

Surge protection device - TTC-6P-1X2-12DC-UT-I - 2908192

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Surge protection, consisting of protective plug and base element, with integrated status indicator for a 2-wire floating signal circuit.

Why buy this product

- ✓ Space-saving installation due to the narrow overall width of 6.2 mm
- ✓ Signaling without additional auxiliary power, thanks to the mechanical status indicator
- ✓ Optional remote signaling module monitors up to 40 items, without additional wiring
- ✓ The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- ✓ Error-free replacement of protective plugs, thanks to coding
- ✓ Safe behavior in the event of overload, thanks to the integrated disconnect device
- ✓ Simple testing and documentation with CHECKMASTER 2, thanks to pluggable protective modules



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 pc |
| GTIN |  4 055626 282671 |
| GTIN | 4055626282671 |

Technical data

Dimensions

| | |
|--------|--------------------------------|
| Height | 105.8 mm |
| Width | 6.2 mm +0.1 mm |
| Depth | 100 mm (incl. DIN rail 7.5 mm) |

Ambient conditions

| | |
|---|--|
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 4000 m (amsl (above mean sea level)) |
| Degree of protection | IP20 |

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Technical data

General

| | |
|--|--|
| Housing material | PBT |
| Flammability rating according to UL 94 | V-0 |
| Color | traffic grey A RAL 7042 |
| | light gray RAL 7035 |
| Mounting type | DIN rail: TH 35 - 7.5 mm |
| Type | DIN rail module, two-section, divisible |
| Direction of action | Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground |

Protective circuit

| | |
|---|---|
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage U_N | 12 V DC |
| Maximum continuous voltage U_C | 15 V DC |
| Rated current | 600 mA (56 °C) |
| Operating effective current I_C at U_C | $\leq 100 \mu\text{A}$ |
| Residual current I_{PE} | $\leq 1 \mu\text{A}$ |
| Nominal discharge current I_n (8/20) μs (line-line) | 5 kA |
| Nominal discharge current I_n (8/20) μs (line-earth) | 5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-line) | 0.5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-earth) | 0.5 kA |
| Total discharge current I_{total} (8/20) μs | 10 kA |
| Voltage protection level U_p (line-line) | $\leq 220 \text{ V}$ (C1 - 1 kV/500 A) |
| | $\leq 350 \text{ V}$ (C2 - 10 kV / 5 kA) |
| | $\leq 25 \text{ V}$ (C3 - 25 A) |
| | $\leq 35 \text{ V}$ (C3 - 100 A) |
| Voltage protection level U_p (line-earth) | $\leq 750 \text{ V}$ (C1 - 1 kV/500 A) |
| | $\leq 750 \text{ V}$ (C2 - 10 kV / 5 kA) |
| | $\leq 700 \text{ V}$ (C3 - 25 A) |
| | $\leq 750 \text{ V}$ (C3 - 100 A) |
| Voltage protection level U_p static (line-line) | $\leq 30 \text{ V}$ (C1 - 1 kV/500 A) |
| | $\leq 81 \text{ V}$ (C2 - 10 kV / 5 kA) |
| Voltage protection level U_p static (line-earth) | $\leq 750 \text{ V}$ (C1 - 1 kV/500 A) |
| | $\leq 750 \text{ V}$ (C2 - 10 kV / 5 kA) |
| Response time t_A (line-line) | $\leq 1 \text{ ns}$ |
| Response time t_A (line-earth) | $\leq 100 \text{ ns}$ |
| Input attenuation aE, sym. | typ. 0.3 dB ($\leq 130 \text{ kHz}/150 \Omega$) |
| Cut-off frequency f_g (3 dB), sym. in 150 Ohm system | typ. 420 kHz |
| Capacity (line-line) | typ. 5.2 nF |

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Protective circuit

| | |
|---------------------------------|--|
| Resistance in series | 1.65 Ω ±20 % |
| Surge protection fault message | optical |
| Max. required back-up fuse | 630 mA (FF) |
| Impulse durability (line-line) | C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 100 A |
| Impulse durability (line-earth) | C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 100 A D1 - 500 A |
| Pulse reset time (line-line) | ≤ 700 ms |
| Pulse reset time (line-earth) | ≤ 1500 ms |

Additional technical data

| | |
|---|------------|
| Max. total discharge current $I_{total\ max}$ (8/20) μs | 20 kA (1x) |
|---|------------|

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| Stripping length | 8 mm |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section solid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section AWG | 24 ... 12 |

Standards and Regulations

| | |
|--------------------------|--|
| Standards/specifications | IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012 |
| | EN 61643-21 2001 + A1:2009 + A2:2013 |

Environmental Product Compliance

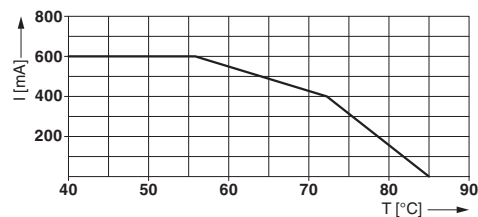
| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

Drawings

Pictogram

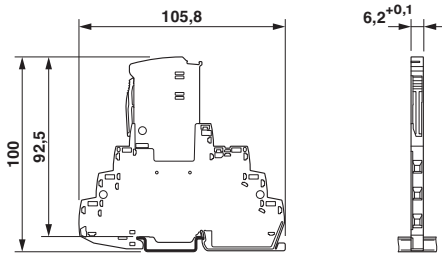


Diagram

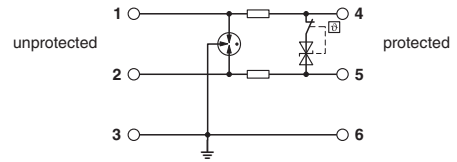


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Dimensional drawing



Circuit diagram



Approvals

Approvals

Approvals

UL Listed / CSA / CSAus / DNV GL / cCSAus

Ex Approvals

Approval details

| | | | |
|-----------|--|---|---------------|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 138168 |
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 70136717 |
| CSAus | | http://www.csagroup.org/services-industries/product-listing/ | 70136717 |
| DNV GL | | http://exchange.dnv.com/tari/ | TAE000027G |
| cCSAus | | http://www.csagroup.org/services-industries/product-listing/ | |

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