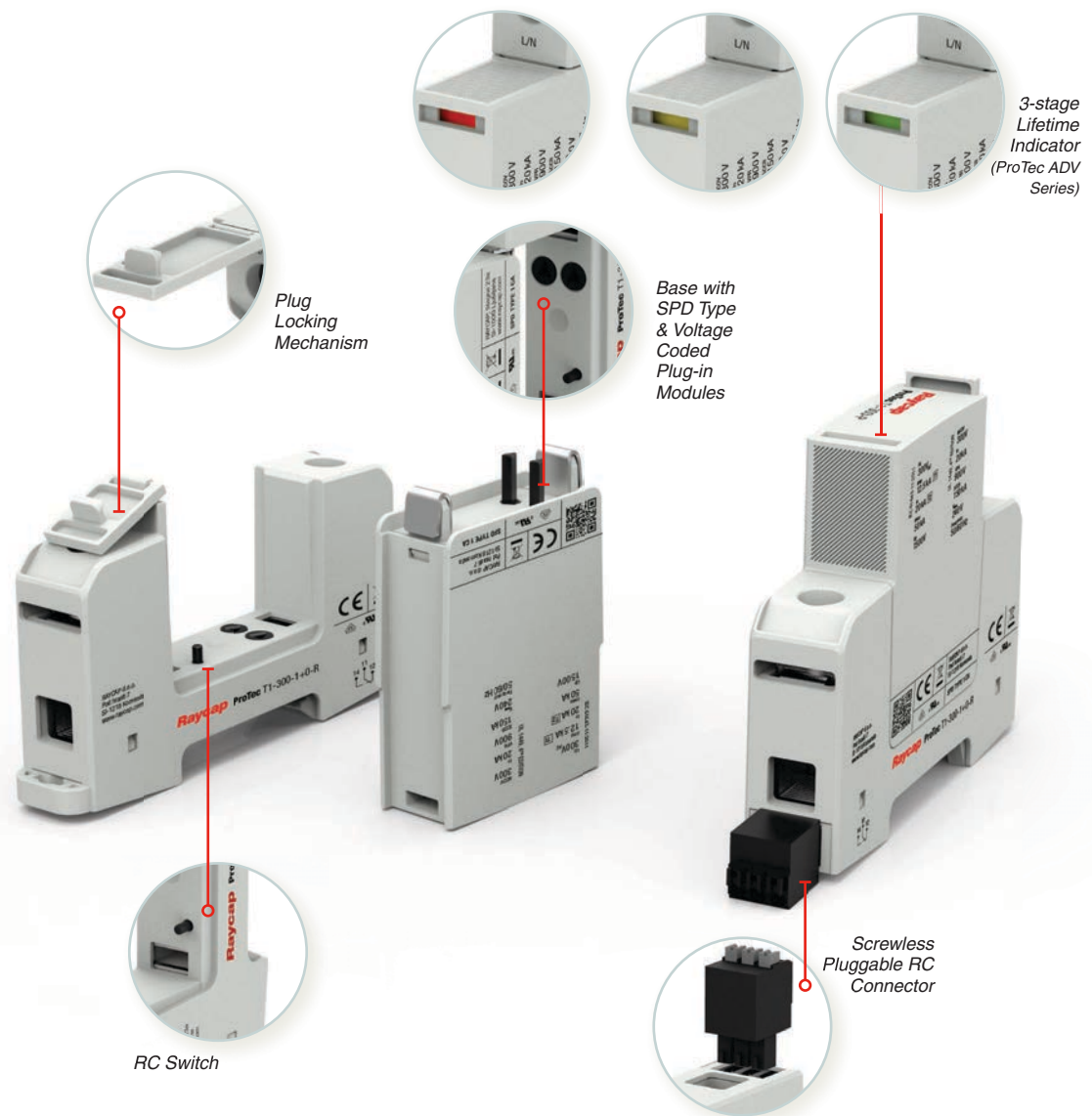


Surge Protection Devices for Low Voltage Power Systems

CAPE
ELECTRIC





Housing Design Features

- Contemporary design
- Low residual protection level
- High durability due to redesigned thermal disconnection mechanism
- No external back-up fuse required up to 315 A
- Patented locking mechanism for secure placement in high vibration environments
- Remote signaling using tool-free remote contact
- Easily visible mechanical lifetime indicator
- Replacement plugs provide ease of installation and preventive maintenance
- Easy replacement during servicing
- Meets IEC/EN 61643-11 and UL 1449 4th Edition

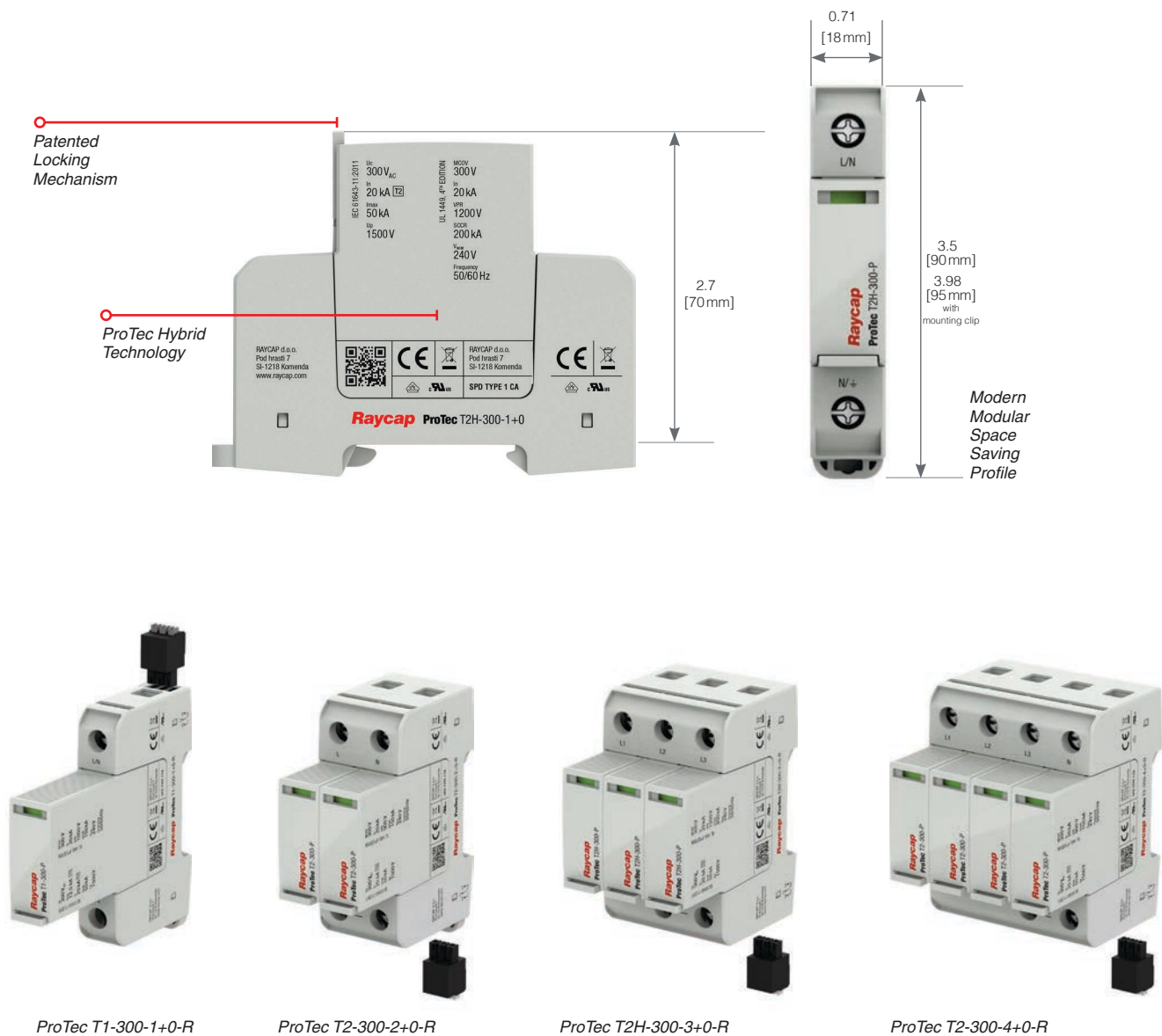


Table of Contents

| | |
|---|----|
| Multi-pole Surge Protective Devices Features | 5 |
| Pluggable Single Pole & Multi-pole Surge Protective Devices | |
| CLASS I • CLASS II • TYPE 1 • TYPE 2 • UL TYPE 4 CA | |
| ProTec T1, ProTec T1-R | 14 |
| ProTec T1H, ProTec T1H-R | 22 |
| ProTec T1HS, ProTec T1HS-R | 30 |
| Pluggable Single Pole & Multi-pole Surge Protective Devices | |
| CLASS II • TYPE 2 • UL TYPE 1 CA | |
| ProTec T2, ProTec T2-R & ProTube T2 | 34 |
| ProTec T2-ADV & ProTec T2-ADV-R | 48 |
| ProTec T2H, ProTec T2H-R | 56 |
| SafeTec T2, SafeTec T2-R | 66 |
| Pluggable Multi-pole Surge Protective Devices | |
| PHOTOVOLTAIC • TYPE 1 • TYPE 2 • UL TYPE 1 CA | |
| ProTec T1-PV & ProTec T1-PV-R | 74 |
| ProTec T2-PV & ProTec T2-PV-R | 76 |
| Miscellaneous Surge Protective Devices | |
| CLASS II • TYPE 2 | |
| Isolating Spark Gap (ISG) Surge Protective Devices | |
| EPZ 100/350 EX | 78 |

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Lightning and Overvoltage Protection

ProTec T1

Special features:

- Available in a wide variety of operating voltages, 75V to 750V
- High impulse current capability using single MOV– 480V and 750V versions comes with reduced impulse current
- Sensitive state-of-the-art thermal disconnecter
- Back-up fuse up to 315A gG, 750V version comes with 250A gG
- Short circuit current rating up to 50kA
- Vibration and shock withstand capability
- VDE-IEC Class I & II / EN Type 1+2 certified and UL Type 1CA certified
- All modules, also N-PE, with operating state green-red
- Optional remote contact (RC) signaling



| Compliance | IEC 61643-11:2011 | EN 61643-11:2012 | UL 1449 4th Edition |
|------------------|-------------------|------------------|---------------------|
| ProTec T1 Series | ✓ | ✓ | ✓ |

The ProTec T1 series offers basic protection as a Type 1 surge protective device that comes with an extended maximum continuous operating voltage range span from 75V to 750V. Due to its Type 1 classification the product can be installed between boundaries OA – 1 and higher. The varistor based protection module features outstanding short-circuit currents up to 50kA_{RMS} without using a back up to a main fuse nominal current of 315A. All modules are equipped with state-of-the-art thermal disconnecter and life-status monitoring (green-red). Due to a unique vibration-proof locking mechanism design, these products are suitable for use in high vibration environments. An optional remote contact (RC) feature offers a three-pole remote signaling terminal to remotely monitor the operating state of the device.

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Lightning and Overvoltage Protection

ProTec T1H



Special features:

- Leakage free hybrid topology
- Energy coordinated with other ProTec families without additional cable length
- State-of-the-art thermal disconnecter
- Backup fuse up to 315A gG
- Short circuit current rating up to 50kA
- Vibration and shock withstand capability
- All modules, also N-PE, with operating state green-red
- Optional remote contact signaling
- VDE-IEC Class I & II / EN Type 1+2 and UL Type 4CA certified



| Compliance | IEC 61643-11:2011 | EN 61643-11:2012 | UL 1449 4th Edition |
|-------------------|-------------------|------------------|---------------------|
| ProTec T1H Series | ✓ | ✓ | ✓ |

The ProTec T1H modular surge protection device provides high durability due to its leakage-free performance ensured by a special series connection of a varistor and a gas discharge tube. The product family is ideal as a supplement to the basic ProTec T1 product family, available for single or three-phase TN-S, TT and TN-C systems, with a maximum continuous operating voltage of 300VAC where a complete absence of leakage current is required. With its Type 1 classification, the ProTec T1H can be installed between boundaries 0b – 1 and higher. The varistor-based protection modules feature outstanding short-circuit currents up to 50 kA_{RMS} without using a back up to a main fuse, with a nominal current of 315A. The device can be installed upstream of meter panels in low-voltage consumer installations. An optional remote contact (RC) features a three-pole remote signaling terminal that enables remote monitoring of the device's operating state.

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)



Lightning and Overvoltage Protection

ProTec T1HS



Special features:

- Leakage free hybrid topology
- High discharge capacity due to unique design impulse discharge current of 25kA
- Energy coordinated with other ProTec families without additional cable length
- State-of-the-art thermal disconnecter
- Backup fuse up to 315A gG
- Short circuit current rating up to 50kA
- Vibration and shock withstand capability
- All modules, also N-PE, with operating state green-red
- Optional remote contact (RC) signaling
- VDE-IEC Class I & II / EN Type 1+2 and UL Type 4CA certified



| Compliance | IEC 61643-11:2011 | EN 61643-11:2012 | UL 1449 4th Edition |
|--------------------|-------------------|------------------|---------------------|
| ProTec T1HS Series | ✓ | ✓ | ✓ |

The Type 1+2 surge protective device contains two high rated stand-alone varistors in series with a gas discharge tube that, in combination with a state-of-the-art space-saving thermal disconnection mechanism, ensure optimal system protection under all kinds of overloads. The series connection isolates the varistor from the grid, making it suitable for use upstream of meter panels in low-voltage consumer installations while making it immune to temporary overvoltage. The operating state requires no power to operate and instantly shows the health of the surge protective indicator. Besides a visual mechanical indicator, an optional remote contact (RC) device features a three-pole remote signaling terminal to remotely monitor the operating state of the device.

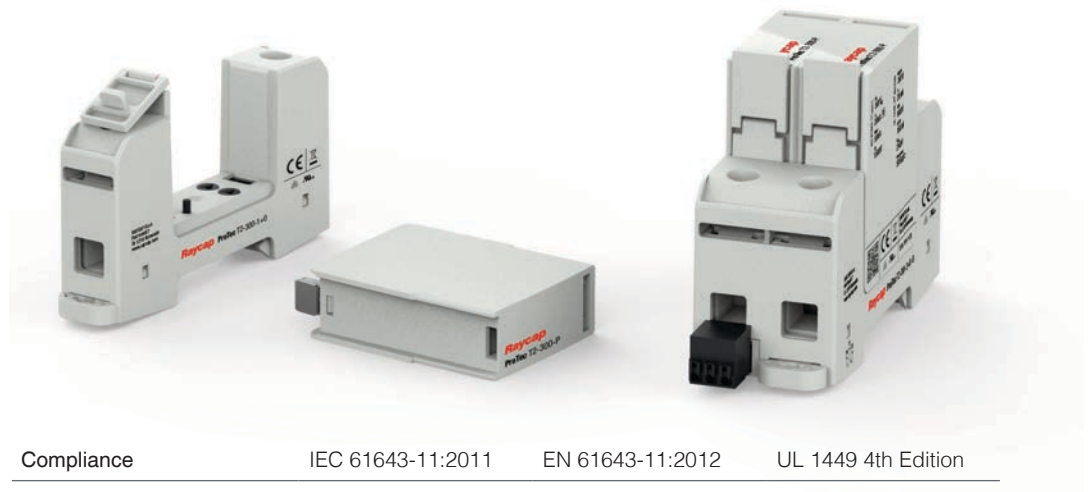
Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Overvoltage Protection

ProTec T2

Special features:

- Available in a wide variety of operating voltages 75V to 750V
- High Impulse Current capability using a single MOV
- Sensitive state-of-the-art thermal disconnecter
- Backup fuse up to 315A gG
- Short-circuit current rating up to 50kA
- Vibration and shock withstand capability
- VDE-IEC Class II / Type 2 certified and UL Type 1CA certified
- All modules including N-PE with operating state green-red
- Optional remote contact (RC) signaling



| Compliance | IEC 61643-11:2011 | EN 61643-11:2012 | UL 1449 4th Edition |
|------------------|-------------------|------------------|---------------------|
| ProTec T2 Series | ✓ | ✓ | ✓ |

ProTec T2 offers basic protection as a Type 2 surge protective device (SPD) that comes with an extended maximum continuous operating voltages (U_c) range that spans 75V up to 750V. With the Type 2 classification, ProTec T2 can be installed between boundaries Ob – 1 and higher. The varistor-based protection modules feature outstanding short-circuit currents up to 50kA_{RMS} without using a back-up to a main fuse nominal current of 315A. All modules are equipped with a state-of-the-art thermal disconnecter and life-status green-red monitoring indicators. A unique vibration-proof locking mechanism enables secure use in and high vibration environments. Besides the visual mechanical indicator, optional remote contacts (RC) feature a three-pole remote signaling terminal, which enables remote monitoring of the operating state of the device.

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Overvoltage Protection

ProTec T2H



Special features:

- High maximum discharge current capacity (I_{max}) of 50kA
- State-of-the-art thermal disconnecter
- Leakage current-free technology
- Backup fuse up to 315A gG
- Short-circuit current rating up to 50kA
- Vibration and shock withstand capability
- VDE-IEC Class II / EN Type 2 certified and UL Type 1CA certified
- All modules including N-PE, with operating state green-red
- Optional remote contact signaling (RC)



| Compliance | IEC 61643-11:2011 | EN 61643-11:2012 | UL 1449 4th Edition |
|-------------------|-------------------|------------------|---------------------|
| ProTec T2H Series | ✓ | ✓ | ✓ |

The ProTec T2H surge protection device provides high durability due to its leakage-free performance ensured by a special series connection of varistor and gas discharge tube. The ProTec T2H product family is an ideal supplement to the basic ProTec T2 product family, available for single or three-phase TN-S, TT and TN-C systems with a maximum continuous voltage of 300VAC. The perfect solution for applications such as railway safety control systems where complete absence of leakage current, is required. With its Type 2 classification, the unit can be installed between boundaries 1 – 2 and higher. The varistor based protection module features outstanding short-circuit currents up to 50kA_{RMS} without using a back-up to a main fuse and a nominal current of 315A. All modules are equipped with a state-of-the-art thermal disconnecter and life-status green-red monitoring indicator. A unique vibration-proof locking mechanism enables secure use in high vibration environments. An optional remote contact (RC) features a three-pole remote signaling terminal, which enables remote monitoring of the operating state of the device.

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Overvoltage Protection

ProTec T2-ADV

Special features:

- Early warning system with clear green-yellow-red indicators
- Available in a wide variety of operating voltages from 75 V to 480 V
- High surge maximum discharge current capability of 50 kA
- State-of-the-art thermal disconnecter
- Backup fuse up to 315 A gG
- Vibration and shock withstand capability
- Optional remote contact (RC) signaling
- VDE-IEC Class II / EN Type 2 certified and UL Type 1CA certified



| Compliance | IEC 61643-11:2011 | EN 61643-11:2012 | UL 1449 4th Edition |
|----------------------|-------------------|------------------|---------------------|
| ProTec T2-ADV Series | ✓ | ✓ | ✓ |

ProTec T2-ADV features an advanced three-stage life status indicator showing an intermediate degradation status before the arrester's end-of-life state, thus indicating possible problems or needed maintenance from overvoltage activity, before complete failure. During the SPDs end-of-life transition, green yellow red, the connected equipment is continually protected against fatal overvoltage effects. The specially treated autonomous varistors provide reliable determination of the first switching disconnecter, and the redundancy of two powerful separate varistors, both of which are functionally connected provide a unique safety advantage. These safety reserve systems are imperative for the growing need for notifications or alerts when changes in conditions occur, and are ideally suited in a variety of environments that protect critical infrastructure. In addition to the visual mechanical indicator, optional remote contacts (RC) feature a three-pole remote signaling terminal, enabling remote monitoring of the operating state of the device.

Pluggable Multi-pole Surge Protective Devices (SPDs) for Photovoltaic Systems (DC)

Lightning and Overvoltage Protection

ProTec T1-PV & ProTec T2-PV

Special features:

- Vibration and shock withstand capability
- Sensitive and reliable state-of-the-art disconnecter
- Short circuit current rating of 11 kA

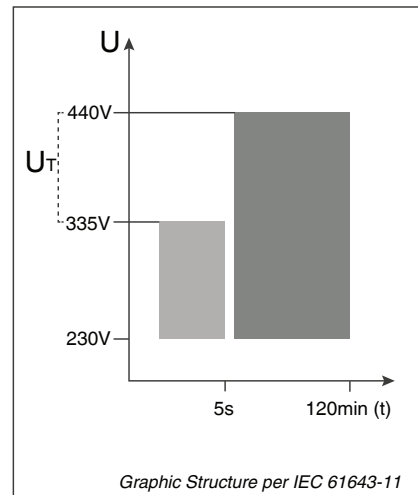
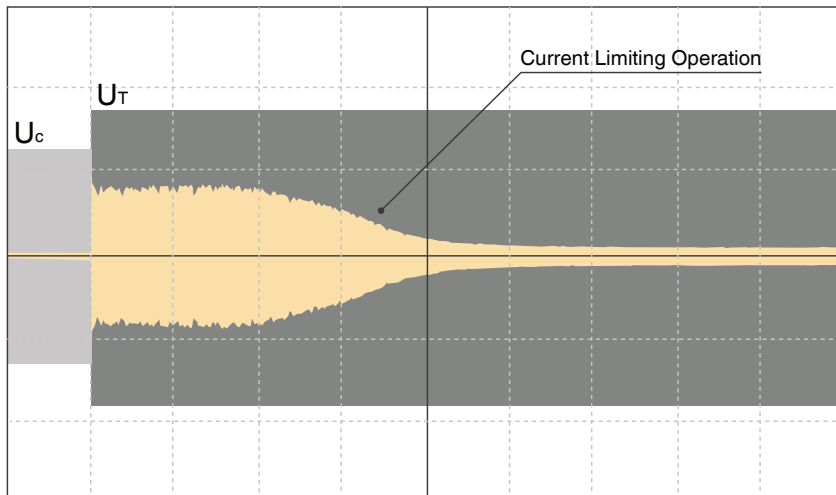


| Compliance | EN 50539-11:2013+A1:2014 | UL 1449 4th Edition |
|---------------------|--------------------------|---------------------|
| ProTec T1 PV Series | ✓ | ✓ |
| ProTec T2 PV Series | ✓ | ✓ |

The ProTec PV product range provides powerful and pluggable protective devices for photovoltaic systems up to 1500 VDC either as Type 1 or Type 2. All devices have a short circuit current rating of 11 kA, the highest available on the market.

