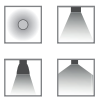


TALEXdriver LC 20W 500/700mA fixC SR SNC

ESSENCE series

Product description

- Independent driver with strain-relief housing
- Extra flat housing for constrained installation conditions (small ceiling cut outs and low ceiling voids)
- Max. output power 20 W
- Output current 500 or 700 mA
- KC certificate for LC 20W 500mA fixC SR SNC
- For luminaires with M and MM as per EN 60598, VDE 0710 and VDE 0711
- Nominal life-time up to 50,000 h
- Temperature protection as per EN 61347-2-13 C5e
- 5-year guarantee

Properties

- Casing: polycarbonat, white
- Type of protection IP20
- Push-in terminals
- 2 separate strain relief parts for input and output cables with highly robust clamps

Functions

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

Standards, page 3

Wiring diagrams and installation examples, page 4

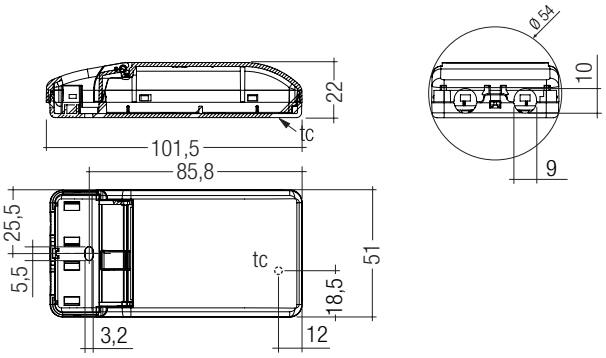
IP20 SELV RoHS

TALEXdriver LC 20W 500/700mA fixC SR SNC

ESSENCE series

Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Power factor at full load[1]	0.93C
Power factor at min. load[1]	0.87C
Mains frequency	50/60 Hz
Overvoltage protection	320 V AC, 1 h
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)[2]	± 7.5 %
Output current tolerance (at 230 V, 50 Hz, min. load)[2]	± 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	0 s
Ambient temperature ta	-20 ... +50 °C
Ambient temperature ta (at life-time 50,000 h)	40 °C
Storage temperature ts	-40 ... +80 °C
Dimensions L x W x H	101.5 x 51 x 22 mm



Ordering data

Type	Article number	Packaging, carton	Packaging, low volume	Packaging, high volume	Weight per pc.
LC 20W 500mA fixC SR SNC	**87500573**	20 pc(s).	380 pc(s).	3,420 pc(s).	0.078 kg
LC 20W 700mA fixC SR SNC	**87500574**	20 pc(s).	380 pc(s).	3,420 pc(s).	0.078 kg

Specific technical data

Type	Output current[2]	Typ. rated current (at 230 V, 50 Hz, full load)	Max. input power	Typ. power consumption (at 230 V, 50 Hz, full load)	Output power	Efficiency at full load[1]	Efficiency at min. load[1]	Min. forward voltage[1]	Max. forward voltage[1]	Max. output voltage	Max. peak output current	Max. casing temperature tc
LC 20W 500mA fixC SR SNC	500 mA	0.12 A	25.0 W	22.5 W	15.5 – 22 W	88.0 %	87 %	30 V	43 V	56 V	850 mA	85 °C
LC 20W 700mA fixC SR SNC	700 mA	0.11 A	23.5 W	22.5 W	13.0 – 20 W	87.5 %	86 %	20 V	28 V	40 V	1,200 mA	85 °C

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

[2] 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
EN 62384

Overload protection
If the output voltage range is exceeded the LED Driver will protect itself and LED may flicker. 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 Driver switches into hic-cup mode. After the removal of the short-circuit fault the nominal operation is restored automatically.

No-load operation
The LED Driver 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.

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.

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

Expected life-time

Type	ta	40 °C	50 °C	60 °C
LC 20W 500mA fixC SR SNC	tc	75 °C	85 °C	x
	Life-time	50,000 h	30,000 h	x
LC 20W 700mA fixC SR SNC	tc	75 °C	85 °C	x
	Life-time	50,000 h	30,000 h	x

The LED Drivers are 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 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 20W 500mA fixC SR SNC	60	80	100	120	48	64	80	96	8 A	80 µs
LC 20W 700mA fixC SR SNC	60	80	100	120	48	64	80	96	8 A	80 µs

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

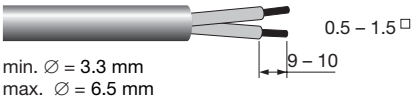
	THD	3.	5.	7.	9.	11.
LC 20W 500mA fixC SR SNC	< 20	< 17	< 6	< 4	< 3	< 3
LC 20W 700mA fixC SR SNC	< 20	< 17	< 6	< 4	< 3	< 3

Installation instructions
The LED module and all contact points within the wiring must be sufficiently insulated against 3.5 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.

