Technical catalogue

Connected Lighting

iLumTech™

Innovation ahead

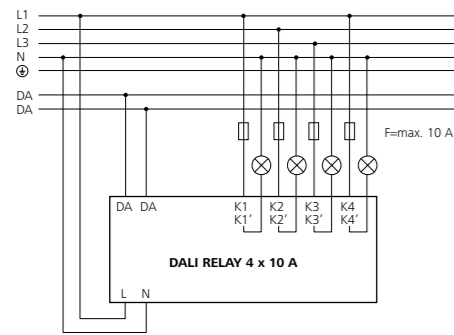## DALI Interface

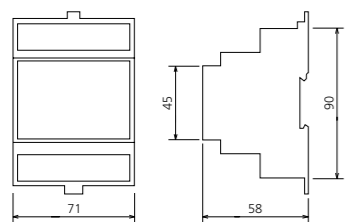The device fulfils EN 62386-208 type 7 standards

Example configuration

Wiring diagram

DALI RELAY 4 x 10 A
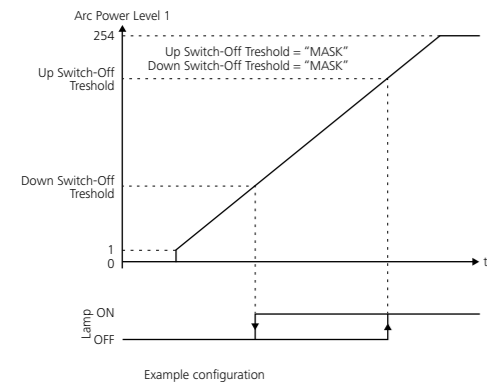
Dimensions

The DALI 4 x Relay is a DALI compatible relay device designed to allow for the independent switching of four devices (luminaires and others) through a DALI interface. On the front panel of the device can be found an integrated push button for the manual control of the relays for testing purposes, additional to five device status indicator LEDs. The device is housed in a standard DIN-rail mountable box for easy installation in electrical switchboards.

DALI 4 x Relay

Key features

- Four independent relay contacts
- 10 A maximum switching current per contact
- Push button for manual control (test function)
- One DALI address for each contact (DALI device type 7, EN 62386-208)

Function

After powering-up the device, an internal test sequence is initiated that lasts for no more than 2 seconds. The device then acts in Normal Mode and awaits DALI commands. The 'STATUS' LED indicator is lit when the DALI bus is correctly supplied. LED indicators 1 to 4 show the current status of each relay: a lit LED means the corresponding relay is switched on, an unlit LED means the corresponding relay is switched off.

Test mode

Test Mode can be activated at any time by pressing the push button 'TEST'.
A short push of the button, for a period less than 3 seconds, changes which relay is selected, indicated by the corresponding LED indicator blinking. By pressing the push button for a period of more than 3 seconds the selected relay is switched on/off, indicated by the way in which the LED indicator blinks (predominantly on means the relay is switched on, predominantly off means the relay is switched off). The device will return to Normal Mode after 5 seconds of push button inactivity.

Conformance with regulations

EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547 purposes EMC	Equipment for general lighting immunity requirements
EN 60950-1	Information technology equipment – Safety – Part 1: General requirements
EN 62386-208	Digital addressable lighting interface

Connections

Mains cable	Wires AWG 24-12 (0.2-2.5 mm²)
DALI cable	Wires AWG 28-16 (0.08-1.5 mm²)
Relays cable	Wires AWG 24-12 (0.2-2.5 mm²)

Power

Mains supply	220-240 V AC / 50-60 Hz
Max. system power	6 W
DALI consumption	< 2 mA
Relay loads	10 A (per contact)
Insulation	4 kV

Mechanical data

Housing	4U DIN rail box 71 mm wide
Weight	300 g
IP rating	IP 20

Operating conditions

Operating temp.	
Ambient temp. range	0 °C - + 40 °C
Max. relative humidity	85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

The DALI Input Unit is a fully DALI-compatible interface, designed to allow customer specified switches, sensors, time clocks or other on/off control devices to be incorporated into a standard DALI installation. The DALI Input Unit is a small, pre-wired, encapsulated PCB module and it is suitable for inclusion into all standard size back boxes together with a suitable mains rated switch.

DALI Input Unit

Key features

- Powered from DALI bus, compatible with standard DALI rating
- Up to four user inputs
- Default functions – ready to use out-of-box
- Small dimensions (L x W x H): 27 x 20 x 4 mm
- DALI consumption < 9 mA

Function

DALI Input Unit detects short-circuit connection between wires Input 1-4 and COM. Module is designed to be used with standard push buttons – short-circuit connection is the active state. The logic of the module differentiates between short and long press of the push buttons. Short press is detected when the short-circuit detection lasts shorter than 1 second. If the short-circuit connection lasts longer it is detected as long press. User can configure different reaction to short and long press. Each input of DALI Input Unit can be configured with different DALI address (device support broadcast, group addresses and short addresses). Three types of reactions can be configured for each input: Static commands, Direct level or Toggle. In Static commands mode device transmit defined command each time a press is detected. The most useful commands are: MIN_LEVEL, MAX_ LEVEL, UP or DOWN. If desirable user can set up any command listed in DALI standard (IEC 62386-102). In Direct level mode device transmit defined brightness level each time a press is detected (for example 50%). In Toggle mode device toggles between two commands each time a press is detected. The user can choose from 3 toggle functions: MIN/MAX, ON/OFF and Scene X/ Scene Y. Scene X and Scene Y are settable number of DALI scenes which are toggled. The configuration can be changed using special programmer (on demand).
For the reaction on long press it is possible to set whether the command should be sent only once or it should be repeated (for example UP/DOWN commands). The period of repetition is also settable (1 second period). DALI Input Unit is delivered with default configuration.
DALI Input Unit is a DALI powered device therefore external DALI power supply has to be connected on the DALI line.

Note

The DALI Input Unit is intended to be used with push buttons that come back to non-active position after release. The compatibility with other devices should be discussed with the manufacturer. The push buttons used as input devices for DALI Input Unit must have mains rating (DALI bus provides basic insulation only).

Connections

Mains cable	Wires AWG 24 (0.5 mm²)
DALI cable	Wires AWG 24 (0.5 mm²)

Power

DALI voltage	12-25 V DC
DALI consumption	< 9 mA

Control Inputs

Voltage range	open 5 V DC / closed max. 0.3 V DC
Current range	max. 1 mA

Mechanical data

Housing	Encapsulated PCB
Weight	10 g
Dimensions	27 x 20 x 4 mm

Operating conditions

Ambient temp. range	0 °C - + 40 °C
Relative humidity	85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

purple	Input 1
blue	Input 2
green	Input 3
yellow	Input 4
orange	COM
red	DALI bus
brown	DALI bus

Wiring diagram

Input 1-4	positive pole of input
COM	negative pole of input (common for all inputs)
DALI	connection to DALI bus (polarity free)

DALI INPUT UNIT

DALI bus (externally powered)
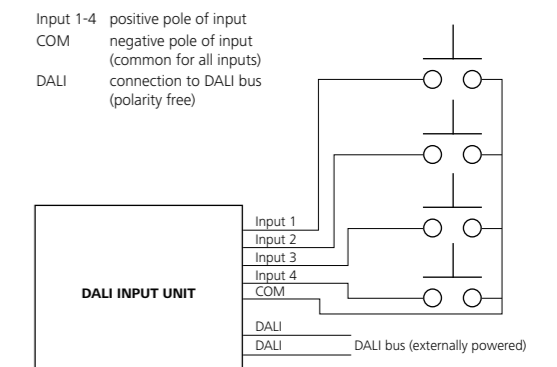
| Input	Address	Short press	Long press
Input 1	Broadcast	Recall Max level	UP
Input 2	Broadcast	OFF	DOWN
Input 3	Group 1	Recall Max level	UP
Input 4	Group 1	OFF	DOWN

DALI TW MODULE is a DALI compatible device (device type 6) especially designed to allow for the Tunable White control of LED modules through a DALI interface. For correct function an external LED driver is required (DALI LED driver if brightness control is desired). The device itself is powered independently from mains. The device is open-frame module that can be easily mounted into the luminaire.

