

IP20     RoHS

TALEXconverter LCI 65W 150mA–400mA TOP Ip
TOP series

Product description

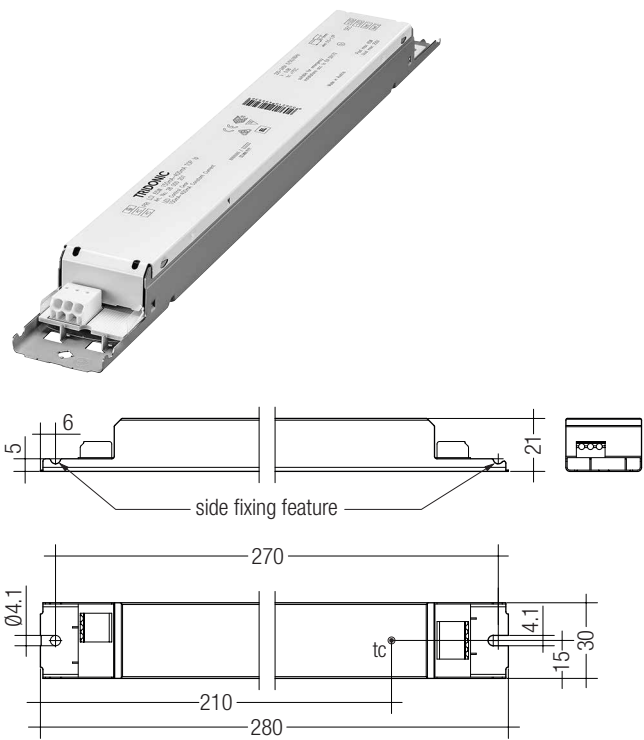
- Fixed output built-in LED control gear
- Constant current LED control gear
- Output current settable 150 – 400 mA
- Max. output power 65 W
- Nominal life time up to 100,000 h
- For luminaires of protection class I and protection class II
- Temperature protection as per EN 61347-2-13 C5e
- 5-year guarantee

Properties

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

Functions

- Intelligent Temperature Guard (overtemperature protection)
- Short-circuit proof
- Overload protection
- Suitable for emergency lighting units acc. to EN 50172



Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
LCI 65W 150mA-400mA TOP Ip	28000201	10 pc(s).	960 pc(s).	0.20 kg



Standards, page 3

Technical data

Rated supply voltage	220 – 240 V
Input voltage, AC	198 – 264 V
Input voltage, DC	176 – 280 V (start \geq 198 V DC)
Mains frequency	0 / 50 / 60 Hz
Leakage current (PE)	< 0.5 mA
Max. input power	71 W
Efficiency (at 230 V, 50 Hz, full load)	92 – 93 %
THD (at 230 V, 50 Hz, full load)	< 11 %
Output current tolerance	\pm 5 %
Output current ripple	\pm 15 %
Max. repetitive output peak current	output current + 20 %
Max. non-repetitive output peak current	output current + 20 %
Max. output voltage (no-load voltage)	250 V
Time to light	< 0.5 s
Hold on time at power failure or switch-off	< 0.5 s
Switchover time (AC/DC)	< 0.5 s
Dimensions L x W x H	280 x 30 x 21 mm