SafeTec Technology

- Good protection level
- Industry standard DIN rail technology for situations where TOVs or switching transients are present on a distribution network
- Open circuit mode in combination with patented current limiting technology offers great immunity to TOVs
- 5-year warranty, 10-year life span
- Low-maintenance cost
- Pluggable installation
- Modular, pluggable, field replaceable modules



Temporary Overvoltages (TOV)

- Maximum Continuous Operating Voltage
- Temporary Overvoltage (TOV)
- Current Through SPD

- SafeTec TC Technology
- Conventional Technology

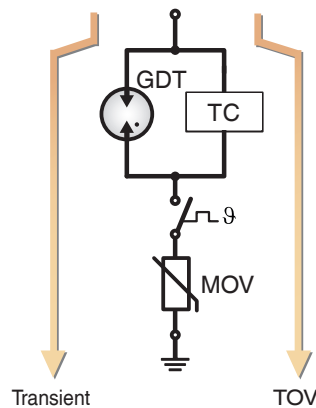
Two possible types of overvoltages may appear in the power supply network:

Transient overvoltages – switching operations, direct and indirect atmospheric discharges

Temporary overvoltages (TOVs) – last between 5 seconds and up to a few weeks, voltage amplitude can reach 173% U_{REF}

$$U_{REF} = U_O \times 1,1$$

U_O ... Nominal Line Voltage



Legend

- Transient Short duration
- TOV Long duration
- TC Thermal control function
- GDT Gas discharge tube
- MOV Metal-oxide varistor
- Thermal disconnect Thermal disconnect

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Overvoltage Protection

SafeTec T2

Special features:

- High temporary overvoltage (TOV) immunity
- High maximum discharge current capacity (I_{max}) of 50kA
- State-of-the-art thermal disconnecter
- Continuous power to the equipment at end-of-life (EOL)
- AC current up to 880V
- Back-up fuse up to 315A gG
- Short circuit current rating up to 50kA
- Vibration and shock withstand capability
- All modules, including N-PE with operating state green-red
- Optional remote contact (RC) signaling
- VDE-IEC Class II / EN Type 2 certified and UL Type 1CA certified
- Worldwide patented thermal control (TC) technology
- Five year warranty



Temporary overvoltages (TOV) are by far the most frequent cause of arrester failure by abnormal overvoltages of the power network (50/60 Hz) with significant duration and amplitude. The SafeTec product family is a reliable solution for all transient overvoltages. This multi-purpose single pole arrester features the industry's widest range and an unprecedented level of integration, enabling power systems to have improved surge protection, simplified designs and lower overall costs. The patented thermal control (TC) technology function prolongs the lifespan of the SPDs, enables TOV immunity and provides low protection level, all at the same dimensions as conventional protective devices. The universal features of SafeTec make the technology suitable for protection of electrical devices not only against overvoltages caused by lightning strikes, but also by switching operations that originate from the internal power system. In addition to the visual mechanical indicator, the optional remote contact (RC) features a three-pole remote signaling terminal enabling remote monitoring of the operating state of the device.

Lightning and Overvoltage Protection

ProTec T1 2+0

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

12.5 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

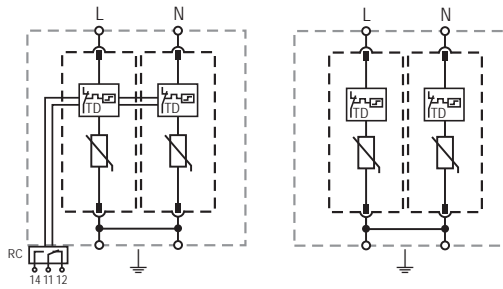
Technical Data

| ProTec T1-xxx-2+0(-R) | | 75 | 150 | 300 | 350 | 480 | 750 |
|--|------------|--|-----------------|-----------------|-----------------|-----------------|-------------------|
| IEC Electrical | | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V | 600V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V | 750V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA | 50 kA | 50 kA | 50 kA | 50 kA | 35 kA |
| Impulse Discharge Current (10/350 μ s) | I_{imp} | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 10 kA | 5 kA |
| Specific Energy | W/R | 39 kJ/ Ω | 39 kJ/ Ω | 39 kJ/ Ω | 39 kJ/ Ω | 25 kJ/ Ω | 6.25 kJ/ Ω |
| Charge | Q | 6.25 As | 6.25 As | 6.25 As | 6.25 As | 5 As | 2.5 As |
| Voltage Protection Level | U_p | 700V | 1000V | 1500V | 1750V | 2100V | 3200V |
| Response Time | t_A | < 25 ns | | | | | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | | | | | 250 A gG |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25 kA / 50 kA | | | | | 50 kA |
| TOV Withstand 5s | U_T | 114V | 175V | 337V | 403V | 581V | 871V |
| TOV 120min | U_T | 114V | 229V | 442V | 529V | 762V | 1143V |
| | mode | Withstand | Safe Fail | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | | |
| UL Electrical | | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V | 750V |
| Voltage Protection Rating | VPR | 330V | 600V | 900V | 1200V | 1500V | 2500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 100 kA | 200 kA | 150 kA | 150 kA | 200 kA | 150 kA |
| 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} | 39.9 lbf-in [4.5 Nm] | | | | | |
| 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 | | 75 | 150 | 300 | 350 | 480 | 750 |
| ProTec T1-xxx-2+0 | | 59.0349 | 59.0019 | 59.0021 | 59.0023 | 59.0025 | 59.0027 |
| ProTec T1-xxx-2+0-R (with remote contacts) | | 59.0350 | 59.0020 | 59.0022 | 59.0024 | 59.0026 | 59.0028 |
| ProTec T1-xxx-P (plug) | | 59.0001 | 59.0002 | 59.0003 | 59.0004 | 59.0005 | 59.0006 |

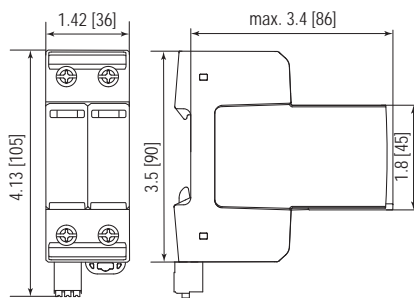
Internal Configuration

Legend

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



Complete Unit

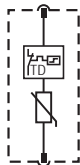


Complete Unit Dimensions & Packaging

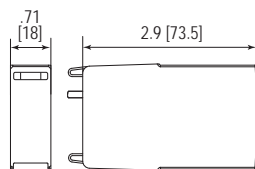
| | | 75 | 150 | 300 | 350 | 480 | 750 | |
|------------------------------|--------|--|------|------|------|------|------|------|
| ProTec T1-xxx-2+0 | Weight | | | | | | | |
| | | pounds | .595 | .697 | .750 | .833 | .847 | .860 |
| | | grams | 270 | 316 | 340 | 378 | 384 | 390 |
| ProTec T1-xxx-2+0-R | | | | | | | | |
| Weight | | pounds | .615 | .717 | .769 | .853 | .866 | .880 |
| | | grams | 279 | 325 | 349 | 387 | 393 | 399 |
| 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 | | 7 Units | | | | | | |

Plug Internal Configuration

ProTec T1-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 | 480 | 750 | |
|------------------------------|--------|--|------|------|------|------|------|------|
| ProTec T1-xxx-P | Weight | | | | | | | |
| | | pounds | .152 | .203 | .229 | .271 | .278 | .284 |
| | | grams | 69 | 92 | 104 | 123 | 126 | 129 |
| 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 | | | | | | |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1 4+0

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

12.5 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

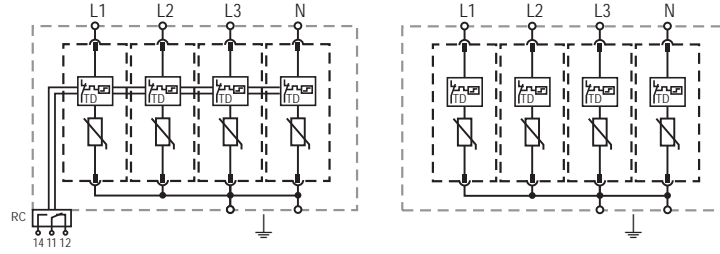
Technical Data

| ProTec T1-xxx-4+0(-R) | | 150 | 300 | 350 | 480 |
|--|------------|--|----------------|----------------|----------------|
| IEC Electrical | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 120V | 240V | 277V | 400V |
| Maximum Continuous Operating Voltage (AC) | U_c | 150V | 300V | 350V | 480V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA |
| Impulse Discharge Current (10/350 μ s) | I_{imp} | 12.5kA | 12.5kA | 12.5kA | 10kA |
| Specific Energy | W/R | 39kJ/ Ω | 39kJ/ Ω | 39kJ/ Ω | 25kJ/ Ω |
| Charge | Q | 6.25As | 6.25As | 6.25As | 5As |
| Voltage Protection Level | U_p | 1000V | 1500V | 1750V | 2100V |
| Response Time | t_A | < 25ns | | | |
| Overcurrent Protection (max) | | 315A / 250A gG | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25kA / 50kA | | | |
| TOV Withstand 5s | U_T | 175V | 337V | 403V | 581V |
| TOV 120min | U_T | 229V | 442V | 529V | 762V |
| | mode | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | |
| UL Electrical | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 150V | 300V | 350V | 480V |
| Voltage Protection Rating | VPR | 600V | 900V | 1200V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 200kA | 150kA | 150kA | 200kA |
| 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 [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 | | 35mm 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) | | | |
| Order Information | | | | | |
| Order Code | | 150 | 300 | 350 | 480 |
| ProTec T1-xxx-4+0 | | 59.0039 | 59.0041 | 59.0351 | 59.0043 |
| ProTec T1-xxx-4+0-R (with remote contacts) | | 59.0040 | 59.0042 | 59.0352 | 59.0044 |
| ProTec T1-xxx-P (plug) | | 59.0002 | 59.0003 | 59.0004 | 59.0005 |

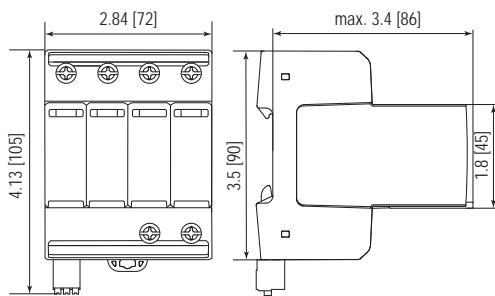
Internal Configuration

Legend

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



Complete Unit

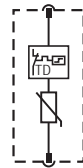


Complete Unit Dimensions & Packaging

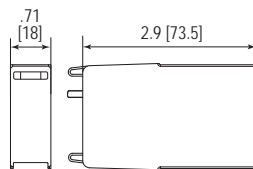
| | | 150 | 300 | 350 | 480 |
|------------------------------|--------|--|-------|-------|-------|
| ProTec T1-xxx-4+0 | Weight | pounds 1.310 | 1.415 | 1.583 | 1.609 |
| | | grams 594 | 642 | 718 | 730 |
| ProTec T1-xxx-4+0-R | | | | | |
| ProTec T1-xxx-4+0-R | Weight | pounds 1.329 | 1.435 | 1.603 | 1.629 |
| | | grams 603 | 651 | 727 | 739 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | |
| Standard Order Quantity | | 4 Units | | | |

Plug Internal Configuration

ProTec T1-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 150 | 300 | 350 | 480 |
|------------------------------|--------|--|------|------|------|
| ProTec T1-xxx-P | Weight | pounds .203 | .229 | .271 | .278 |
| | | grams 92 | 104 | 123 | 126 |
| 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 | | | |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1 1+1

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

12.5 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

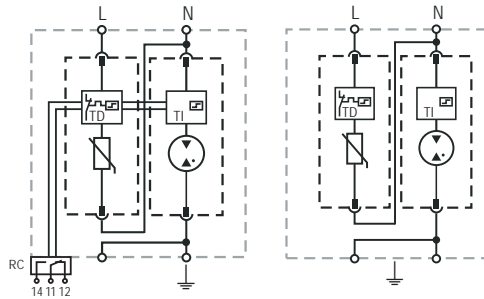
Technical Data

| ProTec T1-xxx-1+1(-R) | | 75 | 150 | 300 | 350 |
|--|------------------------|--|------------------------------------|-----------------|-----------------|
| IEC Electrical | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60 V | 120 V | 240 V | 277 V |
| Maximum Continuous Operating Voltage | (L-N) U_c | 75 V | 150 V | 300 V | 350 V |
| | (N-PE) U_c | 305 V | 305 V | 305 V | 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | | 20 kA / 50 kA | | |
| Maximum Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_{max} | | 50 kA / 100 kA | | |
| Impulse Discharge Current (10/350 μ s) | (L-N)/(N-PE) I_{imp} | | 12.5 kA / 50 kA | | |
| Specific Energy | (L-N)/(N-PE) W/R | | 39 kJ/ Ω / 625 kJ/ Ω | | |
| Charge | (L-N)/(N-PE) Q | | 6.25 As / 25 As | | |
| Voltage Protection Level | (L-N)/(N-PE) U_p | 700 V / 1500 V | 1000 V / 1500 V | 1500 V / 1500 V | 1750 V / 1500 V |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | | 100 A _{RMS} | | |
| Response Time | (L-N)/(N-PE) t_A | | < 25 ns / < 100 ns | | |
| Overcurrent Protection (max) | | | 315 A / 250 A gG | | |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | | 25 kA / 50 kA | | |
| TOV Withstand 5s | (L-N) U_T | 114 V | 175 V | 337 V | 403 V |
| TOV 120min | (L-N) U_T mode | Withstand | 114 V | 229 V | 442 V |
| | | Safe Fail | 114 V | 229 V | 442 V |
| TOV Withstand 200ms | (N-PE) U_T | Safe Fail | | 1200 V | |
| | | Safe Fail | | 1200 V | |
| Number of Ports | | | | | 1 |
| UL Electrical | | | | | |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 75 V / 305 V | 150 V / 305 V | 300 V / 305 V | 350 V / 305 V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 330 V / 1200 V | 600 V / 1200 V | 900 V / 1200 V | 1200 V / 1200 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20 kA / 20 kA | 20 kA / 20 kA | 20 kA / 20 kA | 20 kA / 20 kA |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 100 kA | 200 kA | 150 kA | 150 kA |
| 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} | 39.9 lbf.in [4.5 Nm] | | | |
| 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: 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 mm ² (Solid) | | | |
| Order Information | | | | | |
| Order Code | | 75 | 150 | 300 | 350 |
| ProTec T1-xxx-1+1 | | 59.0047 | 59.0049 | 59.0051 | 59.0053 |
| ProTec T1-xxx-1+1-R (with remote contacts) | | 59.0048 | 59.0050 | 59.0052 | 59.0054 |
| ProTec T1-xxx-P (plug L-N) | | 59.0001 | 59.0002 | 59.0003 | 59.0004 |
| ProTube T1-50-P (plug N-PE) | | 59.0269 | 59.0269 | 59.0269 | 59.0269 |

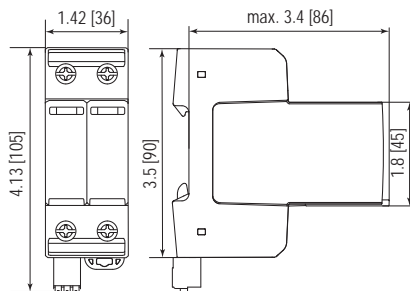
Internal Configuration

Legend

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



Complete Unit

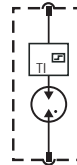
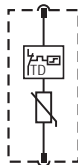


| Complete Unit Dimensions & Packaging | | | | | |
|--------------------------------------|--------|--|------|------|------|
| ProTec T1-xxx-1+1 | | | | | |
| Weight | pounds | 75 | 150 | 300 | 350 |
| | grams | .659 | .710 | .736 | .778 |
| ProTec T1-xxx-1+1-R | | | | | |
| Weight | pounds | .672 | .723 | .750 | .791 |
| | grams | 305 | 328 | 340 | 359 |
| 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 | | 7 Units | | | |

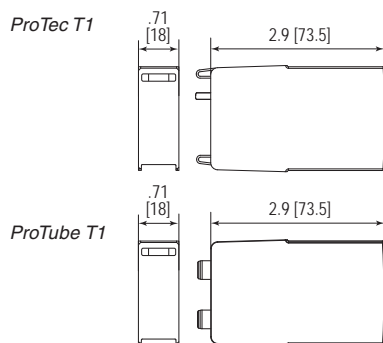
Plug Internal Configuration

ProTec T1-xxx-P

ProTube T1-50-P



Spare Plug



| Single Unit Dimensions & Packaging | | | | | |
|------------------------------------|--------|--|------|------|------|
| ProTec T1-xxx-P | | | | | |
| Weight | pounds | 75 | 150 | 300 | 350 |
| | grams | .152 | .203 | .229 | .271 |
| ProTube T1-50-P | | | | | |
| Weight | pounds | .214 | | | |
| | grams | 97 | | | |
| 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 | | | |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1 3+1

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

12.5 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

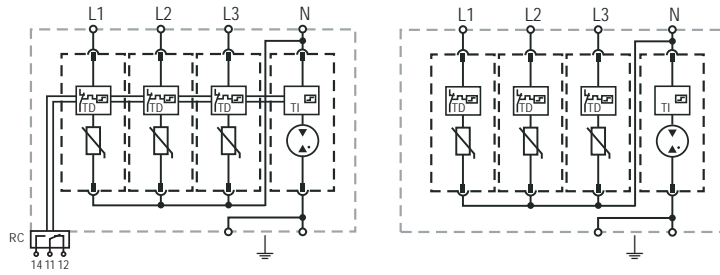
Technical Data

| ProTec T1-xxx-3+1(-R) | | 300 | 350 |
|--|------------------------|--|----------------------------------|
| IEC Electrical | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240V | 277V |
| Maximum Continuous Operating Voltage | (L-N) U_c | 300V | 350V |
| | (N-PE) U_c | 305V | 305V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | | 20kA / 50kA |
| Maximum Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_{max} | | 50kA / 100kA |
| Impulse Discharge Current (10/350 μ s) | (L-N)/(N-PE) I_{imp} | | 12.5kA / 50kA |
| Specific Energy | (L-N)/(N-PE) W/R | | 39kJ/ Ω / 625kJ/ Ω |
| Charge | (L-N)/(N-PE) Q | | 6.25As / 25As |
| Voltage Protection Level | (L-N)/(N-PE) U_p | 1500V / 1500V | 1750V / 1500V |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | | 100A _{RMS} |
| Response Time | (L-N)/(N-PE) t_A | | < 25ns / < 100ns |
| Overcurrent Protection (max) | | | 315A / 250A gG |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | | 25kA / 50kA |
| TOV Withstand 5s | (L-N) U_T | 337V | 403V |
| TOV 120min | (L-N) U_T mode | 442V | 529V |
| | | Safe Fail | Safe Fail |
| TOV Withstand 200ms | (N-PE) U_T | | 1200V |
| Number of Ports | | | 1 |
| UL Electrical | | | |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 300V / 305V | 350V / 305V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 900V / 1200V | 1200V / 1200V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20kA / 20kA | 20kA / 20kA |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 150kA | 150kA |
| 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 [4000m] | |
| Terminal Screw Torque | M_{max} | 39.9 lbf.in [4.5Nm] | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded) / 4 AWG (Flexible) | |
| | | 35mm ² (Solid, Stranded) / 25mm ² (Flexible) | |
| Mounting | | 35mm 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) | |
| Order Information | | | |
| Order Code | | 300 | 350 |
| ProTec T1-xxx-3+1 | | 59.0059 | 59.0061 |
| ProTec T1-xxx-3+1-R (with remote contacts) | | 59.0060 | 59.0062 |
| ProTec T1-xxx-P (plug L-N) | | 59.0003 | 59.0004 |
| ProTube T1-50-P (plug N-PE) | | 59.0269 | 59.0269 |

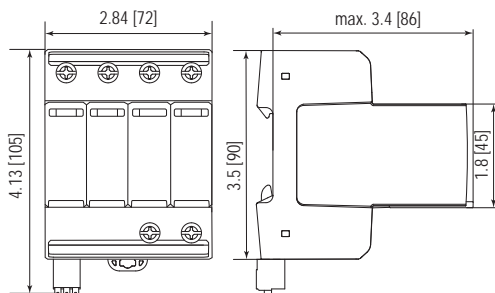
Internal Configuration

Legend

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



Complete Unit



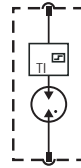
Complete Unit Dimensions & Packaging

| | | 300 | 350 |
|------------------------------|--------|--|-------|
| ProTec T1-xxx-3+1 | | | |
| Weight | pounds | 1.466 | 1.592 |
| | grams | 665 | 722 |
| ProTec T1-xxx-3+1-R | | | |
| Weight | pounds | 1.486 | 1.612 |
| | grams | 674 | 724 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 4 Units | |

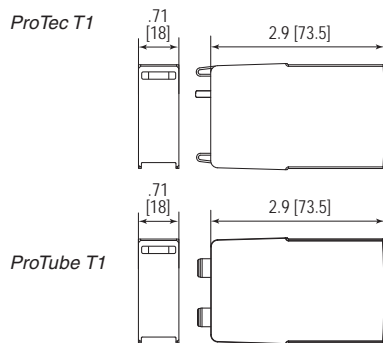
Plug Internal Configuration

ProTec T1-xxx-P

ProTube T1-50-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 300 | 350 |
|------------------------------|--------|--|------|
| ProTec T1-xxx-P | | | |
| Weight | pounds | .229 | .271 |
| | grams | 104 | 123 |
| ProTube T1-50-P | | 50 | |
| Weight | pounds | .214 | |
| | grams | 97 | |
| 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 | |

inches
[mm]



Lightning and Overvoltage Protection
ProTec T1H 2+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
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 4CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T1H-xxx-2+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 | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 65 kA |
| Impulse Discharge Current (10/350 μ s) | 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 |
| 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 | 300V |
| Measured Limiting Voltage | MLV | 1220V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA |

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 [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 | | 35mm 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) |

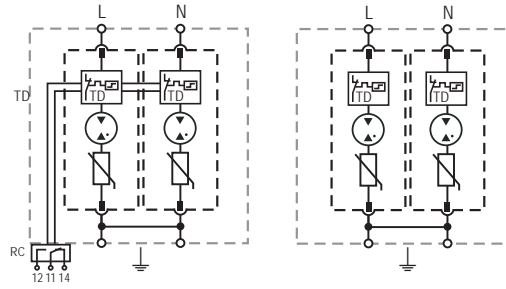
Order Information

| | |
|---|---------|
| Order Code | 300 |
| ProTec T1H-xxx-2+0 | 59.0312 |
| ProTec T1H-xxx-2+0-R (with remote contacts) | 59.0313 |
| ProTec T1H-xxx-P (plug) | 59.0308 |

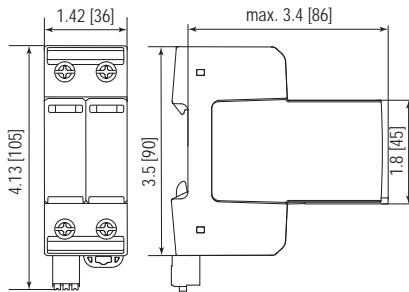
Internal Configuration

Legend

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



Complete Unit

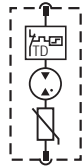


Complete Unit Dimensions & Packaging

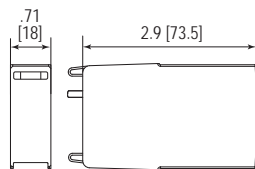
| | |
|------------------------------|--|
| ProTec T1H-xxx-2+0 | 300 |
| Weight | pounds [grams] .736 [334] |
| ProTec T1H-xxx-2+0-R | |
| Weight | pounds [grams] .756 [343] |
| DIN 43880 Dimension | 2 TE / 1.42" [36] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 7 Units |

Plug Internal Configuration

ProTec T1H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | |
|------------------------------|--|
| 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 |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1H 4+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
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 4CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T1H-xxx-4+0(-R)

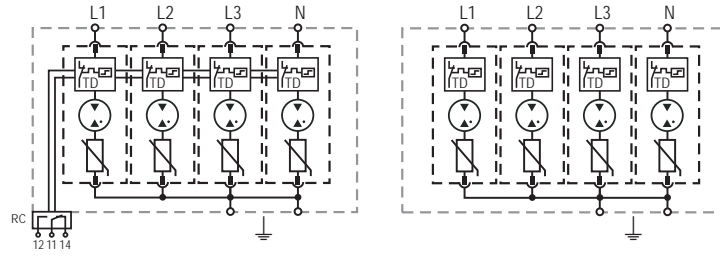
300

| 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 | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 65 kA |
| Impulse Discharge Current (10/350 μ s) | 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 |
| 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 | 300V |
| Measured Limiting Voltage | MLV | 1220V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA |
| 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 [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 | | 35mm 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) |
| Order Information | | |
| Order Code | | 300 |
| ProTec T1H-xxx-4+0 | | 59.0316 |
| ProTec T1H-xxx-4+0-R (with remote contacts) | | 59.0317 |
| ProTec T1H-xxx-P (plug) | | 59.0308 |

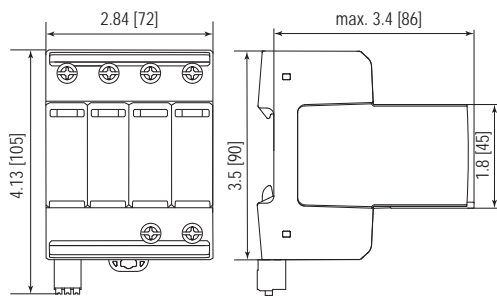
Internal Configuration

Legend

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



Complete Unit

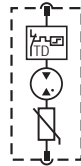


Complete Unit Dimensions & Packaging

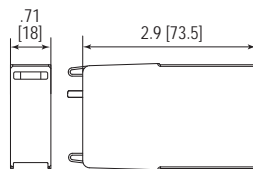
| ProTec T1H-xxx-4+0 | | 300 |
|------------------------------|----------------|--|
| Weight | pounds [grams] | 1.389 [630] |
| ProTec T1H-xxx-4+0-R | | 300 |
| Weight | pounds [grams] | 1.409 [639] |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | | 4 Units |

Plug Internal Configuration

ProTec T1H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| 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 |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1H 1+1

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

12.5 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 4CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

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

300

IEC Electrical

| | | |
|--|--------------------------|------------------------------------|
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-PE) U_c | 300 V / 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_n | 20 kA / 50 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_{max} | 65 kA / 100 kA |
| Impulse Discharge Current (10/350 μ s) | (L-N) / (N-PE) I_{imp} | 12.5 kA / 50 kA |
| Specific Energy | (L-N) / (N-PE) W/R | 39 kJ/ Ω / 625 kJ/ Ω |
| Charge | (L-N) / (N-PE) Q | 6.25 As / 25 As |
| Voltage Protection Level | (L-N) / (N-PE) U_p | 1500 V / 1500 V |
| Response Time | (L-N) / (N-PE) t_A | < 100 ns / < 100 ns |
| Overcurrent Protection (max) | | 315 A / 250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA / 50 kA |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} |
| TOV Withstand 120min | (L-N) U_T | 442 V |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V |
| Number of Ports | | 1 |

UL Electrical

| | | |
|---|---------------------|-----------------|
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-G) MCOV | 300 V / 305 V |
| Measured Limiting Voltage | (L-N) / (N-G) MLV | 1220 V / 1800 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-G) I_n | 20 kA / 20 kA |

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} | 39.9 lbf-in [4.5 Nm] |
| 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) |

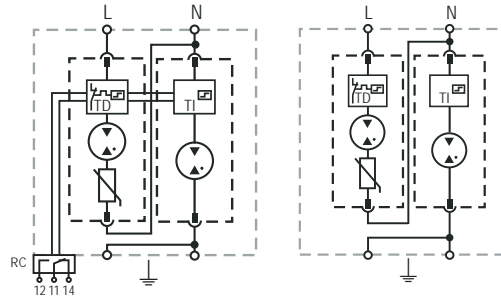
Order Information

| | |
|---|---------|
| Order Code | 300 |
| ProTec T1H-xxx-1+1 | 59.0318 |
| ProTec T1H-xxx-1+1-R (with remote contacts) | 59.0319 |
| ProTec T1H-xxx-P (plug L-N) | 59.0308 |
| ProTube T1H-50-P (plug N-PE) | 59.0309 |

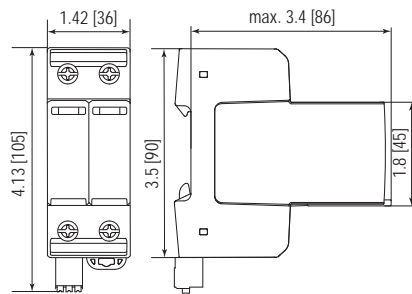
Internal Configuration

Legend

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



Complete Unit

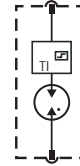
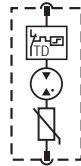


| Complete Unit Dimensions & Packaging | |
|--------------------------------------|--|
| ProTec T1H-xxx-1+1 | 300 |
| Weight | pounds [grams] .730 [331] |
| ProTec T1H-xxx-1+1-R | .743 [337] |
| Weight | pounds [grams] .743 [337] |
| DIN 43880 Dimension | 2 TE / 1.42" [36] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 7 Units |

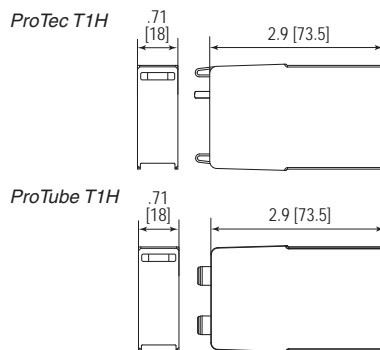
Plug Internal Configuration

ProTec T1H-xxx-P

ProTube T1H-50-P



Spare Plug



| Single Unit Dimensions & Packaging | |
|------------------------------------|--|
| ProTec T1H-xxx-P | 300 |
| Weight | pounds [grams] .223 [101] |
| ProTube T1H-50-P | 50 |
| Weight | pounds [grams] .214 [97] |
| 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 |

inches
[mm]

Lightning and Overvoltage Protection

ProTec T1H 3+1

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

12.5 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 4CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T1H-xxx-3+1(-R)

300

IEC Electrical

| | | |
|--|--------------------------|------------------------------------|
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-PE) U_c | 300 V / 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_n | 20 kA / 50 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_{max} | 65 kA / 100 kA |
| Impulse Discharge Current (10/350 μ s) | (L-N) / (N-PE) I_{imp} | 12.5 kA / 50 kA |
| Specific Energy | (L-N) / (N-PE) W/R | 39 kJ/ Ω / 625 kJ/ Ω |
| Charge (L-N) / (N-PE) | Q | 6.25 As / 25 As |
| Voltage Protection Level | (L-N) / (N-PE) U_p | 1500 V / 1500 V |
| Response Time | (L-N) / (N-PE) t_A | < 100 ns / < 100 ns |
| Overcurrent Protection (max) | | 315 A / 250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA / 50 kA |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} |
| TOV Withstand 120min | (L-N) U_T | 442 V |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V |
| Number of Ports | | 1 |

UL Electrical

| | | |
|---|---------------------|-----------------|
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-G) MCOV | 300 V / 305 V |
| Measured Limiting Voltage | (L-N) / (N-G) MLV | 1220 V / 1800 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-G) I_n | 20 kA / 20 kA |

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} | 39.9 lbf-in [4.5 Nm] |
| 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) |

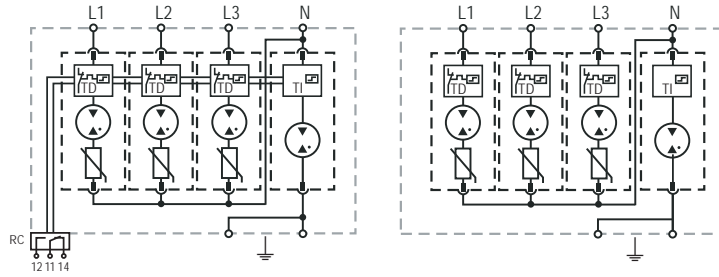
Order Information

| | |
|---|---------|
| Order Code | 300 |
| ProTec T1H-xxx-3+1 | 59.0320 |
| ProTec T1H-xxx-3+1-R (with remote contacts) | 59.0321 |
| ProTec T1H-xxx-P (plug L-N) | 59.0308 |
| ProTube T1H-50-P (plug N-PE) | 59.0309 |

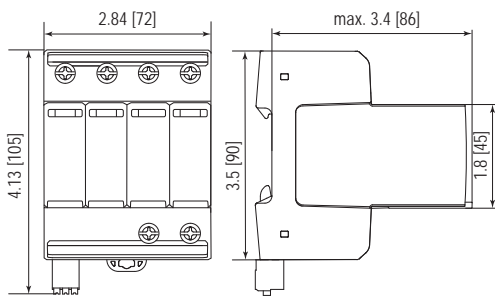
Internal Configuration

Legend

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



Complete Unit



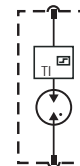
| Complete Unit Dimensions & Packaging | |
|--------------------------------------|--|
| ProTec T1H-xxx-3+1 | 300 |
| Weight | pounds [grams] 1.446 [656] |
| ProTec T1H-xxx-3+1-R | 1.466 [665] |
| Weight | pounds [grams] 1.466 [665] |
| DIN 43880 Dimension | 4 TE / 2.84 [72] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 4 Units |

Plug Internal Configuration

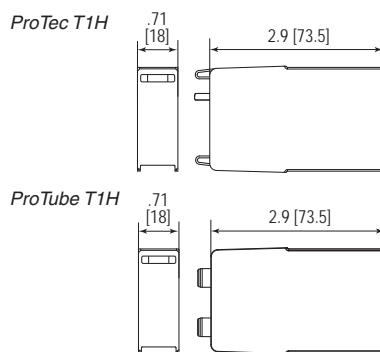
ProTec T1H-xxx-P



ProTube T1H-50-P



Spare Plug



| Single Unit Dimensions & Packaging | |
|------------------------------------|--|
| ProTec T1H-xxx-P | 300 |
| Weight | pounds [grams] .223 [101] |
| ProTube T1H-50-P | 50 |
| Weight | pounds [grams] .214 [97] |
| 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 |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1HS 4+0

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

25 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class I+II, Type 1+2, Type 4CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11: 2011
 EN 61643-11: 2012
 UL 1449 4th Edition

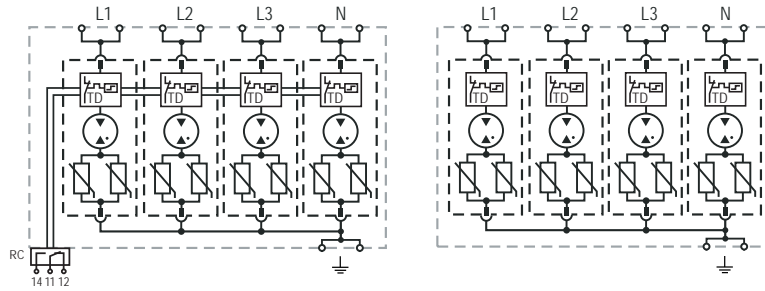
Technical Data

| ProTec T1HS-xxx-4+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 |
| 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} | 39.9 lbf-in [4.5 Nm] |
| 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 T1HS-xxx-4+0 | | 59.0260 |
| ProTec T1HS-xxx-4+0-R (with remote contacts) | | 59.0261 |
| ProTec T1HS-xxx-P (plug) | | 59.0302 |

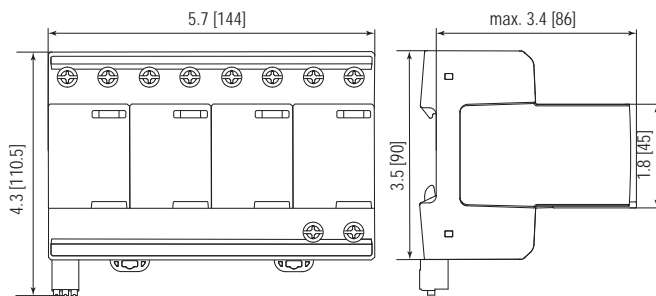
Internal Configuration

Legend

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



Complete Unit



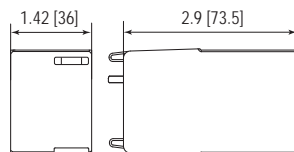
| Complete Unit Dimensions & Packaging | |
|--------------------------------------|--|
| ProTec T1HS-xxx-4+0 | 300 |
| Weight | pounds [grams] 2.502 [1135] |
| ProTec T1HS-xxx-4+0-R | |
| Weight | pounds [grams] 2.522 [1144] |
| DIN 43880 Dimension | 8 TE / 5.7" [144] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 2 Units |

Plug Internal Configuration

ProTec T1HS-xxx-P



Spare Plug



| Single Unit Dimensions & Packaging | |
|------------------------------------|--|
| 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 | 14 Units |

inches
[mm]



Lightning and Overvoltage Protection

ProTec T1HS 3+1

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

25 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class I+II, Type 1+2, Type 4CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11: 2011
 EN 61643-11: 2012
 UL 1449 4th Edition

Technical Data

ProTec T1HS-xxx-3+1(-R)

300

IEC Electrical

| | | |
|--|--------------------------|--|
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-PE) U_c | 300 V / 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_n | 25 kA / 100 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_{max} | 65 kA / 130 kA |
| Impulse Discharge Current (10/350 μ s) | (L-N) / (N-PE) I_{imp} | 25 kA / 100 kA |
| Specific Energy | (L-N) / (N-PE) W/R | 156.2 kJ/ Ω / 2500 kJ/ Ω |
| Charge | (L-N) / (N-PE) Q | 12.5 As / 50 As |
| Voltage Protection Level | (L-N) / (N-PE) U_p | 1500 V / 1500 V |
| Rated Load Current | I_L | 100 A |
| Response Time | (L-N) / (N-PE) t_A | < 100 ns / < 100 ns |
| Overcurrent Protection (max) | | 315 A gG |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 50 kA |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} |
| TOV Withstand 120min | (L-N) U_T | 442 V |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V |
| Number of Ports | | 1 |

UL Electrical

| | | |
|---|-------------------|-----------------|
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 300 V / 305 V |
| Measured Limiting Voltage | (L-N)/(N-G) MLV | 1280 V / 1000 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20 kA |

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: 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 mm ² (Solid) |

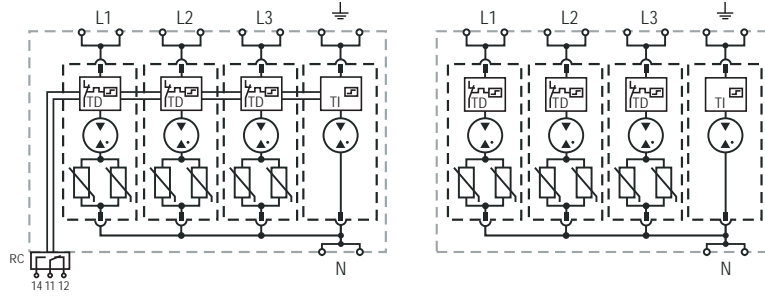
Order Information

| | |
|--|---------|
| Order Code | 300 |
| ProTec T1HS-xxx-3+1 | 59.0306 |
| ProTec T1HS-xxx-3+1-R (with remote contacts) | 59.0307 |
| ProTec T1HS-xxx-P (plug L-N) | 59.0302 |
| ProTube T1HS-100-P (plug N-PE) | 59.0303 |

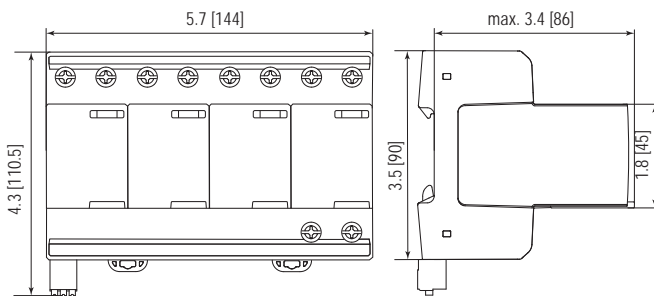
Internal Configuration

Legend

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



Complete Unit



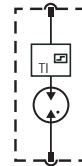
| Complete Unit Dimensions & Packaging | |
|--------------------------------------|--|
| ProTec T1HS-xxx-3+1 | 300 |
| Weight | pounds [grams] 2.348 [1065] |
| ProTec T1HS-xxx-3+1-R | 300 |
| Weight | pounds [grams] 2.368 [1074] |
| DIN 43880 Dimension | 8 TE / 5.7 [144] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 2 Units |

Plug Internal Configuration

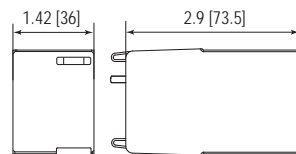
ProTec T1HS-xxx-P



ProTube T1HS-100-P



Spare Plug



| Single Unit Dimensions & Packaging | |
|------------------------------------|--|
| ProTec T1HS-xxx-P | 300 |
| Weight | pounds [grams] .364 [165] |
| ProTube T1HS-100-P | 100 |
| Weight | pounds [grams] 0.209 [95] |
| 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 | 14 Unit |

inches
[mm]



Overvoltage Protection

ProTec T2 1+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-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 II / Type 2 /
 Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

| ProTec T2-xxx-1+0(-R) | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
|--|------------|--|-----------|-----------|-----------|-----------|-----------|-----------|
| IEC Electrical | | | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V | 480V | 600V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V | 550V | 750V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA | 50kA | 50kA | 35kA |
| Voltage Protection Level | U_p | 800V | 1250V | 1500V | 1750V | 2300V | 2500V | 3400V |
| Response Time | t_A | < 25ns | | | | | | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | | | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25 kA / 50 kA | | | | | | |
| TOV Withstand 5s | U_T | 114V | 229V | 337V | 403V | 581V | 697V | 871V |
| TOV 120min | U_T | 114V | 229V | 442V | 529V | 762V | 915V | 1143V |
| | mode | Withstand | Withstand | Safe Fail | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | | | |
| UL Electrical | | | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V | 550V | 750V |
| Voltage Protection Rating | VPR | 330V | 600V | 900V | 1000V | 1500V | 2000V | 2500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 100kA | 200kA | 150kA | 200kA | 200kA | 200kA | 200kA |
| 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 [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 | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
| ProTec T2-xxx-1+0 | | 59.0069 | 59.0071 | 59.0073 | 59.0075 | 59.0077 | 59.0677 | 59.0079 |
| ProTec T2-xxx-1+0-R (with remote contacts) | | 59.0070 | 59.0072 | 59.0074 | 59.0076 | 59.0078 | 59.0678 | 59.0080 |
| ProTec T2-xxx-P (plug) | | 59.0063 | 59.0064 | 59.0065 | 59.0066 | 59.0067 | 59.0685 | 59.0068 |

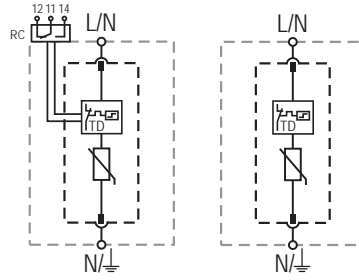
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ProTec T2 1+0

