TALEXconverter LCI 240W 2230mA–4450mA

TOP series

Product description

- Fixed output built-in LED control gear
- Constant current LED control gear
- Output current settable 2,230 – 4,450 mA
- Max. output power 240 W
- Nominal life-time up to 100,000 h
- For luminaires of protection class I and protection class II
- 5-year guarantee

Properties

- Robust aluminium casing
- Type of protection IP65

Functions

- Overtemperature protection
- Short-circuit proof
- Overload protection

Standards, page 3

IP 65 SELV RoHS

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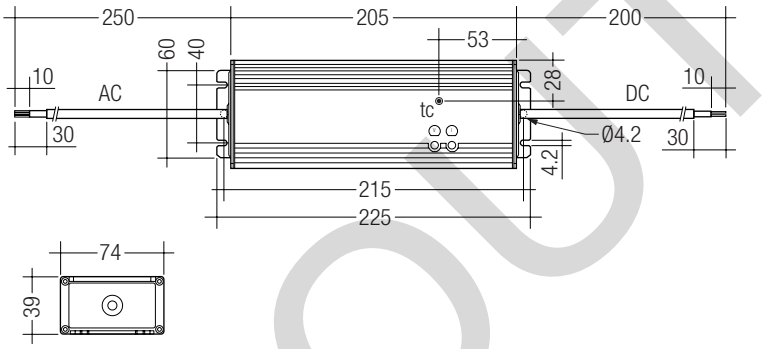
TOP series

Technical data

Rated supply voltage	100 – 277 V
Input voltage, AC	90 – 305 V
Mains frequency	50 / 60 Hz
Leakage current (PE) at 120 V AC	0.4 mA
Leakage current (PE) at 240 V AC	0.75 mA
Max. input power	258.3 W
Efficiency (at 230 V, 50 Hz, full load)	88.0 – 90.5 %
THD (at 230 V, 50 Hz, full load)	< 10 %
Output current tolerance	± 5 %
Output current ripple	± 30 %
Max. repetitive output peak current	output current + 45 %
Max. non-repetitive output peak current	output current + 45 %
Max. output voltage (no-load voltage)	60 V
Time to light	< 2 s
Dimensions L x W x H	225 x 74 x 39 mm



Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
LCI 240W 2230mA-4450mA	**28000350**	12 pc(s).	360 pc(s).	1.335 kg

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 ≥ 50.000 h
LCI 240W 2230mA-4450mA	2,230 mA	27 V	57.0 V	127.1 W	137.0 W	617 mA	0.97	95 °C	-30 … +60 °C	95 / 60 °C
	2,500 mA	27 V	57.0 V	142.5 W	153.9 W	689 mA	0.97	95 °C	-30 … +60 °C	95 / 60 °C
	2,750 mA	27 V	57.0 V	156.8 W	168.4 W	751 mA	0.98	95 °C	-30 … +60 °C	95 / 60 °C
	3,000 mA	27 V	57.0 V	171.0 W	183.5 W	816 mA	0.98	95 °C	-30 … +60 °C	95 / 60 °C
	3,250 mA	27 V	57.0 V	185.3 W	198.7 W	881 mA	0.98	95 °C	-30 … +60 °C	95 / 60 °C
	3,500 mA	27 V	57.0 V	199.5 W	214.3 W	948 mA	0.98	95 °C	-30 … +60 °C	95 / 60 °C
	3,750 mA	27 V	57.0 V	213.8 W	230.0 W	1,016 mA	0.99	95 °C	-30 … +60 °C	95 / 60 °C
	4,000 mA	27 V	57.0 V	228.0 W	245.2 W	1,082 mA	0.99	95 °C	-30 … +60 °C	95 / 60 °C
	4,250 mA	27 V	56.5 V	240.0 W	258.3 W	1,134 mA	0.99	95 °C	-30 … +60 °C	95 / 60 °C
	4,450 mA	27 V	54.0 V	240.0 W	258.3 W	1,134 mA	0.99	95 °C	-30 … +60 °C	95 / 60 °C

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

Output current setting
Output current can be set by turning the screw at the top of the device (I adj, V adj has to be on max. position for this operation mode).

