



TALEXconverter LCBI 8 W 180 mA phase-cut SR BASIC series

Product description

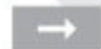
- Independent dimmable LED control gear
- Constant current LED control gear
- Output current 180 mA
- Max. output power 8 W
- Nominal life-time up to 40,000 h
- SELV
- Dimmable via leading edge and trailing edge phase dimmers
- Output dimmed analogue (current amplitude)
- Dimming range typ. 10 to 100 % (depending on dimmer)
- For luminaires of protection class I and protection class II
- For luminaires with M and MM as per EN 60598, VDE 0710 and VDE 0711
- Temperature protection as per EN 61347-2-13 C5e
- 5-year guarantee

Properties

- Casing: polycarbonat, white
- Type of protection IP20
- Push-in terminals (input side)

Functions

- Overload protection
- Short-circuit protection
- No-load protection
- No output current overshoot at mains on/off (at full load)



Standards, page 3

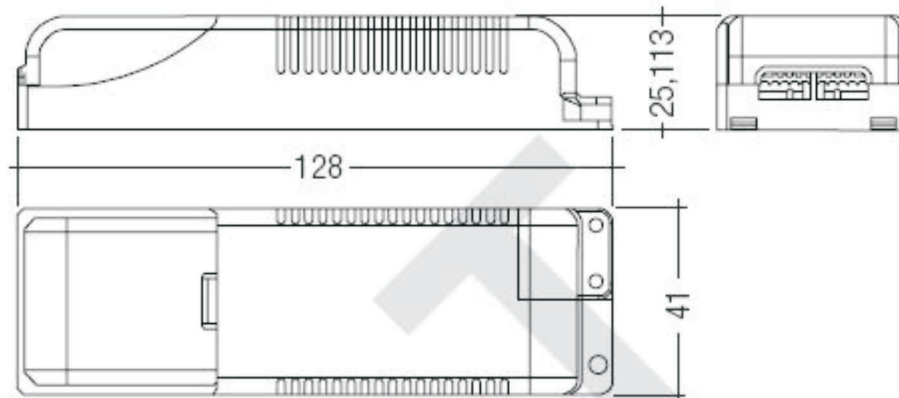
Wiring diagrams and installation examples, page 4

IP20 SELV           RoHS

TALEXconverter LCBI 8 W 180 mA phase-cut SR BASIC series

Technical data

| | |
|---|------------------|
| Rated supply voltage | 220 – 240 V |
| Input voltage, AC | 198 – 264 V |
| Typ. rated current (at 230 V, 50 Hz, full load) | 0.05 A |
| Power factor at full load ^① | 0.9 |
| Power factor at min. load ^① | 0.9 |
| Mains frequency | 50 / 60 Hz |
| Max. input power | 11 W |
| Output power | 6 – 8 W |
| THD (at 230 V, 50 Hz, full load) | < 20 % |
| THD (at 230 V, 50 Hz, min. load) | < 20 % |
| Output current tolerance (at 230 V, 50 Hz, full load) | ± 7.5 % |
| Output current tolerance (at 230 V, 50 Hz, min. load) | ± 10 % |
| Turn on time (at 230 V, 50 Hz, full load) | ≤ 0.5 s |
| Turn off time (at 230 V, 50 Hz, full load) | ≤ 0.2 s |
| Hold on time at power failure | 0 s |
| Ambient temperature t_a | -20 ... +50 °C |
| Max. casing temperature t_c | 70 °C |
| Storage temperature t_s | -40 ... +80 °C |
| Dimensions L x W x H | 128 x 41 x 25 mm |



Ordering data

| Type | Article number | Packaging, carton | Packaging, low volume | Packaging, high volume | Weight per pc. |
|--------------------------------|----------------|-------------------|-----------------------|------------------------|----------------|
| LCBI 8W 180mA phase-cut SR VTX | 87500310 | tbd pc(s). | tbd pc(s). | tbd pc(s). | tbd kg |

Specific technical data

| Type | Output current | Efficiency at full load ^① | Efficiency at min. load ^① | Min. output voltage ^① | Max. output voltage ^① | Max. output voltage (no-load voltage) | Max. repetitive output peak current at full load | Max. repetitive output peak current at min. load | Max. non-repetitive output peak current at full load | Max. non-repetitive output peak current at min. load | Typ. ripple current at full load |
|--------------------------------|----------------|--------------------------------------|--------------------------------------|----------------------------------|----------------------------------|---------------------------------------|--|--|--|--|----------------------------------|
| LCBI 8W 180mA phase-cut SR VTX | 180 mA | 80 % | 77 % | 33 V | 45 V | 60 V | 285 mA | 265 mA | 252 mA | 349 mA | ± 25 % |

^① Test result at 230 V, 50 Hz without dimmer connected.

