

PHILIPS

Outdoor SPD

Surge Protector
Class II serial

Datasheet

Protect your outdoor luminaires against damaging spikes and transients

Outdoor SPD - Surge Protector Class II serial

The unique solution for Outdoor lighting systems offering full protection against high surges in insulation Class II 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 II 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					
	IT	TN	TNC	TNS	TNCS	TT
Class II	✓	✓	✓	✓	✓	✓

February 2019

Logistical data

Specification item	Value
Product name	Surge Protector Class II serial
European order code	?
Logistic code 12NC	9290 021 02800
Pieces per box	?

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		
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
Power grids		TN, TT, IT		Incl. all TN varieties TN-C, TN-C-S, TN-S
Nominal discharge current	I_n (L-N)	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
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

Other specifications

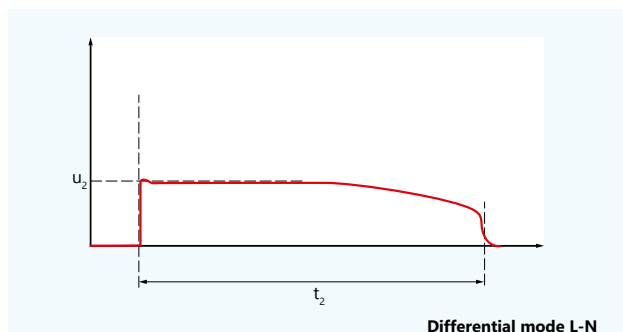
Specifications	Parameter	Value	Unit	Condition
Surge withstand capability		1	strike	max. at 10 kA, 8/20 μ s
Surge withstand capability		30	strikes	min. at 5 kA, 8/20 μ s
Surge withstand capability		50	strikes	min. at 3 kA, 8/20 μ s
Nominal current		4	A	Rated load current at 50 ... 60 Hz
Power consumption		0.001	W	max. at $U_c = 275$ VAC
Suitable for luminaires		Insulation Class II only		Insulation Class acc. IEC60598

Protection levels U_p

Surge Protector Class II serial

I_c 8/20 μ s	Differential mode U_2
1 kA	1100 V
3 kA	1250 V

I_c 8/20 μ s	Differential mode U_2
5 kA	1350 V
10 kA	1500 V



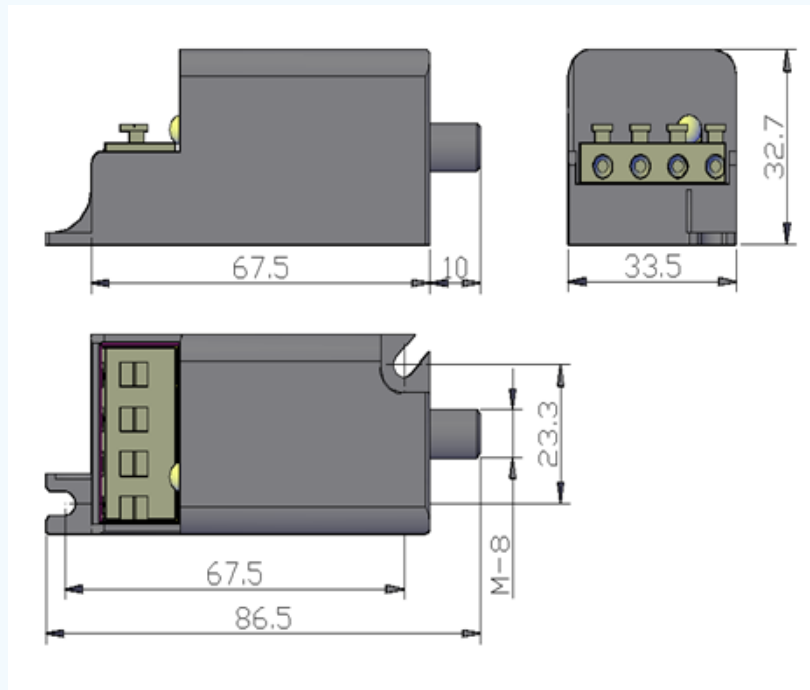
Environmental conditions

Specification item	Value	Unit	Condition
Ambient temperature	-40...70	°C	
Max. surface temperature	80	°C	Measured at Tc-point
Storage temperature	-40...85	°C	
Relative humidity	5...95	%	Non-condensing
Suitable for outdoor luminaires	Yes		Built-in only
Ingress Protection (IP)	20		

Lifetime

Specification item	Value	Unit	Condition
Lifetime	100,000	hours	At max. surface temperature, min. 90% survival

Product dimensions



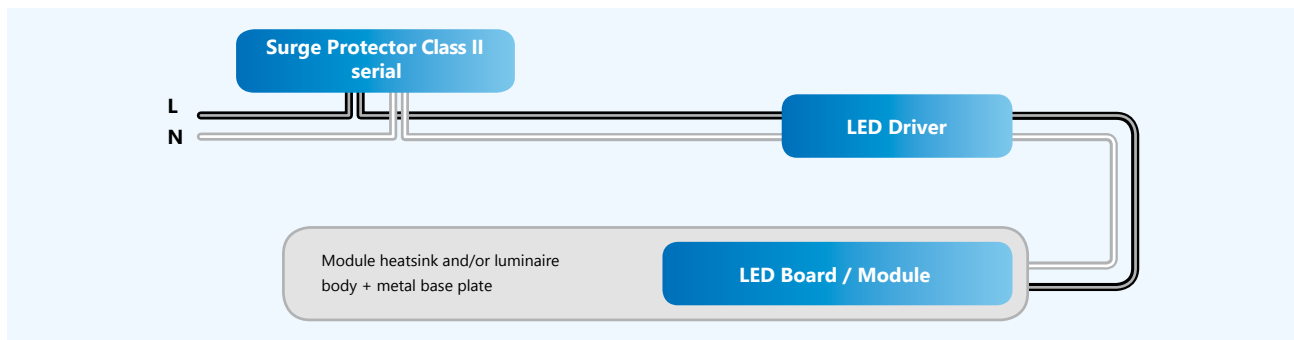
dimensions in mm

Specification item	Value	Unit
Mounting length	76.5	mm
Overall length	86.5	mm
Case Width	33.5	mm
Case Height	32.7	mm
Fixing hole diameter	M4	
Mounting stud	M8	
Max. mounting torque M4/M8	??	Nm
Weight	?	gr

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 II serial application



Electrical connections

Signal	Description	Color
L input	Line input connection	?
L output	Line output connection	?
N input	Neutral input connection	?
N output	Neutral output connection	?



Warning: Xc' bchW&bbYVW]bV&a]b['a U]bg] c'HU[Y'hc' h'Y'@ci hdi hUbX B' ci hdi hW&bbYVW'fg' 5'k Ung'cVgYfj Y']bdi hUbX'ci hdi hW&bbYVW'cbg"



©2019 Signify Holding, IBRS 10461, 5600 VB, NL. All rights reserved.

The information provided herein is subject to change without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.

Date of release: January 28, 2019

www.philips.com/oem