DALI TW Module type 6

Dimensions
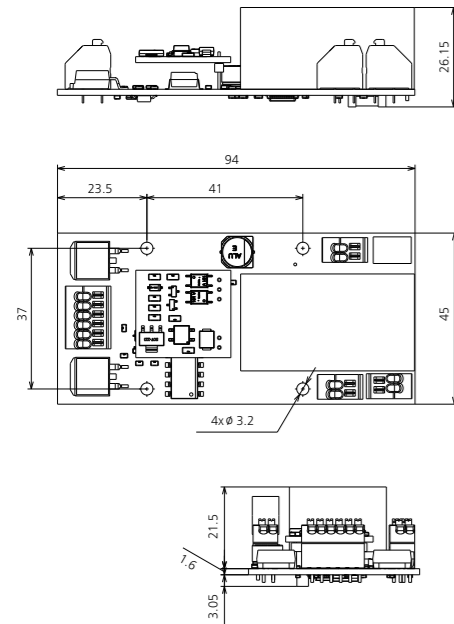
Wiring diagram
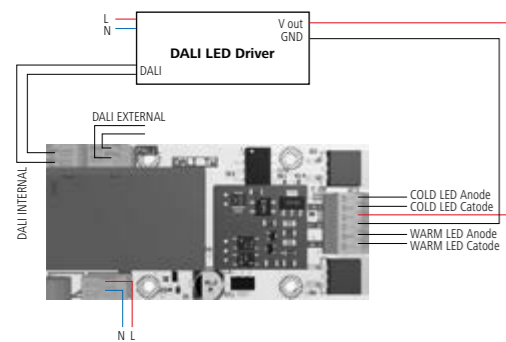
Key features
- independent control of CCT
- up to 180 V voltage range
- DALI control (device type 6)

Function
DALI TW MODULE is a DALI device designed for TunableWhite control.   It is not a power source for LEDs! For correct function an external LED driver must be used (constant current). Selection of the LED driver depends on the LED load used (forward voltage and current). DALI TW MODULE controls the CCT of light according to the DALI commands received. On DALI line, the device appears as standard DALI device type 6 (LED driver) allowing for direct CCT level control, group addressing, fading and scene settings.

DALI TW MODULE represents simple way of CCT control via DALI using standard components – LED driver and DALI controller.

Connections
Mains cable	Wires AWG 28-16 (0.08-1.5 mm²)
DALI cable	Wires AWG 28-16 (0.08-1.5 mm²)
LED cable	Wires AWG 28-16 (0.08-1.5 mm²)

Power
Mains supply	90-260 V AC / 47-400 Hz
	120-370 V DC
System power	< 200 mW
DALI consumption	< 2 mA
Insulation	Class II

Output
Output voltage range	30-180 V DC
Output current range	0-2 A
Output power range	0-150 W

Mechanical data
Housing	Open Frame
Weight	60 g
Dimensions	94 x 45 x 26 mm

Operating conditions
Ambient temp. range	0 ° C - +55 ºC
Relative humidity	< 85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

## Conformance with regulations
EN 55015	limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547	Equipment for general lighting purposes EMC immunity requirements
EN 62386-102	Digital addressable lighting interface, general requirements for control gears
EN 62386-207	Digital addressable lighting interface, LED drivers

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DALI TW MODULE is a DALI compatible device (device type 8) especially designed to allow for the Tunable White control of LED modules through a DALI interface. For correct function an external LED driver is required (DALI LED driver if brightness control is desired). The device itself is powered independently from mains. The device is open-frame module that can be easily mounted into the luminaire.
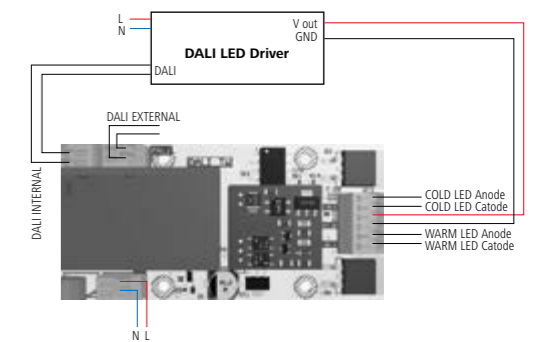
DALI TW Module type 8

Dimensions
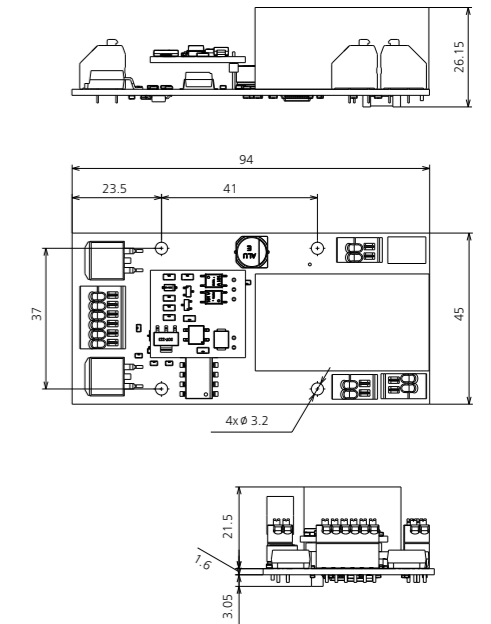
Wiring diagram

Key features
- independent control of CCT
- up to 180 V voltage range
- DALI control (device type 8) – one address only

Function
DALI TW MODULE is a DALI device designed for Tunable White control.   It is not a power source for LEDs! For correct function an external LED driver must be used (constant current). Selection of the LED driver depends on the LED load used (forward voltage and current). DALI TW MODULE controls the CCT of light according to the DALI commands received. On DALI line, the device appears with one address as standard DALI device type 8 (Colour control) allowing for direct brightness and CCT level control, group addressing, and fading and scene settings.

DALI TW MODULE represents simple way of CCT control via DALI using standard components – LED driver and DALI controller.

