

Surge protection connector - PT 1X2-48DC-ST - 2803658

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Protective plug PT with protective circuit for a 2-wire floating signal circuit.

Product Features

- 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

| | |
|-------------------------|---------------|
| package_quantity | 10 |
| GTIN | 4046356299268 |

Technical data

Dimensions

| | |
|-------------------|---------|
| Height | 45 mm |
| Width | 17.7 mm |
| Depth | 52 mm |
| Pitch unit | 1 Div. |
| Height | 90 mm |
| Width | 17.7 mm |
| Depth | 65.5 mm |

Ambient conditions

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

General

| | |
|--|--------|
| Housing material | PA 6.6 |
| Inflammability class according to UL 94 | V0 |

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Technical data

General

| | |
|---|--|
| Color | black |
| Standards for air and creepage distances | VDE 0110-1 |
| Standards for air and creepage distances | IEC 60664-1 |
| Mounting type | On base element |
| Design | DIN rail module, two-section, divisible |
| Number of positions | 3 |
| 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. 3.15 |

Protective circuit

| | |
|---|------------------------------------|
| IEC test classification | C1 |
| IEC test classification | C2 |
| IEC test classification | C3 |
| IEC test classification | D1 |
| VDE requirement class | C1 |
| VDE requirement class | C2 |
| VDE requirement class | C3 |
| VDE requirement class | D1 |
| Nominal voltage U_N | 48 V DC |
| Maximum continuous operating voltage U_C | 53 V DC |
| Maximum continuous operating voltage U_C | 37 V AC |
| Maximum continuous voltage UC (wire-wire) | 53 V DC |
| Maximum continuous voltage UC (wire-wire) | 37 V AC |
| 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) |
| Residual current I_{PE} | $\leq 1 \mu A$ (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) | 18 A |
| Impulse discharge current (10/350) μs, peak value I_{imp} | 2.5 kA |
| Output voltage limitation at 1 kV/μs (Core-Core) spike | $\leq 70 V$ |
| Output voltage limitation at 1 kV/μs (Core-Earth) spike | $\leq 450 V$ |
| Output voltage limitation at 1 kV/μs (Core-Earth) spike | $\leq 1 kV$ (BE: 1x2+F) |
| Output voltage limitation at 1 kV/μs (Core-Core) static | $\leq 70 V$ |
| Voltage protection level U_P (Core-Core) | $\leq 80 V$ (C1 - 500 A) |
| Voltage protection level U_P (Core-Core) | $\leq 85 V$ (C2 (2 kV/1 kA)) |

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Technical data

Protective circuit

| | |
|--|--|
| Voltage protection level U_p (Core-Core) | ≤ 120 V (C2 (10 kV/5 kA)) |
| Voltage protection level U_p (Core-Earth) | ≤ 450 V (C1 - 500 A (1X2-BE)) |
| Voltage protection level U_p (Core-Earth) | ≤ 550 V (C2 - 1 kA (1x2-BE)) |
| Voltage protection level U_p (Core-Earth) | ≤ 600 V (C2 - 5 kA (1X2-BE)) |
| Response time t_A (Core-Core) | ≤ 1 ns |
| Response time t_A (Core-Earth) | ≤ 100 ns |
| Input attenuation a_E , sym. | 0.5 dB (≤ 2 MHz) |
| Input attenuation a_E , sym. | 0.5 dB (≤ 2 MHz / 50 Ω) |
| Input attenuation a_E , sym. | 0.2 dB (≤ 600 kHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), sym. in 50 Ohm system | typ. 10 MHz |
| Cut-off frequency f_g (3 dB), sym. in 150 Ohm system | typ. 3.5 MHz |
| Capacity (Core-Core) | 1 nF |
| Resistance in series | 2.2 Ω (7-8/11-12) |
| Message: Surge protection fault | None |
| Max. required back-up fuse | 500 mA (e.g. T (IEC 127-2/III)) |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Core) | C2 (10 kV/5 kA) |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth) | C2 (10 kV/5 kA) |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth) | D1 (2.5 kA) |

Connection data

| | |
|---------------------|--|
| Connection method | Screw connection (in connection with the base element) |
| Connection type IN | PLUGTRAB plug-in system |
| Connection type OUT | PLUGTRAB plug-in system |

Standards and Regulations

| | |
|-----------------------|-----------------|
| Standards/regulations | IEC 61643-21 |
| Standards/regulations | DIN EN 61643-21 |

