IP20 SELV RoHS

Driver LCI 15 W 350/500/700 mA stepDIM lp

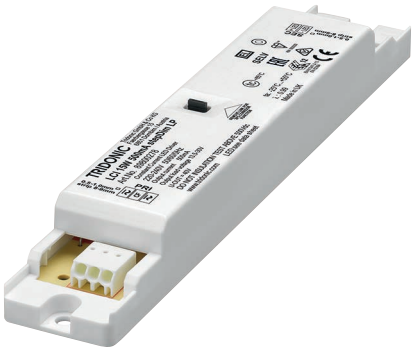
BASIC series

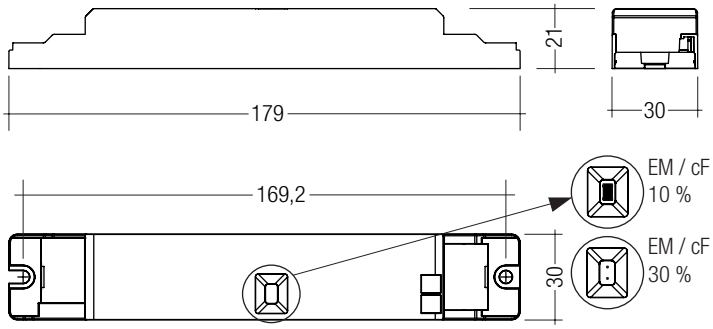
Product description

- Constant current LED Driver for luminaire installation
- Implemented stepDIM function
- 10 or 30 % dimming level settable
- Can be used with a standard motion detector (Simple CORRIDOR FUNCTION)
- Nominal life of 50,000 h (at ta max. with a failure rate of max. 0.2 % per 1,000 h)
- 350, 500 or 700 mA output current
- Push-in terminals
- Connecting cable, cable cross-section 0.5 – 1.5 mm²
- Output power 15/16/16.5 W
- SELV
- Type of protection IP20
- Output dimmed analogue (current amplitude)

Properties

- Casing: polycarbonat, white
- Compact dimensions
- Overload protection
- Short-circuit protection
- No-load protection





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
Output current tolerance (normal operation 100 %)[2]	± 7.5 %
Typ. current ripple (at 230 V, 50 Hz, full load)	± 15 %
Max. repetitive output peak current	output current + 24 %
Max. non-repetitive output peak current	output current + 24 %
λ at full load[1]	0.99
λ at min. load[1]	0.97C
Turn on time (at 230 V, 50 Hz, full load)	≤ 0.1 s
Turn off time (at 230 V, 50 Hz, full load)	≤ 0.1 s
Hold on time at power failure (output)	0 s
Storage temperature ts	-40 … +85 °C
Max. output voltage	60 V
Dimensions L x W x H	179 x 30 x 21 mm

Ordering data

Type	Article number	Packaging, carton	Packaging, pallet	Weight per pc.
LCI 15W 350mA stepDIM lp	**89800277**	10 pc(s).	800 pc(s).	0.064 kg
LCI 15W 500mA stepDIM lp	**89800278**	10 pc(s).	800 pc(s).	0.066 kg
LCI 15W 700mA stepDIM lp	**89800279**	10 pc(s).	800 pc(s).	0.065 kg

→

Standards, page 3

Wiring diagrams and installation examples, page 3

Specific technical data

Type	Typ. output current[2]	Output current tolerance	Min. forward voltage	Max. forward voltage	Typ. output power	Typ. power consumption	Typ. current consumption	tc point	Ambient temperature ta
Normal operation 100 % (LCI 15W 350mA)									
LCI 15W 350mA stepDIM lp	350 mA	± 7.5 %	21.0 V	46.0 V	16.0 W	20.0 W	89 mA	90 °C	-25 … +50 °C
Operation cF / EM 30 % (LCI 15W 350mA)									
LCI 15W 350mA stepDIM lp	105 mA	± 25 %	21.0 V	46.0 V	4.8 W	6.2 W	60 mA	90 °C	-25 … +50 °C
Operation cF / EM 10 % (LCI 15W 350mA)									
LCI 15W 350mA stepDIM lp	35 mA	± 25 %	21.0 V	46.0 V	1.6 W	2.7 W	19 mA	90 °C	-25 … +50 °C
Normal operation 100 % (LCI 15W 500mA)									
LCI 15W 500mA stepDIM lp	500 mA	± 7.5 %	13.5 V	33.5 V	16.5 W	20.5 W	86 mA	85 °C	-25 … +55 °C
Operation cF / EM 30 % (LCI 15W 500mA)									
LCI 15W 500mA stepDIM lp	150 mA	± 25 %	13.5 V	33.5 V	4.9 W	6.3 W	57 mA	85 °C	-25 … +55 °C
Operation cF / EM 10 % (LCI 15W 500mA)									
LCI 15W 500mA stepDIM lp	50 mA	± 25 %	13.5 V	33.5 V	1.7 W	3.0 W	20 mA	85 °C	-25 … +55 °C
Normal operation 100 % (LCI 15W 700mA)									
LCI 15W 700mA stepDIM lp	700 mA	± 7.5 %	10.0 V	21.5 V	15.0 W	19.0 W	84 mA	85 °C	-25 … +55 °C
Operation cF / EM 30 % (LCI 15W 700mA)									
LCI 15W 700mA stepDIM lp	210 mA	± 25 %	10.0 V	21.5 V	4.5 W	5.8 W	51 mA	85 °C	-25 … +55 °C
Operation cF / EM 10 % (LCI 15W 700mA)									
LCI 15W 700mA stepDIM lp	70 mA	± 25 %	10.0 V	21.5 V	1.5 W	3.0 W	21 mA	85 °C	-25 … +55 °C

[1] Test result at 230 V, 50 Hz.

