

Surge protection plug - PT 1X2-24AC-ST - 2856058

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PT protective connector with protective circuit for a 2-wire floating signal circuit. HART-compatible.

The figure shows the PT 1x2-48DC-ST version

Why buy this product

- Plugs can be checked with CHECKMASTER
- Installed in conjunction with the PT 1x2...-BE base element
- Maximum ease of maintenance thanks to the two-piece design
- Base element remains an integral part of the installation
- Consistent plug-in signal circuit protection
- Protection for a floating signal circuit
- Impedance-neutral disconnection of plug for test and maintenance purposes



Key Commercial Data

| | |
|--------------|-----------------|
| Packing unit | 10 STK |
| GTIN | 4 017918 599188 |

Technical data

Dimensions

| | |
|------------------------|---------|
| Height | 45 mm |
| Width | 17.7 mm |
| Depth | 52 mm |
| Horizontal pitch | 1 Div. |
| Complete module height | 90 mm |
| Complete module width | 17.7 mm |
| Complete module depth | 65.5 mm |

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Technical data

Ambient conditions

| | |
|---------------------------------|------------------|
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Degree of protection | IP20 |

General

| | |
|--|--|
| Housing material | PA 6.6 |
| Flammability rating according to UL 94 | V0 |
| Color | black |
| Standards for clearances and creepage distances | VDE 0110-1 |
| | IEC 60664-1 |
| Mounting type | On base element |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 2 |
| Direction of action | Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.00 |

Protective circuit

| | |
|--|------------------------------------|
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| VDE requirement class | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage U_N | 24 V AC |
| Maximum continuous voltage U_C | 40 V DC |
| | 28 V AC |
| Maximum continuous voltage U_C (wire-wire) | 28 V AC |
| Maximum continuous voltage U_C (wire-ground) | 40 V DC |
| Nominal current I_N | 450 mA (45°C) |
| Operating effective current I_C at U_C | $\leq 5 \mu A$ |
| Residual current I_{PE} | $\leq 2 \mu A$ (Directly grounded) |
| | $\leq 1 \mu A$ (BE: 1x2+F) |
| Nominal discharge current I_n (8/20) μs (Core-Core) | 10 kA |
| Nominal discharge current I_n (8/20) μs (Core-Earth) | 10 kA |
| Total surge current (8/20) μs | 20 kA |
| Max. discharge current I_{max} (8/20) μs maximum (Core-Core) | 10 kA |
| Max. discharge current I_{max} (8/20) μs maximum (Core-Earth) | 10 kA |
| Nominal pulse current I_{an} (10/1000) μs (Core-Core) | 23 A |
| Impulse discharge current (10/350) μs , peak value I_{imp} | 2.5 kA |

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Technical data

Protective circuit

| | |
|---|---------------------------------|
| Output voltage limitation at 1 kV/μs (Core-Core) spike | ≤ 55 V |
| Output voltage limitation at 1 kV/μs (Core-Earth) spike | ≤ 450 V |
| | ≤ 1 kV (BE: 1x2+F) |
| Output voltage limitation at 1 kV/μs (Core-Core) static | ≤ 55 V |
| Residual voltage at I _n (conductor-conductor) | ≤ 55 V |
| Residual voltage with I _{an} (10/1000)μs (conductor-conductor) | ≤ 65 V |
| Voltage protection level U _p (core-core) | ≤ 80 V |
| Voltage protection level U _p (core-ground) | ≤ 450 V |
| Response time t _A (Core-Core) | ≤ 1 ns |
| Response time t _A (Core-Earth) | ≤ 100 ns |
| Input attenuation aE, sym. | 0.5 dB (≤ 1.5 MHz) |
| Cut-off frequency f _g (3 dB), sym. in 50 Ohm system | typ. 8 MHz |
| Capacity (Core-Core) | 1.1 nF |
| Resistance in series | 2.2 Ω #10 % (1-2/5-6/7-8/11-12) |
| Max. required back-up fuse | 500 mA |
| Impulse durability (conductor-conductor) | C2 - 10 kV/5 kA |
| Impulse durability (conductor-ground) | C2 - 10 kV/5 kA |
| | D1 - 2,5 kA |

Standards and Regulations

| | |
|-----------------------|-----------------|
| Standards/regulations | IEC 61643-21 |
| | DIN EN 61643-21 |
| | UL 497B |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27140201 |
| eCl@ss 4.1 | 27130801 |
| eCl@ss 5.0 | 27130801 |
| eCl@ss 5.1 | 27130801 |
| eCl@ss 6.0 | 27130807 |
| eCl@ss 7.0 | 27130807 |
| eCl@ss 8.0 | 27130807 |
| eCl@ss 9.0 | 27130807 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000943 |
| ETIM 3.0 | EC000943 |
| ETIM 4.0 | EC000943 |
| ETIM 5.0 | EC000943 |

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Classifications

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2 | 39121620 |

Approvals

Approvals

Approvals


UL Listed / EAC

Ex Approvals

UL Listed / cUL Listed / ATEX / cULus Listed

Approvals submitted

Approval details

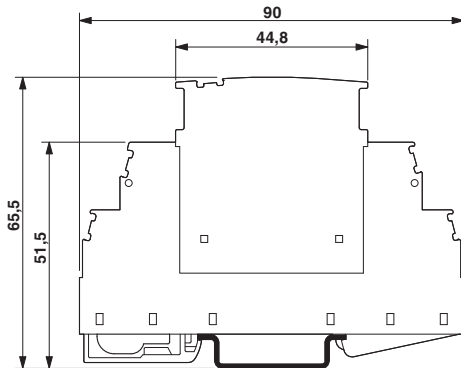
| | |
|---|--------|
| UL Listed  | |
| Nominal current IN | 0.45 A |
| Nominal voltage UN | 34 V |

| |
|-----|
| EAC |
|-----|

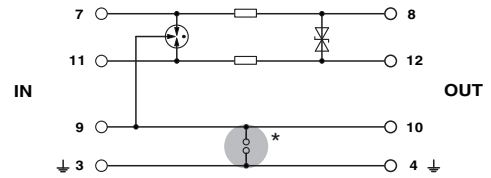
Drawings

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Dimensional drawing



Circuit diagram



The figure shows the complete module consisting of a base element and connector

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