

PT 2+1-S-48DC/FM - Type 3 surge protection device



2817958

<https://www.phoenixcontact.com/us/products/2817958>

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Rail-mountable surge arrester as device protection for terminal equipment, fault signal in the plug and signaling contact in the base element, 2-section, pluggable. Design: 48 V DC

Your advantages

- Easy testing and documentation with CHECKMASTER 2 with pluggable protective modules
- Maximum ease of maintenance, thanks to the 2-piece design
- Easy selection for all possible demands in MCR applications with a complete product portfolio
- The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- Permanent protective device monitoring with optical signaling via LED

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2817958 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL01 |
| Product key | CL1411 |
| GTIN | 4017918574987 |
| Weight per piece (including packing) | 67.93 g |
| Weight per piece (excluding packing) | 63.465 g |
| Customs tariff number | 85363090 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--------------------------------|---|
| Product type | Device protection |
| Product family | PLUGTRAB PT |
| IEC power supply system | DC |
| Type | DIN rail module, two-section, divisible |
| Surge protection fault message | Optical, remote indicator contact |

Insulation characteristics

| | |
|--|-------------------|
| Overvoltage category | III |
| Pollution degree | 2 |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.00 |
| IEC test classification | III T3 |
| EN type | T3 |
| Number of ports | One |

Electrical properties

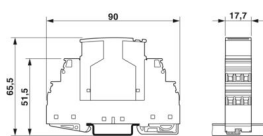
Indicator/remote signaling

| | |
|--------------------|-------------------------------------|
| Connection name | Remote fault indicator contact |
| Switching function | N/C contact |
| Operating voltage | 7 V DC ... 70 V DC (open collector) |
| Operating current | 5 mA DC ... 15 mA (open collector) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.8 Nm |
| Conductor cross-section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section rigid | 0.2 mm ² ... 4 mm ² |
| Conductor cross-section AWG | 24 ... 12 |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 17.7 mm |
| Height | 90 mm |
| Depth | 65.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 1 Div. |

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Material specifications

| | |
|--|------------------|
| Color | black (RAL 9005) |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PA 6.6 |
| Housing material | PA 6.6 |

Protective circuit

| | |
|--|--|
| Mode of protection | L-N |
| | L-PE |
| | N-PE |
| | (L+) - (L-) |
| | (L+/L-) - PE |
| Direction of action | 1L-N & N-PE |
| Nominal voltage U_N | 48 V DC |
| Maximum continuous operating voltage U_C | 60 V DC |
| Rated load current I_L | 26 A (30 °C) |
| Protective conductor current I_{PE} | $\leq 10 \mu\text{A}$ |
| Nominal discharge current I_n (8/20) μs | 500 A |
| Combination wave U_{OC} | 1 kV (2 Ω) |
| | 1 kV (2 Ω) |
| Voltage protection level U_p | $\leq 120 \text{ V}$ |
| Response time t_A (L-N) | $\leq 1 \text{ ns}$ |
| Response time t_A (L-PE) | $\leq 1 \text{ ns}$ |
| Short-circuit current rating I_{SCCR} | 200 A (without backup fuse for U_C) |
| Maximum backup fuse for through wiring | 25 A (gG) |
| Max. backup fuse with branch wiring | 50 A (gG) |

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Altitude | $\leq 2000 \text{ m (amsl)}$ |
| Permissible humidity (operation) | 5 % ... 95 % |

Standards and regulations

Air clearances and creepage distances

| | |
|--------------------------|---|
| Standards/regulations | DIN VDE 0110-1 / IEC 60664-1 / DIN VDE 0675-6 / IEC 61643-1 |
| Standards/specifications | EN 61643-11 |
| Note | 2012 |
| Standards/specifications | IEC 61643-11 |

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| | |
|------|------|
| Note | 2011 |
|------|------|

Mounting

| | |
|---------------|-----------------|
| Mounting type | DIN rail: 35 mm |
|---------------|-----------------|

