

TALEXconverter LCU 100/96W 12/24V IP67 TOP
Outdoor IP67 series

Product description

- Constant voltage LED power supply
- Universal input voltage range
- Constant output voltage
- Connection: Cable with end sleeves (length approx. 500 mm)
- Polarity identifiers, secondary + red / – black
- Metal casing, encapsulated
- Nominal life-time up to 50,000 h (at ta 50 °C with a failure rate max. 0.2 % per 1,000 h)
- 5-year guarantee
- Suitable for emergency installations according to EN 50172
- Complies with CLASS C from minimum to maximum load range according to EN 61000-3-2



Properties

- Small design
- High efficiency
- Low power loss
- Overtemperature protection with automatic restart
- Overload protection
- Short-circuit protection with automatic restart
- SELV
- Type of protection IP67
- Metal casing

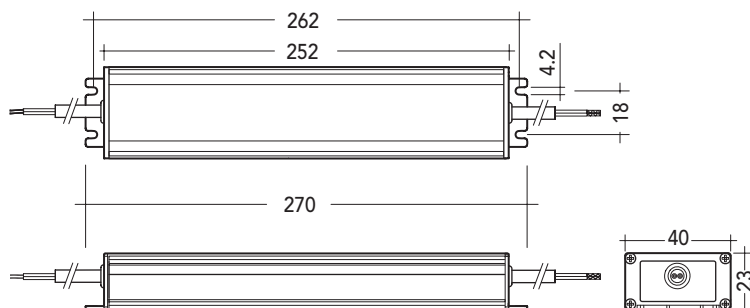




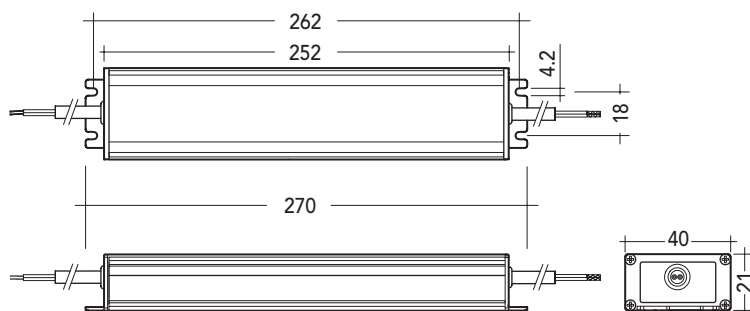
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Technical data

Rated supply voltage	120 – 277 V
Input voltage, AC	108 – 305 V
Input voltage, DC	176 – 288 V
Rated current 12 V (at 230 V, 50 Hz, full load)	0.51 A
Rated current 24 V (at 230 V, 50 Hz, full load)	0.49 A
Mains frequency	0 / 50 / 60 Hz
Efficiency (at 230 V, 50 Hz, full load)	> 90 %
λ (at 230 V, 50 Hz, full load)	0.95
Output voltage tolerance 12 V	-0 / +10 %
Output voltage tolerance 24 V	-0 / +5 %
Output power 12 V ($t_a \leq 60^\circ\text{C}$)	100 W
Output power 24 V ($t_a \leq 60^\circ\text{C}$)	96 W
Output power 12 V ($t_a > 60^\circ\text{C}$)	80 W
Output power 24 V ($t_a > 60^\circ\text{C}$)	76 W
Output power range 12 V	10 – 100 W
Output power range 24 V	10 – 96 W
Turn on time (output)	≤ 0.5 s
Turn off time (output)	≤ 1 s
Hold on time at power failure (Output)	10 ms
Ambient temperature t_a	-40 ... +70 °C
Ambient temperature t_a (at life-time 50,000 h)	-40 ... +50 °C
Storage temperature t_s	-40 ... +85 °C
Dimensions LxWxH for 12 V	270 x 40 x 23 mm
Dimensions LxWxH for 24 V	270 x 40 x 21 mm
Hole spacing	262 x 18 mm



LCU 100W 12V IP67 TOP



LCU 96W 24V IP67 TOP

Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
LCU 100W 12V IP67 TOP	28000510	10 pc(s).	360 pc(s).	0.56 kg
LCU 96W 24V IP67 TOP	28000513	10 pc(s).	360 pc(s).	0.51 kg

Specific technical data

Type	Max. casing temperature t_c	Output voltage	Max. input power	Output current range	Max. output voltage ¹
LCU 100W 12V IP67 TOP	95 °C	12 V	117 W	0.83 – 8.33 A	13.2 V
LCU 96W 24V IP67 TOP	95 °C	24 V	117 W	0.40 – 4.00 A	25.2 V

¹ At failure mode (230 V, 50 Hz).