Load error or defect load
Automatic shutdown of defect load.

Overtemperature protection
The LED control gear will reduce output current at temporary thermal overheating (exceeding max. tc point).

Constant voltage operation
If the current draw from the load is less than the rated output current of the LED control gear, the LED control gear will operate in constant voltage mode. In this case the output voltage can be set between 50 and 57 V by turning the screw at the top of the device (V adj).

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

LCI 240 W is designed for an average life-time of 100,000 (at ta for ≥ 100,000 h) hours under reference conditions and with a failure probability of less than 10 %. This corresponds to an average failure rate of 0.1 % for every 1,000 hours of operation.

Storage conditions
Humidity: 5 % up to max. 95 %, not condensed

Storage temperature: -40 °C up to max. +85 °C

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

Expected life-time

Type	ta	40 °C	50 °C	55 °C	60 °C
LCI 240W 2230mA-4450mA	tc	75 °C	85 °C	90 °C	95 °C
	life-time	> 100,000 h	100,000 h	70,000 h	50,000 h

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 mm²	1,5 mm²	2,5 mm²	2,5 mm²	1,5 mm²	1,5 mm²	2,5 mm²	2,5 mm²	I_{max}	time
LCI 240W 2230mA-4450mA	4	5	7	8	2	3	3	4	72 A	310 µs

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

	Output current	THD	3.	5.	7.	9.	11.
LCI 240W 2230mA-4450mA	2,230 mA	< 10	7.5	3.0	2.5	2.0	1.0
	2,500 mA	< 10	7.0	2.5	2.0	2.0	1.0
	2,750 mA	< 10	6.0	2.5	2.0	2.0	1.0
	3,000 mA	< 10	5.5	2.5	1.5	1.5	1.0
	3,250 mA	< 10	5.5	2.5	1.5	1.5	0.5
	3,500 mA	< 10	5.0	2.0	1.5	1.5	0.5
	3,750 mA	< 10	5.0	2.0	1.0	1.5	0.5
	4,000 mA	< 10	4.5	2.0	1.0	1.5	0.5
	4,250 mA	< 10	4.5	2.0	1.0	1.0	0.5
	4,450 mA	< 10	4.5	2.0	1.0	1.0	0.5

Installation instructions

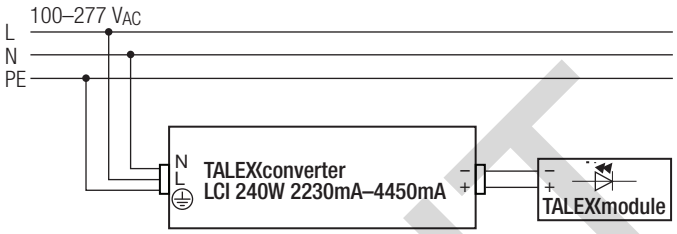
Wiring type and cross section

PRI:
UL2517 18AWGx3C

SEC:
UL2517 16AWGx2C

Primary cable			Secondary cable	
N	L	⏚	–	+
white or blue	black or brown	green-yellow	black	red

Circuit diagram



Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- If LCI 240W 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 wires is 2.5 m.
- Secondary switching is not permitted.
- Incorrect wiring can demage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

