

Lightning and Overvoltage Protection
ProTec T1S 3+0
 Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards
 Network Systems: TN-C, IT (only 440)
 Mode of Protection: L-PEN
 IEC/EN Category: Class I+II / Type 1+2
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018

Technical Data

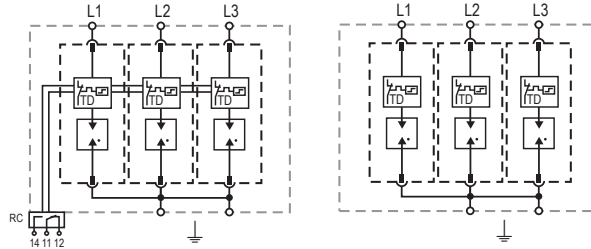
ProTec T1S-xxx-3+0(-R)		275	440*
IEC Electrical			
Nominal AC Voltage (50/60Hz)	U_o / U_n	240V	400V
Maximum Continuous Operating Voltage (AC)	U_c	275V	440V
Nominal Discharge Current (8/20 μ s)	I_n	25 kA	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	65 kA	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA	25 kA
Specific Energy	W/R	156.2 kJ/ Ω	156.2 kJ/ Ω
Charge	Q	12.5 As	12.5 As
Voltage Protection Level	U_p	1500V	2500V
Response Time	t_A	< 100ns	< 100ns
Overcurrent Protection (max)		315 A gG	315 A gG / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA	50 kA / 100 kA
Follow Current Interrupt Rating (AC)	I_{fi}	50 kA	50 kA / 100 kA
TOV 120min	$U_T / mode$	442V/Withstand	762V / Safe Fail
TOV Safe Fail 200ms	U_T	-	1640V
Number of Ports			1
Additional Electrical Parameters - Standard (Tests performed within Raycap testing laboratory only)			
Residual Voltage at 5 kA (8/20 μ s)	U_{res}	1400V	1500V
Overcurrent Protection (min)		250 A gG	250 A gG
Additional Electrical Parameters - Extended (Additionally tested by VDE)			
Short-Circuit Current Rating (AC)	I_{SCCR}		100 kA
Overcurrent Protection (max)		315 A gG	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		6562 ft [2000m]	
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) / 1.5mm ² (Solid)	

*No VDE Certification.

Internal Configuration

Legend

- L Line Conductor Terminal
- ⏏ PE Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect



ProTec T1S-xxx-3+0(-R)

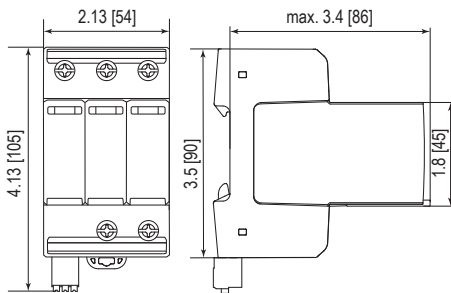
Order Information

Order Code	275	440*
ProTec T1S-xxx-3+0	59.0742	59.A521
ProTec T1S-xxx-3+0-R (with remote contacts)	59.0743	59.A522
ProTec T1S-xxx-P (plug)	59.0384	59.A515

*No VDE Certification.

Dimensions & Packaging

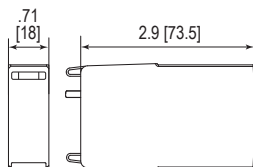
inches [mm]



Complete Unit

ProTec T1S-xxx-3+0	275	440*	
Weight	pounds [grams]	1.100 [499]	1.133 [514]
ProTec T1S-xxx-3+0-R	275	440*	
Weight	pounds [grams]	1.119 [508]	1.166 [529]
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 T1S-xxx-P	275	440*	
Weight	pounds [grams]	.231 [105]	.242 [110]
DIN 43880 Dimension	1 TE / .71 [18]		
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]		
Standard Order Quantity	28 Units		