

Pluggable Multi-Pole SPD
ProTec T1 3+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: $I_{imp} = 12.5\text{ kA}/50\text{ kA}$ (L-N/N-PE)
 $I_n = 20\text{ kA}/50\text{ kA}$ (L-N/N-PE)
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV (L-N) and GDT (N-PE)
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T1-xxx-3+1(-R) **300** **350**

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	240V	277V
Maximum Continuous Operating Voltage	(L-N) U_c	300V	350V
	(N-PE) U_c	305V	305V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20 kA / 50 kA	
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50 kA / 100 kA	
Impulse Discharge Current (10/350 μ s)	(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	1500V / 1500V	1750V / 1500V
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	337V	403V
TOV 120min	(L-N) U_T	mode	Safe Fail
		mode	Safe Fail
TOV Withstand 200ms	(N-PE) U_T	1200V	
Number of Ports		1	

UL Electrical

Maximum Continuous Operating Voltage (AC)	(L-N)/(N-PE) MCOV	300V / 305V	350V / 305V
Voltage Protection Rating	(L-N)/(N-PE) VPR	900V / 1200V	1200V / 1200V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20 kA / 20 kA	20 kA / 20 kA
Short-Circuit Current Rating (AC)	(L-N) SCCR	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

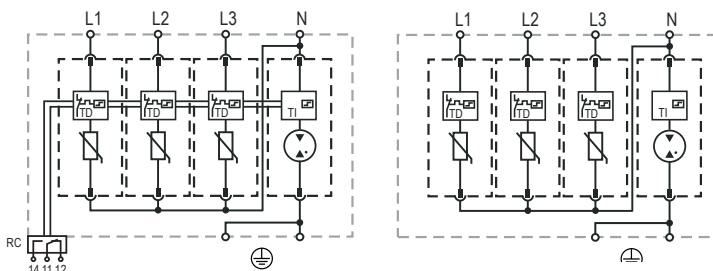
Order Code	300	350
ProTec T1-xxx-3+1	59.0059	59.0061
ProTec T1-xxx-3+1-R (with remote contacts)	59.0060	59.0062
ProTec T1-xxx-P	59.0003	59.0004
ProTube T1-50-P	59.0269	59.0269

ProTec T1 3+1

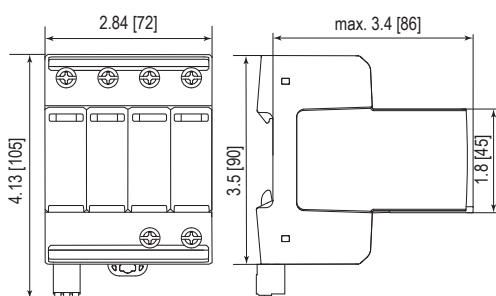
Internal Configuration

Legend

- L Terminal for Line Conductor
- N Terminal for Neutral Conductor
- ⊕ Terminal for PE/G Conductor
- RC Terminal for Remote Contacts (Optional)
- TD Thermal Disconnect
- TI Thermal Indication



Dimensions & Packaging



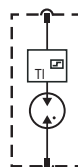
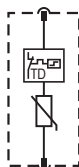
Dimensions & Packaging

		300	350
ProTec T1-xxx-3+1			
Single Unit Weight	pounds [grams]	1.471 [667]	1.577 [715]
ProTec T1-xxx-3+1-R			
Single Unit Weight	pounds [grams]	1.491 [676]	1.597 [724]
Single Unit DIN 43880 Dimension		4 TE	
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Minimum Order Quantity		4 Units	

Plug Internal Configuration

ProTec T1-xxx-P

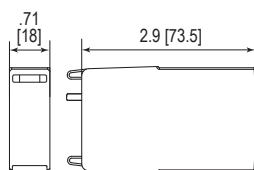
ProTube T1-50-P



Legend

- TD Thermal Disconnect
- TI Thermal Indication

Dimensions & Packaging



Dimensions & Packaging

		300	350
ProTec T1-xxx-P			
Single Unit Weight	pounds [grams]	.236 [107]	.272 [123]
ProTube T1-50-P			
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.