[2] 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

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.

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 current mode. In no-load operation there is the max. output voltage at the output (see page 1).

Installation instructions
Note the requirements set out in the document LED_driver_installation_advise.pdf (http://www.tridonic.com/com/en/technical-data.asp).

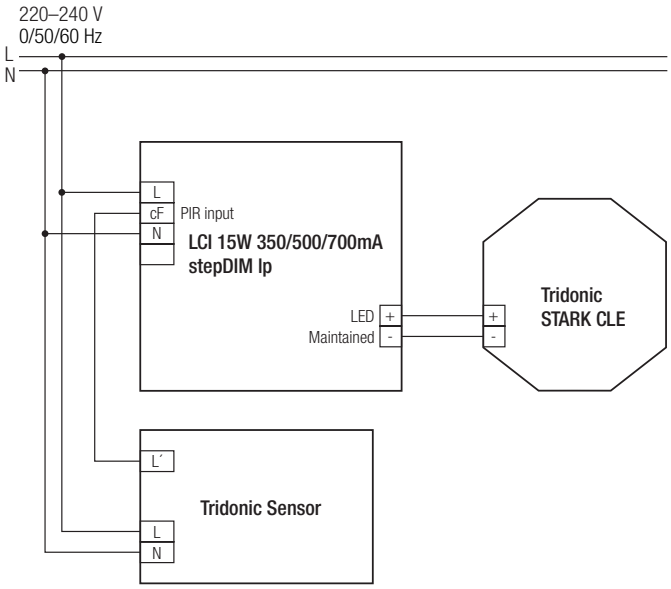
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

Glow wire test
according to IEC 60695-2-11 with increased of 850 °C passed.

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	1.5 mm²	2.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	I_{max}	Time
LCI 15W 350mA step-DIM lp	50	65	80	100	50	65	80	100	2 A	70 µs
LCI 15W 500mA step-DIM lp	50	65	80	100	50	65	80	100	2 A	70 µs
LCI 15W 700mA step-DIM lp	50	65	80	100	50	65	80	100	2 A	70 µs

Wiring diagram with sensor



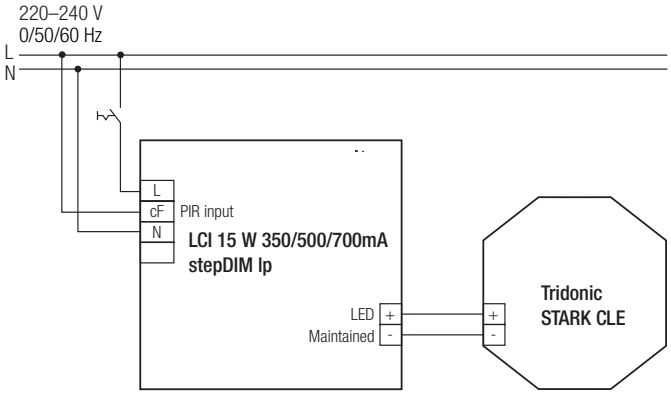
Switching behaviour:

L	cF	Jumper	Output LED
off	off	set / not set	off
off	on	set / not set	off
on	off	set	10 %
on	off	not set	30 %
on	on	set / not set	100 %

DC operation behaviour:
Emergency level at 10 %

The sensor is not activ in DC operation.

Wiring diagram normal operation with EM mode



PIR input 230 V

The mains power must be removed before changing the LED load.

Secondary switching of LEDs is not allowed and may cause damage to the LEDs.

DC operation behaviour:

The emergency level (10 % or 100 %) depends on the polarity of the DC voltage.

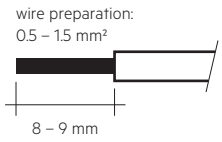
L	+	–	+	–
N	–	+	–	+
CF	+	–	–	+
Emergency level	100 %	10 / 30 %*	10 / 30 %*	100 %

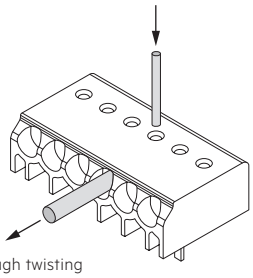
* depending on the jumper setting (set: 10 %, not set: 30 %)

Electrical connections

Wiring

LED module/LED Driver/supply





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

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.

Mounting of device

Max. torque for fixing: 0.5 Nm/M4

Wiring guidelines

- 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)
- Max. length of output wires is 30 cm.
- Incorrect wiring can demage LED modules.
- To avoid the damage of the Driver, 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

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