

Lightning and Overvoltage Protection with Integrated Fuse **ProTec T1SF 3+0**

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



Location of Use: Main Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 IEC/EN Category: Class I+II+III, Type 1+2+3
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11: 2011
 EN 61643-11: 2012+A11:2018

Technical Data

ProTec T1SF-xxx-3+0(-R)

275

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	275 V
Nominal Discharge Current (8/20 μ s)	I_n	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	65 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA
Specific Energy	W/R	156.2 kJ/ Ω
Charge	Q	12.5 As
Open Circuit Voltage of Combination Wave Generator (1.2/50 μ s)	U_{oc}	6 kV
Short Circuit Voltage of Combination Wave Generator (8/20 μ s)	I_{cw}	3 kA
Voltage Protection Level	U_p	2100 V
Voltage Protection Level for Type 3 only	U_p	1500 V
Response Time	t_A	< 100 ns
Overcurrent Protection		Not Required
Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA
Follow Current Interrupt Rating (AC)	I_{fi}	100 kA
TOV Withstand 120min	U_T	442 V
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}	1200 V
Overcurrent Protection (min)		Not Required

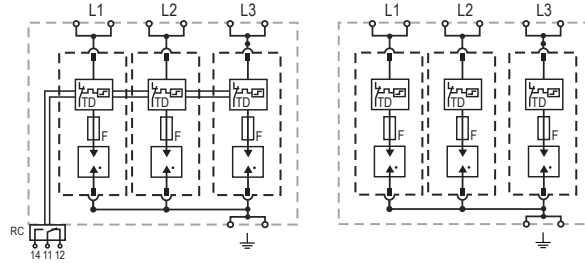
Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
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 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) / 1.5 mm ² (Solid)

Internal Configuration

Legend

- L Line Conductor Terminal
- ⊥ PE Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect
- F Integrated Surge Adapted Backup Fuse



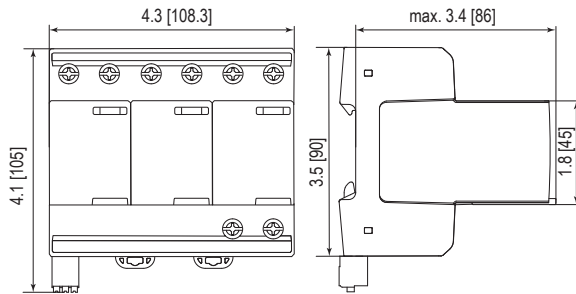
ProTec T1SF-xxx-3+0(-R)

Order Information

Order Code	275
ProTec T1SF-xxx-3+0	59.C170
ProTec T1SF-xxx-3+0-R (with remote contacts)	59.C171
ProTec T1SF-xxx-P (plug)	59.C174

Dimensions & Packaging

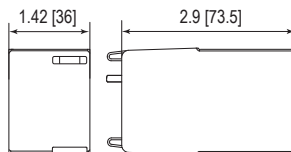
inches [mm]



Complete Unit

ProTec T1SF-xxx-3+0		275
Weight	pounds [grams]	1.892 [858]
ProTec T1SF-xxx-3+0-R		
Weight	pounds [grams]	1.914 [868]
DIN 43880 Dimension	6 TE / 4.3" [108.3mm]	
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity	3 Units	

Spare Plug



Single Unit

ProTec T1SF-xxx-P		275
Weight	pounds [grams]	.427 [194]
DIN 43880 Dimension	2 TE / 1.42 [36mm]	
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity	16 Units	