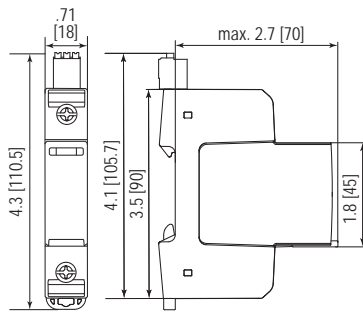
Internal Configuration

Legend

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



Complete Unit

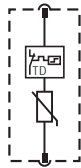


Complete Unit Dimensions & Packaging

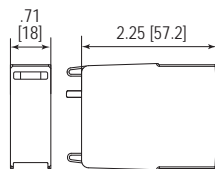
| | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
|------------------------------|--------|--|------|------|------|------|------|------|
| Weight | pounds | .259 | .275 | .281 | .292 | .306 | .311 | .336 |
| | grams | 118 | 125 | 128 | 133 | 139 | 141 | 153 |
| ProTec T2-xxx-1+0-R | | | | | | | | |
| Weight | pounds | .275 | .290 | .297 | .308 | .321 | .326 | .352 |
| | grams | 125 | 132 | 135 | 140 | 146 | 148 | 160 |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | | | | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | | | | |
| Standard Order Quantity | | 12 Units | | | | | | |

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
|------------------------------|--------|-------------------------------------|------|------|------|------|------|------|
| Weight | pounds | .108 | .123 | .130 | .141 | .154 | .163 | .185 |
| | grams | 49 | 56 | 59 | 64 | 70 | 74 | 84 |
| DIN 43880 Dimension | | 1 TE / .71" [18mm] | | | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | | | |
| Standard Order Quantity | | 24 Units | | | | | | |

inches
[mm]

Overvoltage Protection

ProTec T2 2+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

| ProTec T2-xxx-2+0(-R) | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
|--|------------|--|-----------|-----------|-----------|-----------|-----------|-----------|
| IEC Electrical | | | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V | 480V | 600V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V | 550V | 750V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA | 50kA | 50kA | 35kA |
| Voltage Protection Level | U_p | 800V | 1250V | 1500V | 1750V | 2300V | 2500V | 3400V |
| Response Time | t_A | < 25ns | | | | | | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | | | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25 kA / 50 kA | | | | | | |
| TOV Withstand 5s | U_T | 114V | 229V | 337V | 403V | 581V | 697V | 871V |
| TOV 120min | U_T | 114V | 229V | 442V | 529V | 762V | 915V | 1143V |
| | mode | Withstand | Withstand | Safe Fail | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | | | |
| UL Electrical | | | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V | 550V | 750V |
| Voltage Protection Rating | VPR | 330V | 600V | 900V | 1000V | 1500V | 2000V | 2500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 100kA | 200kA | 150kA | 200kA | 200kA | 200kA | 200kA |
| 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 [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 | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
| ProTec T2-xxx-2+0 | | 59.0343 | 59.0081 | 59.0083 | 59.0085 | 59.0087 | 59.0679 | 59.0089 |
| ProTec T2-xxx-2+0-R (with remote contacts) | | 59.0344 | 59.0082 | 59.0084 | 59.0086 | 59.0088 | 59.0680 | 59.0090 |
| ProTec T2-xxx-P (plug) | | 59.0063 | 59.0064 | 59.0065 | 59.0066 | 59.0067 | 59.0685 | 59.0068 |

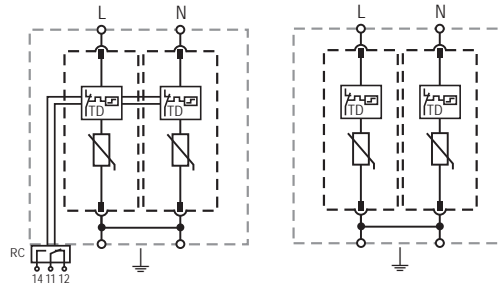
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ProTec T2 2+0

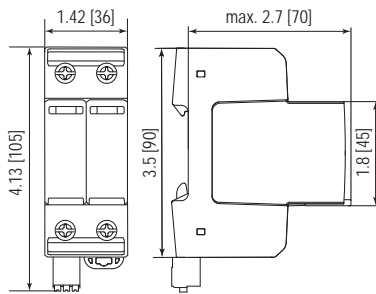
Internal Configuration

Legend

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



Complete Unit

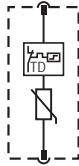


Complete Unit Dimensions & Packaging

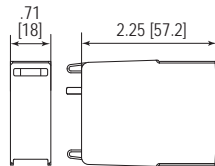
| | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
|------------------------------|--------|------|------|------|--|------|------|------|
| Weight | pounds | .505 | .536 | .549 | .571 | .598 | .608 | .660 |
| | grams | 229 | 243 | 249 | 259 | 271 | 276 | 299 |
| ProTec T2-xxx-2+0-R | | | | | | | | |
| Weight | pounds | .525 | .556 | .569 | .591 | .618 | .639 | .679 |
| | grams | 238 | 252 | 258 | 268 | 280 | 290 | 308 |
| 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 | | | | | 7 Units | | | |

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 | 480 | 550* | 750 |
|------------------------------|--------|------|------|------|-------------------------------------|------|------|------|
| Weight | pounds | .108 | .123 | .130 | .141 | .154 | .163 | .185 |
| | grams | 49 | 56 | 59 | 64 | 70 | 74 | 84 |
| DIN 43880 Dimension | | | | | 1 TE / .71" [18] | | | |
| Packaging Dimensions (HxWxL) | | | | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | |
| Standard Order Quantity | | | | | 24 Units | | | |

inches
[mm]

Overvoltage Protection

ProTec T2 3+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

| ProTec T2-xxx-3+0(-R) | | 150 | 300 | 350 | 480 | 550* | 750 |
|--|------------|--|-----------|-----------|-----------|-----------|-----------|
| IEC Electrical | | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 120V | 240V | 277V | 400V | 480V | 600V |
| Maximum Continuous Operating Voltage (AC) | U_c | 150V | 300V | 350V | 480V | 550V | 750V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA | 50 kA | 50 kA | 50 kA | 50 kA | 35 kA |
| Voltage Protection Level | U_p | 1250V | 1500V | 1750V | 2300V | 2500V | 3400V |
| Response Time | t_A | < 25 ns | | | | | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25 kA / 50 kA | | | | | |
| TOV Withstand 5s | U_T | 229V | 337V | 403V | 581V | 697V | 871V |
| TOV 120min | U_T | 229V | 442V | 529V | 762V | 915V | 1143V |
| | mode | Withstand | Safe Fail | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | | |
| UL Electrical | | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 150V | 300V | 350V | 480V | 550V | 750V |
| Voltage Protection Rating | VPR | 600V | 900V | 1000V | 1500V | 2000V | 2500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 200 kA | 150 kA | 200 kA | 200 kA | 200 kA | 200 kA |
| 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} | 39.9 lbf-in [4.5 Nm] | | | | | |
| 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 | | 150 | 300 | 350 | 480 | 550* | 750 |
| ProTec T2-xxx-3+0 | | 59.0091 | 59.0093 | 59.0095 | 59.0097 | 59.0681 | 59.0099 |
| ProTec T2-xxx-3+0-R (with remote contacts) | | 59.0092 | 59.0094 | 59.0096 | 59.0098 | 59.0682 | 59.0100 |
| ProTec T2-xxx-P (plug) | | 59.0064 | 59.0065 | 59.0066 | 59.0067 | 59.0685 | 59.0068 |

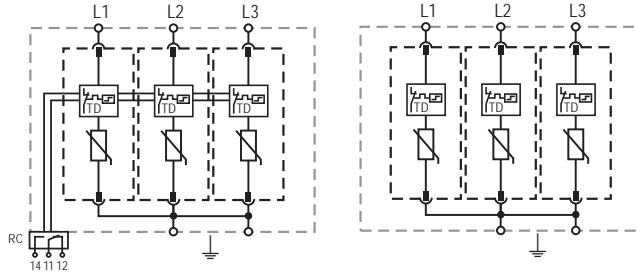
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ProTec T2 3+0

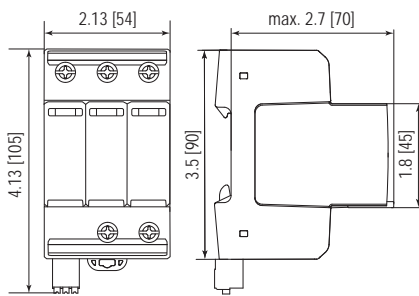
Internal Configuration

Legend

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



Complete Unit

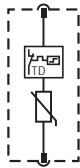


Complete Unit Dimensions & Packaging

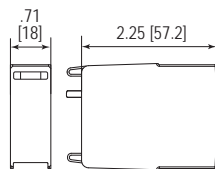
| | | 150 | 300 | 350 | 480 | 550* | 750 |
|------------------------------|--------|--|------|------|------|------|------|
| Weight | pounds | .780 | .800 | .833 | .873 | .890 | .965 |
| | grams | 354 | 363 | 378 | 396 | 404 | 438 |
| ProTec T2-xxx-3+0-R | | | | | | | |
| Weight | pounds | .800 | .820 | .853 | .892 | .913 | .985 |
| | grams | 363 | 372 | 387 | 405 | 414 | 447 |
| DIN 43880 Dimension | | 3 TE / 2.13" [54] | | | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | | | |
| Standard Order Quantity | | 5 Units | | | | | |

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 150 | 300 | 350 | 480 | 550* | 750 |
|------------------------------|--------|-------------------------------------|------|------|------|------|------|
| Weight | pounds | .123 | .130 | .141 | .154 | .163 | .185 |
| | grams | 56 | 59 | 64 | 70 | 74 | 84 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | | |
| Standard Order Quantity | | 24 Units | | | | | |

inches
[mm]

Overvoltage Protection

ProTec T2 4+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 /
 Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

| ProTec T2-xxx-4+0(-R) | | 150 | 300 | 350 | 480 | 550* |
|--|------------|--|-----------|-----------|-----------|-----------|
| IEC Electrical | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 120V | 240V | 277V | 400V | 480V |
| Maximum Continuous Operating Voltage (AC) | U_c | 150V | 300V | 350V | 480V | 550V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA | 50 kA | 50 kA | 50 kA | 50 kA |
| Voltage Protection Level | U_p | 1250V | 1500V | 1750V | 2300V | 2500V |
| Response Time | t_A | < 25 ns | | | | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25 kA / 50 kA | | | | |
| TOV Withstand 5s | U_T | 229V | 337V | 403V | 581V | 697V |
| TOV 120min | U_T | 229V | 442V | 529V | 762V | 915V |
| | mode | Withstand | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | |
| UL Electrical | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 150V | 300V | 350V | 480V | 550V |
| Voltage Protection Rating | VPR | 600V | 900V | 1000V | 1500V | 2000V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 200 kA | 150 kA | 200 kA | 200 kA | 200 kA |
| 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 [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 | | 150 | 300 | 350 | 480 | 550* |
| ProTec T2-xxx-4+0 | | 59.0101 | 59.0103 | 59.0300 | 59.0105 | 59.0683 |
| ProTec T2-xxx-4+0-R (with remote contacts) | | 59.0102 | 59.0104 | 59.0301 | 59.0106 | 59.0684 |
| ProTec T2-xxx-P (plug) | | 59.0064 | 59.0065 | 59.0066 | 59.0067 | 59.0685 |

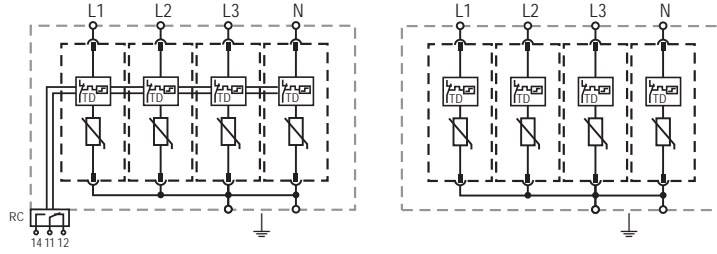
*UL recognized, no IEC/EN certification.

ProTec T2 4+0

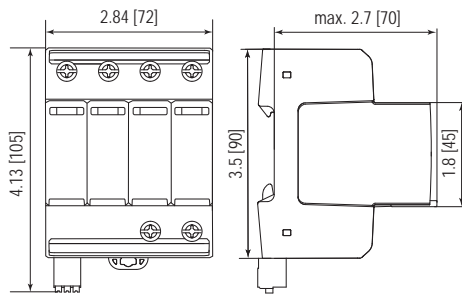
Internal Configuration

Legend

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



Complete Unit

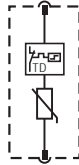


Complete Unit Dimensions & Packaging

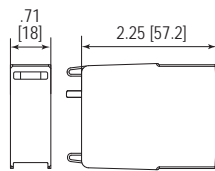
| | | 150 | 300 | 350 | 480 | 550* |
|------------------------------|--------|--|-------|-------|-------|-------|
| Weight | pounds | .989 | 1.015 | 1.059 | 1.112 | 1.208 |
| | grams | 448 | 460 | 480 | 504 | 548 |
| ProTec T2-xxx-4+0-R | | | | | | |
| Weight | pounds | 1.008 | 1.035 | 1.079 | 1.132 | 1.228 |
| | grams | 457 | 469 | 489 | 513 | 557 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | | |
| Standard Order Quantity | | 4 Units | | | | |

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 150 | 300 | 350 | 480 | 550* |
|------------------------------|--------|-------------------------------------|------|------|------|------|
| Weight | pounds | .123 | .130 | .141 | .154 | .163 |
| | grams | 56 | 59 | 64 | 70 | 74 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | |
| Standard Order Quantity | | 24 Units | | | | |

inches
[mm]

Overvoltage Protection

ProTec T2 1+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

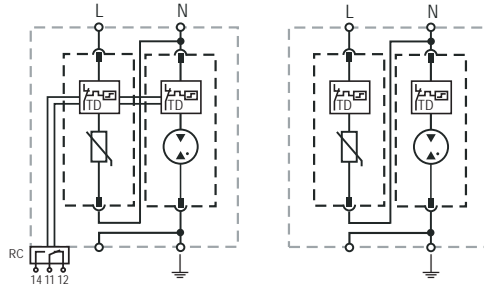
| ProTec T2-xxx-1+1(-R) | | 75 | 150 | 300 | 350 |
|--|------------------------|--|-----------------|-----------------|-----------------|
| IEC Electrical | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60 V | 120 V | 240 V | 277 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) U_c | 75 V | 150 V | 300 V | 350 V |
| | (N-PE) U_c | 305 V | 305 V | 305 V | 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | 20 kA / 40 kA | 20 kA / 40 kA | 20 kA / 40 kA | 20 kA / 40 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_{max} | 50 kA / 65 kA | 50 kA / 65 kA | 50 kA / 65 kA | 50 kA / 65 kA |
| Voltage Protection Level | (L-N)/(N-PE) U_p | 800 V / 1500 V | 1250 V / 1500 V | 1500 V / 1500 V | 1750 V / 1500 V |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} | | | |
| Response Time | (L-N)/(N-PE) t_A | < 25 ns / < 100 ns | | | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | | | |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA / 50 kA | | | |
| TOV Withstand 5s | (L-N) U_T | 114 V | 229 V | 337 V | 403 V |
| TOV 120min | (L-N) U_T | mode | Withstand | Withstand | Safe Fail |
| | | Withstand | Withstand | Safe Fail | Safe Fail |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V | | | |
| Number of Ports | | 1 | | | |
| UL Electrical | | | | | |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 75 V / 305 V | 150 V / 305 V | 300 V / 305 V | 350 V / 305 V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 330 V / 1000 V | 600 V / 1000 V | 900 V / 1000 V | 1000 V / 1000 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20 kA / 20 kA | | | |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 100 kA | 200 kA | 150 kA | 200 kA |
| 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 [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 | | 75 | 150 | 300 | 350 |
| ProTec T2-xxx-1+1 | | 59.0109 | 59.0111 | 59.0113 | 59.0115 |
| ProTec T2-xxx-1+1-R (with remote contacts) | | 59.0110 | 59.0112 | 59.0114 | 59.0116 |
| ProTec T2-xxx-P (plug L-N) | | 59.0063 | 59.0064 | 59.0065 | 59.0066 |
| ProTube T2-40-P (plug N-PE) | | 59.0273 | 59.0273 | 59.0273 | 59.0273 |

ProTec T2 1+1

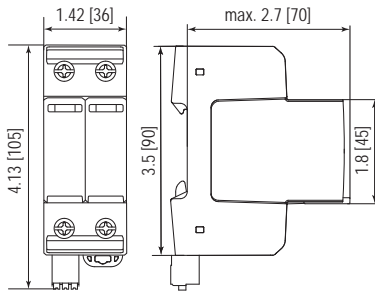
Internal Configuration

Legend

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



Complete Unit

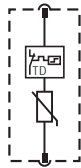


Complete Unit Dimensions & Packaging

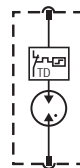
| | | 75 | 150 | 300 | 350 |
|------------------------------|--------|--|------|------|------|
| ProTec T2-xxx-1+1 | Weight | pounds .512 | .527 | .534 | .545 |
| | | grams 232 | 239 | 242 | 247 |
| ProTec T2-xxx-1+1-R | | | | | |
| Weight | pounds | .521 | .536 | .543 | .554 |
| | grams | 236 | 243 | 246 | 251 |
| 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 | | 7 Units | | | |

Plug Internal Configuration

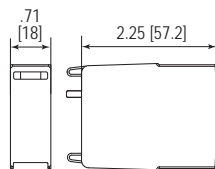
ProTec T2-xxx-P



ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 |
|------------------------------|--------|-------------------------------------|------|------|------|
| ProTec T2-xxx-P | Weight | pounds .108 | .123 | .130 | .141 |
| | | grams 49 | 56 | 59 | 64 |
| ProTube T2-40-P | | | 40 | | |
| Weight | pounds | .093 | | | |
| | grams | 42 | | | |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | |
| Standard Order Quantity | | 24 Units | | | |

inches
[mm]

Overvoltage Protection

ProTec T2 3+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN/UL Category: Class II / Type 2 / Type 1CA
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

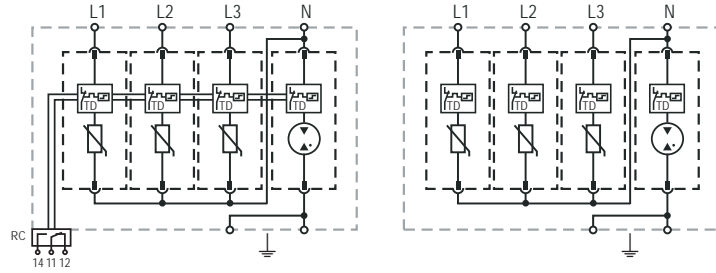
| ProTec T2-xxx-3+1(-R) | | 300 | 350 |
|--|------------------------|--|---------------|
| IEC Electrical | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240V | 277V |
| Maximum Continuous Operating Voltage (AC) | (L-N) U_c | 300V | 350V |
| | (N-PE) U_c | 305V | 305V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | 20kA / 40kA | 20kA / 40kA |
| Maximum Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_{max} | 50kA / 65kA | 50kA / 65kA |
| Voltage Protection Level | (L-N)/(N-PE) U_p | 1500V / 1500V | 1750V / 1500V |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} | |
| Response Time | (L-N)/(N-PE) t_A | < 25 ns / < 100 ns | |
| Overcurrent Protection (max) | | 315 A / 250 A gG | |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA / 50 kA | |
| TOV Withstand 5s | (L-N) U_T | 337V | 403V |
| TOV 120min | (L-N) U_T | mode | Safe Fail |
| | | | Safe Fail |
| TOV Withstand 200ms | (N-PE) U_T | 1200V | |
| Number of Ports | | 1 | |
| UL Electrical | | | |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 300V / 305V | 350V / 305V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 900V / 1000V | 1000V / 1000V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20kA / 20kA | |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 150kA | 200kA |
| 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 [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 | 350 |
| ProTec T2-xxx-3+1 | | 59.0121 | 59.0123 |
| ProTec T2-xxx-3+1-R (with remote contacts) | | 59.0122 | 59.0124 |
| ProTec T2-xxx-P (plug L-N) | | 59.0065 | 59.0066 |
| ProTube T2-40-P (plug N-PE) | | 59.0273 | 59.0273 |

ProTec T2 3+1

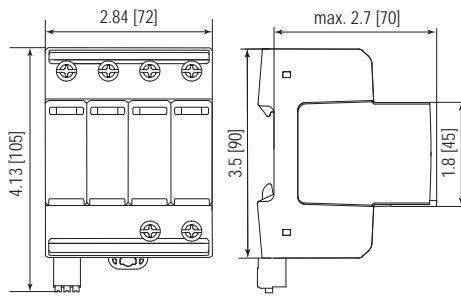
Internal Configuration

Legend

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



Complete Unit

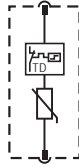


Complete Unit Dimensions & Packaging

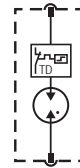
| | | 300 | 350 |
|------------------------------|--------|--|-------|
| ProTec T2-xxx-3+1 | | | |
| Weight | pounds | 1.000 | 1.033 |
| | grams | 453 | 468 |
| ProTec T2-xxx-3+1-R | | | |
| Weight | pounds | 1.011 | 1.044 |
| | grams | 458 | 473 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 4 Units | |

Plug Internal Configuration

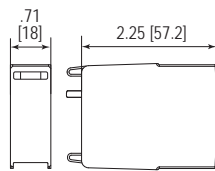
ProTec T2-xxx-P



ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 300 | 350 |
|------------------------------|--------|-------------------------------------|------|
| ProTec T2-xxx-P | | | |
| Weight | pounds | .130 | .141 |
| | grams | 59 | 64 |
| ProTube T2-40-P | | 40 | |
| Weight | pounds | .093 | |
| | grams | 42 | |
| DIN 43880 Dimension | | 1 TE / .71" [18] | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | |
| Standard Order Quantity | | 24 Units | |

inches
[mm]

Overvoltage Protection

ProTube T2 40 0+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTube T2-xxx-0+1(-R)

40

IEC Electrical

| | | |
|--|-----------|----------------------|
| Maximum Continuous Operating Voltage | U_c | 305V |
| Nominal Discharge Current (8/20 μ s) | I_n | 40kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 65kA |
| Voltage Protection Level | U_p | 1500V |
| Follow Current Interrupt Rating | I_{fi} | 100 A _{RMS} |
| Response Time | t_A | < 100 ns |
| TOV Withstand 200ms | U_T | 1200 V |
| Number of Ports | | 1 |

UL Electrical

| | | |
|---|-------|-------|
| Maximum Continuous Operating Voltage (AC) | MCOV | 305V |
| Voltage Protection Rating | VPR | 1000V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA |

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 [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 / 1 A; 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

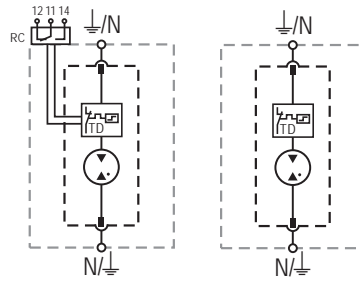
| | |
|---|---------|
| Order Code | 40 |
| ProTube T2-xxx-0+1 | 59.0280 |
| ProTube T2-xxx-0+1-R (with remote contacts) | 59.0336 |
| ProTube T2-40-P (plug) | 59.0273 |

ProTube T2 40 0+1

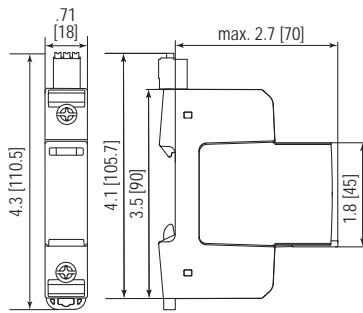
Internal Configuration

Legend

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



Complete Unit

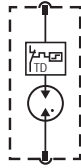


Complete Unit Dimensions & Packaging

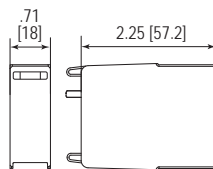
| ProTube T2-xxx-0+1 | | 40 |
|------------------------------|--|------|
| Weight | pounds | .244 |
| | grams | 111 |
| ProTube T2-xxx-0+1-R | | |
| Weight | pounds | .259 |
| | grams | 118 |
| DIN 43880 Dimension | 1 TE / .71" [18] | |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | 12 Units | |

Plug Internal Configuration

ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

| ProTube T2-40-P | | 40 |
|------------------------------|-------------------------------------|------|
| Weight | pounds | .093 |
| | grams | 42 |
| DIN 43880 Dimension | 1 TE / .71" [18] | |
| Packaging Dimensions (HxWxL) | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | |
| Standard Order Quantity | 24 Units | |

inches
[mm]

Overvoltage Protection ProTec T2-ADV 1+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-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 II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

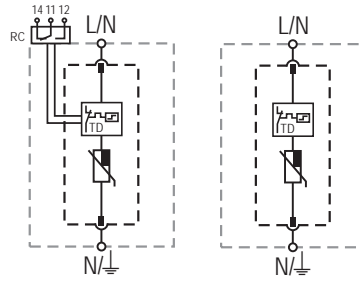
| ProTec T2-ADV-xxx-1+0(-R) | | 75 | 150 | 300 | 350 | 480 |
|--|------------|--|-----------|-----------|-----------|-----------|
| IEC Electrical | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA | 50kA |
| Voltage Protection Level | U_p | 600V | 1000V | 1300V | 1700V | 2000V |
| Response Time | t_A | < 25ns | | | | |
| Overcurrent Protection (max) | | 160A gG | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 50kA | | | | |
| TOV Withstand 5s | U_T | 114V | 229V | 337V | 403V | 581V |
| TOV 120min | U_T | 114V | 229V | 442V | 528V | 762V |
| | mode | Withstand | Withstand | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | |
| UL Electrical | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V |
| Voltage Protection Rating | VPR | 400V | 600V | 900V | 1200V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 100kA | 200kA | 150kA | 200kA | 200kA |
| 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 [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 | | 75 | 150 | 300 | 350 | 480 |
| ProTec T2-ADV-xxx-1+0 | | 59.0208 | 59.0210 | 59.0212 | 59.0214 | 59.0216 |
| ProTec T2-ADV-xxx-1+0-R (with remote contacts) | | 59.0209 | 59.0211 | 59.0213 | 59.0215 | 59.0217 |
| ProTec T2-ADV-xxx-P (plug) | | 59.0202 | 59.0203 | 59.0204 | 59.0205 | 59.0206 |

ProTec T2-ADV 1+0

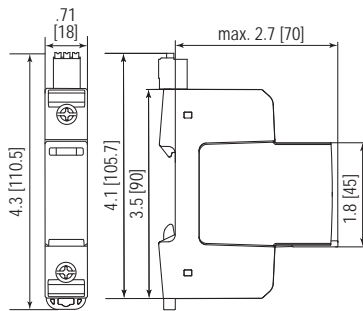
Internal Configuration

Legend

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



Complete Unit

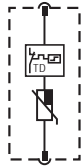


Complete Unit Dimensions & Packaging

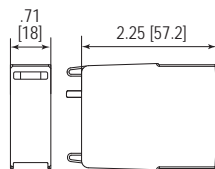
| | | 75 | 150 | 300 | 350 | 480 |
|--------------------------------|--------|--|------|------|------|------|
| Weight | pounds | .266 | .275 | .291 | .302 | .304 |
| | grams | 121 | 125 | 132 | 137 | 144 |
| ProTec T2-ADV-xxx-1+0-R | | | | | | |
| Weight | pounds | .283 | .291 | .306 | .317 | .328 |
| | grams | 128 | 132 | 139 | 144 | 149 |
| 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 | | | | |

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 | 480 |
|------------------------------|--------|-------------------------------------|------|------|------|------|
| Weight | pounds | .120 | .127 | .143 | .154 | .165 |
| | grams | 54 | 58 | 65 | 70 | 75 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | |
| Standard Order Quantity | | 24 Units | | | | |

inches
[mm]

Overvoltage Protection

ProTec T2-ADV 2+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

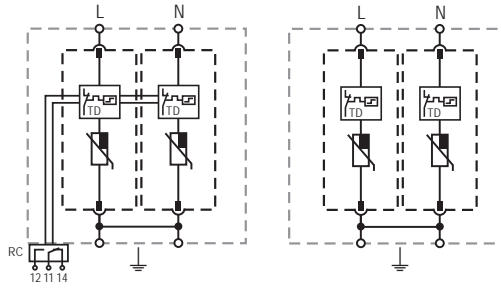
| ProTec T2-ADV-xxx-2+0(-R) | | 75 | 150 | 300 | 350 | 480 |
|--|------------|--|-----------|-----------|-----------|-----------|
| IEC Electrical | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA | 50kA |
| Voltage Protection Level | U_p | 600V | 1000V | 1300V | 1700V | 2000V |
| Response Time | t_A | < 25ns | | | | |
| Overcurrent Protection (max) | | 160A gG | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 50kA | | | | |
| TOV Withstand 5s | U_T | 114V | 229V | 337V | 403V | 581V |
| TOV 120min | U_T | 114V | 229V | 442V | 528V | 762V |
| | mode | Withstand | Withstand | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | | |
| UL Electrical | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V |
| Voltage Protection Rating | VPR | 400V | 600V | 900V | 1200V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 100kA | 200kA | 150kA | 200kA | 200kA |
| 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 [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) / 1.5mm ² (Solid) | | | | |
| Order Information | | | | | | |
| Order Code | | 75 | 150 | 300 | 350 | 480 |
| ProTec T2-ADV-xxx-2+0 | | 59.0347 | 59.0220 | 59.0222 | 59.0224 | 59.0226 |
| ProTec T2-ADV-xxx-2+0-R (with remote contacts) | | 59.0348 | 59.0221 | 59.0223 | 59.0225 | 59.0227 |
| ProTec T2-ADV-xxx-P (plug) | | 59.0202 | 59.0203 | 59.0204 | 59.0205 | 59.0206 |

ProTec T2-ADV 2+0

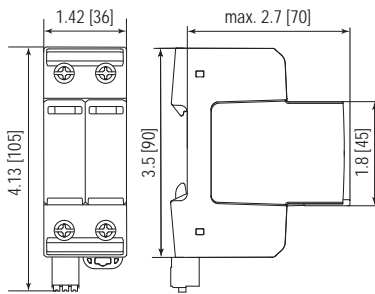
Internal Configuration

Legend

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



Complete Unit

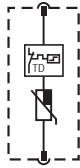


Complete Unit Dimensions & Packaging

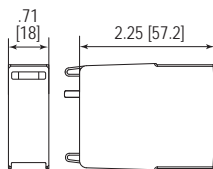
| | | 75 | 150 | 300 | 350 | 480 |
|--------------------------------|--------|--|------|------|------|------|
| Weight | pounds | .524 | .542 | .573 | .595 | .617 |
| | grams | 238 | 246 | 260 | 270 | 280 |
| ProTec T2-ADV-xxx-2+0-R | | | | | | |
| Weight | pounds | .555 | .573 | .590 | .626 | .648 |
| | grams | 252 | 260 | 268 | 284 | 294 |
| 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 | | 7 Units | | | | |

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 | 480 |
|------------------------------|--------|-------------------------------------|------|------|------|------|
| Weight | pounds | .120 | .127 | .143 | .154 | .165 |
| | grams | 54 | 58 | 65 | 70 | 75 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | |
| Standard Order Quantity | | 24 Units | | | | |

inches
[mm]

Overvoltage Protection

ProTec T2-ADV 3+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

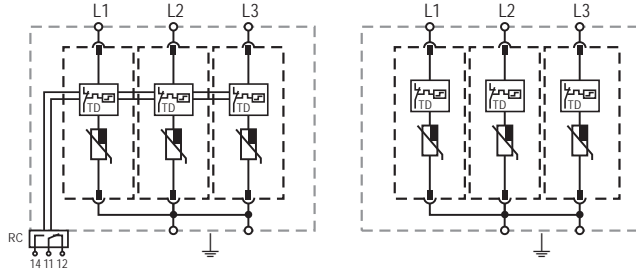
| ProTec T2-ADV-xxx-3+0(-R) | | 150 | 300 | 350 | 480 |
|--|------------|--|-----------|-----------|-----------|
| IEC Electrical | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 120V | 240V | 277V | 400V |
| Maximum Continuous Operating Voltage (AC) | U_c | 150V | 300V | 350V | 480V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA |
| Voltage Protection Level | U_p | 1000V | 1300V | 1700V | 2000V |
| Response Time | t_A | < 25 ns | | | |
| Overcurrent Protection (max) | | 160A gG | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 50kA | | | |
| TOV Withstand 5s | U_T | 229V | 337V | 403V | 581V |
| TOV 120min | U_T | 229V | 442V | 528V | 762V |
| | mode | Withstand | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | |
| UL Electrical | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 150V | 300V | 350V | 480V |
| Voltage Protection Rating | VPR | 600V | 900V | 1200V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 200kA | 150kA | 200kA | 200kA |
| 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 [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 | | 150 | 300 | 350 | 480 |
| ProTec T2-ADV-xxx-3+0 | | 59.0228 | 59.0230 | 59.0232 | 59.0234 |
| ProTec T2-ADV-xxx-3+0-R (with remote contacts) | | 59.0229 | 59.0231 | 59.0233 | 59.0235 |
| ProTec T2-ADV-xxx-P (plug) | | 59.0203 | 59.0204 | 59.0205 | 59.0206 |

ProTec T2-ADV 3+0

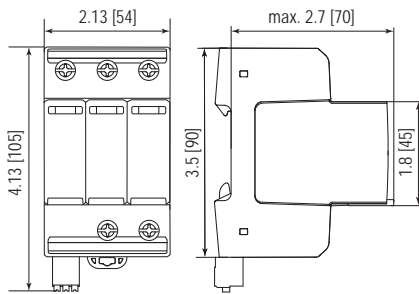
Internal Configuration

Legend

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



Complete Unit

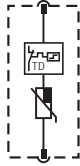


Complete Unit Dimensions & Packaging

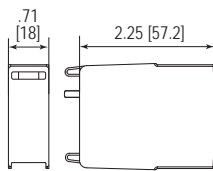
| | | 150 | 300 | 350 | 480 |
|--------------------------------|--------|--|------|------|------|
| Weight | pounds | .787 | .833 | .866 | .899 |
| | grams | 357 | 378 | 393 | 408 |
| ProTec T2-ADV-xxx-3+0-R | | | | | |
| Weight | pounds | .809 | .855 | .888 | .921 |
| | grams | 367 | 388 | 403 | 418 |
| DIN 43880 Dimension | | 3 TE / 2.13" [54] | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | |
| Standard Order Quantity | | 5 Units | | | |

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 150 | 300 | 350 | 480 |
|------------------------------|--------|-------------------------------------|------|------|------|
| Weight | pounds | .127 | .143 | .154 | .165 |
| | grams | 58 | 65 | 70 | 75 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | |
| Standard Order Quantity | | 24 Units | | | |

inches
[mm]

Overvoltage Protection

ProTec T2-ADV 4+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

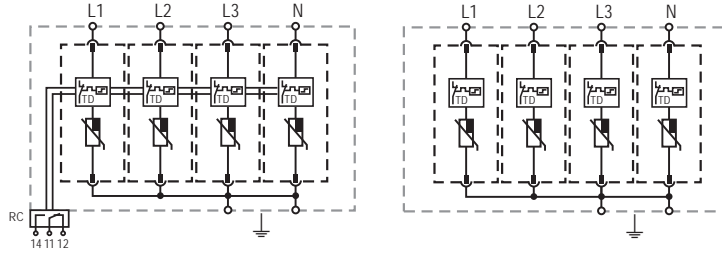
| ProTec T2-ADV-xxx-4+0(-R) | | 150 | 300 | 350 | 480 |
|--|------------|--|-----------|-----------|-----------|
| IEC Electrical | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 120V | 240V | 277V | 400V |
| Maximum Continuous Operating Voltage (AC) | U_c | 150V | 300V | 350V | 480V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA |
| Voltage Protection Level | U_p | 1000V | 1300V | 1700V | 2000V |
| Response Time | t_A | < 25 ns | | | |
| Overcurrent Protection (max) | | 160A gG | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 50kA | | | |
| TOV Withstand 5s | U_T | 229V | 337V | 403V | 581V |
| TOV 120min | U_T | 229V | 442V | 528V | 762V |
| | mode | Withstand | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports | | 1 | | | |
| UL Electrical | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 150V | 300V | 350V | 480V |
| Voltage Protection Rating | VPR | 600V | 900V | 1200V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 200kA | 150kA | 200kA | 200kA |
| 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 [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 | | 150 | 300 | 350 | 480 |
| ProTec T2-ADV-xxx-4+0 | | 59.0236 | 59.0238 | 59.0240 | 59.0242 |
| ProTec T2-ADV-xxx-4+0-R (with remote contacts) | | 59.0237 | 59.0239 | 59.0241 | 59.0243 |
| ProTec T2-ADV-xxx-P (plug) | | 59.0203 | 59.0204 | 59.0205 | 59.0206 |

ProTec T2-ADV 4+0

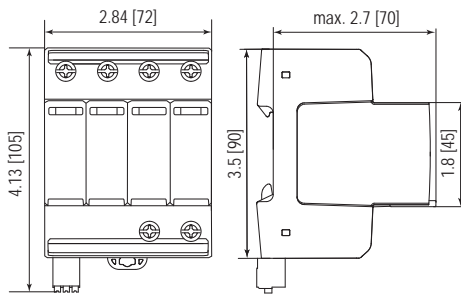
Internal Configuration

Legend

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



Complete Unit

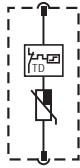


Complete Unit Dimensions & Packaging

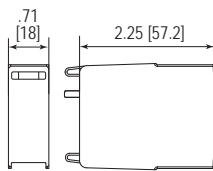
| | | 150 | 300 | 350 | 480 |
|--------------------------------|--------|--|-------|-------|-------|
| Weight | pounds | 1.067 | 1.128 | 1.172 | 1.216 |
| | grams | 484 | 512 | 532 | 552 |
| ProTec T2-ADV-xxx-4+0-R | | | | | |
| Weight | pounds | 1.086 | 1.148 | 1.192 | 1.236 |
| | grams | 493 | 521 | 541 | 561 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | |
| Standard Order Quantity | | 4 Units | | | |

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 150 | 300 | 350 | 480 |
|------------------------------|--------|-------------------------------------|------|------|------|
| Weight | pounds | .127 | .143 | .154 | .165 |
| | grams | 58 | 65 | 70 | 75 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | |
| Standard Order Quantity | | 24 Units | | | |

inches
[mm]

Overvoltage Protection ProTec T2H 2+0

Class II • Type 2 • Type 1 • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2H-xxx-2+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 | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA |
| Voltage Protection Level | U_p | 1500 V |
| Response Time | t_A | < 25 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 |
| Voltage Protection Rating | VPR | 1200 V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 200 kA |

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} | 39.9 lbf-in [4.5 Nm] |
| 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 / 1 A; 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

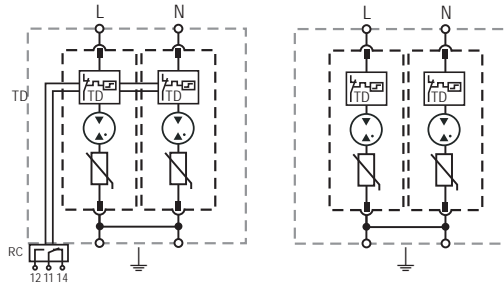
| | |
|---|---------|
| Order Code | 300 |
| ProTec T2H-xxx-2+0 | 59.0326 |
| ProTec T2H-xxx-2+0-R (with remote contacts) | 59.0327 |
| ProTec T2H-xxx-P (plug) | 59.0322 |

ProTec T2H 2+0

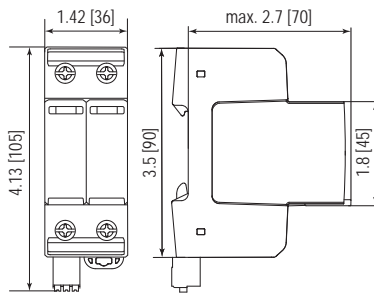
Internal Configuration

Legend

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



Complete Unit

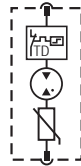


Complete Unit Dimensions & Packaging

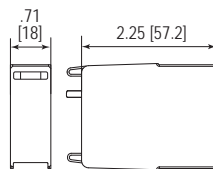
| | |
|------------------------------|--|
| ProTec T2H-xxx-2+0 | 300 |
| Weight | pounds [grams] .514 [233] |
| ProTec T2H-xxx-2+0-R | |
| Weight | pounds [grams] .534 [242] |
| DIN 43880 Dimension | 2 TE / 1.42" [36] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 7 Units |

Plug Internal Configuration

ProTec T2H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | |
|------------------------------|-------------------------------------|
| ProTec T2H-xxx-P | 300 |
| Weight | pounds [grams] .112 [51] |
| DIN 43880 Dimension | 1 TE / .71" [18] |
| Packaging Dimensions (HxWxL) | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] |
| Standard Order Quantity | 24 Units |

inches
[mm]

Overvoltage Protection ProTec T2H 3+0

Class II • Type 2 • Type 1 • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2H-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 | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA |
| Voltage Protection Level | U_p | 1500 V |
| Response Time | t_A | < 25 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 |
| Voltage Protection Rating | VPR | 1200 V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 200 kA |

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} | 39.9 lbf-in [4.5 Nm] |
| 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 / 1 A; 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

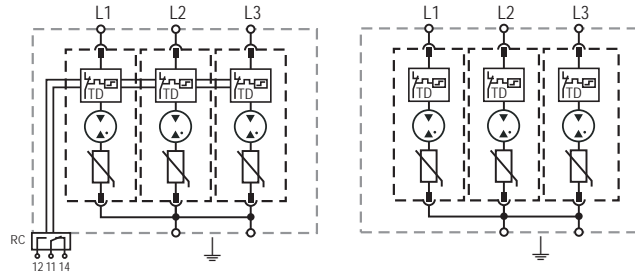
| | |
|---|---------|
| Order Code | 300 |
| ProTec T2H-xxx-3+0 | 59.0328 |
| ProTec T2H-xxx-3+0-R (with remote contacts) | 59.0329 |
| ProTec T2H-xxx-P (plug) | 59.0322 |

ProTec T2H 3+0

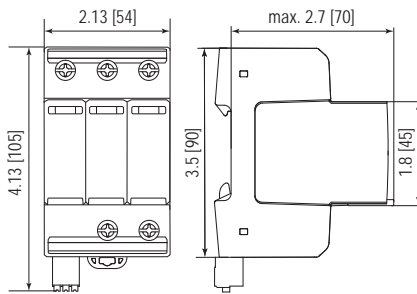
Internal Configuration

Legend

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



Complete Unit

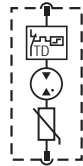


Complete Unit Dimensions & Packaging

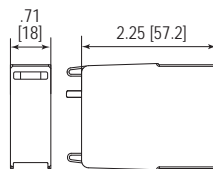
| Complete Unit Dimensions & Packaging | | |
|--------------------------------------|----------------|--|
| ProTec T2H-xxx-3+0 | | 300 |
| Weight | pounds [grams] | .747 [339] |
| ProTec T2H-xxx-3+0-R | | |
| Weight | pounds [grams] | .767 [348] |
| DIN 43880 Dimension | | 3 TE / 2.13" [54] |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | | 5 Units |

Plug Internal Configuration

ProTec T2H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| Single Unit Dimensions & Packaging | | |
|------------------------------------|----------------|-------------------------------------|
| ProTec T2H-xxx-P | | 300 |
| Weight | pounds [grams] | .112 [51] |
| DIN 43880 Dimension | | 1 TE / .71" [18] |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] |
| Standard Order Quantity | | 24 Units |

inches
[mm]

Overvoltage Protection ProTec T2H 4+0

Class II • Type 2 • Type 1 • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2H-xxx-4+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 | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA |
| Voltage Protection Level | U_p | 1500 V |
| Response Time | t_A | < 25 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 |
| Voltage Protection Rating | VPR | 1200 V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 200 kA |

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} | 39.9 lbf-in [4.5 Nm] |
| 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 / 1 A; 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

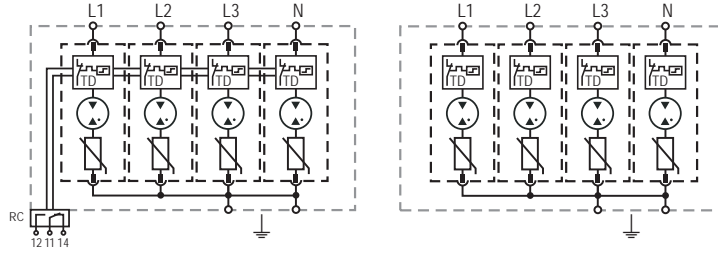
| | |
|---|---------|
| Order Code | 300 |
| ProTec T2H-xxx-4+0 | 59.0330 |
| ProTec T2H-xxx-4+0-R (with remote contacts) | 59.0331 |
| ProTec T2H-xxx-P (plug) | 59.0322 |