Specific technical data

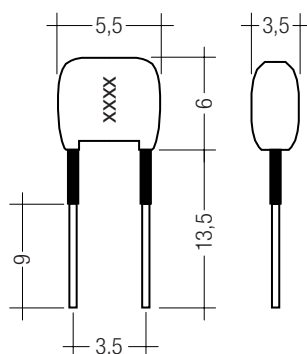
Type	Output current	Min. output voltage	Max. output voltage	Max. output power	Input power (at 230 V, 50 Hz, full load)	Input current (at 230 V, 50 Hz, full load)	λ (at 230 V, 50 Hz, full load)	tc point	Ambient temperature ta	tc/ta for \geq 50.000 h	I sel resistor value
LCI 65W 150mA-400mA TOP Ip	150 mA	112 V	250 V	37.5 W	40.3 W	183 mA	0.96	75 °C	-25 ... +65 °C	75 / 65 °C	open
	175 mA	112 V	250 V	43.7 W	47.0 W	211 mA	0.97	75 °C	-25 ... +60 °C	75 / 60 °C	63.40 k Ω
	200 mA	112 V	250 V	50.0 W	53.8 W	240 mA	0.97	75 °C	-25 ... +60 °C	75 / 60 °C	54.90 k Ω
	225 mA	112 V	250 V	56.3 W	60.5 W	269 mA	0.98	75 °C	-25 ... +60 °C	75 / 60 °C	47.50 k Ω
	250 mA	112 V	250 V	62.5 W	67.2 W	298 mA	0.98	75 °C	-25 ... +60 °C	75 / 60 °C	40.20 k Ω
	275 mA	105 V	236 V	65.0 W	69.9 W	310 mA	0.98	75 °C	-25 ... +55 °C	75 / 55 °C	34.00 k Ω
	300 mA	97 V	217 V	65.0 W	70.0 W	310 mA	0.98	75 °C	-25 ... +55 °C	75 / 55 °C	27.40 k Ω
	325 mA	90 V	200 V	65.0 W	70.0 W	311 mA	0.98	75 °C	-25 ... +55 °C	75 / 55 °C	22.00 k Ω
	350 mA	83 V	186 V	65.0 W	70.1 W	310 mA	0.98	75 °C	-25 ... +55 °C	75 / 55 °C	12.00 k Ω
	375 mA	77 V	173 V	65.0 W	70.2 W	311 mA	0.98	75 °C	-25 ... +55 °C	70 / 50 °C	6.19 k Ω
	400 mA	72 V	163 V	65.0 W	70.5 W	312 mA	0.98	75 °C	-25 ... +55 °C	70 / 50 °C	short circuit (0 Ω)

ACCES-
SORIES

I-SELECT PLUG

Product description

- Ready-for-use resistor to set output current value
- Resistor is base isolated
- Resistor power 0.25 W
- Resistor value tolerance \pm 1 %



Ordering data

Type	Article number	Colour	Marking	Resistor value	Packaging bag	Weight per pc.
I-SELECT PLUG MAX GR	28000274	Grey	MAX	0 Ω	10 pc(s).	0.001 kg
I-SELECT PLUG 250mA BL	28000368	Blue	0250	40.2 k Ω	10 pc(s).	0.001 kg
I-SELECT PLUG 275mA BL	28000369	Blue	0275	34.0 k Ω	10 pc(s).	0.001 kg
I-SELECT PLUG 300mA BL	28000275	Blue	0300	27.4 k Ω	10 pc(s).	0.001 kg
I-SELECT PLUG 350mA BL	28000276	Blue	0350	12.0 k Ω	10 pc(s).	0.001 kg

Standards

EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-2-13
EN 62384
EN 61547

According to EN 50172 for use in central battery systems

According to EN 60598-2-22 suitable for emergency lighting installations

Output current setting

Output current can be set by connecting a resistor between the 2 "I sel" terminals. Relationship between output current and resistor value can be found at the table "Specific technical data". Resistor values specified from standardised resistor value ranges.

Resistor value tolerance has to be $\leq 1\%$.

Resistor power has to be ≥ 0.1 W.

If the resistor is connected with wires a max. wire length of 2 m may not be exceeded and possible interferences have to be avoided.

Resistor detection at each start.

Change of the resistor value during the operation will be not considered.

Resistors for the main output current values can be ordered from Tridonic (see accessories).

DC operation

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

Light output level in DC operation: 100 %

Overload protection

LED control gear will switch off at overload operation. Mains reset is required to restart the LED control gear.

Underload operation

LED control gear will switch off at underload operation. Mains reset is required to restart the LED control gear.

Overtemperature protection

The LED control gear will reduce output current at temporary thermal over-heating (exceeding max. t_c point).

Short-circuit behaviour

LED control gear will switch off in case of short-circuit of LED output. Mains reset is required to restart the LED control gear.

No-load operation or load loss during operation

LED control gear will detect a load loss during operation. In this case and no-load operation the max. output voltage can apply at the LED output for max. 5 s before LED control gear shuts down. Mains reset is required to restart the LED control gear.

Hot plug-in

Hot plug-in is not recommend within 5 s after shutdown due to output voltage of > 0 V. Mains reset is required to restart the LED control gear if LED module is connected to the LED control gear after these 5 s.

