

BRIDGE 0-10V PLC DC STR Ip

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

Product description

- Bridge for converting analogue signals into PLC for DC-String dimming
- For connecting dimmable DC-String LMI LED Driver in 0...10 V control systems
- For a maximum of 20 DC-String LMI LED Driver
- On/off switching via DC-STR UNV FO Driver
- For the "group dimming" functionality by using standard 0...10 V dimmers
- Class 2 control device
- Dry and damp location
- Casing: polycarbonate, white
- 5-year guarantee



Wiring diagrams and installation examples, page 3



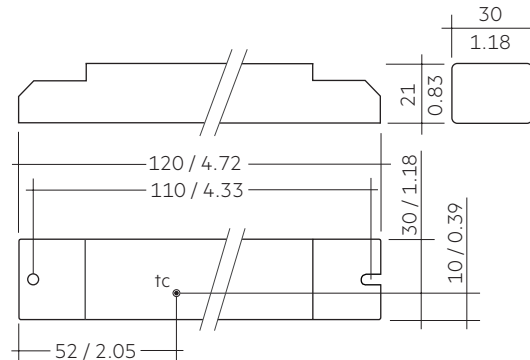
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Technical data

| | |
|--|---|
| Rated supply voltage DC ^① | 45 – 54 V |
| Power consumption | < 700 mW |
| On / off switching cycles | 50,000 |
| Ambient temperature ta (at life-time 50,000 h) | -25 ... +60 °C / -13 ... +140 °F |
| Max. casing temperature tc | 70 °C / 158 °F |
| Dimensions L x W x H | 30 x 21 x 120 mm / 1.18 x 0.83 x 4.72 inch |

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



Dimensions in mm / inch

Ordering data

| Type | Article number | Packaging, carton | Weight per pc. |
|-------------------------|----------------|-------------------|----------------------|
| BRIDGE 0-10V PLC DC STR | 28002074 | 10 pc(s). | 0.036 kg / 0.079 lbs |

This product is for use together with following DC-String product:

| Type | Article number | Packaging box | Packaging pallet | Weight per pc. |
|------------------------------|----------------|---------------|------------------|----------------------|
| LC 48V 100W DC-STR UNV FO Ip | 28001983 | 15 pc(s). | 540 pc(s). | 0.338 kg / 0.745 lbs |

For dimming applications we recommend using following LMI LED Drivers together with BRIDGE 0-10V PLC DC STR and LC 48V 100W DC-STR UNV FO Ip:

| Type | Article number | Packaging box | Packaging carton (contains 10 boxes) | Packaging pallet | Weight per pc. |
|--------------------------------------|----------------|---------------|--------------------------------------|------------------|----------------|
| LMI G2 48V 350-700mA 3-20V DIM slim | 28000731 | 5 pc(s). | 50 pc(s). | 3,000 pc(s). | 0.029 lbs |
| LMI G2 48V 350-700mA 20-42V DIM | 28001584 | 5 pc(s). | 50 pc(s). | 3,000 pc(s). | 0.026 lbs |
| LMI G2 48V 350-700mA 20-42V DIM slim | 28001585 | 5 pc(s). | 50 pc(s). | 3,000 pc(s). | 0.029 lbs |
| LMI G2 48V 700-1050mA 3-20V DIM slim | 28001583 | 5 pc(s). | 50 pc(s). | 3,000 pc(s). | 0.035 lbs |

1. Standards

UL 8750
CSA C22.2
FCC Part 15

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 / 1,562 °F passed.

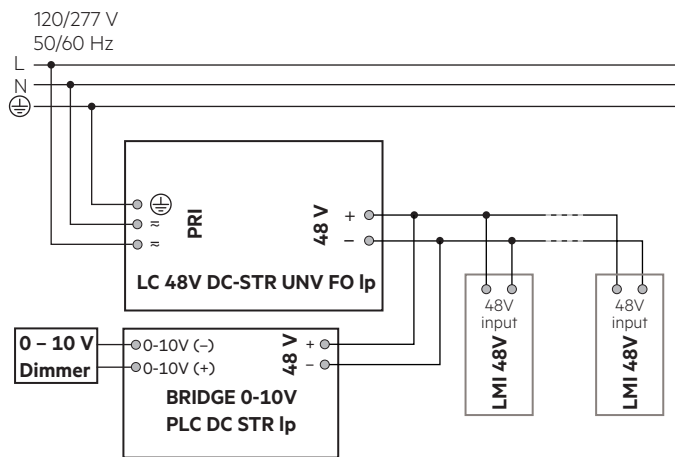
2. Thermal details and life-time

2.1 Expected life-time

Life-time is limited by DC power supply.
Max. tc point temperature must not be exceeded.

3. Installation / wiring

3.1 Circuit diagram



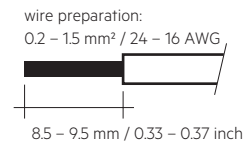
To use dimming functionality use dimmable LMI LED drivers with “DIM” in the product name.

3.2 Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid with a cross section of 0.2–1.5 mm² / 24 – 16 AWG.

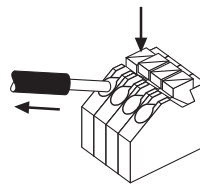
Strip 8.5–9.5 mm / 3/8 inch of insulation from the cables to ensure perfect operation of the push-wire terminals.

Use one wire for each terminal connector only.



3.3 Loose wiring

Press down the “push button” and remove the cable from front.



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

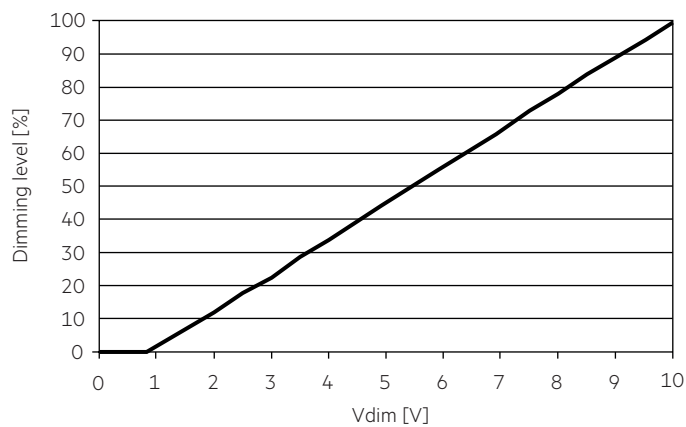
4.1 Dimming

Dimming range is 1 to 100%.

4.2 Dimming characteristics

Control input (0 – 10 V)

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



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.

4.3 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 k Ω 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.

7. Miscellaneous

7.1 Conditions of use and storage

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

Storage temperature: -13 °F up to max. +140 °F

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

7.2 Additional information

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

Guarantee conditions at www.tridonic.com → Services

Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.