

## Surge protection connector - PT 3-PB-ST - 2858030

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Surge protection plug for the base element, normal mode voltage coarse and fine protection for two floating signal wires in IT, common mode voltage coarse protection to ground.

### 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
- Protection for fieldbus systems, PROFIBUS, and signal circuits with 3 to 5-wire technology
- Consistent plug-in signal circuit protection
- Impedance-neutral disconnection of plug for test and maintenance purposes



### Key commercial data

|                        |   |
|------------------------|---|
| Packing unit           | 1   |
| Minimum order quantity | 1   |
| Catalog page           | Page 101 (TT-2011)  |
| GTIN                   | <br>4 017918 878030 |
| Custom tariff number   | 85363090  |
| Country of origin      | GERMANY   |

### Technical data

#### General

|  |   |
|--|---|
| Housing material                         | PA                                      |
| Inflammability class according to UL 94  | V0                                      |
| Color                                    | black                                   |
| Standards for air and creepage distances | DIN EN 61664-1                          |
| Standards for air and creepage distances | IEC 60664-1                             |
| Total surge current (8/20) $\mu$ s       | 20 kA                                   |
| Ambient temperature (operation)          | -40 °C ... 85 °C                        |
| Mounting type                            | On base element                         |
| Design                                   | DIN rail module, two-section, divisible |
| Number of positions                      | 2                                       |

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### Technical data

#### General

|  |   |
|--|---|
| Degree of protection   | IP20  |
| 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. 1.10   |
| 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   | 5 V DC                |
| Maximum continuous operating voltage UC                                      | 5.2 V DC              |
| Maximum continuous operating voltage UC                                      | 3.6 V AC              |
| Maximum continuous voltage UC (wire-wire)                                    | 5.2 V DC              |
| Maximum continuous voltage UC (wire-wire)                                    | 3.6 V AC              |
| Maximum continuous voltage UC (wire-ground)                                  | 5.2 V DC (PT 1x2-BE)  |
| Maximum continuous voltage UC (wire-ground)                                  | 3.6 V AC (PT 1x2-BE)  |
| Nominal current IN   | 450 mA (45°C)         |
| Operating effective current IC at UC   | ≤ 300 µA              |
| Ground conductor current IPE   | ≤ 300 µA (PT 1x2-BE)  |
| Ground conductor current IPE   | ≤ 1 µA (PT 1x2+F-BE)  |
| Nominal discharge surge current In (8/20) µs (Core-Core)                     | 10 kA                 |
| 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 <sub>max</sub> (8/20) µs maximum (Core-Core)  | 10 kA                 |
| Max. discharge surge current I <sub>max</sub> (8/20) µs maximum (Core-Earth) | 10 kA                 |
| Nominal pulse current I <sub>an</sub> (10/1000) µs (Core-Core)               | 90 A                  |
| Lightning test current (10/350) µs, peak value I <sub>imp</sub>              | 2.5 kA                |
| Output voltage limitation at 1 kV/µs (Core-Core) spike                       | ≤ 55 V                |
| Output voltage limitation at 1 kV/µs (Core-Earth) spike                      | ≤ 55 V (PT 1x2-BE)    |
| Output voltage limitation at 1 kV/µs (Core-Earth) spike                      | ≤ 700 V (PT 1x2+F-BE) |
| Output voltage limitation at 1 kV/µs (Core-Core) static                      | ≤ 15 V                |
| Output voltage limitation at 1 kV/µs (Core-Earth) static                     | ≤ 15 V                |

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### Technical data

#### Protective circuit

|   |  |
|---|--|
| Output voltage limitation at 1 kV/μs (Core-Earth) static                | ≤ 30 V (PT 1x2+F-BE)                       |
| Residual voltage at In, (conductor-conductor)                           | ≤ 15 V                                     |
| Residual voltage at In, (conductor-ground)                              | ≤ 30 V (PT 1x2-BE)                         |
| Residual voltage at In, (conductor-GND)                                 | ≤ 15 V (PT 1x2-BE)                         |
| Residual voltage with I <sub>an</sub> (10/1000)μs (conductor-conductor) | ≤ 15 V                                     |
| Residual voltage with I <sub>an</sub> (10/1000)μs (conductor-GND)       | ≤ 15 V                                     |
| Protection level UP (Core-Core)   | ≤ 100 V (C2 (10 kV/5 kA))                  |
| Protection level UP (Core-Core)   | ≤ 34 V (C3 - 25 A)                         |
| Protection level UP (Core-Earth)  | ≤ 100 V (C2 (10 kV/5 kA))                  |
| Protection level UP (Core-Earth)  | ≤ 34 V (C3 - 25 A)                         |
| Protection level UP (Core-GND)  | ≤ 38 V (C3 - 25 A)                         |
| Response time t <sub>A</sub> (Core-Core)                                | ≤ 500 ns                                   |
| Response time t <sub>A</sub> (Core-Earth)                               | ≤ 500 ns                                   |
| Response time t <sub>A</sub> (Core-Earth)                               | ≤ 500 ns                                   |
| Input attenuation a <sub>E</sub> , sym.                                 | Typ. 0.2 dB (≤ 5 MHz / 100 Ω)              |
| Cut-off frequency f <sub>g</sub> (3 dB), sym. in 100 Ohm system         | Typ. 70 MHz                                |
| Capacity (Core-Core)  | Typ. 30 pF                                 |
| Resistance in series  | 2.2 Ω ±10 %                                |
| Max. required back-up fuse  | 500 mA (e.g. T in acc. with 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-Core)           | C3 (90 A)                                  |
| 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)          | C3 (90 A)                                  |
| 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                                |

