

# Overvoltage Protection ProTec T2 4+0-US

Type 1CA • Open Type 1 SPD Listed • Class II • Type 2



Location of Use: Sub-Distribution Boards  
 Network Systems: 3-Phase Delta / 3-Phase WYE, 4W+G  
 Mode of Protection: L-PE, N-PE  
 UL/IEC/EN Category: Open Type 1 SPD Listed / Type 1CA  
 Class II / Type 2  
 Housing: Pluggable Design  
 Compliance: UL 1449 5th Edition  
 IEC 61643-11:2011  
 EN 61643-11:2012+A11:2018

## Technical Data

### ProTec T2-xxx-4+0-US(-R)

|                                           |                | 150           | 300           | 350           | 480           | 550*          |
|-------------------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|
| <b>UL Electrical</b>                      |                |               |               |               |               |               |
| Nominal System Voltage (AC)               |                | 208 V / 120 V | 415 V / 240 V | 480 V / 277 V | 690 V / 400 V | 690 V / 400 V |
| System                                    |                | 3Y            | 3Y            | 3Y            | 3Y            | 3Y            |
| Maximum Continuous Operating Voltage (AC) | MCOV           | 150V          | 300V          | 350V          | 480V          | 550V          |
| Voltage Protection Rating                 | VPR            | 600V          | 900V          | 1000V         | 1500V         | 2000V         |
| Nominal Discharge Current (8/20µs)        | I <sub>n</sub> | 20kA          | 20kA          | 20kA          | 20kA          | 20kA          |
| Short-Circuit Current Rating (AC)         | SCCR           | 200 kA        | 150 kA        | 200 kA        | 200 kA        | 200 kA        |

### IEC Electrical

|                                           |                                 |                  |           |           |           |           |
|-------------------------------------------|---------------------------------|------------------|-----------|-----------|-----------|-----------|
| Nominal AC Voltage (50/60Hz)              | U <sub>o</sub> / U <sub>n</sub> | 120V             | 240V      | 277V      | 400V      | 480V      |
| Maximum Continuous Operating Voltage (AC) | U <sub>c</sub>                  | 150V             | 300V      | 350V      | 480V      | 550V      |
| Nominal Discharge Current (8/20µs)        | I <sub>n</sub>                  | 20kA             | 20kA      | 20kA      | 20kA      | 20kA      |
| Maximum Discharge Current (8/20µs)        | I <sub>max</sub>                | 50kA             | 50kA      | 50kA      | 50kA      | 50kA      |
| Voltage Protection Level                  | U <sub>p</sub>                  | 1250V            | 1500V     | 1750V     | 2300V     | 2500V     |
| Response Time                             | t <sub>A</sub>                  | < 25 ns          |           |           |           |           |
| Overvoltage Category                      |                                 | III              |           |           |           |           |
| Overcurrent Protection (max)              |                                 | 315 A / 250 A gG |           |           |           |           |
| Short-Circuit Current Rating (AC)         | I <sub>SCCR</sub>               | 25 kA / 50 kA    |           |           |           |           |
| TOV Withstand 5s                          | U <sub>T</sub>                  | 229V             | 337V      | 403V      | 581V      | 697V      |
| TOV 120min                                | U <sub>T</sub>                  | 229V             | 442V      | 529V      | 762V      | 915V      |
|                                           | mode                            | Withstand        | Safe Fail | Safe Fail | Safe Fail | Safe Fail |
| Number of Ports                           |                                 | 1                |           |           |           |           |

### Mechanical & Environmental

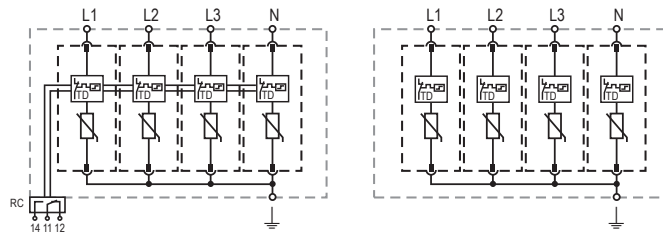
|                                    |                  |                                                                      |  |  |  |  |
|------------------------------------|------------------|----------------------------------------------------------------------|--|--|--|--|
| Operating Temperature Range        | T <sub>a</sub>   | -40 °F to +185 °F [-40 °C to +85 °C]                                 |  |  |  |  |
| Permissible Operating Humidity     | RH               | 5%...95%                                                             |  |  |  |  |
| Pollution Degree                   |                  | 2                                                                    |  |  |  |  |
| Altitude (max)                     |                  | 13123 ft [4000m]                                                     |  |  |  |  |
| Terminal Screw Torque              | M <sub>max</sub> | 35 lbf-in per UL 1499 [4.5 Nm]                                       |  |  |  |  |
| Conductor Cross Section (max)      |                  | 6 AWG (Solid, Stranded) per UL 1449                                  |  |  |  |  |
|                                    |                  | 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 / 1 A; DC: 48V / 0.5A, 24V / 0.5A, 12V / 0.5A    |  |  |  |  |
| RC Conductor Cross Section (max)   |                  | 10 AWG (Solid, Stranded) per UL 1449 [1.5 mm <sup>2</sup> (Solid)]   |  |  |  |  |
| Overvoltage Category               |                  | III                                                                  |  |  |  |  |

\*No VDE certification.

## Internal Configuration

### Legend

|           |                                     |
|-----------|-------------------------------------|
| <i>L</i>  | Line Conductor Terminal             |
| <i>N</i>  | Neutral Conductor Terminal          |
| $\perp$   | PE/G Conductor Terminal             |
| <i>RC</i> | Remote Contacts Terminal (Optional) |
| <i>TD</i> | Thermal Disconnect                  |



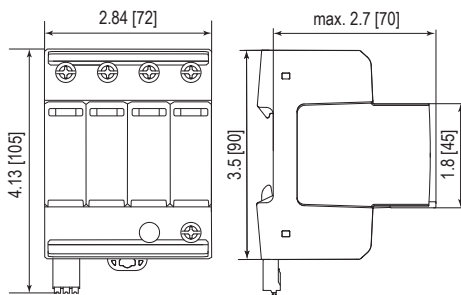
### Order Information

| Order Code                                    | 150     | 300     | 350     | 480     | 550*    |
|-----------------------------------------------|---------|---------|---------|---------|---------|
| ProTec T2-xxx-4+0-US                          | 59.B111 | 59.B113 | 59.B115 | 59.B117 | 59.B119 |
| ProTec T2-xxx-4+0-US-R (with remote contacts) | 59.B112 | 59.B114 | 59.B116 | 59.B118 | 59.B120 |
| ProTec T2-xxx-P (plug)                        | 59.0064 | 59.0065 | 59.0066 | 59.0067 | 59.0685 |

\*No VDE certification.

## Dimensions & Packaging

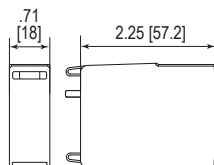
inches [mm]



### Complete Unit

| ProTec T2-xxx-4+0-US         |        | 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-US-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                                |       |       |       |

## Spare Plug



### Single Unit

| ProTec T2-xxx-P              |        | 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 116 x 305 mm] |                  |      |       |
| Standard Order Quantity      |        |      |                                     | 24 Units         |      |       |