

# 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               | 10 pc              |
| Sales key                            | CL01               |
| Product key                          | CL1411             |
| Catalog page                         | Page 84 (C-4-2019) |
| 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

|                                |   |
|--------------------------------|---|
| IEC power supply system        | DC                                      |
| Type                           | DIN rail module, two-section, divisible |
| Product type                   | Device protection                       |
| 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<br>T3         |
| EN type  | T3                |
| Number of ports  | One               |

### Electrical properties

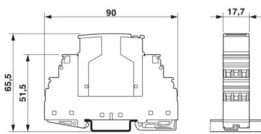
#### Indicator/remote signaling

|                    |                                     |
|--------------------|-------------------------------------|
| 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 <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| 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) |
|  | Copper           |
| 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 voltage $U_C$                     | 60 V DC                                |
| Rated load current $I_L$                             | 26 A (30 °C)                           |
| Residual current $I_{PE}$                            | $\leq 10 \mu\text{A}$                  |
| Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ | 500 A                                  |
| Combination wave $U_{OC}$                            | 1 kV (2 $\Omega$ )                     |
|  | 1 kV (2 $\Omega$ )                     |
| 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 $U_C$ ) |
| 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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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27130806 |
| ECLASS-13.0 | 27171203 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000942 |
|----------|----------|

### UNSPSC

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

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## Environmental product compliance

|            |  |
|------------|--|
| REACH SVHC | Lead 7439-92-1   |
|            | Hexahydromethylphthalic anhydride  |
| China RoHS | Environmentally Friendly Use Period = 50 years   |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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