

Overvoltage Protection

ProTec T2 1+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-S, TN-C, TT (only L-N)
 Mode of Protection: L-PE, N-PE (only TN-S), L-PEN, L-N
 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-1+0 (-R)

		75	150	300	350	480	750
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V	600V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V	750V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	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	50 kA	35 kA
Voltage Protection Level	U_p	800V	1250V	1500V	1750V	2300V	3400V
Response Time	t_A	< 25ns					
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	114V	229V	337V	403V	581V	871V
TOV 120min	U_T	114V	229V	442V	529V	762V	1143V
	mode	Withstand	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1					

UL Electrical

Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V	750V
Voltage Protection Rating	VPR	330V	600V	900V	1000V	1500V	2500V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Short-Circuit Current Rating (AC)	SCCR	100 kA	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}	400V	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					

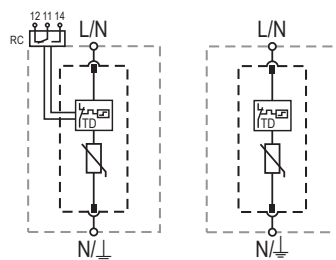
Mechanical & Environmental

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 [4.5Nm]					
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

<i>L</i>	Line Conductor Terminal
<i>N</i>	Neutral Conductor Terminal
$\perp$	PE/G Conductor Terminal
<i>RC</i>	Remote Contacts Terminal (Optional)
<i>TD</i>	Thermal Disconnect

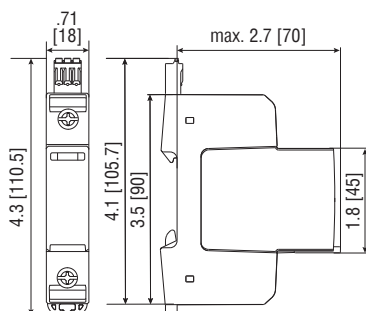


Order Information

Order Code	75	150	300	350	480	750
ProTec T2-xxx-1+0	59.0069	59.0071	59.0073	59.0075	59.0077	59.0079
ProTec T2-xxx-1+0-R (with remote contacts)	59.0070	59.0072	59.0074	59.0076	59.0078	59.0080
ProTec T2-xxx-P (plug)	59.0063	59.0064	59.0065	59.0066	59.0067	59.0068

Dimensions & Packaging

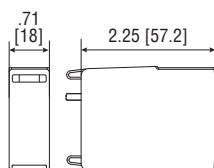
inches [mm]



Complete Unit

ProTec T2-xxx-1+0)	75	150	300	350	480	750
Weight	pounds	.259	.275	.281	.292	.306
	grams	118	125	128	133	139
ProTec T2-xxx-1+0-R						
Weight	pounds	.275	.290	.297	.308	.321
	grams	125	132	135	140	146
DIN 43880 Dimension	1 TE / .71" [18 mm]					
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]					
Standard Order Quantity	12 Units					

Spare Plug



Single Unit

ProTec T2-xxx-P	75	150	300	350	480	750
Weight	pounds	.108	.123	.130	.141	.154
	grams	49	56	59	64	70
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					