Standards

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

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 off. After elimination of the short circuit the nominal operation is restored automatically.

No-load operation

The LED control gear works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string open due a failure.

In no-load operation the output voltage will not exceed the specified max. output voltage (see page 2).

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

Storage temperature: -40 °C up to max. +80 °C

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

Glow wire test

according to EN 60598-1 with increased temperature of 960 °C passed.

Expected life-time

| Type | t_a | 40 °C | 50 °C | 60 °C |
|--------------------------------|-----------|----------|----------|-------|
| LCBI 8W 180mA phase-cut SR VTX | t_c | 60 °C | 70 °C | x |
| | Life-time | 40,000 h | 30,000 h | x |

Maximum loading of automatic circuit breakers

| Automatic circuit breaker type | C10 | C13 | C16 | C20 | B10 | B13 | B16 | B20 | Inrush current | |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------|-------------|
| | | | | | | | | | I_{max} | Time |
| Installation \emptyset | 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 | 10 A | 100 μ s |
| LCBI 8W 180mA phase-cut SR VTX | 60 | 90 | 120 | 140 | 30 | 45 | 60 | 70 | | |

Installation instructions

The LED module and all contact points within the wiring must be sufficiently insulated against **2.8 kV** surge voltage.

Air and creepage distance must be maintained.

Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 12 seconds
4. Connect LED module again

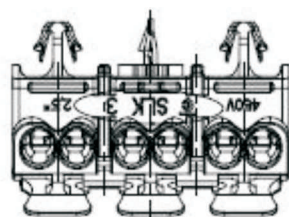
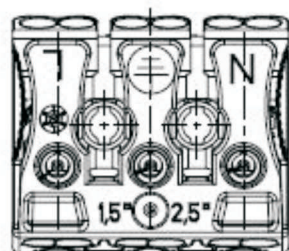
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

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



Output terminal



Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED control gear and other leads (ideally 5 – 10 cm distance)
- Max. length of output wires is 2 m.
- Secondary switching is not permitted.
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

Additional information

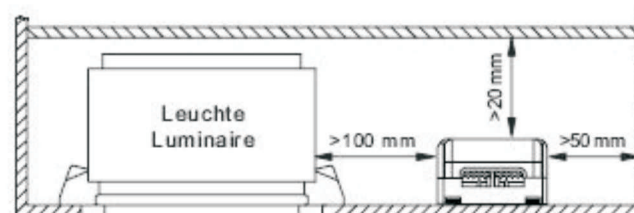
Additional technical information at
www.tridonic.com → Technical Data

Guarantee conditions at
www.tridonic.com → Services

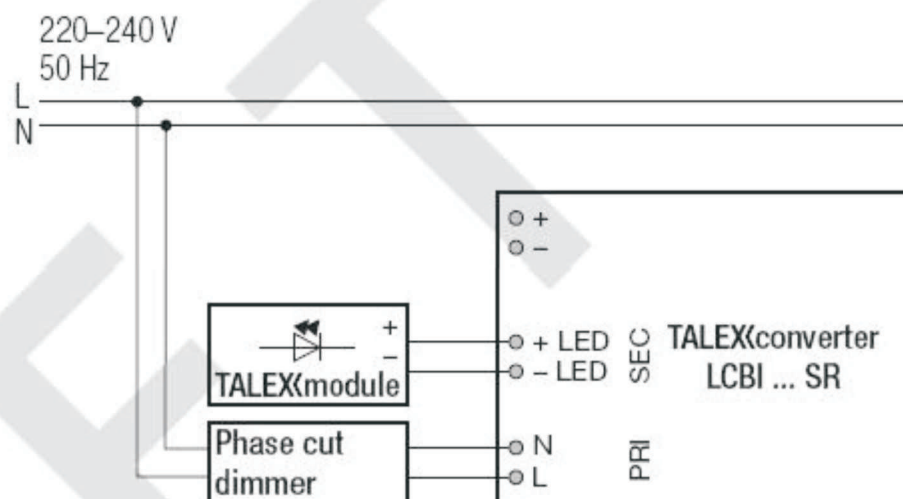
No warranty if device was opened.

Fixing conditions

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



Wiring diagram



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.

