

DATA SHEET

Pluggable Single and Multi-Pole SPD

ProTec T1H 1+0

Class I • Class II • Type 1 • Type 2



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
 Surge Ratings: $I_{imp} = 12.5 \text{ kA (10/350}\mu\text{s)}$
 $I_n = 20 \text{ kA (8/20}\mu\text{s)}$
 IEC/EN Category: Class I+II / Type 1+2
 Protective Elements: GDT in series with High Energy MOV
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

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

300

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	240V
Maximum Continuous Operating Voltage (AC)	U_c	300V
Nominal Discharge Current (8/20 μs)	I_n	20kA
Maximum Discharge Current (8/20 μs)	I_{max}	65kA
Impulse Discharge Current (10/350 μs)	I_{imp}	12.5kA
Specific Energy	W/R	39kJ/ Ω
Charge	Q	6.25As
Voltage Protection Level	U_p	1500V
Response Time	t_A	< 25 ns
Back-Up Fuse (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442V
Number of Ports		1

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
Altitude		13123 ft [4000m]
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5Nm]
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)

Order Information

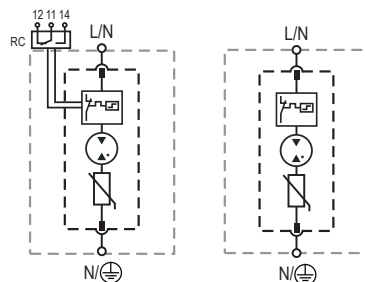
Order Code	300
ProTec T1H-xxx-1+0	59.0310
ProTec T1H-xxx-1+0-R (with remote contacts)	59.0311
ProTec T1H-xxx-P	59.0308

ProTec T1H 1+0

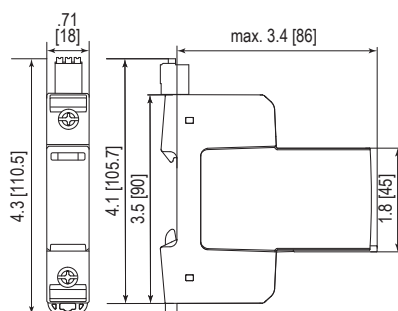
Internal Configuration

Legend

- L Line
- N Neutral
- ⊕ Protective Earth
- RC Remote Contacts Optional



Dimensions & Packaging



Dimensions & Packaging

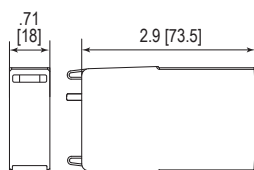
ProTec T1H-xxx-1+0		300
Single Unit Weight	pounds [grams]	.437 [198]
ProTec T1H-xxx-1+0-R		300
Single Unit Weight	pounds [grams]	.452 [205]
Single Unit DIN 43880 Dimension		1 TE
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Minimum Order Quantity		12 Units

Plug Internal Configuration

ProTec T1H-xxx-P



Dimensions & Packaging



Dimensions & Packaging

ProTec T1H-xxx-P		300
Single Unit Weight	pounds [grams]	.286 [130]
Single Unit DIN 43880 Dimension		1 TE
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Minimum Order Quantity		28 Units

inches
[mm]

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Pluggable Single and Multi-Pole SPD
ProTube T1H 50 0+1
 Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: N-PE
 Surge Ratings: $I_{imp} = 50 \text{ kA (10/350}\mu\text{s)}$
 $I_n = 50 \text{ kA (8/20}\mu\text{s)}$
 IEC/EN Category: Class I+II / Type 1+2
 Protective Elements: High Energy GDT with Thermal Disconnecter
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

ProTube T1H-xxx-0+1

50

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	0V
Maximum Continuous Operating Voltage (AC)	U_c	305V
Nominal Discharge Current (8/20 μs)	I_n	50kA
Maximum Discharge Current (8/20 μs)	I_{max}	100kA
Impulse Discharge Current (10/350 μs)	I_{imp}	50kA
Specific Energy	W/R	625 kJ/ Ω
Charge	Q	25As
Voltage Protection Level	U_p	1500V
Follow Current Interrupt Rating	I_{fi}	100A _{RMS}
Response Time	t_A	< 100ns
TOV Withstand 200ms	U_T	1200V
Number of Ports		1

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
Altitude		13123 ft [4000m]
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5Nm]
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

Order Information

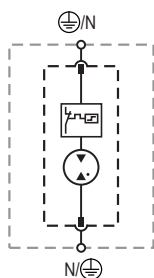
Order Code	50
ProTube T1H-xxx-0+1	59.0340
ProTube T1H-50-P	59.0309

ProTube T1H 50 0+1

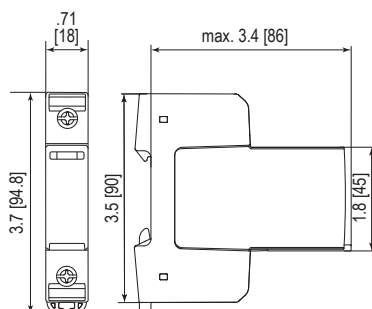
Internal Configuration

Legend

- L Line
- N Neutral
- ⊕ Protective Earth



Dimensions & Packaging

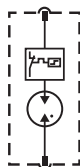


Dimensions & Packaging

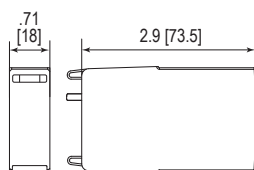
ProTube T1H-50-0+1		50
Single Unit Weight	pounds [grams]	.390 [177]
Single Unit DIN 43880 Dimension		1 TE
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Minimum Order Quantity		12 Units

Plug Internal Configuration

ProTube T1H-50-P



Dimensions & Packaging



Dimensions & Packaging

ProTube T1H-50-P		50
Single Unit Weight	pounds [grams]	.208 [94]
Single Unit DIN 43880 Dimension		1 TE
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Minimum Order Quantity		28 Units

inches
[mm]

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