

TALEXconverter LC 40W 900mA fixC C SNC ESSENCE series

Product description

- Fixed output built-in LED control gear
- Constant current LED control gear
- Output current 900 mA
- Max. output power 40 W
- Nominal life-time up to 50,000 h
- For luminaires of protection class I and protection class II
- Temperature protection as per EN 61347-2-13 C5e
- 5-year guarantee

Properties

- Casing: polycarbonat, white
- Type of protection IP20

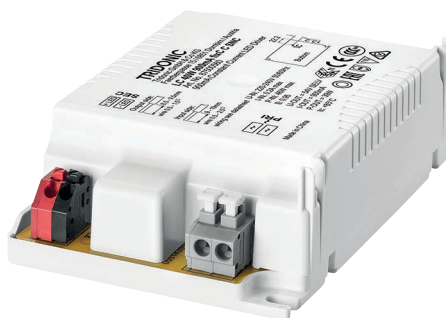
Functions

- Overtemperature protection
- Overload protection
- Short-circuit protection
- No-load protection



Standards, page 2

Wiring diagrams and installation examples, page 3

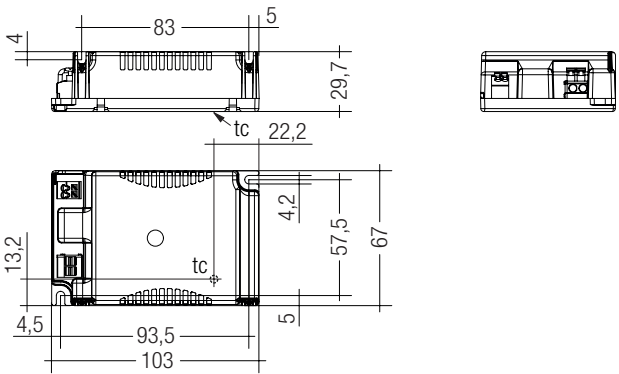


IP20 SELV       RoHS

TALEXconverter LC 40W 900mA fixC C SNC
ESSENCE series

Technical data

| | |
|---|--------------------|
| Rated supply voltage | 220 – 240 V |
| AC voltage range | 198 – 264 V |
| Input current (at 230 V, 50 Hz, full load) | 0.2 A |
| Mains frequency | 50 / 60 Hz |
| Typ. power consumption (at 230 V, 50 Hz, full load) | 43.5 W |
| Max. input power | 46 W |
| Output power range | 27 – 39 W |
| THD (at 230 V, 50 Hz, full load) | < 20 % |
| Output current tolerance [Ⓢ] | ± 7.5 % |
| Typ. current ripple (at 230 V, 50 Hz, full load) | ± 30 % |
| Turn on time (at 230 V, 50 Hz, full load) | ≤ 0.5 s |
| Turn off time (at 230 V, 50 Hz, full load) | ≤ 0.5 s |
| Hold on time at power failure (output) | 0 s |
| Ambient temperature ta | -20 ... +50 °C |
| Ambient temperature ta (at life-time 50,000 h) | 40 °C |
| Max. casing temperature tc | 85 °C |
| Storage temperature ts | -40 ... +80 °C |
| Dimensions L x W x H | 103 x 67 x 29.7 mm |



Ordering data

| Type | Article number | Packaging, carton | Packaging, low volume | Packaging, high volume | Weight per pc. |
|-------------------------|----------------|-------------------|-----------------------|------------------------|----------------|
| LC 40W 900mA fixC C SNC | 87500560 | 15 pc(s). | 345 pc(s). | 2,760 pc(s). | 0.126 kg |

Specific technical data

| Type | Output current [Ⓢ] | Power factor at full load [Ⓢ] | Efficiency at full load [Ⓢ] | Power factor at min. load [Ⓢ] | Efficiency at min. load [Ⓢ] | Min. forward voltage | Max. forward voltage | Max. output voltage | Max. output peak current at full load [Ⓢ] | Max. output peak current at min. load [Ⓢ] |
|-------------------------|-----------------------------|--|--------------------------------------|--|--------------------------------------|----------------------|----------------------|---------------------|--|--|
| LC 40W 900mA fixC C SNC | 900 mA | 0.96 | 91 % | 0.93C | 90 % | 30 V | 43 V | 54 V | 1,260 mA | 1,440 mA |

[Ⓢ] Test result at 230 V, 50 Hz.

