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

## Overvoltage Protection (PGDT Technology)

## ProTec T1S

**Special features:**

- Leakage current free solution, Class I, $I_{imp}$ = 25 kA
- Low voltage protection level, $U_p$ < 2.5 kV
- Can be installed in IT systems (only SPD with $U_c$ 440 V)
- No external arrester backup fuse required up to 315 A
- Vibration and shock withstand capability
- Sensitive and reliable state-of-the-art disconnector
- Short circuit current rating up to 100 kA*
- Compact power package, 25 kA $I_{imp}$ in 1 TE



| IEC 61643-11:2011 | EN 61643-11:2012+A11:2018 |
|---|---|
| ✓ | ✓ |

The ProTec T1S product family is based on a heavy-duty multi-gap technology that offers compelling benefits in the smallest case size while retaining high levels of safety performance. By using the most advanced gas discharge tube, Raycap's new ProTec T1S range combines lightning current and surge arrester performance. Its modular and flexible design makes the ProTec T1S series the ideal solution for electrical installations with limited space. Classified as Type 1+2 device, the T1S can be installed between boundaries OA – 1 and higher.
The multi-gap tube technology enables follow current extinction under severe short-circuit conditions through wider range from just a few kA up to 100 kA* while preventing the tripping of upstream fuses, thus ensuring sustainable system operation. Ease of installation in single or three phase system is furthermore simplified with universal energy coordination not only with Raycap's units but any other brand without additional cable length. By using a unique thermal disconnection mechanism optimal system protection can be achieved under all kinds of overloads, setting new standards in "spark" gap performance technologies. The operating state indicator needs no power to show the operating state of the surge protective device. Besides visual mechanical indication, the remote contacts (RC) feature a three-pole remote signaling terminal to remotely monitor the operating state of the device.

More Product Information

** VDE certified up to 50 kA, 100 kA additionally tested by VDE.*

RoHS COMPLIANT

**DATASHEET**

Lightning and Overvoltage Protection

# ProTec T1S 1+0

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TN-S, TN-C, TT (only L-N), IT (only 440)
Mode of Protection: L-PE, N-PE (only TN-S and IT), L-PEN, L-N
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

CE VDE RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-1+0(-R) | | 275 | 440* |
|---|---|---|---|
| **IEC Electrical** | | | |
| Nominal AC Voltage (50/60Hz) | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | $U_c$ | 275 V | 440 V |
| Nominal Discharge Current (8/20 µs) | $I_n$ | 25 kA | 25 kA |
| Maximum Discharge Current (8/20 µs) | $I_{max}$ | 65 kA | 50 kA |
| Impulse Discharge Current (10/350 µs) | $I_{imp}$ | 25 kA | 25 kA |
| Specific Energy | W/R | 156.2 kJ/Ω | 156.2 kJ/Ω |
| Charge | Q | 12.5 As | 12.5 As |
| Voltage Protection Level | $U_p$ | 1500 V | 2500 V |
| Response Time | $t_A$ | < 100 ns | < 100 ns |
| Overvoltage Category | | III | III |
| Overcurrent Protection (max) | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | $I_{fi}$ | 50 kA | 50 kA/100 kA |
| TOV 120 min | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Safe Fail 200ms | $U_T$ | - | 1640 V |
| Number of Ports | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | |
| Residual Voltage at 5 kA (8/20 µs) | $U_{res}$ | 1400 V | 1500 V |
| Minimum Backup fuse, if required | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | |
| Operating Temperature Range | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | RH | 5%...95% | |
| Pollution Degree | | 2 | |
| Altitude | | 6562 ft [2000 m] | |
| Terminal Screw Torque | $M_{max}$ | 40 lbf·in [4.5 Nm] | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | IP 20 (built-in) | |
| Housing Material | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| 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 mm² (Solid) | |
| Overvoltage Category | | III | |

**No VDE Certification.*

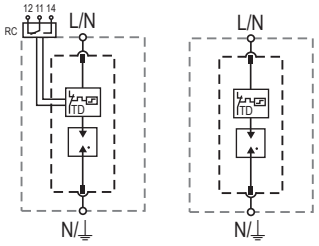
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| *N* | *Neutral Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |

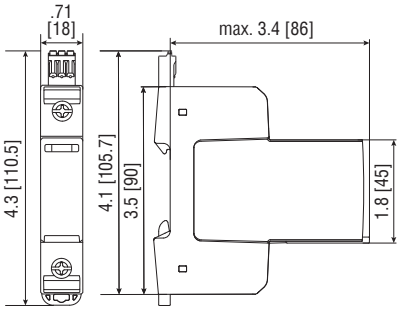



| Order Information | | |
|---|---|---|
| Order Code | **275** | **440*** |
| ProTec T1S-xxx-1+0 | 59.0738 | 59.A517 |
| ProTec T1S-xxx-1+0-R (with remote contacts) | 59.0739 | 59.A518 |
| ProTec T1S-xxx-P (plug) | 59.0384 | 59.A515 |

**No VDE Certification.*

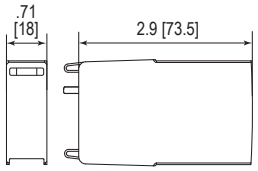
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-1+0** | | **275** | **440*** |
| Weight | pounds [grams] | .381 [173] | .392 [178] |
| **ProTec T1S-xxx-1+0-R** | | | |
| Weight | pounds [grams] | .396 [180] | .407 [185] |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 12 Units | |

