![Lunatone logo]

DALI 0-10V PWM

Datasheet

DALI to 0-10V PWM interface

DT5 Converter Module for the integration of ballasts with PWM-control input in DALI systems
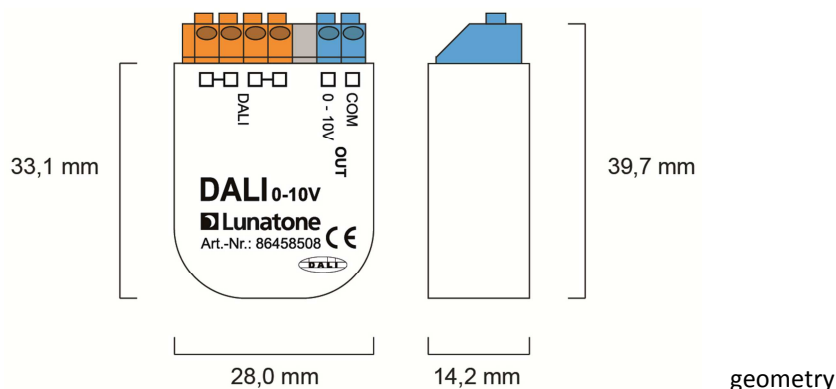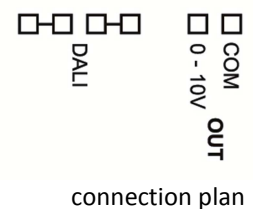
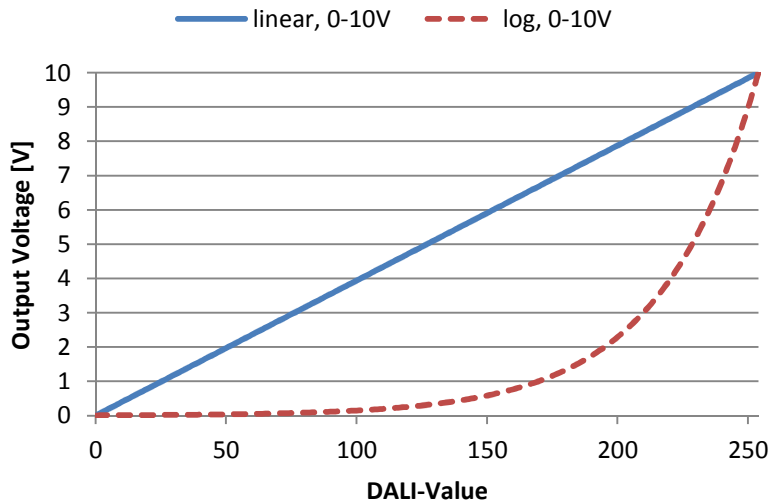Art. Nr. 86458508-PWM

DALI 0-10V PWM Interface

Overview

- module converting DALI dimming commands into PWM signal

- easy integration of electronic ballast with PWM control input (e.g. Meanwell HLG, HLN, NPF or LPF series) in DALI lighting systems

- advantage of fail-safe digital signal data communication compared to types with analog output voltage

- transformation of DALI 8-Bit arc power level into PWM output signal (~500Hz) from 0% to 100%

- Selection of linear or logarithmic dimming curve (DT5)

- Output range selectable between 0-100% and 10-100% (DT5)

- Manufacturer specific mode for customized output range (FW2.0+)

- maximum output current of 1mA (current sink)

- The DALI 0-10V 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

- DALI signal line is connected through

- galvanic isolation between DALI and 0-10V

Specification, Characteristics

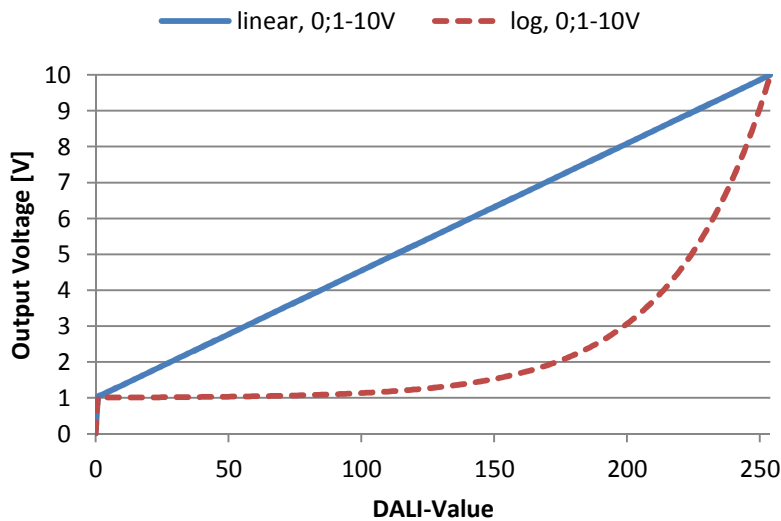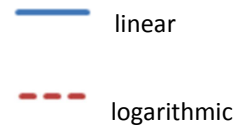| type	DALI-0-10V PWM
article number	86458508-PWM
supply	via DALI signal line
typ. current consumption DALI	3.1 mA
input	DALI
output	488Hz PWM (0%-100%)/1mA current sink
geometry (l/w/h)	39.7mm / 28.0mm / 14.2 mm
weight	~10g
storing and operational ambient temperature	-20°C to +75°C
protection class	IP20
connecting wire cross section	0.5-1.5 mm^2

