

Overvoltage Protection

ProTec T2 3+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition



Technical Data

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

		150	300	350	480	750
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	120V	240V	277V	400V	600V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	480V	750V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	35 kA
Voltage Protection Level	U_p	1250V	1500V	1750V	2300V	3400V
Response Time	t_A	< 25 ns				
Overvoltage Category		III				
Overcurrent Protection (max)		315 A / 250 A gG				
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA				
TOV Withstand 5s	U_T	229V	337V	403V	581V	871V
TOV 120min	U_T	229V	442V	529V	762V	1143V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1				

UL Electrical

Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	480V	750V
Voltage Protection Rating	VPR	600V	900V	1000V	1500V	2500V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Short-Circuit Current Rating (AC)	SCCR	200 kA	150 kA	200 kA	200 kA	200 kA

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

Residual Voltage at 5 kA (8/20 μ s)	U_{res}	750V	1000V	1300V	1500V	2500V
Minimum Backup fuse, if required		80 A gG				

Additional Electrical Parameters - Extended (Additionally tested by VDE)

Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA				
Overcurrent Protection (max)		250 A gG				

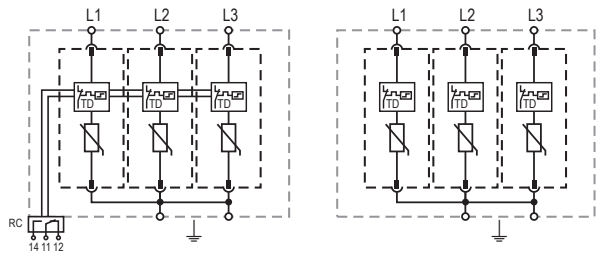
Mechanical & Environmental

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 [4000m]				
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

- L Line Conductor Terminal
- ⏏ PEN/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect

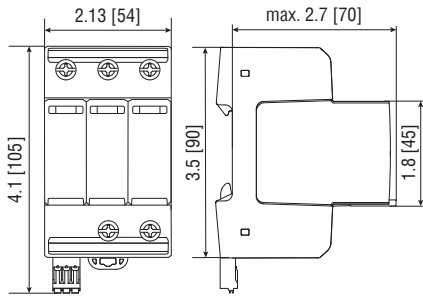


Order Information

Order Code	150	300	350	480	750
ProTec T2-xxx-3+0	59.0091	59.0093	59.0095	59.0097	59.0099
ProTec T2-xxx-3+0-R (with remote contacts)	59.0092	59.0094	59.0096	59.0098	59.0100
ProTec T2-xxx-P (plug)	59.0064	59.0065	59.0066	59.0067	59.0068

Dimensions & Packaging

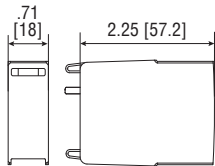
inches [mm]



Complete Unit

ProTec T2-xxx-3+0		150	300	350	480	750
Weight	pounds	.800	.820	.853	.893	.985
	grams	363	372	387	405	447
ProTec T2-xxx-3+0-R						
Weight	pounds	.820	.840	.873	.912	1.005
	grams	372	381	396	414	456
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-xxx-P		150	300	350	480	750
Weight	pounds	.123	.130	.141	.154	.185
	grams	56	59	64	70	84
DIN 43880 Dimension			1 TE / .71" [18 mm]			
Packaging Dimensions (HxWxL)			3.2 x 4.5 x 12" [83 x 116 x 305 mm]			
Standard Order Quantity			24 Units			