

Lightning and Overvoltage Protection  
**ProTec T1H 1+0**  
 Class I • Class II • Type 1 • Type 2 • Type 4CA



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 $\mu$ s)	$I_n$	20 kA
Maximum Discharge Current (8/20 $\mu$ s)	$I_{max}$	65 kA
Impulse Discharge Current (10/350 $\mu$ s)	$I_{imp}$	12.5 kA
Specific Energy	W/R	39 kJ/ $\Omega$
Charge	Q	6.25 As
Voltage Protection Level	$U_p$	1500 V
Response Time	$t_A$	< 100 ns
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 $\mu$ s)	$I_n$	20 kA

**Additional Electrical Parameters - Standard** (Tests performed within Raycap testing laboratory only)

Residual Voltage at 5 kA (8/20 $\mu$ s)	$U_{res}$	800 V
Overcurrent Protection (min)		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

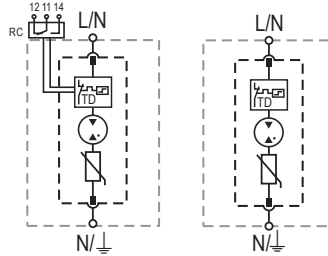
**Mechanical & Environmental**

Operating Temperature Range	$T_a$	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
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 mm <sup>2</sup> (Solid, Stranded) / 25 mm <sup>2</sup> (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 <sup>2</sup> (Solid)

## Internal Configuration

### Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊥ PE/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect



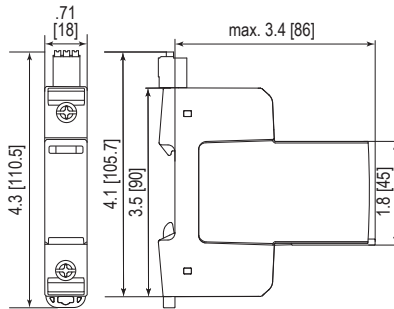
### ProTec T1H-xxx-1+0(-R)

#### 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

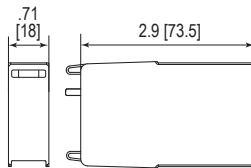
inches [mm]



#### 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]
Packaging Dimensions (HxWxL)	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]
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity	28 Units