Standards

EN55015
EN60598-1
EN60598-2-22
EN61000-3-2
EN61000-3-3
EN61347-1
EN61347-2-13
EN61547
EN62384
EN62493
Acc.to EN50172 suitable for central battery systems

Overload protection

Automatic shutdown of the LED Driver if the maximum output current is exceeded. Automatic restart if the output current is below the limit.

No-load operation

The LED Driver is not damaged in no-load operation. The max. output voltage (see page 1) can be obtained during no-load operation.

Over temperature protection

Automatic shutdown of the LED Driver if the temperature limit is exceeded. Automatic restart if the temperature falls below the limit.

Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED Driver switches into hiccup mode. After removal of the short-circuit fault the LED Driver will recover automatically.

Expected life-time

Type	Output voltage	t _a	40 °C	50 °C	60 °C
LCU 100W 12V IP67 TOP	12 V	tc	60 °C	70 °C	80 °C
		Life-time	> 100,000 h	> 50,000 h	> 25,000 h
LCU 96W 24V IP67 TOP	24 V	tc	60 °C	70 °C	80 °C
		Life-time	> 100,000 h	> 50,000 h	> 25,000 h

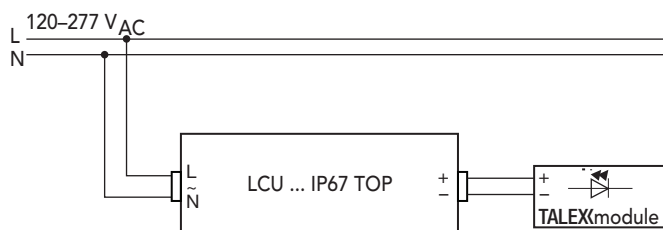
Maximum loading of automatic circuit breakers

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
LCU 100W 12V IP67 TOP	9	12	15	19	6	7	9	12	51.50 A	99 µs
LCU 96W 24V IP67 TOP	10	13	16	20	6	8	10	12	50.75 A	107 µs

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

Type	THD	3	5	7	9	11
LCU 100W 12V IP67 TOP	10	3	2	2	2	1
LCU 96W 24V IP67 TOP	5.1	1	1	3	2	1

Wiring diagram

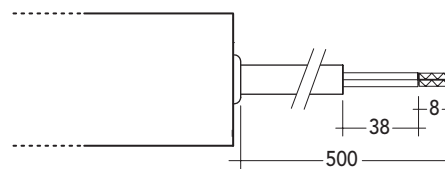


Installation instructions

The switching of LEDs on secondary side is not permitted. A proper functioning of the LCU in combination with third party dimming devices (e.g. PWM) cannot be guaranteed.

Connection

Primary cable		Secondary cable	
L	N	+	-
brown	blue	red	black



PRI:

Ø 7.7 ± 0.2 mm; 2 x 1.04 mm² (17 AWG)

SEC:

LCU 100W 12V IP67 TOP: Ø 8.7 ± 0.2 mm; 2 x 2.08 mm² (14 AWG)

LCU 96W 24V IP67 TOP: Ø 7.7 ± 0.2 mm; 2 x 1.04 mm² (17 AWG)

Isolation and electric strength testing of luminaires

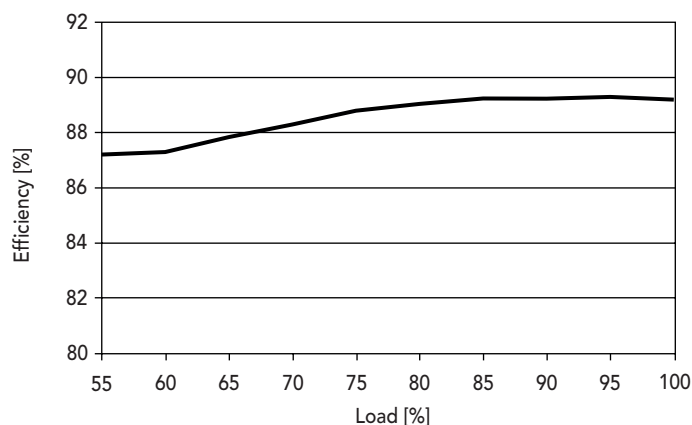
Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500VDC 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.

