

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 |
| 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 |
| Overcurrent Protection (min) | | 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

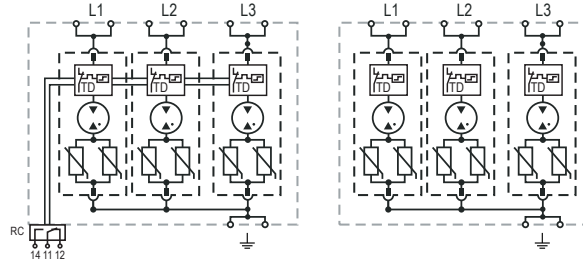
| | | |
|------------------------------------|-----------|---|
| Operating Temperature Range | T_a | -40 °F to +185 °F [-40 °C to +85 °C] |
| Permissible Operating Humidity | RH | 5%...95% |
| Altitude | | 13123 ft [4000 m] |
| Terminal Screw Torque | M_{max} | 40 lbf-in [4.5 Nm] |
| Conductor Cross 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) / 1.5mm ² (Solid) |



Internal Configuration

Legend

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



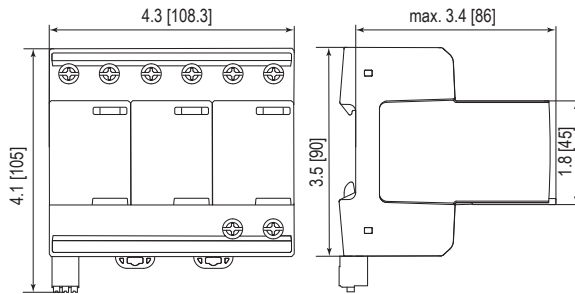
ProTec T1HS-xxx-3+0(-R)

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

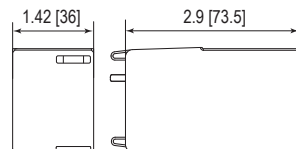
inches [mm]



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" [108.3] |
| 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] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 16 Units |