Connections
Mains cable	Wires AWG 28-16 (0.08-1.5 mm²)
DALI cable	Wires AWG 28-16 (0.08-1.5 mm²)
LED cable	Wires AWG 28-16 (0.08-1.5 mm²)

Power
Mains supply	90-260 V AC / 47-400 Hz
	120-370 V DC
System power	< 200 mW
DALI consumption	< 2 mA
Insulation	Class II

Output
Output voltage range	30-180 V DC
Output current range	0-2 A
Output power range	0-150 W

Mechanical data
|	
Housing	Open Frame
Weight	60 g
Dimensions	94 x 45 x 26 mm

Operating conditions
Ambient temp. range	0 °C - +55 °C
Relative humidity	< 85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

Conformance with regulations
EN 55015	limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547	Equipment for general lighting purposes EMC immunity requirements
EN 62386-102	Digital addressable lighting interface, general requirements for control gears
EN 62386-207	Digital addressable lighting interface, LED drivers
EN 62386-209	Digital addressable lighting interface, Colour control
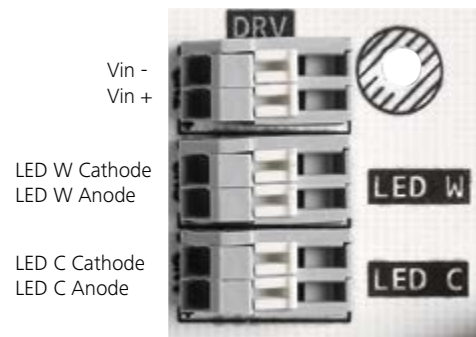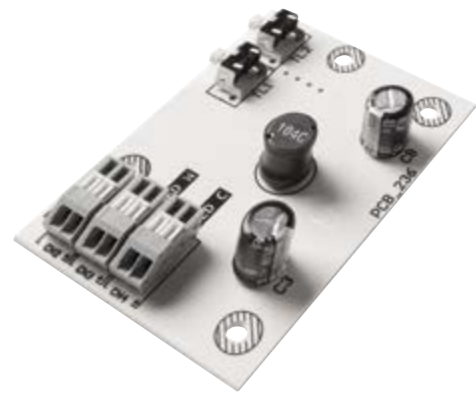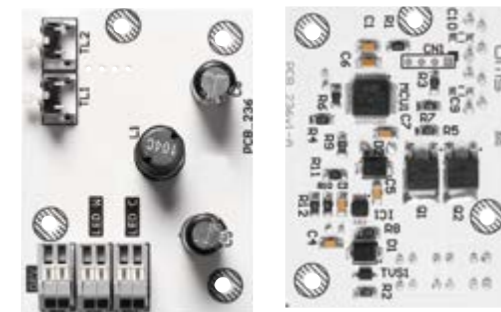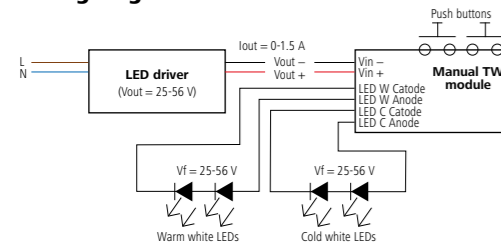
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MANUAL TW is module with patented current splitter topology for Tunable White control. It is intended to be used in any Tunable White luminaire that fits its operating range (input voltage and output current). The module requires external LED driver for its biasing and LED powering. MANUAL TW 01 has a fixed position of buttons so the module should be placed in a fixture on the place, where the button can be reachable.

MANUAL TW is module with patented current splitter topology for Tunable White control. It is intended to be used in any Tunable White luminaire that fits its operating range (input voltage and output current). The module requires external LED driver for its biasing and LED powering. Manual TW Module 02 is without the fixed position of the buttons, so can be placed anywhere in a luminaire.

Vin -
Vin +

LED W Cathode
LED W Anode

LED C Cathode
LED C Anode

Wiring diagram

Manual TW Module 01

Manual TW Module 02

Vin +
Vin -

LED W Anode
LED W Cathode

LED C Anode
LED C Cathode

Wiring diagram

Manual TW Module 01

Key features
• Two push buttons for manual control
• Output current range: up to 2 A
• Output power: up to 110 W
• Module internal biasing: 5 V / 8 mA (40 mW)

Function
After powering up Manual TW electronic reloads last used setting of output current ratio. The new level is saved to memory after 10 seconds of push button inactivity. Push button 1 (PB 1) serves for increasing and Push button 2 (PB 2) for decreasing of output current ratio. There are two modes of current ratio transients – smooth mode and discrete mode.
Discrete mode / discrete mode is activated by default. When short pressing one of the push buttons (holding pressed shorter than 1 second) the current ratio level is changed in discrete steps according to the table below. One press activates change of one step.
Smooth mode – smooth mode is activated when one of the push buttons is hold pressed longer than 1 second. After this period current ratio starts to change (increase or decrease) smoothly with approximately 2 % per second.

Connections
Cable   Wires AWG 24-12 (0.5-2.5 mm²)

Power
Input voltage   25 V DC-56 V DC

Output
Output voltage   25 V DC-56 V DC
Output current   0-1.5 A
Module consumption 50 mW

Mechanical data
Housing   Open case
Weight   18 g
Dimensions   60 x 45 x 15 mm

Operating conditions
Ambient temp. range 0 °C - +55 °C

Manual TW Module 02

Key features
• Two push buttons for manual control
• Output current range: up to 2 A
• Output power: up to 100 W
• Module internal biasing: 5 V / 3 mA (15 mW)

Function
After powering up Manual TW electronic reloads last used setting of output current ratio. The new level is saved to memory after 10 seconds of push button inactivity. Push button 1 (PB 1) serves for increasing and Push button 2 (PB 2) for decreasing of output current ratio. There are two modes of current ratio transients – smooth mode and discrete mode.
Discrete mode – discrete mode is activated by default. When short pressing one of the push buttons (holding pressed shorter than 1 second) the current ratio level is changed in discrete steps according to the table below. One press activates change of one step.
Smooth mode – smooth mode is activated when one of the push buttons is hold pressed longer than 1 second. After this period current ratio starts to change (increase or decrease) smoothly with approximately 2 % per second.

Purpose: electronic control device, manually controlled control device, built-in control device, for normally polluted environment. Mode of action: type 1.

Connection of push buttons
Manual TW module is delivered with cable harness for push button connection. The cable harness consists of 4 wires – Push button 1 input (PBI1), Push button input 2 (PBI2) and common ground (COM). Wires can be connected to any type of mechanical push buttons.

Connections
Cable   Wires AWG 24-12 (0.5-2.5 mm²)

Power
Input voltage   25-70 V DC

Output
Output voltage   25-70 V DC
Output current   0-1.5 A
Module consumption 15 mW

Mechanical data
Housing   Open case
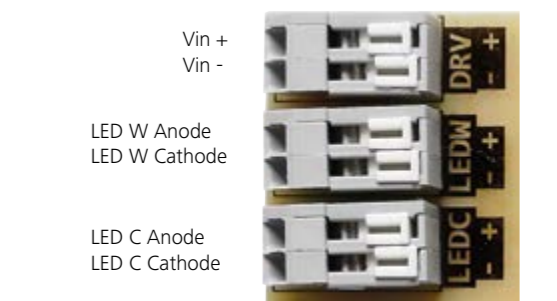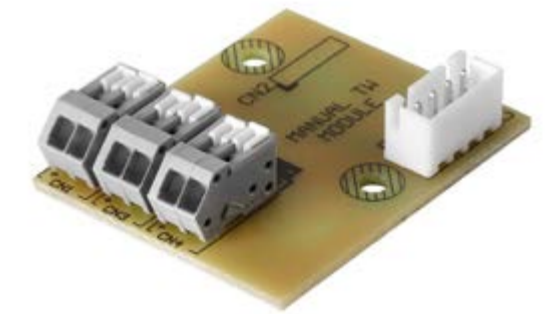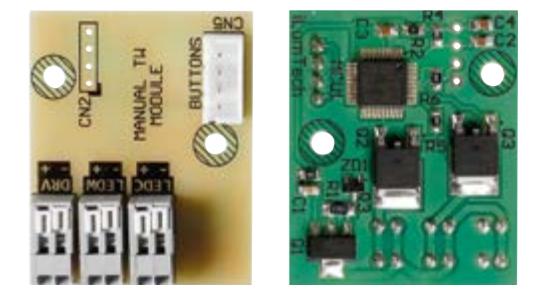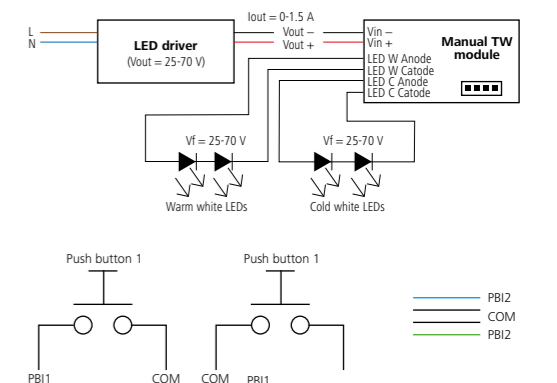Weight   10 g
Dimensions   42 x 34 x 15 mm

