LL1x15-E-CC-500

1x15 W **Constant Current** LED driver

Helvar
freedom in lighting

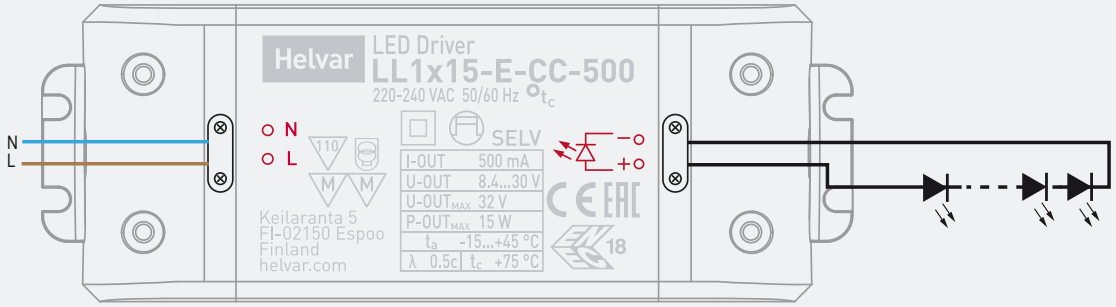
Product code: 5582

15 W 220 - 240 V, 50 - 60 Hz

- Fixed constant current output: 500 mA
- Maximum 15 W load
- Low current ripple, complying with IEEE 1789 recommendation
- Short circuit protection
- Overvoltage protection
- Over temperature protection
- Suitable for Class I, II and III luminaires
- Linear enclosure with strain relief for independent use

SELV

Connections



Note: Not suitable for load side switching operation.

Mains Characteristics

Voltage range	198 - 264 VAC
Max mains current at full load	0.13 - 0.18 A
Frequency	50 - 60 Hz
U-OUTmax (abnormal)	30 V

Load Output

Output current	500 mA
Max output power	15 W
Efficiency, at full load, typical	⩾ 0.85

Ripple	< ± 5 % at ⩽ 120 Hz
PstLM	< 0.1*
SVM	< 0.02*

*) At full power, measured with Cree XP-G LED modules.

I_{OUT}	500 mA
$P_{OUT(MAX)}$	15 W
U_{OUT}	8 - 30 V
PF (λ) at full load	0.50c
Efficiency (η) at full load	0.85

Operating Conditions and Characteristics

Max.temperature at Tc point	75 °C
Ambient temperature range	-15...+45 °C
Storage temperature range	-40...+80 °C
Maximum relative humidity	no condensation
Life time	30 000 h, at Tc max (90 % survival rate)

Connections and Mechanical Data

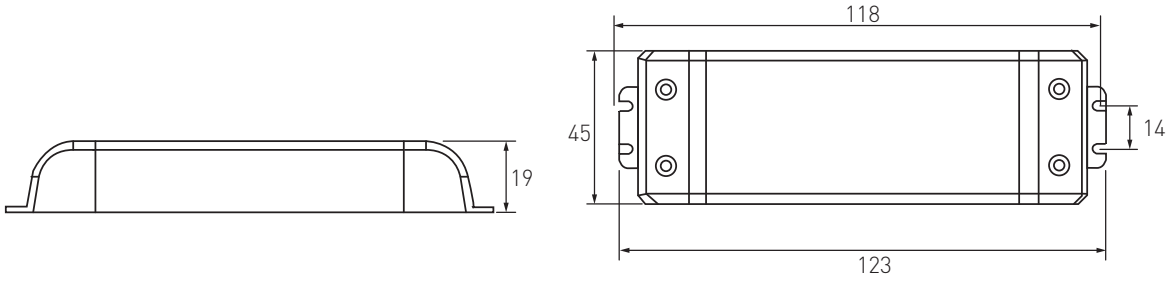
Wire size	0.5 - 1.5 mm²
Wire type	solid core and fine-stranded
Maximum driver to LED wire length	5 m
Weight	70 g
IP rating	IP20

Conformity & Standards

General and safety requirements	EN 61347-1
Particular safety requirements for d.c. or a.c. supplied electronic controlgear for LED modules, acc. to	EN 61347-2-13
Performance requirements, acc to	EN 62384
Mains current harmonics, acc. to	EN 61000-3-2
Limits for Voltage Fluctuations and Flicker, acc to	EN 61000-3-3
Radio Frequency Interference, acc. to	EN 55015
Immunity standard, acc. to	EN 61547
Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers	IEEE 1789-2015

ENEC, CE, UKCA & SELV marked

Dimensions



LL1x15-E-CC-500 LED driver is suited for either in-built or independent luminaire usage. In order to have safe and reliable LED driver operation, the LED luminaires will need to comply with the relevant standards and regulations (e.g. IEC/EN 60598-1). The LED luminaire shall be designed to adequately protect the LED driver from dust, moisture and pollution. The luminaire manufacturer is responsible for the correct choice and installation of the LED drivers according to the application and product datasheets. Specifications of the LED drivers may never exceed the operating conditions as per the product datasheets.

Wiring considerations

Wire type and cross section

- Please refer to datasheets connections & mechanical data

Wiring insulation

- According to recommendations in EN 60598

Maximum wire lengths

- Please refer to datasheets connections & mechanical data

Wire connections

- Please refer to datasheets connections diagram

Miniature Circuit Breakers (MCB)

- Type-C MCB's with trip characteristics in according to EN 60898 are recommended.

LED driver earthing

- LED drivers are designed to support different luminaire classifications, like Class I or Class II fittings (no earth required). Please check the individual LED driver type for its exact safety class rating.
- For Helvar LED drivers to have a reliable operation and EMC performance, the luminaires are expected to have an earth connection. Earth connection can be left out if luminaire safety is guaranteed by its construction.
- When using a SELV-rated LED driver, then the SELV driver output has to be insulated from the luminaire earth connection (ref. EN60598-1 luminaire standard).

Installation & operational considerations

Maximum tc temperature

- Reliable operation and lifetime is only guaranteed if the maximum tc point temperature is not exceeded under the conditions of use.

Strain Relief for independent use

- LL1x15-E-CC-500 LED driver allow use both inside the luminaire and outside the luminaire. The strain relief provides reliable fastening method for the mains and LED output wiring.
- Ensure that the LED driver does not exceed temperature higher than specified on the product datasheets.
- The general preferred installation position of LED drivers is to have the top cover facing upwards.