

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	440**	480	550***	750
IEC Electrical								
Nominal AC Voltage (50/60Hz)	U _o /U _n	120V	240V	277V	230V	400V	480V	600V
Maximum Continuous Operating Voltage (AC)	U _c	150V	300V	350V	440V	480V	550V	750V
Nominal Discharge Current (8/20μs)	I _n	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20μs)	I _{max}	50kA	50kA	50kA	50kA	50kA	50kA	35kA
Voltage Protection Level	U _p	1250V	1500V	1750V	1800V	2300V	2500V	3400V
Response Time	t _A	< 25 ns						
Overcurrent Protection (max)		315 A / 250 A gG						
Short-Circuit Current Rating (AC)	I _{SCCR}	25 kA / 50kA						
TOV Withstand 5s	U _T	229V	337V	403V	440V	581V	697V	871V
TOV 120min	U _T	229V	442V	529V	440V	762V	915V	1143V
	mode	Withstand	Safe Fail	Safe Fail	Withstand	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1						
UL Electrical								
Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	-	480V	550V	750V
Voltage Protection Rating	VPR	600V	900V	1000V	-	1500V	2000V	2500V
Nominal Discharge Current (8/20μs)	I _n	20kA	20kA	20kA	-	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	200kA	150kA	200kA	-	200kA	200kA	200kA
Additional Electrical Parameters - Standard <i>(Tests performed within Raycap testing laboratory only)</i>								
Residual Voltage at 5 kA (8/20 μs)	U _{res}	750V	1000V	1300V	1400V	1500V	1800V	2500V
Overcurrent Protection (min)		80 A gG						
Additional Electrical Parameters - Extended <i>(Additionally tested by VDE)</i>								
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%						
Altitude (max)		13123 ft [4000m]						
Terminal Screw Torque	M _{max}	40 lbf-in [4.5Nm]						
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)						
		35 mm² (Solid, Stranded) / 25 mm² (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 mm² (Solid)						

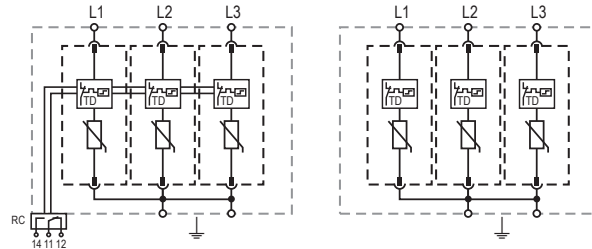
**No VDE and UL certification.

***No VDE certification.

Internal Configuration

Legend

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



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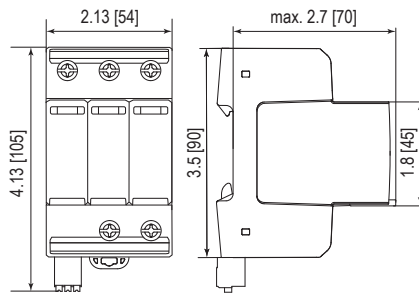
Order Information VDE Certified and UL Recognized Products*

Order Code	150	300	350	440**	480	550***	750
ProTec T2-xxx-3+0	59.0091	59.0093	59.0095	59.0550	59.0097	59.0681	59.0099
ProTec T2-xxx-3+0-R (with remote contacts)	59.0092	59.0094	59.0096	59.0551	59.0098	59.0682	59.0100
ProTec T2-xxx-P (plug)	59.0064	59.0065	59.0066	59.0547	59.0067	59.0685	59.0068

**No VDE and UL certification.

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Dimensions & Packaging

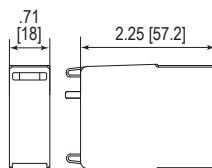


inches [mm]

Complete Unit

ProTec T2-xxx-3+0	150	300	350	440**	480	550***	750
Weight	pounds	.800	.820	.853	.867	.893	.910
	grams	363	372	387	393	405	413
		447					
ProTec T2-xxx-3+0-R	150	300	350	440**	480	550***	750
Weight	pounds	.820	.840	.873	.886	.912	.933
	grams	372	381	396	402	414	423
		456					
DIN 43880 Dimension	3 TE / 2.13" [54]						
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	440**	480	550***	750
Weight	pounds	.123	.130	.141	.146	.154	.163
	grams	56	59	64	66	70	74
		84					
DIN 43880 Dimension	1 TE / .71" [18]						
Packaging Dimensions (HxWxL)	3.2 x 4.5 x 12" [83 x 116 x 305 mm]						
Standard Order Quantity	24 Units						