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 9 – 10 mm for the input terminal.
The max. torque at the clamping screw (M3) is 0.2 Nm.



The following cable types are approved and recommended by Tridonic:
- RVVB 2x0.5 mm²
- H03VVH2-F2G0.75
- RVVB 2x1.0 mm²
- RVV 2x1.5 mm²

Wiring guidelines
- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Max. lenght of output wires is 2 m.
- Secondary switching is not permitted.
- Incorrect wiring can demage LED modules.
- Through wiring of mains is connecting additional LED Driver only. Max. permanent current of 6 A may not be exceeded.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

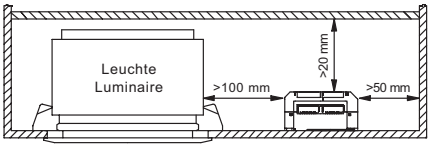
Additional information

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

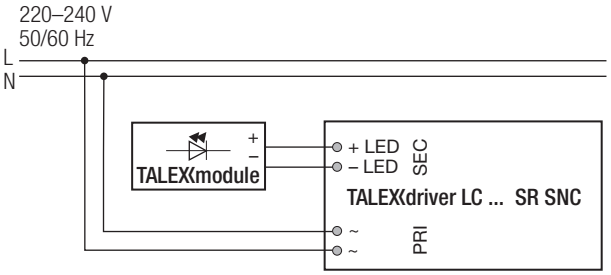
Guarantee conditions at
www.tridonic.com → Services

No warranty if device was opened.

Fixing conditions
Dry, acidfree, oilfree, fatfree. It is not allowed to exceed the maximum ambient temperature (ta) 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



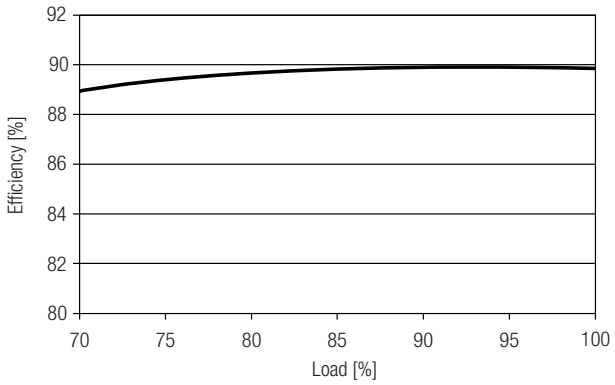
Isolation and electric strength testing of luminaires
Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

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 MΩ.

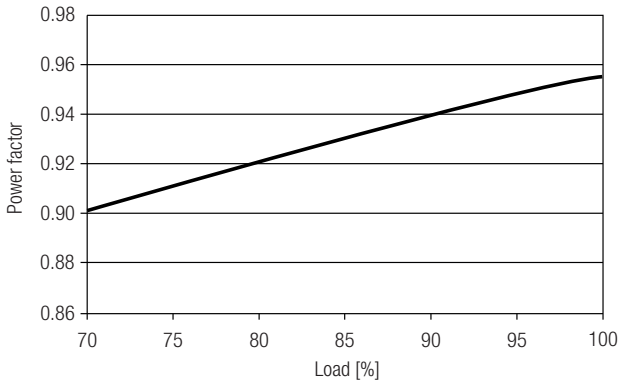
As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V AC (or 1.414 x 1500 V DC). To avoid damage to the electronic devices this test must not be conducted.

