

IP20 SELV                                          

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. peak output current at full load ^{ⓈⓉ}	Max. peak output current at min. load ^{ⓈⓉ}	Max. casing temperature tc
LCI 42W 900mA TEC SR	900 mA	0.98	90.0 %	0.95	86 %	23 V	47 V	60 V	1,360 mA	1,690 mA	75 °C
LCI 42W 1050mA TEC SR	1,050 mA	0.98	90.0 %	0.95	85 %	20 V	40 V	50 V	1,610 mA	1,890 mA	80 °C

[Ⓢ] 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 60598-1
- 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 reduces the LED output current. After elimination of the overload, the nominal operation is restored automatically.

Overtemperature protection

The LED Driver 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. It restarts automatically. 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 Driver switches into hic-cup mode. After elimination of the short circuit the nominal operation is restored automatically.

No-load operation

The LED Driver works in constant voltage mode. In no-load operation the output voltage will not exceed the specified max. output voltage (see page 2).

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 60 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
LCI 42W 900mA TEC SR	t_c	65 °C	75 °C	x
	Life-time	50,000 h	30,000 h	x
LCI 42W 1050mA TEC SR	t_c	70 °C	80 °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 %.

Maximum loading of automatic circuit breakers

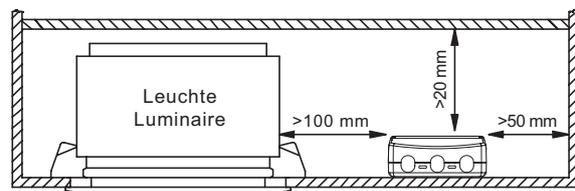
Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current
Installation Ø	1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	I_{max} Time
LCI 42W 900mA TEC SR	33	50	66	83	25	38	50	58	10 A 100 µs
LCI 42W 1050mA TEC SR	33	50	66	83	25	38	50	58	10 A 100 µs

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

	THD	3.	5.	7.	9.	11.
LCI 42W 900mA TEC SR	20	8	2	2	2	1
LCI 42W 1050mA TEC SR	20	8	2	2	2	2

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.

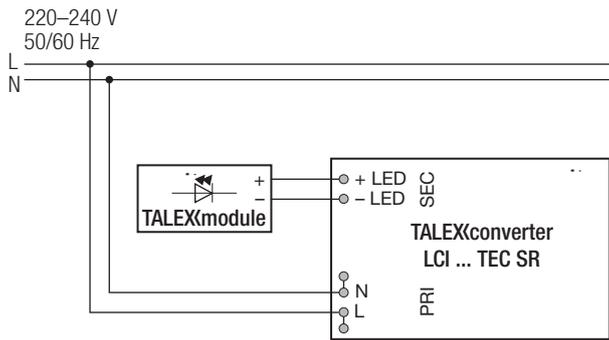


Storage conditions

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**Glow-wire test**

according to EN 60598-1 with increased temperature of 850 °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

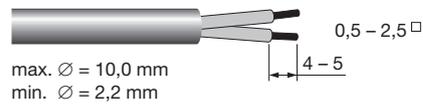
Guarantee conditions at www.tridonic.com → Services

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

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

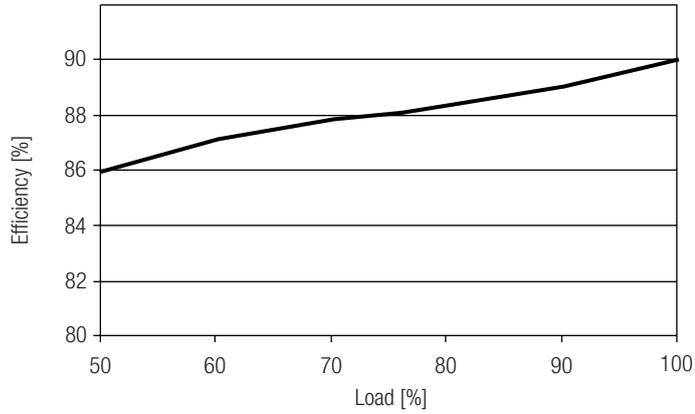
The maximum lead length on secondary side is 2 m. For a good EMC performance keep the LED wiring as short as possible.

