

DALI-2 WLAN Cockpit Interface

Datasheet DALI-Cockpit Interface



Interface for communication
between the DALI Cockpit
and modules on
the DALI bus via WLAN

Art. Nr.: 24138478
Art. Nr.: 24138478-PS

DALI-2 WLAN Cockpit Interface Interface

Overview

- DALI - WLAN interface module Commissioning, configuring and controlling of a DALI system via Wi-Fi, using the Lunatone software DALI Cockpit
- Enables connection via the device's hotspot
- Enables integration of the device into the local network
- Bidirectional data traffic for configuration and monitoring of bus communication
- Support of standard DALI, DALI-2 and various extended DALI protocols
- Version with integrated DALI power supply (200mA) for the supply of up to 64 DALI devices available
- Independent control gear (for remote ceiling or integration in luminaires)
- Double terminals for easy installation



Specification, Characteristics

| type | DALI-2 WLAN | DALI-2 WLAN PS |
|----------------|---------------|----------------|
| article number | 24138478 | 24138478-PS |
| GTIN | 9010342013874 | 9010342013881 |

input: L, N

| | | |
|---------------------------|--------------------------------|--------------------------------|
| input type | supply, mains- voltage | |
| marking terminals | L, N | |
| input voltage range | 100Vac ... 240Vac | |
| max. input supply current | 40mA (@120Vac), 20mA (@240Vac) | |
| input supply frequency | 50Hz / 60Hz | |
| power consumption | max. 1W | 0,5-5W (depending on bus load) |
| start-up time | < 1s | |

output: DA+, DA-

| | | |
|--------------------------------|--------|-------------------|
| output type | DALI | DALI supply |
| marking terminals | DA, DA | DA+, DA- |
| voltage range | - | 12Vdc ... 20,5Vdc |
| guaranteed DALI supply current | - | 200mA |
| open circuit proof | yes | yes |
| short circuit proof | yes | yes |

insulation data:

| | |
|--|----------------------|
| impulse voltage category | II |
| pollution degree | 2 |
| rated insulation voltage | 250V |
| insulation DALI (DA+, DA-) / supply (L, N) | reinforced isolation |
| insulation test voltage DALI-output/mains | 3000Vac |

environmental conditions:

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

general data:

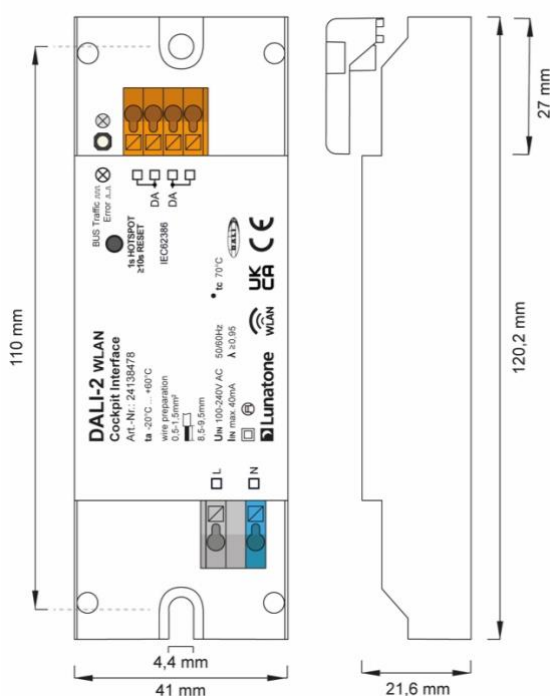
| | |
|-----------------------------|---|
| dimensions (l x w x h) | 120mm x 41mm x 22mm |
| mounting | remote ceiling integration in class II devices |
| rated max. temperature tc | 70°C |
| expected life time @tc | 50.000 h |
| protection class | II in intended use |
| protection degree housing | IP40 |
| protection degree terminals | IP20 |

terminals:

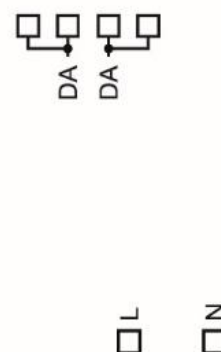
| | |
|----------------------------------|---|
| connection type | spring terminal connector |
| wire size solid core | 0,5 ... 1,5 mm ² (AWG20 ... AWG16) |
| wire size fine wired | 0,5 ... 1,5 mm ² (AWG20 ... AWG16) |
| wire size using wire end ferrule | 0,25 ... 1 mm ² |
| stripping length | 8,5 ... 9,5mm / 0,33 ... 0,37inch |
| release of wire | push button |

standards:

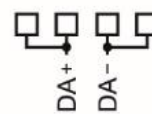
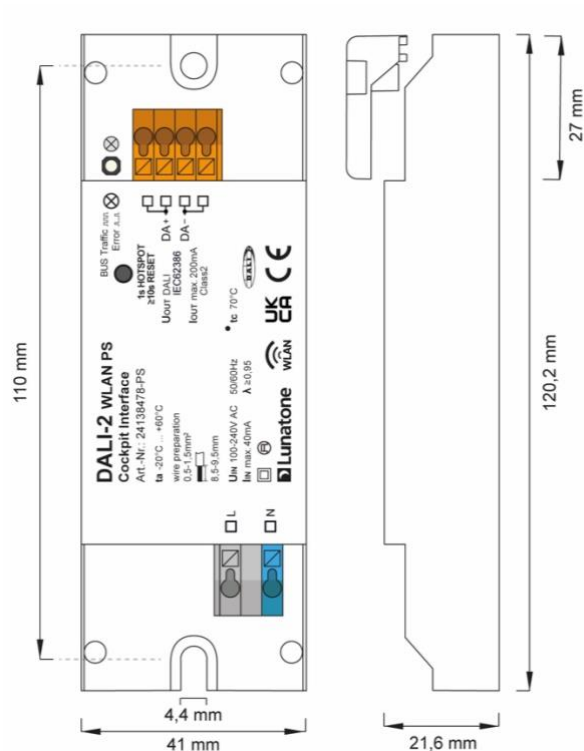
| | |
|----------|------------------------------------|
| DALI | EN 62386-101 |
| EMV | EN 61547 EN 50015 / IEC CISPR15 |
| Safety | EN 61347-2-11 EN 61347-1 |
| markings | CE |



