

## Features

- Maximum Continuous Operating Voltage (L-N/L1-L2): 510Vac
- Maximum Continuous Operating Voltage (L-PE/N-PE): 320Vac
- L-N, L-PE and N-PE Protection Mode
- Suitable for TN Systems
- Maximum Discharge Current ( $I_{max}$ ) 20kA, 8/20 $\mu$ s
- Nominal Discharge Current ( $I_n$ ) 10kA, 8/20 $\mu$ s
- Open Circuit Voltage ( $U_{oc}$ ) 20kV, 1.2/50 $\mu$ s
- Thermally Protected
- End-of-life LED Indicator
- EN 61643-11 – T2 & T3
- IEC 61643-11 - Test Class II & Class III
- Parallel Installation
- IP65



## Description

SPD 20/510 PL P5 thermally protected Surge Protective Device is designed to provide a higher level of lightning protection for LED drivers used in applications such as high-mast lighting and sports fields. It features thermal protection and end-of-life indication, effectively preventing catastrophic failure and fire hazards upon the SPD's end of life.

## Models

Certification	Wiring Configuration <sup>(1)</sup>	Protection Mode	Max Clamped Voltage		Indicator Light	Wires	IP Rating	Model Number
			L-N/L-PE	N-PE				
TUV, CE, CB	Parallel	DM/CM	2500V	3200V	Y	Flying Leads	IP65	SPD 20/510 PL P5 FL
TUV, CE, CB	Parallel	DM/CM	2500V	3200V	Y	Cables	IP65	SPD 20/510 PL P5 V

**Notes:** (1) When the life of the SPD ends, the indicator will be off. Although the LED driver may still work normally, please replace the SPD in time.

## General Specifications

Parameter	Min.	Typ.	Max.	Notes
Max. Continuous Operating Voltage (MCOV/ $U_c$ ) <sup>(1)</sup>	-	-	510 Vac	L-N/ L1-L2
	-	-	320 Vac	L-PE, N-PE
Input Frequency	47 Hz	-	63 Hz	
Nominal Discharge Current ( $I_n$ ) <sup>(2)</sup>			10 kA	8/20 $\mu$ s current waveform
Maximum Discharge Current ( $I_{max}$ ) <sup>(3)</sup>			20 kA	8/20 $\mu$ s current waveform
Open Circuit Voltage ( $U_{oc}$ ) <sup>(4)</sup>			20 kV	1.2/50 $\mu$ s open circuit voltage waveform

## General Specifications (Continued)

Parameter		Min.	Typ.	Max.	Notes
Clamping Voltage $U_p$ <sup>(5)</sup>	L-N, L-PE			2500 V	Measured at a 20kV/10kA combination wave and 10kA 8/20 $\mu$ s
	N-PE			3200 V	
Earthing Systems		TN			
End-of-life LED Indicator		Yes			GREEN: Good OFF: Replace
Repetitive Surge Capability (each coupling mode)					8/20 $\mu$ s current waveform
	20 kA	1	-	-	
	10 kA	15	-	-	
	4 kA	100	-	-	
	2 kA	500	-	-	
Dimensions					With mounting ear 3.23 × 1.55 × 0.70 82 × 39.3 × 17.7
	Inches (L × W × H)	2.76 × 1.55 × 0.70			
	Millimeters (L × W × H)	70 × 39.3 × 17.7			
Net Weight	SPD 20/510 PL P5 FL		81 g		
	SPD 20/510 PL P5 V		86 g		

- Notes:** (1) Maximum Continuous Operating Voltage (MCOV/ $U_c$ ): The maximum r.m.s. voltage that could be continuously applied to the SPD
- (2) Nominal Discharge Current ( $I_n$ ): The peak amount of current that the SPD can withstand for 15 impulses using the 8/20 $\mu$ s current wave. This measures the SPD's endurance capability.
- (3) Maximum Discharge Current ( $I_{max}$ ): The peak amount of current that the SPD can withstand for 1 impulses using the 8/20 $\mu$ s current wave. This measures the SPD's maximum capability.
- (4) Open Circuit Voltage ( $U_{oc}$ ): The peak amount of voltage that the SPD can withstand using the combination wave. This measures the SPD's maximum voltage capability.
- (5) Clamping Voltage ( $U_p$ ): The measured amount of residual, or "let-through", voltage that can pass through the SPD during the application of impulses of Open Circuit Voltage ( $U_{oc}$ ).