Operating conditions
Ambient temp. range 0 °C - +55 °C

Step Index	1	2	3	4	5	6	7	8
Channel C Level (%)	0	9,8	20	31,7	45,1	63,5	85,5	100
Channel W Level (%)	100	90,2	80	68,3	54,9	36,5	14,5	0

Step Index	1	2	3	4	5	6	7	8
Channel C Level (%)	0	9.8	20	31.7	45.1	63.5	85.5	100
Channel W Level (%)	100	90.2	80	68.3	54.9	36.5	14.5	0

1 Year Warranty

DALI Ambient Sensor

The DALI Ambient Sensor measures illuminance and Correlated Colour Temperature properties and uses a DALI bus for biasing and communication. It can be used as a simple sensor with its data being processed by another device on the same DALI bus, or as a combined sensor and control device to regulate the luminous output and colour temperature parameters of DALI addressed Tunable White luminaires.

Dimmensions

Height (m)	Diameter (m)
1.7	5.89
2	6.93
2.3	7.97
2.5	8.66
2.7	9.35
3	10.39
3.5	12.12
4	13.86
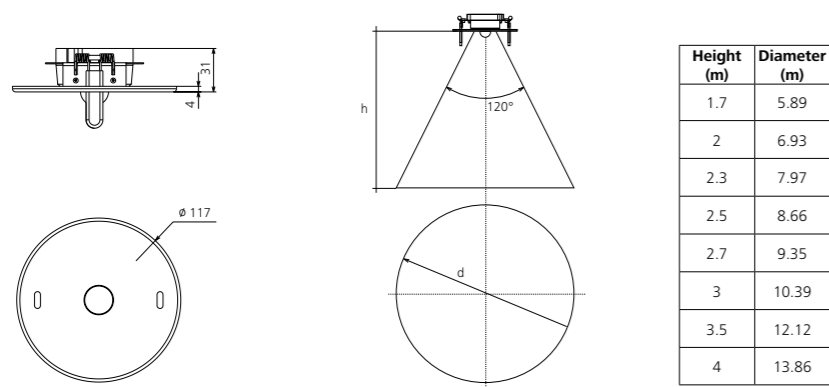
Parameter	Ranges of values	Settable by	Description
Address	1- 64	Any DALI configurator	Address of the sensor
Illuminance level	100-30,000 lx	-	Measured illuminance value (read only)
CCT level	2500-8000 K	-	Measured CCT value (read only)
Status	-	-	Status of the sensor (see below)
Timing	5-300 ms	USB/DALI Bridge	The defined period between two subsequent control commands (a lower value results in faster regulation)
Final illuminance level	100-30,000 lx	USB/DALI Bridge	Desired illuminance value
Final CCT level	2500-8000 K	USB/DALI Bridge	Desired CCT value
Illuminance regulation	Active / Inactive	USB/DALI Bridge	Activates or deactivates the illuminance regulation
CCT regulation	Active / Inactive	USB/DALI Bridge	Activates or deactivates the CCT regulation
Regulation mode	Cold/warm, Brightness/CCT, DALI type 8	USB/DALI Bridge	Defines the addressing of TW luminaires – it is possible to use more addressing types at the same time
Warm channel group address	1-16	USB/DALI Bridge	Defines group address for warm channel control
Cold channel group address	1-16	USB/DALI Bridge	Defines group address for cold channel control
Brightness channel group address	1-16	USB/DALI Bridge	Defines group address for brightness channel control
CCT channel group address	1-16	USB/DALI Bridge	Defines group address for CCT channel control
DALI type 8 group address	1-16	USB/DALI Bridge	Defines group address for DALI type 8 control

Key features
- Biasing from the DALI bus with an input voltage range compatible with the DALI standard
- Illuminance and CCT measurement
- Passive / Active Mode – offers direct regulation of TunableWhite luminaires
- Configuration via DALI bus
- Installation into ceiling

Function
The DALI Ambient Sensor measures illuminance and Correlated Colour Temperature (CCT) properties within its scanning area – illuminance in lux and CCT in Kelvins. Measurement occurs automatically using automatic range switching within an illuminance range of 100-30,000 lx and CCT range of 2500-8000 K. The sensor communicates using the industry standard DALI protocol once addressed and set using any standard DALI configuration tool. Additional sensor parameters can be set using a USB/DALI bridge and related software tool.

By default, the sensor functions in passive mode with regulation disabled and where measured values can only be read. The basic parameters required for regulation are desired illuminance and CCT values and connection to type-defined and controllable Tunable White luminaires. The sensor can be used to regulate warm/cold two-channel luminaires, brightness/ CCT two-channel luminaires and DALI type 8 luminaires. It is possible to assign each channel its own address, for example, a cold channel, warm channel, brightness channel, CCT channel or DALI type 8 channel. All connected TunableWhite luminaires can be controlled in parallel using illuminance only regulation, CCT only regulation or dual regulation.

The parameters and properties of the DALI Ambient Sensor are outlined in the table below.

Connections
Cable   Wires AWG 24 (0.5 mm²)

Power
Voltage at DALI input   12-25 V DC
Input current   < 9 mA

Mechanical data
IP rating   IP40
Weight   200 g
Dimensions   Ø 117 x 40 mm
Opening   Ø 105 mm

Operating conditions
Ambient temp. range   0 °C - +40 °C
Relative humidity   85 % (non-condensing)
Storage temp. range   -40 °C - +70 °C

Key features
- Biasing from DALI bus, input voltage range iscompatible with DALI standard
- Illuminance and CCT sensing
- Passive / Active mode – offers direct regulation of Tunable White luminaires
- Configuration via DALI bus
- Installation ceiling surfaced

Function
DALI Ambient Sensor senses the light conditions in the area – illuminance in luxes and correlated colour temperature (CCT) in Kelvins. The measurement runs automatically with automatic range switching. The range of measured illuminance is from 100 lx to 30 000 lx. The range of CCT measurement is from 2 500 K to 8 000 K. For the communication the sensor uses DALI protocol typical for lighting installations. The sensor reacts on its address that is possible to set using any standard DALI configuration tool. Other parameters of the sensor can be set only using USB/DALI Bridge and its software tool.

