

PRODUCT DATASHEET

LVED SPD 20KV IP20 Class I

LED SURGE PROTECTOR DEVICE



AREAS OF APPLICATION

- Surge protector device
- Uoc: 20KV
- Class I

PRODUCT BENEFITS

- Long lifetime and high working temperature
- Failure indication LED
- Low maintenance costs thanks to easy replacement

PRODUCT FEATURES

- Suitable for luminaries of protection class I
- High surge protection of up to 20 kV
- Maximize the lifetime of outdoor lighting applications
- Fully comply with IEC 61643-11
- Operating frequency: 50/60 Hz
- Compact design
- Type of protection IP20

TECHNICAL DATA

Electrical Specifications

Specifications	Parameter	Value	Unit	Condition
Classification		Class III (T3)		IEC/EN 61643-11 GB/T18802.11-2020
Protection mode		Diff. mode & Comm. Mode		
(L-N) Max. continuous operating voltage	Uc (L-N)	320	VAC	50 ... 60 Hz
(L-GND) Max. continuous operating voltage	Uc (L-GND)	320	VAC	50 ... 60 Hz
(N-GND) Max. continuous operating voltage	Uc (N-GND)	15	VAC	50 ... 60 Hz / The L N input line must be connected correctly and cannot be reversed.L N
Temporary overvoltage TOV	UT	336.6	V	LV system fault: 255 V x 1.32 at tt =5S, TN
Temporary overvoltage TOV	UT	441.6	V	LV system fault: 255 V x $\sqrt{3}$ at tt = 120m, TN
Power grids		TN		Incl. all TN varieties TN-C, TN-C-S, TN-S
(L-N) Nominal discharge current	In (L-N) (L-GND) (N-GND)	10 7.5 7.5	kA	@ Uoc=20kV, internal resistance=2 Ω @ Uoc=15kV, internal resistance=2 Ω @ Uoc=15kV, internal resistance=2 Ω
Max discharge current	Imax(L-N) (L-GND) (N-GND)	20	kA	1 strike
(L-N) Max. voltage protection level at In	Up (L-N)	1.8	kV	@ Uoc=20KV, internal resistance=2 Ω
(L-GND) Max. voltage protection level at In	Up (L-GND)	2	kV	@ Uoc=15KV, internal resistance=2 Ω
(N-GND) Max. voltage protection level at In	Up (N-GND)	2	kV	@ Uoc=15KV, internal resistance=2 Ω
Open-circuit voltage	Uoc	20	kV	
Backup fuse		16	A	Max., gG fuse
End of life indication		Yes		Light ON: SPD is functional. Light OFF: SPD has reached end-of-life
Max earth leakage current at Uc		50	μ A	Max. rms, to GND
IP protection level		IP20		

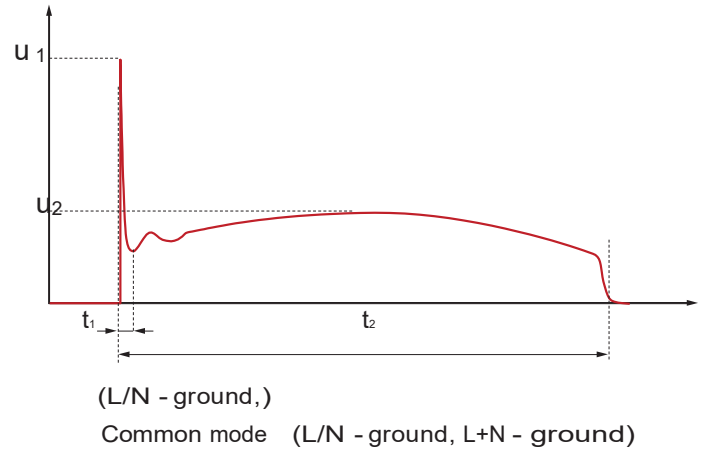
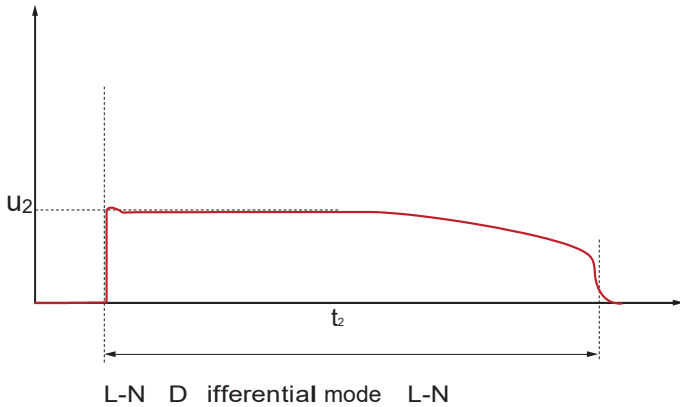
Other Specifications