### 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

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

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## Classifications

### etim

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

### unspsc

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

## Approvals

### Approvals

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Approvals

UL Listed / GOST / GL

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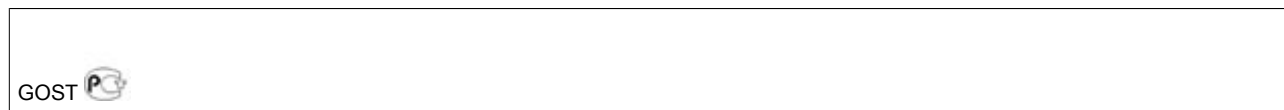
Ex Approvals

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Approvals submitted

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### Approval details



## Accessories

Accessories

Marking

## Surge protection connector - PT 3-PB-ST - 2858030

### Accessories

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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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

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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

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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

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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

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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

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### Accessories

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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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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

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### Necessary add-on products

Surge protection base element - PT 1X2-BE - 2856113



Base element for protective plug PT with protective circuit for a 2-core floating signal circuit. Mounting on NS 35/7.5 und NS 35/15, housing width: 17.5 mm.

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Surge protection base element - PT 1X2+F-BE - 2856126



Base element for protective plug PT with protective circuit for a 2-core floating signal circuit. Integrated gas arrester as coarse protection between GND and PE. Mounting on NS 35/7.5 und NS 35/15, housing width: 17.5 mm.

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### Additional products

Shield connection - SSA 3-6 - 2839295



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

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## Accessories

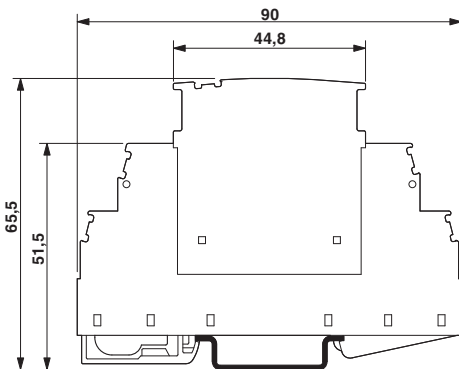
Shield connection - SSA 5-10 - 2839512



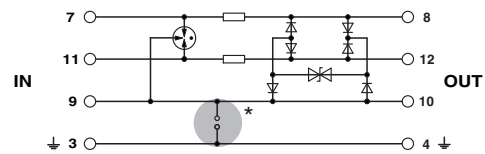
Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

## Drawings

Dimensioned drawing



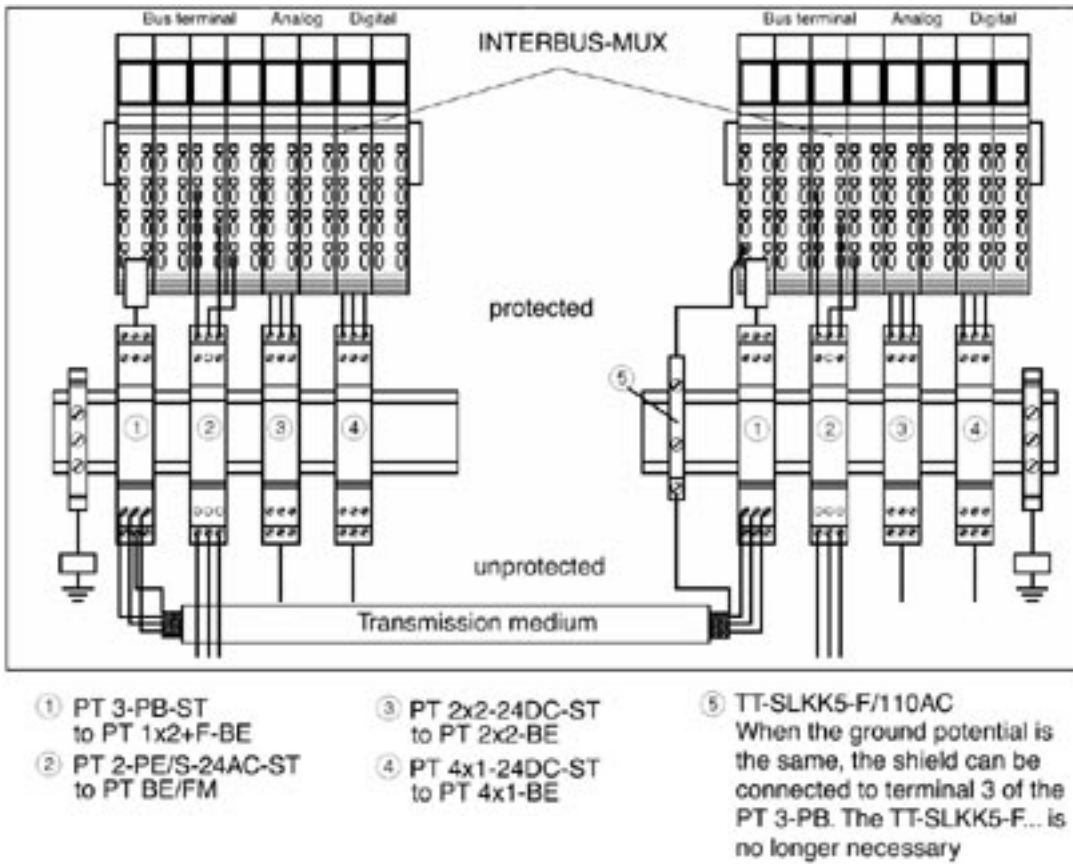
Circuit diagram



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

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Application drawing



Connecting M-UBF IBS-MUX to the field multiplexer





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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