By default the sensor is in passive mode therefore any regulation is disabled – it is possible to read-out measured values only. The basic parameters for the regulation are final values of illuminance and CCT. Then it is necessary to define the type of regulated Tunable White luminaires. DALI Ambient Sensor can control the luminaires with two channels of cold/warm type; two channels of brightness/CCT type and DALI type 8 luminaires. For each channels it is possible to set its DALI group address independently (cold channel, warm channel, brightness channel, CCT channel, DALI type 8). The sensor can control all types of Tunable White luminaires in parallel. The regulation of illuminance and CCT can be activated or deactivated independently or it can also run in parallel (concurrent regulation of illuminance and CCT). The parameters of the DALI Ambient Sensor and its properties are summarized in the table below.

Connections
Cable   Wires AWG 24 (0.5 mm²)

Power
Voltage at DALI input   12-25 V DC
Input current   < 9 mA

Mechanical data
IP rating   IP65
Weight   214 g
Dimensions   82 x 112 x 55 mm

Operating conditions
Ambient temp. range   -20 °C - +60 °C
Relative humidity   85 % (non-condensing)
Storage temp. range   -40 °C - +70 °C

DALI Ambient Sensor Outdoor is a sensor of illuminance and correlated colour temperature that uses DALI bus for biasing and the communication. Besides of the sensing features it is also capable of regulation of variously addressed Tunable White luminaires. DALI Ambient Sensor can therefore act as simple sensor, whose data are processed by another device on DALI bus or it can act as control device for automatic control of illuminance and correlated colour temperature. DALI Ambient Sensor Outdoor is suitable for outdoor application (IP 65).

DALI Ambient Sensor Outdoor

Dimmensions

Assembly

Holes(2) are designed for M4 PAN Head Machine screws use
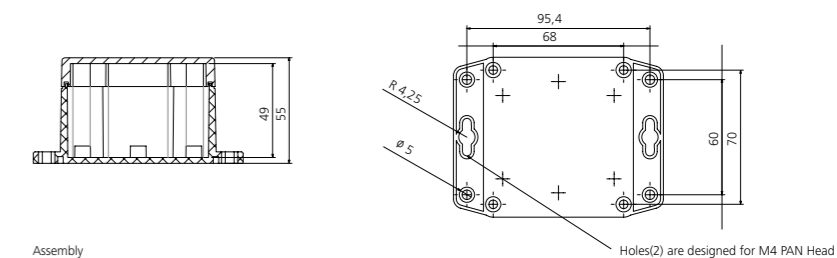
Parameter	Ranges of values	Settable by	Description
Address	1 to 64	Any DALI configurator	Address of the sensor
Illuminance level	100-30,000 lx	-	Measured value of illuminance (read only)
CCT level	2500-8000 K	-	Measured value of CCT (read only)
Status	-	-	Status of the sensor (see below)
Timing	5-300 ms	USB/DALI Bridge	Parameter defines period between two subsequent control commands (lower value means faster regulation)
Final illuminance level	100-30,000 lx	USB/DALI Bridge	Desired illuminance value
Final CCT level	2500-8000 K	USB/DALI Bridge	Desired CCT value
Illuminance regulation	Active / Non-active	USB/DALI Bridge	Activates or deactivates the illuminance regulation
CCT regulation	Active / Non-active	USB/DALI Bridge	Activates or deactivates the CCT regulation
Regulation mode	Cold/Warm, Brightness/CCT, DALI type 8	USB/DALI Bridge	Defines the addressing of TW luminaires, it is possible to use more addressing types concurrently
Warm channel group address	1- 6	USB/DALI Bridge	Define group address for warm channel control
Cold channel group address	1-16	USB/DALI Bridge	Define group address for cold channel control
Brightness channel group address	1-16	USB/DALI Bridge	Define group address for brightness channel control
CCT channel group address	1- 6	USB/DALI Bridge	Define group address for CCT channel control
DALI type 8 group address	1-16	USB/DALI Bridge	Define group address for DALI type 8 control

1 Year Warranty

DeeBridge is a solution comprising an Ethernet to DALI bridge device and easily operated user interface application. This solution enables intuitive control of luminaires within a DALI installation via an Ethernet network using a PC, tablet or smartphone. The software runs on Windows, Android and iOS. The device comes housed in a standard 2U sized DIN box which allows for installation on electrical switchboards. It is powered by an external 12 V DC Power Source Unit (not standardly supplied with the device but available on request). Free software available at Google Play, Apple store or www.ilumtech.eu

DeeBridge
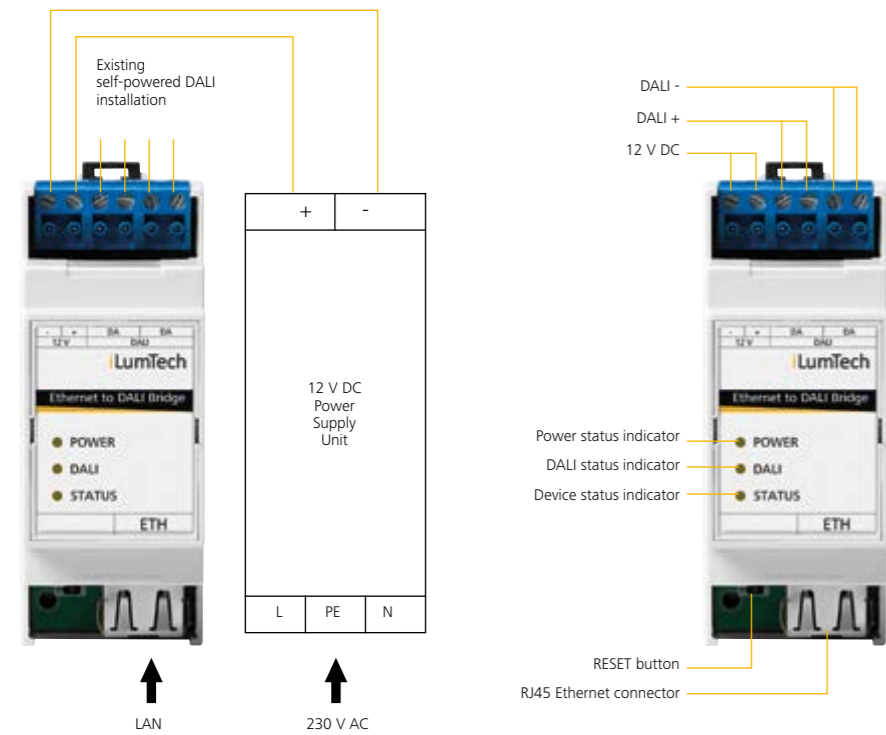
Key Features
- Allows for intuitive control of DALI installations from computer, tablet and smartphone
- Application runs on Windows, Android and iOS
- Provides dimming control via buttons, switches and sliders
- Offers standard or advanced Tunable White and RGB control as well as lighting scenes and timers
- Integrated web server for initial setting
- Wireless control via external Wi-Fi router

Connections
Power cable	Wires AWG 28-16 (0.08-1.5 mm²)
DALI cable	Wires AWG 28-16 (0.08-1.5 mm²)
Ethernet cable	UTP CAT5E

Power
Input voltage	12 V DC
System power	< 0,5 W
DALI consumption	< 2 mA
Insulation	Class II

Mechanical data
Housing	2U sized DIN box
Weight	70 g
Dimensions	94 x 36 x 60 mm

Operating conditions
Ambient temp. range	0 °C - +40 °C
Relative humidity	< 85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