## Spare Plug




| Single Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-P** | | **275** | **440*** |
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

# Lightning and Overvoltage Protection
# ProTec T1S 2+0

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TN-S, IT (only 440)
Mode of Protection: L-PE, N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-2+0(-R) | | 275 | 440* |
|---|---|---|---|
| **IEC Electrical** | | | |
| Nominal AC Voltage (50/60Hz) | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | $U_c$ | 275 V | 440 V |
| Nominal Discharge Current (8/20 µs) | $I_n$ | 25 kA | 25 kA |
| Maximum Discharge Current (8/20 µs) | $I_{max}$ | 65 kA | 50 kA |
| Impulse Discharge Current (10/350 µs) | $I_{imp}$ | 25 kA | 25 kA |
| Specific Energy | W/R | 156.2 kJ/Ω | 156.2 kJ/Ω |
| Charge | Q | 12.5 As | 12.5 As |
| Voltage Protection Level | $U_p$ | 1500 V | 2500 V |
| Response Time | $t_A$ | < 100 ns | < 100 ns |
| Overvoltage Category | | III | III |
| Overcurrent Protection (max) | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | $I_{fi}$ | 50 kA | 50 kA/100 kA |
| TOV 120 min | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Safe Fail 200ms | $U_T$ | - | 1640 V |
| Number of Ports | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | |
| Residual Voltage at 5 kA (8/20 µs) | $U_{res}$ | 1400 V | 1500 V |
| Minimum Backup fuse, if required | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | |
| Operating Temperature Range | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | RH | 5%...95% | |
| Pollution Degree | | 2 | |
| Altitude | | 6562 ft [2000 m] | |
| Terminal Screw Torque | $M_{max}$ | 40 lbf·in [4.5 Nm] | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | IP 20 (built-in) | |
| Housing Material | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| 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 mm² (Solid) | |
| Overvoltage Category | | III | |

**No VDE Certification.*

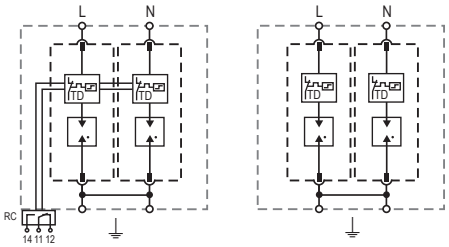
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| *N* | *Neutral Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |



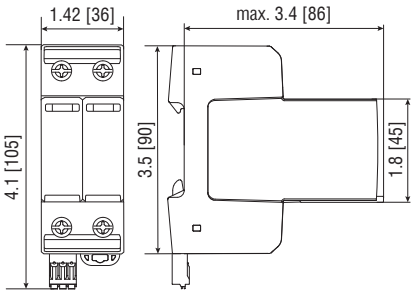

**Order Information**

| Order Code | 275 | 440* |
|---|---|---|
| ProTec T1S-xxx-2+0 | 59.0740 | 59.A519 |
| ProTec T1S-xxx-2+0-R (with remote contacts) | 59.0741 | 59.A520 |
| ProTec T1S-xxx-P (plug) | 59.0384 | 59.A515 |

**No VDE Certification.*

## Dimensions & Packaging

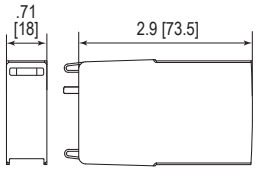
*inches [mm]*




**Complete Unit**

| **ProTec T1S-xxx-2+0** | | **275** | **440*** |
|---|---|---|---|
| Weight | pounds [grams] | .749 [340] | .771 [350] |
| **ProTec T1S-xxx-2+0-R** | | | |
| Weight | pounds [grams] | .769 [349] | .791 [359] |
| DIN 43880 Dimension | | 2 TE / 1.42" [36 mm] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 7 Units | |

## Spare Plug




**Single Unit**

| **ProTec T1S-xxx-P** | | **275** | **440*** |
|---|---|---|---|
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

Lightning and Overvoltage Protection

# ProTec T1S 3+0

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TN-C, IT (only 440)
Mode of Protection: L-PEN
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-3+0(-R) | | 275 | 440* |
|---|---|---|---|
| **IEC Electrical** | | | |
| Nominal AC Voltage (50/60Hz) | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | $U_c$ | 275 V | 440 V |
| Nominal Discharge Current (8/20 µs) | $I_n$ | 25 kA | 25 kA |
| Maximum Discharge Current (8/20 µs) | $I_{max}$ | 65 kA | 50 kA |
| Impulse Discharge Current (10/350 µs) | $I_{imp}$ | 25 kA | 25 kA |
| Specific Energy | W/R | 156.2 kJ/Ω | 156.2 kJ/Ω |
| Charge | Q | 12.5 As | 12.5 As |
| Voltage Protection Level | $U_p$ | 1500 V | 2500 V |
| Response Time | $t_A$ | < 100 ns | < 100 ns |
| Overvoltage Category | | III | III |
| Overcurrent Protection (max) | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | $I_{fi}$ | 50 kA | 50 kA/100 kA |
| TOV 120 min | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Safe Fail 200ms | $U_T$ | - | 1640 V |
| Number of Ports | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | |
| Residual Voltage at 5 kA (8/20 µs) | $U_{res}$ | 1400 V | 1500 V |
| Minimum Backup fuse, if required | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | |
| Operating Temperature Range | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | RH | 5%...95% | |
| Pollution Degree | | 2 | |
| Altitude | | 6562 ft [2000 m] | |
| Terminal Screw Torque | $M_{max}$ | 40 lbf·in [4.5 Nm] | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | IP 20 (built-in) | |
| Housing Material | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| 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 mm² (Solid) | |
| Overvoltage Category | | III | |

