

SPV series is a Type 1CA SPD according to UL 1449 4th, designed for Photovoltaic system DC-side protection against the damage from surges caused by lightning and other electrical sources.

Rating:

- Max. permitted DC voltage (Vpdc): 85V~1500Vdc
- Surge capacity (8/20μs): 50kA
- Short circuit current rating (SCCR): 100kArms - tested without external CB or fuse

Technical Features:

- UL recognized Type 1CA SPD (ANSI/UL1449 4th), Type 2CA SPD (CSA-C22.2) for PV/ Photovoltaic system. (UL File No. E319871).
- Pluggable design with window fault indication
- Remote alarm signal optional
- Meet worldwide standards of UL 1449-4th, IEC 61643-31:2018 & EN50539-11:2013
- Global patented thermal disconnecter design with arc extinguishing device, fail-safe & self-protected, quick thermal response and perfect circuit cutoff function. No additional over-current protection devices required.

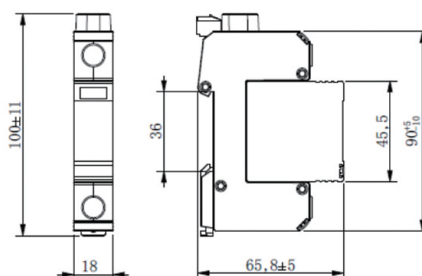




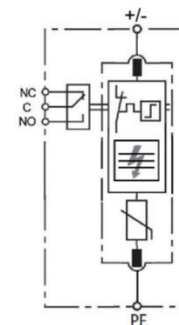
**Single mode or
I Configuration
protection**

Part No.		Pole	Nominal Voltage (Vdc)	Max. Permitted DC Voltage, Vpvc (V)	Nominal Discharge Current, In (8/20μs) (kA)	Max. Discharge Current, Imax (8/20μs) (kA)	Voltage Protection Rating, VPR (kV)	SCCR Rating (kArms)
Type 1ca	Type 2ca							
SPV48-V-S	SPV48-V-S/C	1	48	85	20	50	0.4	30
SPV500-V-S	SPV500-V-S/C	1	500	560	20	50	1.5	100
SPV600-V-S	SPV600-V-S/C	1	600	670	20	50	1.5	50

• Dimension drawing



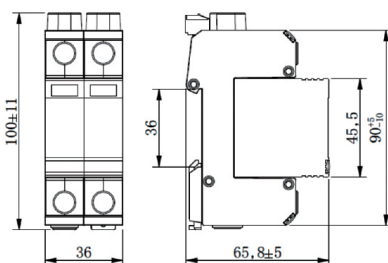
• Basic circuit diagram



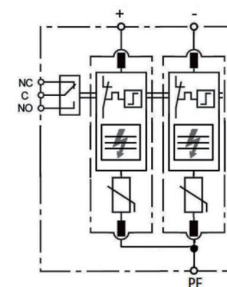
**V Configuration
protection**

Part No.		Pole	Nominal Voltage (Vdc)	Max. Permitted DC Voltage, Vpvc (V)	Nominal Discharge Current, In (8/20μs) (kA)	Max. Discharge Current, Imax (8/20μs) (kA)	Voltage Protection Rating, VPR (kV)	SCCR Rating (kArms)
Type 1ca	Type 2ca							
SPV48-V-C-S	SPV48-V-C-S/C	2	48	85	20	50	0.4	30
SPV500-V-C-S	SPV500-V-C-S/C	2	500	560	20	50	1.5	100
SPV600-V-C-S	SPV600-V-C-S/C	2	600	670	20	50	1.5	50

