

IP20 SELV              RoHS

TALEXconverter LCBU 25W 12V BASIC phase-cut SR BASIC series

Product description

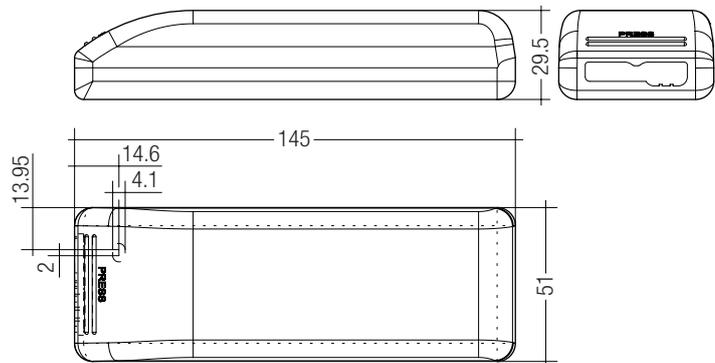
- Dimmable via leading edge and trailing edge phase dimmers
- Nominal life-time of 50,000 h (at ta max. 50 °C with a failure rate of max. 0.2 % per 1,000 h)
- 12 V DC output voltage
- Screw terminals
- Connecting cable, wire cross-section 0.5 – 2.5 mm²
- Output power 25 W
- SELV
- Type of protection IP20
- Output dimmed analogue (current amplitude)
- Dimming range typ. 5 to 100 % (depending on dimmer)

Properties

- Casing: polycarbonate, white
- Compact dimensions
- Overload protection
- Short-circuit protection
- No-load protection

Technical data

| | |
|---|--------------------|
| Rated supply voltage | 220 – 240 V |
| Input voltage AC | 198 – 264 V |
| Mains frequency | 50 / 60 Hz |
| Typ. rated current (at 230 V, 50 Hz, full load) | 0.135 A |
| Typical ripple voltage at full load | ± 7 % |
| Power factor at full load [Ⓟ] | 0.97 |
| Power factor at min. load [Ⓟ] | 0.75C |
| Turn on time (at 230 V, 50 Hz, full load) | ≤ 0.1 s |
| Turn off time (at 230 V, 50 Hz, full load) | ≤ 0.1 s |
| Hold on time at power failure (output) | 0 s |
| Ambient temperature ta | -25 ... +50 °C |
| Ambient temperature ta (at life-time 50,000 h) | 50 °C |
| Max. casing temperature tc | 75 °C |
| Storage temperature ts | -40 ... +85 °C |
| Dimensions L x W x H | 145 x 51 x 29.5 mm |



Ordering data

| Type | Article number | Packaging, carton | Packaging, pallet | Weight per pc. |
|---------------------------------|----------------|-------------------|-------------------|----------------|
| LCBU 25W 12V BASIC phase-cut SR | 89800290 | 10 pc(s). | 600 pc(s). | 0.117 kg |



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Specific technical data

| Type | Efficiency at full load [Ⓟ] | Efficiency at min. load [Ⓟ] | Max. output current | Output voltage DC | Max. output voltage DC | Max. input power | Output power |
|--------------------------------|--------------------------------------|--------------------------------------|---------------------|-------------------|------------------------|------------------|--------------|
| LCU 25W 12V BASIC phase-cut SR | 83 % | 77 % | 2.1 A | 11 – 15 V | 15 V | 30 W | 10 – 25 W |

[Ⓟ] Test result at 230 V, 50 Hz.

Standards

EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384

Glow wire test according to IEC 60695-2-11

960 °C passed.

Overload protection

If the output voltage range is exceeded the LED control gear reduces the LED output current. After elimination of the overload the nominal operation is restored automatically.

Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED control gear switches into hic-cup mode. After the removal of the short-circuit fault the LED control gear will recover automatically.

No-load operation

The LED control gear works in constant current mode. In no-load operation there is the max. output voltage at the output (see page 1).

