**DATASHEET**

Pluggable Multi-Pole SPD for DC Systems

# ProTec T2 DCU 3Y

**Class II • Type 2 • DC SPD Type 4CA**

**Unipolar**



Location of Use: DC Systems
Network Systems: Unipolar grounded / ungrounded, TN, TT*, IT*
Mode of Protection: (+)-PE/G, (-)-PE/G, (+)-(-)
IEC/EN/UL Category: Class II/Type 2/DC SPD Type 4CA
Housing: Pluggable Design
Compliance: IEC 61643-41:2025
EN IEC 61643-41:2025
UL 1449 5th Edition, Supplement SB

CE RoHS COMPLIANT

## Technical Data

| ProTec T2-xxxDCU-3Y(-R) | | | 90 | 150 | 250 |
|---|---|---|---|---|---|
| **IEC Electrical** | | | | | |
| Nominal DC Voltage | (+)-(-) | $U_n$ | 75 V | 120 V | 220 V |
| Maximum Continuous Operating Voltage (DC) | | $U_c$ | 90 V | 150 V | 250 V |
| Nominal Discharge Current (8/20 µs) | | $I_n$ | 20 kA | 20 kA | 20 kA |
| Maximum Discharge Current | | $I_{max}$ | 40 kA | 40 kA | 40 kA |
| Total Discharge Current (8/20 µs) | | $I_{Total}$ | 40 kA | 40 kA | 40 kA |
| Voltage Protection Level | | $U_p$ | 700 V | 700 V | 1000 V |
| Overcurrent Protection (max) | | | 125 A gBat** | 125 A gBat** | 125 A gBat** |
| Short-Circuit Current Rating (DC) | | $I_{SCCR}$ | 10 kA (L/R < 3 ms) | | |
| Response Time | | | < 25 ns | | |
| Overvoltage Category | | | III | | |
| Number of Ports | | | 1 | | |
| **UL Electrical** | | | | | |
| Maximum Permitted DC Voltage | | $V_{dcmcov}$ | 90 V | 150 V | 250 V |
| Measured Limiting Voltage | | MLV | 800 V | 800 V | 1100 V |
| Nominal Discharge Current (8/20 µs) | | $I_n$ | 20 kA | | |
| **Additional Electrical Parameters** *(Tests performed within Raycap testing laboratory only)* | | | | | |
| Residual Voltage at 5 kA (8/20 µs) | | $U_{res}$ | 350 V | 350 V | 400 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) | | | 6562 ft [2000 m] | | |
| Terminal Screw Torque | | $M_{max}$ | 35 lbf·in per UL 1449 [4.5 Nm] | | |
| Conductor Cross Section (max) | | | 6 AWG (Solid, Stranded) per UL 1449 | | |
| | | | 35 mm² (Solid, Stranded) / 25 mm² (Flexible) | | |
| | | | Cu Only per UL 1449 | | |
| 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 | | | 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 | | |

**Only for DC power systems which are electrically separated from AC power systems.*

***ETI NH1 BAT 125 A/550 V DC (004723264)*

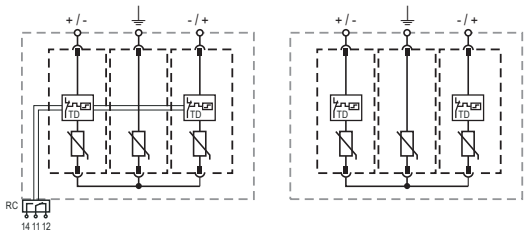
Raycap

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## Internal Configuration

**Legend**

⏚ *PE / G Conductor Terminal*
*RC* *Remote Contacts Terminal (Optional)*
*TD* *Thermal Disconnector*

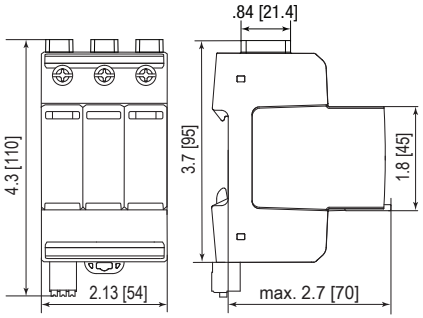



**Order Information**

| Order Code | 90 | 150 | 250 |
|---|---|---|---|
| ProTec T2-xxxDCU-3Y | 59.C864 | 59.C865 | 59.C866 |
| ProTec T2-xxxDCU-3Y-R (with remote contacts) | 59.C829 | 59.C830 | 59.C831 |
| ProTec T2-45DCU-M-P (side plug) | 59.C869 | - | - |
| ProTec T2-45DCU-P (middle plug) | 59.C870 | - | - |
| ProTec T2-75DCU-M-P (side plug) | - | 59.C871 | - |
| ProTec T2-75DCU-P (middle plug) | - | 59.C872 | - |
| ProTec T2-125DCU-M-P (side plug) | - | - | 59.C873 |
| ProTec T2-125DCU-P (middle plug) | - | - | 59.C874 |

## Dimensions & Packaging

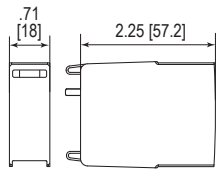
*inches [mm]*



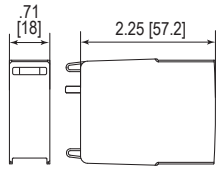

**Complete Unit**

| **ProTec T2-xxxDCU-3Y** | | **90** | **150** | **250** |
|---|---|---|---|---|
| Weight | pounds [grams] | .672 [305] | .672 [305] | .683 [310] |
| **ProTec T2-xxxDCU-3Y-R** | | | | |
| Weight | pounds [grams] | .694 [315] | .694 [315] | .705 [320] |
| DIN 43880 Dimension | | 3 TE / 2.13" [54 mm] | | |
| Packaging Dimensions (H x W x L) | | 4.3 × 4.5 × 13.8" [109 × 115 × 352 mm] | | |
| Standard Order Quantity | | 5 Units | | |

## Spare Plug




*ProTec T2-45DCU-M-P*
*ProTec T2-75DCU-M-P*
*ProTec T2-125DCU-M-P*




*ProTec T2-45DCU-P*
*ProTec T2-75DCU-P*
*ProTec T2-125DCU-P*

**Single Unit**

| **ProTec T2-xxxDCU-M-P** | | **45** | **75** | **125** |
|---|---|---|---|---|
| Weight | pounds [grams] | .093 [42] | .093 [42] | .095 [43] |
| **ProTec T2-xxxDCU-P** | | **45** | **75** | **125** |
| Weight | pounds [grams] | .099 [45] | .099 [45] | .104 [47] |
| DIN 43880 Dimension | | 1 TE / .70" [18 mm] | | |
| Packaging Dimensions (H x W x L) | | 3.2 × 4.5 × 12" [83 × 116 × 305 mm] | | |
| Standard Order Quantity | | 24 Units | | |


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