dimensions DALI-2 WLAN
Cockpit Interface

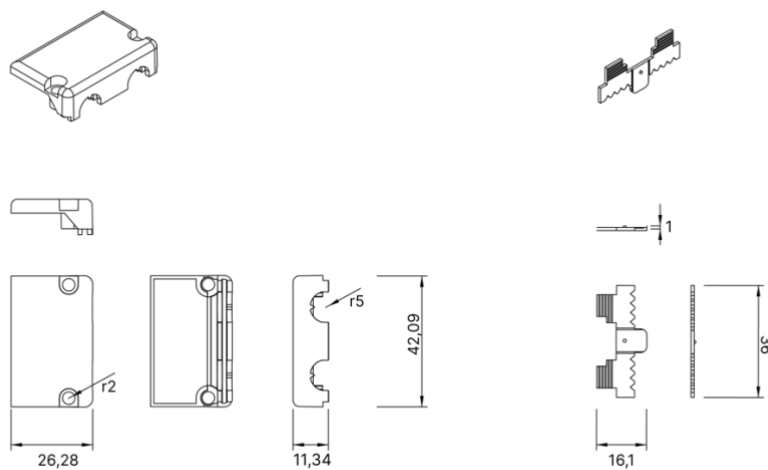


connection plan
DALI-2 WLAN Cockpit Interface

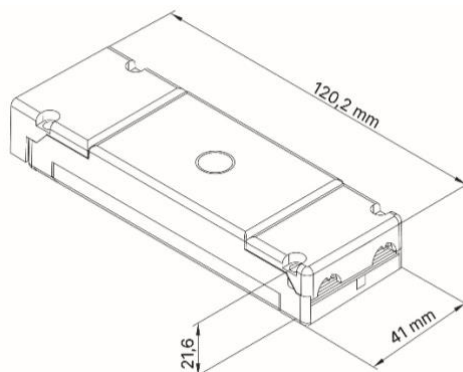


dimensions
DALI-2 WLAN PS Cockpit Interface

connection plan
DALI-2 WLAN PS Cockpit Interface



standard strain relief cover for 120x41x22mm



Installation

- The DALI-2 WLAN interface is intended for remote installation in a ceiling or in an enclosure, ensure proper cable relief for installation in protection class II devices.
- The DALI-2 WLAN PS module has an integrated 200mA bus power supply. With the DALI-2 WLAN an external DALI bus power supply is required.
- DALI-2 WLAN PS: it must be ensured that the maximum power consumption on the DALI circuit does not exceed the guaranteed output current (200mA) of the DALI Room Controller at any time.
- 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.
- connect power supply terminals L and N to mains voltage according to the labelling.
- DALI-2 WLAN PS: the polarity of the output voltage is marked on the housing (DA+, DA-).
- DALI-2 WLAN: the connection to the DALI terminals can be made regardless of the polarity.
- The DALI line may be routed together with the mains voltage (in one cable or as single wires in a tube).
- The DALI-line must **not** be connected to the mains or extra low voltage (SELV) systems.
- 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 DALI wiring can be realised with standard low-voltage installation material. No special cables are required.
- Wiring topology of the DALI-line: Line, Tree, Star.
- For positioning the device the structural conditions need to be considered, to not shield or weaken the WLAN signal.
- Status-LED:
 - flashing 2Hz, 5% on: error (overload /short circuit)
 - flashing 2Hz, 90% on: bus activity
- functions of the device button:
 - short button press: activate the device hotspot (hotspot will be automatically disabled after 1 minute if no PC connects)
 - long button press (>=10s): reset all WLAN settings



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).



Attention: DALI-2 WLAN PS: an additional and/or unsuitable DALI power supply can cause damage of the DALI devices!

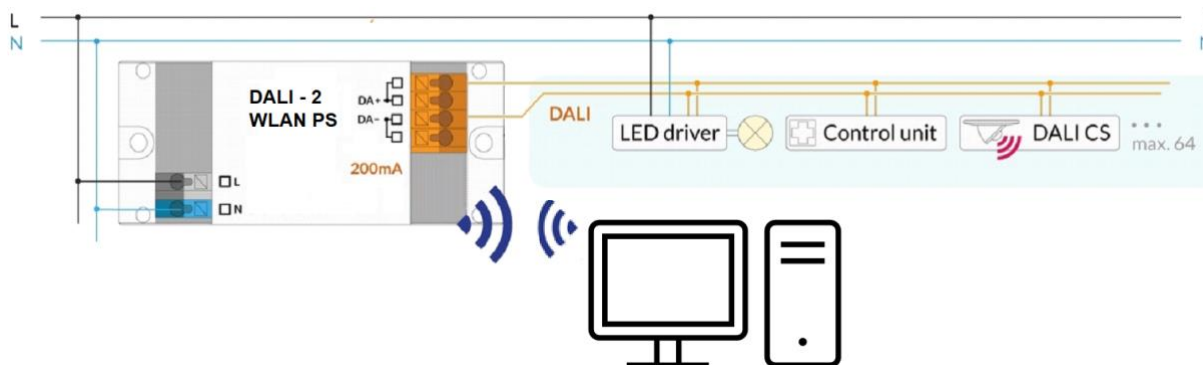


Fig. 1 Installation DALI-2 WLAN PS Cockpit Interface – typical Application

Commissioning and Function

After connection, the DALI-2 WLAN interface is ready for use. On installation, the device automatically provides a WLAN hotspot. In order to use the interface, the PC must be connected to the WLAN hotspot of the module. The interface can then be used directly via the hotspot. Alternatively the device can also be added to a local network.

