BRIDGE DALI 0-10V PLC DC STR lp

Bridge to convert 0...10 V and DALI into power line communication for DC-String system

Product description

_ Bridge for converting analogue signals or digital DALI / DALI-2 signals into PLC for DC-String dimming

_ Note: Due to PLC technology the bridge only works with Tridonic 48 V DC string LED drivers (in combination with 48 V LMI DC boards). Error-free operation with 48 V Drivers from other manufacturers is not guaranteed.

_ For connecting dimmable DC-String LMI LED driver in 0...10 V or DALI control systems

_ In delivery condition 0 ... 10 V is active (for details see data sheet chapter 4.1)

_ For a maximum of 20 DC-String LMI LED driver / addresses

_ On/off switching via DC-STR UNV FO Driver 0...10V or DALI

_ For the "group dimming" functionality by using standard 0...10 V dimmers or individual dimming using DALI

_ Class 2 control device

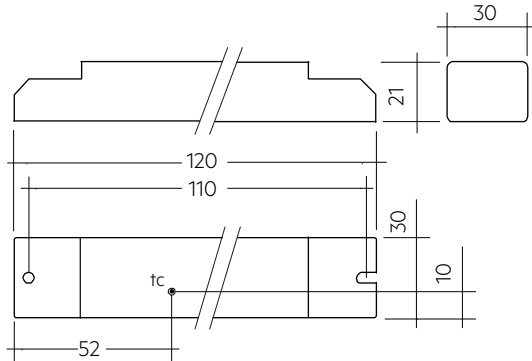_ Casing: polycarbonate, white

_ 5 years guarantee (conditions at https://www.tridonic.com/manufacturer-guarantee-conditions)

Website

http://www.tridonic.com/28003419

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Ordering data

Type	Article number	Packaging, carton	Weight per pc.
BRIDGE DALI / 0-10V PLC DC-STR lp	**28003419**	10 pc(s).	0.038 kg

Technical data

Rated voltage range DC	45 – 54 V
Rated current (at 48 V DC) [1]	< 30 mA
Power consumption	< 1.5 W
On / off switching cycles	50,000
Ambient temperature ta (at lifetime 50,000 h)	-25 ... +60 °C
Max. casing temperature tc	65 °C
Guarantee (conditions at www.tridonic.com)	5 Year(s)
Dimensions L x W x H	120 x 30 x 21 mm

Approval marks

c**UL**us CE UK CA RoHS

Standards

UL 8750, CSA C22.2, FCC PART 15, EN 61347-1, EN 61347-2-11, EN 55015, EN 61547

[1] Only compatible with Tridonic's 48 V DC-String system.

1. Standards

UL 8750
CSA C22.2
FCC Part 15
EN 61347-1
EN 61347-2-11
EN 55015
EN 61547

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

1.1 Glow wire test

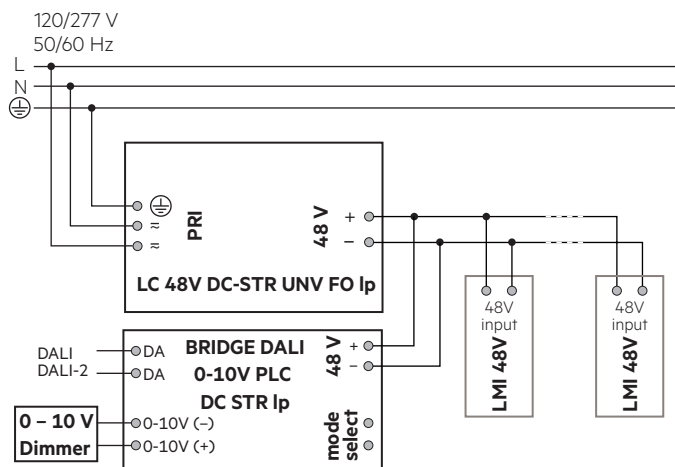according to EN 61347-1 with increased temperature of 850 °C passed.

2. Thermal details and lifetime

2.1 Expected lifetime

Lifetime is limited by DC power supply.
Max. tc point temperature must not be exceeded.

# 3. Installation / wiring

3.1 Circuit diagram

To use dimming functionality use dimmable LMI LED drivers with "DIM" in the product name.

