

## 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

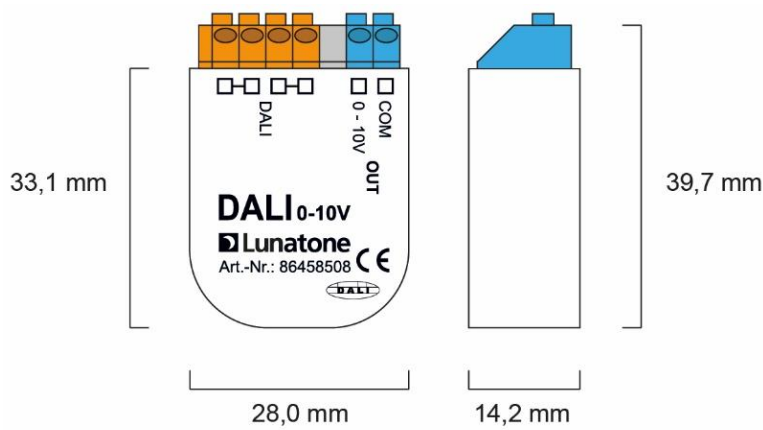
## Overview

- 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

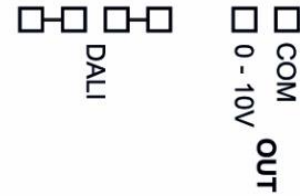
## Specification, Characteristics

type	DALI-0-10V PWM
article number	86458508-PWM
<b>electrical data</b>	
supply	via DALI signal line
typ. current consumption DALI	3.1 mA
input	DALI
output	488Hz PWM (0%-100%)/1mA current sink
<b>general data</b>	
geometry (l/w/h)	41mm / 28.0mm / 14 mm (details see page 3)
weight	~10g
protection degree housing	IP40
protection degree terminals	IP20
<b>environmental conditions</b>	
storing and transportation temperature	-20°C ... +75°C
operational ambient temperature	-20°C ... +75°C
<b>terminals</b>	
connection type	spring terminal connector
wire size solid core	0,5 ... 1,5 mm <sup>2</sup>

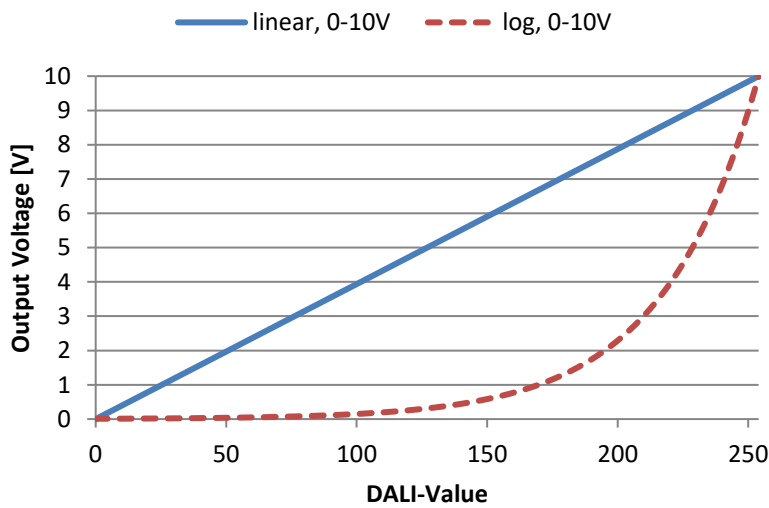
	(AWG20 ... AWG16)
wire size fine wired	0,5 ... 1,5 mm <sup>2</sup> (AWG20 ... AWG16)
wire size using wire end ferrule	0,25 ... 1 mm <sup>2</sup>
stripping length	8,5 ... 9,5mm / 0,33 ... 0,37inch
actuation type	push button