**No VDE Certification.*

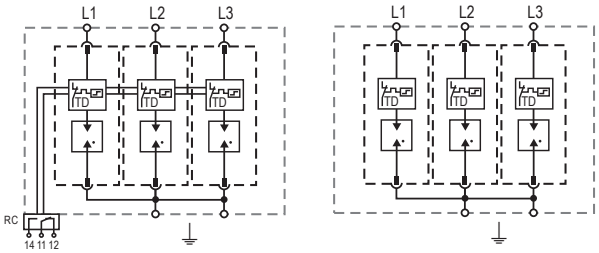
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |



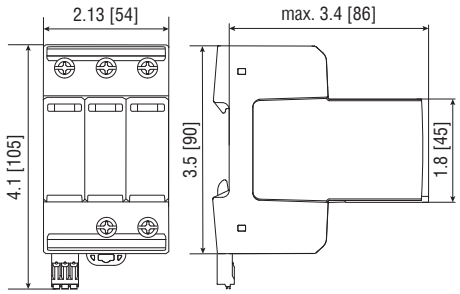

**Order Information**

| Order Code | 275 | 440* |
|---|---|---|
| ProTec T1S-xxx-3+0 | 59.0742 | 59.A521 |
| ProTec T1S-xxx-3+0-R (with remote contacts) | 59.0743 | 59.A522 |
| ProTec T1S-xxx-P (plug) | 59.0384 | 59.A515 |

**No VDE Certification.*

## Dimensions & Packaging

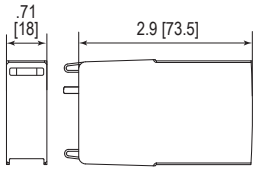
*inches [mm]*




**Complete Unit**

| **ProTec T1S-xxx-3+0** | | **275** | **440*** |
|---|---|---|---|
| Weight | pounds [grams] | 1.100 [499] | 1.133 [514] |
| **ProTec T1S-xxx-3+0-R** | | | |
| Weight | pounds [grams] | 1.119 [508] | 1.166 [529] |
| DIN 43880 Dimension | | 3 TE/2.13" [54 mm] | |
| 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 | |

## Spare Plug




**Single Unit**

| **ProTec T1S-xxx-P** | | **275** | **440*** |
|---|---|---|---|
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| DIN 43880 Dimension | | 1 TE/.71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

Lightning and Overvoltage Protection

# ProTec T1S 4+0

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TN-S, IT (only 440)
Mode of Protection: L-PE, N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:212+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-4+0(-R) | | 275 | 440* |
|---|---|---|---|
| **IEC Electrical** | | | |
| Nominal AC Voltage (50/60Hz) | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | $U_c$ | 275 V | 440 V |
| Nominal Discharge Current (8/20 µs) | $I_n$ | 25 kA | 25 kA |
| Maximum Discharge Current (8/20 µs) | $I_{max}$ | 65 kA | 50 kA |
| Impulse Discharge Current (10/350 µs) | $I_{imp}$ | 25 kA | 25 kA |
| Specific Energy | W/R | 156.2 kJ/Ω | 156.2 kJ/Ω |
| Charge | Q | 12.5 As | 12.5 As |
| Voltage Protection Level | $U_p$ | 1500 V | 2500 V |
| Response Time | $t_A$ | < 100 ns | < 100 ns |
| Overvoltage Category | | III | III |
| Overcurrent Protection (max) | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | $I_{fi}$ | 50 kA | 50 kA/100 kA |
| TOV 120 min | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Safe Fail 200ms | $U_T$ | - | 1640 V |
| Number of Ports | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | |
| Residual Voltage at 5 kA (8/20 µs) | $U_{res}$ | 1400 V | 1500 V |
| Minimum Backup fuse, if required | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | |
| Short-Circuit Current Rating (AC) | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | |
| Operating Temperature Range | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | RH | 5%...95% | |
| Pollution Degree | | 2 | |
| Altitude | | 6562 ft [2000 m] | |
| Terminal Screw Torque | $M_{max}$ | 40 lbf·in [4.5 Nm] | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | IP 20 (built-in) | |
| Housing Material | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| 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 mm² (Solid) | |
| Overvoltage Category | | III | |

**No VDE Certification.*

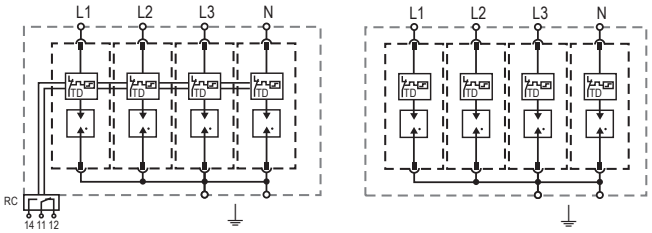
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| *N* | *Neutral Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |

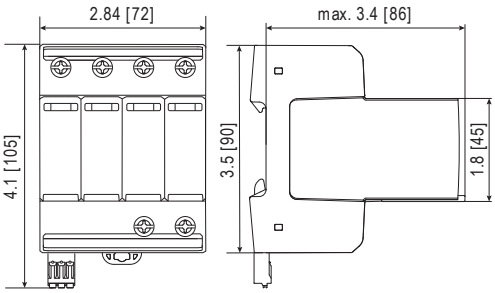



| Order Information | | |
|---|---|---|
| Order Code | **275** | **440*** |
| ProTec T1S-xxx-4+0 | 59.0744 | 59.A523 |
| ProTec T1S-xxx-4+0-R (with remote contacts) | 59.0745 | 59.A524 |
| ProTec T1S-xxx-P (plug) | 59.0384 | 59.A515 |

**No VDE Certification.*

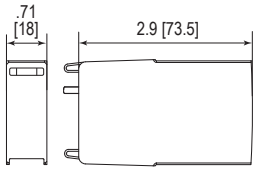
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-4+0** | | **275** | **440*** |
| Weight | pounds [grams] | 1.481 [672] | 1.526 [692] |
| **ProTec T1S-xxx-4+0-R** | | | |
| Weight | pounds [grams] | 1.501 [681] | 1.545 [701] |
| DIN 43880 Dimension | | 4 TE / 2.84" [72 mm] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 4 Units | |

## Spare Plug




| Single Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-P** | | **275** | **440*** |
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

# Lightning and Overvoltage Protection
# ProTec T1S 1+1

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-1+1(-R) | | | 275 | 440* |
|---|---|---|---|---|
| **IEC Electrical** | | | | |
| Nominal AC Voltage (50/60Hz) | | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-PE) | $U_c$ | 275 V/305 V | 440 V/440 V |
| Nominal Discharge Current (8/20 µs) | (L-N)/(N-PE) | $I_n$ | 25 kA/100 kA | 25 kA/100 kA |
| Maximum Discharge Current (8/20 µs) | (L-N)/(N-PE) | $I_{max}$ | 65 kA/150 kA | 50 kA/100 kA |
| Impulse Discharge Current (10/350 µs) | (L-N)/(N-PE) | $I_{imp}$ | 25 kA/100 kA | 25 kA/100 kA |
| Specific Energy | (L-N)/(N-PE) | W/R | 156.2 kJ/Ω/2500 kJ/Ω | 156.2 kJ/Ω/2500 kJ/Ω |
| Charge | (L-N)/(N-PE) | Q | 12.5 As/50 As | 12.5 As/50 As |
| Voltage Protection Level | (L-N)/(N-PE) | $U_p$ | 1500 V/1500 V | 2500 V/2500 V |
| Response Time | (L-N)/(N-PE) | $t_A$ | < 100 ns/< 100 ns | < 100 ns/< 100 ns |
| Overvoltage Category | | | III | III |
| Overcurrent Protection (max) | | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | (L-N) | $I_{fi}$ | 50 kA | 50 kA/100 A |
| | (N-PE) | | 100 A | 100 A |
| TOV 120 min | (L-N) | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Withstand 200ms | (N-PE) | $U_T$ | 1200 V | 1200 V |
| Number of Ports | | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | | |
| Residual Voltage at 5 kA (8/20 µs) | (L-N)/(N-PE) | $U_{res}$ | 1400 V/305 V | 1500 V/305 V |
| Minimum Backup fuse, if required | | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | | |
| Short-Circuit Current Rating (AC) | | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | | |
| Operating Temperature Range | | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | | RH | 5%...95% | |
| Pollution Degree | | | 2 | |
| Altitude | | | 6562 ft [2000 m] | |
| Terminal Screw Torque | | $M_{max}$ | 40 lbf-in [4.5 Nm] | |
| Conductor Cross Section (max) | | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | | IP 20 (built-in) | |
| Housing Material | | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| Operating State/Fault Indication | | | Green Flag/Not Green Flag | |
| Remote Contacts (RC) | | | Optional | |
| RC Switching Capacity | | | AC: 250 V/1A, 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 mm² (Solid) | |
| Overvoltage Category | | | III | |

**No VDE Certification.*

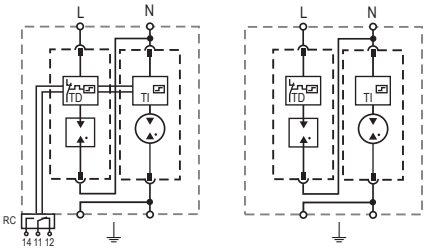
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| *N* | *Neutral Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |
| *TI* | *Thermal Indication* |



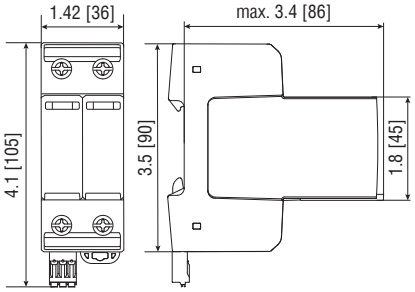

### Order Information

| Order Code | 275 | 440* |
|---|---|---|
| ProTec T1S-xxx-1+1 | 59.0746 | 59.A525 |
| ProTec T1S-xxx-1+1-R (with remote contacts) | 59.0747 | 59.A526 |
| ProTec T1S-xxx-P (plug L-N) | 59.0384 | 59.A515 |
| ProTube T1S-100-P (plug N-PE) | 59.0386 | |
| ProTube T1S-440-100-P (plug N-PE) | | 59.A516 |