Storage conditions

Humidity: 5 % up to max. 85 %,
not condensed
(max. 56 days/year at 85 %)

Storage temperature: -40°C up to max. $+80^\circ\text{C}$

The devices have to be within the specified temperature range (t_a) before they can be operated.

Temperature range

The LED control gear life duration is related to the ambient temperature t_a . The relation of t_c to t_a temperature depends also on the luminaire design. If the measured t_c temperature is approx. 5 K below t_c max. or higher, t_a temperature should be checked and eventually critical components (e.g. ELCAP) measured. Detailed information on request.

Expected lifetime

Type	Output current	t_a	40 °C	50 °C	55 °C	60 °C	65 °C
LCI 65W 150mA-400mA TOP Ip	150 mA	t_c	50 °C	60 °C	65 °C	70 °C	75 °C
		lifetime	> 100,000 h	> 100,000 h	> 100,000 h	75,000 h	50,000 h
	175 – 250 mA	t_c	55 °C	65 °C	70 °C	75 °C	x
		lifetime	> 100,000 h	> 100,000 h	75,000 h	50,000 h	x
	275 – 350 mA	t_c	60 °C	70 °C	75 °C	x	x
		lifetime	> 100,000 h	75,000 h	50,000 h	x	x
	375 – 400 mA	t_c	60 °C	70 °C	75 °C	x	x
		lifetime	> 100,000 h	50,000 h	40,000 h	x	x

x = not permitted

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	2,5 mm ²	1,5 mm ²	1,5 mm ²	2,5 mm ²	2,5 mm ²	I _{max}	time
LCI 65W 150mA-400mA TOP Ip	12	18	24	28	6	9	12	14	32.6 A	260 µs

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

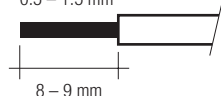
	THD	3.	5.	7.	9.	11.
LCI 65W 150mA-400mA TOP Ip	< 11	< 7	< 3	< 6	< 3	< 2.5

Installation instructions

Wiring type and cross section

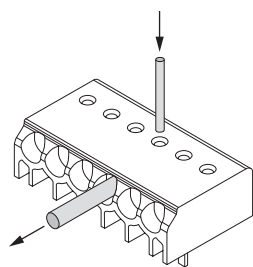
Solid wire with a cross section of 0.5–1.5 mm². Strip 8–9 mm of insulation from the cables to ensure perfect operation of terminals.

wire preparation:
0.5 – 1.5 mm²



Release of the wiring

Loosen wire through twisting and pulling or using a Ø 1 mm release tool.



Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Earthing is not required for the device to operate but will improve the EMI behaviour for protection class I luminaires.
- If LCI TOP C will be earthed protection earth (PE) has to be used.
- Mains leads should be kept apart from LED control gear and other leads (ideally 5 – 10 cm distance)
- Max. length of output and I sel 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 metal parts, metal cable clips, louver, etc.).

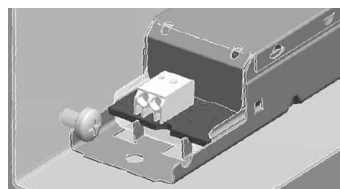
Additional information

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

Guarantee conditions at
www.tridonic.com → Services

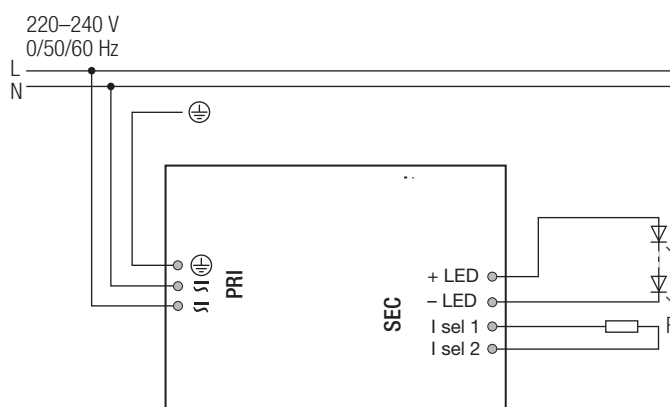
No warranty if device was opened.

Side fixing feature



Screw M4, screw head diameter 8–10 mm

Circuit 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.

