



DALI to 0-10V Interface

Datasheet

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DT5 Converter Module for the
integration of 0-10V dimmer in DALI
lighting systems

Art. Nr. 86458508-AN

DALI 0-10V Interface

Overview

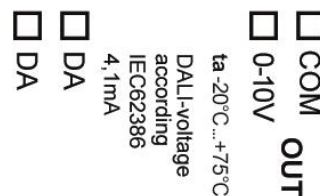
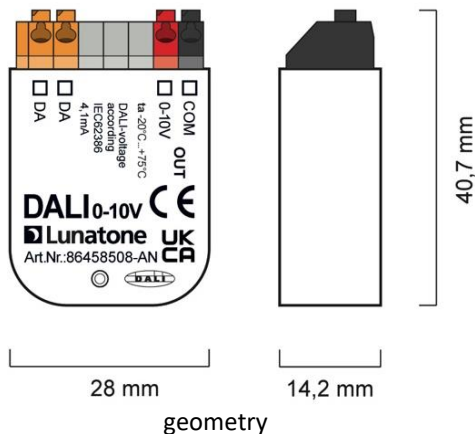
- module converting DALI dimming commands into analogue 0-10V signal (DALI DT5)
- the module is especially designed to operate with drivers with 0-10V control input
- transformation of DALI 8-Bit arc power level into analogue output signal from 0V to 10V
- selection of linear or logarithmic dimming curve (DT5)
- factory default are the default DT5 settings: output range 1-10V, logarithmic dimming curve
- maximum output current of 1mA (current sink)
- The DALI 0-10V must not be connected to the mains. It is supplied directly by the DALI signal line.
- The DALI 0-10V has its own address and can be assigned to DALI groups and scenes
- electrically isolated
- Auto Calibration Mode (can be deactivated or manually triggered via DALI-Cockpit)



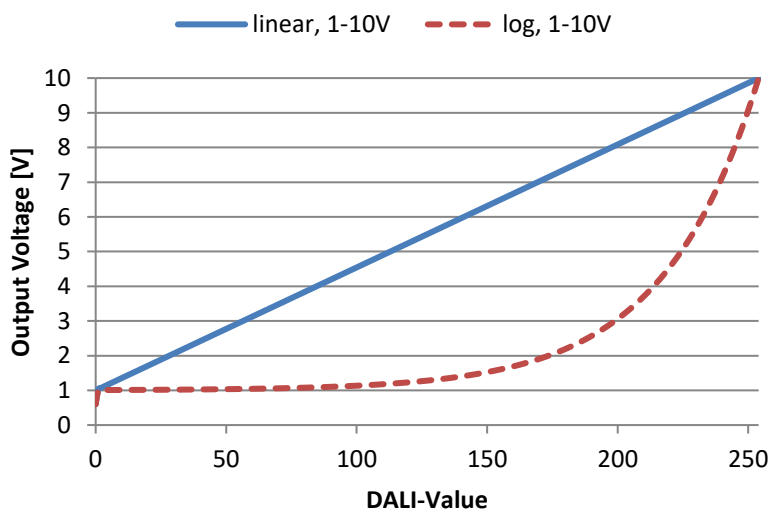
Specification, Characteristics

type	DALI 0-10V
article number	86458508-AN
electrical data	
supply	via DALI signal line
typ. current consumption DALI	<4.1 mA
input	DALI
output	0.6V-10V analog voltage 100uA-1mA
general data	
dimensions (l x w x h)	41mm x 28.0mm x 14 mm (details see page 3)
weight	~10g
protection degree housing	IP40
protection degree terminals	IP20
environmental conditions	
storing and transportation temperature	-20°C ... +75°C
operational ambient temperature	-20°C ... +75°C
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
actuation type	push button