**No VDE Certification.*

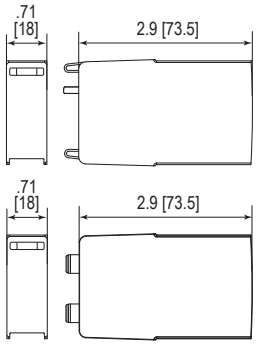
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-1+1** | | **275** | **440*** |
| Weight | pounds [grams] | .773 [351] | .785 [356] |
| **ProTec T1S-xxx-1+1-R** | | | |
| Weight | pounds [grams] | .787 [357] | .798 [362] |
| DIN 43880 Dimension | | 2 TE / 1.42" [36 mm] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 7 Units | |

## Spare Plug




| Single Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-P** | | **275** | **440*** |
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| **ProTube T1S-100-P** | | **100** | |
| Weight | pounds [grams] | .253 [115] | |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

# Lightning and Overvoltage Protection
# ProTec T1S 3+1

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-3+1(-R) | | | 275 | 440* |
|---|---|---|---|---|
| **IEC Electrical** | | | | |
| Nominal AC Voltage (50/60Hz) | | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-PE) | $U_c$ | 275 V/305 V | 440 V/440V |
| Nominal Discharge Current (8/20 µs) | (L-N)/(N-PE) | $I_n$ | 25 kA/100 kA | 25 kA/100 kA |
| Maximum Discharge Current (8/20 µs) | (L-N)/(N-PE) | $I_{max}$ | 65 kA/150 kA | 50 kA/100 kA |
| Impulse Discharge Current (10/350 µs) | (L-N)/(N-PE) | $I_{imp}$ | 25 kA/100 kA | 25 kA/100 kA |
| Specific Energy | (L-N)/(N-PE) | W/R | 156.2 kJ/Ω/2500 kJ/Ω | 156.2 kJ/Ω/2500 kJ/Ω |
| Charge | (L-N)/(N-PE) | Q | 12.5 As/50 As | 12.5 As/50 As |
| Voltage Protection Level | (L-N)/(N-PE) | $U_p$ | 1500 V/1500 V | 2500 V/2500 V |
| Response Time | (L-N)/(N-PE) | $t_A$ | < 100 ns/< 100 ns | < 100 ns/< 100 ns |
| Overvoltage Category | | | III | III |
| Overcurrent Protection (max) | | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | (L-N) | $I_{fi}$ | 50 kA | 50 kA/100 A |
| | (N-PE) | | 100 A | 100 A |
| TOV 120 min | (L-N) | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Withstand 200ms | (N-PE) | $U_T$ | 1200 V | 1200 V |
| Number of Ports | | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | | |
| Residual Voltage at 5 kA (8/20 µs) | (L-N)/(N-PE) | $U_{res}$ | 1400 V/305 V | 1500 V/305 V |
| Minimum Backup fuse, if required | | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | | |
| Short-Circuit Current Rating (AC) | | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | | |
| Operating Temperature Range | | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | | RH | 5%...95% | |
| Pollution Degree | | | 2 | |
| Altitude | | | 6562 ft [2000 m] | |
| Terminal Screw Torque | | $M_{max}$ | 40 lbf-in [4.5 Nm] | |
| Conductor Cross Section (max) | | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | | IP 20 (built-in) | |
| Housing Material | | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| Operating State/Fault Indication | | | Green Flag/Not Green Flag | |
| Remote Contacts (RC) | | | Optional | |
| RC Switching Capacity | | | AC: 250 V/1A, 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 mm² (Solid) | |
| Overvoltage Category | | | III | |

**No VDE Certification.*

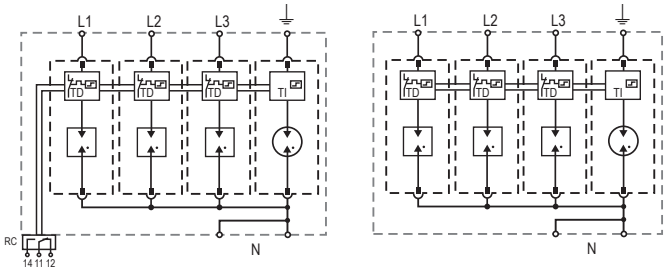
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| *N* | *Neutral Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |
| *TI* | *Thermal Indication* |

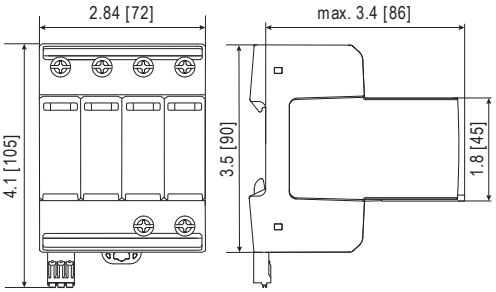



| Order Information | | |
|---|---|---|
| Order Code | **275** | **440*** |
| ProTec T1S-xxx-3+1 | 59.0748 | 59.A527 |
| ProTec T1S-xxx-3+1-R (with remote contacts) | 59.0749 | 59.A528 |
| ProTec T1S-xxx-P (plug L-N) | 59.0384 | 59.A515 |
| ProTube T1S-100-P (plug N-PE) | 59.0386 | - |
| ProTube T1S-440-100-P (plug N-PE) | - | 59.A516 |