connection plan

geometry

Output Voltage Range: 0-10V:

control characteristic:

DALI 0-254 is transformed into a 0-10V output voltage (0%-100% PWM pattern).

— linear

-- logarithmic

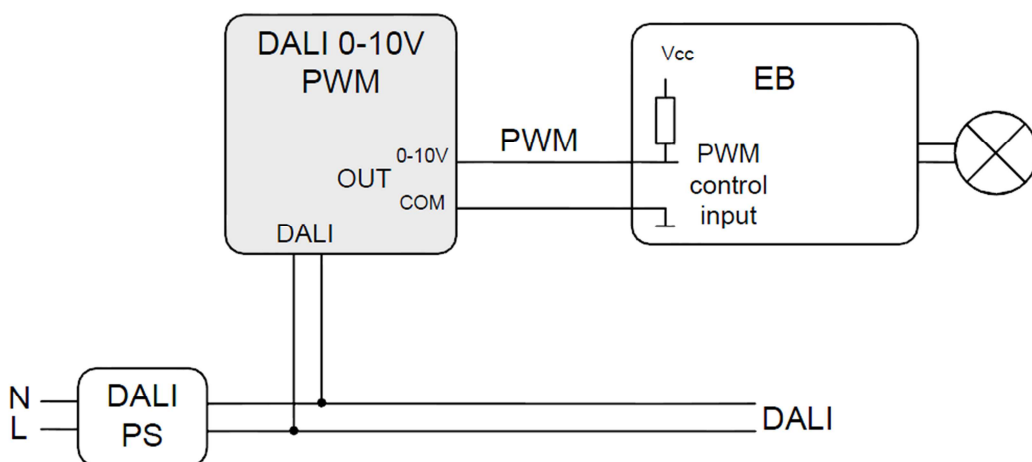**Output Voltage Range: 1-10V:**

control characteristic:

DALI 0 (=OFF) correlates with a voltage bleow 0,5V.

DALI 1-254 is transformed to a 1-10V output voltage (10%-100% PWM pattern).

— linear

-- logarithmic

Note: the voltage values given in the control characteristics are valid only in the case that 10VDC are applied to the output

typical application

Connection

The interface is supplied directly via the DALI signal line. It must not be connected to the mains. A typical value of the current consumption is approximately 3.1 mA. For supplying components on a DALI line the installation of a DALI power supply (DALI PS) is necessary. The connection to the DALI line is polarity free. Internally the DALI-terminals are connected through as visualized on the housing.

The PWM output supports sinking currents up to 1mA.

The terminals allow cross sections of the connection wire from 0.5 to 1.5 mm^2.

Function

The DALI 0-10V PWM interface converts the desired DALI dim level in a corresponding PWM-pattern. Up from firmware 2.0 DALI device type 5 is supported. This allows the selection of the control characteristic with respect to output range (0-10V/1-10V) and dimming curve (linear/logarithmic). The relationship is clearly presented by the control characteristic diagram. The maximum output current is 1mA (current sink).

 Firmware 2.0 an higher support a manufacturer specific mode as well. It allows the customized adaption of the output voltage range. This option can be easily accessed with the help of the DALI Cockpit software tool.

DALI instruction set

The DALI PWM is based on the standard for DALI control gear (IEC 62386-102) and device type 5 extension (IEC 62386-206).

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.

Purchase Information

article number: 86458508-PWM

DT5 interface module for conversion of DALI signals to a PWM signal, galvanic isolation between DALI-input and PWM output

similar components:

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

DALI 0-10V AN (Art.Nr. 86458508-AN) with analog output, galvanic isolation between DALI input and 0-10V output, automatic calibration algorithm

Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems
http://lunatone.at/de/dali-systeme/software/

Lunatone DALI products
http://www.lunatone.at/de/

Lunatone datasheets and manuals
http://lunatone.at/de/downloads/

Contact

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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.