Wiring guidelines

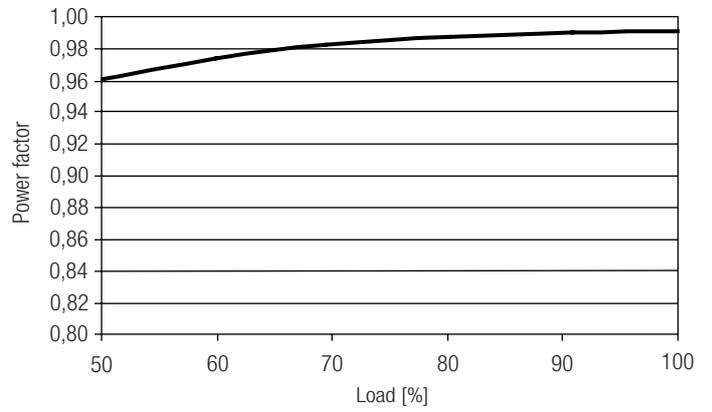
- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Max. length of output wires is 2 m.
- Secondary switching is not permitted.
- Incorrect wiring can damage LED modules.
- Through wiring of mains is connecting additional LED Driver only. Max. permanent current of 16 A may not be exceeded.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

Diagrams LCI 42W 900mA TEC SR

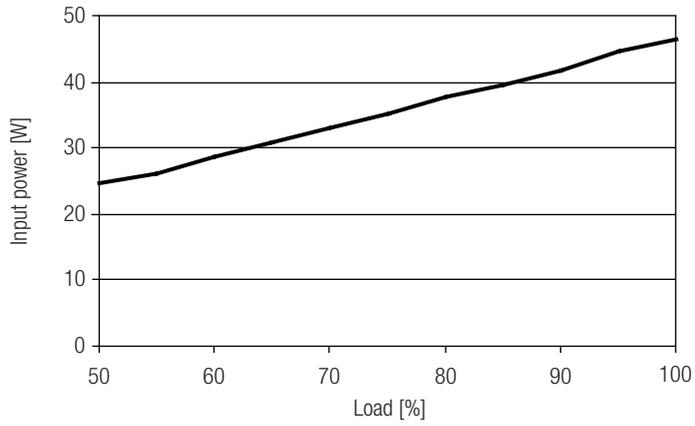
