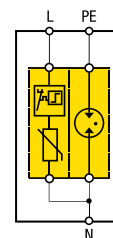
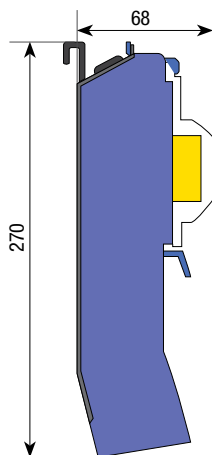


Surge Protective Devices: ZOTUPLED



LLP 2/10 230 ff 1+1

LLP (LED Lighting Protection) systems is a ready to install assembly of a voltage limiting and a voltage switching SPD providing two modes of protection in a protective housing, with the following features and benefits:

- **Impulse test classification: Test Class II** according to IEC 61643-11(2011-03) and **Type 2** according to EN 61643-11 (2012-10);
- Combination type SPD for the protection of street lighting luminaires against indirect lightning effects;
- **Backup protection is not required with an upstream CB ≤ 160 A or up to an I_{sccr} ≤ 5 kA rms;**
- **Easy wiring inside of the openings at the pole base with a size of 186 x 45 mm (minimum diameter of the pole 101 mm);**
- The special SPD case material allows to match with "Pollution Degree 3" requirements.

Model LLP 2/10 ...

230 ff 1+1

CODE			242 190
Nominal ac system voltage	U _N		230/400 V ac
Modes of protection (number of poles)			1+1 (L-N + N-PE)
Max Continuous Operating Voltage (L-N)	U _c		335 V ac
Max Continuous Operating Voltage (N-PE)	U _c		255 V ac
Test Class according to IEC 61643-11 Ed.1 (2011-03)			II
Type according to EN 61643-11 (2012-10)			T2
Nominal discharge current (8/20 μs) (L-N)	I _n		10 kA
Nominal discharge current (8/20 μs) (N-PE)	I _n		40 kA
Max. discharge current (8/20 μs) (L-N)	I _{max}		20 kA
Max. discharge current (8/20 μs) (N-PE)	I _{max}		65 kA
Voltage protection level (L-N, L-PE) at a discharge current of			
1 kA	U _p	≤ 0,87 kV	≤ 1,50 kV
5 kA	U _p	≤ 1,00 kV	≤ 1,50 kV
10 kA	U _p	≤ 1,25 kV	≤ 1,50 kV
Voltage protection level (N-PE)	U _p		≤ 1,50 kV
Response time (L-N / N-PE)	t _a		≤ 25 ns / ≤ 100 ns
End of life			OCFM (open circuit failure mode)
Behaviour of failure mode in case of Temporary OverVoltage (TOV):			
L-N	U _r		440 V / 120 min, withstand (W)
N-PE	U _r		1200 V / 200 ms, withstand (W)
Short Circuit Current rating without backup protection (internal disconnecter)	I _{sccr}		5 kA rms
Short Circuit Current rating with max. backup protection fuse (L)	I _{sccr}		100 kA rms
Max. back-up protection with up-stream CB with a max. let-through energy of (max. prospective short circuit current depends on the CB breaking capability).			160 A (max. 4,50 x 10 ⁵ A ² s)
Max. back-up protection with FUSE at prospective short circuit currents of			125 A gG (> 5 ÷ 100 kA rms)
Follow current interrupt rating (L-N)	I _{fi}		NFC No Follow Current®
Follow current interrupt rating (N-PE)	I _{fi}		100 A rms
Status indicator (indication of disconnecter operation)			3 coloured levels with progressive performance indication
Operating temperature range / Humidity			-40 ... +80 °C (extended) / 5% ... 95%
Terminal-Conductor size			4-35 mm ² flexible / 4-50 mm ² semi rigid
Mounting			35 x 7,5 mm top hat DIN rail IEC/EN 60715
Case material / Flammability grade			BMC / V-0 in accordance with UL 94
Pollution degree / Degree of protection	PD / IP		3 / 54 (built-in)
Approximate weight			260 g
Dimensions			1 68 x h 270 x d 44 mm
Certifications / Quality Mark			CB, STC issued by OVE / KEMA-KEUR
GTIN (EAN)			8054890321815

TECHNICAL DATA