

Pluggable Multi-Pole SPD ProTec T1 1+1

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



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_{imp} = 12.5 \text{ kA} (10/350\mu\text{s})$
 $I_n = 12.5 \text{ kA} (8/20\mu\text{s})$
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV and GDT
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T1-xxx-1+1(-R)

		75	150	300	350
IEC Electrical					
Nominal AC Voltage (50/60Hz)		60 V	120 V	240 V	277 V
Maximum Continuous Operating Voltage	(L - N) U_c	75 V	150 V	300 V	350 V
	(N - PE) U_c	305 V	305 V	305 V	305 V
Nominal Discharge Current (8/20 μs)	(L - N)/(N - PE) I_n		12.5 kA / 50 kA		
Maximum Discharge Current (8/20 μs)	(L - N)/(N - PE) I_{max}		50 kA / 100 kA		
Impulse Discharge Current (10/350 μs)	(L - N)/(N - PE) I_{imp}		12.5 kA / 50 kA		
Specific Energy	(L - N)/(N - PE) W/R		39 kJ/ Ω / 625 kJ/ Ω		
Charge	(L - N)/(N - PE) Q		6.25 As / 25 As		
Voltage Protection Level	(L - N)/(N - PE) U_p	700 V / 1500 V	1000 V / 1500 V	1400 V / 1500 V	1500 V / 1500 V
Follow Current Interrupt Rating	(N - PE) I_{fi}		100 A _{RMS}		
Response Time	(L - N)/(N - PE) t_A		< 25 ns / < 100 ns		
Back-Up Fuse (max)			315 A / 250 A gG		
Short-Circuit Current Rating (AC)	(L - N) I_{SCCR}		25 kA / 50 kA		
TOV Withstand 5s	(L - N) U_T	114 V	175 V	337 V	403 V
TOV 120min	(L - N) U_T	114 V	229 V	442 V	529 V
		mode	Withstand	Safe Fail	Safe Fail
TOV Withstand 200ms	(N - PE) U_T		1200 V		
Number of Ports			1		

UL Electrical

Maximum Continuous Operating Voltage (AC)	(L - N)/(N - PE) MCOV	75 V / 305 V	150 V / 305 V	300 V / 305 V	350 V / 305 V
Voltage Protection Rating	(L - N)/(N - PE) VPR	330 V / 1200 V	600 V / 1200 V	900 V / 1200 V	1200 V / 1200 V
Nominal Discharge Current (8/20 μs)	(L - N)/(N - PE) I_n	20 kA / 20 kA	20 kA / 20 kA	20 kA / 20 kA	20 kA / 20 kA
Short-Circuit Current Rating (AC)	(L - N) SCCR	100 kA	200 kA	150 kA	150 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		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) / 1.5 mm ² (Solid)			

Order Information

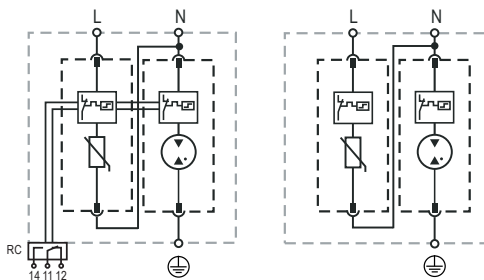
Order Code	75	150	300	350
ProTec T1-xxx-1+1	59.0047	59.0049	59.0051	59.0053
ProTec T1-xxx-1+1-R (with remote contacts)	59.0048	59.0050	59.0052	59.0054
ProTec T1-xxx-P	59.0001	59.0002	59.0003	59.0004
ProTube T1-50-P	59.0269	59.0269	59.0269	59.0269

ProTec T1 1+1

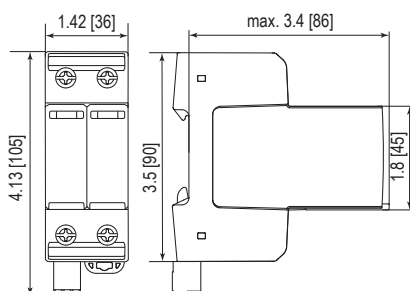
Internal Configuration

Legend

- L Line
- N Neutral
- ⊕ Protective Earth
- RC Remote Contacts Optional



Dimensions & Packaging

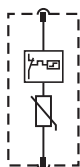


Dimensions & Packaging

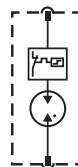
		75	150	300	350	
ProTec T1-xxx-1+1	Single Unit Weight					
		pounds	.702	.702	.732	.768
		grams	318	318	332	348
ProTec T1-xxx-1+1-R	Single Unit Weight					
		pounds	.715	.715	.746	.781
		grams	324	324	338	354
Single Unit DIN 43880 Dimension		2 TE				
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]				
Minimum Order Quantity		7 Units				

Plug Internal Configuration

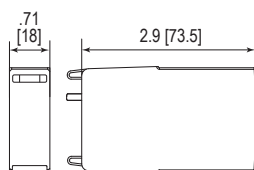
ProTec T1-xxx-P



ProTube T1-50-P



Dimensions & Packaging



Dimensions & Packaging

		75	150	300	350	
ProTec T1-xxx-P	Single Unit Weight					
		pounds	.206	.206	.236	.272
		grams	93	93	107	123
ProTube T1-50-P		50				
Single Unit Weight	pounds [grams]	.208 [94]				
Single Unit DIN 43880 Dimension		1 TE				
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]				
Minimum Order Quantity		28 Units				

inches
[mm]

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

