



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

**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 $\mu$ s)   | $I_n$        | 25 kA              | 25 kA               |
| Maximum Discharge Current (8/20 $\mu$ s)   | $I_{max}$    | 65 kA              | 50 kA               |
| Impulse Discharge Current (10/350 $\mu$ s) | $I_{imp}$    | 25 kA              | 25 kA               |
| Specific Energy                            | W/R          | 156.2 kJ/ $\Omega$ | 156.2 kJ/ $\Omega$  |
| 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 120min                                 | $U_T$ / 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 $\mu$ s)     | $U_{res}$ | 1400 V   | 1500 V   |
| Minimum Overcurrent Protection, 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   |          |
| Overcurrent Protection (max)      |            | 315 A gG | 250 A gG |

**Mechanical & Environmental**

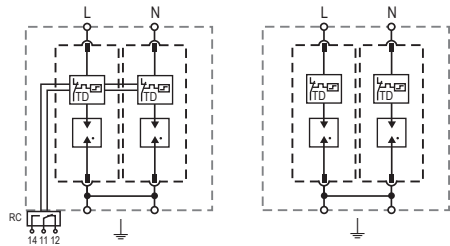
|                                    |           |                                                                      |  |
|------------------------------------|-----------|----------------------------------------------------------------------|--|
| Operating Temperature Range        | $T_a$     | -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 mm <sup>2</sup> (Solid, Stranded) / 25 mm <sup>2</sup> (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 <sup>2</sup> (Solid)                         |  |
| Overvoltage Category               |           | III                                                                  |  |

\*No VDE Certification.

Internal Configuration

Legend

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



ProTec T1S-xxx-2+0(-R)

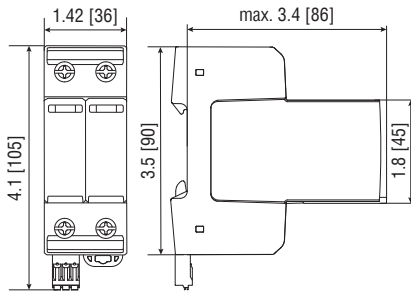
Order Information

| 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

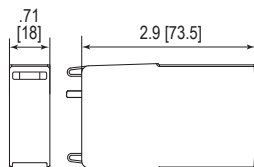
inches [mm]



Complete Unit

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

Spare Plug



Single Unit

| ProTec T1S-xxx-P             | 275                                    | 440*       |
|------------------------------|----------------------------------------|------------|
| Weight                       | pounds [grams]                         | .231 [105] |
| 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      | 28 Units                               |            |