

IP20 SELV 

### Driver LCI 65 W 1400/1750 mA TEC C

TEC series

#### Product description

- Fixed output built-in LED Driver
- Constant current LED Driver
- Output current 1,400 or 1,750 mA
- Max. output power 65 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

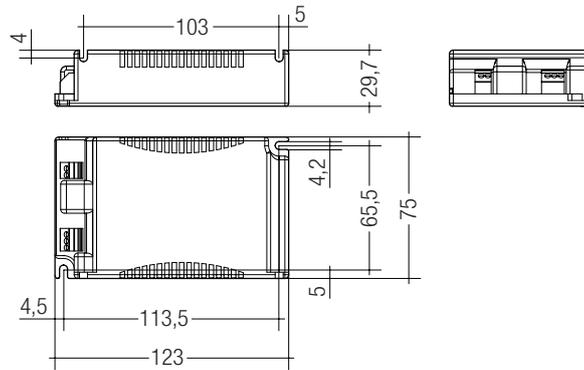
- Casing: polycarbonat, white
- Type of protection IP20

#### Functions

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

#### Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Current at 50 Hz 230 V	0.32 A
Mains frequency	50 / 60 Hz
Overvoltage protection	300 V AC, 1 h
Typ. power consumption (at 230 V, 50 Hz, full load)	72 W
Max. input power	75 W
Output power	65 W
THD (at 230 V, 50 Hz, full load)	< 20 %
Output current tolerance <sup>®</sup>	± 7.5 %
Typ. current ripple (at 230 V, 50 Hz, full load)	± 30 %
Turn on time (at 230 V, 50 Hz, full load)	≤ 0.7 s
Turn off time (at 230 V, 50 Hz, full load)	≤ 0.7 s
Hold on time at power failure (output)	0 s
Ambient temperature $t_a$	-20 ... +50 °C
Ambient temperature $t_a$ (at life-time 50,000 h)	40 °C
Max. casing temperature $t_c$	95 °C
Storage temperature $t_s$	-40 ... +80 °C
Dimensions L x W x H	123 x 75 x 29.7 mm



#### Ordering data

Type	Article number	Packaging, carton	Packaging, low volume	Packaging, high volume	Weight per pc.
LCI 65W 1400mA TEC C	87500204	10 pc(s).	180 pc(s).	2,160 pc(s).	0188 kg
LCI 65W 1750mA TEC C	87500206	10 pc(s).	180 pc(s).	2,160 pc(s).	0189 kg



**Standards**, page 2

**Wiring diagrams and installation examples**, page 3

**Specific technical data**

Type	Output current <sup>①</sup>	Power factor at full load <sup>②</sup>	Efficiency at full load <sup>③</sup>	Power factor at min. load <sup>②</sup>	Efficiency at min. load <sup>③</sup>	Min. forward voltage <sup>②</sup>	Max. forward voltage <sup>②</sup>	Max. output voltage	Max. peak output current at full load <sup>②③</sup>	Max. peak output current at min. load <sup>②③</sup>
<b>LCI 65W 1400mA TEC C</b>	1,400 mA	0.98	90 %	0.93	88.5 %	23.0 V	46.5 V	55 V	1,960 mA	2,340 mA
<b>LCI 65W 1750mA TEC C</b>	1,750 mA	0.98	90 %	0.93	87.5 %	18.5 V	37.0 V	43 V	2,450 mA	2,950 mA

① Test result at 230 V, 50 Hz.

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

③ 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

Housing fulfils requirements for reinforced insulation according EN 60598-1.

**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. The temperature protection is activated typically at 8 °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 the removal of the short-circuit fault the LED Driver will recover 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 1).

**Installation instructions**

The LED module and all contact points within the wiring must be sufficiently insulated against 5.0 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
<b>LCI 65W xxxmA TEC C</b>	$t_c$	85 °C	95 °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 $\varnothing$	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	$I_{max}$ Time
<b>LCI 65W 1400mA TEC C</b>	20	30	40	50	16	24	32	40	13 A 50 $\mu$ s
<b>LCI 65W 1750mA TEC C</b>	20	30	40	50	16	24	32	40	13 A 50 $\mu$ s

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

	THD	3.	5.	7.	9.	11.
<b>LCI 65W 1400mA TEC C</b>	20	11	3	2	1	1
<b>LCI 65W 1750mA TEC C</b>	20	11	2	3	1	1

**Glow-wire test**

Glow-wire test according to EN 61347-1 with increased temperature of 850 °C passed.

**Mounting of device**

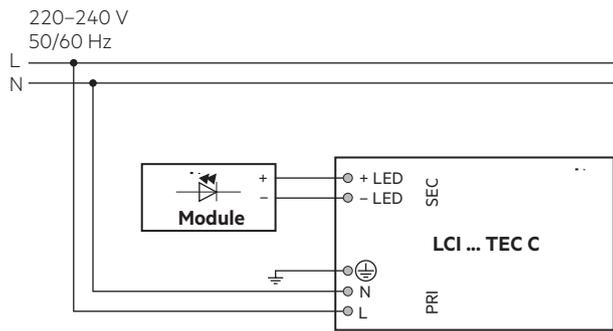
Max. torque for fixing: 0.5 Nm/M4

**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<sub>DC</sub> 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<sub>AC</sub> (or 1.414 x 1500 V<sub>DC</sub>). To avoid damage to the electronic devices this test must not be conducted.

**Additional information**

Additional technical information at [www.tridonic.com](http://www.tridonic.com) → Technical Data

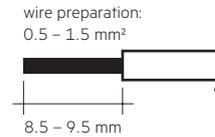
Guarantee conditions at [www.tridonic.com](http://www.tridonic.com) → Services

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 stranded wires with ferrules or rigid wires with a cross section of 0.5 – 1.5 mm<sup>2</sup>.

