

Pluggable Multi-Pole SPD for Photovoltaic Systems

SPT12.5-PVXXX-(S)

Class I Class II • Type 1 Type 2 • Type 1CA

Location of Use: String box, Inverter

Mode of Protection: (DC+)- PE, (DC-)- PE, (DC+)-(DC-)

Surge Ratings: I_{total} = up to 12.5 kA (10/350 μ s)

I_{total} = up to 40 kA (8/20 μ s)

IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA

Protective Elements: High Energy MOV

Housing: Pluggable Design

Compliance: IEC 61643-31:2018

EN 50539-11:2013+A1:2014

UL 1449 4th Edition



Technical Data

SPT12.5-PVXXX-(S)

600

1000

1200

1500

IEC Electrical

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

UL Electrical

Maximum Permitted DC Voltage	V_{pVdc}	600 V	1000 V	1200 V	1500 V	
Voltage Protection Rating	(DC+) - PE, (DC-) - PE	V_{PR}	1600 V	2500 V	3000 V	4000 V
	(DC+) - (DC-)	V_{PR}	1600 V	2500 V	3000 V	4000 V
Nominal Discharge Current (8/20 μ s)	I_n		20 kA			
Short-Circuit Current Rating	SCCR	35 kA	50 kA	55 kA	65 kA	

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)			
		35mm ² (Solid, Stranded) / 25mm ² (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)		Optional			
RC Switching Capacity		AC: 250V / 0.5 A; DC: 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 ² (Solid)			

SPT12.5-PVXXX-(S)



Order Information

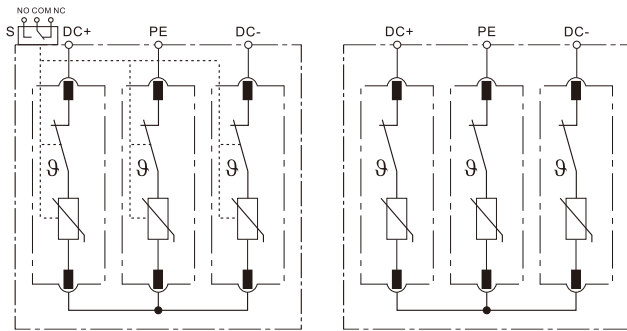
Order Code	600	1000	1200	1500
SPT12.5- PVXXX	0760025	0710235	0712231	0715231
SPT12.5- PVXXX-(S) (with remote contacts)	0760026	0710236	0712232	0715232
SPT12.5- PVXXX/0 (spare modules)	0760002	0710202	0712202	0715202

Internal Configuration

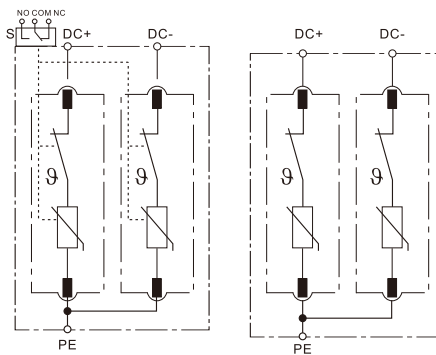
Legend

- PE Protective Earth
- S Signalling Contacts Optional

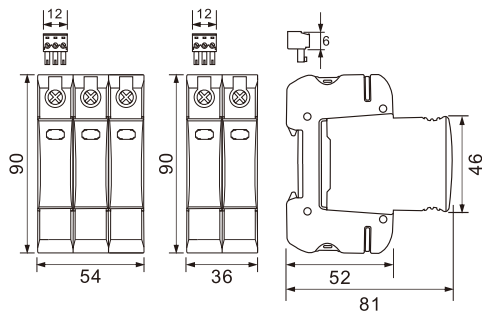
SPT12.5-PV1000-(S), SPT12.5-PV1200-(S), SPT12.5-PV1500-(S)



SPT12.5-PV600-(S)



Dimensions & Packaging

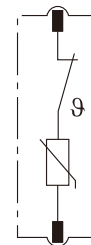


SPT12.5-PV1500-(S) SPT12.5-PV600-(S)
SPT12.5-PV1200-(S)
SPT12.5-PV1000-(S)

Dimensions & Packaging

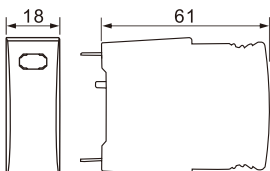
SPT12.5-PVXXX-(S)	600	1000	1200	1500
Single Unit DIN 43880 Dimension	1 CTN			
Packaging Dimensions (H x W x L)	[220 x 230 x 330 mm]			
Minimum Order Quantity	32 Units	16 Units	16 Units	16 Units

SPT12.5-PVXXX/0



Plug Internal Configuration

Dimensions & Packaging



Dimensions & Packaging

SPT12.5-PVXXX/0	600	1000	1200	1500
Single Unit DIN 43880 Dimension	1 CTN			
Packaging Dimensions (H x W x L)	[220 x 230 x 330 mm]			
Minimum Order Quantity	64 Units			