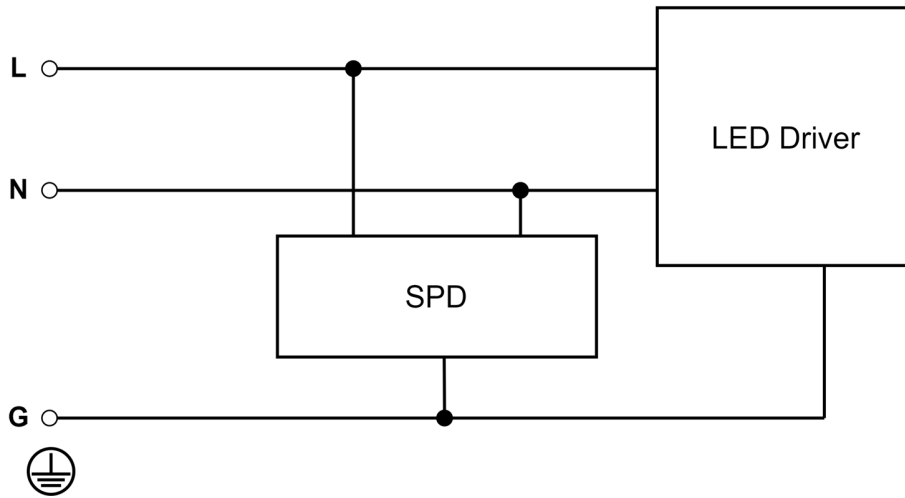
## Environmental Specifications

Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-40 °C	-	+85 °C	Humidity: 10% RH to 95% RH
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 95% RH