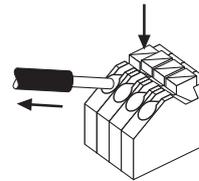
Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals (WAGO 250).

**Wiring instructions**

- 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)
- 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.)

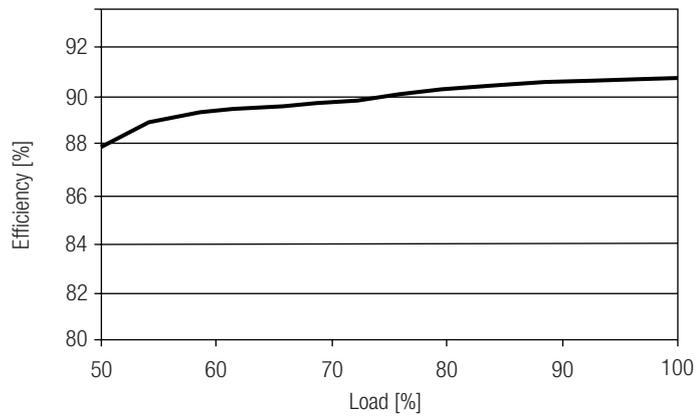
**Release of the wiring**

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

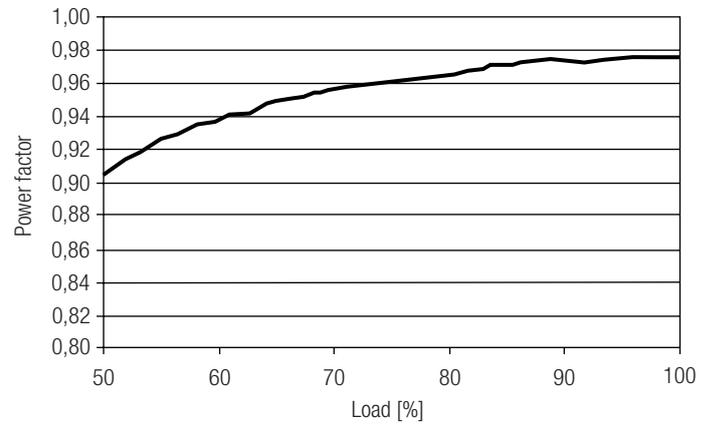


**Diagrams LCI 65W 1,400mA TEC C**

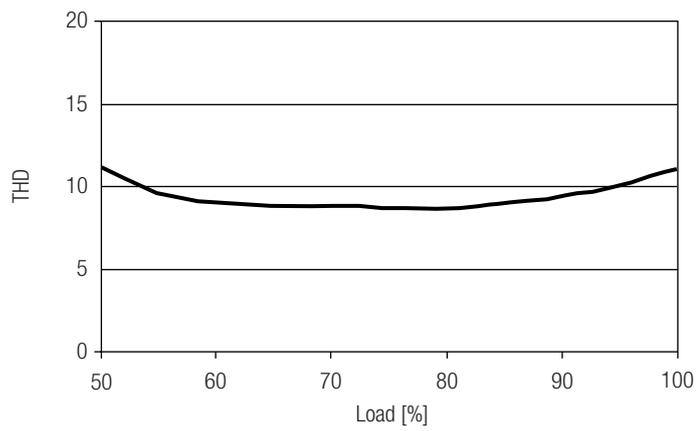
Efficiency vs Load



Power factor vs Load

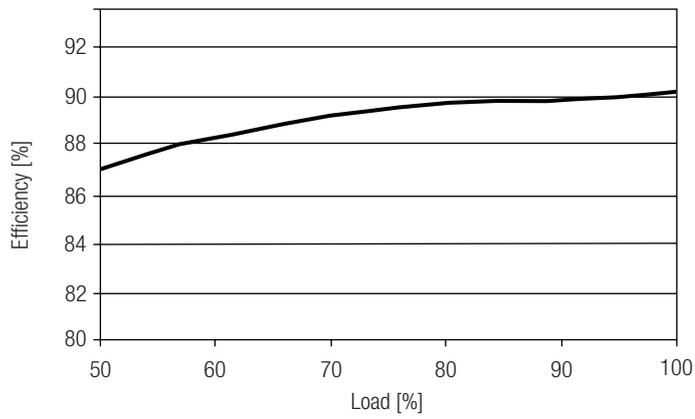


THD vs Load

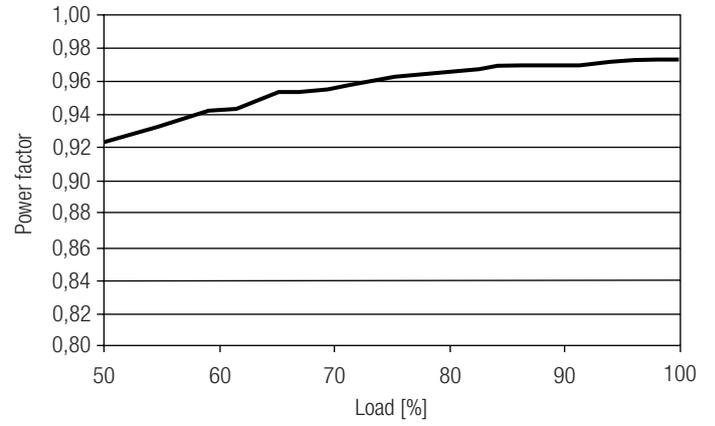


**Diagrams LCI 65W 1,750mA TEC C**

Efficiency vs Load



Power factor vs Load



THD vs Load