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

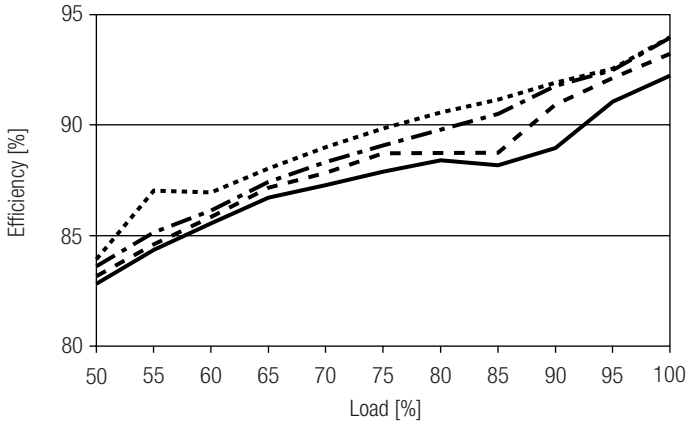
Additional technical information at
www.tridonic.com → Technical Data

Guarantee conditions at
www.tridonic.com → Services

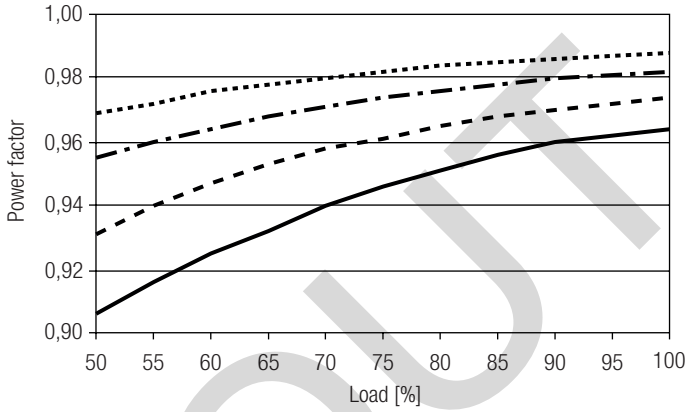
No warranty if device was opened.

Diagrams LCI 240W 2230mA-4450mA

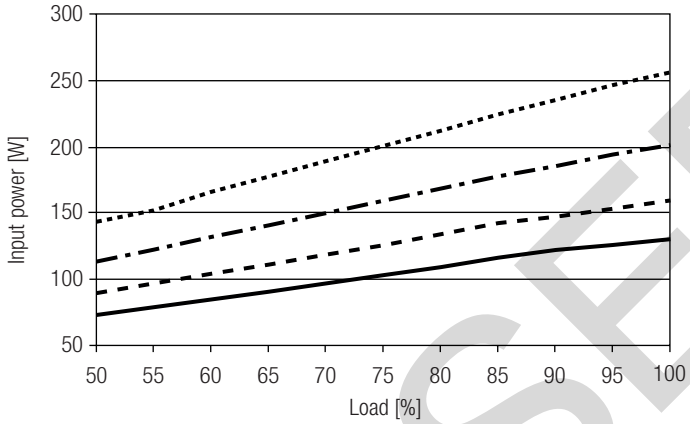
Efficiency vs load



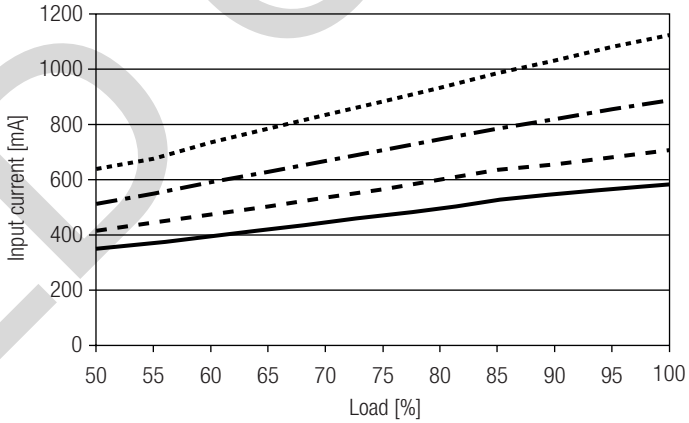
Power factor vs load



Input power vs load



Input current vs load



THD vs load