

IP20 

Driver LCI 70 W 300 mA I010 220-240 V

TOP series

Product description

- Built-in LED Driver for LED
- Constant current LED Driver with 300 mA output current
- Output power 70 W
- Nominal life-time of 50,000 h (at t_a 50 °C with a failure rate max. 0.2 % per 1,000 h)
- 5-year guarantee

Properties

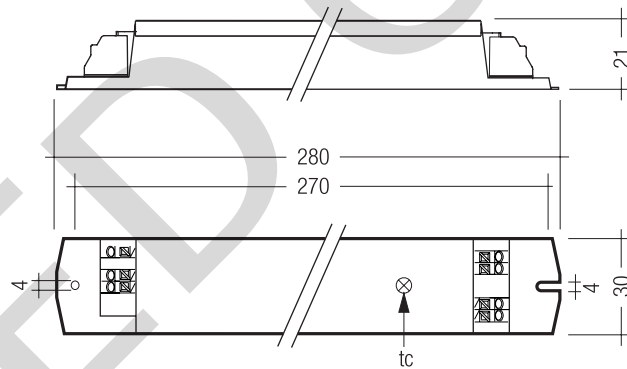
- Low-profile metal casing with white cover
- Type of protection IP20

Functions

- Overload protection
- Short circuit proof
- Suitable for emergency lighting units acc. to EN 50172

Technical data

Rated supply voltage	220 – 240 V
AC Voltage range	198 – 264 V
DC Voltage range	176 – 280 V
Mains frequency	0 / 50 / 60 Hz
Typ. rated current (at 230 V / 50 Hz / full load)	0.33 A
Mains current (at 220 V / 0 Hz / full load)	0.33 A
Leakage current (PE)	< 0.2 mA
Max. input power	78 W
Typ. efficiency (at 230 V / 50 Hz / full load)	> 94.5 %
Typ. λ (at 230 V / 50 Hz / full load)	0.95
Output LF current ripple (< 120 Hz)	< 3 %
Max. peak output current	Output current + 67 %
Switch-on time	0.4 s
Turn off time (at 230 V / 50 Hz / full load)	0.1 s
Hold time ^①	10 ms
Operating temperature range t_a	-25 ... +50 °C
Max. casing temperature t_c	70 °C
Dimensions LxWxH	280 x 30 x 21 mm
Hole spacing D	270 mm



Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
LCI 070/0300 I010 220-240 V	28000160	10 pc(s).	960 pc(s).	0.2 kg

Specific technical data

Type	Output current ^③	Output current tolerance ^③	Output voltage range	Max. output voltage ^②	Typ. output power
LCI 070/0300 I010 220-240 V	300 mA	± 5 %	116 – 230 V	250 V	70 W

^① At power failure

^② In no-load operation

^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

According to the EN 50172 suitable for central battery systems
 According to the EN 60598 suitable for emergency lighting installations

Overload protection / underload protection

If the output voltage range is exceeded the LED Driver turns off the LED output and tries a restart every 6 seconds.

Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED output is switched off. Every 6 seconds the LED Driver tries to restart.

No-load operation

The LED Driver is not damaged in the no-load operation. Every 6 seconds the LED Driver tries to restart. The max. output voltage (see page 1) can be obtained for a short time (50 ms) during no-load operation.

Operation on DC voltage

The LED Driver is designed for operation with DC voltage and pulsed DC voltage.

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	2.5 mm ²	4 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	4 mm ²	I _{max}	Time
LCI 070/0300 I010 220-240 V	16	24	30	40	8	12	15	20	27 A	240 µs

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

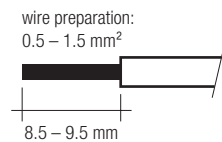
	THD	3.	5.	7.	9.	11.
LCI 070/0300 I010 220-240 V	< 10	< 8	< 4	< 3	< 3	< 1

Wiring guidelines

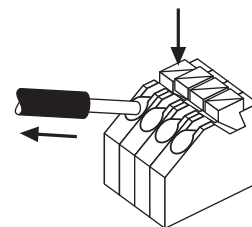
- The secondary cables should be run separately from the mains connections and mains cables to ensure good EMC conditions
- The LED wiring should be kept as short as possible to ensure good EMC. The recommended secondary cable length is max. 2 m.
- The LED Driver does not have polarity reversal protection on the secondary side. LED modules that do not have polarity reversal protection may be damaged if polarity is reversed.

Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid from 0.5 – 1.5 mm². For perfect function of the push-wire terminals (WAGO 250) the strip length should be 8.5 – 9.5 mm.

**Release of the wiring**

Press down the "push button" and remove the cable from front.



LED Driver is not SELV (output voltage up to 250 V).

DC emergency operation

The LED Driver is designed for operation on DC voltage and pulsed DC voltage.

Light output level in DC operation: 100 %

The voltage-dependent input current of Driver incl. LED module is depending on the used load.

The voltage-dependent no-load current of Driver (without or defect LED module) is for:

AC: < 50 mA

DC: < 7 mA

Expected life-time

Type	t _a	40 °C	50 °C	60 °C
	t _c	60 °C	70 °C	x
LCI 070/0300 I010 220-240 V	Life-time	> 100,000 h	65,000 h	x

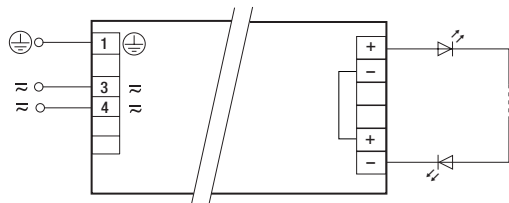
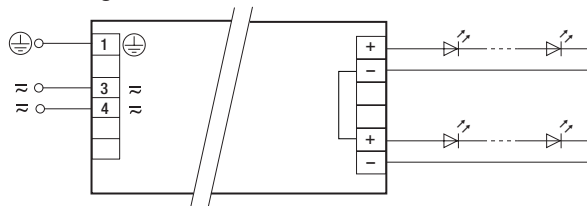
Storage conditions

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.

Circuit diagrams



LED's have to be connected as shown above to work properly. It is possible to connect a different number of LED's on two circuits (like on top picture). The minimum power load has to be connected. Otherwise the LED Driver will switch off.

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 500V_{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

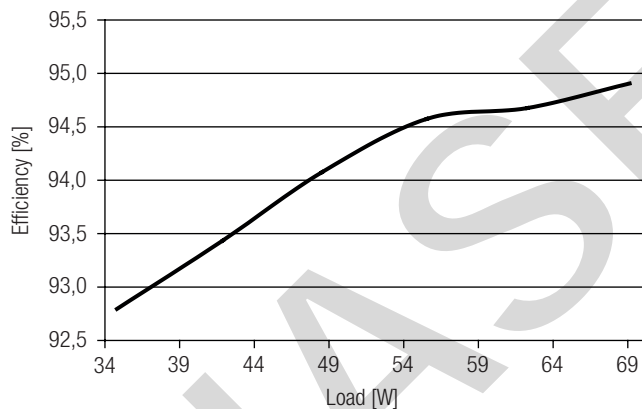
Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

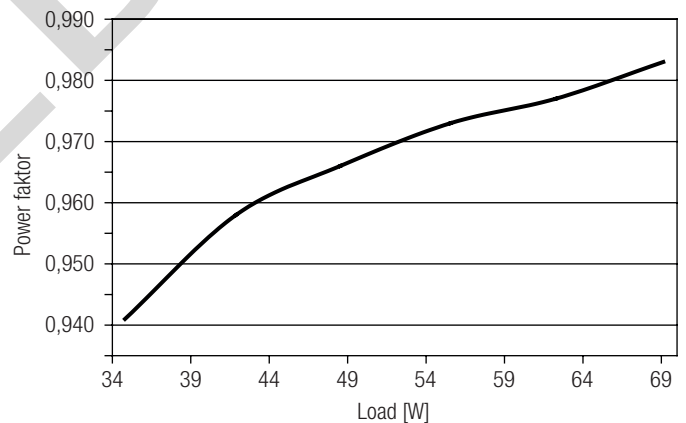
Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.

Diagrams LCI 70W 300mA I010

Efficiency vs load



Power factor vs load



Input power vs load

