

**ProTec T1-1500PV-3+0-S(-R)**

Type 1 • Type 2 • Open Type 1 SPD Listed



Location of Use: String box, Inverter  
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)  
 Surge Ratings:  $I_{Total}$  = up to 12.5kA (10/350  $\mu$ s)  
 $I_{Total}$  = up to 60kA (8/20  $\mu$ s)  
 EN/UL Category: Type 1, Type 2 /  
 Open Type 1 SPD Listed  
 Housing: Pluggable Design  
 Compliance: EN 50539-11:2013+A1:2014  
 UL 1449 4th Edition

**ProTec T1-xxxxPV-3+0-S(-R)****1500****EN Electrical**

|                                            |                      |                   |
|--------------------------------------------|----------------------|-------------------|
| Maximum Continuous Operating DC Voltage    | $U_{CPV}$            | 1500 V            |
| Nominal Discharge Current (8/20 $\mu$ s)   | $I_n$                | 20 kA             |
| Impulse Discharge Current (10/350 $\mu$ s) | $I_{imp}$            | 6.25 kA           |
| Specific Energy                            | W/R                  | 9.77 kJ/ $\Omega$ |
| Charge                                     | Q                    | 3.125 As          |
| Total Discharge Current (10/350 $\mu$ s)   | $I_{Total}$          | 12.5 kA           |
| Total Discharge Current (8/20 $\mu$ s)     | $I_{Total}$          | 60 kA             |
| Maximum Discharge Current (8/20 $\mu$ s)   | $I_{max}$            | 60 kA             |
| Voltage Protection Level                   | (+)-PE, (-)-PE $U_p$ | 4500 V            |
|                                            | (+)-(-) $U_p$        | 4500 V            |
| Response Time                              | $t_A$                | < 25 ns           |
| Short-Circuit Current Rating               | $I_{SCP}$            | 30 kA             |
| Number of Ports                            |                      | 1                 |

**UL Electrical**

|                                          |                       |        |
|------------------------------------------|-----------------------|--------|
| Maximum Permitted DC Voltage             | $V_{pVdc}$            | 1500 V |
| Voltage Protection Rating                | (+)-G, (-)-G $V_{PR}$ | 3000 V |
|                                          | (+)-(-) $V_{PR}$      | 3000 V |
| Nominal Discharge Current (8/20 $\mu$ s) | $I_n$                 | 20 kA  |
| Short-Circuit Current Rating             | SCCR                  | 100 kA |

**Mechanical & Environmental**

|                                    |           |                                                                                                                    |
|------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------|
| Operating Temperature Range        | $T_a$     | -40 °F to +158 °F [-40 °C to +70 °C]                                                                               |
| Permissible Operating Humidity     | RH        | 5%...95%                                                                                                           |
| Altitude (max)                     |           | 6561 ft [2000 m]                                                                                                   |
| Terminal Screw Torque              | $M_{max}$ | 39.9 lbf-in [4.5 Nm]                                                                                               |
| Conductor Cross Section (max)      |           | 2 AWG (Solid, Stranded) / 4 AWG (Flexible)<br>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)                                                                       |

**Order Information**

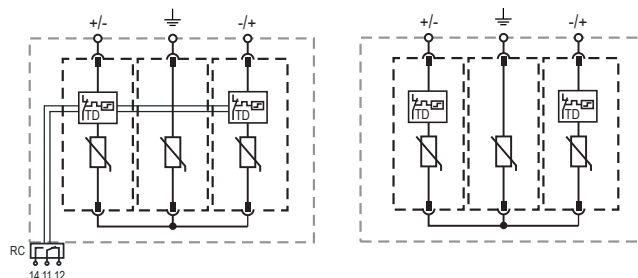
|                                                 |             |
|-------------------------------------------------|-------------|
| Order Code                                      | <b>1500</b> |
| ProTec T1-xxxxPV-3+0-S                          | 59.0917     |
| ProTec T1-xxxxPV-3+0-S-R (with remote contacts) | 59.0916     |
| ProTec T1-750PV-S-P (middle plug)               | 59.0919     |
| ProTec T1-750PV-S-M-P (side plug)               | 59.0918     |

## ProTec T1-1500PV-3+0-S(-R)

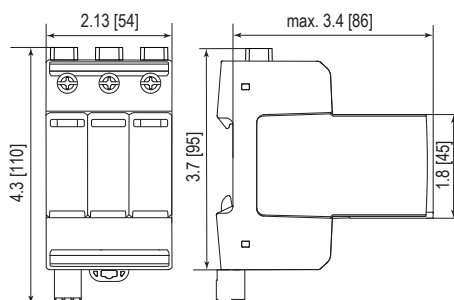
### Internal Configuration

#### Legend

|          |                                 |
|----------|---------------------------------|
| +/-, -/+ | Terminal for +/-, -/+ Conductor |
| ⏏        | Terminal for PE/G Conductor     |
| RC       | Remote Contacts Optional        |
| TD       | Thermal Disconnect              |



### Complete Unit

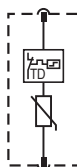


#### Dimensions & Packaging

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| <b>ProTec T1-xxxxPV-3+0-S</b>    | <b>1500</b>                             |
| Single Unit Weight               | pounds 1.034                            |
|                                  | grams 469                               |
| <b>ProTec T1-xxxxPV-3+0-S-R</b>  | <b>1500</b>                             |
| Single Unit Weight               | pounds 1.045                            |
|                                  | grams 474                               |
| Single Unit DIN 43880 Dimension  | 3 TE / 2.13 [54]                        |
| Packaging Dimensions (H x W x L) | 4.30 x 3.03 x 4.48" [109 x 77 x 114 mm] |
| Standard Order Quantity          | 1 Unit                                  |

### Plug Internal Configuration

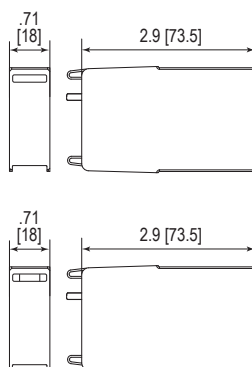
#### ProTec T1-750PV-S-M-P



#### ProTec T1-750PV-S-P



### Spare Plug



#### Dimensions & Packaging

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| <b>ProTec T1-xxxPV-S-P</b>       | <b>750</b>                              |
| Single Unit Weight               | pounds .282                             |
|                                  | grams 128                               |
| <b>ProTec T1-xxxPV-S-M-P</b>     | <b>750</b>                              |
| Single Unit Weight               | pounds .196                             |
|                                  | grams 89                                |
| Single Unit DIN 43880 Dimension  | 1 TE / .71 [18]                         |
| Packaging Dimensions (H x W x L) | 4.30 x 3.03 x 4.48" [109 x 77 x 114 mm] |
| Standard Order Quantity          | 1 Unit                                  |

inches  
[mm]

Information contained in this document is subject to change at any time without notice.