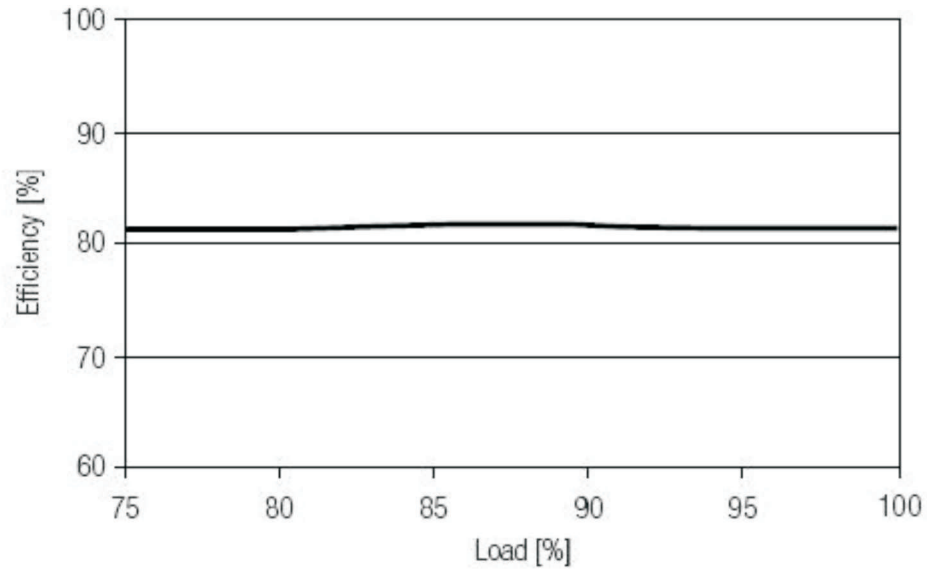
According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.

The isolation resistance must be at least 2 M Ω .

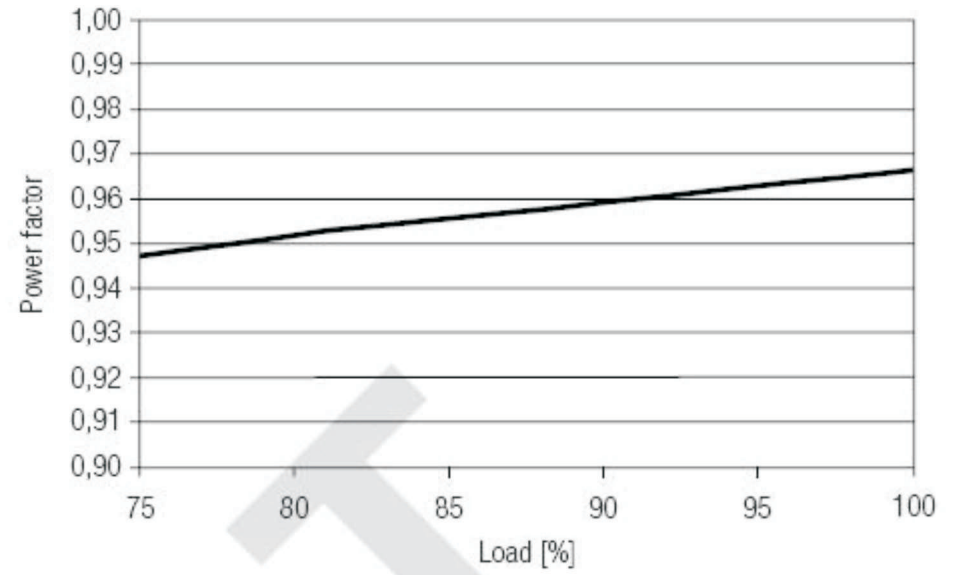
As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