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 |

ETIM

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

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classifications

ETIM

| | |
|-----------------|----------|
| ETIM 5.0 | EC000943 |
|-----------------|----------|

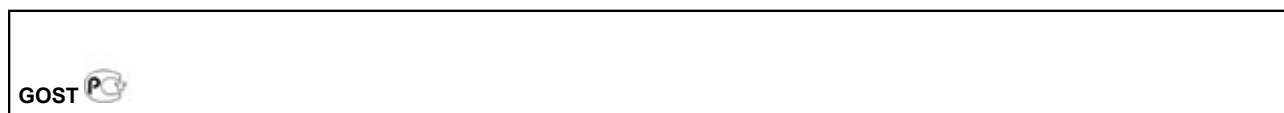
UNSPSC

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

approvals

GOST /

Approval details



accessories

Marker pen

X-PEN 0,35 - 0811228



Terminal marking

ZBF 5:UNBEDRUCKT - 0808642



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accessories

ZBF 5/WH-100:UNBEDRUCKT - 0808668



Labeled terminal marker

ZBF 5,LGS:FORTL.ZAHLEN - 0808671



ZBF 5,LGS:GERADE ZAHLEN - 0810821



ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



ZBF 5,QR:FORTL.ZAHLEN - 0808697



Device marking

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accessories

ZBN 18:UNBEDRUCKT - 2809128



accessories

ZBF 15:SO/CMS - 0814717



ZBF 5:SO/CMS - 0808707



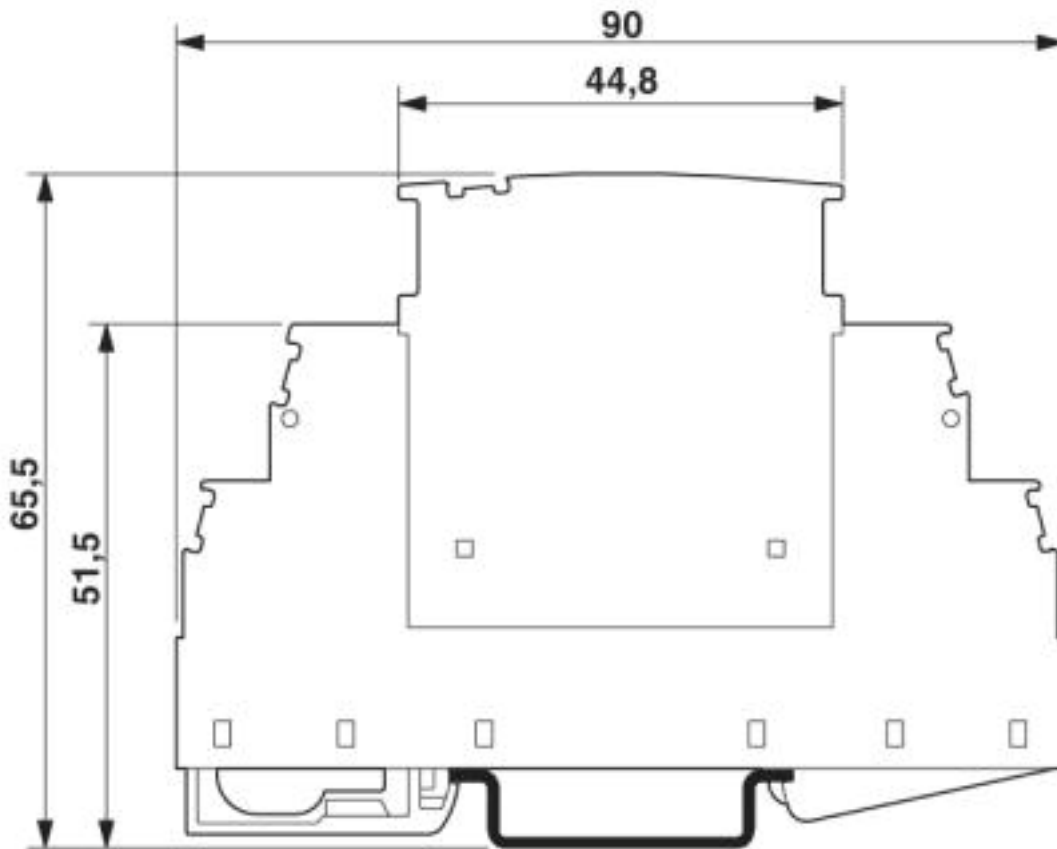
ZBN 18:SO/CMS - 0800763



Drawings

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Dimensioned drawing



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

Circuit diagram