Efficiency vs load



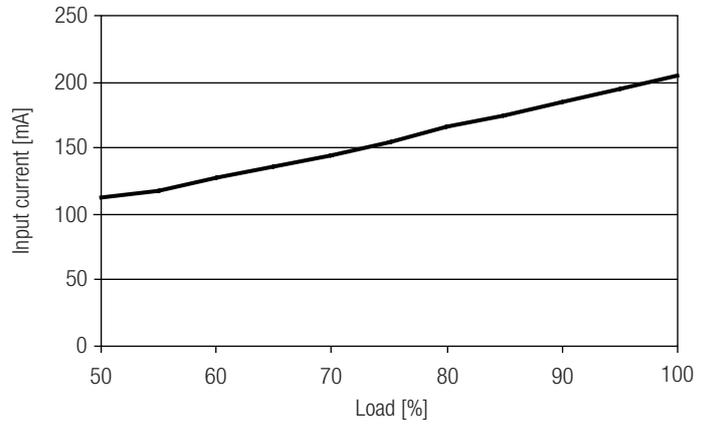
Power factor vs load



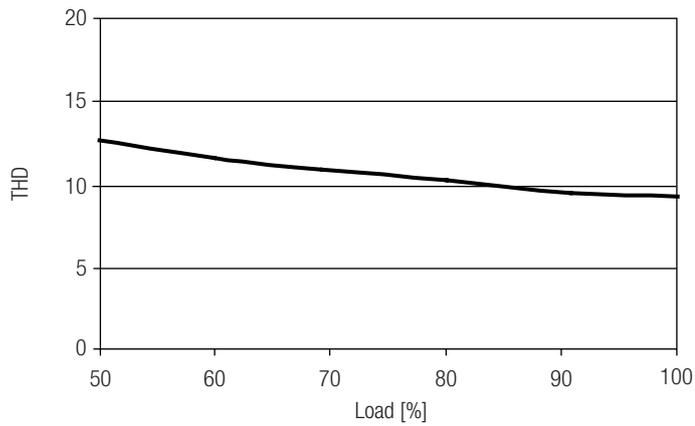
Input power vs load



Input current vs load

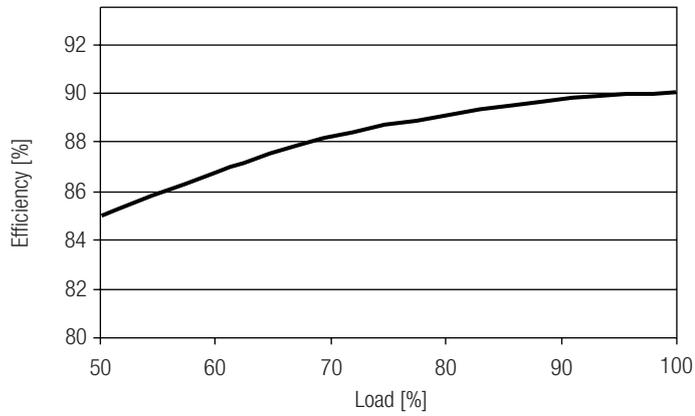


THD vs load

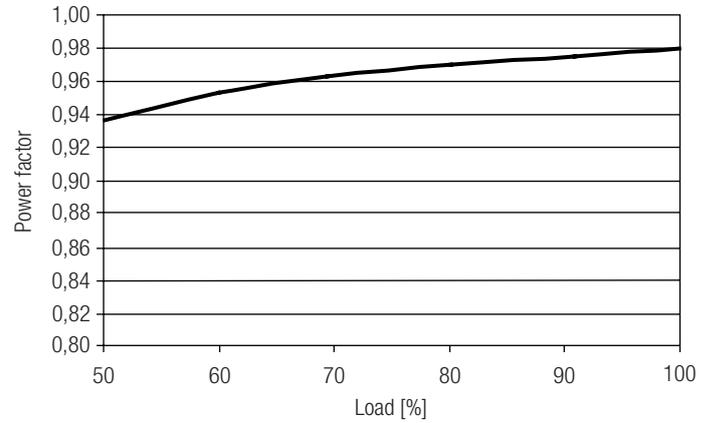


Diagrams LCI 42W 1,050mA TEC SR

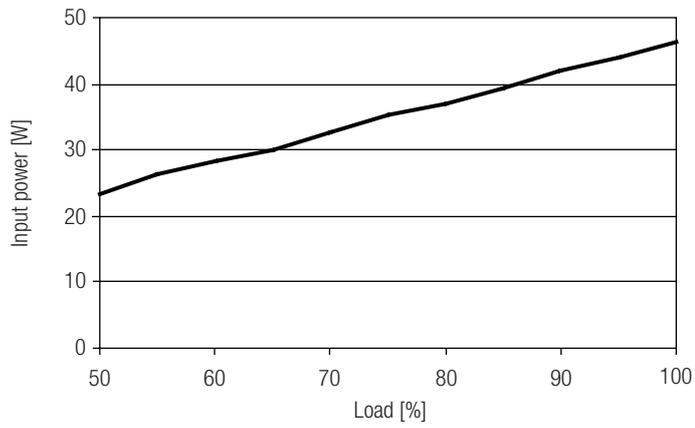
Efficiency vs load



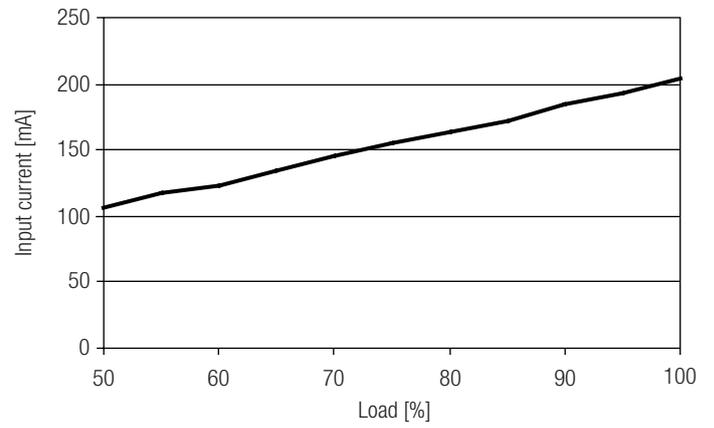
Power factor vs load



Input power vs load



Input current vs load



THD vs load