[Ⓢ] The trend between min. and full load is linear.

[Ⓢ] Output current is mean value.

Standards

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

Overload protection

If the output voltage range is exceeded the LED control gear will protect itself and LED may flicker. After elimination of the overload, the nominal operation is restored automatically.

Overtemperature protection

The LED control gear is protected against temporary thermal overheating. If the temperature limit is exceeded, the output current is reduced to limit t_c at a certain level.

The temperature protection is activated typically at 10 °C above t_c max.

Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED control gear switches into hic-cup mode. After elimination of the short-circuit fault the LED control gear will recover 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 opens due to a failure.

Installation instructions

The LED module and all contact points within the wiring must be sufficiently insulated against 3 kV surge voltage.

Air and creepage distance must be maintained.

Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 10 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.

Expected life-time

| Type | t_a | 40 °C | 50 °C | 60 °C |
|-------------------------|-----------|----------|----------|-------|
| LC 40W 900mA fixC C SNC | t_c | 75 °C | 85 °C | x |
| | Life-time | 50,000 h | 30,000 h | x |

The LED control gear is designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.

Life-time declarations are informative and represent no warranty claim.

Maximum loading of automatic circuit breakers

| Automatic circuit breaker type | C10 | C13 | C16 | C20 | B10 | B13 | B16 | B20 | Inrush current |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------|
| 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 | I_{max} Time |
| LC 40W 900mA fixC C SNC | 35 | 50 | 65 | 75 | 28 | 40 | 52 | 60 | 10 A 100 µs |

Harmonic distortion in the mains supply (at 230 V/50 Hz and full load) in %

| | THD | 3. | 5. | 7. | 9. | 11. |
|--------------------|-----|----|----|----|----|-----|
| LC 40W 900mA C SNC | 20 | 10 | 2 | 2 | 2 | 1 |

Glow-wire test

according to EN 61347-1 with increased temperature of 960 °C passed.

Mounting of device

Max. torque for fixing: 0.5 Nm/M4

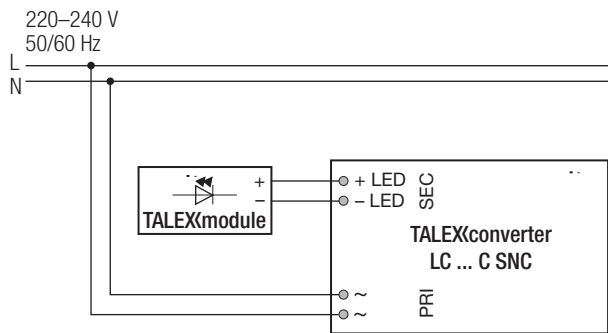
Storage conditions

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.

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 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.

Wiring type and cross section

The input wiring can be stranded wires with ferrules with a cross section of 0.5 – 1.5 mm² or with solid wires with a cross section of 0.5 – 2.5 mm². Strip 9 – 10 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.

The output wiring can be done with a cross section of 0.5 – 1.5 mm². Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.

Input wiring

wire preparation:
Solid: 0.5 – 2.5 mm²
Fine-stranded: 0.5 – 1.5 mm²

9 – 10 mm

Output wiring

wire preparation:
0.5 – 1.5 mm²

8.5 – 9.5 mm

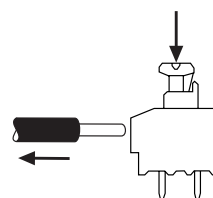
Wiring guidelines

- 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.
- Through wiring of mains is connecting additional LED Driver only. Max. permanent current of 14 A may not be exceeded.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

