TALEXconverter LC 30W 700mA fixC SR SNC

ESSENCE series

Product description

- Independent fixed output LED control gear
- Constant current LED control gear
- Output current 700 mA
- Max. output power 30 W
- Nominal life-time up to 30,000 h
- 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
- 3-year guarantee

Properties

- Casing: polycarbonat, white
- Type of protection IP20

Functions

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

Standards, page 3

Wiring diagrams and installation examples, page 4

IP20 SELV RoHS

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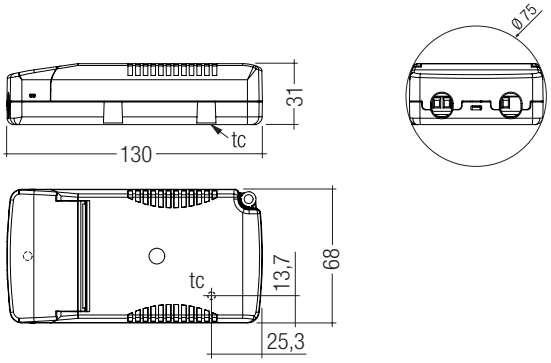
Technical data

Rated supply voltage	220 – 240 V
Input voltage, AC	198 – 264 V
Input current (at 230 V, 50 Hz, full load)	0.152 A
Mains frequency	50 / 60 Hz
Input power (at 230 V, 50 Hz, full load)	33.5 W
Max. input power	35 W
Output power range	21 – 30 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 30,000 h)	40 °C
Max. casing temperature tc	80 °C
Storage temperature ts	-40 ... +80 °C
Dimensions L x W x H	130 x 68 x 31 mm



Ordering data

Type	Article number	Packaging, carton	Packaging, low volume	Packaging, high volume	Weight per pc.
LC 30W 700mA fixC SR SNC	**87500365**	30 pc(s).	390 pc(s).	1,950 pc(s).	0.15 kg

Specific technical data

Type	Output current	Power factor at full load[1]	Efficiency at full load[1]	Power factor at min. load[1]	Efficiency at min. load[1]	Min. forward voltage	Max. forward voltage	Max. output voltage	Max. repetitive output peak current at full load[2]	Max. repetitive output peak current at min. load[2]	Max. non-repetitive output peak current at full load[2]	Max. non-repetitive output peak current at min. load[2]
LC 30W 700mA fixC SR SNC	700 mA	0.95	91 %	0.92C	90 %	30 V	43 V	54 V	980 mA	1,120 mA	980 mA	1,120 mA

[1] Test result at 230 V, 50 Hz.

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

Standards
EN 55015
EN 60598-1
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 tc at a certain level.
The temperature protection is activated typically at 10 °C above tc 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 2.5 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

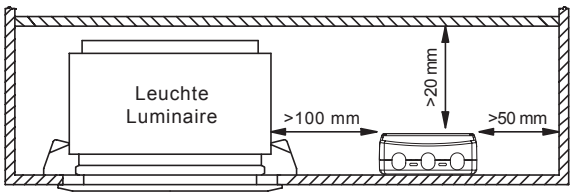
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

Expected life-time

Type	ta	40 °C	50 °C	60 °C
LC 30W 700mA fixC SR SNC	tc	70 °C	80 °C	x
	Life-time	30,000 h	15,000 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 %.

Fixing conditions
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.



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 (ta) before they can be operated.

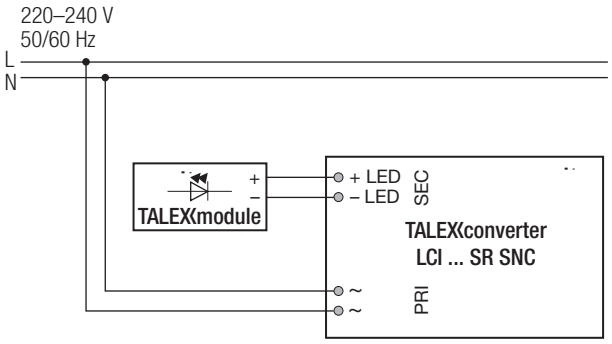
Maximum loading of automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current	
Installation Ø	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	I_{max}	Time
LC 30W 700mA fixC SR SNC	45	60	75	90	36	48	60	72	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 30W 700mA fixC SR SNC	20	11	2	2	2	1

Wiring diagram



Glow wire test

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

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

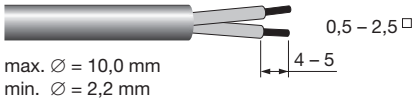
Guarantee conditions at
www.tridonic.com → Services

No warranty if device was opened.

