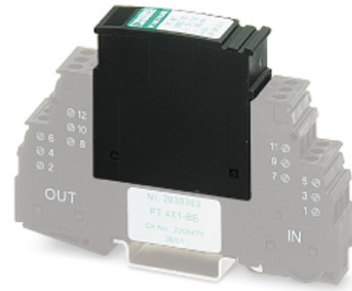# PT 4X1-12DC-ST

Order No.: 2838319

The illustration shows version PT 4x1- 5 DC-ST

Protective plug PT with protective circuit for 4 conductors of signal circuits grounded on one side. Nominal voltage: 12 V DC

CHECKMASTER

### Commercial data

| EAN | 4017918182700 |
|-----|---------------|
| Pack | 10 pcs. |
| Customs tariff | 85363010 |
| Weight/Piece | 0.02571 KG |
| Catalog page information | Page 69 (TT-2007) |

**Product notes**

WEEE/RoHS-compliant since: 08/18/2006

### Technical data

**General**

| Housing material | PA 6.6 |
|------------------|--------|
| Inflammability class acc. to UL 94 | V0 |
| Color | black |
| Standards for air and creepage distances | VDE 0110-1 |
| | IEC 60664-1: 1992-10 |

| Total surge current (8/20) µs | 20 kA |
|---|---|
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Mounting type | On base element |
| 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 |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.00 |
| Width | 17.70 mm |
| Height | 52.00 mm |
| Length | 45.00 mm |
| Pitch unit | 1 Div. |

**Protective circuit**

| IEC category | C1 |
|---|---|
| | C2 |
| | C3 |
| | D1 |
| VDE requirement class | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage $U_N$ | 12 V DC |
| Max. operating voltage $U_{max}$ | 13 V DC |
| Arrester rated voltage $U_C$ | 13 V DC |
| | 9 V AC |
| Arrester rated voltage $U_C$ (Core-Earth) | 13 V DC |
| | 9 V AC |
| Nominal current $I_N$ | 300 mA (45°C) |
| Operating effective current $I_C$ at $U_C$ | $\leq 5$ µA |
| Discharge current to PE at $U_C$ | $\leq 1$ µA (BE: 4x1+F) |
| | $\leq 20$ µA (Directly grounded) |
| Nominal discharge surge current $I_n$ (8/20) µs (Core-Earth) | 10 kA |
| Total surge current (8/20) µs | 20 kA |

| | |
|---|---|
| Max. discharge surge current Imax (8/20) µs maximum (Core-Earth) | 10 kA |
| Nominal pulse current Ian (10/1000) µs (Core-Earth) | 67 A |
| 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 | $\leq$ 23 V |
| Output voltage limitation at 1 kV/µs (Core-Earth) static | $\leq$ 18 V |
| Residual voltage at In, (conductor-ground) | $\leq$ 18 V |
| Protection level $U_P$ (Core-Earth) | $\leq$ 65 V (C2 (10 kV/5 kA)) |
| Response time tA (Core-Earth) | $\leq$ 1 ns |
| Input attenuation aE, asym. | 0.5 dB ($\leq$ 600 kHz) |
| Cut-off frequency fg (3 dB), asym. (PE) in 50 Ohm system | Typ. 3 MHz |
| Capacity (Core-Earth) | 3 nF |
| Resistance in series | 4.7 $\Omega$ (Path 1-2/5-6) |
| | 4.7 $\Omega$ (Path 7-8, 11-12) |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth) | C2 (10 kV/5 kA) |
| | D1 (2.5 kA) |

**Connection data**

| | |
|---|---|
| Type of connection | 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, min | 0.8 Nm |
| Stripping length | 8 mm |
| Conductor cross section stranded min. | 0.2 mm² |
| Conductor cross section stranded max. | 2.5 mm² |
| Conductor cross section solid min. | 0.2 mm² |
| Conductor cross section solid max. | 4 mm² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |

**Connection, protective circuit**

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

| | DIN EN 61643-21 |
| --- | --- |
| | UL 497B |

## Certificates / Approvals

Certification                                          GOST, UL Listed

Certification Ex:                                      CUL-EX LIS, UL-EX LIS

## Accessories

| Item | Designation | Description |
| --- | --- | --- |
| **Marking** | | |
| 0811228 | X-PEN 0,35 | Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm |
| 0811228 | X-PEN 0,35 | Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm |
| 0811228 | X-PEN 0,35 | Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm |
| 0814717 | ZBF 15:SO/CMS | Zack strip, flat, 10-section, divisible, special printing, marking according to customer requirements |
| 0808671 | ZBF 5,LGS:FORTL.ZAHLEN | Zack strip, flat, printed horizontally: 10-section, with the numbers, 1-10, 11-20 etc. up to 991-1000, color: White |
| 0810821 | ZBF 5,LGS:GERADE ZAHLEN | Zack marker strip, flat, printed horizontally: 10-section, with even numbers, printed with the numbers: 2-20, 22-40, etc. up to 82-100 |
| 0810863 | ZBF 5,LGS:UNGERADE ZAHLEN | Zack strip, flat, printed horizontally: 10-section, with odd numbers, printed with the numbers: 1-19, 21-39 etc. up to 81-99 |
| 0808697 | ZBF 5,QR:FORTL.ZAHLEN | Flat Zack marker strip, printed vertically: 10-section, with the numbers 1-10, 11-20, etc. up to 151-160, color: White |
| 0808668 | ZBF 5/WH-100:UNBEDRUCKT | Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, large batch, sufficient for labeling 1000 terminal blocks, color: white |
| 0808707 | ZBF 5:SO/CMS | Zack strip, flat, 10-section, divisible, special printing, marking according to customer requirements |
| 0808642 | ZBF 5:UNBEDRUCKT | Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, sufficient for 100 terminal blocks, color: white |
| 0800763 | ZBN 18:SO/CMS | Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White |

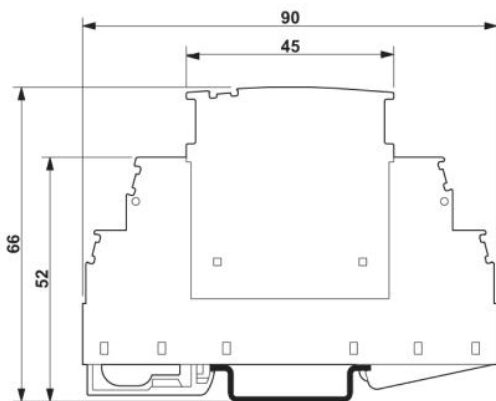| 2809128 | ZBN 18:UNBEDRUCKT | Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White |
|---|---|---|

## Additional products

| Item | Designation | Description |
|---|---|---|

**Assembly**

| 2839295 | SSA 3-6 | shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black |
|---|---|---|
| 2839512 | SSA 5-10 | Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black |

**General**

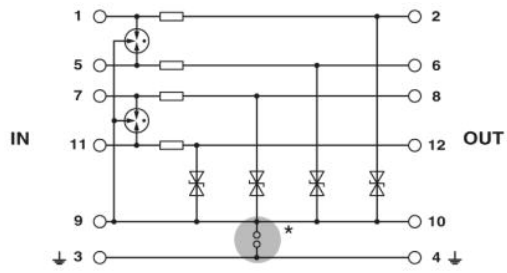| 2839376 | PT 4X1+F-BE | Base element for protective plug PT with protective circuit for 4 signal wires, with gas-filled surge arrester between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm |
|---|---|---|
| 2839363 | PT 4X1-BE | Base element for protective plug PT with protective circuit for 4 conductors of signal circuits grounded on one side, with bridge between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm |

## Drawings

Dimensioned drawing



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

## Circuit diagram



## Approval logo (Ex area)