• Dimension drawing



• Basic circuit diagram

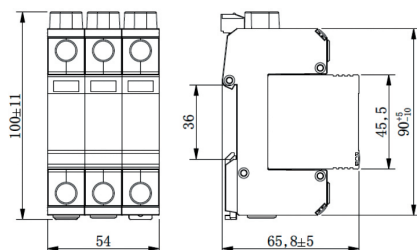




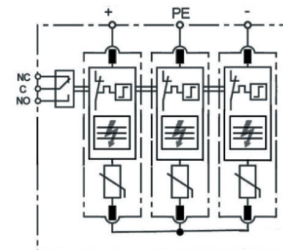
Y Configuration protection

Part No.		Pole	Nominal Voltage (Vdc)	Max. Permitted DC Voltage, Vpvc (V)	Nominal Discharge Current, In (8/20μs) (kA)	Max. Discharge Current, Imax (8/20μs) (kA)	Voltage Protection Rating, VPR (kV)	SCCR Rating (kArms)
Type 1ca	Type 2ca							
SPV600-V-CD-S	SPV600-V-CD-S/C	3	600	700	20	50	1.8	50
SPV800-V-CD-S	SPV800-V-CD-S/C	3	800	920	20	50	2.5	50
SPV1000-V-CD-S	SPV1000-V-CD-S/C	3	1000	1120	20	50	2.5	50
SPV1200-V-CD-S	SPV1200-V-CD-S/C	3	1200	1340	20	50	3.0	50
SPV1500-V-CD-S	SPV1500-V-CD-S/C	3	1500	1500	20	50	4.0	50

- Dimension drawing



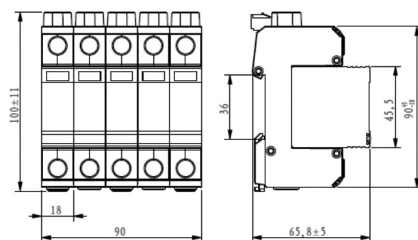
- Basic circuit diagram



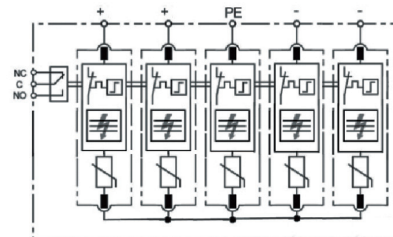
2Y Configuration protection

Part No.		Pole	Nominal Voltage (Vdc)	Max. Permitted DC Voltage, Vpvc (V)	Nominal Discharge Current, In (8/20μs) (kA)	Max. Discharge Current, Imax (8/20μs) (kA)	Voltage Protection Rating, VPR (kV)	SCCR Rating (kArms)
Type 1ca	Type 2ca							
SPV600-V-CD2-S	SPV600-V-CD2-S/C	3	600	700	20	50	1.8	50
SPV800-V-CD2-S	SPV800-V-CD2-S/C	3	800	920	20	50	2.5	50
SPV1000-V-CD2-S	SPV1000-V-CD2-S/C	3	1000	1120	20	50	2.5	50
SPV1200-V-CD2-S	SPV1200-V-CD2-S/C	3	1200	1340	20	50	3.0	50
SPV1500-V-CD2-S	SPV1500-V-CD2-S/C	3	1500	1500	20	50	4.0	50

- Dimension drawing



- Basic circuit diagram



Modules for DC PV SPD

SPM series are surge protection modules which are heavy MOV based devices and are constructed with Prosurge thermal protection and arc extinguishing technology, can be easily integrated in or mounted on PCBs. They are the best choice for global customers to develop PV SPD at minimum cost.

Rating:

- Max. permitted DC voltage(Vpvc): 85V-825 Vdc
- Surge capacity (8/20 us): 50 kA
- SCCR: 100 kArms - tested without external CB or fuse

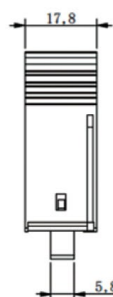
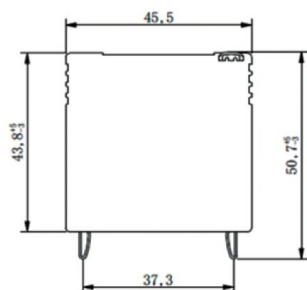
Technical Features:

- UL recorgnized Type 1CA SPD (ANSI/UL 1449 4th), Type 2CA SPD (CSA-C22.2) for PV/ Photovoltaic system. (UL File No. E319871).
- Completely meet IEC61643-11 :2011 & EN50539-11 :2013.
- Quick thermal response and perfect circuit cutoff function due to special thermal disconnecter design with arc extinguishing device (Patent pending)
- Wide operating temperature range and high reliability
- High surge current capacity and low leakage current
- Provide a number of ways to use on PCB, such as permanent soldering or pluggable
- Floating remote signaling contact for fault indication while additional uses of PVD_Base