Diagrams LC 20W 500mA fixC SR SNC

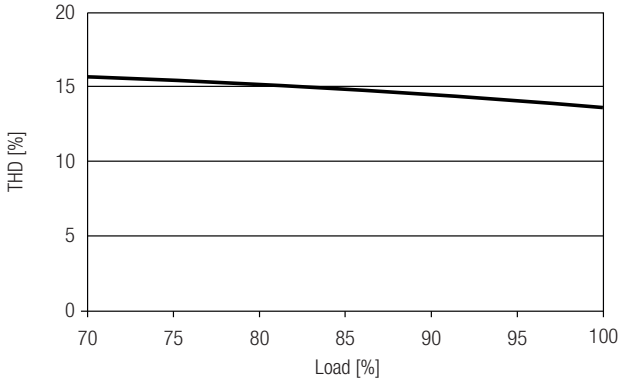
Efficiency vs load



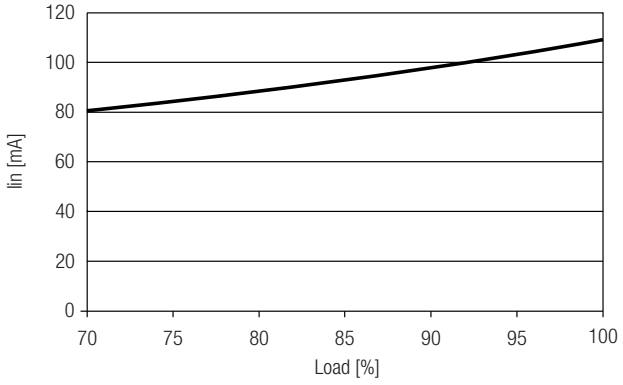
Power factor vs load



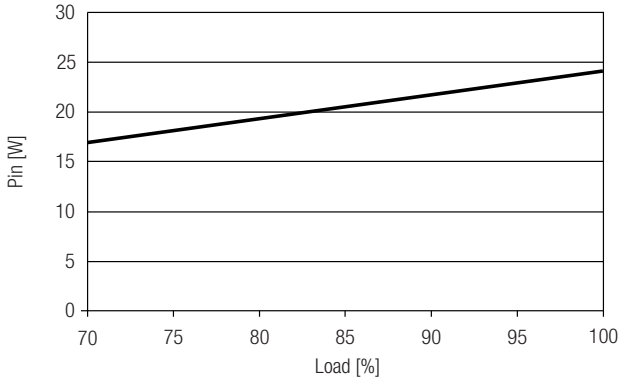
THD vs load



Input current vs load

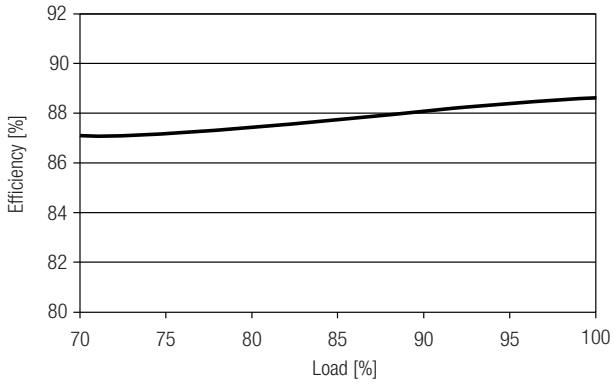


Input power vs load

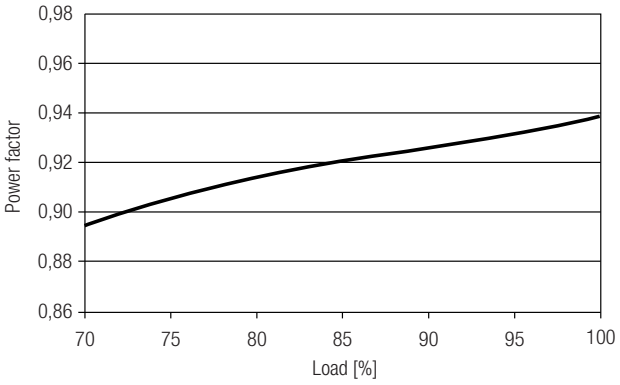


Diagrams LC 20W 700mA fixC SR SNC

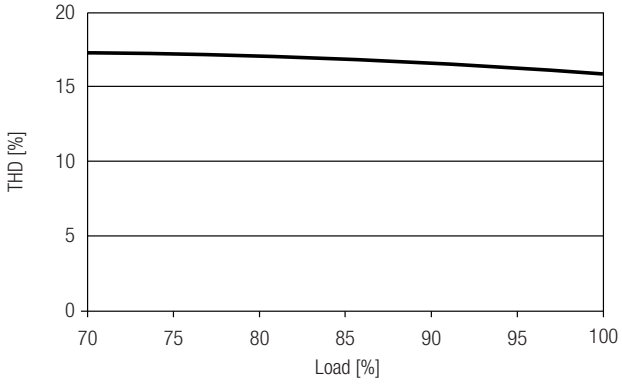
Efficiency vs load



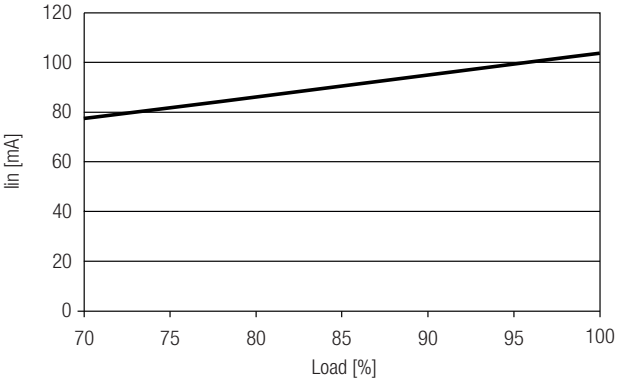
Power factor vs load



THD vs load



Input current vs load



Input power vs load