**No VDE Certification.*

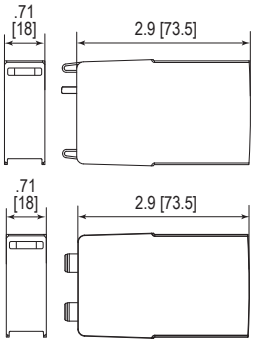
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-3+1** | | **275** | **440*** |
| Weight | pounds [grams] | 1.503 [682] | 1.537 [697] |
| **ProTec T1S-xxx-3+1-R** | | | |
| Weight | pounds [grams] | 1.523 [691] | 1.556 [706] |
| DIN 43880 Dimension | | 4 TE / 2.84" [72 mm] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 4 Units | |

## Spare Plug




| Single Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-P** | | **275** | **440*** |
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| **ProTube T1S-100-P** | | **100** | |
| Weight | pounds [grams] | .253 [115] | |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

Lightning and Overvoltage Protection

# ProTec T1S 3+1 N

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTec T1S-xxx-3+1-N(-R) | | | 275 | 440* |
|---|---|---|---|---|
| **IEC Electrical** | | | | |
| Nominal AC Voltage (50/60Hz) | | $U_o/U_n$ | 240 V | 400 V |
| Maximum Continuous Operating Voltage (AC) | (L-N)/(N-PE) | $U_c$ | 275 V/305 V | 440 V/440V |
| Nominal Discharge Current (8/20 µs) | (L-N)/(N-PE) | $I_n$ | 25 kA/100 kA | 25 kA/100 kA |
| Maximum Discharge Current (8/20 µs) | (L-N)/(N-PE) | $I_{max}$ | 65 kA/150 kA | 50 kA/100 kA |
| Impulse Discharge Current (10/350 µs) | (L-N)/(N-PE) | $I_{imp}$ | 25 kA/100 kA | 25 kA/100 kA |
| Specific Energy | (L-N)/(N-PE) | W/R | 156.2 kJ/Ω/2500 kJ/Ω | 156.2 kJ/Ω/2500 kJ/Ω |
| Charge | (L-N)/(N-PE) | Q | 12.5 As/50 As | 12.5 As/50 As |
| Voltage Protection Level | (L-N)/(N-PE) | $U_p$ | 1700 V/1500 V | 2500 V/2500 V |
| Response Time | (L-N)/(N-PE) | $t_A$ | < 100 ns/< 100 ns | < 100 ns/< 100 ns |
| Overvoltage Category | | | III | III |
| Overcurrent Protection (max) | | | 315 A gG | 315 A gG/250 A gG |
| Short-Circuit Current Rating (AC) | (L-N) | $I_{SCCR}$ | 50 kA | 50 kA/100 kA |
| Follow Current Interrupt Rating (AC) | (L-N) | $I_{fi}$ | 50 kA | 50 kA/100 A |
| | (N-PE) | | 100 A | 100 A |
| TOV 120 min | (L-N) | $U_T$/mode | 442 V/Withstand | 762 V/Safe Fail |
| TOV Withstand 200ms | (N-PE) | $U_T$ | 1200 V | 1200 V |
| Number of Ports | | | 1 | |
| **Additional Electrical Parameters - Standard** *(Tests performed within Raycap testing laboratory only)* | | | | |
| Residual Voltage at 5 kA (8/20 µs) | (L-N)/(N-PE) | $U_{res}$ | 1400 V/305 V | 1500 V/305 V |
| Minimum Backup fuse, if required | | | 250 A gG | 250 A gG |
| **Additional Electrical Parameters - Extended** *(Additionally tested by VDE)* | | | | |
| Short-Circuit Current Rating (AC) | | $I_{SCCR}$ | 100 kA | |
| Minimum Backup fuse, if required | | | 315 A gG | 250 A gG |
| **Mechanical & Environmental** | | | | |
| Operating Temperature Range | | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] | |
| Permissible Operating Humidity | | RH | 5%...95% | |
| Pollution Degree | | | 2 | |
| Altitude | | | 6562 ft [2000 m] | |
| Terminal Screw Torque | | $M_{max}$ | 40 lbf-in [4.5 Nm] | |
| Conductor Cross Section (max) | | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) | |
| | | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) | |
| Mounting | | | 35 mm DIN Rail, EN 60715 | |
| Degree of Protection | | | IP 20 (built-in) | |
| Housing Material | | | Thermoplastic: Extinguishing Degree UL 94 V-0 | |
| Operating State/Fault Indication | | | Green Flag/Not Green Flag | |
| Remote Contacts (RC) | | | Optional | |
| RC Switching Capacity | | | AC: 250 V/1A, 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 mm² (Solid) | |
| Overvoltage Category | | | III | |

**No VDE Certification.*

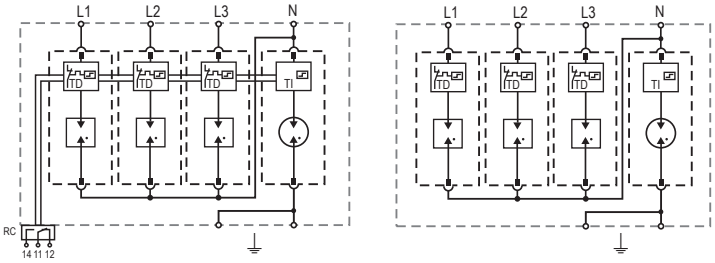
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

| | |
|---|---|
| *L* | *Line Conductor Terminal* |
| *N* | *Neutral Conductor Terminal* |
| ⏚ | *PE Conductor Terminal* |
| *RC* | *Remote Contacts Terminal (Optional)* |
| *TD* | *Thermal Disconnector* |
| *TI* | *Thermal Indication* |