## Safety & EMC Compliance

Safety Category	Standard
TUV & CE	EN 61643-11
CB	IEC 61643-11

## Wiring

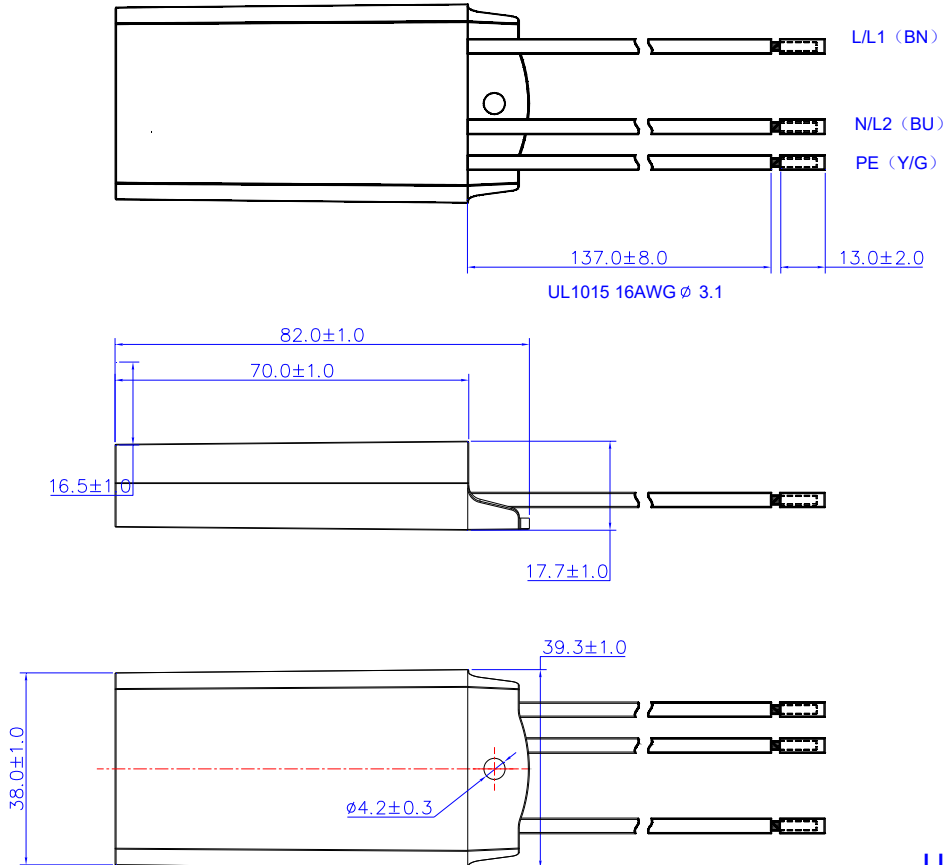


### Note:

- When the life of the SPD ends, the indicator will be off. Although the LED driver may still work normally, please replace the SPD in time.

## Mechanical Outline

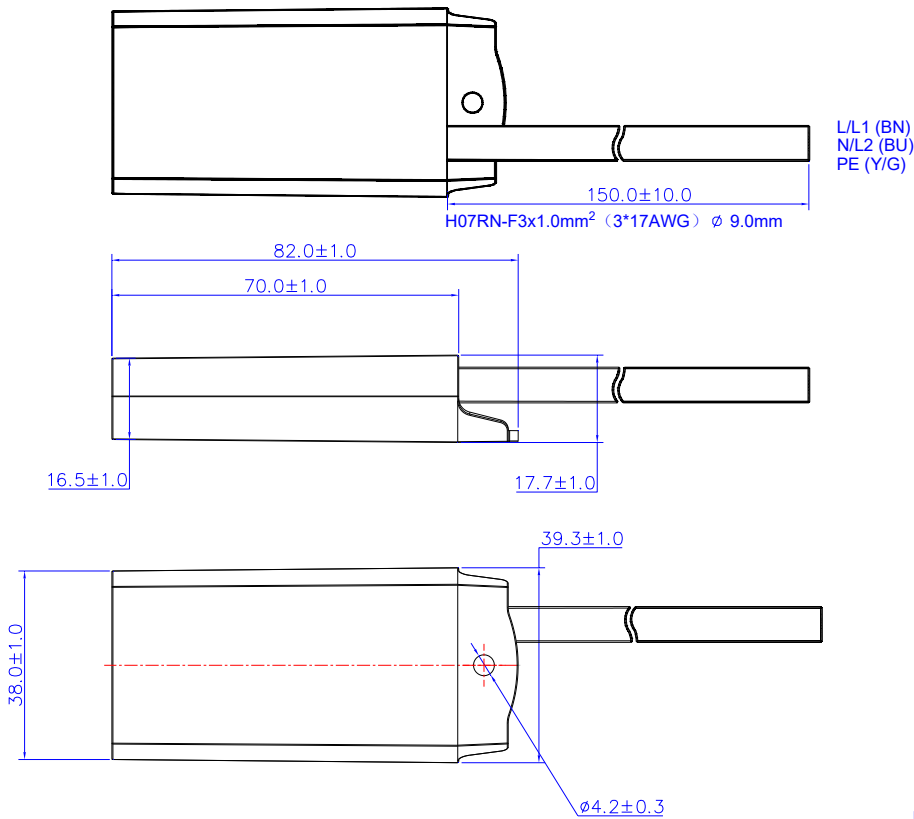
SPD 20/510 PL P5 FL



PROJ:

Unspecified tolerance:  $\pm 1$

SPD 20/510 PL P5 V



Unspecified tolerance:±1

## Product Order Overview

### Order Code & Packaging

Order Code (EAN)	Product Version Name	Certification Markings on Product	Packaging unit (Pieces/Box)	Packing Dimensions (L x W x H)(mm)	Gross Weight (Kg)
6937186199027	SPD 20/510 PL P5 FL	TUV CE	150	395 x 267 x 285	13.692
6937186199041	SPD 20/510 PL P5 V	TUV CE	150	395 x 267 x 285	14.442

## Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2026-05-15	A	Datasheet Release	/	/