

DALI 100k



Datasheet Control Device

DALI control module with analogue
input for connection of a 100kΩ
potentiometer

Art. Nr. 86458506

subject to change, Information provided without guarantee

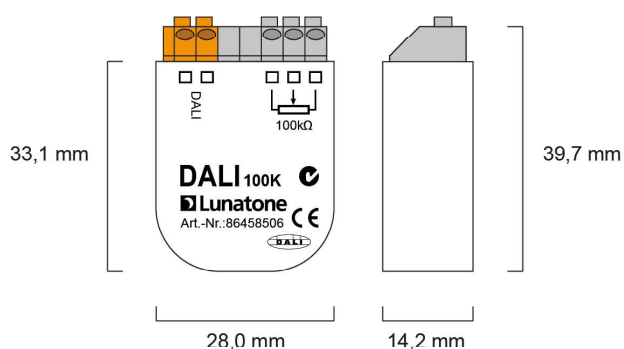
DALI 100k Control Device

Overview

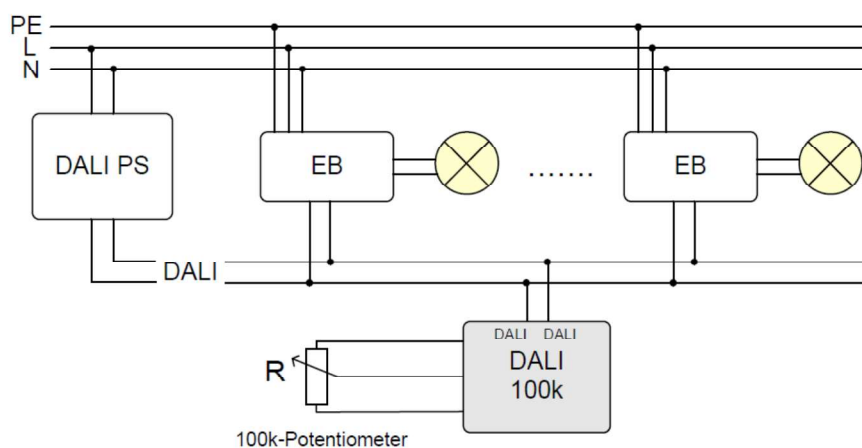
- Compact DALI control module with analog input for connection of a 100kΩ potentiometer
- The input signal is directly converted in a DALI direct arc power level.
- The conversion can start either periodically or triggered.
- An input voltage change (>2%) is used as trigger event.
- Individual addresses, group addresses or broadcast can be set as destination address
- Configuration with the help of the DALI-Cockpit software and a DALI-USB Interface
- Multiple DALI 100k modules can be used on the same DALI line
- The module can be installed in the conduit box behind the potentiometer.
- The DALI 100k is supplied directly via the DALI signal line.

Specification, Characteristics

type	DALI 100k
article number	86459506
supply	via DALI signal line
typ. current consumption	<3 mA
input	100kΩ Potentiometer
output	DALI
ambient temperature	0°C-50°C
protection class	IP20
connecting wire cross section	0.5-1.5 mm ²
wiring length to potentiometer	50 cm
geometry	40mm x 28mm x 15mm



geometry



typical installation

Installation

The DALI 100k is supplied directly via the DALI signal line (typical current consumption <3mA). DALI power supply units like the DALI PS have the capability to supply control gear as well as control devices. The connection to the DALI-line is polarity free and protected against overvoltage of up to 270Vac.

The DALI 100k module can easily be installed in recessed conduit boxes.

Function, Factory Settings, Addressing and Configuration

The DALI 100k module measures the analogue input value and converts it to a digital DALI dim level, which can be sent to a destination address as direct arc power level. A typical structure of an installation is shown above. For simple applications the factory setting is sufficient and the device can be used immediately after being connected:

- Destination address: broadcast
- Input value 0%-100% is converted to DALI range 0-254
- Transmission of a new direct arc power level after input signal change
- A fade time of 0.7s is set before a direct arc power level is sent

If the factory settings should not cover all requirements, it is possible to adjust all settings using the DALI USB interface and the software "DALI-Cockpit". The DALI-Cockpit is a free configuration tool for DALI systems. It enables the communication with devices in the DALI circuit (standard DALI) as well as addressing and configuration of the DALI 100k¹. The DALI-Cockpit and DALI-USB Interface are only required for configuration

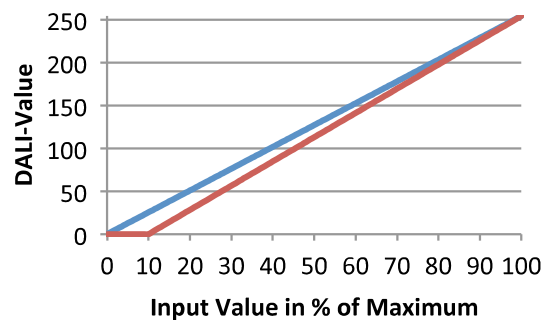
¹ besides the DALI 100k all other Lunatone DALI components are supported.

and can be removed after setup (see typical installation drawing).

During the addressing process the module is going to be registered and listed (random addressing). In addition several adjustments can be made:

Transmission Behaviour

The transmission behaviour can be adapted towards ensuring turning off. An offset value for the input value range can be defined below which the DALI value 0 will be displayed. Possible values for this threshold are 0% (default) 1%, 5% and 10% of the input value range.



Transmission of a new value

The conversion can be periodic or released by a trigger. The change of the input signal of 2% can be used as such a trigger. For periodic repeated conversions different time frames are possible: (0.7s, 1s, 1.4s, 2s, 2.8s, 4s, 5.7s, 10s, 30s, 1m, 2m, 5m, 10m, 30m, 60m).

Fading

The sending the fade time 0.7sec before a dim value change can be deactivated. To ensure a homogeneous brightness scale fading is necessary. With the deactivation it is up to the user how and with which devices the dimming is being performed. (for example: Fast Fading with DT6 devices with a fast fade time of 400ms)

Target Addresses

Also the target addresses, which should receive dim values, can be configured. Up to 4 destinations can be defined, single device addresses, groups as well as broadcast can be chosen.

Modes of Operation

The DALI 100k offers 3 operating modes.

Master Mode (Default)

In this operating mode the device works as DALI control device sending DALI commands to DALI ballasts. In combination with a central system controller the direct master mode might not be suitable and should be changed to one of the other operating modes.

Event Message Mode

If a dimming value has to be transmitted, this mode enables the device to send a signal to a specific target address (to itself or any other master), all in the scope of the proprietary protocol extension.

In this operating mode the device does not directly control DALI-loads, but is active at the DALI signal line.

Slave Mode

The slave mode is a passive operating mode. The DALI 100k is not automatically active, it only replies on request. The information retrieval of analogue values can be done with special commands, provided within the scope of the proprietary protocol extension. It is also possible to give the DALI 100k a standard DALI-address and retrieve the information via query scene level 3.

The operating mode can be selected with the DALI-Cockpit software.

Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems

<http://lunatone.at/en/dali-systems/software/>

DALI-Manual http://www.dali-ag.org/c/manual_gb.pdf

DALI USB – PC interface for DALI system. The DALI-Cockpit can access DALI components using the DALI USB

http://lunatone.at/en/downloads/Lunatone_Art24138923_DALI_USB_Datasheet_EN.pdf

DALI PS – power supply for a DALI line

http://lunatone.at/en/downloads/Lunatone_Art24033444_DALI_PS_Datasheet_EN.pdf

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