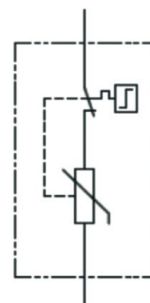


Part No.	Nominal voltage (Vdc) V	Max. permitted DC voltage Vpvc V	Nominal discharge current In (8/20) kA	Max. discharge current Imax (8/20) kA	Voltage protection rating VPR kV	Leakage (Quiescent) μ A	SCCR kArms
SP85D	48	85	20	50	<0.4kV	<2.5 μ A	30kA
SP350D	300	350	20	50	<0.9kV	<2.5 μ A	100kA
SP460D	400	460	20	50	<1.2kV	<2.5 μ A	100kA
SP560D	500	560	20	50	<1.5kV	<2.5 μ A	100kA
SP670D	600	670	20	50	<1.5kV	<2.5 μ A	50kA
SP825D	750	825	20	50	<1.9kV	<2.5 μ A	50kA

• Dimension drawing



• Basic circuit diagram



PCB mounting method and illustration

PVD_Base Type A/ B are designed for SPM module to be mounted on the PCB and be replaced easily, and with Floating remote signaling contact for fault indication

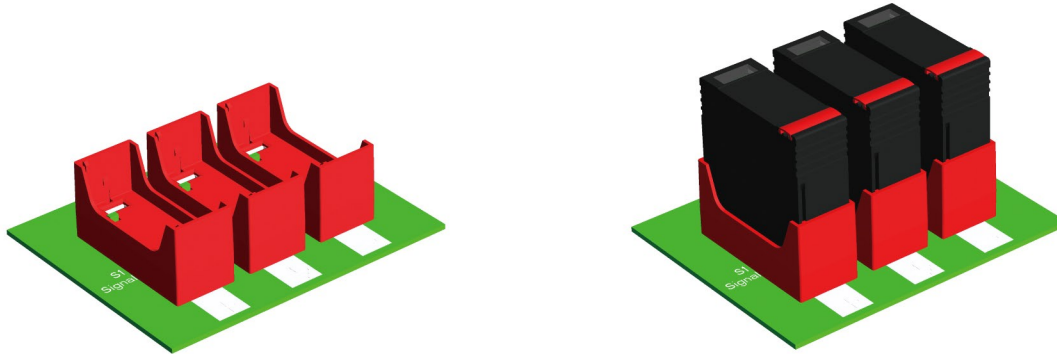


Fig: PVD_Base type A to be mounted on PCB for pluggable Prosurge PVD modules

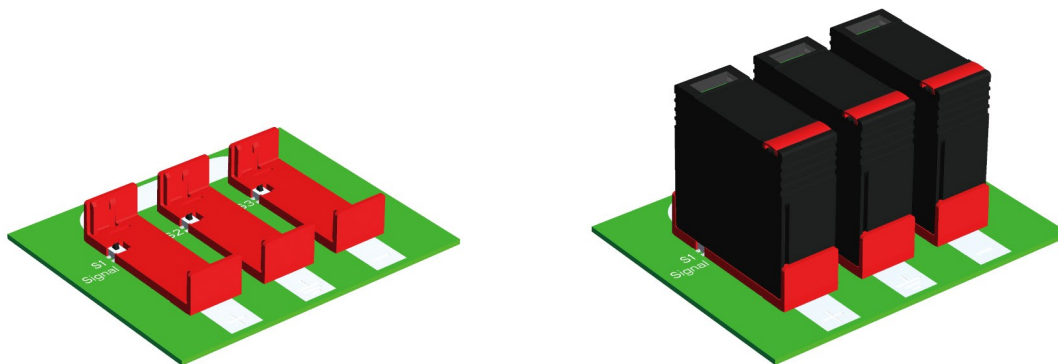


Fig: PVD_Base type B to be mounted on PCB for permanent connection of Prosurge PVD modules