

Surge protection connector - PT 2X1-24DC/FM-ST - 2920120

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Surge protection plug with integrated diagnostic and status indicator on the module and remote indication contact for two signal wires with common reference potential. Nominal voltage: 24 V DC

Why buy this product

- Plugs can be checked with CHECKMASTER
- Maximum ease of maintenance thanks to the two-piece design
- Base element remains an integral part of the installation
- With floating remote indication contact
- Consistent plug-in signal circuit protection
- Permanent and independent monitoring by a diagnostics unit
- Impedance-neutral disconnection of plug for test and maintenance purposes
- Optical status indication for the individual arresters



Key commercial data

| | |
|------------------------|---|
| Packing unit | 0 |
| Minimum order quantity | 1 |
| Catalog page | Page 91 (TT-2011) |
| GTIN |  4 046356 154079 |
| Custom tariff number | 85369010 |
| Country of origin | GERMANY |

Technical data

General

| | |
|--|------------------|
| Housing material | PA 6.6 |
| Inflammability class according to UL 94 | V0 |
| Color | black |
| Standards for air and creepage distances | VDE 0110-1 |
| Standards for air and creepage distances | IEC 60664-1 |
| Total surge current (8/20) μ s | 20 kA |
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Mounting type | On base element |

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Technical data

General

| | |
|----------------------|--|
| Design | DIN rail module, two-section, divisible |
| Degree of protection | IP20 |
| Direction of action | Line-Line & Line-Signal Ground/Shield & optional Signal Ground/ Shield-Earth Ground |
| Width | 17.7 mm |
| Height | 45 mm |
| Depth | 52 mm |
| Pitch unit | 1 Div. |

Protective circuit

| | |
|--|-----------------------------|
| IEC category | C1 |
| IEC category | C2 |
| IEC category | C3 |
| IEC category | D1 |
| VDE requirement class | C1 |
| VDE requirement class | C2 |
| VDE requirement class | C3 |
| VDE requirement class | D1 |
| Nominal voltage UN | 24 V DC |
| Maximum continuous operating voltage UC | 28 V DC |
| Maximum continuous operating voltage UC | 20 V AC |
| Maximum continuous voltage UC (wire-ground) | 28 V DC |
| Maximum continuous voltage UC (wire-ground) | 20 V AC |
| Nominal current IN | 300 mA (45°C) |
| Operating effective current IC at UC | ≤ 5 μA |
| Ground conductor current IPE | ≤ 1 μA (BE: 2x1+F) |
| Ground conductor current IPE | ≤ 10 μA (Directly grounded) |
| Nominal discharge surge current In (8/20) μs (Core-Earth) | 10 kA |
| Total surge current (8/20) μs | 20 kA |
| Max. discharge surge current I _{max} (8/20) μs maximum (Core-Earth) | 10 kA |
| Nominal pulse current I _{an} (10/1000) μs (Core-Earth) | 33 A (25°C) |
| Lightning test current (10/350) μs, peak value I _{imp} | 2.5 kA (per path) |
| Output voltage limitation at 1 kV/μs (Core-Earth) spike | ≤ 50 V |
| Output voltage limitation at 1 kV/μs (Core-Earth) spike | ≤ 600 V (BE: 2x1+F) |
| Output voltage limitation at 1 kV/μs (Core-GND) spike | ≤ 50 V |
| Output voltage limitation at 1 kV/μs (Core-Earth) static | ≤ 40 V |
| Output voltage limitation at 1 kV/μs (Core-GND) static | ≤ 40 V |
| Residual voltage at I _n , (conductor-ground) | ≤ 40 V |
| Residual voltage with I _{an} (10/1000) μs (conductor-ground) | ≤ 50 V |
| Protection level UP (Core-Earth) | ≤ 40 V (C1 (500 V/250 A)) |
| Protection level UP (Core-Earth) | ≤ 40 V (C3 (25 A)) |
| Protection level UP (Core-GND) | ≤ 40 V (C1 (500 V/250 A)) |
| Protection level UP (Core-GND) | ≤ 40 V (C3 (25 A)) |