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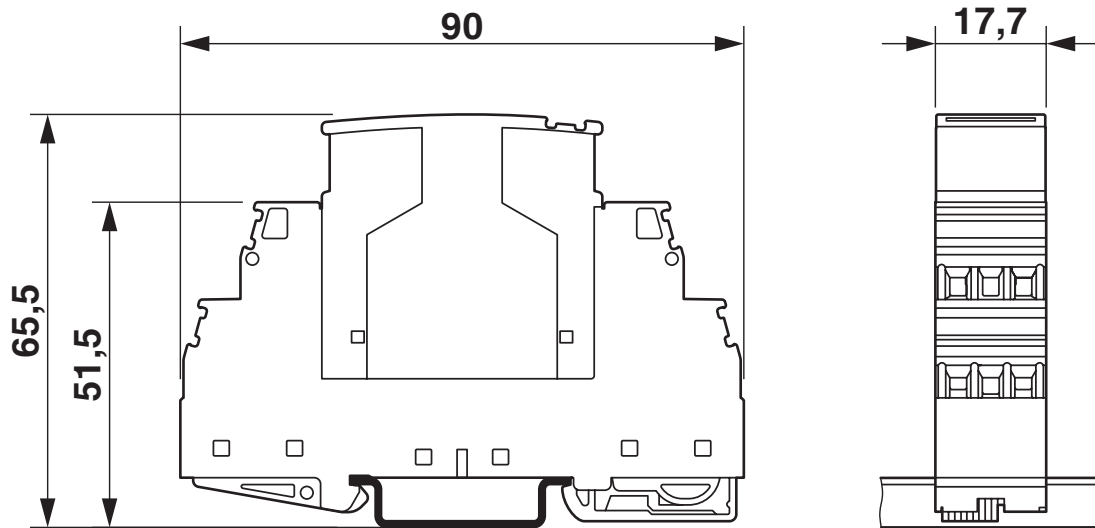


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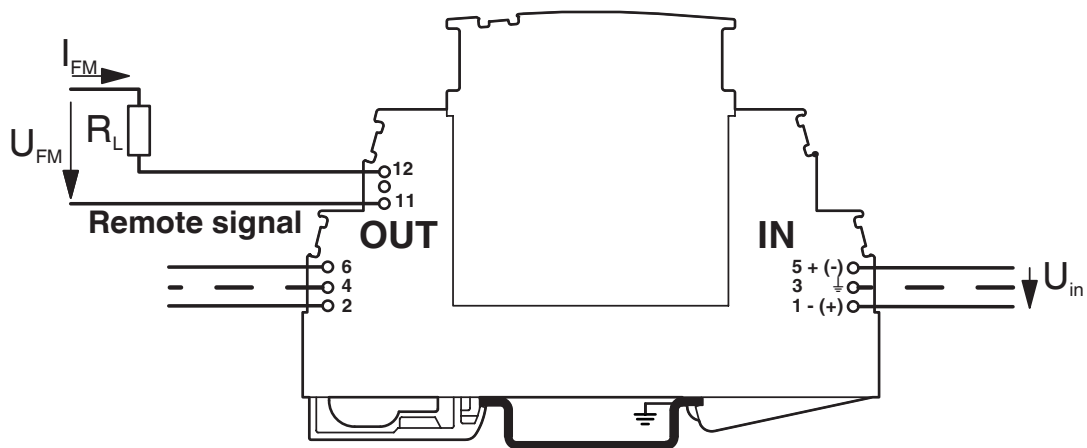
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Drawings

