

Pluggable Multi-Pole SPD for Photovoltaic Systems

ProTec T1-PV 3+0

Type 1 • Type 2 • Type 1CA



Location of Use: String box, Inverter
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 Surge Ratings: I_{Total} = up to 12.5kA (10/350 μ s)
 I_{Total} = up to 50kA (8/20 μ s)
 EN/UL Category: Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV
 Housing: Pluggable Design
 Compliance: EN 50539-11:2013+A1:2014
 UL 1449 4th Edition

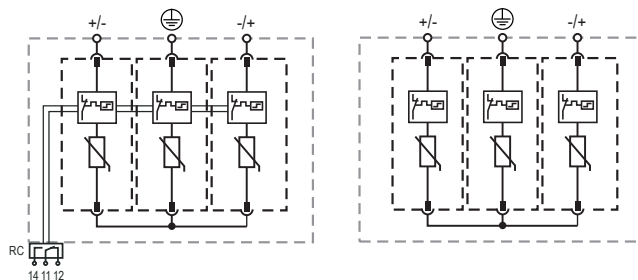
ProTec T1-xxxxPV-3+0(-R)		1100	1500
IEC Electrical			
Maximum Continuous Operating DC Voltage	U_{CPV}	1100 V	1500 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	6.25kA	5kA
Specific Energy	W/R	9.77kJ/ Ω	6.25kJ/ Ω
Charge	Q	3.125As	2.5As
Total Discharge Current (10/350 μ s)	I_{Total}	12.5kA	10kA
Total Discharge Current (8/20 μ s)	I_{Total}	50kA	40kA
Maximum Discharge Current (8/20 μ s)	I_{max}	40kA	30kA
Voltage Protection Level	(+)-PE, (-)-PE U_p	3800 V	5000 V
	(+)-(-) U_p	3800 V	5000 V
Response Time	t_A		< 25 ns
Short-Circuit Current Rating	I_{SCPV}		11 kA
Number of Ports			1
UL Electrical			
Maximum Permitted DC Voltage	V_{pVdc}	1100V	1500V
Voltage Protection Rating	(+)-PE, (-)-PE VPR	2500V	4000V
	(+)-(-) VPR	2500V	4000V
Nominal Discharge Current (8/20 μ s)	I_n		20 kA
Short-Circuit Current Rating	SCCR	50 kA	65 kA
Mechanical & Environmental			
Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]	
Permissible Operating Humidity	RH	5%...95%	
Altitude (max)		13123 ft [4000 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 ² (Solid, Stranded) / 25 mm 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 Flag / Not Green Flag	
Remote Contacts (RC)		Optional	
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A	
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5mm ² (Solid)	
Order Information			
Order Code		1100	1500
ProTec T1-xxxxPV-3+0		59.0285	59.0289
ProTec T1-xxxxPV-3+0-R (with remote contacts)		59.0286	59.0290
ProTec T1-550PV-P		59.0283	-
ProTec T1-550PV-M-P		59.0284	-
ProTec T1-750PV-P		-	59.0287
ProTec T1-750PV-M-P		-	59.0288

ProTec T1-PV-3+0

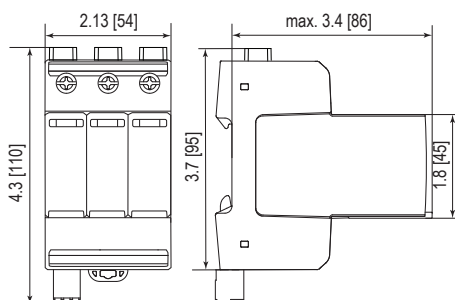
Internal Configuration

Legend

- ⊕ Ground
- RC Remote Contacts Optional



Dimensions & Packaging

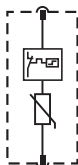


Dimensions & Packaging

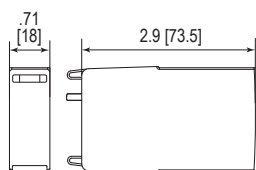
		1100	1500
ProTec T1-xxxxPV-3+0	Single Unit Weight	pounds .999	1.076
		grams 453	488
ProTec T1-xxxxPV-3+0-R	Single Unit Weight	pounds 1.019	1.096
		grams 462	497
Single Unit DIN 43880 Dimension	3 TE		
Packaging Dimensions (H x W x L)	4.30 x 3.03 x 4.48" [109 x 77 x 114 mm]		
Minimum Order Quantity	5 Units		

Plug Internal Configuration

ProTec T1-xxxPV-P
ProTec T1-xxxPV-M-P



Dimensions & Packaging



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		550	750
ProTec T1-xxxPV-P	Single Unit Weight	pounds .280	.287
		grams 127	130
ProTec T1-xxxPV-M-P	Single Unit Weight	pounds .157	.192
		grams 71	87
Single Unit DIN 43880 Dimension	1 TE		
Packaging Dimensions (H x W x L)	4.30 x 3.03 x 4.48" [109 x 77 x 114 mm]		
Minimum Order Quantity	28 Units		

inches
[mm]

Information contained in this document is subject to change at any time without notice.

