DATASHEET

Lightning and Overvoltage Protection with Integrated Fuse

ProTec T1SF 1+1

Class I • Class II • Class III • Type 1 • Type 2 • Type 3



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II+III, Type 1+2+3
Housing: Pluggable Design
Compliance: IEC 61643-11: 2011
EN 61643-11: 2012+A11:2018

RoHS COMPLIANT

Technical Data

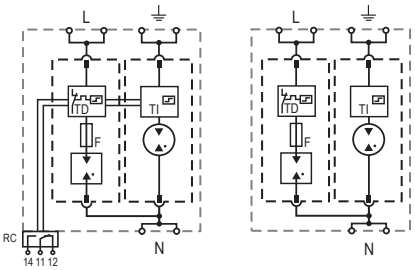
ProTec T1SF-xxx-1+1(-R)			275
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N)/(N-PE)	U_c	275 V/305 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	25 kA/100 kA
Maximum Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_{max}	65 kA/150 kA
Impulse Discharge Current (10/350 µs)	(L-N)/(N-PE)	I_{imp}	25 kA/100 kA
Specific Energy	(L-N)/(N-PE)	W/R	156.2 kJ/Ω/2500 kJ/Ω
Charge	(L-N)/(N-PE)	Q	12.5 As/50 As
Open Circuit Voltage of Combination Wave Generator (1.2/50 µs)		U_{oc}	6 kV
Short Circuit Current of Combination Wave Generator (8/20 µs)		I_{cw}	3 kA
Voltage Protection Level	(L-N)/(N-PE)	U_p	1900 V/1500 V
Response Time		t_A	< 100 ns
Overvoltage Category			III
Overcurrent Protection (max)			Not Required
Short-Circuit Current Rating (AC)		I_{SCCR}	100 kA
Follow Current Interrupt Rating (AC)	(L-N)/(N-PE)	I_{fi}	100 kA/100 A
TOV Withstand 120min	(L-N)	U_T	442 V
TOV Withstand 200ms	(N-PE)	U_T	1200 V
Number of Ports			1
Additional Electrical Parameters *(Tests performed within Raycap testing laboratory only)*			
Residual Voltage at 5 kA (8/20 µs)	(L-N)/(N-PE)	U_{res}	1200 V/305 V
Minimum Backup fuse, if required			Not required
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

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

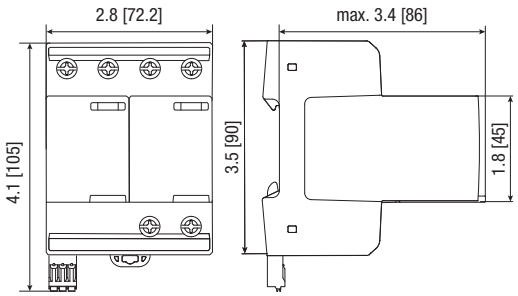
L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*
F	*Integrated Surge Adapted Overcurrent Protection*



Order Information	
Order Code	**275**
ProTec T1SF-xxx-1+1	59.C672
ProTec T1SF-xxx-1+1-R (with remote contacts)	59.C673
ProTec T1SF-xxx-P (plug L-N)	59.A502
ProTube T1SF-100-P (plug N-PE)	59.C175

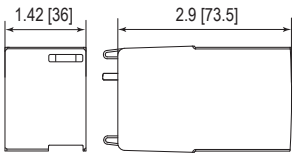
Dimensions & Packaging

inches [mm]



Complete Unit		
ProTec T1SF-xxx-1+1		**275**
Weight	pounds [grams]	1.171 [531]
ProTec T1SF-xxx-1+1-R		
Weight	pounds [grams]	1.186 [538]
DIN 43880 Dimension		4 TE/2.8" [72.2mm]
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity		4 Units

Spare Plug



Single Unit		
ProTec T1SF-xxx-P		**275**
Weight	pounds [grams]	.427 [194]
ProTube T1SF-xx-P		**100**
Weight	pounds [grams]	.209 [95]
DIN 43880 Dimension		2TE/1.42" [36 mm]
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity		14 Units

© 2026 Raycap All rights reserved.