Hotspot Wi-Fi settings:

Default SSID: "Lunatone Dali WLAN"

Default password: "lunatonewlan",

IP at hotspot connection: "192.168.1.1"

Device web interface: the web interface of the DALI-2 WLAN module can be opened by entering "192.168.1.1:8080" in a browser (the device used to open the web interface must be in the hotspot network of the DALI-2 WLAN module).

The password and name of the DALI-2 WLAN hotspot can be changed on the web interface.

Adding the DALI-2 WLAN interface to a

network: The SSID and the password of a local network can be specified via the device web interface.

Attention: the first connection to a network can take up to 10s

The device hotspot remains active:

- as long as a PC is connected.
- 60s after start-up if no external network is configured (default state)
- 60s after a short press of the device button

DALI Cockpit

Lunatone offers a configuration and monitoring software for DALI systems called DALI-Cockpit. General information on the DALI Cockpit is available at: <https://www.lunatone.com/en/product/dali-cockpit/>

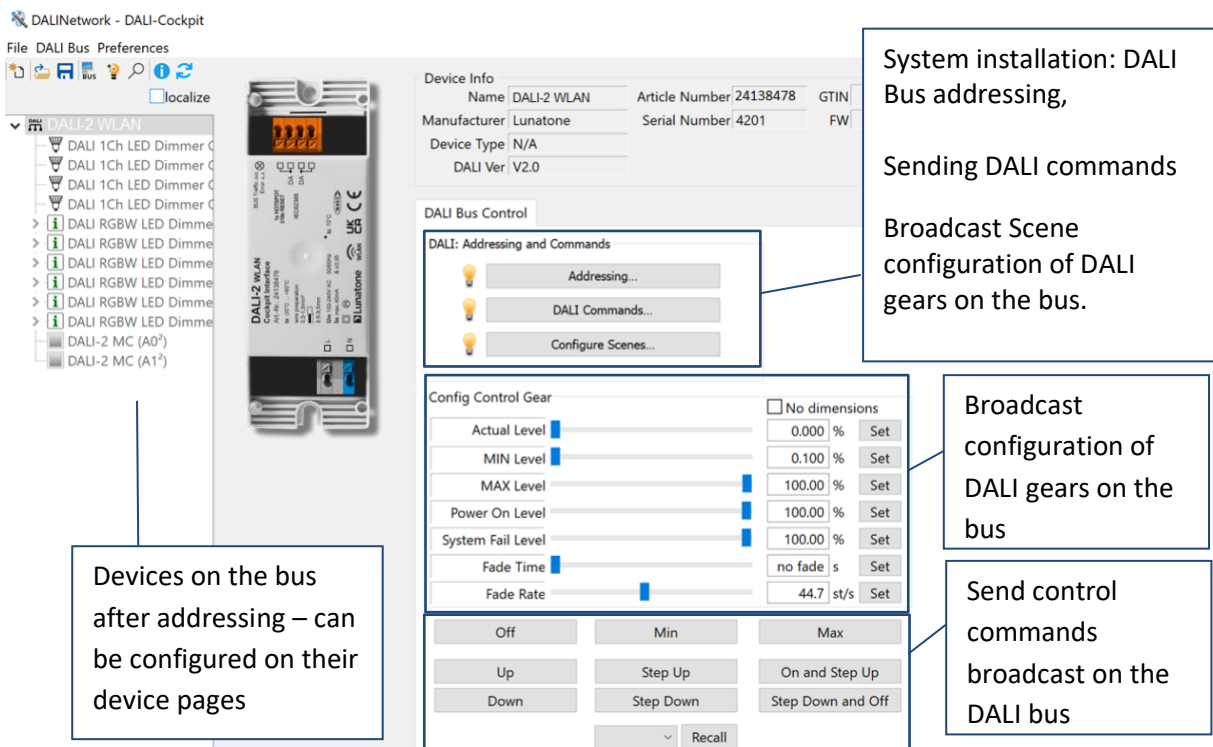
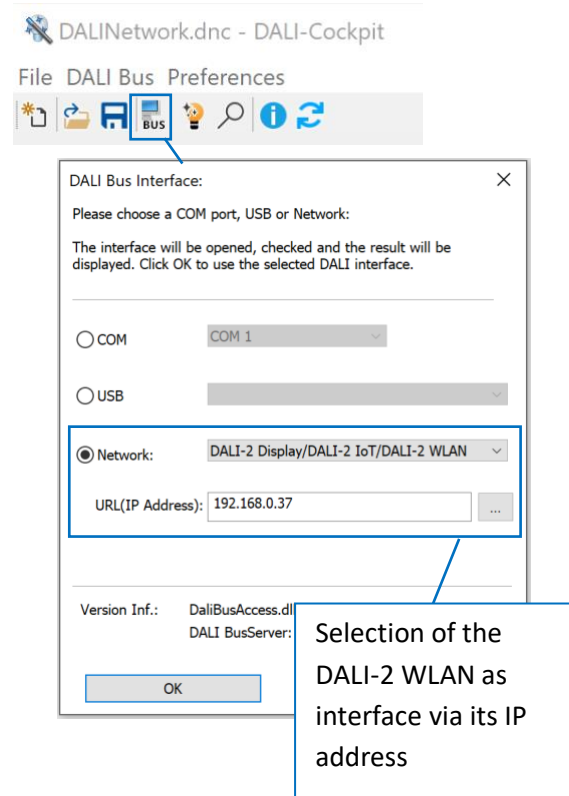
The DALI-2 WLAN is supported from Cockpit Version 1.38. on.