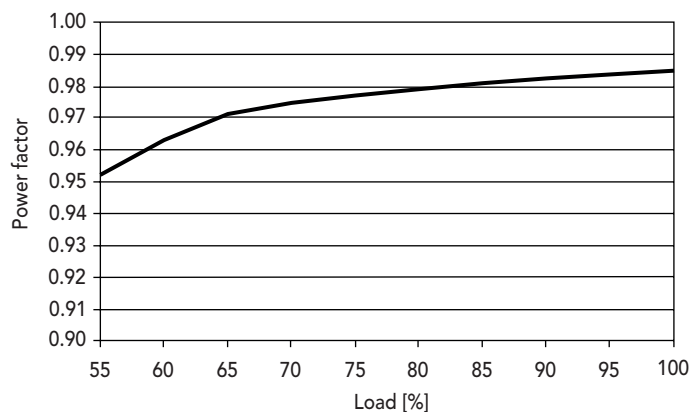
As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500VAC (or 1.414x1500VDC). To avoid damage to the electronic devices this test must not be conducted.

Diagrams for 12 V

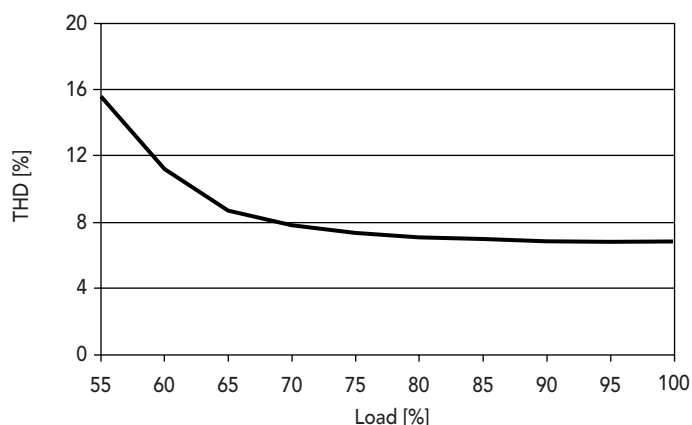
Efficiency vs load



Power factor vs load

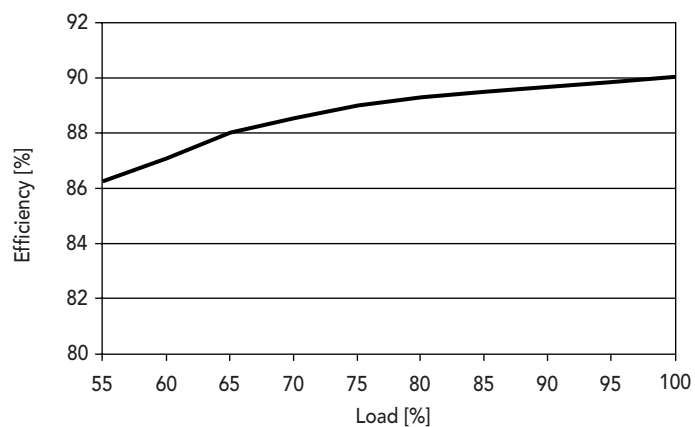


THD vs load

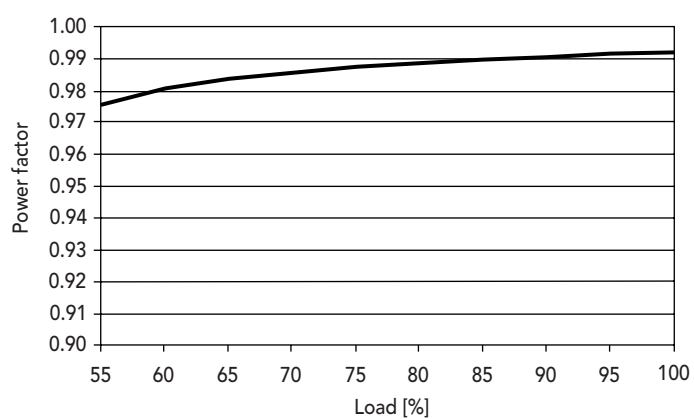


Diagrams for 24 V

Efficiency vs load



Power factor vs load



THD vs load

