

# Type 1+2 PV Multipolar Surge Protector MDSP-PV series



## Class I • Class II • Type 1 • Type 2

- Location of Use: String box, Inverter
- Mode of Protection: (DC+)- PE, (DC-)- PE, (DC+)- (DC-)
- Surge Ratings:  $I_{total} = 12.5 \text{ kA (10/350 } \mu\text{s)}$   
 $I_{total} = 40 \text{ kA (8/20 } \mu\text{s)}$
- IEC/EN/UL Category: Class I+II / Type 1+2
- Protective Elements: High Energy MOV
- Housing: Pluggable Design
- Compliance: IEC 61643-31  
EN 61643-31  
UL 1449 4th Edition

## Technical Data

### MDSP-PV1000 series

		600	1000	1200	1500
Maximum Continuous Operating DC Voltage	(DC+) - PE, (DC-) - PE (DC+) - (DC-)	$U_{CPV}$ 600 V	$U_{CPV}$ 1000 V	$U_{CPV}$ 1200 V	$U_{CPV}$ 1500 V
Nominal Discharge Current (8/20 $\mu$ s)			$I_n$ 20kA		
Impulse Discharge Current (10/350 $\mu$ s)			$I_{imp}$ 6.25kA		
Total Discharge Current (10/350 $\mu$ s)			$I_{Total}$ 12.5kA		
Total Discharge Current (8/20 $\mu$ s)			$I_{Total}$ 40kA		
Maximum Discharge Current (8/20 $\mu$ s)			$I_{max}$ 40kA		
Voltage Protection Level	(DC+) - PE, (DC-) - PE (DC+) - (DC-)	$U_p$ $\leq 2200V$	$U_p$ $\leq 4000V$	$U_p$ $\leq 4400V$	$U_p$ $\leq 5200V$
Response Time			$t_A$ < 25 ns		
Short-Circuit Current Rating			$I_{SCPV}$ 2000A		
Number of Ports			1		

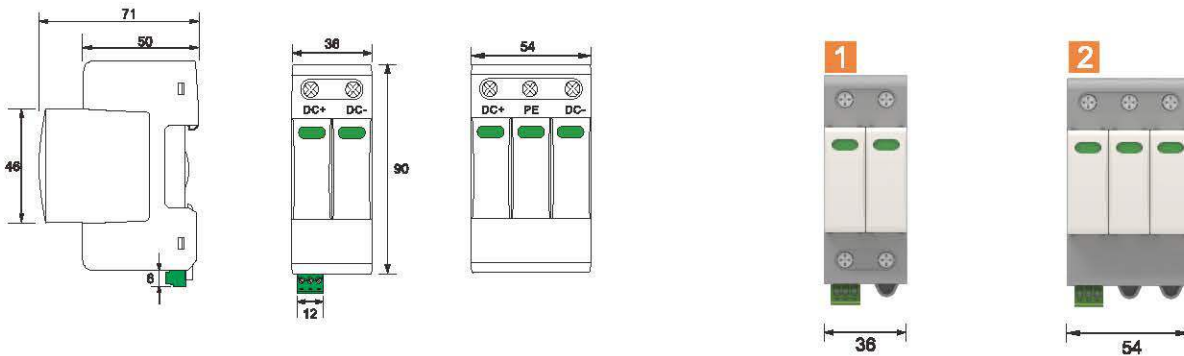
### Mechanical & Environmental

Operating Temperature Range	$T_a$	-40 °F to +158 °F [-40 °C to +70 °C]
Permissible Operating Humidity	RH	5%...95%
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m
Terminal Screw Torque	$M_{max}$	39.9 lbf·in [4.5 Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded)/ 4 AWG (Flexible) 35 mm <sup>2</sup> (Solid, Stranded)/ 25 mm <sup>2</sup> (Flexible)
Mounting		35 mm DIN Rail, EN 60715
Degree of Protection		IP 20 (built-in)
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0
Thermal Protection		Yes
Operating State / Fault Indication		Green ok / Red defect
Remote Contacts (RC)		Option
RC Switching Capacity		<b>AC:</b> 250V / 0.5 A; <b>DC:</b> 250V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm <sup>2</sup> (Solid)

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## Dimensions - Internal Configuration

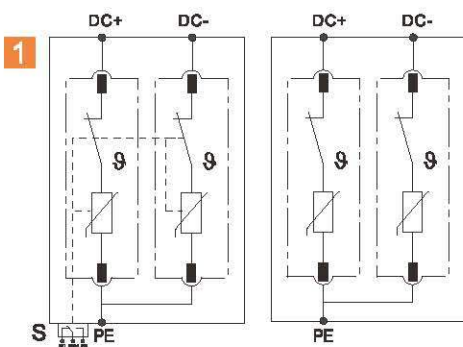
(in mm)



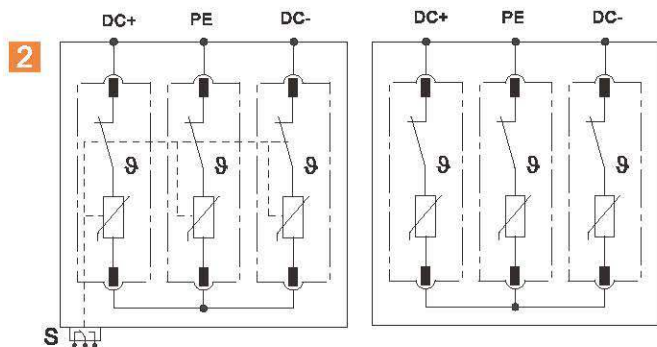
### Legend

PE Protective Earth

S Signaling Contacts (Option)



MDSP-PV600



MDSP-PV1000, MDSP-PV1200, MDSP-PV1500

## Connection Diagram

