DATASHEET

Lightning and Overvoltage Protection

ProTec T1H 1+0

Class I • Class II • Type 1 • Type 2 • Type 4CA

12.5 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/UL Category: Class I+II / Type 1+2 / Type 4CA
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018
UL 1449 5th Edition

Technical Data

ProTec T1H-xxx-1+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	65 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	12.5 kA
Specific Energy	W/R	39 kJ/Ω
Charge	Q	6.25 As
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 100 ns
Overvoltage Category		III
Overcurrent Protection (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Measured Limiting Voltage	MLV	1220 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*		
Residual Voltage at 5 kA (8/20 µs)	U_{res}	800 V
Minimum Backup fuse, if required		160 A gG
Additional Electrical Parameters - Extended *(Additionally tested by VDE)*		
Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA
Overcurrent Protection (max)		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 (max)		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
Thermal Protection		Yes
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

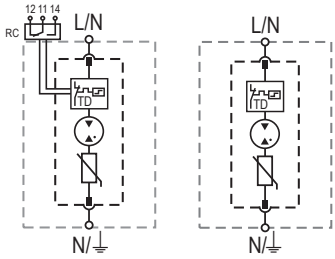
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Internal Configuration

Legend

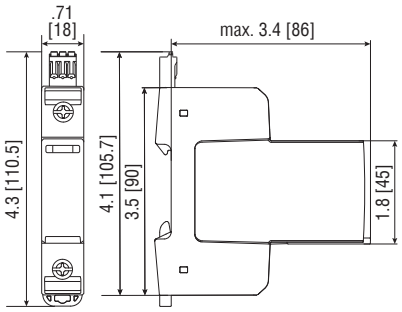
L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



Order Information	
Order Code	**300**
ProTec T1H-xxx-1+0	59.0310
ProTec T1H-xxx-1+0-R (with remote contacts)	59.0311
ProTec T1H-xxx-P (plug)	59.0308

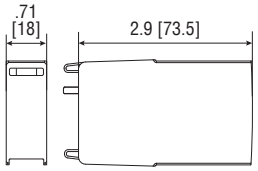
Dimensions & Packaging

inches [mm]



Complete Unit		
ProTec T1H-xxx-1+0		**300**
Weight	pounds [grams]	.375 [170]
ProTec T1H-xxx-1+0-R		
Weight	pounds [grams]	.390 [177]
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		12 Units

Spare Plug



Single Unit		
ProTec T1H-xxx-P		**300**
Weight	pounds [grams]	.223 [101]
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

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