Specifications	Parameter	Value	Unit	Condition
Surge withstand capability		1	strike	Max. at 20KA
		20	strike	Min. at 10kA
		50	strike	Min. at 5kA
Nominal current		5	A	(50-60Hz) Rated load current at 50 ... 60 Hz
Power consumption		0.5	W	Max. at Uc = 320VAC; Load current=5A
Suitable for luminaires		Class I		IEC60598 Insulation Class acc. IEC60598

TECHNICAL DATA

Protection levels Up

Model	Ic 8/20 μ s	Differential mode U2	(L-G) U1/U2 Common mode U1/U2	(N-G) U1/U2 Common mode U1/U2
LVED SPD 20KV IP20 I	DM:10kA / CM:7.5kA	≤ 1800 V	≤ 2000 V / 1400 V	≤ 2000 V / 1000 V



Environmental conditions

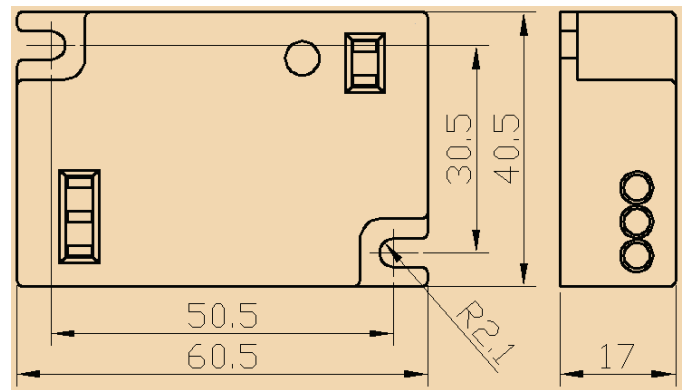
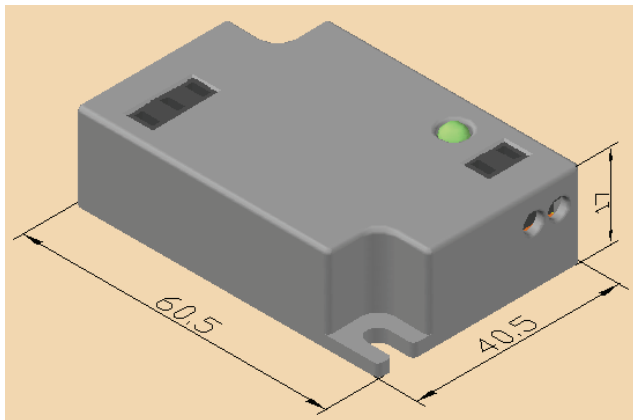
Specification item	Value	Unit	Condition
Ambient temperature	-40...80	$^{\circ}$ C	
Tcase-max.	85	$^{\circ}$ C	Measured at Tc-point
Storage temperature	-40...85	$^{\circ}$ C	
Relative humidity	5...95	%	Non-condensing
Suitable for outdoor luminaires	Yes		Built-in only

Lifetime

Specification item	Value	Unit	Condition
Lifetime	100,000	hours	Measured @ Tcase-max with min 90% survival

LOGISTICAL DATA

Product Dimensions



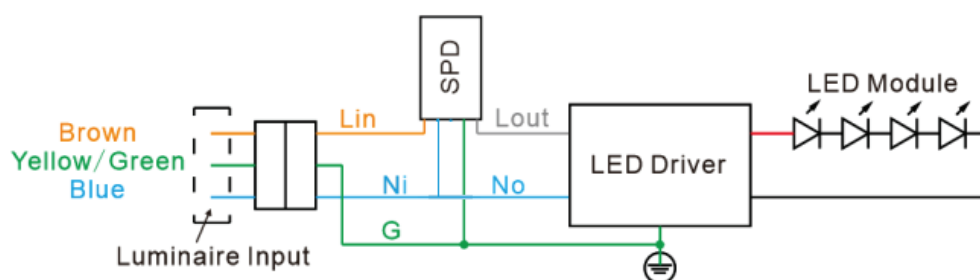
Dimensions

Mounting length	60.5 mm
Overall length	60.5 mm
Case Width	60.5 mm
Case Height	17 mm
Fixing hole diameter	M4 (50.5*30.5)
Max. screw torque	0.45 nm
Weight	39 g

Connector

Specification item	Value	Unit	Condition
Connector type	(0.75-2.5mm ²) Spring Type Terminal		Single wire only

Wiring diagram Insulation Class I application



The L N input line must be connected correctly and cannot be reversed.L N