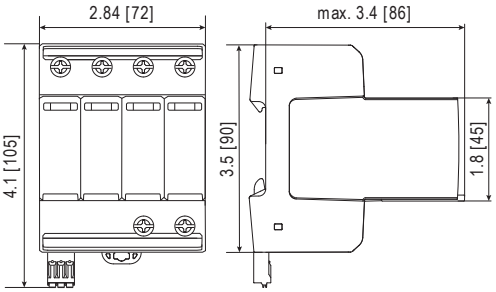



| Order Information | | |
|---|---|---|
| Order Code | **275** | **440*** |
| ProTec T1S-xxx-3+1-N | 59.0382 | 59.A657 |
| ProTec T1S-xxx-3+1-N-R (with remote contacts) | 59.0383 | 59.A658 |
| ProTec T1S-xxx-N-P (plug L-N) | 59.0385 | - |
| ProTec T1S-xxx-P (plug L-N) | - | 59.A515 |
| ProTube T1S-100-P (plug N-PE) | 59.0386 | - |
| ProTube T1S-440-100-P (plug N-PE) | - | 59.A516 |

**No VDE Certification.*

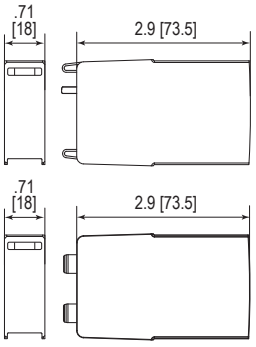
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-3+1-N** | | **275** | **440*** |
| Weight | pounds [grams] | 1.503 [682] | 1.537 [697] |
| **ProTec T1S-xxx-3+1-N-R** | | | |
| Weight | pounds [grams] | 1.523 [691] | 1.556 [706] |
| DIN 43880 Dimension | | 4 TE / 2.84" [72 mm] | |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | |
| Standard Order Quantity | | 4 Units | |

## Spare Plug




| Single Unit | | | |
|---|---|---|---|
| **ProTec T1S-xxx-P** | | **275** | **440*** |
| Weight | pounds [grams] | .231 [105] | .242 [110] |
| **ProTube T1S-100-P** | | **100** | |
| Weight | pounds [grams] | .253 [115] | |
| DIN 43880 Dimension | | 1 TE / .71" [18 mm] | |
| 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 | |


© 2026 Raycap All rights reserved.

**DATASHEET**

Lightning and Overvoltage Protection

# ProTube T1S-100-0+1

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

RoHS COMPLIANT

## Technical Data

| ProTube T1S-xxx-0+1 | | 100 |
|---|---|---|
| **IEC Electrical** | | |
| Maximum Continuous Operating Voltage (AC) | $U_c$ | 305 V |
| Nominal Discharge Current (8/20 µs) | $I_n$ | 100 kA |
| Maximum Discharge Current (8/20 µs) | $I_{max}$ | 150 kA |
| Impulse Discharge Current (10/350 µs) | $I_{imp}$ | 100 kA |
| Specific Energy | W/R | 2500 kJ/Ω |
| Charge | Q | 50 As |
| Voltage Protection Level | $U_p$ | 1500 V |
| Response Time | $t_A$ | < 100 ns |
| Overvoltage Category | | III |
| Follow Current Interrupt Rating (AC) | $I_{fi}$ | 100 A |
| TOV 200ms | $U_T$/mode | 1200 V/Withstand |
| Number of Ports | | 1 |
| **Additional Electrical Parameters** *(Tests performed within Raycap testing laboratory only)* | | |
| Residual Voltage at 5 kA (8/20 µs) | $U_{res}$ | 305 V |
| **Mechanical & Environmental** | | |
| Operating Temperature Range | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] |
| Permissible Operating Humidity | RH | 5%...95% |
| Pollution Degree | | 2 |
| Altitude | | 6562 ft [2000 m] |
| Terminal Screw Torque | $M_{max}$ | 40 lbf·in [4.5 Nm] |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) |
| | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) |
| Mounting | | 35 mm DIN Rail, EN 60715 |
| Degree of Protection | | IP 20 (built-in) |
| Housing Material | | Thermoplastic: Extinguishing Degree UL 94 V-0 |
| 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 mm² (Solid) |
| Overvoltage Category | | III |

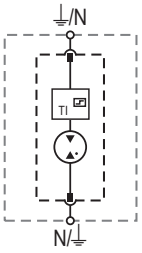
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

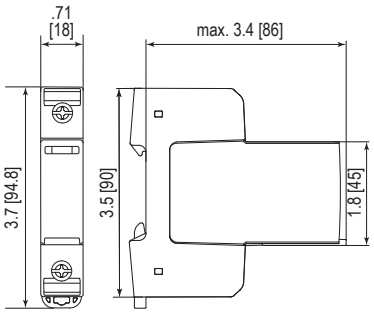
*N* *Neutral Conductor Terminal*
*⏚* *PE Conductor Terminal*
*TI* *Thermal Indication*




| Order Information | |
|---|---|
| Order Code | **100** |
| ProTube T1S-xxx-0+1 | 59.A744 |
| ProTube T1S-100-P (plug) | 59.0386 |