ProTec T2H 4+0

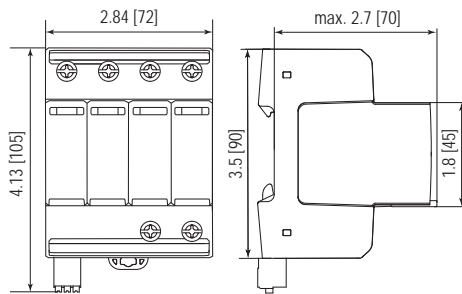
Internal Configuration

Legend

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



Complete Unit

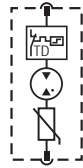


Complete Unit Dimensions & Packaging

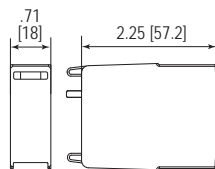
| Complete Unit Dimensions & Packaging | |
|--------------------------------------|--|
| ProTec T2H-xxx-4+0 | 300 |
| Weight | pounds [grams] .944 [428] |
| ProTec T2H-xxx-4+0-R | .964 [437] |
| Weight | pounds [grams] .964 [437] |
| DIN 43880 Dimension | 4 TE / 2.84" [72] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 4 Units |

Plug Internal Configuration

ProTec T2H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| Single Unit Dimensions & Packaging | |
|------------------------------------|-------------------------------------|
| ProTec T2H-xxx-P | 300 |
| Weight | pounds [grams] .112 [51] |
| DIN 43880 Dimension | 1 TE / .71" [18] |
| Packaging Dimensions (HxWxL) | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] |
| Standard Order Quantity | 24 Units |

inches
[mm]

Overvoltage Protection

ProTec T2H 1+1

Class II • Type 2 • Type 1 • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11: 2011
 EN 61643-11: 2012
 UL 1449 4th Edition

Technical Data

ProTec T2H-xxx-1+1(-R)

300

IEC Electrical

| | | |
|---|--------------------------|----------------------|
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-PE) U_c | 300 V / 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_n | 20 kA / 40 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_{max} | 50 kA / 65 kA |
| Voltage Protection Level | (L-N) / (N-PE) U_p | 1500 V / 1500 V |
| Response Time | (L-N) / (N-PE) t_A | <25 ns / <100 ns |
| Overcurrent Protection (max) | | 315 A / 250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA / 50 kA |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} |
| TOV Withstand 120min | (L-N) U_T | 442 V |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V |
| Number of Ports | | 1 |

UL Electrical

| | | |
|---|-------------------|-----------------|
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 300 V / 305 V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 1200 V / 1000 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20 kA / 20 kA |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 200 kA |

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} | 39.9 lbf-in [4.5 Nm] |
| 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

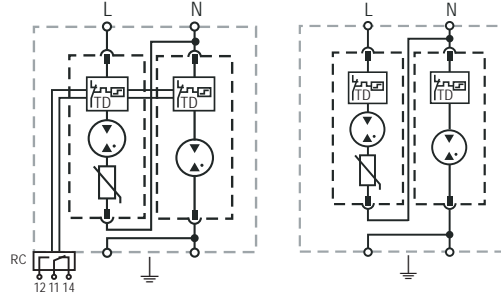
| | |
|---|---------|
| Order Code | 300 |
| ProTec T2H-xxx-1+1 | 59.0332 |
| ProTec T2H-xxx-1+1-R (with remote contacts) | 59.0333 |
| ProTec T2H-xxx-P (plug L-N) | 59.0322 |
| ProTube T2H-40-P (plug N-PE) | 59.0323 |

ProTec T2H 1+1

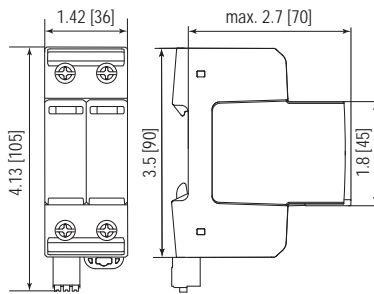
Internal Configuration

Legend

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



Complete Unit

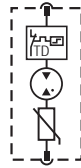


Complete Unit Dimensions & Packaging

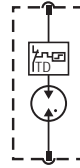
| | |
|------------------------------|--|
| ProTec T2H-xxx-1+1 | 300 |
| Weight | pounds [grams] .516 [234] |
| ProTec T2H-xxx-1+1-R | 525 |
| Weight | pounds [grams] .525 [238] |
| DIN 43880 Dimension | 2 TE / 1.42" [36] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 7 Units |

Plug Internal Configuration

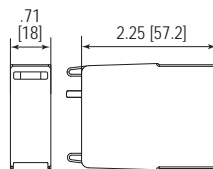
ProTec T2H-xxx-P



ProTube T2H-40-P



Spare Plug



Single Unit Dimensions & Packaging

| | |
|------------------------------|-------------------------------------|
| ProTec T2H-xxx-P | 300 |
| Weight | pounds [grams] .112 [51] |
| ProTube T2H-40-P | 40 |
| Weight | pounds [grams] .093 [42] |
| DIN 43880 Dimension | 1 TE / .71" [18] |
| Packaging Dimensions (HxWxL) | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] |
| Standard Order Quantity | 24 Units |

inches
[mm]

Overvoltage Protection

ProTec T2H 3+1

Class II • Type 2 • Type 1 • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Technology: Hybrid
 Leakage Current Free: Yes
 Housing: Pluggable Design
 Compliance: IEC 61643-11: 2011
 EN 61643-11: 2012
 UL 1449 4th Edition

Technical Data

ProTec T2H-xxx-3+1(-R)

300

IEC Electrical

| | | |
|---|--------------------------|----------------------|
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) / (N-PE) U_c | 300 V / 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_n | 20 kA / 40kA |
| Maximum Discharge Current (8/20 μ s) | (L-N) / (N-PE) I_{max} | 50 kA / 65 kA |
| Voltage Protection Level | (L-N) / (N-PE) U_p | 1500 V / 1500 V |
| Response Time | (L-N) / (N-PE) t_A | <25 ns / < 100 ns |
| Overcurrent Protection (max) | | 315 A / 250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA / 50 kA |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} |
| TOV Withstand 120min | (L-N) U_T | 442 V |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V |
| Number of Ports | | 1 |

UL Electrical

| | | |
|---|-------------------|---------------|
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 300V / 305V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 1200V / 1000V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20 kA / 20 kA |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 200 kA |

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 [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 / 1 A; 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

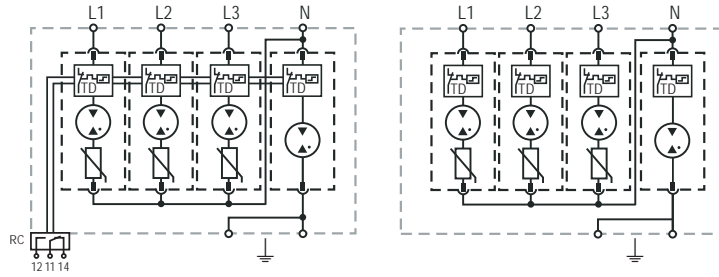
| | |
|---|---------|
| Order Code | 300 |
| ProTec T2H-xxx-3+1 | 59.0334 |
| ProTec T2H-xxx-3+1-R (with remote contacts) | 59.0335 |
| ProTec T2H-xxx-P (plug L-N) | 59.0322 |
| ProTube T2H-40-P (plug N-PE) | 59.0323 |

ProTec T2H 3+1

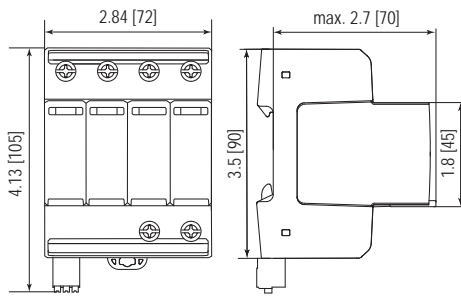
Internal Configuration

Legend

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



Complete Unit

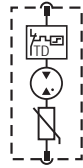


Complete Unit Dimensions & Packaging

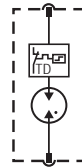
| | |
|------------------------------|--|
| ProTec T2H-xxx-3+1 | 300 |
| Weight | pounds [grams] .947 [429] |
| ProTec T2H-xxx-3+1-R | .958 [434] |
| Weight | pounds [grams] .958 [434] |
| DIN 43880 Dimension | 4 TE / 2.84" [72] |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | 4 Units |

Plug Internal Configuration

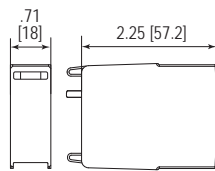
ProTec T2H-xxx-P



ProTube T2H-40-P



Spare Plug



Single Unit Dimensions & Packaging

| | |
|------------------------------|-------------------------------------|
| ProTec T2H-xxx-P | 300 |
| Weight | pounds [grams] .112 [51] |
| ProTube T2H-40-P | 40 |
| Weight | pounds [grams] .093 [42] |
| DIN 43880 Dimension | 1 TE / .71" [18] |
| Packaging Dimensions (HxWxL) | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] |
| Standard Order Quantity | 24 Units |

inches
[mm]

Overvoltage Protection

SafeTec T2 2+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Safety: Patented Current Limiting Technology
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

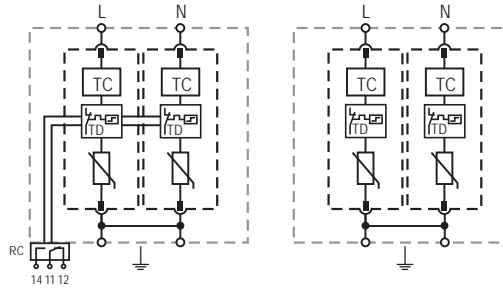
| SafeTec T2-xxx-2+0(-R) | | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 |
|---|------------|--|---------|---------|---------|---------|---------|---------|---------|
| IEC Electrical | | | | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V | 400V | 600V | 600V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V | 550V | 750V | 880V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA | 50kA | 50kA | 35kA | 35kA |
| Voltage Protection Level | U_p | 800V | 1250V | 1650V | 1750V | 2300V | 2500V | 3500V | 3600V |
| Response Time | t_A | < 25 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 | 150V | 255V | 442V | 529V | 762V | 918V | 1200V | 1250V |
| Number of Ports | | 1 | | | | | | | |
| UL Electrical | | | | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V | 550V | 750V | 880V |
| Voltage Protection Rating | VPR | 600V | 700V | 1200V | 1200V | 1500V | 1800V | 2500V | 2500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 85kA | 200kA | 150kA | 200kA | 200kA | 200kA | 200kA | 200kA |
| 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 [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) / 1.5mm ² (Solid) | | | | | | | |
| Order Information | | | | | | | | | |
| Order Code | | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 |
| SafeTec T2-xxx-2+0 | | 59.0345 | 59.0148 | 59.0150 | 59.0152 | 59.0154 | 59.0156 | 59.0158 | 59.0160 |
| SafeTec T2-xxx-2+0-R (with remote contacts) | | 59.0346 | 59.0149 | 59.0151 | 59.0153 | 59.0155 | 59.0157 | 59.0159 | 59.0161 |
| SafeTec T2-xxx-P (plug) | | 59.0125 | 59.0126 | 59.0127 | 59.0128 | 59.0129 | 59.0299 | 59.0130 | 59.0131 |

SafeTec T2 2+0

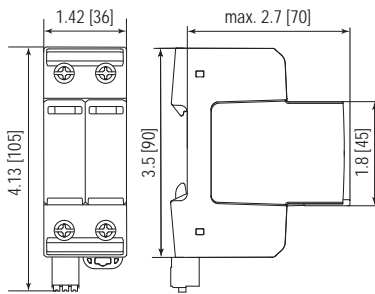
Internal Configuration

Legend

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



Complete Unit

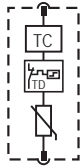


Complete Unit Dimensions & Packaging

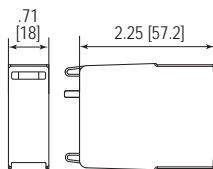
| | | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 |
|------------------------------|--------|--|------|------|------|------|------|------|------|
| SafeTec T2-xxx-2+0 | | | | | | | | | |
| Weight | pounds | .545 | .567 | .580 | .616 | .620 | .642 | .677 | .686 |
| | grams | 247 | 257 | 263 | 279 | 281 | 291 | 307 | 311 |
| SafeTec T2-xxx-2+0-R | | | | | | | | | |
| Weight | pounds | .565 | .587 | .600 | .635 | .640 | .662 | .697 | .706 |
| | grams | 256 | 266 | 272 | 288 | 290 | 300 | 316 | 320 |
| 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 | | 7 Units | | | | | | | |

Plug Internal Configuration

SafeTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 |
|------------------------------|--------|-------------------------------------|------|------|------|------|------|------|------|
| SafeTec T2-xxx-P | | | | | | | | | |
| Weight | pounds | .128 | .139 | .146 | .163 | .165 | .176 | .194 | .198 |
| | grams | 58 | 63 | 66 | 74 | 75 | 80 | 88 | 90 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | | | | |
| Standard Order Quantity | | 24 Units | | | | | | | |

inches
[mm]

Overvoltage Protection

SafeTec T2 4+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Safety: Patented Current Limiting Technology
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

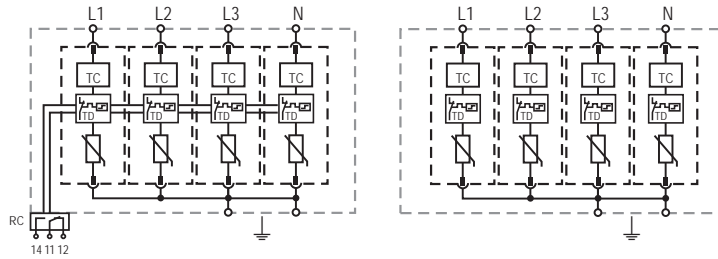
| SafeTec T2-xxx-4+0(-R) | | 150 | 300 | 350 | 480 | 550 |
|---|------------|--|---------|---------|---------|---------|
| IEC Electrical | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 120V | 240V | 277V | 400V | 400V |
| Maximum Continuous Operating Voltage (AC) | U_c | 150V | 300V | 350V | 480V | 550V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50kA | 50kA | 50kA | 50kA | 50kA |
| Voltage Protection Level | U_p | 1250V | 1650V | 1750V | 2300V | 2500V |
| Response Time | t_A | < 25 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 | 255V | 442V | 529V | 762V | 918V |
| Number of Ports | | 1 | | | | |
| UL Electrical | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 150V | 300V | 350V | 480V | 550V |
| Voltage Protection Rating | VPR | 700V | 1200V | 1200V | 1500V | 1800V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA | 20kA | 20kA | 20kA |
| Short-Circuit Current Rating (AC) | SCCR | 200kA | 150kA | 200kA | 200kA | 200kA |
| 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} | 39.9 lbf-in [4.5 Nm] | | | | |
| 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 | | 150 | 300 | 350 | 480 | 550 |
| SafeTec T2-xxx-4+0 | | 59.0176 | 59.0178 | 59.0180 | 59.0182 | 59.0184 |
| SafeTec T2-xxx-4+0-R (with remote contacts) | | 59.0177 | 59.0179 | 59.0181 | 59.0183 | 59.0185 |
| SafeTec T2-xxx-P (plug) | | 59.0126 | 59.0127 | 59.0128 | 59.0129 | 59.0299 |

SafeTec T2 4+0

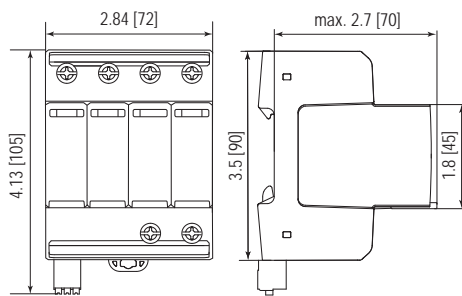
Internal Configuration

Legend

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



Complete Unit

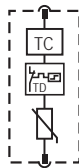


Complete Unit Dimensions & Packaging

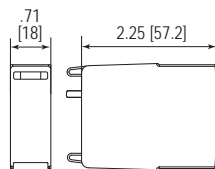
| | | 150 | 300 | 350 | 480 | 550 |
|------------------------------|--------|--|-------|-------|-------|-------|
| Weight | pounds | 1.050 | 1.077 | 1.147 | 1.156 | 1.200 |
| | grams | 476 | 488 | 520 | 524 | 544 |
| SafeTec T2-xxx-4+0-R | | | | | | |
| Weight | pounds | 1.070 | 1.097 | 1.167 | 1.176 | 1.220 |
| | grams | 485 | 497 | 529 | 533 | 553 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | | | | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | | |
| Standard Order Quantity | | 4 Units | | | | |

Plug Internal Configuration

SafeTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 150 | 300 | 350 | 480 | 550 |
|------------------------------|--------|-------------------------------------|------|------|------|------|
| Weight | pounds | .139 | .146 | .163 | .165 | .176 |
| | grams | 63 | 66 | 74 | 75 | 80 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | |
| Standard Order Quantity | | 24 Units | | | | |

inches
[mm]

Overvoltage Protection

SafeTec T2 1+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Safety: Patented Current Limiting Technology
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

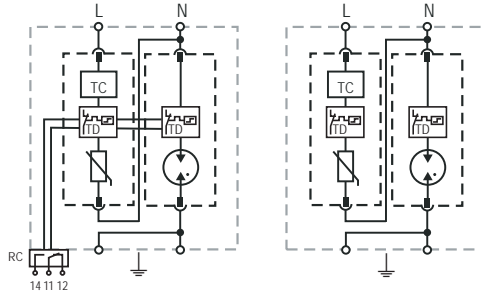
| SafeTec T2-xxx-1+1(-R) | | 75 | 150 | 300 | 350 |
|---|------------------------|--|---------------|---------------|---------------|
| IEC Electrical | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60 V | 120 V | 240 V | 277 V |
| Maximum Continuous Operating Voltage (AC) | (L-N) U_c | 75 V | 150 V | 300 V | 350 V |
| | (N-PE) U_c | 305 V | 305 V | 305 V | 305 V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | 20 kA/40 kA | 20 kA/40 kA | 20 kA/40 kA | 20 kA/40 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_{max} | 50 kA/65 kA | 50 kA/65 kA | 50 kA/65 kA | 50 kA/65 kA |
| Voltage Protection Level | (L-N)/(N-PE) U_p | 800 V/1500 V | 1250 V/1500 V | 1650 V/1500 V | 1750 V/1500 V |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} | | | |
| Response Time | (L-N)/(N-PE) t_A | < 25 ns / < 100 ns | | | |
| Overcurrent Protection (max) | | 315 A/250 A gG | | | |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA/50 kA | | | |
| TOV Withstand 120min | (L-N) U_T | 150 V | 255 V | 442 V | 529 V |
| TOV Withstand 200ms | (N-PE) U_T | 1200 V | | | |
| Number of Ports | | 1 | | | |
| UL Electrical | | | | | |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-G) MCOV | 75V/305V | 150V/305V | 300V/305V | 350V/305V |
| Voltage Protection Rating | (L-N)/(N-G) VPR | 600V/1000V | 700V/1000V | 1200V/1000V | 1200V/1000V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-G) I_n | 20 kA/20 kA | | | |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 85 kA | 200 kA | 150 kA | 200 kA |
| 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} | 39.9 lbf-in [4.5 Nm] | | | |
| 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 | | 75 | 150 | 300 | 350 |
| SafeTec T2-xxx-1+1 | | 59.0186 | 59.0188 | 59.0190 | 59.0192 |
| SafeTec T2-xxx-1+1-R (with remote contacts) | | 59.0187 | 59.0189 | 59.0191 | 59.0193 |
| SafeTec T2-xxx-P (plug L-N) | | 59.0125 | 59.0126 | 59.0127 | 59.0128 |
| SafeTube T2-40-P (plug N-PE) | | 59.0274 | 59.0274 | 59.0274 | 59.0274 |

SafeTec T2 1+1

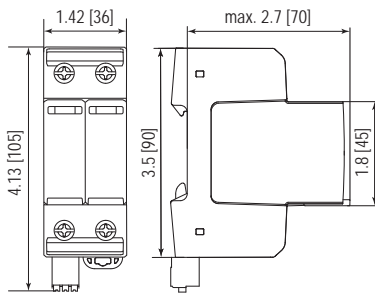
Internal Configuration

Legend

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



Complete Unit

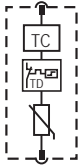


Complete Unit Dimensions & Packaging

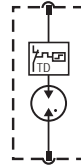
| | | 75 | 150 | 300 | 350 |
|------------------------------|--------|--|------|------|------|
| SafeTec T2-xxx-1+1 | Weight | pounds .532 | .543 | .549 | .567 |
| | | grams 241 | 246 | 249 | 257 |
| SafeTec T2-xxx-1+1-R | | | | | |
| Weight | pounds | .541 | .552 | .558 | .576 |
| | grams | 245 | 250 | 253 | 261 |
| 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 | | 7 Units | | | |

Plug Internal Configuration

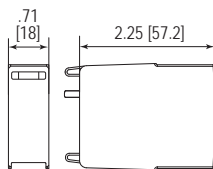
SafeTec T2-xxx-P



SafeTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 75 | 150 | 300 | 350 |
|------------------------------|--------|-------------------------------------|------|------|------|
| SafeTec T2-xxx-P | Weight | pounds .128 | .139 | .146 | .163 |
| | | grams 58 | 63 | 66 | 74 |
| SafeTube T2-40-P | | | 40 | | |
| Weight | pounds | .093 | | | |
| | grams | 42 | | | |
| DIN 43880 Dimension | | 1 TE / .71" [18] | | | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | |
| Standard Order Quantity | | 24 Units | | | |

inches
[mm]