geometry



connection plan

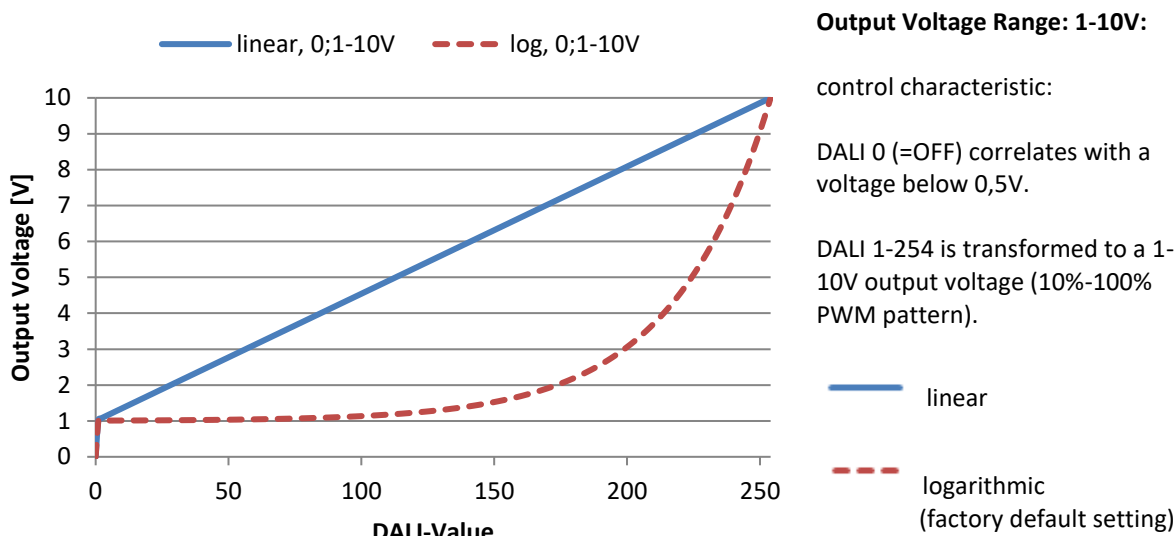


**Output Voltage Range: 0-10V:**

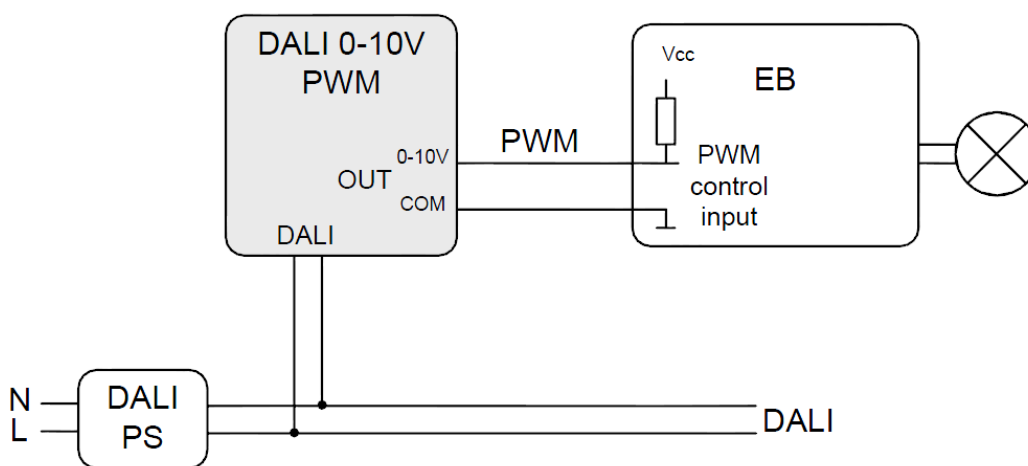
control characteristic:

DALI 0-254 is transformed into a 0-10V output voltage (0%-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<sup>2</sup>.

## 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 and 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 analogue output, suitable for 0-10V drivers with electrically isolated control input

[DALI 0-10V AN \(Art.Nr. 86458508-AN\)](#) with analogue 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

<https://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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## 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.