

# Multi-Pole Base for Photovoltaic Systems

## ProTec T2-PV-5Y-00(-R)

### Class II • Type 2 • PV SPD Type 1CA



Location of Use: String box, Inverter  
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)  
 IEC/EN/UL Category: Class II / Type 2 / PV SPD Type 1CA  
 Housing: Pluggable Design  
 Compliance: IEC 61643-31:2018  
 EN 61643-31:2019  
 UL 1449 5th Edition



## Technical Data

ProTec T2-xxxxPV-5Y-00(-R)

1100

### EN Electrical

|                                           |                |        |
|-------------------------------------------|----------------|--------|
| Maximum Continuous Operating Voltage (PV) | $U_{CPV}$      | 1100 V |
| Nominal Discharge Current (8/20 $\mu$ s)  | $I_n$          | 20 kA  |
| Total Discharge Current (8/20 $\mu$ s)    | $I_{Total}$    | 50 kA  |
| Maximum Discharge Current (8/20 $\mu$ s)  | $I_{max}$      | 40 kA  |
| Voltage Protection Level                  | (+/-)-PE $U_p$ | 3800 V |
|                                           | (+)-(-) $U_p$  | 3800 V |
| Overvoltage Category                      |                | III    |
| Short-Circuit Current Rating              | $I_{SCPV}$     | 11 kA  |
| Number of Ports                           |                | 1      |

### UL Electrical

|                                          |                   |        |
|------------------------------------------|-------------------|--------|
| Maximum Permitted DC Voltage             | $V_{pVdc}$        | 1100 V |
| Voltage Protection Level                 | (+/-)-PE $V_{PR}$ | 2500 V |
|                                          | (+)-(-) $V_{PR}$  | 2500 V |
| Nominal Discharge Current (8/20 $\mu$ s) | $I_n$             | 20 kA  |
| Short-Circuit Current Rating             | SCCR              | 50 kA  |

### Additional Electrical Parameters (Tests performed within Raycap testing laboratory only)

|                                         |           |        |
|-----------------------------------------|-----------|--------|
| Residual Voltage at 5 kA (8/20 $\mu$ s) | $U_{res}$ | 3000 V |
|-----------------------------------------|-----------|--------|

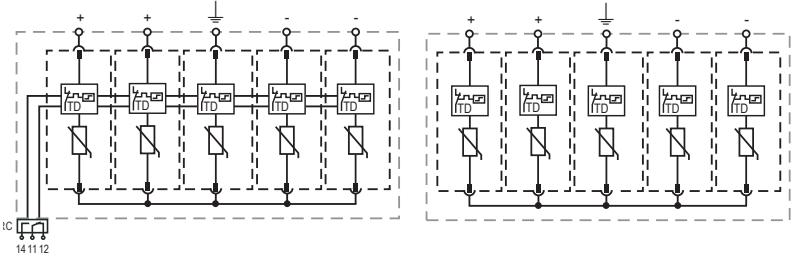
### Mechanical & Environmental

|                                    |           |                                                                                                                    |
|------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------|
| 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 (max)                     |           | 13123 ft [4000 m]                                                                                                  |
| Terminal Screw Torque              | $M_{max}$ | 40 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)                                                                       |
| Overvoltage Category               |           | III                                                                                                                |

Internal Configuration

Legend

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



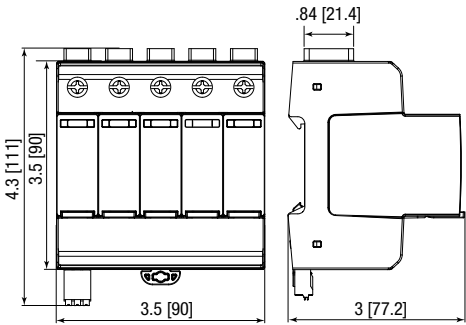
ProTec T2-xxxxPV-5Y-00(-R)

Order Information

|                                                 |         |
|-------------------------------------------------|---------|
| Order Code                                      | 1100    |
| ProTec T2-xxxxPV-5Y-00                          | 59.A452 |
| ProTec T2-xxxxPV-5Y-00-R (with remote contacts) | 59.A453 |
| ProTec T2-550PV-00-P (plug)                     | 59.A454 |

Dimensions & Packaging

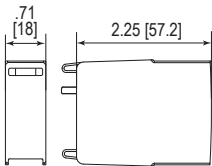
inches [mm]



Complete Unit

|                                  |                                        |
|----------------------------------|----------------------------------------|
| ProTec T2-xxxxPV-5Y-00           | 1100                                   |
| Weight                           | pounds 1.313                           |
|                                  | grams 596                              |
| ProTec T2-xxxxPV-5Y-00-R         | 1100                                   |
| Weight                           | pounds 1.329                           |
|                                  | grams 603                              |
| DIN 43880 Dimension              | 5 TE / 3.5" [90 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          | 3 Units                                |

Spare Plug



Single Unit

|                                  |                                     |
|----------------------------------|-------------------------------------|
| ProTec T2-xxxPV-00-P             | 550                                 |
| Single Unit Weight               | pounds .145                         |
|                                  | grams 66                            |
| Single Unit DIN 43880 Dimension  | 1 TE / .71" [18 mm]                 |
| Packaging Dimensions (H x W x L) | 3.2 x 4.5 x 12" [83 x 116 x 305 mm] |
| Standard Order Quantity          | 24 Units                            |