LL1x120-CV24

1x120W **Constant Voltage** LED driver

Helvar
freedom in lighting

Product code: 5576

120 W 220-240 VAC 50-60 Hz

- Open & short circuit protection
- Over voltage protection
- 24 V Constant voltage output
- Low voltage ripple, complying with IEEE 1789-2015 recommendation
- Maximum 120 W load
- Suitable for Class I and Class II luminaires, as well as for independent use
- Double insulated enclosure
- Suitable for use with LL1xCV-DA driver extension for DALI dimmable solutions

Connections

Parallel output connection

Mains Characteristics

Voltage range	198-264 VAC,
Max mains current at full load	0.7 A
Frequency	50 - 60 Hz
Power factor	0.95
Input Power at no load	0.5 W

Load Output (SELV < 60 V)

Output voltage (U-OUT)	24 V
Ripple	< ± 5%* at ⩽ 120 Hz
PstLM	< 0.05*
SVM	< 0.01*
Max output current (I-OUT)	5 A
Max output power	120 W
Efficiency, at full load, typical	0.88

*) At full power

Operating Conditions and Characteristics

Max.temperature at tc point	+90 °C
Ambient temperature range	-20...+45 °C
Storage temperature range	-40...+80 °C
Maximum relative humidity	no condensation
Life time	50 000 h at t_c = 80 °C
	40 000 h at t_c = 85 °C
	30 000 h at at t_c = 90 °C
	(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	425 g
IP rating	IP20

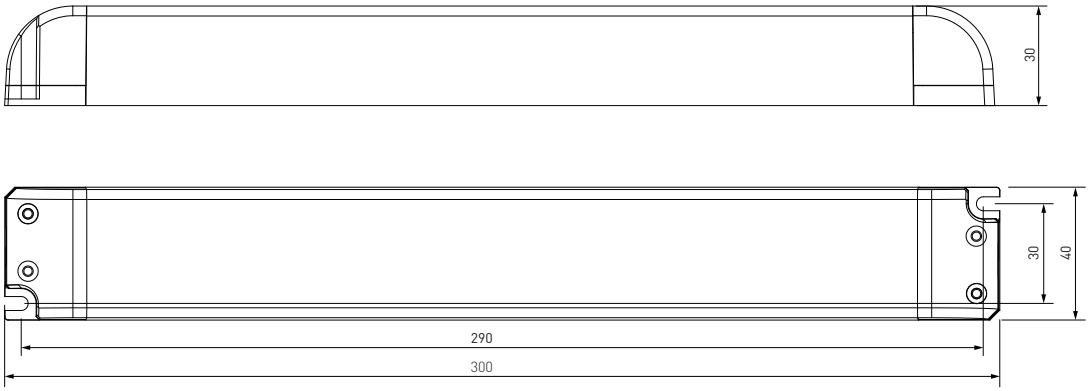
Conformity

Radio Frequency Interference, acc. to	EN 55015
Immunity standard, acc. to	EN 61547
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	EN 61000-3-3
Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers	IEEE 1789-2015

CE / UKCA and SELV marked

Note: See page 2 for dimensions

Dimensions



Wiring & connectivity

LL1x120-E-CV24 LED driver is suited for either in-built and 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.

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.

Installation site

- 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.

Quantity of drivers per miniature circuit breaker 16 A Type C

Based on I_{Cont} (pcs.)	Based on I_{peak} (pcs.)	Typ.inrush current I_{peak} (A)	1/2 value time Δt (µs)	Calculated energy $I_{peak}^2 Δt$ (A^2s)
20	55	12.8	308	0.0205