

DATASHEET

Pluggable Multi-Pole SPD for Photovoltaic Systems

ProTec T2-PV 3+0

Type 2 • PV SPD Type 1CA



Location of Use: String box, Inverter
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 EN/UL Category: Type 2/Type 1CA PV SPD
 Housing: Pluggable Design
 Compliance: EN 61643-31:2019
 UL 1449 5th Edition



Technical Data

ProTec T2-xxxxPV-3+0(-R)

		1100	1500
EN Electrical			
Maximum Continuous Operating Voltage (PV)	U_{CPV}	1100 V	1500 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	40 kA	30 kA
Total Discharge Current	I_{Total}	50 kA	40 kA
Voltage Protection Level	U_p	3800 V	5000 V
Response Time	t_A	< 25 ns	
Overvoltage Category		III	
Short-Circuit Current Rating	I_{SCP}	11 kA	
Number of Ports		1	

UL Electrical

Maximum Permitted DC Voltage	V_{pdc}	1100V	1500V
Voltage Protection Rating	VPR	2500V	4000V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA
Short-Circuit Current Rating	SCCR	50 kA	65 kA

Additional Electrical Parameters (Tests performed within Raycap testing laboratory only)

Residual Voltage at 5 kA (8/20 μ s)	U_{res}	3100V	4000V
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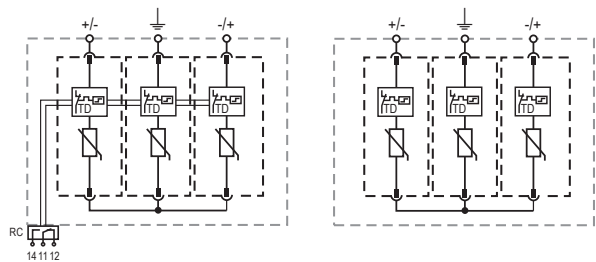
Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]	
Permissible Operating Humidity	RH	5%...95%	
Pollution Degree		2	
Altitude (max)		13123 ft [4000 m]	
Terminal Screw Torque	M_{max}	40 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) / 1.5 mm ² (Solid)	
Overvoltage Category		III	

Internal Configuration

Legend

- +/-, -/+ + or - Conductor Terminal
- ⏏ PE/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect

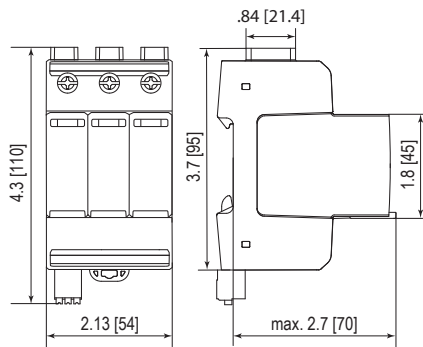


Order Information

Order Code	1100	1500
ProTec T2-xxxxPV-3+0	59.0292	59.0295
ProTec T2-xxxxPV-3+0-R (with remote contacts)	59.0293	59.0296
ProTec T2-550PV-P (plug)	59.0291	-
ProTec T2-750PV-P (plug)	-	59.0294

Dimensions & Packaging

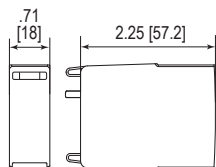
inches [mm]



Complete Unit

ProTec T2-xxxxPV-3+0		1100	1500
Weight	pounds [grams]	.806 [366]	.879 [399]
ProTec T2-xxxxPV-3+0-R			
Weight	pounds [grams]	.817 [371]	.890 [404]
DIN 43880 Dimension	3 TE / 2.13" [54 mm]		
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]		
Standard Order Quantity	5 Units		

Spare Plug



Single Unit

ProTec T2-xxxPV-P		550	750
Weight	pounds [grams]	.150 [68]	.174 [79]
DIN 43880 Dimension		1 TE / .71" [18 mm]	
Packaging Dimensions (HxWxL)		3.2 × 4.5 × 12" [83 × 116 × 305 mm]	
Standard Order Quantity		24 Units	