

# Surge Protection Device

## SPD 20/320 D P5 G3

Surge Protection Device (SPD) is to offer comprehensive protection solution against high surges for Outdoor lighting systems.

### Benefits

- Maximize the lifetime of outdoor lighting system
- Lower maintenance costs
- Suitable for luminaries of protection class II
- Long lifetime & high working temperature
- High surge protection of up to 20 kV (T3) / 20 kA (T2) for all lighting applications
- Compact and thin
- Failure indication LED
- IP65
- Fully comply with IEC 61643-11

### Applications

Street, Urban and Industrial lighting

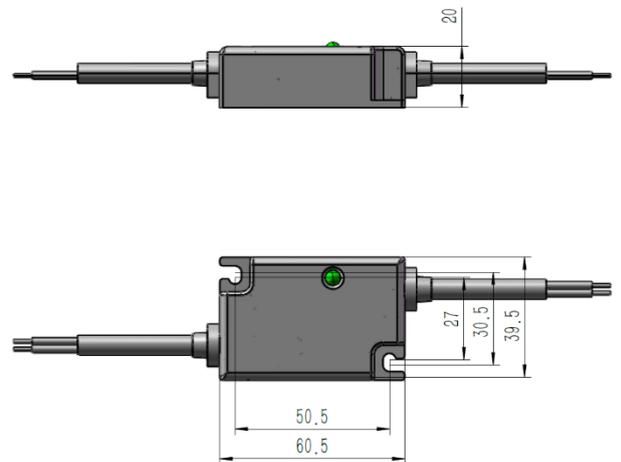
### Approval marks



In preparation, if not already printed on product label

### Product Features

- Mains voltage to 320Vac
- Suitable for luminaries of protection class II
- Fully LED Driver protection by  $U_p < 1.8\text{kV}$
- High surge protection of up to 20 kV / 10 kA; comply with IEC 61643-11 - T3
- Maximum surge protection of up to 20 kA; comply with IEC 61643-11 - T2
- TÜV approved acc. to IEC 61643-11 – T2 & T3
- IP65



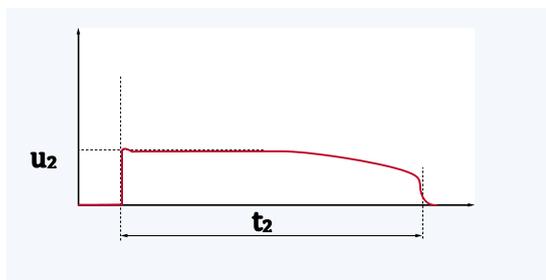
Housing material: plastic material, dark grey

Electrical Characterization

	Item	Value	Unit	Remarks, Conditions
INPUT	Max. continuous operating voltage (L-N)	320	Vac	
	Nominal Voltage	100 - 277	Vac	
	Nominal frequency	50 / 60	Hz	
	Classification	Class II + III (T2 + T3)		Acc. IEC61643-11
	Power grids	TN, TT		Including all TN varieties TN-C, TN-C-S, TN-S
	Open-circuit voltage (Uoc)	20	kV	
	Nominal current	5	A	Rated load current at 50/60 Hz
	Power losses	<0.5	W	max. at Uc = 320VAC
	Protection class	II		Insulation Class acc. IEC60598
	Temporary overvoltage	441.7 336.6	V	LV system fault: 255 V x 1.73 at tt = 120 m LV system fault: 255 V x 1.32 at tt = 5 s
	Max discharge current (Imax)	20	kA	L-N
	Protection mode	Different mode		Please refer to Protection levels.
	Nominal discharge current (In)	10	kA	L-N; @ UOC=20KV, internal resistance=2Ω
	Max. voltage protection level (Up)	1.8	kV	L-N; @ UOC=20KV, internal resistance=2Ω
	Backup fuse	16	A	Max., gG fuse
	Max earth leakage current	NA	μA	Max. rms, to GND
ENVIRONMENT	Typical surge withstand capability	1 50 100	strike	Max. at 20kA (L-N) at 10kA (L-N); min. 20 strikes at 5kA (L-N); min. 50 strikes
	Ambient temperature range ta	-40 ... +80	°C	
	Max. case temperature at tc point	85	°C	
	Storage temperature range	-40...+85	°C	
	Relative humidity	5 ... 95	%	Not condensing
	IP rating	IP 65		Built-in only
	End of life indication (by LED light)	Yes		Optical, light ON: SPD is functional. Light OFF: SPD has reached end-of-life.
	Expected lifetime	100'000	h	tc = 85°C with max. 10% failure rate
	Dimensions (L x W x H)	60.5 x 40.5 x 20	mm	
	Weight	75	g	

