

Pluggable Multi-pole SPD

ProTec T2-CM-1+1-L-E(-R)

Class II • Class III • Type 2 • Type 3



Location of Use: Sub-distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L - N, N - PE
 IEC/EN Category: Class II+III / Type 2+3
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018



Technical Data

ProTec T2-CM-xxx-1+1-L-E(-R)

275

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o	230V	230V
Maximum Continuous Operating Voltage (AC)	(L - N)/(N - PE) U_c	275V / 255V	440V / 255V
Nominal Discharge Current (8/20 μ s)	(L - N)/(N - PE) I_n	10 kA / 20 kA	
Maximum Discharge Current (8/20 μ s)	(L - N)/(N - PE) I_{max}	20 kA / 40 kA	
Voltage Protection Level for Type 2+3	(L - N) U_p	1200V	1700V
	(N - PE) U_p	1500V	1500V
Voltage Protection Level for Type 3 only	(L - N) U_p	1000V	1400V
	(N - PE) U_p	1000V	1000V
Open Circuit Voltage of Combination Wave Generator (1.2/50 μ s)	(L - N)/(N - PE) U_{oc}	6 kV / 6 kV	
Short Circuit Current of Combination Wave Generator (8/20 μ s)	(L - N)/(N - PE) I_{cw}	3 kA / 3 kA	
Follow Current Interrupt Rating	(N - PE) I_{fi}	100 A	
Response Time	(L - N)/(N - PE) t_A	< 25 ns / < 100 ns	
Overvoltage Category		III	
Overcurrent Protection (max)		100 A gG	
Short-Circuit Current Rating	I_{SCCR}	25 kA	
TOV Withstand 5s	(L - N) U_T	335V	440V
TOV 120min	(L - N) $U_T / mode$	440V / Safe Fail	440V / Withstand
TOV Withstand 200ms	(N - PE) U_T	1200V / 300 A	
Number of Ports		1	

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

Residual Voltage at 5 kA (8/20 μ s)	U_{res}	1000V / 255V	1500V / 255V
Minimum Backup fuse, if required		40 A gG	

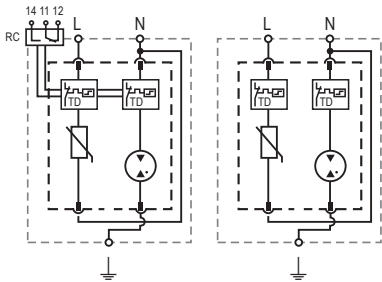
Mechanical & Environmental

Temperature Range	T_a	-40 °C to +85 °C	
Permissible Humidity	RH	5%...95%	
Pollution Degree		2	
Altitude (max)		6562 ft [2000 m]	
Terminal Screw Torque	(L, N) M_{max}	10 lbf-in [1.2 Nm]	
	(PE) M_{max}	17 lbf-in [2.0 Nm]	
Conductor Cross Section (max)	(L, N)	8 AWG (Solid, Stranded) / 10 AWG (Flexible)	
		10 mm ² (Solid, Stranded) / 6 mm ² (Flexible)	
	(PE)	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)	
Thermal Protection		Yes	
Fault Indication		Red Flag	
Remote Contacts (RC)		Optional	
RC Switching Capacity		AC: 250/0.5A; DC: 60V/0.1A	
RC Terminal Cross Section (max)		13 AWG [1.5 mm ²]	
RC Terminal Screw Torque	M_{max}	3.5 lbf-in [0.4 Nm]	
Overvoltage Category		III	

Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- PE Conductor Terminal
- RC Remote Contacts Terminal
- TD Thermal Disconnect

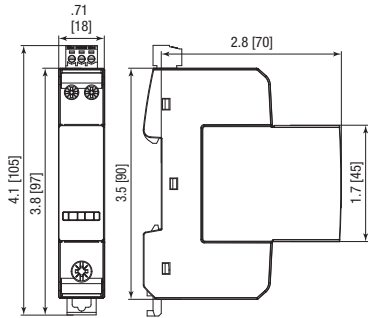


Order Information

Order Code	275	440
ProTec T2-CM-xxx-1+1-L-E	515 596	515 661
ProTec T2-CM-xxx-1+1-L-E-R (with remote contact)	515 597	515 662
ProTec T2-CM-xxx-L-G-E-P (plug)	515 598	515 607

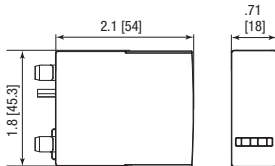
Dimensions & Packaging

inches [mm]



Complete Unit			
ProTec T2-CM-xxx-1+1-L-E		275	440
Weight	pounds [grams]	.304 [138]	.131 [142]
ProTec T2-CM-xxx-1+1-L-E-R		275	440
Weight	pounds [grams]	.313 [142]	.321 [146]
DIN 43880 Dimension	1 TE / .70" [18 mm]		
Packaging Dimensions (H x W x L)	3.2 x 1.7 x 4.6" [83.5 x 44 x 117 mm]		
Standard Order Quantity	15 Units		

Spare plug



Single Unit			
ProTec T2-CM-xxx-L-G-E-P		275	440
Weight	pounds [grams]	.144 [65.5]	.151 [68.5]
DIN 43880 Dimension	1 TE / .70" [18 mm]		
Packaging Dimensions (H x W x L)	2.5 x 1.8 x 8.7" [64 x 45 x 220 mm]		
Standard Order Quantity	24 Units		