



UL Listed to UL 1741 - (Q110.E338877 & Q1107.E338877)
UL Listed to UL 1449-3 Photovoltaic Standard
(VZCA.E321351 & VZCA7.E321351)

- **UL Listed as opposed to Recognized - avoids scrutiny over Technical Considerations of Recognized products**
- **Avoids Certification Surprises**
- **No Unexpected Installation Requirements**

Industry's first and only UL 1741 Listed SPD, also listed to UL 1449 as DC SPD for use in PV applications

Options & Configurations for OEMs (see back)

Does not require additional upstream fusing for SPD safety protection

- **100kA DC Short Circuit Current Rating (SCCR)**
- **Fail-Safe operation – arc breaking, slide-gate thermal disconnectors built-in**
- **Avoids safety challenges & fusing shortcomings of overseas-standard SPDs**

Performance Specifications

- **50kA 8x20µs Per Mode**
- **300Vdc, 600Vdc, 1000Vdc & OEM models**
- All modes of protection: DC+ – G, DC- – G, DC+ – DC-
- UL 1449 tested I_n : 20kA (highest available)
- UL 1449 tested SCCR: 100kA DC
- UL 1449-3 Listed as Type 1 SPD
- UL 1449 Type 2 optional for cUL Mark
- Large-Block arrestor-grade 34mm square MOVs
- Individually Fused & Thermally Protected MOVs
- Repetitive Impulse: 5000 - 3kA-8x20µs; 1000 - 10kA-8x20µs
- Response Time: < 1nanosecond

Physical Specifications

- Relative Humidity Range: 0-95% non-condensing
- Operating Frequency: DC
- Operating Temperature: -40°C (-40°F) to +65°C (149°F)
- Solid State Bi-directional Operation
- NEMA 4X Polycarbonate Enclosure – UL746C(f1), UL 94-5VA
- Pre-wired with 3' (1m) of #8 AWG & #6 AWG ground conductor

Tri-Mount Installation - Mounting Kit Included



Std. 3/4"-14 Nipple



DIN-rail Mount (rail not incl.)

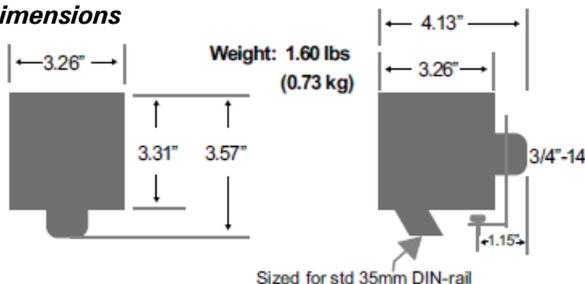


Bracket Mount for flat surfaces

Monitoring Configurations

- Standard - Low consumption LED; monitors every MOV
 - Illuminates when power is produced
- Options:
 - R – Removes LED and its circuitry
 - M – MOV Microswitch access option (requires R above)

Dimensions



Quality, Standards & Validation

- 2 year warranty (longer optional)
- ANSI/IEEE C62.41.1-2002, C62.41.2-2002 & C62.45-2002
- Burn-In tested Prior to Shipment
- ISO 9001:2008 Quality Management System
- ISO 17025: Certified Test Lab
- IEC 61643, CE
- UL 96A Lightning Protection Master Label Eligible



Applications & Models:

Presently, there is no complimentary listing between UL 1449 and UL 1741. This necessitates different model numbers across different UL standards. Models with PV suffix reflect Listing to UL 1741.

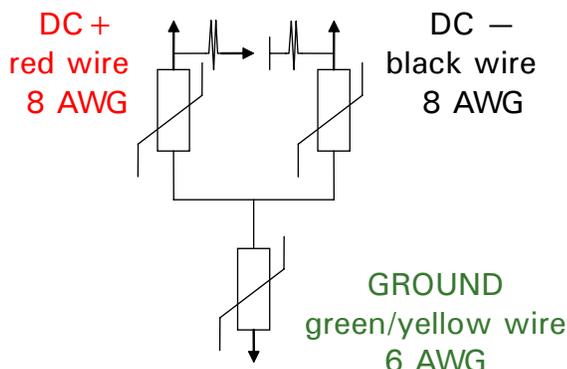
UL 1741 Model Number	S50A300VDCPV	S50A600VDCPV	S50A1000VDCPV
UL 1449-3 Model Number	S50A300VDC	S50A600VDC	S50A1000VDC
DC Voltage	0-300Vdc	0-600Vdc	0-1000Vdc
Maximum Continuous Operating Voltage	424Vdc	905Vdc	1188Vdc
Voltage Protection Level (Up) @ 6kV/3kA	< 1000Vp	< 2000Vp	< 2500Vp

SPDEE DC Model Number Configurator & Options

UL 1741:	S50A	Voltage	PV	Options
	50kA default	300VDC 600VDC 1000VDC	UL 1741	2 = Type 2 SPD bearing cULus Mark (for Canada) R = Removes LED and its circuitry Visual Monitoring via pop-up indicator tabs on each MOV. Includes different front label (see photo below) M = Microswitch option – requires R option above. Allows remote access to logic connected MOV diagnostics. Includes 20 AWG wires out of nipple. Power must be limited to 50mA at 12Vdc G = For Grounding DC+ terminal of system
UL 1449:	S50A	Voltage		Options
	50kA default	300VDC 600VDC 1000VDC		2 = Type 2 SPD bearing cULus Mark (for Canada) R = Removes LED and its circuitry Visual Monitoring via pop-up indicator tabs on each MOV. Includes different front label (see photo below) M = Microswitch option – requires R option above. Allows remote access to logic connected MOV diagnostics. Includes 20 AWG wires out of nipple. Power must be limited to 50mA at 12Vdc

Examples:
 - S50A600VDCPV = 50kA, 600Vdc, UL 1741 model
 - S50A300VDC2RM = 50kA, 300Vdc, Type 2 (cUL Mark), Remove LED, Monitor MOV, UL 1449 model

Schematic: All Modes of Protection



Available Z Mounting
Bracket Accessory



AC Voltage SPDEE's
Also Available



OEM & Brand Label Opportunities
Please call 800.237.4567