Lunatone

DALI-2 Display Bus Extension

Datasheet

DALI System Extension

Device for increasing
the number of
DALI-2 Display's DALI lines

Art.Nr. 86451848

DALI-2 Display Bus Extension - DALI System Extension

Overview
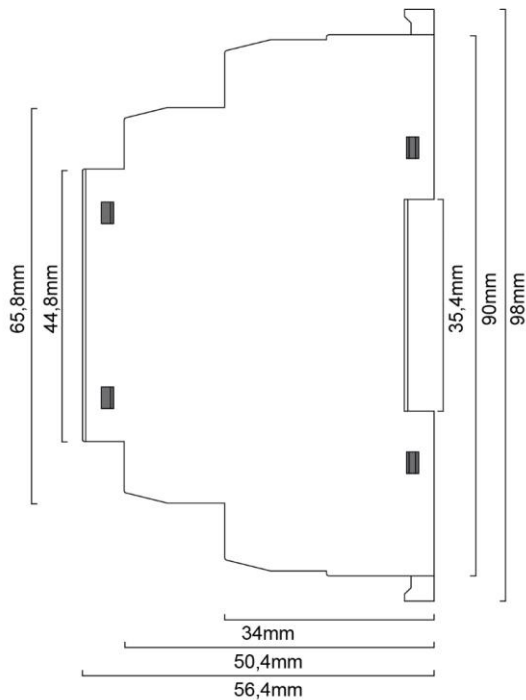
- Device to increase the number of DALI lines for the DALI-2 Display 7" Plus and DALI-2 Display 7" Emergency

- Extension by 3 additional independent DALI lines (each with 64 DALI addresses)

- Cross-line control via configurable forwarding in the DALI-2 display ("trigger actions")

- Only applicable in combination with a DALI-2 Display 7" PLUS (article number 86456840-**P**) or the DALI-2 7" Emergency Displays (article number 86456840-**EM** und article number 86456840-**P-EM**)

- Simple installation via network connectors

- Test button and status LED for DALI system checks

- DIN rail mounting

- Supply 24VDC (e.g.: with 24V / 300mA Art.Nr. 24166012-24HS). The DALI-2 display is powered via the DALI-2 Bus Extension module (PoE), no additional power supply for the DALI-2 display is required.
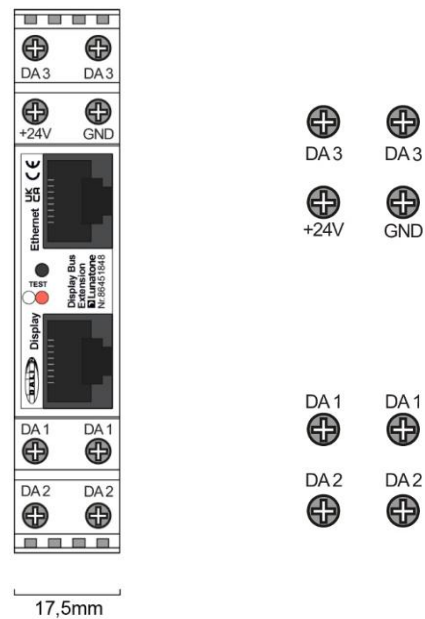
Specification, Characteristics

type	DALI-2 Display Bus Extension
article number	89453886
GTIN	9010342013973

electrical data:

power supply	24VDC
typ. current consumption	90 mA + POE
network socket - Ethernet	Ethernet 10/100Base-T, electrically isolated, isolation voltage 1500VAC, RJ45-connector
network socket - Display	Ethernet 10/100Base-T, electrically isolated, isolation voltage 1500VAC, RJ45-connector
DALI	3 x DALI, electrically isolated

environmental conditions:

storage and transportation temperature	-20°C … +75°C
operational ambient temperature	-20°C … +60°C
rel. humidity, none condensing	15% … 90%

general data:

dimensions	98 x 18 x 56 mm (drawings see page 3)

mounting	DIN rail
rated max. temperature tc	75°C
protection class	II in intended use
protection degree housing	IP40
protection degree terminals	IP20

terminals:	
connection type	screw connector
wire size solid core	0,5 … 2,5 mm^2 (AWG20 … AWG14)
Wire size stranded wired	0,5 … 2,5 mm^2 (AWG20 … AWG14)
wire size using wire end ferrule	0,25 … 1,5 mm^2
stripping length	7 mm / 0,27 inch
locking torque	0,5Nm
open terminal	open screw

standards:	
DALI	EN 62386-101
EMC	EN 61547 EN 50015 / IEC CISPR15
safety	EN 61347-2-11 EN 61347-1
markings	CE, UKCA

