide us with any and all documents required to assert our rights.

As long as the customer meets his contractual obligations without delay, he shall be authorised to collect the claims assigned. He shall keep the amounts collected on our behalf separately and remit them to us immediately as soon and as far as our claims become due. The authorisation shall lapse in case of any cheque or bill protest of the customer or his definite suspension of payments. The customer shall bear the costs incurred for any action taken against third parties and shall advance them upon request.

If the security provided to us by the retention of title and the anticipatory assignment should exceed the claims to be secured by more than 20%, we shall, at the customer's request, release paid supplies of our choice. Upon payment of all our claims by the customer, assigned claims shall pass to the customer.

9. Any complaints for obvious defects regarding the quantity or quality of our supplies and services that are identifiable upon careful inspection shall without delay, but at the latest within the period of limitation of eight days from arrival of the goods at the address of the customer or the person appointed by him, be notified in writing to us, not to our representatives. Slight deviations in dimensions and designs within the scope of defined technical tolerances shall not give rise to any right of complaint. Any rejected goods may only be returned to us with our prior written authorisation.

In case of justified complaints within the prescribed period, we shall, at our option, take remedial action by way of subsequent performance, by rectifying the defect, supplying non-defective goods or providing a credit note for the lower value calculated.

We shall be entitled to refuse subsequent performance in accordance with the statutory provisions. If we refuse subsequent performance, if any subsequent performance remains unsuccessful or if the customer cannot be reasonably expected to accept any subsequent performance, the latter shall be entitled to withdraw from the contract in compliance with the provisions of the following sentences. The customer shall only be entitled to withdraw from the contract - where a withdrawal is not excluded by law - upon the unsuccessful expiry of a reasonable period for subsequent performance set by him, unless this period was not required under the statutory provisions (§§ 281 para. 2, 323 para. 2, 440, 441 para. 1 BGB (German Civil Code)).

In case of his withdrawal, the customer shall be liable for any deterioration, destruction or loss of use resulting from any negligence or intent on his part. Any claims for damages or reimbursement of expenses of the customer shall be subject to the provisions set out in article 10.

In the case of any fraudulent concealment of a defect or in the case of any provision of a quality guarantee for the goods sold at the time of the passing of risk within the meaning of § 444 BGB (German Civil Code) (seller's declaration that the object sold has a specific property at the time of the passing of risk and that the seller, regardless of any fault on his part, intends to be answerable for any and all consequences resulting from its absence), the customer's rights shall be exclusively governed by the statutory provisions.

We shall - in addition to the statutory grounds for refusal - also be entitled to refuse subsequent performance if and as long as the customer fails to send us, at our request, the rejected goods or a sample thereof; the customer shall have no right of withdrawal for any such refusal. We may further refuse any subsequent performance if the goods concerned have been altered or modified without our consent unless the customer can prove that the defect was not caused by such alteration or modification.

The limitation period for any claims arising from defects shall be one year; in the case of goods which have been used in accordance with their intended purpose for a building and have caused its defectiveness, the limitation period shall be two years. The provisions of §§ 478, 479 BGB (German Civil Code) on recourse in the chain of suppliers shall not be affected thereby.

10. In the case of a pre-contractual, contractual or non-contractual breach of duty, including unsatisfactory delivery, tortious conduct and producer's liability, we shall only be liable for compensatory damages and reimbursement of expenses - subject to further contractual or statutory liability requirements - in the case of intent, gross negligence or slightly negligent breach of a material contractual duty (contractual duty the infringement of which jeopardises the fulfilment of the object of the contract). However - except in the case of intent - our liability shall be limited to the typical contractual damage that was foreseeable at the time the contract was entered into.

The purchaser shall not be permitted to make a claim for expenses incurred in vain.

Except for any breach of material duties, our liability for slight negligence shall be excluded, but in any case be limited to the amount of the purchase price.

Any claim asserted by the customer or a third party for payment of a contractual penalty shall be excluded.

With regard to damages caused by delay, we shall only be liable for slight negligence up to the amount of 5% of the purchase price agreed with us.

The exclusions and limitations of liability set forth above shall not apply in the event that a guarantee is given with respect to the quality of the object sold within the meaning of § 444 BGB (German Civil Code) if a defect is fraudulently concealed or in the event of injury to life, physical injury or injury to health, or strict liability under the German Product Liability Act.

Any and all claims for damages against us, for any legal reason whatsoever, shall become statute-barred at the latest after one year from delivery of the goods to the customer, in the case of tortious liability from the time of knowledge, or grossly negligent ignorance, of the circumstances giving rise to the claim and the person liable to pay damages. This provision shall not apply in the case of liability for intent and in the event that a guarantee is given for the quality of the object sold, in the case of fraudulent concealment of a defect or in the event of injury to life, physical injury or injury to health, or strict liability under the German Product Liability Act. Any shorter limitation periods shall take precedence.

11. We shall be entitled to process and store any customer data obtained with regard to or in connection with the business relationship in accordance with the German Federal Data Protection Act, irrespective of whether such data is provided by the purchaser himself or by any third parties.

12. Place of performance for delivery and payment is Menden/Sauerland. The court of competent jurisdiction for any and all disputes, including disputes with regard to bills of exchange and cheques, is the Local Court (Amtsgericht) of Menden or, at our option, the District Court (Landgericht) of Arnsberg, irrespective of the value of the object in dispute. We shall, however, also be entitled to take legal proceedings against the customer at the place of his registered office.

German law shall be exclusively applicable. The application of international purchase laws is hereby excluded.

Should, for any reason whatsoever, individual provisions of our terms and conditions of sale and delivery be invalid, the validity and binding nature of the other provisions shall not be affected thereby. The customer agrees, that the invalid provision shall be replaced by a valid provision that comes as close as possible to the economic meaning of the invalid provision.

13. The prices of products made of brass and copper are subject to certain fluctuations that are based on the relevant DEL listings. The prices of our brass articles are based on a DEL listing of € 150 for Ms 58, those of our copper products on a DEL value for electrolyte copper of € 200.

In case of any increase or reduction in these prices by more than € 15, a five per cent surcharge or deduction shall be made for each 15 points. The calculation of any such surcharges or deductions shall be based on the DEL listing of the date of our receipt of the order.

Valid from January 2010



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