

Overvoltage Protection

SafeTec T2 2+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Safety: Patented Current Limiting Technology
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

| SafeTec T2-xxx-2+0(-R) | | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 |
|---|------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| IEC Electrical | | | | | | | | | |
| Nominal AC Voltage (50/60Hz) | U_o/U_n | 60V | 120V | 240V | 277V | 400V | 400V | 600V | 600V |
| Maximum Continuous Operating Voltage (AC) | U_c | 75V | 150V | 300V | 350V | 480V | 550V | 750V | 880V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Maximum Discharge Current (8/20 μ s) | I_{max} | 50 kA | 50 kA | 50 kA | 50 kA | 50 kA | 50 kA | 35 kA | 35 kA |
| Voltage Protection Level | U_p | 800V | 1250V | 1650V | 1750V | 2300V | 2500V | 3500V | 3600V |
| Response Time | t_A | < 25 ns | | | | | | | |
| Overcurrent Protection (max) | | 315 A/250 A gG | | | | | | | |
| Short-Circuit Current Rating (AC) | I_{SCCR} | 25 kA/50 kA | | | | | | | |
| TOV Withstand 120min | U_T | 150V | 255V | 442V | 529V | 762V | 918V | 1200V | 1250V |
| Number of Ports | | 1 | | | | | | | |

| | | | | | | | | | |
|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| UL Electrical | | | | | | | | | |
| Maximum Continuous Operating Voltage (AC) | MCOV | 75V | 150V | 300V | 350V | 480V | 550V | 750V | 880V |
| Voltage Protection Rating | VPR | 600V | 700V | 1200V | 1200V | 1500V | 1800V | 2500V | 2500V |
| Nominal Discharge Current (8/20 μ s) | I_n | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA | 20 kA |
| Short-Circuit Current Rating (AC) | SCCR | 85 kA | 200 kA | 150 kA | 200 kA | 200 kA | 200 kA | 200 kA | 200 kA |

| | | | | | | | | | |
|---------------------------------------|-----------|--|--|--|--|--|--|--|--|
| Mechanical & Environmental | | | | | | | | | |
| Operating Temperature Range | T_a | -40 °F to +185 °F [-40 °C to +85 °C] | | | | | | | |
| Permissible Operating Humidity | RH | 5%...95% | | | | | | | |
| Altitude (max) | | 13123 ft [4000 m] | | | | | | | |
| Terminal Screw Torque | M_{max} | 39.9 lbf-in [4.5 Nm] | | | | | | | |
| Conductor Cross Section (max) | | 2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (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 ² (Solid) | | | | | | | |

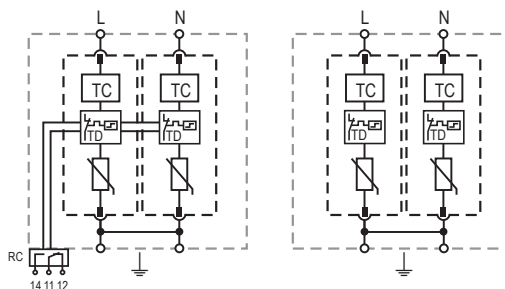
| Order Information | | | | | | | | | |
|---|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Order Code | | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 |
| SafeTec T2-xxx-2+0 | | 59.0345 | 59.0148 | 59.0150 | 59.0152 | 59.0154 | 59.0156 | 59.0158 | 59.0160 |
| SafeTec T2-xxx-2+0-R (with remote contacts) | | 59.0346 | 59.0149 | 59.0151 | 59.0153 | 59.0155 | 59.0157 | 59.0159 | 59.0161 |
| SafeTec T2-xxx-P (plug) | | 59.0125 | 59.0126 | 59.0127 | 59.0128 | 59.0129 | 59.0299 | 59.0130 | 59.0131 |

SafeTec T2 2+0

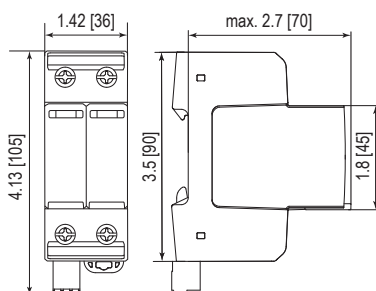
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⏏ PE/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TC Thermal Control Function
- TD Thermal Disconnect



Complete Unit

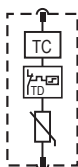


Complete Unit Dimensions & Packaging

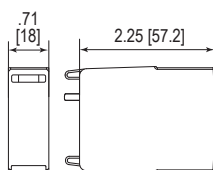
| SafeTec T2-xxx-2+0 | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 | |
|------------------------------|--|------|------|------|------|------|------|------|------|
| Weight | pounds | .545 | .567 | .580 | .616 | .620 | .642 | .677 | .686 |
| | grams | 247 | 257 | 263 | 279 | 281 | 291 | 307 | 311 |
| SafeTec T2-xxx-2+0-R | | | | | | | | | |
| Weight | pounds | .565 | .587 | .600 | .635 | .640 | .662 | .697 | .706 |
| | grams | 256 | 266 | 272 | 288 | 290 | 300 | 316 | 320 |
| DIN 43880 Dimension | 2 TE / 1.42" [36] | | | | | | | | |
| Packaging Dimensions (HxWxL) | 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm] | | | | | | | | |
| Standard Order Quantity | 7 Units | | | | | | | | |

Plug Internal Configuration

SafeTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

| SafeTec T2-xxx-P | 75 | 150 | 300 | 350 | 480 | 550 | 750 | 880 | |
|------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|
| Weight | pounds | .128 | .139 | .146 | .163 | .165 | .176 | .194 | .198 |
| | grams | 58 | 63 | 66 | 74 | 75 | 80 | 88 | 90 |
| DIN 43880 Dimension | 1 TE / .71" [18] | | | | | | | | |
| Packaging Dimensions (HxWxL) | 3.2 x 4.5 x 12" [83 x 115 x 305 mm] | | | | | | | | |
| Standard Order Quantity | 24 Units | | | | | | | | |