SOSEN

SPECIFICATIONS

SS-SPD-U*

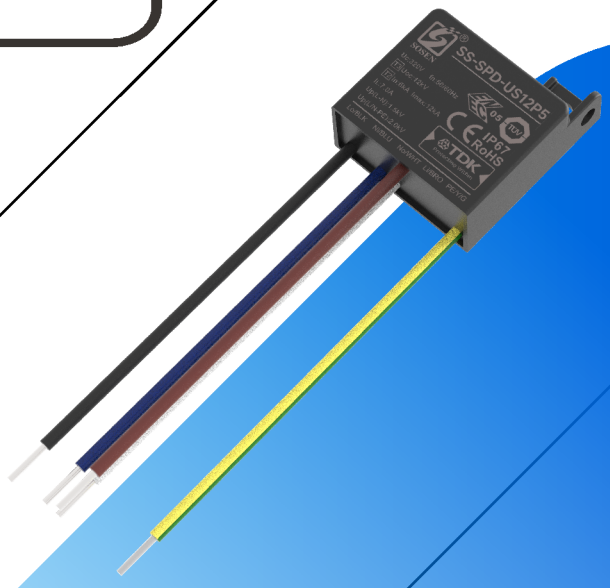
Surge Protection Device

Model: SS-SPD-US12P4、SS-SPD-US12P5、SS-SPD-UP12P

Description: Surge Protection Device

Rev.: V01

Release Date: 2026-11-04



SS-SPD-U*

Features

- Wiring method: Single-live wire series connection: SS-SPD-US12P4
  Series Connection: SS-SPD-US12P5
  Parallel connection: SS-SPD-UP12P
- Operating voltage: 90-305Vac
- Excellent surge resistance with low residual voltage
- Test category: EN 61643-11 – T2 & T3、IEC 61643-11 - Test Class II & Class III
- Waterproofing IP rating: IP67
- Reference standard: IEC61643-11, EN61643-11
- Surge protection: L-N、L-PE、N-PE

TDK MOV+GDT inside

IP67 RoHS

Description

The SS-SPD-U* is a specially designed surge protection device, specifically used to provide a higher level of surge protection and transient overvoltage protection for LED drivers in applications such as street lighting, industrial lighting, sports lighting, and commercial lighting. The product is characterized by high quality, high stability, convenient installation, good safety, long service life, and low maintenance costs. It can deliver a higher level of surge protection for LED drivers, ensuring stable operation without damage, thereby effectively preventing equipment failure.

Applications: street lights, tunnel lights,sports, industrial and commercial lighting systems.

Technical Parameters

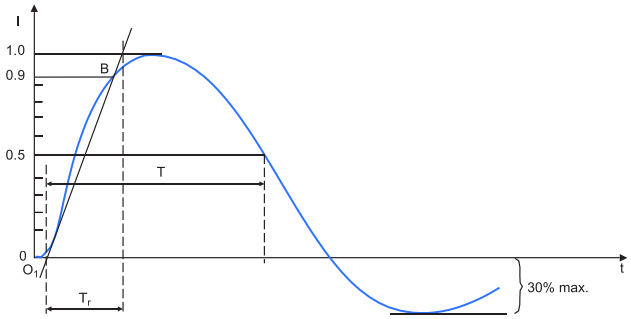
Parameters	Numerical value
Rated Input Voltage Range	100-277Vac
Maximum Input Voltage Range	90-305Vac
Maximum continuous Operating Voltage	320Vac
Input frequency	47-63Hz Typ:50/60Hz
Open circuit voltage Uoc	12kV @ 1.2/50us
Voltage Protection Level Up	<1500V Typ:1300V L-N
Voltage Protection Level Up	<2000V Typ:1800V L/N-PE
Nominal discharge current In	≤ 6kA @ 8/20μs electric current wave
Maximum discharge current Imax	≤12kA @ 8/20μs electric current wave
Rated load current IL	≤ 7A Series-type
Operating Ta	-40~+85°C
Storage Ta	-40~+85°C
End-of-life indication	Light ON: SPD is functional Light OFF: SPD has reached end-of-life
Weight	45g

SHENZHEN SOSEN ELECTRONICS CO.,LTD.

