

Box with Multi-Pole SPD for Photovoltaic Systems

ProTec T1 PV-5Y(-S)(-RG)-Box

Class I • Class II • Type 1 • Type 2



Location of Use: Photovoltaic Systems
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 IEC/EN Category: Class I+II, Type 1+2
 Housing: Up to IP 67 Enclosure
 Compliance: EN 61643-31:2019
 IEC 61643-31:2018

Technical Data

ProTec T1-xxxxPV-5Y(-S)(-RG)-Box

1100

1500

Electrical

Maximum Continuous Operating Voltage (DC)	U_{OPV}	1100V	1500V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA
Total Discharge Current (8/20 μ s)	I_{total}	50 kA	50 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	40 kA	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	6.25 kA	6.25 kA
Total Discharge Current (10/350 μ s)	I_{total}	12.5 kA	12.5 kA
Specific Energy	W/R	9.77 kJ/ Ω	9.77 kJ/ Ω
Charge	Q	3.125 As	3.125 As
Voltage Protection Level	U_p	< 4.4 kV	< 5.2 kV
Rated Load Current [Rubber Grommet]	I_L	35 A	35 A
Response Time	t_A	< 25 ns	< 25 ns
Short Circuit Current Rating	I_{SCPV}	11 kA	30 kA
Number of Strings per MPPT		2	

Mechanical & Environmental

Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]	
Permissible Humidity	RH	5%...95%	
Altitude		13123 ft [4000 m]	
Type of Cable Entry		Cable Gland / Rubber Grommet	
Wire Insulation Outer Diameter	(min)	.15" [4 mm] (stranded, flexible)	
	(max)	.31" [8 mm] (stranded, flexible)	
Conductor Cross Section [Cable Gland]	(min)	24 AWG [0.2 mm ²] (stranded, flexible)	
	(max)	5 AWG [16 mm ²] (stranded, flexible)	
2 Conductors with Same Cross Section and Twin Ferrule [Rubber Grommet]	(min)	20 AWG [0.5 mm ²] (stranded, flexible)	
	(max)	9 AWG [6 mm ²] (stranded, flexible)	
Degree of Protection [Cable Gland / Rubber Grommet]		IP 67/IP 65	
Thermal Protection		Yes	
Operating State / Fault Indication		Green Flag / Not Green Flag	
Housing Material		Polycarbonate with Semi-transparent	
Mounting		Wall - Indoor/Outdoor	

Internal Configuration

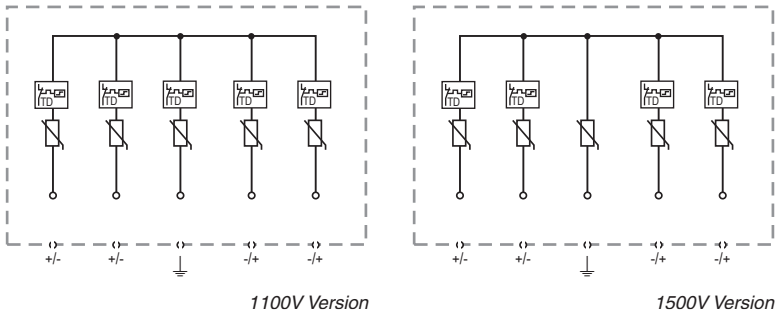
Legend

- +/-, -/+

Terminal for +/-, -/+ Conductor
- ⏏

Terminal for PE/G Conductor
- TD

Thermal Disconnect



ProTec T1-xxxxPV-5Y(-S)(-RG)-Box

Order Information

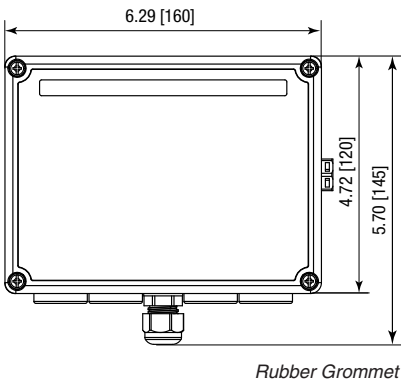
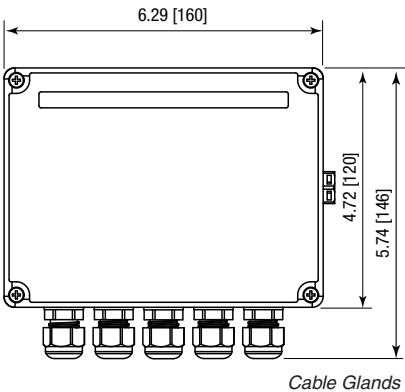
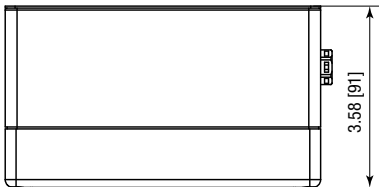
Order Code	1100	1500
ProTec T1-xxxxPV-5Y-Box (Cable Gland)	515 609	-
ProTec T1-xxxxPV-5Y-S-Box (Cable Gland)	-	515 613
ProTec T1-xxxxPV-5Y-RG-Box (Rubber Grommet)	515 650	-
ProTec T1-xxxxPV-5Y-S-RG-Box (Rubber Grommet)	-	515 652

Abmessungen & Verpackung

inches [mm]

Complete Unit

ProTec T1-xxxxPV-5Y(-S)-Box		1100	1500
Single Unit Weight	pounds [grams]	2.01 [915]	2.41 [1096]
ProTec T1-xxxxPV-5Y(-S)-RG-Box			
Single Unit Weight	pounds [grams]	2.46 [1117]	2.86 [1298]
Packaging Dimensions (H x W x L)		4.06 x 6.29 x 7.87" [103 x 160 x 200 mm]	
Minimum Package Quantity		1 Unit	



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