

Product description

- Independent LED driver with cable clamps
- For luminaires of protection class I and protection class II
- Temperature protection
- Constant current LED driver
- Selectable fixed output current via DIP switch 150, 200, 250 and 300 mA
- Max. output power 12 W
- Nominal lifetime up to 50,000 h
- 5 years guarantee

Housing properties

- Casing: polycarbonat, white
- Type of protection IP20

Functions

- Overload protection
- Short-circuit protection
- No-load protection

Typical applications

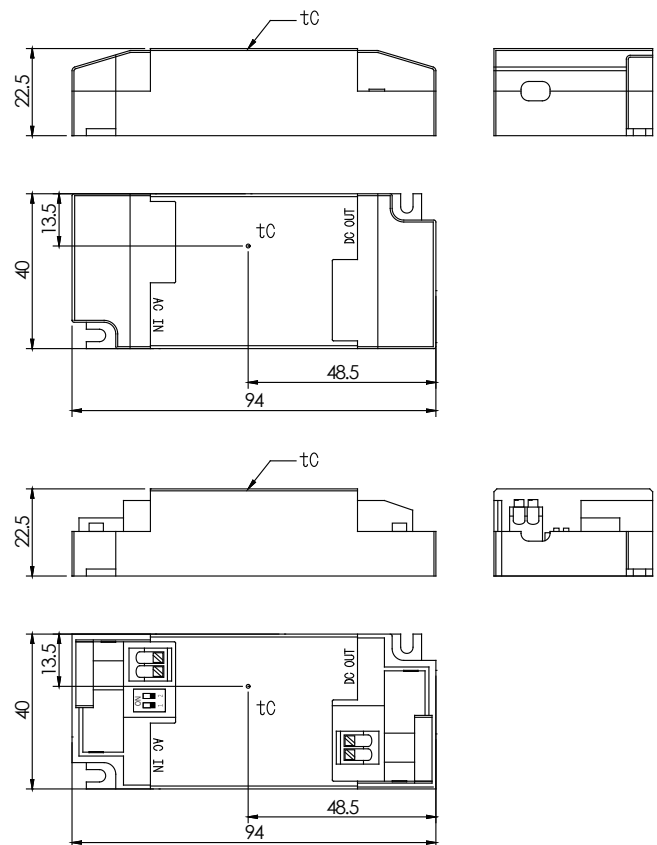
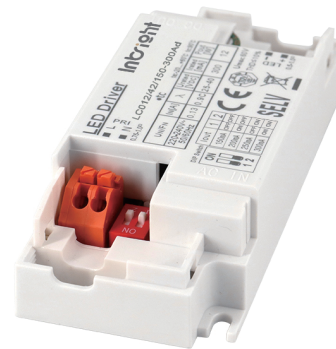
- For spot light and downlight in retail and hospitality application
- For panel light in office application

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Wiring diagrams and installation examples, page 3

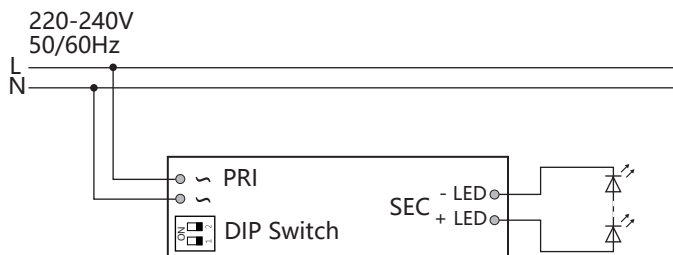
Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Max.input current(at 230V,50Hz,full load)	0.060 A
Mains frequency	50 / 60 Hz
Overvoltage protection	320 V AC, 2 h
Typ. power consumption(at 230V,50Hz,full load)	13 W
Min. output power	3.8 W
Max. output power	12 W
Typ. efficiency(at 230V/50Hz/full load)	80.5 %
λ over full operating range (max.)	0.95
λ over full operating range (min.)	0.75C
Output current tolerance	± 10%
Max. output current peak	≤ output current + 12 %
Max. output voltage	60 V
THD (at 230 V, 50 Hz, full load)	< 10 %
Output LF current ripple (< 120 Hz)	± 5 %
Output P_{stLM} (at full load)	≤ 1
Output SVM (at full load)	≤ 0.4
Starting time (at 230V,50Hz,full load)	< 0.5 s
Turn off time (at 230V,50Hz,full load)	≤ 0.5 s
Hold on time at power failure (output)	0 s
Ambient temperature t_a (at lifetime 50,000 h)	50°C
Storage temperature t_s	-40~+80°C
Mains burst capability	1 kV
Mains surge capability (between L – N)	1 kV
Mains surge capability (between L/N–PE)	2 kV
Surge voltage at output side (against PE)	3 kV
Lifetime	up to 50,000h
Guarantee	5 years
Dimensions L x W x H	94 x 40 x 22.5 mm



