DATASHEET

Lightning and Overvoltage Protection

ProTec T1S-35 1+0

Class I • Class II • Type 1 • Type 2

35 kA Series



Location of Use: Main Distribution Boards
Network Systems: TN-S, TN-C, TT (only L-N), IT (only 440 V)
Mode of Protection: L-PE, N-PE (only TN-S and IT), 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-35-xxx-1+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	35 kA	35 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA	50 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	35 kA	35 kA
Specific Energy	W/R	306.25 kJ/Ω	306.25 kJ/Ω
Charge	Q	17.5 As	17.5 As
Voltage Protection Level	U_p	1500 V	2500 V
Rated Load Current	I_L	100 A	100 A
Response Time	t_A	< 100 ns	< 100 ns
Overvoltage Category		III	III
Maximum Backup fuse, if required		500 A gG	400 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA	100 kA
Follow Current Interrupt Rating (AC)	I_{fi}	100 kA	100 kA
TOV Withstand 120min	U_T	442 V	762 V
TOV Safe Fail 200ms	U_T	-	1640 V
Number of Ports		1	1
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*			
Residual Voltage at 5 kA (8/20 µs)	U_{res}	1000 V	1500 V
Minimum Backup fuse, if required		400 A gG	400 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	400 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/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	

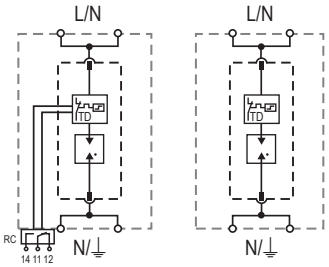
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Internal Configuration

Legend

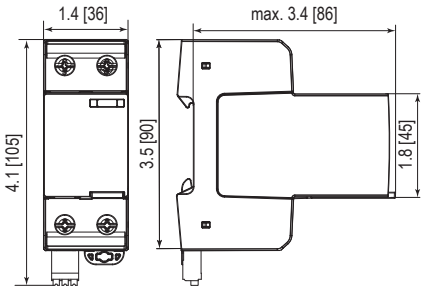
L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



Order Information		
Order Code	**275**	**440**
ProTec T1S-35-xxx-1+0	59.A530	59.A536
ProTec T1S-35-xxx-1+0-R (with remote contacts)	59.A531	59.A537
ProTec T1S-35-xxx-P (plug)	59.A532	59.A538

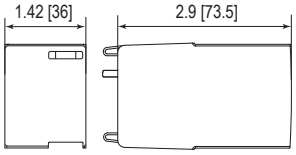
Dimensions & Packaging

inches [mm]



Complete Unit			
ProTec T1S-35-xxx-1+0		**275**	**440**
Weight	pounds [grams]	.623 [283]	.656 [298]
ProTec T1S-35-xxx-1+0-R			
Weight	pounds [grams]	.643 [292]	.676 [307]
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		7 Units	

Spare Plug



Single Unit			
ProTec T1S-35-xxx-P		**275**	**440**
Weight	pounds [grams]	.412 [187]	.445 [202]
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		16 Units	

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