DATASHEET

Lightning and Overvoltage Protection

ProTec T1S-50 1+0

Class I • Class II • Type 1 • Type 2

50 kA Series



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

CE RoHS COMPLIANT

Technical Data

ProTec T1S-50-xxx-1+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 µs)	I_n	50 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	50 kA
Specific Energy	W/R	625 kJ/Ω
Charge	Q	25 As
Voltage Protection Level	U_p	1500 V
Rated Load Current	I_L	100 A
Response Time	t_A	< 100 ns
Overvoltage Category		III
Maximum Backup fuse, if required		500 A gG
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 - Standard *(Tests performed within Raycap testing laboratory only)*		
Residual Voltage at 5 kA (8/20 µs)	U_{res}	1000 V
Minimum Backup fuse, if required		500 A gG
Additional Electrical Parameters - Extended *(Additionally tested by VDE)*		
Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA
Minimum Backup fuse, if required		500 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		13123 ft [4000 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

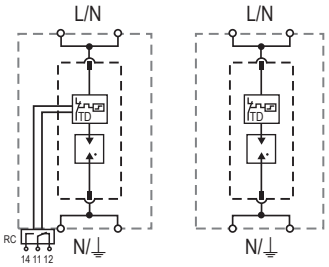
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Internal Configuration

Legend

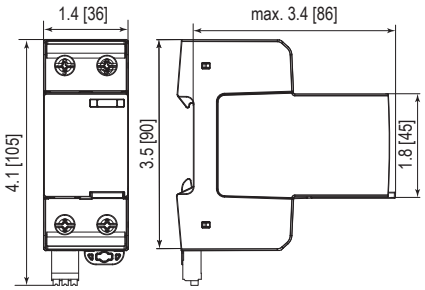
L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



Order Information		
Order Code		**275**
ProTec T1S-50-xxx-1+0		59.A533
ProTec T1S-50-xxx-1+0-R (with remote contacts)		59.A534
ProTec T1S-50-xxx-P (plug)		59.A535

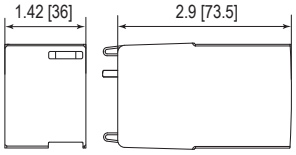
Dimensions & Packaging

inches [mm]



Complete Unit		
ProTec T1S-50-xxx-1+0		**275**
Weight	pounds [grams]	.623 [283]
ProTec T1S-50-xxx-1+0-R		
Weight	pounds [grams]	.643 [292]
DIN 43880 Dimension		2 TE / 1.42" [36 mm]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		7 Units

Spare Plug



Single Unit		
ProTec T1S-50-xxx-P		**275**
Weight	pounds [grams]	.412 [187]
DIN 43880 Dimension		2 TE / 1.42" [36 mm]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		16 Units

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