Installation instructions

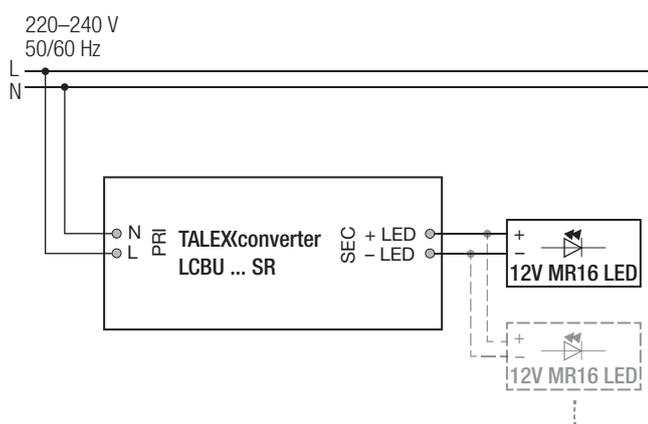
Note the requirements set out in the document
LED_driver_installation_advise.pdf
(<http://www.tridonic.com/com/en/technical-docs.asp>).

Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

Maximum loading of automatic circuit breakers

| Automatic circuit breaker type | C10 | C13 | C16 | C20 | B10 | B13 | B16 | B20 | Inrush current | |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------|-------|
| | | | | | | | | | I_{max} | Time |
| Installation Ø | 1.5 mm ² | 1.5 mm ² | 1.5 mm ² | 2.5 mm ² | 1.5 mm ² | 1.5 mm ² | 1.5 mm ² | 2.5 mm ² | | |
| LCBU 25W 12V BASIC phase-cut SR | 35 | 45 | 55 | 70 | 35 | 45 | 55 | 70 | 1.7 A | 40 µs |

Wiring diagram

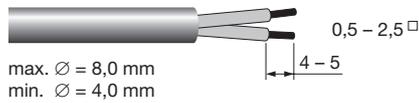


Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid. For perfect function of the cage clamp terminals the strip length should be 4 – 5 mm for the input terminal.

The max. torque at the clamping screw (M3) is 0.2 Nm.

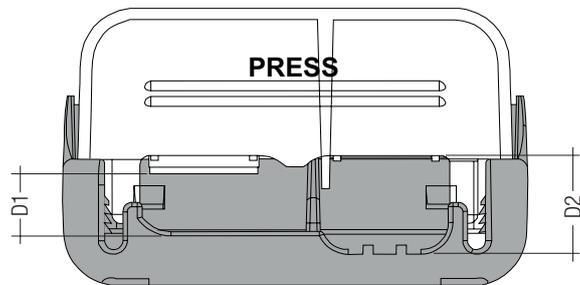
Input terminal (D2)



Output terminal (D1)



To get a proper working strain relief it is recommended that the cable jacket diameter of the side D2 is compared to the side D1 terminal according to the value table. (This can vary if the used cable jacket material varies from side D2 to D1 in pinching property).



Depending on the used flaps of the terminal following cable jacket diameter difference between the side D2 and D1 terminals is recommended:

| Side D1 | | Side D2 | | Difference D2 - D1 |
|----------------|----------------|----------------|----------------|--------------------|
| Housing bottom | Cover terminal | Housing bottom | Cover terminal | |
| With flap | Without flap | With flap | Without flap | |
| x | - | x | - | 3.5 mm |
| x | - | x | - | 5.5 mm |
| x | - | - | x | 3.5 mm |
| - | x | x | - | 3.5 mm |
| - | x | - | x | 1.5 mm |
| x | - | - | x | 1.5 mm |
| - | x | x | - | 1.5 mm |
| - | x | - | x | -0.5 mm |

Wiring instructions

The secondary leads should be separated from the mains connections and wiring for good EMC performance.

Maximum lead length on secondary side is 3 x 2 m (parallel wiring of 12 V modules). For a good EMC performance keep the the LED wiring as short as possible.

Isolation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.

The isolation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

Additional information

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

Guarantee conditions at www.tridonic.com → Services

No warranty if device was opened.