Overvoltage Protection

SafeTec T2 3+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Safety: Patented Current Limiting Technology
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

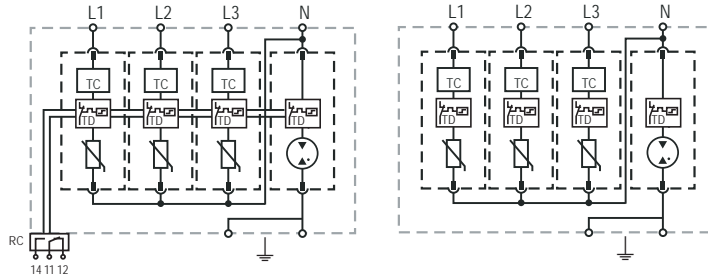
| SafeTec T2-xxx-3+1(-R) | | 300 | 350 |
|---|------------------------|--|-------------|
| IEC Electrical | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 240V | 277V |
| Maximum Continuous Operating Voltage (AC) | (L-N) U_c | 300V | 350V |
| | (N-PE) U_c | 305V | 305V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | 20 kA/40 kA | 20 kA/40 kA |
| Maximum Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_{max} | 50 kA/65 kA | 50 kA/65 kA |
| Voltage Protection Level | (L-N)/(N-PE) U_p | 1650V/1500V | 1750V/1500V |
| Follow Current Interrupt Rating | (N-PE) I_{fi} | 100 A _{RMS} | |
| Response Time | (L-N)/(N-PE) t_A | < 25 ns / < 100 ns | |
| Overcurrent Protection (max) | | 315 A/250 A gG | |
| Short-Circuit Current Rating (AC) | (L-N) I_{SCCR} | 25 kA/50 kA | |
| TOV Withstand 120min | (L-N) U_T | 442V | 529V |
| TOV Withstand 200ms | (N-PE) U_T | 1200V | |
| Number of Ports | | 1 | |
| UL Electrical | | | |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-PE) MCOV | 300V/305V | 350V/305V |
| Voltage Protection Rating | (L-N)/(N-PE) VPR | 1200V/1000V | 1200V/1000V |
| Nominal Discharge Current (8/20 μ s) | (L-N)/(N-PE) I_n | 20 kA/20 kA | |
| Short-Circuit Current Rating (AC) | (L-N) SCCR | 150 kA | 200 kA |
| 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 [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 | 350 |
| SafeTec T2-xxx-3+1 | | 59.0198 | 59.0200 |
| SafeTec T2-xxx-3+1-R (with remote contacts) | | 59.0199 | 59.0201 |
| SafeTec T2-xxx-P (plug L-N) | | 59.0127 | 59.0128 |
| SafeTube T2-40-P (plug N-PE) | | 59.0274 | 59.0274 |

SafeTec T2 3+1

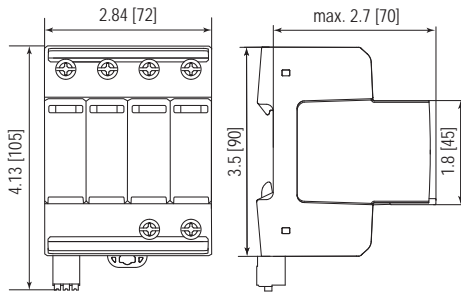
Internal Configuration

Legend

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



Complete Unit

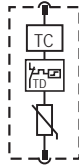


Complete Unit Dimensions & Packaging

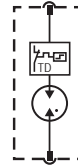
| | | 300 | 350 |
|------------------------------|--------|--|-------|
| Weight | pounds | 1.046 | 1.099 |
| | grams | 474 | 498 |
| SafeTec T2-xxx-3+1-R | | | |
| Weight | pounds | 1.057 | 1.110 |
| | grams | 479 | 503 |
| DIN 43880 Dimension | | 4 TE / 2.84" [72] | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 4 Units | |

Plug Internal Configuration

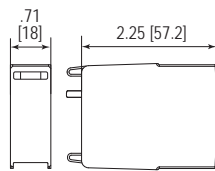
SafeTec T2-xxx-P



SafeTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 300 | 350 |
|------------------------------|--------|-------------------------------------|------|
| Weight | pounds | .146 | .163 |
| | grams | 66 | 74 |
| SafeTube T2-40-P | | 40 | |
| Weight | pounds | .093 | |
| | grams | 42 | |
| DIN 43880 Dimension | | 1 TE / .71" [18] | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | |
| Standard Order Quantity | | 24 Units | |

inches
[mm]

Pluggable Multi-Pole SPD for Photovoltaic Systems

ProTec T1-PV 3+0

Type 1 • Type 2 • Type 1CA



Location of Use: String box, Inverter
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 EN/UL Category: Type 1, Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: EN 50539-11:2013+A1:2014
 UL 1449 4th Edition

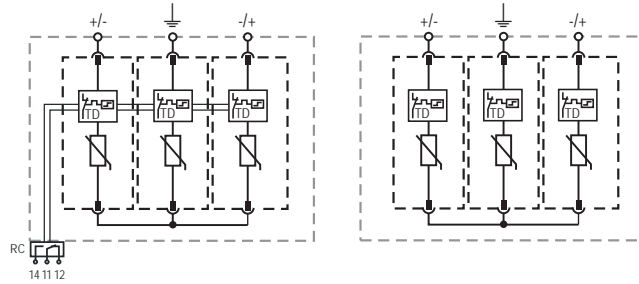
| ProTec T1-xxxxPV-3+0(-R) | | 1100 | 1500 |
|---|----------------------|--|------------------|
| EN Electrical | | | |
| Maximum Continuous Operating Voltage (PV) | U_{CPV} | 1100V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | 20kA |
| Impulse Discharge Current (10/350 μ s) | I_{imp} | 6.25kA | 5kA |
| Specific Energy | W/R | 9.77kJ/ Ω | 6.25kJ/ Ω |
| Charge | Q | 3.125As | 2.5As |
| Total Discharge Current (10/350 μ s) | I_{Total} | 12.5kA | 10kA |
| Total Discharge Current (8/20 μ s) | I_{Total} | 50kA | 40kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 40kA | 30kA |
| Voltage Protection Level | (+)-PE, (-)-PE U_p | 3800V | 5000V |
| | (+)-(-) U_p | 3800V | 5000V |
| Response Time | t_A | < 25ns | |
| Short-Circuit Current Rating | I_{SCPV} | 11kA | |
| Number of Ports | | 1 | |
| UL Electrical | | | |
| Maximum Permitted DC Voltage | V_{pVdc} | 1100V | 1500V |
| Voltage Protection Rating | (+)-G, (-)-G VPR | 2500V | 4000V |
| | (+)-(-) VPR | 2500V | 4000V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20kA | |
| Short-Circuit Current Rating | SCCR | 50kA | 65kA |
| 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 [4000m] | |
| Terminal Screw Torque | M_{max} | 39.9 lbf-in [4.5Nm] | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded) / 4 AWG (Flexible) | |
| | | 35mm ² (Solid, Stranded) / 25mm ² (Flexible) | |
| Mounting | | 35mm 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) | |
| Order Information | | | |
| Order Code | | 1100 | 1500 |
| ProTec T1-xxxxPV-3+0 | | 59.0285 | 59.0289 |
| ProTec T1-xxxxPV-3+0-R (with remote contacts) | | 59.0286 | 59.0290 |
| ProTec T1-550PV-P (middle plug) | | 59.0283 | - |
| ProTec T1-550PV-M-P (side plug) | | 59.0284 | - |
| ProTec T1-750PV-P (middle plug) | | - | 59.0287 |
| ProTec T1-750PV-M-P (side plug) | | - | 59.0288 |

ProTec T1-PV 3+0

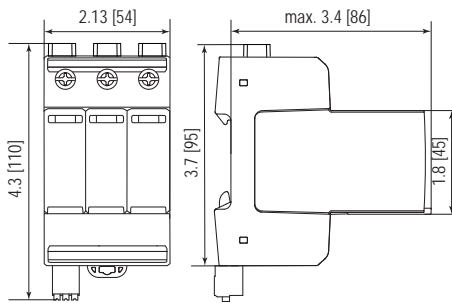
Internal Configuration

Legend

- +/-, -/+ + or - Conductor Terminal
- ⏏ PE/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect



Complete Unit

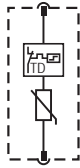


Complete Unit Dimensions & Packaging

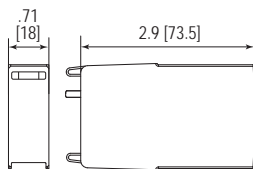
| | | 1100 | 1500 |
|----------------------------------|--------|--|-------|
| Weight | pounds | .968 | 1.034 |
| | grams | 439 | 469 |
| ProTec T1-xxxxPV-3+0-R | | | |
| Weight | pounds | .979 | 1.045 |
| | grams | 444 | 474 |
| DIN 43880 Dimension | | 3 TE / 2.13" [54] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 5 Units | |

Plug Internal Configuration

ProTec T1-xxxPV-P
ProTec T1-xxxPV-M-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 550 | 750 |
|----------------------------------|--------|--|------|
| Weight | pounds | .220 | .282 |
| | grams | 100 | 128 |
| ProTec T1-xxxPV-M-P | | | |
| Weight | pounds | .194 | .196 |
| | grams | 88 | 89 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | |
| 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 | |

inches
[mm]

Pluggable Multi-Pole SPD for Photovoltaic Systems

ProTec T2-PV 3+0

Type 2 • Type 1CA



Location of Use: String box, Inverter
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 EN/UL Category: Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: EN 50539-11:2013+A1:2014
 UL 1449 4th Edition

Technical Data

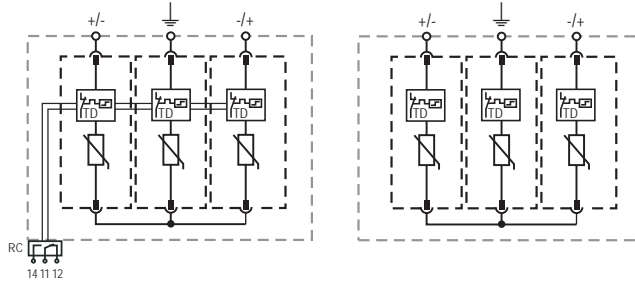
| ProTec T2-xxxxPV-3+0(-R) | | 1100 | 1500 |
|---|-------------|--|---------|
| EN Electrical | | | |
| Maximum Continuous Operating Voltage (PV) | U_{CPV} | 1100V | 1500V |
| Nominal Discharge Current (8/20 μ s) | I_n | | 20kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 40kA | 30kA |
| Total Discharge Current | I_{Total} | 50kA | 40kA |
| Voltage Protection Level | U_p | 3800V | 5000V |
| Response Time | t_A | | < 25ns |
| Short-Circuit Current Rating | I_{SCPV} | | 11kA |
| Number of Ports | | | 1 |
| UL Electrical | | | |
| Maximum Permitted DC Voltage | V_{pVdc} | 1100V | 1500V |
| Voltage Protection Rating | VPR | 2500V | 4000V |
| Nominal Discharge Current (8/20 μ s) | I_n | | 20kA |
| Short-Circuit Current Rating | SCCR | 50kA | 65kA |
| 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 [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) / 1.5mm ² (Solid) | |
| Order Information | | | |
| Order Code | | 1100 | 1500 |
| ProTec T2-xxxxPV-3+0 | | 59.0292 | 59.0295 |
| ProTec T2-xxxxPV-3+0-R (with remote contacts) | | 59.0293 | 59.0296 |
| ProTec T2-550PV-P (plug) | | 59.0291 | - |
| ProTec T2-750PV-P (plug) | | - | 59.0294 |

ProTec T2-PV 3+0

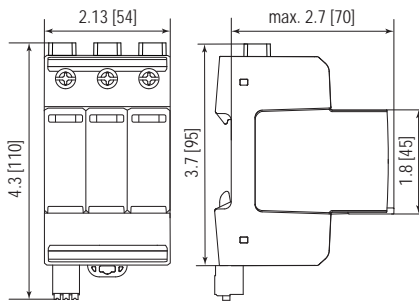
Internal Configuration

Legend

- +/-, -/+ + or - Conductor Terminal
- ⊥ PE/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect



Complete Unit

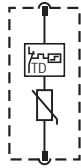


Complete Unit Dimensions & Packaging

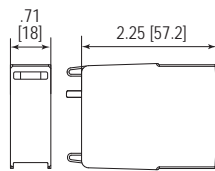
| | | 1100 | 1500 |
|-------------------------------|--------|--|------|
| Weight | pounds | .806 | .879 |
| | grams | 366 | 399 |
| ProTec T2-xxxxPV-3+0-R | | | |
| Weight | pounds | .817 | .890 |
| | grams | 371 | 404 |
| DIN 43880 Dimension | | 3 TE / 2.13" [54] | |
| Packaging Dimensions (HxWxL) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 5 Units | |

Plug Internal Configuration

ProTec T2-XXXPV-P



Spare Plug



Single Unit Dimensions & Packaging

| | | 550 | 750 |
|------------------------------|--------|-------------------------------------|------|
| Weight | pounds | .150 | .174 |
| | grams | 68 | 79 |
| DIN 43880 Dimension | | 1 TE / .71" [18] | |
| Packaging Dimensions (HxWxL) | | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | |
| Standard Order Quantity | | 24 Units | |

inches
[mm]

Isolating Spark Gaps (ISG) EPZ 100/350 Ex Class 1L for Light Duty



Corrosion resistant enclosure with hermetic environmental seal and flying leads for ease of connection. Use in places in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas or vapour is not likely to occur in normal operation, but if it does occur, will persist for short period only (usually no longer than two hours).

Location of Use: Explosive atmosphere, Zone 2, Group II, Category 3

Type of Protection: Equipment Producing Operational Sparks
IEC/EN Category: Class 1L

Housing: Corrosion resistant enclosure

Compliance: IEC 60079-0:2011
IEC 60079-15:2010
EN 60079-0:2012+A11:2013
EN 60079-15:2010
EN 62561-3:2017



Technical Data

EPZ 100/350 Ex

350

Intrinsic Safety Parameters

| | |
|--------------------|--------------------------------------|
| IECEx BAS 15.0069X | Ex nC IIC T5 Gc (-30°C ≤ 70°C) |
| Basefa15ATEX0102X | II 3G Ex nC IIC T5 Gc (-30°C ≤ 70°C) |

Electrical

| | | |
|---|-------------|----------|
| Rated Power Frequency Withstand Voltage | $U_{W AC}$ | 240V |
| Rated DC Withstand Voltage | $U_{W DC}$ | 350V |
| Rated Impulse Sparkover Voltage | $U_{r imp}$ | 1000V |
| Maximum Discharge Current (8/20 μs) | I_{max} | 100 kA |
| Impulse Discharge Current (10/350 μs) | I_{imp} | 25 kA |
| Specific Energy | W/R | 156 kJ/Ω |
| Charge | Q | 12.5 As |
| Residual Voltage at 5 kA (8/20 μs) | U_{res} | 1.6 kV |
| ISG Classification | | 1 L |
| Capacitance at 1 MHz | C | < 10 pF |

Mechanical & Environmental

| | | |
|-----------------------------|-------|---------------------------------------|
| Temperature Range | T_a | -40 °F to +158 °F [-40 °C to +70 °C] |
| Nominal Outer Diameter | | 1.102" [28mm] |
| Nominal Length | | 5.511" [140mm] |
| Length With Cables (approx) | | 37.402" [950mm] |
| Cross Sectional Area | | 6 AWG [16mm ²] |
| Number of Conductors | | ≥ 465/0.21 |
| Insulation | | Double Insulated |
| Environmental Protection | | UV Stabilized, Flame Retardant |
| Resistant | | Acids, Solvents and Oils |
| Connection | | Suitable for Screw or Lug Termination |
| Degree of Protection | | IP 67 |
| Housing Material | | Metal Tube |
| Location | | Indoor/Outdoor |

Specifications for Use

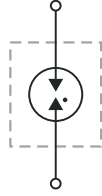
| | |
|---------------|--|
| Environmental | Local heating by pipelines and other hot surfaces in vicinity of the installation of the product must be considered by the installer to ensure that specified maximum ambient temperature is not exceeded. |
| Wiring | Connection of the internal cables must be in accordance with the applicable requirement of IEC 60079-0 and IEC 60079-15 for field wiring connections. |
| Safety | EPZ has an external non-metallic heat shrink sleeve which may provide a potential electrostatic charging hazard. See installation instructions for further information. |

Order Information

| | |
|----------------|---------|
| Order Code | 350 |
| EPZ 100/350 Ex | 509 521 |

EPZ 100/350 Ex

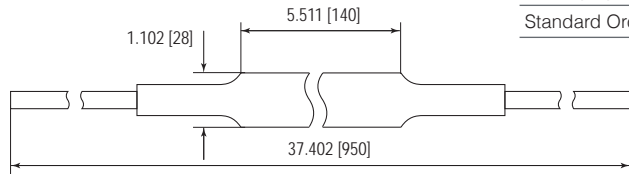
Internal Configuration



Complete Unit







Complete Unit Dimensions & Packaging

| EPZ 100/350 Ex | | 350 |
|------------------------------|----------------|---------------------------------------|
| Weight | pounds [grams] | 1.103 [500] |
| Packaging Dimensions (H×W×L) | | 13.7 × 4.9 × 2.1" [350 × 125 × 55 mm] |
| Standard Order Quantity | | 27 Units |










inches
[mm]



| | Product Name | Order Code | Dimensions DIN 43880 | Catalog Page(s) |
|--|----------------------|------------|-------------------------|--------------------|
| Pluggable Single Pole & Multi-pole Surge Protective Devices | | | | |
| ProTec T1 2+0 (R)  | ProTec T1-75-2+0 | 59.0349 | 2 TE | 14 |
| | ProTec T1-75-2+0-R | 59.0350 | 2 TE | 14 |
| | ProTec T1-150-2+0 | 59.0019 | 2 TE | 14 |
| | ProTec T1-150-2+0-R | 59.0020 | 2 TE | 14 |
| | ProTec T1-300-2+0 | 59.0021 | 2 TE | 14 |
| | ProTec T1-300-2+0-R | 59.0022 | 2 TE | 14 |
| | ProTec T1-350-2+0 | 59.0023 | 2 TE | 14 |
| | ProTec T1-350-2+0-R | 59.0024 | 2 TE | 14 |
| | ProTec T1-480-2+0 | 59.0025 | 2 TE | 14 |
| | ProTec T1-480-2+0-R | 59.0026 | 2 TE | 14 |
| | ProTec T1-750-2+0 | 59.0027 | 2 TE | 14 |
| ProTec T1-750-2+0-R | 59.0028 | 2 TE | 14 | |
| ProTec T1 4+0 (R)  | ProTec T1-150-4+0 | 59.0039 | 4 TE | 16 |
| | ProTec T1-150-4+0-R | 59.0040 | 4 TE | 16 |
| | ProTec T1-300-4+0 | 59.0041 | 4 TE | 16 |
| | ProTec T1-300-4+0-R | 59.0042 | 4 TE | 16 |
| | ProTec T1-350-4+0 | 59.0351 | 4 TE | 16 |
| | ProTec T1-350-4+0-R | 59.0352 | 4 TE | 16 |
| | ProTec T1-480-4+0 | 59.0043 | 4 TE | 16 |
| ProTec T1-480-4+0-R | 59.0044 | 4 TE | 16 | |
| ProTec T1 1+1 (R)  | ProTec T1-75-1+1 | 59.0047 | 2 TE | 18 |
| | ProTec T1-75-1+1-R | 59.0048 | 2 TE | 18 |
| | ProTec T1-150-1+1 | 59.0049 | 2 TE | 18 |
| | ProTec T1-150-1+1-R | 59.0050 | 2 TE | 18 |
| | ProTec T1-300-1+1 | 59.0051 | 2 TE | 18 |
| | ProTec T1-300-1+1-R | 59.0052 | 2 TE | 18 |
| | ProTec T1-350-1+1 | 59.0053 | 2 TE | 18 |
| ProTec T1-350-1+1-R | 59.0054 | 2 TE | 18 | |
| ProTec T1 3+1 (R)  | ProTec T1-300-3+1 | 59.0059 | 4 TE | 20 |
| | ProTec T1-300-3+1-R | 59.0060 | 4 TE | 20 |
| | ProTec T1-350-3+1 | 59.0061 | 4 TE | 20 |
| | ProTec T1-350-3+1-R | 59.0062 | 4 TE | 20 |
| ProTec T1-xxx-P | ProTec T1-75-P | 59.0001 | 1 TE plug | 14, 18 |
| | ProTec T1-150-P | 59.0002 | 1 TE plug | 14-18 |
| | ProTec T1-300-P | 59.0003 | 1 TE plug | 54-64 |
| | ProTec T1-350-P | 59.0004 | 1 TE plug | 14-20 |
| | ProTec T1-480-P | 59.0005 | 1 TE plug | 14, 16 |
| | ProTec T1-750-P | 59.0006 | 1 TE plug | 14 |
| ProTec T1H 2+0 (R)  | ProTec T1H-300-2+0 | 59.0312 | 2 TE | 22 |
| | ProTec T1H-300-2+0-R | 59.0313 | 2 TE | 22 |
| ProTec T1H 4+0 (R)  | ProTec T1H-300-4+0 | 59.0316 | 4 TE | 24 |
| | ProTec T1H-300-4+0-R | 59.0317 | 4 TE | 24 |

| | Product Name | Order Code | Dimensions DIN 43880 | Catalog Page(s) |
|---|-----------------------|------------|-------------------------|--------------------|
| Pluggable Single Pole & Multi-pole Surge Protective Devices | | | | <i>(continued)</i> |
| ProTec T1H 1+1 (R) | ProTec T1H-300-1+1 | 59.0318 | 2 TE | 26 |
| | ProTec T1H-300-1+1-R | 59.0319 | 2 TE | 26 |
| ProTec T1H 3+1 (R) | ProTec T1H-300-3+1 | 59.0320 | 4 TE | 28 |
| | ProTec T1H-300-3+1-R | 59.0321 | 4 TE | 28 |
| ProTec T1H-300-P | ProTec T1H-300-P | 59.0308 | 1 TE plug | 22-28 |
| ProTec T1HS 4+0 (R) | ProTec T1HS-300-4+0 | 59.0260 | 8 TE | 30 |
| | ProTec T1HS-300-4+0-R | 59.0261 | 8 TE | 30 |
| ProTec T1HS 3+1 (R) | ProTec T1HS-300-3+1 | 59.0306 | 8 TE | 32 |
| | ProTec T1HS-300-3+1-R | 59.0307 | 8 TE | 32 |
| ProTec T1HS-300-P | ProTec T1HS-300-P | 59.0302 | 1 TE plug | 30-32 |

