



Location of Use: String box, Inverter
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 IEC/EN/UL Category: Class I+II / Type 1+2 / PV SPD Type 1CA
 Compliance: IEC 61643-31:2018
 EN 61643-31:2019
 UL 1449 5th Edition

ProTec T1-xxxxPV-3+0(-R)**600*****1100****EN Electrical**

Maximum Continuous Operating Voltage (PV)	U_{OPV}	600 V	1100 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	6.25 kA	6.25 kA
Specific Energy	W/R	9.77 kJ/ Ω	9.77 kJ/ Ω
Charge	Q	3.125 As	3.125 As
Total Discharge Current (10/350 μ s)	I_{Total}	12.5 kA	12.5 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	40 kA
Voltage Protection Level	(+)-PE, (-)-PE U_p	2800 V	3800 V
	(+)-(-) U_p	2800 V	3800 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_{pdc}	600 V	1100 V
Voltage Protection Rating	(+)-G, (-)-G VPR	2000 V	2500 V
	(+)-(-) VPR	2000 V	2500 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA
Short-Circuit Current Rating	SCCR	50 kA	50 kA

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

Residual Voltage at 5 kA (8/20 μ s)	U_{res}	2200 V	3200 V
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Mechanical & Environmental

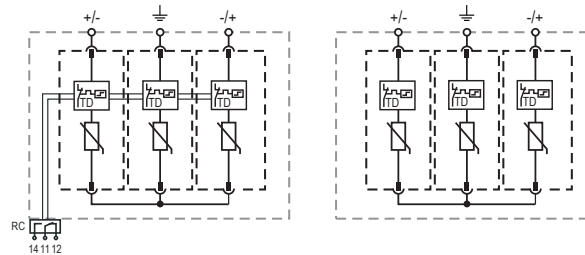
Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]	
Permissible Operating Humidity	RH	5%...95%	
Altitude (max)		13123 ft [4000 m]	
Terminal Screw Torque	M_{max}	40 lbf-in [4.5 Nm]	
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)	
		35 mm ² (Solid, Stranded) / 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)	

*No VDE and UL certification.

Internal Configuration

Legend

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

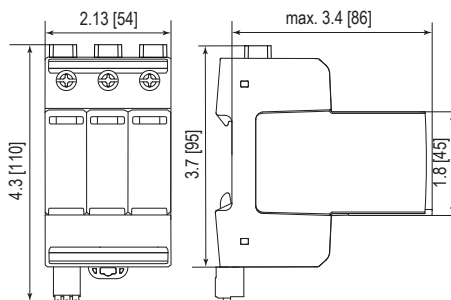


Order Information

Order Code	600*	1100
ProTec T1-xxxxPV-3+0	59.A574	59.0285
ProTec T1-xxxxPV-3+0-R (with remote contacts)	59.A575	59.0286
ProTec T1-300PV-P (middle plug)	59.A576	
ProTec T1-300PV-M-P (side plug)	59.A577	
ProTec T1-550PV-P (middle plug)	-	59.0283
ProTec T1-550PV-M-P (side plug)	-	59.0284

*No VDE and UL certification.

Complete Unit

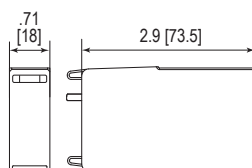


inches [mm]

Complete Unit

ProTec T1-xxxxPV-3+0	600	1100
Weight	pounds .928	.968
	grams 421	439
ProTec T1-xxxxPV-3+0-R		
Weight	pounds .943	.979
	grams 428	444
DIN 43880 Dimension	3 TE / 2.13" [54]	
Packaging Dimensions (H x W x L)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity	5 Units	

Spare Plug



Single Unit

ProTec T1-xxxPV-P	300	550
Weight	pounds .231	.220
	grams 105	100
ProTec T1-xxxPV-M-P	300	550
Weight	pounds .165	.194
	grams 75	88
DIN 43880 Dimension	1 TE / .71" [18]	
Packaging Dimensions (H x W x L)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity	28 Units	