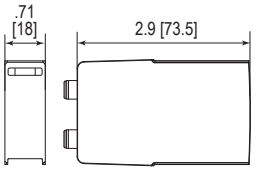
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | |
|---|---|---|
| **ProTube T1S-xxx-0+1** | | **100** |
| Weight | pounds [grams] | .410 [186] |
| DIN 43880 Dimension | | 1 TE/.71" [18 mm] |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | | 12 Units |

## Spare Plug




| Single Unit | | |
|---|---|---|
| **ProTube T1S-100-P** | | **100** |
| Weight | pounds [grams] | .227 [103] |
| DIN 43880 Dimension | | 1 TE/.71" [18 mm] |
| 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 |


© 2026 Raycap All rights reserved.

**DATASHEET**

Lightning and Overvoltage Protection

# ProTube T1S-440-100-0+1

**Class I • Class II • Type 1 • Type 2**

**25 kA Series**



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: N-PE
IEC/EN Category: Class I+II/Type 1+2
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

CE RoHS COMPLIANT

## Technical Data

| ProTube T1S-440-xxx-0+1 | | 100 |
|---|---|---|
| **IEC Electrical** | | |
| Maximum Continuous Operating Voltage (AC) | $U_c$ | 440 V |
| Nominal Discharge Current (8/20 µs) | $I_n$ | 100 kA |
| Maximum Discharge Current (8/20 µs) | $I_{max}$ | 100 kA |
| Impulse Discharge Current (10/350 µs) | $I_{imp}$ | 100 kA |
| Specific Energy | W/R | 2500 kJ/Ω |
| Charge | Q | 50 As |
| Voltage Protection Level | $U_p$ | 1500 V |
| Response Time | $t_A$ | < 100 ns |
| Overvoltage Category | | III |
| Follow Current Interrupt Rating (AC) | $I_{fi}$ | 100 A |
| TOV 200ms | $U_T$/mode | 1200 V/Withstand |
| Number of Ports | | 1 |
| **Additional Electrical Parameters** *(Tests performed within Raycap testing laboratory only)* | | |
| Residual Voltage at 5 kA (8/20 µs) | $U_{res}$ | 440 V |
| **Mechanical & Environmental** | | |
| Operating Temperature Range | $T_a$ | -40 °F to +185 °F [-40 °C to +85 °C] |
| Permissible Operating Humidity | RH | 5%...95% |
| Pollution Degree | | 2 |
| Altitude | | 6562 ft [2000 m] |
| Terminal Screw Torque | $M_{max}$ | 40 lbf·in [4.5 Nm] |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded)/4 AWG (Flexible) |
| | | 35 mm² (Solid, Stranded)/25 mm² (Flexible) |
| Mounting | | 35 mm DIN Rail, EN 60715 |
| Degree of Protection | | IP 20 (built-in) |
| Housing Material | | Thermoplastic: Extinguishing Degree UL 94 V-0 |
| 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 mm² (Solid) |
| Overvoltage Category | | III |

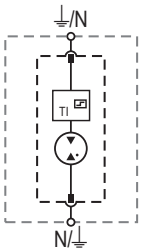
Raycap

*Information contained in this document is subject to change at any time without notice.*
*No part of this document may be reproduced or used without written permission from Raycap.*

## Internal Configuration

**Legend**

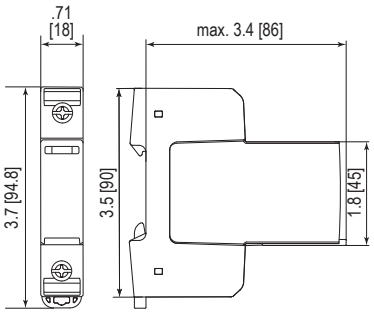
*N* *Neutral Conductor Terminal*
*⏚* *PE Conductor Terminal*
*TI* *Thermal Indication*




| Order Information | |
|---|---|
| Order Code | **100** |
| ProTube T1S-440-xxx-0+1 | 59.A529 |
| ProTube T1S-440-100-P (plug) | 59.A516 |

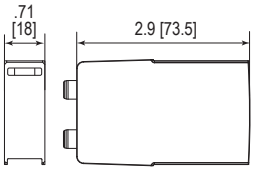
## Dimensions & Packaging

*inches [mm]*




| Complete Unit | | |
|---|---|---|
| **ProTube T1S-440-xxx-0+1** | | **100** |
| Weight | pounds [grams] | .403 [183] |
| DIN 43880 Dimension | | 1 TE/.71" [18 mm] |
| Packaging Dimensions (H x W x L) | | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] |
| Standard Order Quantity | | 12 Units |

## Spare Plug




| Single Unit | | |
|---|---|---|
| **ProTube T1S-440-100-P** | | **100** |
| Weight | pounds [grams] | .253 [115] |
| DIN 43880 Dimension | | 1 TE/.71" [18 mm] |
| 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 |


© 2026 Raycap All rights reserved.

Accessories

## Cable Extender

- Connecting accessories for 2-pole and 3-pole surge protective device (SPD) input terminals
- Overvoltage Category 3
- Limited width to one DIN Rail standard module, 1 TE
- Connection terminals can be easily connected to each other