| | Product Name | Order Code | Dimensions DIN 43880 | Catalog Page(s) |
|---|---|------------------|-------------------------|--------------------|
| Pluggable Single Pole & Multi-pole Surge Protective Devices | | | | |
| ProTec T2 1+0 (R)  | ProTec T2-75-1+0 | 59.0069 | 1 TE | 34 |
| | ProTec T2-75-1+0-R | 59.0070 | 1 TE | 34 |
| | ProTec T2-150-1+0 | 59.0071 | 1 TE | 34 |
| | ProTec T2-150-1+0-R | 59.0072 | 1 TE | 34 |
| | ProTec T2-300-1+0 | 59.0073 | 1 TE | 34 |
| | ProTec T2-300-1+0-R | 59.0074 | 1 TE | 34 |
| | ProTec T2-350-1+0 | 59.0075 | 1 TE | 34 |
| | ProTec T2-350-1+0-R | 59.0076 | 1 TE | 34 |
| | ProTec T2-480-1+0 | 59.0077 | 1 TE | 34 |
| | ProTec T2-480-1+0-R | 59.0078 | 1 TE | 34 |
| | ProTec T2-550-1+0 | 59.0677 | 1 TE | 34 |
| | ProTec T2-550-1+0-R | 59.0678 | 1 TE | 34 |
| | ProTec T2-750-1+0 | 59.0079 | 1 TE | 34 |
| | ProTec T2-750-1+0-R | 59.0080 | 1 TE | 34 |
| ProTec T2 2+0 (R)  | ProTec T2-75-2+0 | 59.0343 | 2 TE | 36 |
| | ProTec T2-75-2+0-R | 59.0344 | 2 TE | 36 |
| | ProTec T2-150-2+0 | 59.0081 | 2 TE | 36 |
| | ProTec T2-150-2+0-R | 59.0082 | 2 TE | 36 |
| | ProTec T2-300-2+0 | 59.0083 | 2 TE | 36 |
| | ProTec T2-300-2+0-R | 59.0084 | 2 TE | 36 |
| | ProTec T2-350-2+0 | 59.0085 | 2 TE | 36 |
| | ProTec T2-350-2+0-R | 59.0086 | 2 TE | 36 |
| | ProTec T2-480-2+0 | 59.0087 | 2 TE | 36 |
| | ProTec T2-480-2+0-R | 59.0088 | 2 TE | 36 |
| | ProTec T2-550-2+0 | 59.0679 | 2 TE | 36 |
| | ProTec T2-550-2+0-R | 59.0680 | 2 TE | 36 |
| | ProTec T2-750-2+0 | 59.0089 | 2 TE | 36 |
| | ProTec T2-750-2 +0-R | 59.0090 | 2 TE | 36 |
| ProTec T2 3+0 (R)  | ProTec T2-150-3+0 | 59.0091 | 3 TE | 38 |
| | ProTec T2-150-3+0-R | 59.0092 | 3 TE | 38 |
| | ProTec T2-300-3+0 | 59.0093 | 3 TE | 38 |
| | ProTec T2-300-3+0-R | 59.0094 | 3 TE | 38 |
| | ProTec T2-350-3+0 | 59.0095 | 3 TE | 38 |
| | ProTec T2-350-3+0-R | 59.0096 | 3 TE | 38 |
| | ProTec T2-480-3+0 | 59.0097 | 3 TE | 38 |
| | ProTec T2-480-3+0-R | 59.0098 | 3 TE | 38 |
| | ProTec T2-550-3+0 | 59.0681 | 3 TE | 38 |
| | ProTec T2-550-3+0-R | 59.0682 | 3 TE | 38 |
| | ProTec T2-750-3+0 | 59.0099 | 3 TE | 38 |
| ProTec T2-750-3+0-R | 59.0100 | 3 TE | 38 | |
| ProTec T2 4+0 (R)  | ProTec T2-150-4+0 | 59.0101 | 4 TE | 40 |
| | ProTec T2-150-4+0-R | 59.0102 | 4 TE | 40 |
| | ProTec T2-300-4+0 | 59.0103 | 4 TE | 40 |
| | ProTec T2-300-4+0-R | 59.0104 | 4 TE | 40 |
| | ProTec T2-350-4+0 | 59.0300 | 4 TE | 40 |
| | ProTec T2-350-4+0-R | 59.0301 | 4 TE | 40 |
| | ProTec T2-480-4+0 | 59.0105 | 4 TE | 40 |
| | ProTec T2-480-4+0-R | 59.0106 | 4 TE | 40 |
| | ProTec T2-550-4+0 | 59.0683 | 4 TE | 40 |
| | ProTec T2-550-4+0-R | 59.0684 | 4 TE | 40 |
| | ProTec T2 1+1 (R)  | ProTec T2-75-1+1 | 59.0109 | 2 TE |
| ProTec T2-75-1+1-R | | 59.0110 | 2 TE | 42 |
| ProTec T2-150-1+1 | | 59.0111 | 2 TE | 42 |
| ProTec T2-150-1+1-R | | 59.0112 | 2 TE | 42 |
| ProTec T2-300-1+1 | | 59.0113 | 2 TE | 42 |
| ProTec T2-300-1+1-R | | 59.0114 | 2 TE | 42 |
| ProTec T2-350-1+1 | | 59.0115 | 2 TE | 42 |
| ProTec T2-350-1+1-R | | 59.0116 | 2 TE | 42 |

| | Product Name | Order Code | Dimensions DIN 43880 | Catalog Page(s) |
|--|-------------------------|------------|-------------------------|--------------------|
| Pluggable Single Pole & Multi-pole Surge Protective Devices <i>(continued)</i> | | | | |
| ProTec T2 3+1 (R)  | ProTec T2-300-3+1 | 59.0121 | 4 TE | 44 |
| | ProTec T2-300-3+1-R | 59.0122 | 4 TE | 44 |
| | ProTec T2-350-3+1 | 59.0123 | 4 TE | 44 |
| | ProTec T2-350-3+1-R | 59.0124 | 4 TE | 44 |
| ProTec T2-xxx-P | ProTec T2-75-P | 59.0063 | 1 TE plug | 34-26, 42 |
| | ProTec T2-150-P | 59.0064 | 1 TE plug | 34-42 |
| | ProTec T2-300-P | 59.0065 | 1 TE plug | 34-44 |
| | ProTec T2-350-P | 59.0066 | 1 TE plug | 34-44 |
| | ProTec T2-480-P | 59.0067 | 1 TE plug | 34-40 |
| | ProTec T2-550-P | 59.0685 | 1 TE plug | 34-40 |
| ProTec T2-ADV 1+0 (R)  | ProTec T2-ADV-75-1+0 | 59.0208 | 1 TE | 48 |
| | ProTec T2-ADV-75-1+0-R | 59.0209 | 1 TE | 48 |
| | ProTec T2-ADV-150-1+0 | 59.0210 | 1 TE | 48 |
| | ProTec T2-ADV-150-1+0-R | 59.0211 | 1 TE | 48 |
| | ProTec T2-ADV-300-1+0 | 59.0212 | 1 TE | 48 |
| | ProTec T2-ADV-300-1+0-R | 59.0213 | 1 TE | 48 |
| | ProTec T2-ADV-350-1+0 | 59.0214 | 1 TE | 48 |
| | ProTec T2-ADV-350-1+0-R | 59.0215 | 1 TE | 48 |
| | ProTec T2-ADV-480-1+0 | 59.0216 | 1 TE | 48 |
| | ProTec T2-ADV-480-1+0-R | 59.0217 | 1 TE | 48 |
| ProTec T2-ADV 2+0 (R)  | ProTec T2-ADV-75-2+0 | 59.0347 | 2 TE | 50 |
| | ProTec T2-ADV-75-2+0-R | 59.0348 | 2 TE | 50 |
| | ProTec T2-ADV-150-2+0 | 59.0220 | 2 TE | 50 |
| | ProTec T2-ADV-150-2+0-R | 59.0221 | 2 TE | 50 |
| | ProTec T2-ADV-300-2+0 | 59.0222 | 2 TE | 50 |
| | ProTec T2-ADV-300-2+0-R | 59.0223 | 2 TE | 50 |
| | ProTec T2-ADV-350-2+0 | 59.0224 | 2 TE | 50 |
| | ProTec T2-ADV-350-2+0-R | 59.0225 | 2 TE | 50 |
| | ProTec T2-ADV-480-2+0 | 59.0226 | 2 TE | 50 |
| ProTec T2-ADV-480-2+0-R | 59.0227 | 2 TE | 50 | |
| ProTec T2-ADV 3+0 (R)  | ProTec T2-ADV-150-3+0 | 59.0228 | 3 TE | 52 |
| | ProTec T2-ADV-150-3+0-R | 59.0229 | 3 TE | 52 |
| | ProTec T2-ADV-300-3+0 | 59.0230 | 3 TE | 52 |
| | ProTec T2-ADV-300-3+0-R | 59.0231 | 3 TE | 52 |
| | ProTec T2-ADV-350-3+0 | 59.0232 | 3 TE | 52 |
| | ProTec T2-ADV-350-3+0-R | 59.0233 | 3 TE | 52 |
| | ProTec T2-ADV-480-3+0 | 59.0234 | 3 TE | 52 |
| ProTec T2-ADV-480-3+0-R | 59.0235 | 3 TE | 52 | |
| ProTec T2-ADV 4+0 (R)  | ProTec T2-ADV-150-4+0 | 59.0236 | 4 TE | 54 |
| | ProTec T2-ADV-150-4+0-R | 59.0237 | 4 TE | 54 |
| | ProTec T2-ADV-300-4+0 | 59.0238 | 4 TE | 54 |
| | ProTec T2-ADV-300-4+0-R | 59.0239 | 4 TE | 54 |
| | ProTec T2-ADV-350-4+0 | 59.0240 | 4 TE | 54 |
| | ProTec T2-ADV-350-4+0-R | 59.0241 | 4 TE | 54 |
| | ProTec T2-ADV-480-4+0 | 59.0242 | 4 TE | 54 |
| ProTec T2-ADV-480-4+0-R | 59.0243 | 4 TE | 54 | |
| ProTec T2-ADV-xxx-P | ProTec T2-ADV-75-P | 59.0202 | 1 TE plug | 48-50 |
| | ProTec T2-ADV-150-P | 59.0203 | 1 TE plug | 48-54 |
| | ProTec T2-ADV-300-P | 59.0204 | 1 TE plug | 48-54 |
| | ProTec T2-ADV-350-P | 59.0205 | 1 TE plug | 48-54 |
| | ProTec T2-ADV-480-P | 59.0206 | 1 TE plug | 48-54 |


| | | | | | |
|----------------------|---|----------------------|---------|-----------|-------|
| ProTec T2H 2+0 (R) |  | ProTec T2H-300-2+0 | 59.0326 | 2 TE | 56 |
| | | ProTec T2H-300-2+0-R | 59.0327 | 2 TE | 56 |
| ProTec T2H 3+0 (R) |  | ProTec T2H-300-3+0 | 59.0328 | 3 TE | 58 |
| | | ProTec T2H-300-3+0-R | 59.0329 | 3 TE | 58 |
| ProTec T2H 4+0 (R) |  | ProTec T2H-300-4+0 | 59.0330 | 4 TE | 60 |
| | | ProTec T2H-300-4+0-R | 59.0331 | 4 E | 60 |
| ProTec T2H 1+1 (R) |  | ProTec T2H-300-1+1 | 59.0332 | 2 TE | 62 |
| | | ProTec T2H-300-1+1-R | 59.0333 | 2 TE | 62 |
| ProTec T2H 3+1 (R) |  | ProTec T2H-300-3+1 | 59.0334 | 4 TE | 64 |
| | | ProTec T2H-300-3+1-R | 59.0335 | 4 TE | 64 |
| ProTec T2H-300-P | | ProTec T2H-300-P | 59.0322 | 1 TE plug | 56-64 |
| ProTube T2 0+1 (R) |  | ProTube T2-40-0+1 | 59.0280 | 1 TE | 46 |
| | | ProTube T2-40-0+1-R | 59.0336 | | 46 |
| SafeTec T2 2+0 (R) |  | SafeTec T2-75-2+0 | 59.0345 | 2 TE | 66 |
| | | SafeTec T2-75-2+0-R | 59.0346 | 2 TE | 66 |
| | | SafeTec T2-150-2+0 | 59.0148 | 2 TE | 66 |
| | | SafeTec T2-150-2+0-R | 59.0149 | 2 TE | 66 |
| | | SafeTec T2-300-2+0 | 59.0150 | 2 TE | 66 |
| | | SafeTec T2-300-2+0-R | 59.0151 | 2 TE | 66 |
| | | SafeTec T2-350-2+0 | 59.0152 | 2 TE | 66 |
| | | SafeTec T2-350-2+0-R | 59.0153 | 2 TE | 66 |
| | | SafeTec T2-480-2+0 | 59.0154 | 2 TE | 66 |
| | | SafeTec T2-480-2+0-R | 59.0155 | 2 TE | 66 |
| | | SafeTec T2-550-2+0 | 59.0156 | 2 TE | 66 |
| | | SafeTec T2-550-2+0-R | 59.0157 | 2 TE | 66 |
| | | SafeTec T2-750-2+0 | 59.0158 | 2 TE | 66 |
| | | SafeTec T2-750-2+0-R | 59.0159 | 2 TE | 66 |
| | | SafeTec T2-880-2+0 | 59.0160 | 2 TE | 66 |
| SafeTec T2-880-2+0-R | 59.0161 | 2 TE | 66 | | |
| SafeTec T2 4+0 (R) |  | SafeTec T2-150-4+0 | 59.0176 | 4 TE | 68 |
| | | SafeTec T2-150-4+0-R | 59.0177 | 4 TE | 68 |
| | | SafeTec T2-300-4+0 | 59.0178 | 4 TE | 68 |
| | | SafeTec T2-300-4+0-R | 59.0179 | 4 TE | 68 |
| | | SafeTec T2-350-4+0 | 59.0180 | 4 TE | 68 |
| | | SafeTec T2-350-4+0-R | 59.0181 | 4 TE | 68 |
| | | SafeTec T2-480-4+0 | 59.0182 | 4 TE | 68 |
| | | SafeTec T2-480-4+0-R | 59.0183 | 4 TE | 68 |
| | | SafeTec T2-550-4+0 | 59.0184 | 4 TE | 68 |
| | | SafeTec T2-550-4+0-R | 59.0185 | 4 TE | 68 |

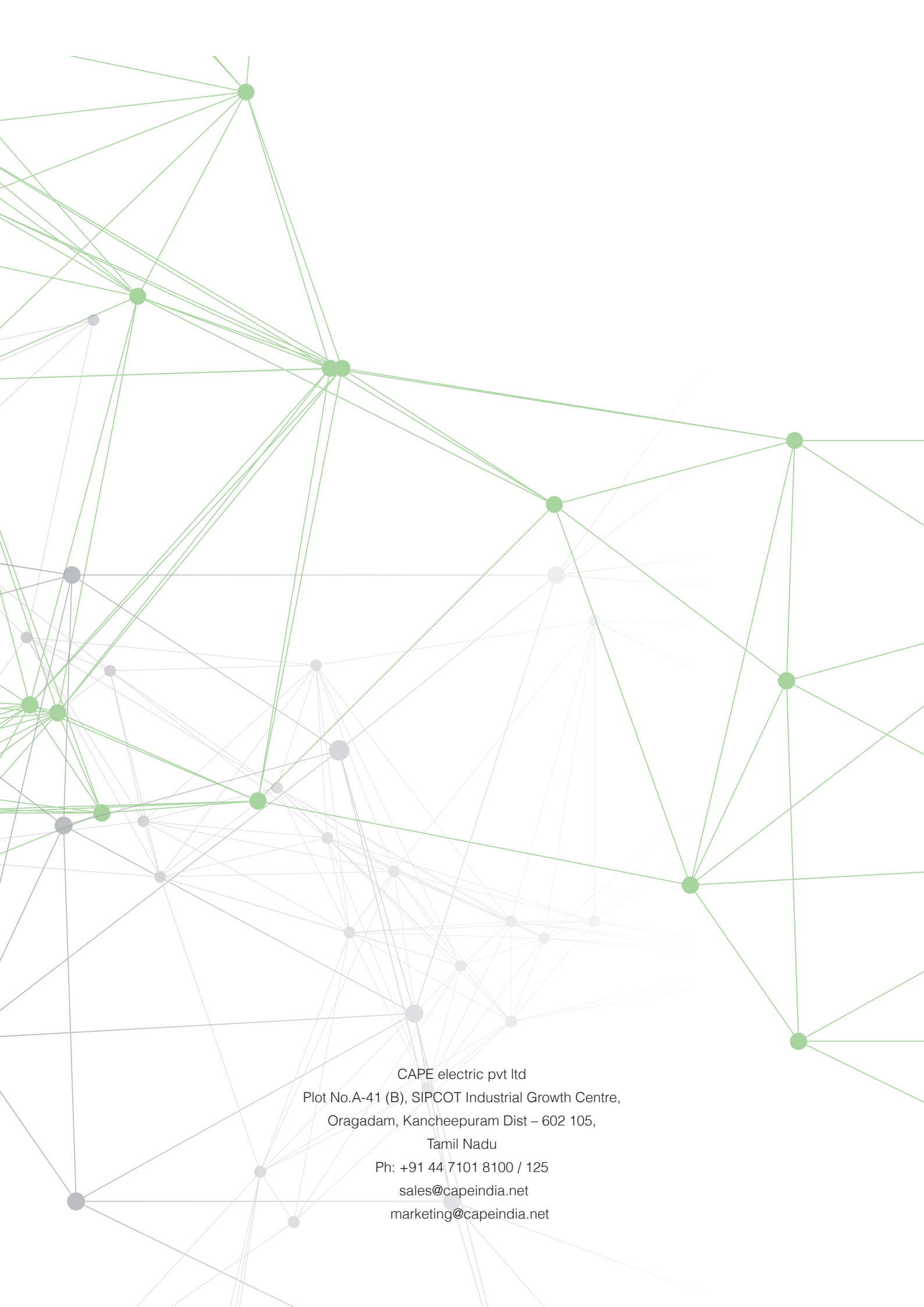
| | | | | |
|---|----------------------|---------|-----------|-------|
|  | SafeTec T2-75-1+1 | 59.0186 | 2 TE | 70 |
| | SafeTec T2-75-1+1-R | 59.0187 | 2 TE | 70 |
| | SafeTec T2-150-1+1 | 59.0188 | 2 TE | 70 |
| | SafeTec T2-150-1+1-R | 59.0189 | 2 TE | 70 |
| | SafeTec T2-300-1+1 | 59.0190 | 2 TE | 70 |
| | SafeTec T2-300-1+1-R | 59.0191 | 2 TE | 70 |
| | SafeTec T2-350-1+1 | 59.0192 | 2 TE | 70 |
| | SafeTec T2-350-1+1-R | 59.0193 | 2 TE | 70 |
|  | SafeTec T2-300-3+1 | 59.0198 | 4 TE | 72 |
| | SafeTec T2-300-3+1-R | 59.0199 | 4 TE | 72 |
| | SafeTec T2-350-3+1 | 59.0200 | 4 TE | 72 |
| | SafeTec T2-350-3+1-R | 59.0201 | 4 TE | 72 |
|  | SafeTec T2-75-P | 59.0125 | 1 TE plug | 66,70 |
| | SafeTec T2-150-P | 59.0126 | 1 TE plug | 66-70 |
| | SafeTec T2-300-P | 59.0127 | 1 TE plug | 66-72 |
| | SafeTec T2-350-P | 59.0128 | 1 TE plug | 66-72 |
| | SafeTec T2-480-P | 59.0129 | 1 TE plug | 66,68 |
| | SafeTec T2-550-P | 59.0299 | 1 TE plug | 66,68 |
| | SafeTec T2-750-P | 59.0130 | 1 TE plug | 66 |
| | SafeTec T2-880-P | 59.0131 | 1 TE plug | 66 |

Type 1 • Type 2 • Type 1 CA

| | Product Name | Order Code | Dimensions DIN 43880 | Catalog Page(s) |
|---|------------------------|------------|-------------------------|--------------------|
| Pluggable Multi-Pole SPD for Photovoltaic Systems | | | | |
|  | ProTec T1-1100PV-3+0 | 59.0285 | 3 TE | 74 |
| | ProTec T1-1100PV-3+0-R | 59.0286 | 3 TE | 74 |
| | ProTec T1-1500PV-3+0 | 59.0289 | 3 TE | 74 |
| | ProTec T1-1500PV-3+0-R | 59.0290 | 3 TE | 74 |
|  | ProTec T1-550PV-P | 59.0283 | 1 TE plug | 74 |
| | ProTec T1-550PV-M-P | 59.0284 | 1 TE plug | 74 |
| | ProTec T1-750PV-P | 59.0287 | 1 TE plug | 74 |
| | ProTec T1-750PV-M-P | 59.0288 | 1 TE plug | 74 |
|  | ProTec T2-1100PV-3+0 | 59.0292 | 3 TE | 76 |
| | ProTec T2-1100PV-3+0-R | 59.0293 | 3 TE | 76 |
| | ProTec T2-1500PV-3+0 | 59.0295 | 3 TE | 76 |
| | ProTec T2-1500PV-3+0-R | 59.0296 | 3 TE | 76 |
|  | ProTec T2-550PV-P | 59.0291 | 1 TE plug | 76 |
| | ProTec T2-750PV-P | 59.0294 | 1 TE plug | 76 |

Class 1L

| | Product Name | Order Code | Dimensions DIN 43880 | Catalog Page(s) |
|---|--------------|------------|-------------------------|--------------------|
| Isolating Spark Gap | | | | |
|  | EPZ 100/350 | 509 521 | | 78 |



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