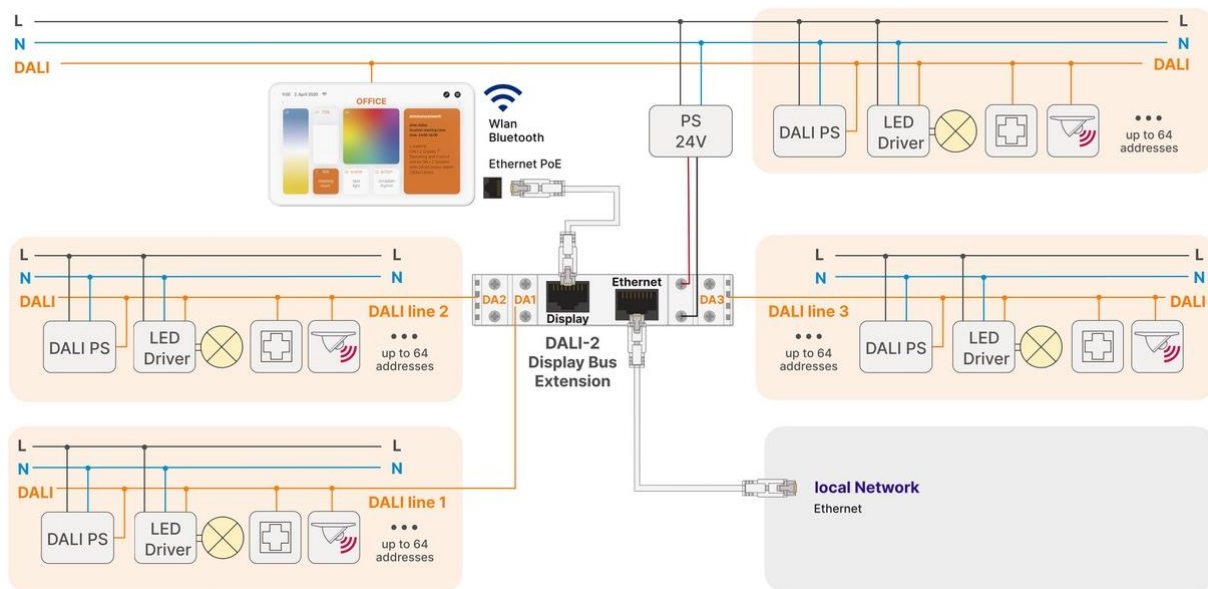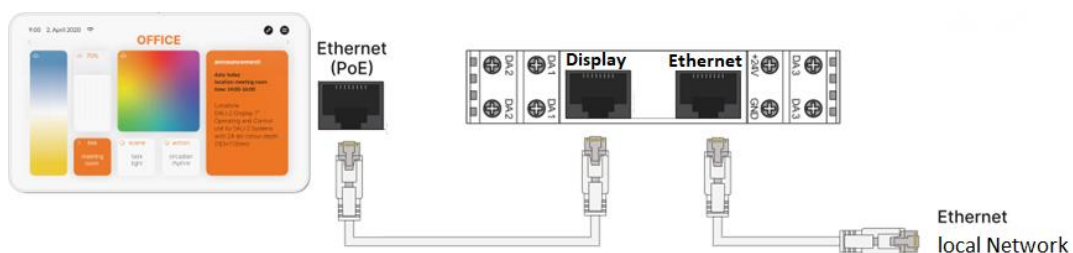dimensions   connection plan

Typical Application

typical application

Installation

- Supply voltage 24VDC - the DALI-2 Display Bus Extension module requires a 24 V supply, which needs to be connected to the according terminals (+24V/GND). (A suitable power supply unit: PS 24V, 300mA, article nr.: 24166012-24HS).

