

PHILIPS

Outdoor SPD

Surge Protector
Class I serial

Datasheet

Protect your outdoor luminaires against damaging spikes and transients

Outdoor SPD - Surge Protector Class I serial

The unique solution for Outdoor lighting systems offering full protection against high surges in insulation Class I installations.

Benefits

- Maximize the lifetime of outdoor lighting applications
- Lower maintenance costs
- Easy to apply in new or existing installations
- Load disconnection when SPD reaches end of life

Features

- Suitable for insulation Class I luminaires
- Long lifetime, robust protection against vibration and temperature
- Provides high surge protection of up to 10 kV / 10 kA for all lighting technologies
- Optical failure indicator

Application

- Highways
- Rural roads
- Industrial zones
- Open space parking areas

Insulation Class	Supported grids			
	TN	TNC	TNS	TNCS
Class I	✓	✓	✓	✓

Logistical data

Specification item	Value
Product name	Surge Protector Class I serial?
European order code	?
Logistic code 12NC	9290 021 02700
Pieces per box	60

Electrical specifications

Specifications	Parameter	Value	Unit	Condition
Certifications		CE, TUV		
Designation		Type 3		Acc. EN61643-11
Classification		Class III		Acc. IEC61643-11
Protection mode		Diff. mode & Comm. mode		
Nominal input voltage	U_n (L-N)	230	VAC	50 ... 60 Hz
Max. continuous operating voltage	U_c (L-N)	275	VAC	50 ... 60 Hz
Max. continuous operating voltage	U_c (L-GND)	275	VAC	50 ... 60 Hz
Max. continuous operating voltage	U_c (N-GND)	275	VAC	50 ... 60 Hz
Power grids		TN		Incl. all TN varieties TN-C, TN-C-S, TN-S
Nominal discharge current	I_n (L-N)	5	kA	8/20 μ s
Nominal discharge current	I_n (L-GND)	5	kA	8/20 μ s
Nominal discharge current	I_n (N-GND)	5	kA	8/20 μ s
Max. voltage protection level at I_n	U_p (L-N)	1.5	kV	See separate protection level table for other I_n values
Max. voltage protection level at I_n	U_p (L-GND)	2	kV	See separate protection level table for other I_n values
Max. voltage protection level at I_n	U_p (N-GND)	2	kV	See separate protection level table for other I_n values
Open-circuit voltage	U_{oc}	10	kV	
Backup fuse		16	A	max., gG fuse
End of life indication		yes		Optical, light ON: SPD is functional. Light OFF: SPD has reached end-of-life
Servicability		n/a		No user servicable parts inside
Max earth leakage current at U_c		50	μ A	Max. rms, to GND

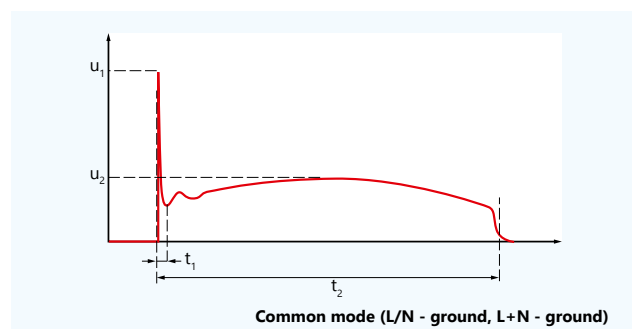
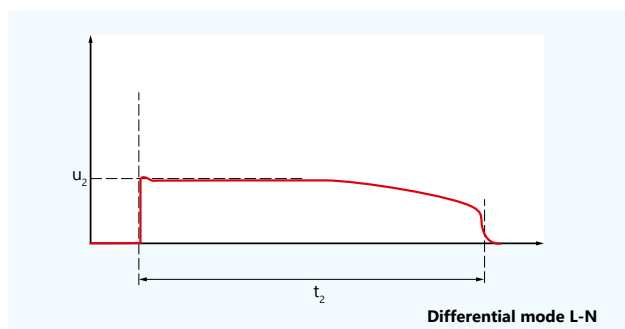
Other specifications

Specifications	Parameter	Value	Unit	Condition
Surge withstand capability		1	strike	max. at 10 kA, 8/20 μ s
Surge withstand capability		30	strikes	min. at 5 kA, 8/20 μ s
Surge withstand capability		50	strikes	min. at 3 kA, 8/20 μ s
Nominal current		4	A	Rated load current at 50 ... 60 Hz
Power consumption		0.01	W	max. at $U_c = 275$ VAC
Suitable for luminaires		Insulation Class I only		Insulation Class acc. IEC60598

Protection levels U_p

Surge Protector Class I serial

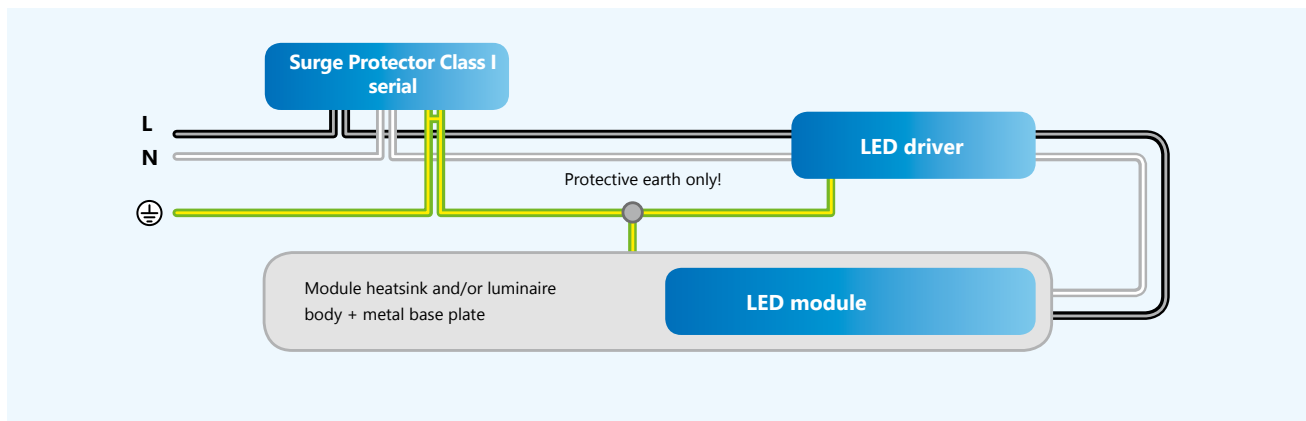
I_c 8/20 μ s	Differential mode U_2	Common mode U_1/U_2	I_c 8/20 μ s	Differential mode U_2	Common mode U_1/U_2
1 kA	1100 V	1500 V / 1100 V	5 kA	1350 V	1800 V / 1350 V
3 kA	1250 V	1700 V / 1250 V	10 kA	1500 V	2000 V / 1500 V



Wiring

Specification item	Value	Unit	Condition
Connector type	Push-in		Single wire only
Wire diameter	0.75...2.5	mm ²	Solid and stranded
Wire strip length	7...9	mm	

Wiring diagram Insulation Class I serial application



Electrical connections

Signal	Description	Color
LINE	Line connection	Black
LINE	Line connection	Black
NEUTRAL	Neutral connection	White
NEUTRAL	Neutral connection	White
GND	Ground connection	Green
GND	Ground connection	Green



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