DATASHEET

Lightning and Overvoltage Protection

ProTec T1S 3+1 N

Class I • Class II • Type 1 • Type 2

25 kA Series



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
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+1-N(-R)			275	440*
IEC Electrical				
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V	400 V
Maximum Continuous Operating Voltage (AC)	(L-N)/(N-PE)	U_c	275 V/305 V	440 V/440V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	25 kA/100 kA	25 kA/100 kA
Maximum Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_{max}	65 kA/150 kA	50 kA/100 kA
Impulse Discharge Current (10/350 µs)	(L-N)/(N-PE)	I_{imp}	25 kA/100 kA	25 kA/100 kA
Specific Energy	(L-N)/(N-PE)	W/R	156.2 kJ/Ω/2500 kJ/Ω	156.2 kJ/Ω/2500 kJ/Ω
Charge	(L-N)/(N-PE)	Q	12.5 As/50 As	12.5 As/50 As
Voltage Protection Level	(L-N)/(N-PE)	U_p	1700 V/1500 V	2500 V/2500 V
Response Time	(L-N)/(N-PE)	t_A	< 100 ns/< 100 ns	< 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)	(L-N)	I_{SCCR}	50 kA	50 kA/100 kA
Follow Current Interrupt Rating (AC)	(L-N)	I_{fi}	50 kA	50 kA/100 A
	(N-PE)		100 A	100 A
TOV 120 min	(L-N)	U_T/mode	442 V/Withstand	762 V/Safe Fail
TOV Withstand 200ms	(N-PE)	U_T	1200 V	1200 V
Number of Ports			1	
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*				
Residual Voltage at 5 kA (8/20 µs)	(L-N)/(N-PE)	U_{res}	1400 V/305 V	1500 V/305 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/1A, 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.*

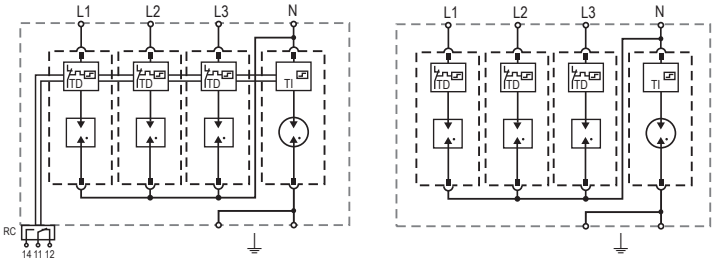
Raycap

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*
N	*Neutral Conductor Terminal*
⏚	*PE Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*

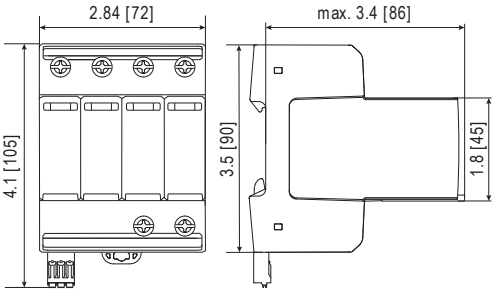


Order Information		
Order Code	**275**	**440***
ProTec T1S-xxx-3+1-N	59.0382	59.A657
ProTec T1S-xxx-3+1-N-R (with remote contacts)	59.0383	59.A658
ProTec T1S-xxx-N-P (plug L-N)	59.0385	-
ProTec T1S-xxx-P (plug L-N)	-	59.A515
ProTube T1S-100-P (plug N-PE)	59.0386	-
ProTube T1S-440-100-P (plug N-PE)	-	59.A516

**No VDE Certification.*

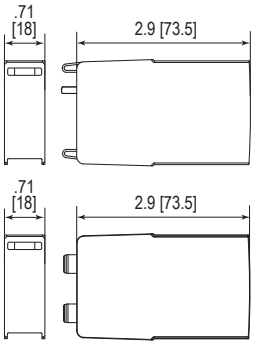
Dimensions & Packaging

inches [mm]



Complete Unit			
ProTec T1S-xxx-3+1-N		**275**	**440***
Weight	pounds [grams]	1.503 [682]	1.537 [697]
ProTec T1S-xxx-3+1-N-R			
Weight	pounds [grams]	1.523 [691]	1.556 [706]
DIN 43880 Dimension		4 TE / 2.84" [72 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		4 Units	

Spare Plug



Single Unit			
ProTec T1S-xxx-P		**275**	**440***
Weight	pounds [grams]	.231 [105]	.242 [110]
ProTube T1S-100-P		**100**	
Weight	pounds [grams]	.253 [115]	
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.