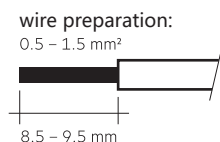
3. Installation / wiring

3.1 Circuit diagram



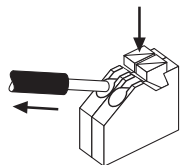
3.2 Wiring type and cross section for input

For wiring use stranded wire with ferrules or solid wire from 0.5–1.5 mm². Strip 8.5–9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals. Use one wire for each terminal connector only.



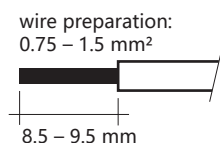
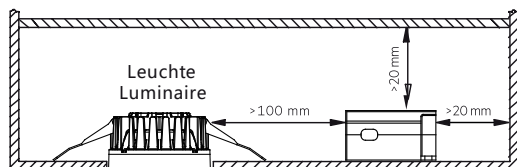
3.3 Release of the wiring

Press down the “push button” and remove the cable from front.



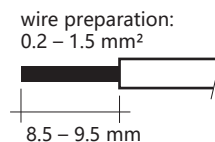
3.4 Fixing conditions when using as independent Driver with Clip-On

Dry, acidfree, oilfree, fatfree. It is not allowed to exceed the maximum ambient temperature (ta) stated on the device. Minimum distances stated below are recommendations and depend on the actual luminaire. Is not suitable for fixing in corner.



3.5 Wiring type and cross section for output

For wiring use stranded wire with ferrules or solid wire from 0.2–1.5 mm². Strip 8.5–9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals. Use one wire for each terminal connector only.



3.6 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 2 m.
- To comply with the EMC regulations run the secondary wires (LED module) in parallel.
- Secondary switching is not permitted.
- Incorrect wiring can damage 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.).

3.7 Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 20 seconds
4. Connect LED module again

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

3.8 Installation instructions

The LED module and all contact points within the wiring must be sufficiently insulated against 3 kV surge voltage. Air and creepage distance must be maintained.

3.9 Mounting of device

Max. torque for fixing: 0.5 Nm/M4

4. Functions

4.1 Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED driver switches off. After elimination of the short-circuit fault the LED driver will recover automatically.

4.2 No-load operation

The LED driver works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string opens due to a failure.

4.3 Overload protection

If the maximum load is exceeded by a defined internal limit, the LED driver will protect itself and LED may flicker. After elimination of the overload the nominal operation will recover automatically.

4.4 Overtemperature protection

The LED driver is protected against temporary thermal overheating. If the temperature limit is exceeded, the output current will reduce or LED may flicker. It will recover automatically.

5. Miscellaneous

5.1 Disposal of equipment



Return old devices in accordance with the WEEE directive to suitable recycling facilities.

5.2 Insulation 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 insulation test with 500V for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal. The insulation resistance must be at least 2 MΩ.

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

5.3 Conditions of use and storage

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 (ta) before they can be operated.

5.4 Maximum number of switching cycles

All LED driver are tested with 50,000 switching cycles.

Lifetime declarations are informative and represent no warranty claim.

No warranty if device was opened.