

Lightning and Overvoltage Protection

ProTec T1HS 3+0

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



Location of Use: Main Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 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 T1HS-xxx-3+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 μ s)	I_n	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	65 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA
Specific Energy	W/R	156.2 kJ/ Ω
Charge	Q	12.5 As
Voltage Protection Level	U_p	1500 V
Rated Load Current	I_L	100 A
Response Time	t_A	< 100 ns
Overvoltage Category		III
Overcurrent Protection (max)		315 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	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	1280 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA

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

Residual Voltage at 5 kA (8/20 μ s)	U_{res}	1100 V
Minimum Backup fuse, if required		250 A gG

Additional Electrical Parameters - Extended (Additionally tested by VDE)

Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA
Overcurrent Protection (max)		315 A gG

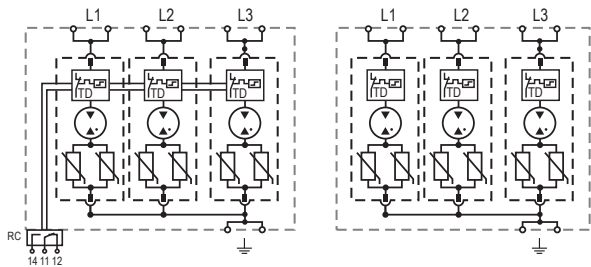
Mechanical & Environmental

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)		4 AWG (Solid, Stranded) per UL 1449 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)
Overvoltage Category		III

Internal Configuration

Legend

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

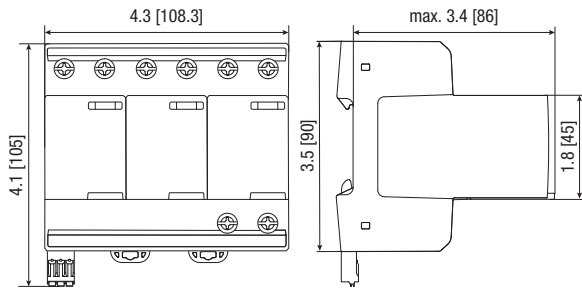


Order Information

Order Code	300
ProTec T1HS-xxx-3+0	59.0304
ProTec T1HS-xxx-3+0-R (with remote contacts)	59.0305
ProTec T1HS-xxx-P (plug)	59.0302

Dimensions & Packaging

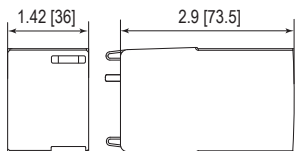
inches [mm]



Complete Unit

ProTec T1HS-xxx-3+0		300
Weight	pounds [grams]	1.892 [858]
ProTec T1HS-xxx-3+0-R		
Weight	pounds [grams]	1.914 [868]
DIN 43880 Dimension	6 TE / 4.3" [108 mm]	
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity	3 Units	

Spare Plug



Single Unit

ProTec T1HS-xxx-P		300
Weight	pounds [grams]	.364 [165]
DIN 43880 Dimension	2 TE / 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	