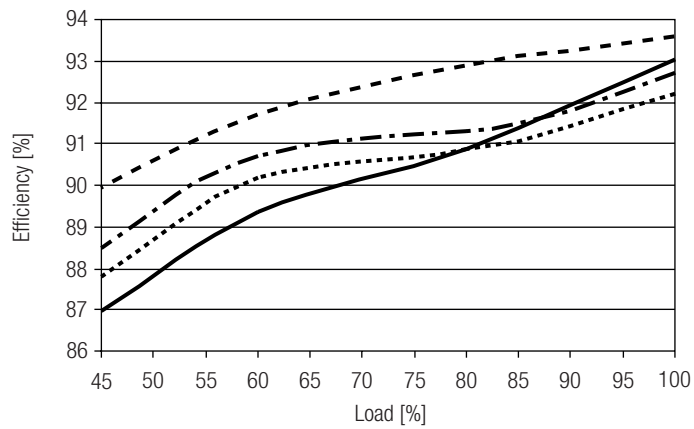
According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.

The isolation resistance must be at least 2 MΩ.

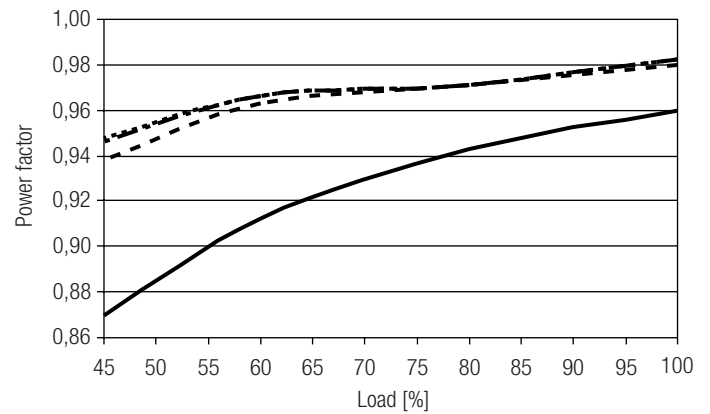
As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

Diagrams LCI 65W 150mA-400mA TOP Ip

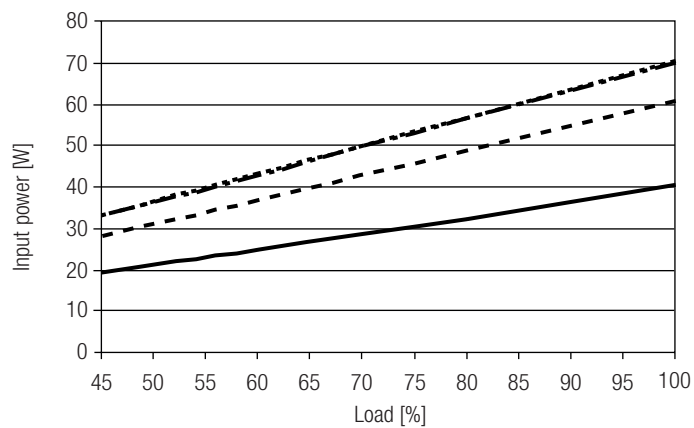
Efficiency vs load



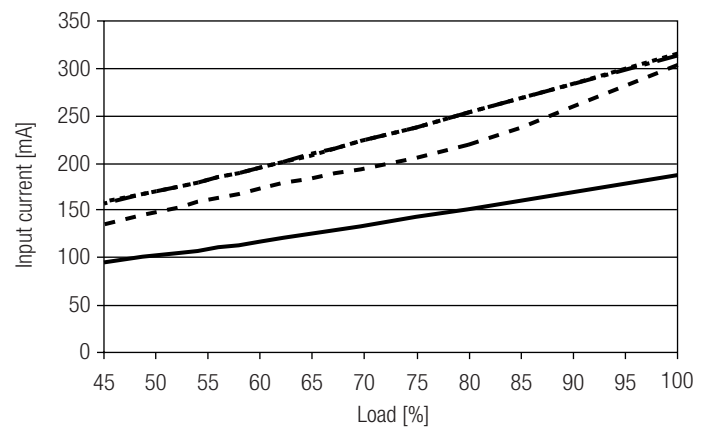
Power factor vs load



Input power vs load



Input current vs load



THD vs load