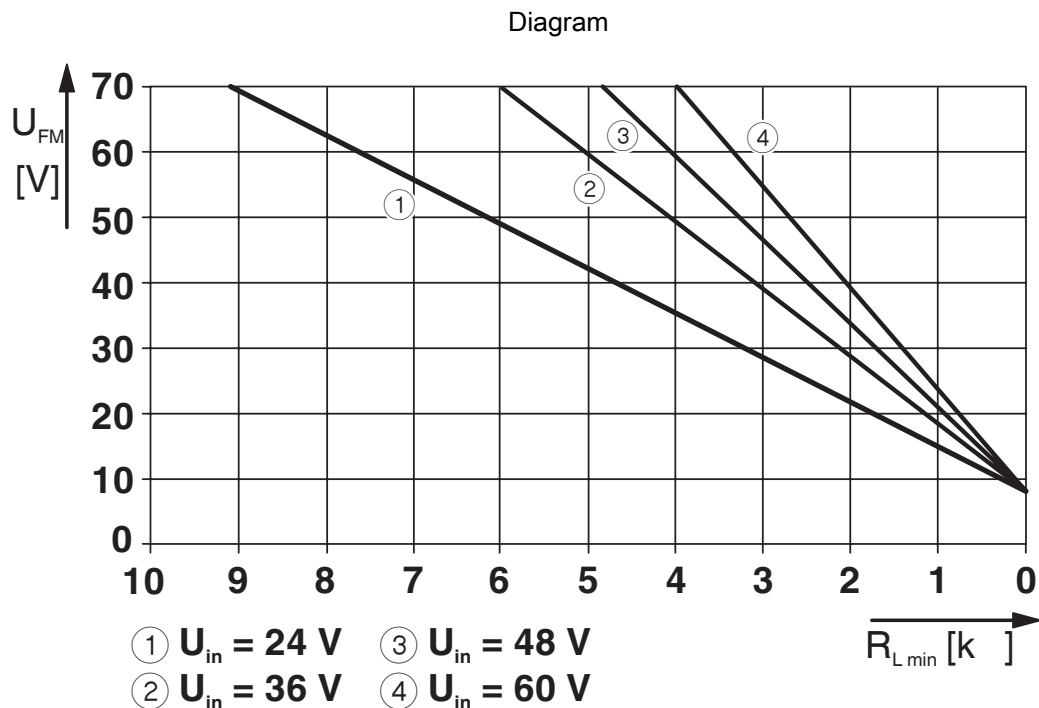
Dimensional drawing



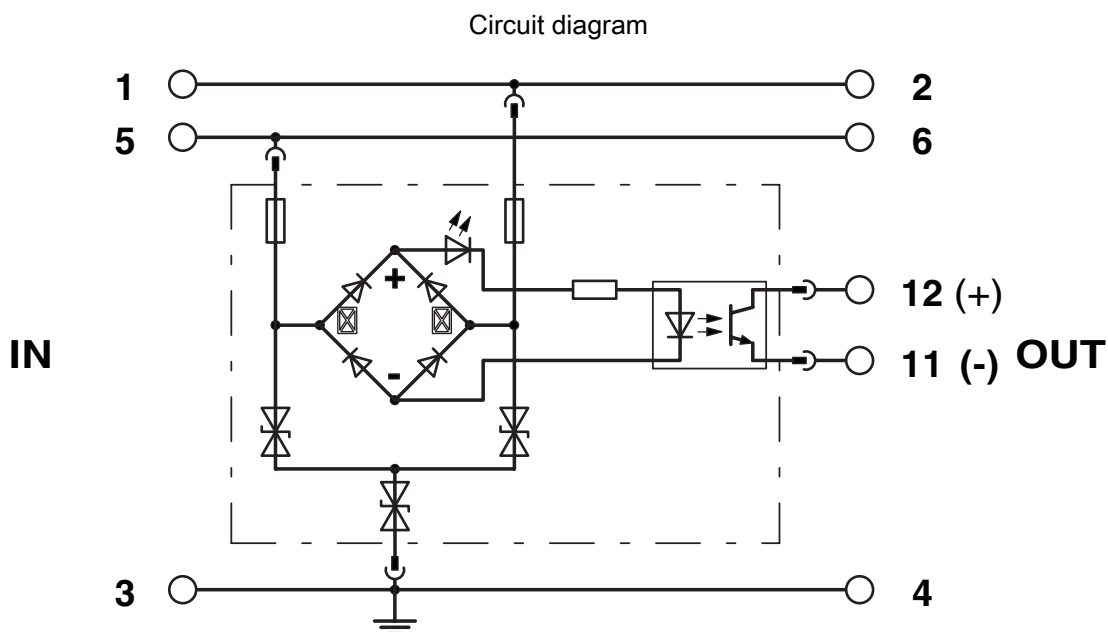
Connection diagram



The voltage of the cable to be protected (U_{in}) determines the current driven by the transistor output (I_{FM}).



The figure shows the minimum load resistance (R_L) at the transistor output of the remote indication contact depending on the specified input voltage (U_{in}).



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27171203 |
| ECLASS-15.0 | 27171203 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC000942 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|---|
| REACH candidate substance (CAS No.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
| | Lead(CAS: 7439-92-1) |
| SCIP | bba789db-0658-4177-889f-1efe413733db |

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