3.2 Wiring type and cross section

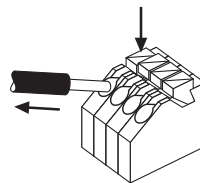For wiring use stranded wire with ferrules or solid wire from 0.2–1.5 mm² / 24 – 16 AWG.
Strip 8.5–9.5 mm / 3/8 inch of insulation from the cables to ensure perfect operation of the push-wire terminals.
Use one wire for each terminal connector only.

wire preparation:
0.2 – 1.5 mm² / 24 – 16 AWG

8.5 – 9.5 mm / 0.33 – 0.37 inch
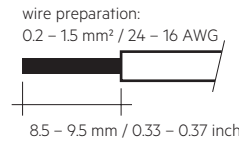
3.3 Loose wiring

Press down the "push button" and remove the cable from front.

3.4 Fixing conditions when using as independent Driver with Clip-On

Dry, acidfree, oilfree, fatfree. It is not allowed to exceed the maximum ambient temperature (ta) stated on the device. Minimum distances stated below are recommendations and depend on the actual luminaire.
Is not suitable for fixing in corner.
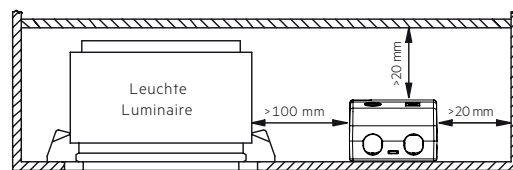
3.5 Hot plug-in

BRIDGE is suitable for hot plug-in.
Devices will be switched off shortly for fadetime configuration at hot plug-in.
Maximum number of LMI LED drivers is limited by 20.

4. Electrical values

4.1 Mode selection

It can be switched between 0...10 V (open) and DALI interface (short) with the "mode select" terminals by setting a jumper.

4.2 Dimming characteristics
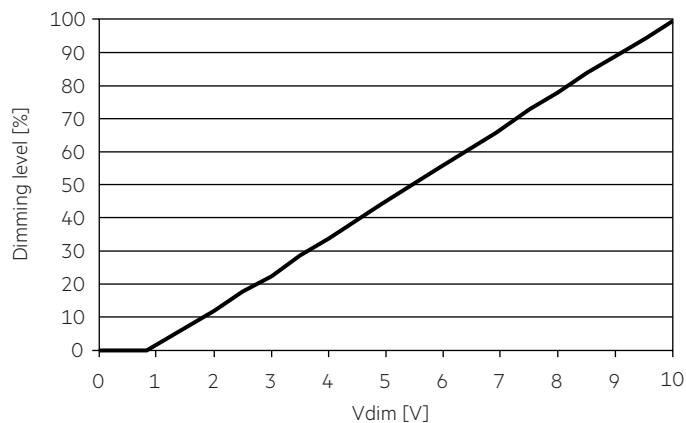
Control input DALI

Digital control with:
DALI signal: 16 bit Manchester Code

For dimming and programming see data sheet of dimmable LMI LED drivers.

Control input (0 – 10 V)

Control input open	max. dimming level
Control input short-circuited	off (stand-by)
Interface current range	540 µA
Max. permitted input voltage	± 13 V
Voltage range dimming	1 – 10 V
Input voltage < 1 V	off (stand-by)
Input voltage > 10 V	max. dimming level

Interface is class 2 (without DALI connected).

BRIDGE sends stand-by command to LMI LED drivers from operation to stand-by for a voltage of < 0.8 V and from stand-by to on for a voltage of > 1 V.

0... 10 V control input

To the 0...10 V interface passive potentiometers or 0...10 V voltage sources can be connected.

Control with passive potentiometers
To accurately adjust light levels it is recommended that you use a 22 kΩ potentiometer. If another potentiometer value is already in use, then install a suitable resistor in parallel or series.

Control with a 0...10 V voltage source
The 0...10 V input is supplying a control current for operation with passive potentiometers. In the event of using an active voltage source please be aware that this source has to be able to sink a current of 2 mA to enable correct adjustment.
In this case the voltage source has to supply a minimum current of 2 mA to reach the maximum needed output voltage of +10 V.

5. Miscellaneous

5.1 Conditions of use and storage

Environmental conditions: 5 % up to max. 85 %, not condensed (max. 56 days/year at 85 %)

Storage temperature: -25 °C bis max. +60 °C

The devices have to be acclimatised to the specified temperature range (ta) before they can be operated.

5.2 Additional information

Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

Lifetime declarations are informative and represent no warranty claim. No warranty if device was opened.