Conformance with regulations
EN 61347-1	Lamp control gear. Part 1: General and safety requirements
EN 61347-2-1	Lamp control gear. Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires
EN 62386-102	Digital addressable lighting interface, general requirements for control gears

Initial Dee Bridge device TCP/IP and port configuration settings
TCP/IP address	192.168.1.252
Port	8421

Default web configuration settings
Username	admin
Password	admin

Wiring diagram

Existing self-powered DALI installation

+ −

12 V DC Power Supply Unit

L PE N

LAN

230 V AC

DALI −
DALI +
12 V DC

Power status indicator
DALI status indicator
Device status indicator

RESET button
RJ45 Ethernet connector

Free software available at Google Play, Apple store or www.ilumtech.eu

BlueBridge

BlueBridge is a solution comprising a DALI to BLE bridge device and easily operated user interface application that enables intuitive control of luminaires within a DALI installation via Bluetooth Low Energy (Bluetooth 4.1) using a tablet or smartphone.
The Intelligent Switch function allows for automatic reconnection of various BlueBridge devices within the network. while programmable NFC tags allow for control of the lighting through the close proximity (100 mm or less) or contact of devices.

Key Features
- Wireless control of DALI installation via Bluetooth Low Energy
- Compatibility with most tablets and smartphones
- User friendly Android GUI app
- Powered from the DALI bus (no external power source)
- Pluggable DALI terminals – easy to install and use

Connections
DALI cable	Wires AWG 28-16 (0.08-1.5 mm²)

Power
DALI input voltage	12-25 V DC
System power	< 0.25 W
DALI consumption	< 10 mA
Insulation	Class II

Mechanical data
Housing	ABS plastic box
Weight	50 g
Dimensions	33 x 47 x 10 mm

Operating Conditions
Ambient temp. range	0 °C - +40 °C
Relative Humidity	< 85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

Connection

DALI terminal

connection to DALI bus (polarity free)

Free software available at Google Play, Apple store or www.ilumtech.eu

The Company reserves the right to change any product specifications without prior notification.
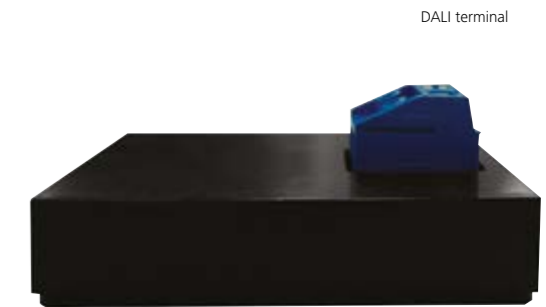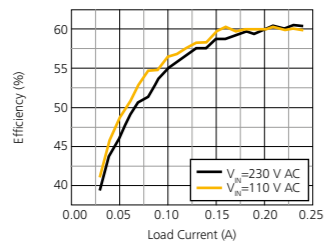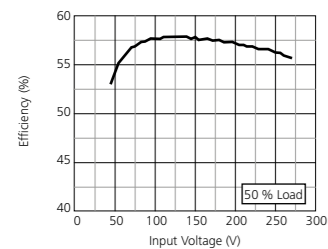
DALI Power Supply is a member of the Connected Lighting product family. As a basic element of DALI installations, it provides power supply for all DALI devices. It is fully compatible according to the DALI standard, and capable of supplying DALI devices with an overall current consumption of up to 250 mA. The green LED indicates DALI voltage and the blinking red LED indicates DALI communication.
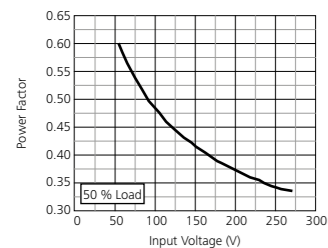
DALI/USB Bridge is a control and configuration device that interconnects DALI bus with PC equipped with USB. Using DALI/USB Bridge you are able to set all the parameters defined by DALI standard and all the parameters of iLumTech control devices. Small form factor and simplicity of wiring makes DALI/USB Bridge ideal for DALI bus setup and commissioning.

DALI Power Supply

DALI/USB Bridge

Wiring diagram

Mains input

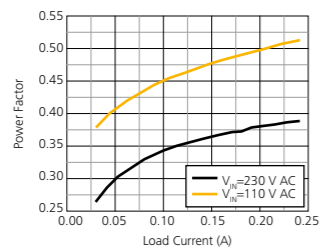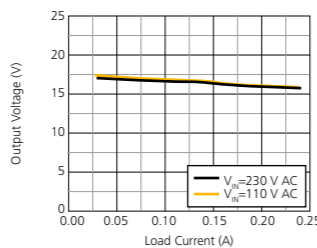Output to DALI bus

Characteristics

Efficiency by input voltage (@50 % load)

Power factor by input voltage (@50 % load)

Load regulation

Key features
- Power supply for DALI devices up to 250 mA
- Over-heating protection
- DALI overcurrent protection
- Input fuse protection
- Power and communication indication LEDs
- Wide input voltage operation

Installation notes
- The connected mains supply must be protected
- Only one DALI power supply may be used

Connections
Mains cable	0.5-4 mm² (AWG 20-10)
DALI cable	0.08-2.5 mm² (AWG 28-12)

Power
Input voltage	85-264 V AC (47-63 Hz)
System power	max. 3.7 W
DALI output	18 V DC (250 mA)

Mechanical data
Housing	2U sized DIN box
Weight	82 g
Dimensions	90 x 36 x 58 mm
IP rating	IP20

Operating conditions
Ambient temp. range	0 °C - +40 °C
Relative humidity	85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

Key features
- Isolated from DALI bus, powered from USB – no extra power supplies needed
- Small form factor – flash stick size
- Supports standard DALI commands for control gears – device type 1, 6, 7 and 8
- Supports iLumTech devices

Function
DALI/USB Bridge is designed mainly for setup of DALI network and its commissioning. Firstly you have to install DALI Controller software available on our website. During the installation also the USB drivers will be installed. After successful installation of software you can connect the DALI/USB Bridge to your PC. When DALI network is correctly powered green LED is lit. Red LED indicator is flashing when DALI/USB Bridge transmits data while green LED indicator is flashing simultaneously indicating the activity on the DALI line. If only green LED indicator is flashing it indicates the communication initiated by other DALI devices. Detailed description of DALI Controller software is included in its user manual.