Wiring type and cross section

The 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 / Output terminal

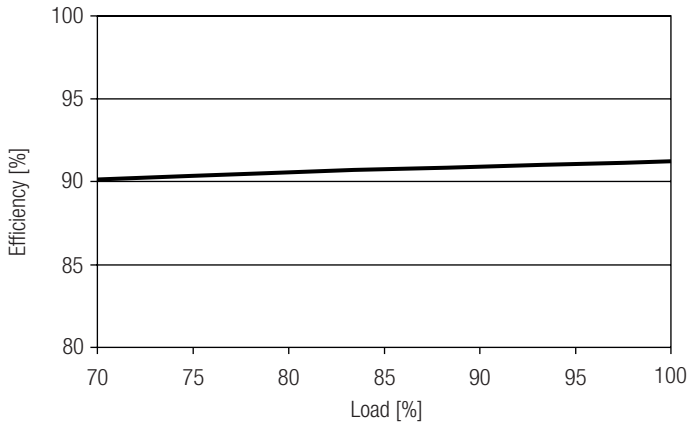


Wiring instructions

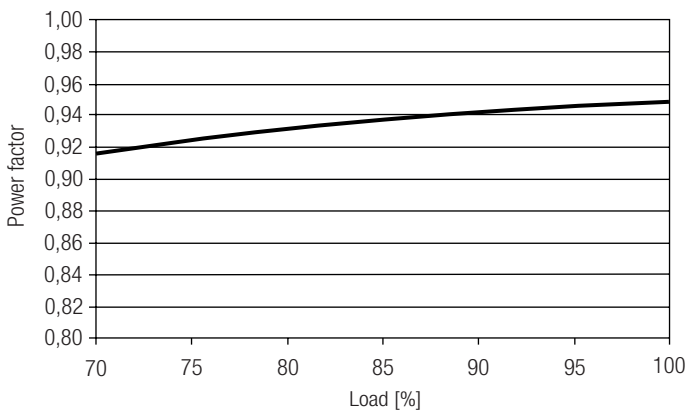
- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED control gear and other leads (ideally 5 – 10 cm distance)
- The maximum length of output wires is 2 m.
- Secondary switching is not permitted.
- Incorrect wiring can damage LED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

Diagrams LC 30W 700mA fixC SR SNC

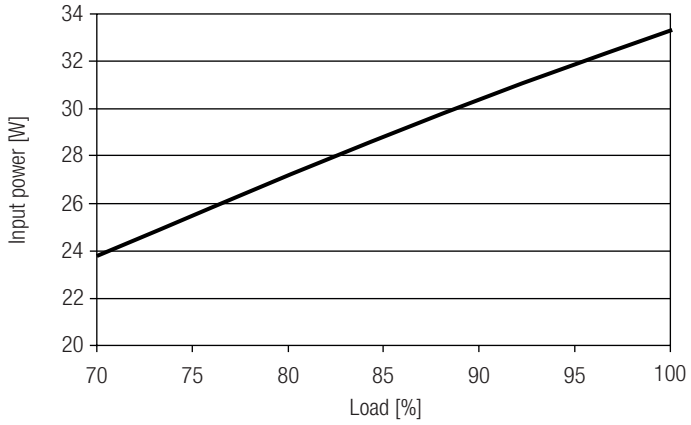
Efficiency vs load



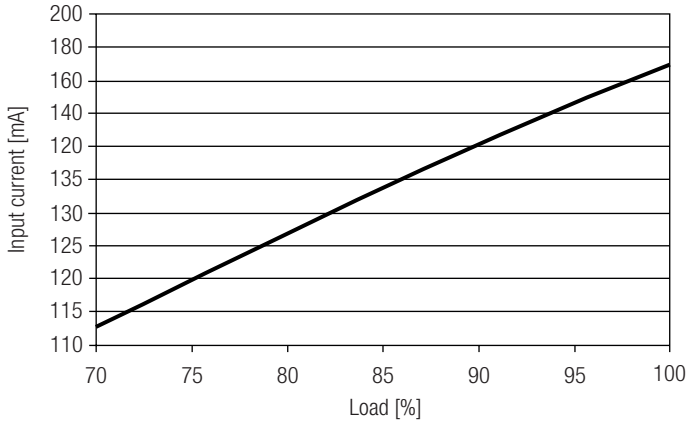
Power factor vs load



Input power vs load



Input current vs load



THD vs load