Protection levels of Up

IC 8/20 μs	Differential mode U2 (L-N)
10kA	≤1800 V



Differential mode L-N

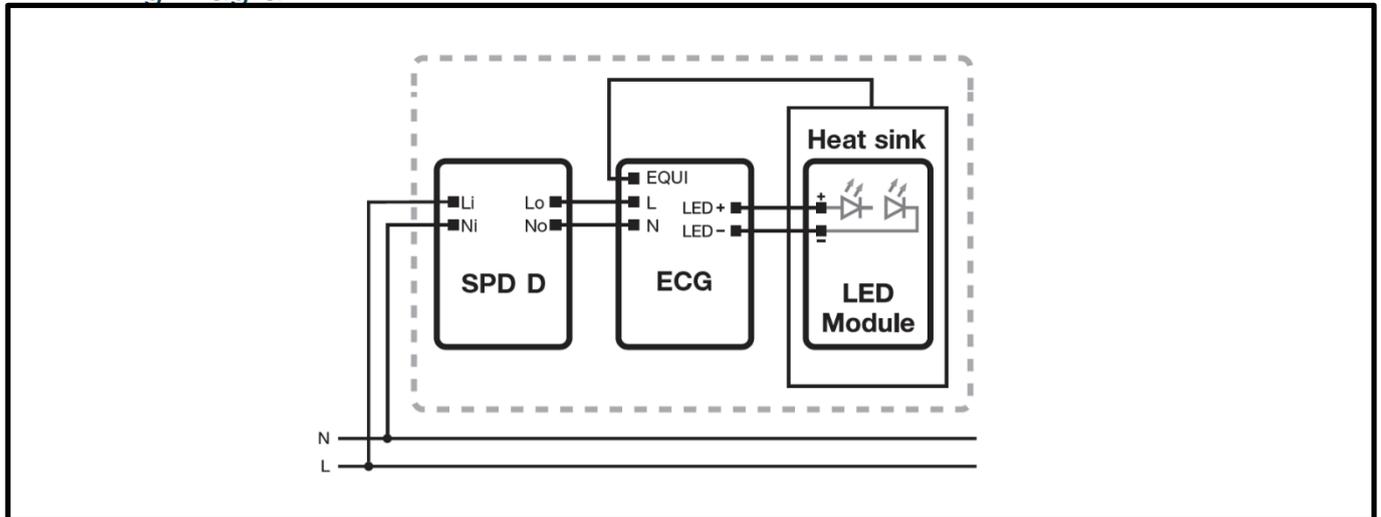
Product Datasheet

Additional Information

Approvals*	CE, CB, TUV
Standards	Acc. to IEC 61643-11

\*In preparation, if not already printed on product label

Wiring Diagram



	Item	Value	Unit	Remarks
INPUT	Cable cross section	2*1	mm <sup>2</sup>	Solid and stranded
	Wire preparation length	8...10	mm	
	Type of wire	Cable,		
	Lead length	230		
OUTPUT	Cable cross section	2*1	mm <sup>2</sup>	Solid and stranded
	Wire preparation length	8...10	mm	
	Type of wire	Cable,		
	Lead length	230		
	Cable length from SPD to LED Driver	<3	m	

Standards

IEC 61643-11

ordering information

Product name	EAN10	EAN40	Pieces / box
SPD20/320 D P5 G3	6977078997164	6977078997171	50

### Disclaimer

Subject to change without notice. Errors and omission accepted. Always make sure to use the most recent release. The latest release of the datasheet is available under the following link [www.inventronicsglobal.com](http://www.inventronicsglobal.com)

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