Connections
DALI cable	Wires AWG 24 (0.5 mm²)

Input parameters
Voltage at DALI input	12-25 V DC
Input current	< 2 mA
Voltage at USB input	5 V DC
Input Current	< 10 mA

Mechanical data
IP coverage	IP20
Weight	50 g
Dimension	70 x 23 mm, height 20 mm

Operating conditions
Ambient temp. range	0 °C - +40 °C
Max. relative humidity	85 % (non-condensing)
Storage temp. range	-40 °C - +70 °C

Connection

USB Plug

DALI terminal

connection to DALI bus (polarity free)

Free software available at www.ilumtech.eu

DLS TOUCH PANEL II is 7" touchscreen display which is suitable mainly for use in offices. It can be used also in classrooms, smaller manufacturing facilities and similar areas of application. DLS TOUCH PANEL II offers wide possibilities for Tunable White and RGB control. User can use pre-defined sequences or customize his own. Automatic control can be overridden by manual control at any time. Possibility of sensor connection makes the lighting installation even more intelligent by reacting to ambient light level changes and presence of people. DLS TOUCH PANEL II offers control of 3 DALI lines thus allowing for large lighting installation. Additionally DLS TOUCH PANEL II is DALI type 8 compatible.

iLumTech DALI PLC Coupler belongs to the Connected Lighting product family. This powerful device is used for connecting two or more DALI networks over mains. It means that it couples DALI communication to the mains and vice versa. This eliminates usage of additional wires where communication is transmitting over mains. This is intended for usage in applications where two-wire cable for DALI communication is not presented and reconstruction is not planned or possible.
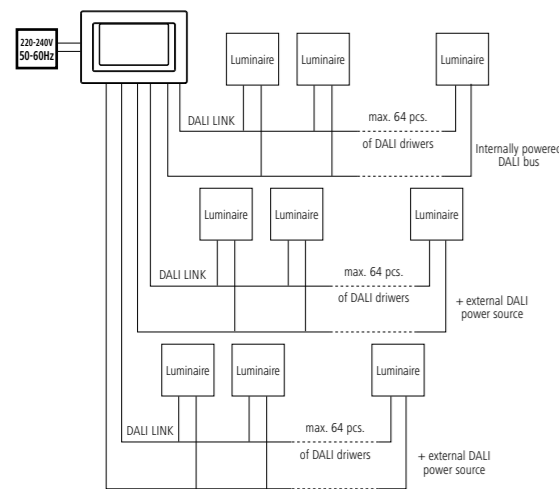
DLS Touch Panel II

DALI PLC

MAIN MENU

CONTROL MODE

TIME LINE

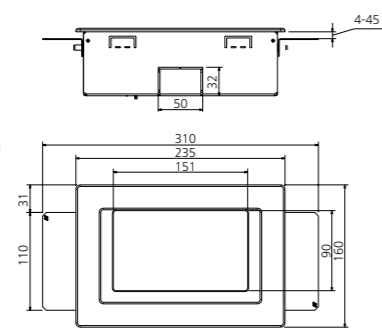USER SETTING

Key features
- 2 modes: RGB and Dynamic white
- Manual or fully automatic control of light
- DALI type 8 support – up to 192 DALI type 8 devices
- Possibility of connecting up to 81 TW luminaires or 64 RGB luminaires
- 3 independent DALI lines – 1 internally powered, 2 externally powered
- User configurable time scheduler
- Possibility of connection light-level and movement sensor
- Energy saving solution
- Daylight simulation - bringing natural conditions into interior
- Security option – password protection of settings
- Simple and fast setting of colour with TW or RGB
- User friendly graphic interface
- User pre-settable screen savers
- Static scene pre-sets
- Dynamic scene pre-sets

General
Power consumption	max. 9 W
Power input	12 V DC
Cooling system	fanless
Temp.-Range	0° C - +40° C

System Hardware
CPU	Texas Instruments AM3354, 720 MHz
Memory	256 MB SDRAM
Flash	128 MB NAND FLASH
Networking	LAN 100BaseTX, Bluetooth, Wi-Fi
I/O	3xDALI (1xDALI internally powered – 250 mA)

Display
Size	7"
LCD Type	TFT, Transmissive, Anti-Glare
Resolution	800x480, 262K colors
Viewing angle (H/V)	140 / 120 deg
Luminance	350 Cd/m²
Contrast ratio	350:1
Touchscreen	Capacitive
Ambient temp. range	0 °C - +40 °C

Key features
- Support of forward and backward DALI commands according to IEC 62 386-102
- DALI powered
- 3-phase support
- Communication error source detection
- Over-voltage protection

Installation notes:
- Maximum of 64 DALI devices with unique address can be connected to single network
- Only one DALI power supply may be used

Input parameters:
DALI:	12-25 V DC, input current < 20 mA
PLC:	110 / 230 V AC

Connections
DALI:	0.08-2.5 mm² (AWG 28-12)
Mains:	0.5-4 mm² (AWG 20-10)

Operating Conditions:
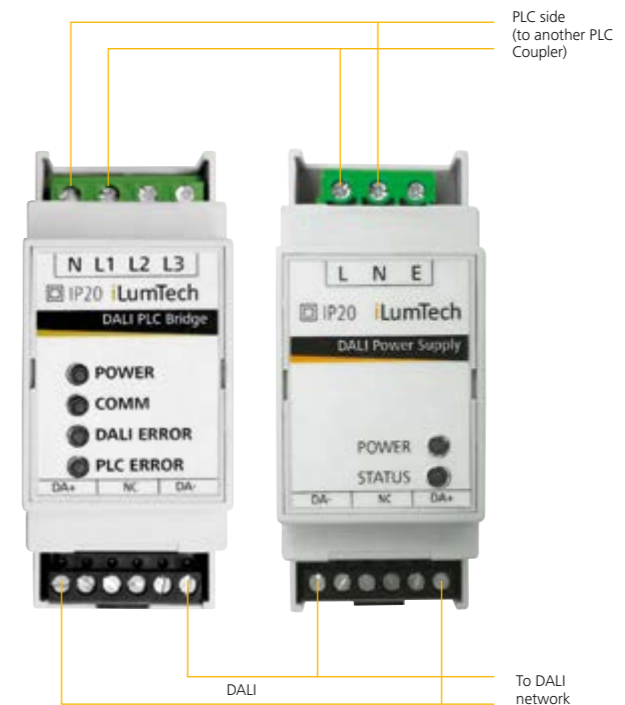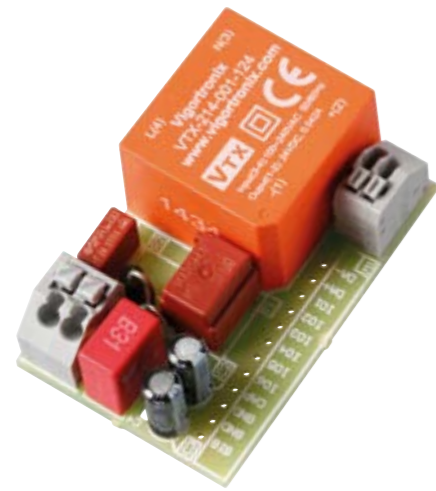|	
Ambient temp. range	0 °C - +40 °C
Max. relative humidity	90% (non-condensing)
Storage temp. range	-40 °C - +70 °C

Mechanical data
Housing:	DIN rail enclosure
Dimensions:	90 x 36 x 58 (mm)
Weight:	74 g
IP Rating:	IP20

Wiring diagram

PLC side (to another PLC Coupler)

To DALI network

DALI

Wiring diagram

Dimensions

iLumTech DALI PLC-IN belongs to the Connected Lighting product family. This small device is intended to be used inside the luminaire in order to connect the luminaire to the DALI PLC network. DALI PLC-IN has to be used in combination with at least one DALI PLC Bridge than brings DALI communication to the power line. DALI PLC-IN offers possibility to connect the luminaire to the DALI PLC network without using additional DALI wiring between the luminaires. This is intended for usage in applications where two-wire cable for DALI communication is not present and reconstruction is not planned or possible.
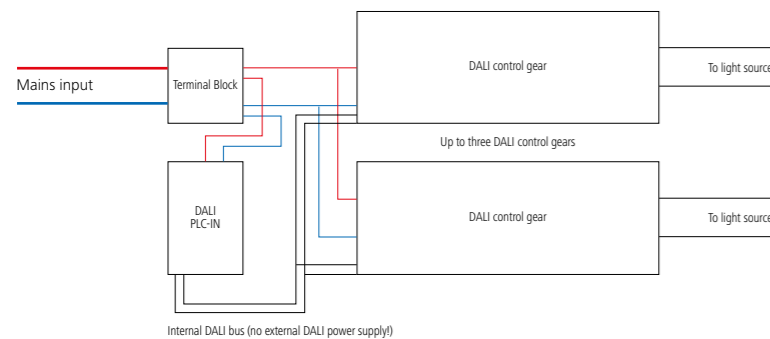
DALI PLC-IN

