MIDNITE SOLAR INC.

Surge Protection

## Surge Protection You Can Count On!

MidNite Solar Surge Protection Devices are Type 2 devices (NEC 2011 Article 285), designed for indoor and outdoor applications. Engineered for both AC and 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 SPDs 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 SPDs against other surge protection devices. You will see there is no comparison in both our price and features. All our SPDs are made in the USA and have a 5 year warranty.

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



www.midnitesolar.com/spd 17722 67th 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 NO.	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 485 VAC 0 to 600 VDC	
MCOV	180V (162-198)	470V (423-517)	470V (423-517)	780V (702-858)	
Clamp Voltage @ 100A Current 8/20 µs	295V	775V	775V	1290V	
Energy Absorption In Joules	1120 J (Full Device) 560 J (Each Section)	3130 J (Full Device) 1560 J (Each Section)	3130 J (Full Device) 1560 J (Each Section)	4320 J (Full Device) 2160 J (Each Section)	
Suggested Placement	Up to 90 VAC circuits, 12V, 24V, 48V DC 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	
Diagnostic Blue LED	MNSPD-115, MNSPD-300-AC and MNSPD-300-DC				

LED indicates when voltage is present between L1+Ground and L2+Ground

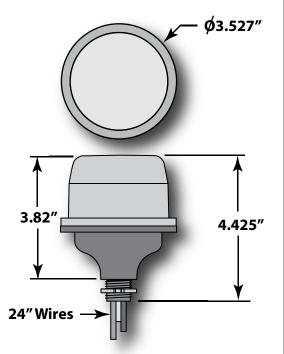
MNSPD-600

LED indicates when voltage is present between L1+L2 (PV + PV-)

Thermal Disconnector - Internal Fuse

Response time <1 micro sec.





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Surge Current Rating per Phase	5/KA
Short Circuit Current Rating	115kA
T-MOVs	8
Fusing	Individually fused MOVs
Thermal Fusing	Yes
Over current Fusing	Yes
Operating Frequency	0 to 60 Hz

### **Mechanical Description**

Polycarbonate UL94V-0
Type 4X
#12 AWG
1 lb.
1/2" Conduit Knockout
Sea Level – 12,000' (3,658 Meters)
-40° F to +185° F (-40° C to +85° C)
-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-Third Edition CSA C22.2 No. 8-M1986 Electromangetic Interference (EMI) Filters, Fourth Edition

Model No.	Max Operating	Surge Current	Configuration	MCOV	SCCR	VPR 600V/3kA
	Voltage	per Phase		1		L_G
MNSPD-115	90VAC/115VDC	57kA	1 Ø, 3-wire (2 Legs)	180V L-N	115kA	330V
MNSPD-300-AC	250VAC	57kA	1,0, 3-wire (2 Legs)	470V L-N	115kA	880V
MNSPD-300-DC	300VDC	57kA	1 Ø, 3-wire (2 Legs)	470V L-N	115kA	880V
MNSPD-600	485VAC/600VDC	57kA	1,0, 3-wire (2 Legs)	780V L-N	115kA	1500V