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Technical data

Protective circuit

| | |
|--|---|
| Response time t_A (Core-Earth) | ≤ 1 ns |
| Input attenuation a_E , asym. | Typ. 0.5 dB (≤ 1 MHz / 50 Ω) |
| Input attenuation a_E , asym. | Typ. 0.2 dB (≤ 400 kHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), asym. (GND) in 50 Ohm system | Typ. 6 MHz |
| Cut-off frequency f_g (3 dB), asym. (GND) in 150 Ohm system | Typ. 2.5 MHz |
| Resistance in series | 4.7 Ω (7-8/11-12) |
| Max. required back-up fuse | 315 mA (e.g. T (IEC 127-2/III)) |
| 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) |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth) | C3 (25 A) |
| Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth) | 5 A - 1 s |

Connection data

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| Connection method | Screw connection (in connection with the base element) |
| Connection type IN | PLUGTRAB plug-in system |
| Connection type OUT | PLUGTRAB plug-in system |
| Screw thread | M3 |
| Tightening torque | 0.8 Nm |
| Stripping length | 8 mm |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 4 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |

Connection, protective circuit

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

Classifications

eclass

| | |
|------------|----------|
| 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 |

etim

| | |
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| ETIM 2.0 | EC000943 |
| ETIM 3.0 | EC000943 |

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Classifications

etim

| | |
|----------|----------|
| ETIM 4.0 | EC000943 |
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unspsc

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

Approvals

Approvals

Approvals

UL Listed / GOST

Ex Approvals

Approvals submitted

Approval details



Accessories

Accessories

Marking

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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Accessories

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.1 x 5.2 mm

Zack Marker strip, flat - ZBF 5/WH-100:UNBEDRUCKT - 0808668



Zack Marker strip, flat, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:FORTL.ZAHLEN - 0808671



Zack Marker strip, flat, Strip, white, Labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:GERADE ZAHLEN - 0810821



Zack Marker strip, flat, Strip, white, Labeled, Printed horizontally: Consecutive numbers 2 - 20, 22 - 40, etc. up to 82 - 100, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



Zack Marker strip, flat, Strip, white, Labeled, Printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,QR:FORTL.ZAHLEN - 0808697



Zack Marker strip, flat, Strip, white, Labeled, Printed vertically: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

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Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Necessary add-on products

Surge protection base element - PT 2X1+F-BE/FM - 2920049



Base element to accept a protective plug with diagnostic and status indicator for two signal wires with common reference potential, integrated spark gap to provide a high-resistance connection between the ground of the protective circuit of the plug and ground potential.

Surge protection base element - PT 2X1-BE/FM - 2920036



Base element to accept a protective plug with diagnostic and status indicator for two signal wires with common reference potential.

Additional products

Shield connection - SSA 3-6 - 2839295



shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black

Shield connection - SSA 5-10 - 2839512

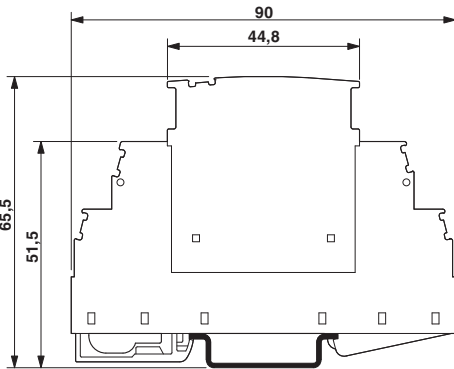


Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

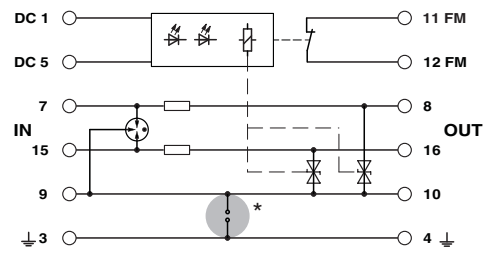
Drawings

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Dimensioned drawing



Circuit diagram



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

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«FORSTAR» (основан в 1998 г.)

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