10F, Pengzhanhui No 1 Building, Zhongxin Road No 233,
Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Test Waveform:

Number of lightning strikes

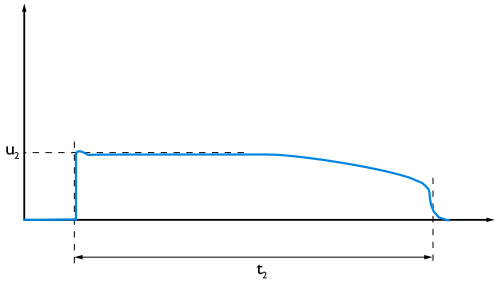


Front time: T_r = 8 μs ± 20%
Time to half-value: T = 20 μs ± 20%

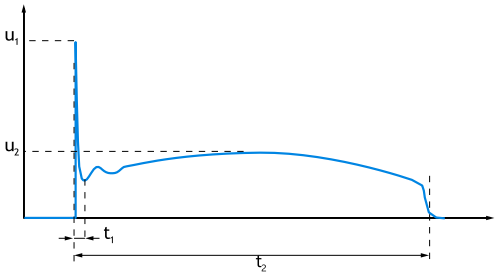
Short circuit current waveform

Lightning Surge Test 8/20μs	
Surge magnitude	Number of impacts
12000A	1
7000A	2
6000A	15

Voltage Protection Level Up



Differential mode L-N



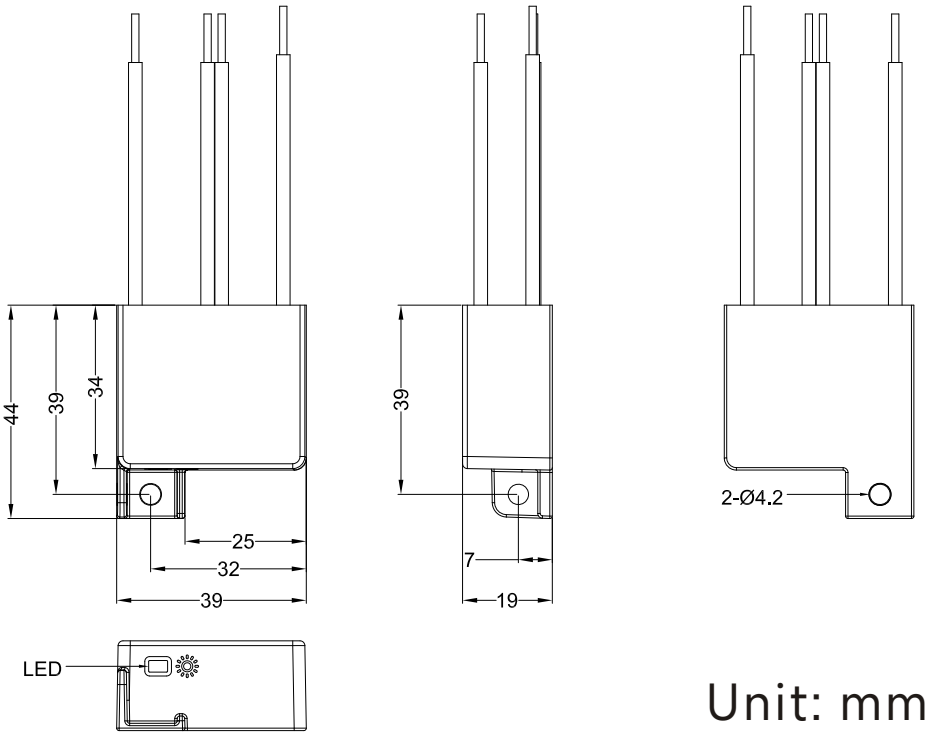
Common mode (L/N -PE)

I_c 8/20μs	Differential mode U_2	Common mode U_2/U_1
1kA	≤1100V	≤1100/1800V
3kA	≤1300V	≤1300/1800V
6kA	≤1500V	≤1500/2000V

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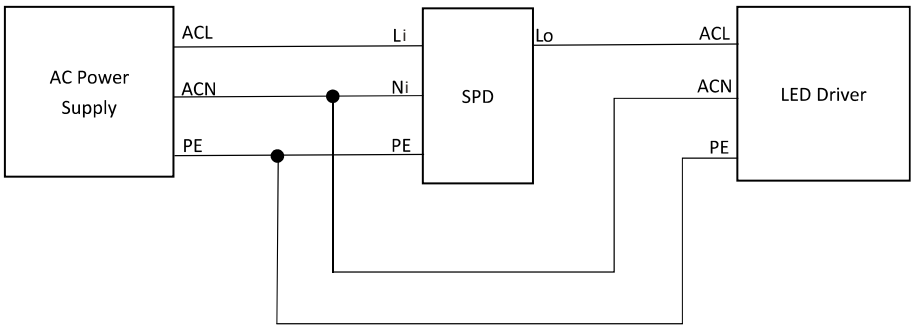
SS-SPD-USxxx4 Series:

Enclosure Dimensions:



Unit: mm

Wiring Method:

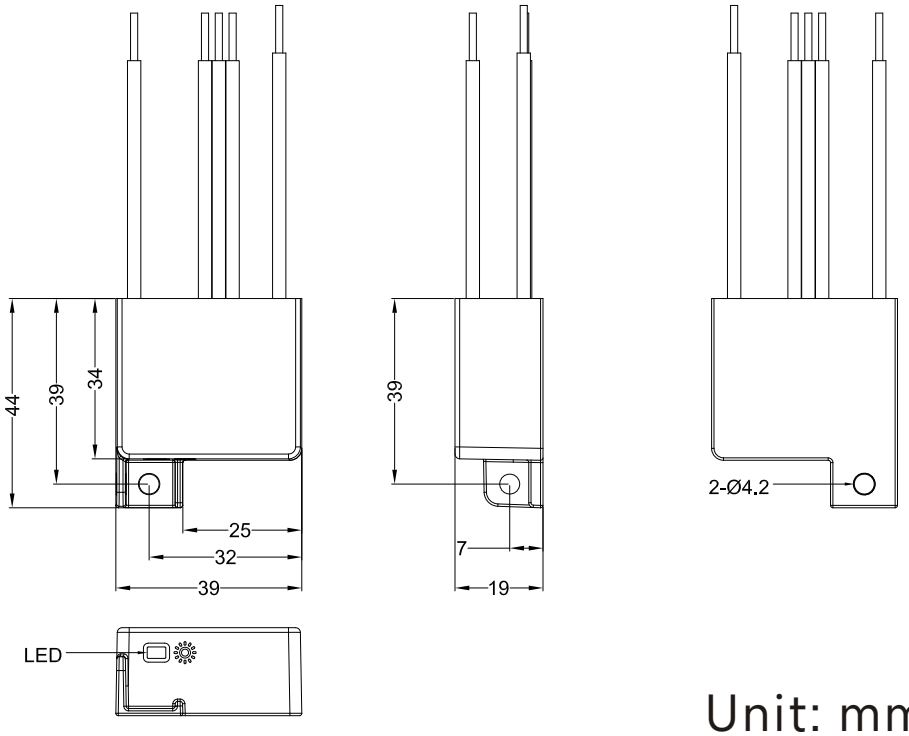


Notes:
1. Brown: Li, Black: Lo, Blue: Ni, Yellow-Green: PE;
2. Wire gauge: UL 1015, 18AWG ,105°C, 600V, Exposed Length 150±10mm, Tinned length of wire:10±2mm
3. Shell color: Black
4. Shell material: PC(UL94-V0).

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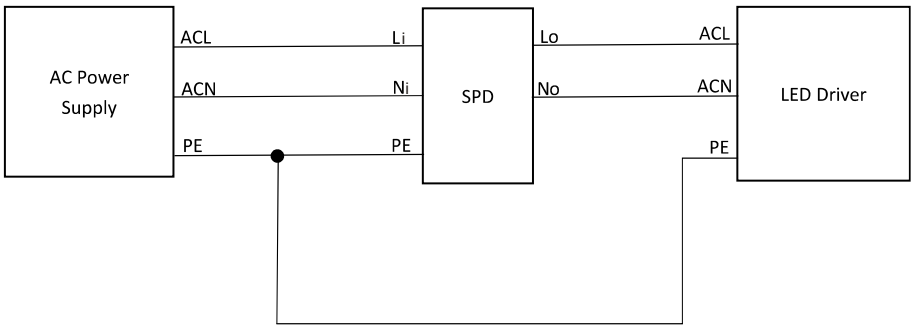
SS-SPD-USxxx5 Series:

Enclosure Dimensions:



Unit: mm

Wiring Method:

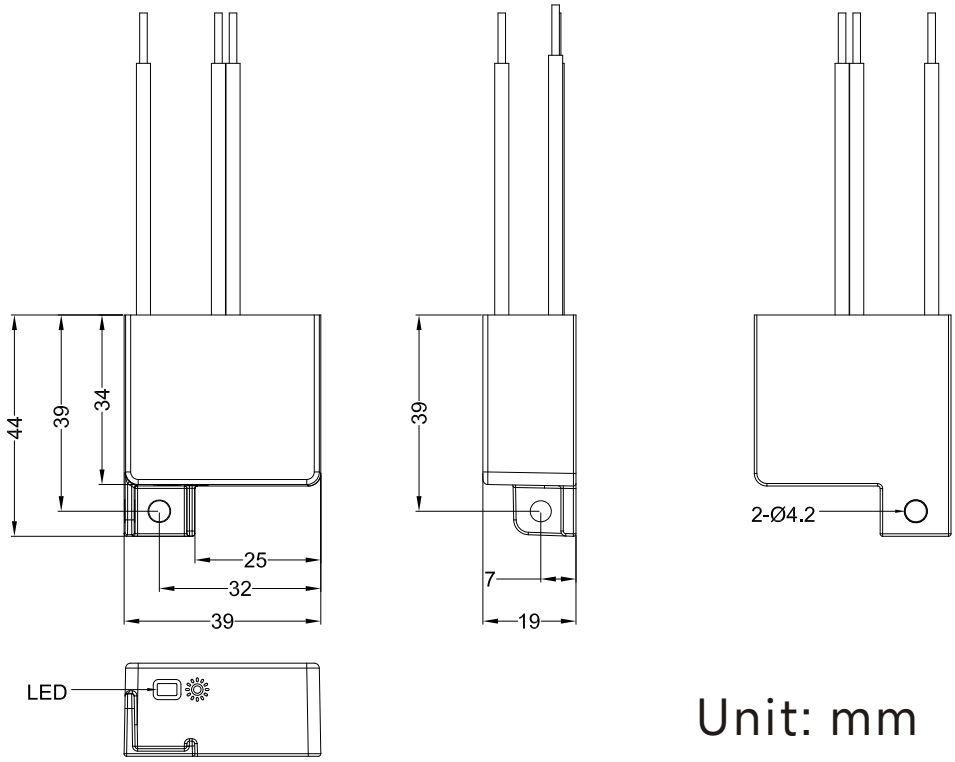


Notes:
1. Brown: Li, Black: Lo, Blue: Ni, White: No, Yellow-Green: PE;
2. Wire gauge: UL 1015, 18AWG ,105°C,600V ,Exposed Length 150±10mm ,Tinned length of wire:10±2mm
3. Shell color: Black
4. Shell material: PC(UL94-V0).

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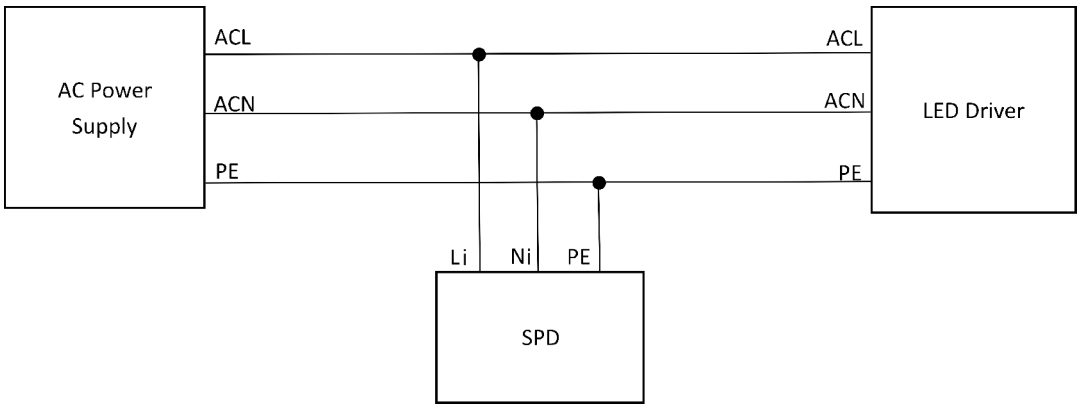
SS-SPD-UPxxx Series:

Enclosure Dimensions:



Unit: mm

Wiring Method:



Notes:
1. Brown: Li, Blue: Ni, Yellow-green: PE;
2. Wire gauge: UL 1015, 18AWG ,105°C,600V ,Exposed Length 150±10mm ,Tinned length of wire:10±2mm
3. Shell color: Black
4. Shell material: PC(UL94-V0).

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Package

- Outside carton dimension: L×W×H =495mm×385mm×162mm;
- 112PCS/Carton;
- Net weight/Piece0.045kg;Gross weight/Carton: 6.25kg;

Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be avoided direct sunlight and rain, loaded/unloaded with caution.

Storage

The product storage meets the standard of the GB 3873—83.

Products should be rechecked if stored for over 1 year before assembly.

RoHS

Products comply with RoHS Directive (2011/65/EU) and amendment 2015/863/EU.

Revision History

Version	Description of Update	Updated Date	Remark
V00	Original Release	2025/12/04	
V01	Update renderings and certifications	2026/11/04	

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