- The DALI-2 Display Bus Extension module is connected to the DALI-2 7" Display Plus with an Ethernet cable to the "Display"-socket

- The DALI-2 Display is powered via PoE via the DALI-2 Display Bus Extension Module. No additional power supply may be connected to the DALI-2 Display.

- The DALI-2 Display Bus Extension module is connected to the local network with an Ethernet cable to the "Ethernet"-socket.

- Up to 3 DALI lines can be connected to the DALI-2 Display Bus Extension module. Each DALI line must be supplied by a suitable DALI bus power supply (e.g. DALI PS article nr.: 24033444).

- The connection to the DALI terminals can be made regardless of polarity. The bus input is protected against overvoltage (mains voltage).

- The wiring should be carried out as a permanent installation in a dry and clean environment.

- Installation may only be carried out in a voltage-free state of the system and by qualified specialists.

- National regulations for setting up electrical systems must be followed.

- The DALI wiring can be realized with standard low-voltage installation material. No special cables are required.
    w
- The DALI line may be routed together with the mains voltage (in one cable or as single wires in a tube)

- Wiring topology of the DALI-line: Line, Tree, Star

- Only 1 wire may be connected to each terminal. When using double wire end ferrules, the connection capacity of the terminal must be considered.

- The device has 2 LEDs, one indicates if the device is powered, the second shows the bus status: status LED

- Status-LED:
    o   flashing 5Hz, 50% on: test mode
    o   flashing 2Hz, 5% on : error
    o   flashing 2Hz, 90% on: activity

- Wiring check by pressing the test button: the LED is flashing and all luminaires connected to the DALI system will be controlled by a test sequence (on, off, dimming). To quit the test mode press the test button again.

☞ **Attention:** The DALI-signal is not classified as SELV circuit (Safety Extra Low Voltage). Therefore, the installation regulations for low voltage apply

☞ The voltage drop on the DALI line must not exceed 2V at maximum length (300m) and maximum bus load (250mA).

Functionality

The Display Bus Extension module is used to expand the DALI lines that can be controlled via the DALI-2 7" Display Plus or DALI-2 7" Emergency Displays.

Up to 3 additional DALI lines can be connected, with the Display's line in total 4 DALI lines can be controlled via the Display. The devices of all lines can be controlled via the Display and configured via the DALI Cockpit (Version > 1.38), using the DALI-2 7" Display Plus as interface.

The 4 DALI lines are independent of each other, each requiring its own bus supply. Therewith, 64 DALI addresses are available for each DALI line.

In the DALI-2 Display, "Zones" can be defined with multi line effective ranges. Thereby, allowing control of devices on several lines simultaneously, using a single widget.

"Links" can be created in the DALI-2 Display in order to forward DALI control commands sent from a different operating device on one DALI line to an effective range on other DALI lines.

For more information about the DALI Cockpit interface and the DALI-2 7" Display, see the DALI-2 Display 7" data sheet.

Compatibility

The Display Bus Extension module can only be used in combination with a [DALI-2 Display 7" PLUS](#) (article number 86456840-**P**) or the [DALI-2 7" Emergency Displays](#) (article number 86456840-**EM** and article number 86456840-**P-EM**). The DALI-2 Display 7" basic version does not support the Bus Extension module.

Purchase Order Information

Art.Nr. 86451848: Display Bus Extension Module, DALI system extension for the DALI-2 Display 7" Plus, DIN rail

Accessories:

Art. Nr.: 24166012-24HS, 24VDC/300mA power supply, DIN rail, 1TE
https://www.lunatone.com/wp-content/uploads/2018/03/24166012-24HS_PS24V_EN_D0065.pdf

Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems
https://www.lunatone.com/en/product/dali-cockpit/

Lunatone DALI products
www.luntone.com/en/

Lunatone datasheets and manuals
www.lunatone.com/en/downloads-a-z/

Contact

Technical Support: support@lunatone.com

Requests: sales@lunatone.com

www.lunatone.com

Disclaimer

Subject to change. Information provided without guarantee. The datasheet refers to the current delivery.

The compatibility with other devices must be tested in advance to the installation.