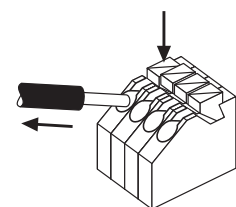
Release of the wiring

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

Input terminal

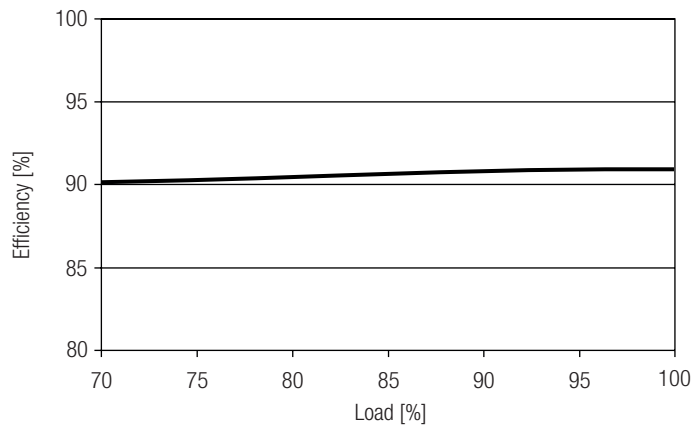


Output terminal

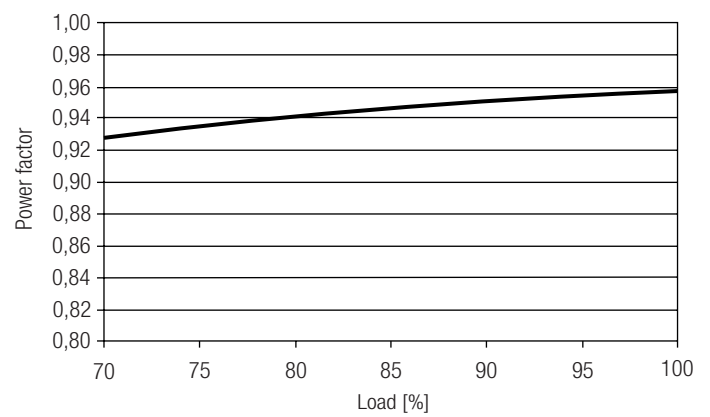


Diagrams LC 40W 900mA fixC C SNC

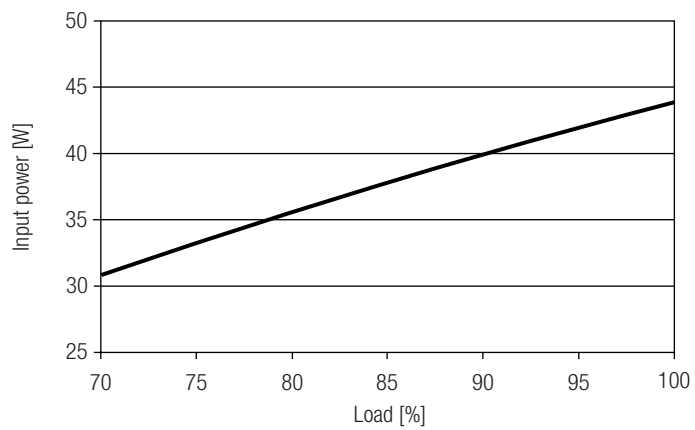
Efficiency vs load



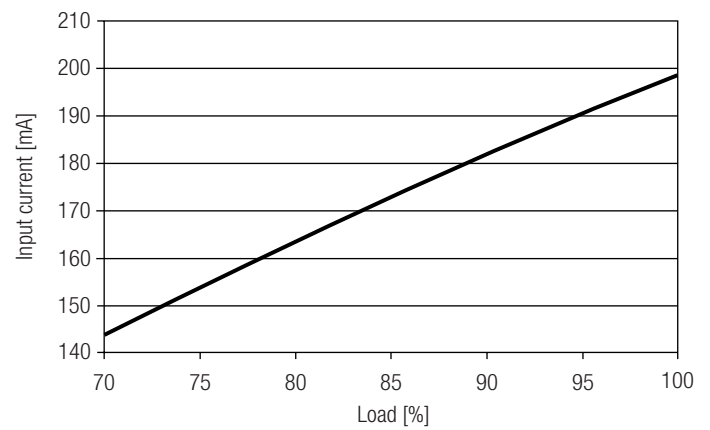
Power factor vs load



Input power vs load



Input current vs load



THD vs load