Wiring diagram

Mains input

DALI (to the luminaire)

Typical application example
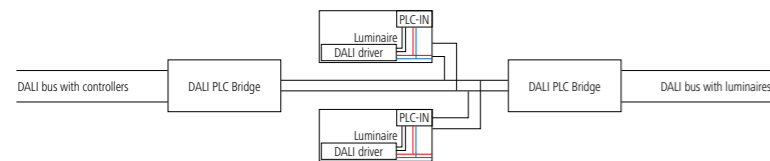
Connection inside the luminaire

Key features
- Support of forward and backward DALI commands according to IEC 62 386-102
- Powered from mains
- DALI control output to luminaire with integrated DALI power supply
- Possibility to connect up to three DALI control gears at DALI output
- Communication error source detection
- Over-voltage protection

Installation notes
- Maximum of 64 DALI devices with unique address can be connected to single network
- No extra DALI Power supply is needed – DALI Power supply is integrated

Input parameters
DALI	12-25 V DC, output current < 20 mA
PLC	110 / 230 V AC, input current < 20 mA

Connections
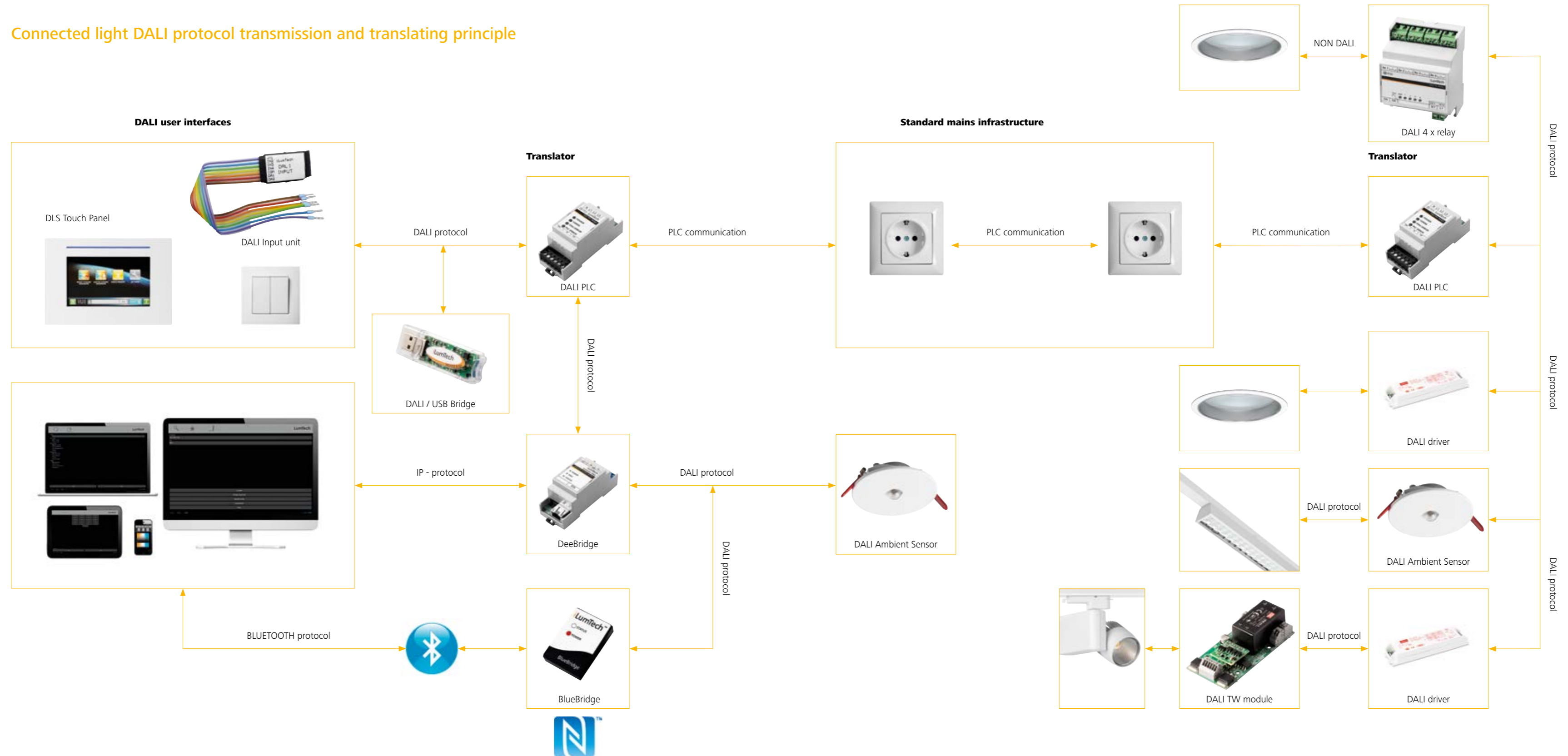|	
DALI	0.08-2.5 mm^2 (AWG 28-12)
Mains	0.5-4 mm^2 (AWG 20-10)

Operating Conditions
Ambient Temperature Range	0 °C to +40 °C
Max. Relative Humidity	90 % (non-condensing)
Storage Temperature Range	-40 °C to 70 °C

Mechanical data
Housing	Plastic box or open frame
Dimensions	33 x 50 x 30 (mm)
Weight	32 g
IP Rating	IP20

Connected light DALI protocol transmission and translating principle

DALI user interfaces

DLS Touch Panel

DALI Input unit

DALI / USB Bridge

Translator

DALI PLC

DALI protocol

PLC communication

Standard mains infrastructure

PLC communication

PLC communication

NON DALI

DALI 4 x relay

DALI protocol

Translator

DALI PLC

DALI protocol

DALI driver

DALI protocol

DALI Ambient Sensor

DALI protocol

DALI protocol

IP - protocol

DeeBridge

DALI protocol

DALI Ambient Sensor

DALI protocol

BLUETOOTH protocol

BlueBridge

DALI protocol

DALI TW module

DALI protocol

DALI driver

DALI protocol

Connected light DALI protocol transmission and translating principle – integrated concept

DALI driver

DALI PLC - IN

DALI user interfaces with integrated PLC module

DLS Touch Panel

DALI Input unit

Translator

DALI protocol

DALI PLC

PLC communication

Standard mains infrastructure

PLC communication

Translator

PLC communication

DALI PLC

DALI protocol

DALI / USB Bridge

DALI protocol

IP - protocol

DeeBridge

DALI protocol

DALI Ambient Sensor

DALI driver

DALI protocol

DALI protocol

DALI PLC - IN

DALI protocol

DALI TW module

BLUETOOTH protocol

DALI protocol

BlueBridge

DALI Ambient Sensor

DALI protocol

DALI protocol

DALI 4 x relay

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innovation ahead

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