

MIDNITE SOLAR INC.

Surge Protection

Surge Protection You Can Count On!

MidNite Solar Surge Protection Devices are type 1 devices, designed for indoor and outdoor applications. Engineered for both AC and PV DC electrical systems, they provide protection to service panels, load centers or electronic devices that are directly connected to a MidNite Surge Protection Device (SPD).

MidNite's SPD's are offered in four models to protect a variety of different voltage ranges. They achieve this protection by clamping surge voltage to a level that your system can sustain without damaging the components of the system.

Compare our SPD's against other surge protection devices. You will see there is no comparison in both our price and features. All our SPD's have a 5 year warranty.

With lightning you only get one chance, so get the best!



www.midnitesolar.com/spd

19115 - 62nd Ave. NE., Arlington, WA. 360-403-7207 FAX: 360-691-6862



MNSPD300ACFM (Cut-in box)
(MNSPD-300-AC included)



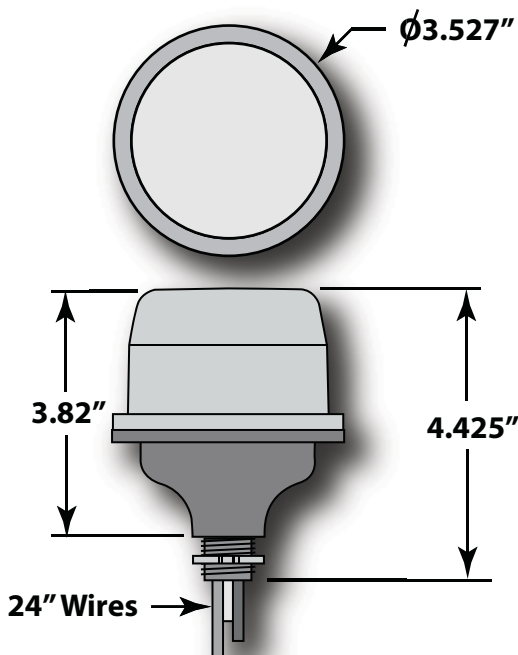
Four Models:

MNSPD-115
MNSPD-300-AC
MNSPD-300-DC
MNSPD-600



MidNite Surge Protection Devices

| PART NUMBER | MNSPD-115 | MNSPD-300-AC | MNSPD-300-DC | MNSPD-600 |
|---------------------|--|-----------------------|---|---|
| Nominal Voltage | 0 to 90 VAC 0 to 115 VDC | 0 to 250 VAC | 0 to 300 VDC | 0 to 480 VAC 0 to 600 VDC |
| MCOV | 180V | 470V | 470V | 780V |
| VPR Line to Ground | 600V | 1200V | 1200V | 1800V |
| Suggested Placement | Up to 90VAC circuits, 12V, 24V, 48VDC battery circuits | 120/240 VAC circuits | Off-grid PV combiners Charge controller inputs up to 300VDC | 316V/480 VAC circuits Grid-tie PV combiners Grid-tie inverter input Non-Isolated Inverters |
| Type | UL1449 4th Ed. Type 1 | UL1449 4th Ed. Type 1 | UL1449 4th Ed. Type 1 | UL1449 4th Ed. Type 1 |
| Diagnostic Blue LED | MNSPD-300-AC LED indicates when voltage is present between L1 + ground and L2 + ground MNSPD-115, MNSPD-300-DC and MNSPD-600: LED indicates when voltage is present between L1 + L2 (PV+ PV-) | | | |
| Thermal Disconnect | Internal Fuse | | | |
| Response Time | <1 micro sec. | | | |



Performance

| | |
|--------------------------------|------|
| Surge Current Rating per Phase | 80kA |
| Short Circuit Current Rating | 10kA |

| | |
|---------------------|-------------------------|
| Fusing | Individually fused MOVs |
| Thermal Fusing | Yes |
| Over current Fusing | Yes |
| Operating Frequency | 0 to 500 Hz |

Mechanical Description

| | |
|----------------------|--------------------------------------|
| Enclosure | Polycarbonate UL94V-0 |
| Environmental Rating | Type 4X |
| Connection Method | #12 AWG |
| Weight | 1 lb. |
| Mounting Method | 1/2" Conduit Knockout |
| Operating Altitude | Sea Level – 12,000' (3,658 Meters) |
| Storage Temp | -40° F to +185° F (-40° C to +85° C) |
| Operating Temp | -40° F to +185° F (-40° C to +85° C) |

Diagnostics

Blue status LED, one per leg

Listings and Performance

UL Standard for Safety, UL 1449 Surge Protective Devices-Fourth Edition
CSA C22.2 No. 8-M1986 Electromagnetic Interference (EMI) Filters, Fourth Edition

| Model No. | Max Operating Voltage | Surge Current per Phase | Configuration | MCOV | SCCR | VPR 600V/3kA L G |
|--------------|-----------------------|-------------------------|----------------------|----------|------|------------------|
| MNSPD-115 | 100 VAC/150VDC | 80kA | 1 Ø, 3-wire (2 Legs) | 180V L-N | 10kA | 600V |
| MNSPD-300-AC | 300VAC | 80kA | 1 Ø, 3-wire (2 Legs) | 470V L-N | 10kA | 1200V |
| MNSPD-300-DC | 385VDC | 80kA | 1 Ø, 3-wire (2 Legs) | 470V L-N | 10kA | 1200V |
| MNSPD-600 | 480VAC/600VDC | 80kA | 1 Ø, 3-wire (2 Legs) | 780V L-N | 10kA | 1800V |

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