connection plan



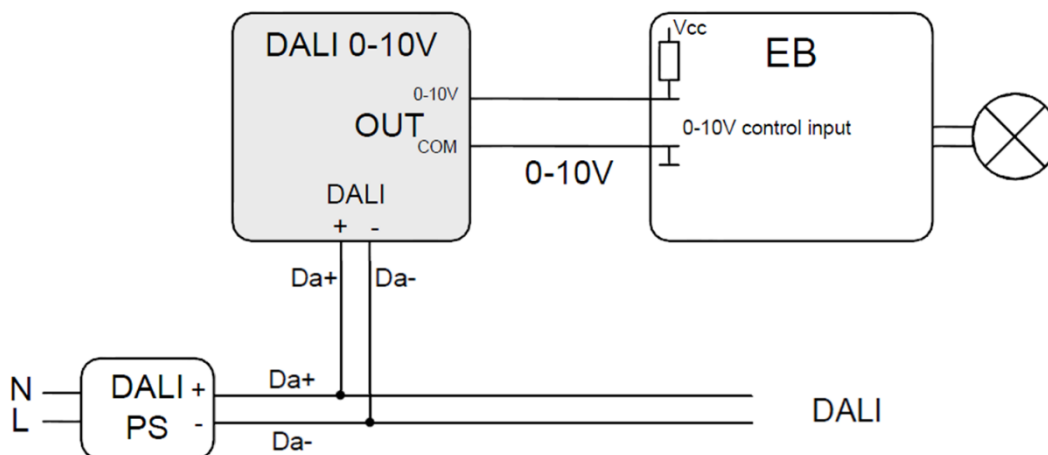
Output range 1-10V:

control characteristic:

DALI 0 (=OFF) correlates with a voltage below and a clear gap to 1V (<0,8V).

DALI 1-254 is transformed to 1V-10V output voltage

- linear
- - - logarithmic (default setting)



typical structure

Connection

The interface is supplied directly via the DALI signal line. It must not be connected to the mains. The current consumption is typically below 3mA. For supplying components on a DALI line the installation of a DALI power supply (DALI PS) is necessary.

The voltage output supports sinking currents up to 1mA. The terminals allow cross sections of the connection wire from 0.5 to 1.5 mm².

Function

The DALI 0-10V interface converts the desired DALI dim level in a corresponding output voltage. Two types of conversion curves are available (according to DALI DT5). The DALI direct arc power level [1-254] is linearly or logarithmic converted to the output signal [1V-10V]. The relationships are clearly represented by the control characteristic diagram. The maximum output current is 1mA (current sink).

DALI instruction set

The DALI 0-10V module is based on the standard for DALI control gear (IEC 62386-102) and device type 5 extension (IEC 62386-206). With few exceptions the entire instruction set defined by the DALI standard is supported. For changing dimming curve DALI commands for device type 5 are implemented.

Commands and functions referring to the SYSTEM FAILURE LEVEL are not supported. This parameter is used as the dim level that should be applied on the output in case of a DALI line outage. Since the DALI 0-10V is a bus powered device there is no possibility to apply a specific predefined signal on the output without being under power. In the case of a DALI-line outage 100% are applied on the output.

Auto Calibration Mode

On power up the DALI 0-10V converter is evaluating if the calibration values for the output values are still correct or if a recalibration is required. A calibration will last up to 2 minutes. The auto calibration routine can be deactivated and manually triggered via DALI-Cockpit software tool. During the calibration the device does not react to any dimming commands. The DALI Cockpit provides information if the device is in normal operation or if the auto calibration is running.

Purchase Information

article number: 86458508-AN

DT5 interface module for conversion of DALI signals to an electrically isolated 0-10V analog signal

similar components:

[DALI 0-10V PWM \(Art.Nr. 86458508-PWM\)](#)

with PWM output, galvanic isolation between DALI-input and PWM output

[DALI PWM \(Art.Nr. 86458508-100\)](#) with PWM output (100mA), galvanic isolation between DALI-input and PWM output

[DALI 0-10V LE \(Art.Nr. 86458508-LE\)](#) with analog output, suitable for 0-10V drivers with electrically isolated control input

Additional Information and Equipment

DALI-Cockpit – free configuration tool for
DALI systems

www.lunatone.com/en/product/dali-cockpit/

Lunatone DALI products

<https://www.lunatone.com/en/>

Lunatone datasheets and manuals

<https://www.lunatone.com/en/downloads-a-z/>

Contact

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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.