Diagrams LCBI 10W 180mA phase-cut/1-10 V SR

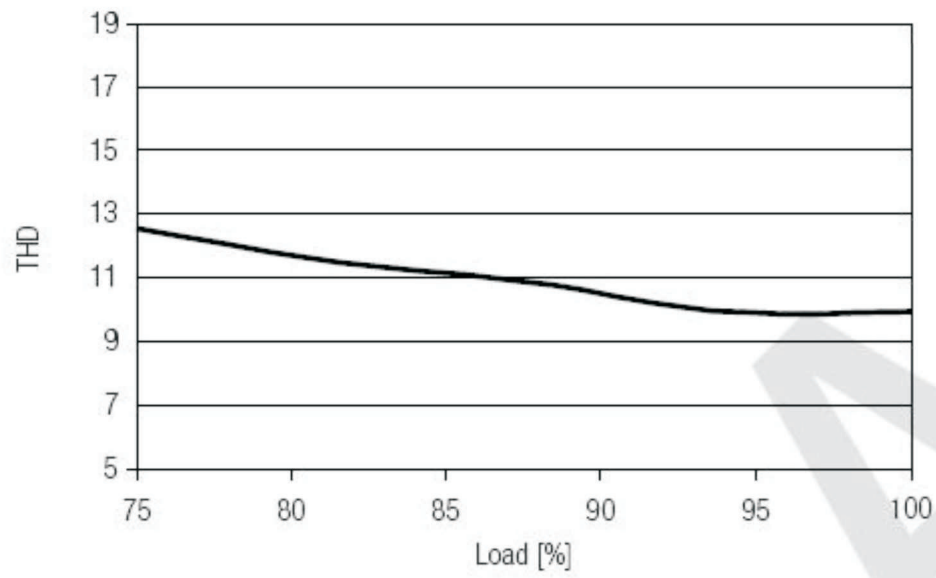
Efficiency vs load



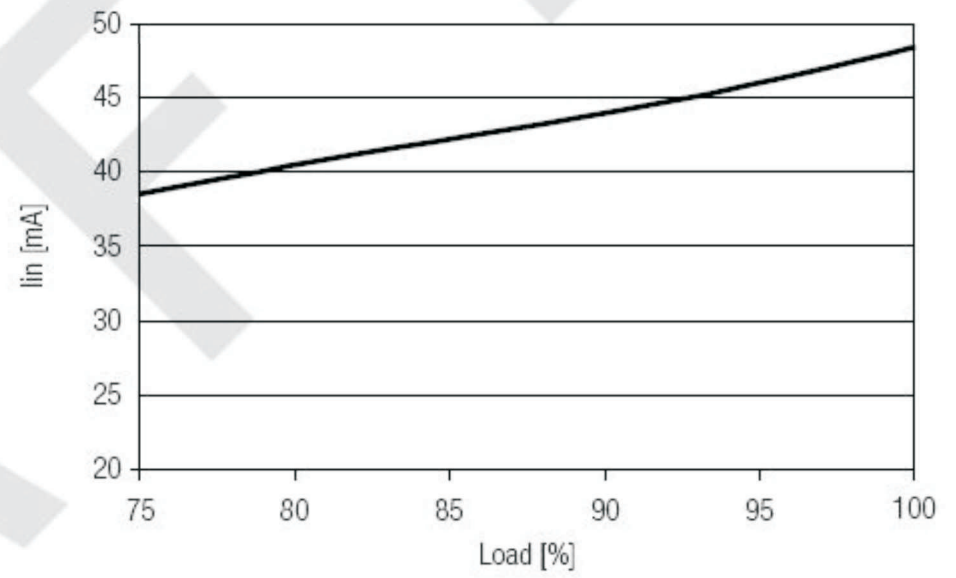
Power factor vs load



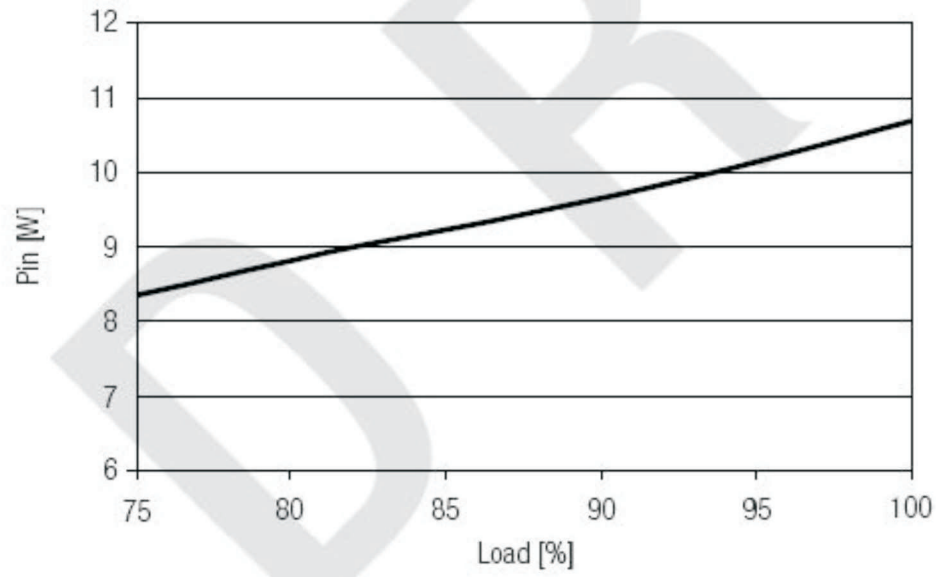
THD vs load



Input current vs load



Input power vs load



Phase cut dimming curve (depends dimmer)
Output current vs dimming angle

