DATASHEET

Lightning and Overvoltage Protection

ProTec T1S 3+0

Class I • Class II • Type 1 • Type 2

25 kA Series

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

RoHS COMPLIANT

Technical Data

ProTec T1S-xxx-3+0(-R)		275	440*
IEC Electrical			
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V	400 V
Maximum Continuous Operating Voltage (AC)	U_c	275 V	440 V
Nominal Discharge Current (8/20 µs)	I_n	25 kA	25 kA
Maximum Discharge Current (8/20 µs)	I_{max}	65 kA	50 kA
Impulse Discharge Current (10/350 µs)	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	1500 V	2500 V
Response Time	t_A	< 100 ns	< 100 ns
Overvoltage Category		III	III
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 120 min	U_T/mode	442 V/Withstand	762 V/Safe Fail
TOV Safe Fail 200ms	U_T	-	1640 V
Number of Ports		1	
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*			
Residual Voltage at 5 kA (8/20 µs)	U_{res}	1400 V	1500 V
Minimum Backup fuse, if required		250 A gG	250 A gG
Additional Electrical Parameters - Extended *(Additionally tested by VDE)*			
Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA	
Minimum Backup fuse, if required		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%	
Pollution Degree		2	
Altitude		6562 ft [2000 m]	
Terminal Screw Torque	M_{max}	40 lbf·in [4.5 Nm]	
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	
Operating State/Fault Indication		Green Flag/Not Green Flag	
Remote Contacts (RC)		Optional	
RC Switching Capacity		AC: 250 V/1 A, 125 V/1 A; DC: 48 V/0.5 A, 24 V/0.5 A, 12 V/0.5 A	
RC Conductor Cross Section (max)		16 AWG (Solid) /1.5 mm² (Solid)	
Overvoltage Category		III	

**No VDE Certification.*

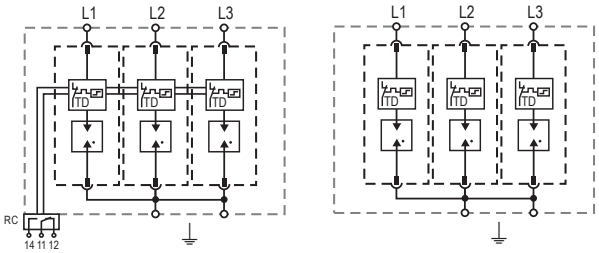
Raycap

Information contained in this document is subject to change at any time without notice.
No part of this document may be reproduced or used without written permission from Raycap.

Internal Configuration

Legend

L	*Line Conductor Terminal*
⏚	*PE Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



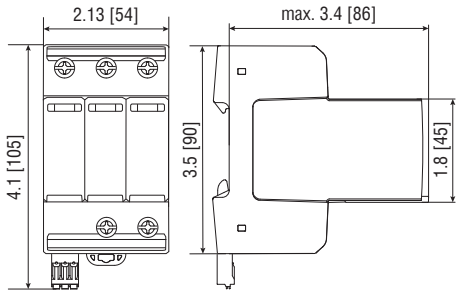
Order Information

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

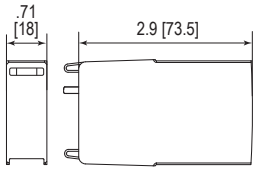
inches [mm]



Complete Unit

ProTec T1S-xxx-3+0		**275**	**440***
Weight	pounds [grams]	1.100 [499]	1.133 [514]
ProTec T1S-xxx-3+0-R			
Weight	pounds [grams]	1.119 [508]	1.166 [529]
DIN 43880 Dimension		3 TE/2.13" [54 mm]	
Packaging Dimensions (H x W x L)		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 mm]	
Packaging Dimensions (H x W x L)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity		28 Units	

© 2026 Raycap All rights reserved.