The DALI-2 WLAN interface can be set with the bus interface selection "Network" and "DALI-2 Display, DALI-2 IoT, DALI-2 WLAN" and the device's IP address. If the IP address is not known, the network can be searched for devices using the button next to the IP address input field.

Troubleshooting, if the interface is not found: The PC and the device must be in the same network (see section: Commissioning and function).

With the DALI-2 WLAN interface and the DALI Cockpit the DALI bus can be addressed and the devices on the bus can then be configured

The DALI bus traffic can also be monitored and logged via the PC software "DALI Monitor" by selecting the DALI-2 WLAN device as the bus interface. The DALI Monitor is installed together with the DALI Cockpit and stored in the same installation directory.



Supported DALI specifications and operating modes

The DALI-2 WLAN Cockpit Interface supports the following protocols:

- Standard DALI (16Bit)
- Standard DALI (8Bit), backward frame
- eDALI, special 25Bit Tridonic protocol (24Bit data)
- DALI2 (24Bit) Forward Frame according to IEC62386-103 and NEMA DALI, 24Bit according to NEMA Std. publication 243-2005
- 17Bit DALI, special DALI-Frame by Helvar

In addition to sending and receiving commands, the DALI-2 WLAN module also offers the option of monitoring the DALI bus communication. During monitoring, all messages on the bus that correspond to one of the supported protocols are transmitted to the PC.

Purchase Information

Art.Nr. 24138478: DALI-2 WLAN Cockpit Interface, interface, remote ceiling

Art.Nr. 24138478-PS: DALI-2 WLAN PS Cockpit Interface, interface with integrated bus power supply (200mA), remote ceiling

Additional Information and Equipment

Lunatone datasheets, manuals and software <http://www.lunatone.com/downloads-a-z/>

Lunatone DALI products <http://www.lunatone.com>

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

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www.lunatone.com



Disclaimer

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

The function in installations with other devices must be tested for compatibility in advance