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## Surge protection plug - PT 4X1-48DC-ST - 2858014

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Surge protection plug for the base element, common mode voltage coarse and fine protection for four lines with a common reference potential. Design: 48 V DC

### Your advantages

☑ 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

☑ Consistent plug-in signal circuit protection

☑ Protection for four conductors with common reference potential

☑ Impedance-neutral disconnection of plug for test and maintenance purposes

RoHS | 48 V IEC | 2,5 mm² | IP20 | SIL evaluated IEC 61508 | CHECKMASTER | H D W

### Key Commercial Data

| Packing unit | 1 pc |
|---|---|
| GTIN | 4 017918 828325 |
| GTIN | 4017918828325 |
| Weight per Piece (excluding packing) | 25.760 g |
| Custom tariff number | 85363010 |
| Country of origin | Germany |

### Technical data

#### Dimensions

| Height | 45 mm |
|---|---|
| Width | 17.7 mm |
| Depth | 52 mm |

# Surge protection plug - PT 4X1-48DC-ST - 2858014

## Technical data

### Dimensions

| Horizontal pitch | 1 Div. |
|---|---|
| Complete module height | 90 mm |
| Complete module width | 17.7 mm |
| Complete module depth | 65.5 mm |

### 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 | V-0 |
| Color | jet black RAL 9005 |
| Mounting type | on base element |
| Type | Male |
| 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 $U_N$ | 48 V DC |
| Maximum continuous voltage $U_C$ | 53 V DC |
| | 37 V AC |
| Rated current | 300 mA (45 °C) |
| Operating effective current $I_C$ at $U_C$ | ≤ 5 µA |
| Residual current $I_{PE}$ | ≤ 1 µA (with PT 4X1+F-BE) |
| | ≤ 20 µA (Directly grounded) |
| Nominal discharge current $I_n$ (8/20) µs (line-earth) | 10 kA |
| Pulse discharge current $I_{imp}$ (10/350) µs | 2.5 kA (per path) |
| Total discharge current $I_{total}$ (8/20) µs | 20 kA |
| Max. discharge current $I_{max}$ (8/20) µs maximum (line-earth) | 10 kA |

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## Technical data

### Protective circuit

| Nominal pulse current Ian (10/1000) µs (line-earth) | 17 A |
|---|---|
| Output voltage limitation at 1 kV/µs (line-earth) spike | $\leq$ 75 V |
| Output voltage limitation at 1 kV/µs (line-earth) static | $\leq$ 70 V |
| Residual voltage at $I_n$ (line-earth) | $\leq$ 70 V |
| Voltage protection level $U_p$ (line-earth) | $\leq$ 130 V (C2 - 10 kV / 5 kA) |
| Response time $t_A$ (line-earth) | $\leq$ 1 ns |
| Input attenuation aE, asym. | 0.5 dB ($\leq$ 1.7 MHz) |
| Cut-off frequency fg (3 dB), asym. (PE) in 50 Ohm system | typ. 9 MHz |
| Capacity (line-earth) | 0.9 nF |
| Resistance in series | 4.7 $\Omega$ |
| Max. required back-up fuse | 315 mA (T) |
| Impulse durability (line-earth) | C2 - 10 kV / 5 kA |
| | D1 - 2.5 kA |

### Connection data

| Connection method | Screw connection (in connection with the base element) |
|---|---|
| Screw thread | M3 |
| Tightening torque | 0.8 Nm |
| Stripping length | 8 mm |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section solid | 0.2 mm² ... 4 mm² |
| Conductor cross section AWG | 24 ... 12 |

### Standards and Regulations

| Standards/specifications | IEC 61643-21 2000 |
|---|---|

### Environmental Product Compliance

| China RoHS | Environmentally Friendly Use Period = 50 |
|---|---|
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Classifications

### eCl@ss

| eCl@ss 4.0 | 27140201 |
|---|---|
| eCl@ss 4.1 | 27130801 |
| eCl@ss 5.0 | 27130801 |
| eCl@ss 5.1 | 27130800 |
| eCl@ss 6.0 | 27130800 |

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## Classifications

### eCl@ss

| | |
|---|---|
| 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 |
| ETIM 6.0 | EC000943 |
| ETIM 7.0 | EC000943 |

### UNSPSC

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

## Approvals

### Approvals

Approvals

EAC

Ex Approvals

### Approval details

| | | |
|---|---|---|
| EAC | EAC | RU C-DE.A*30.B01561 |

## Accessories

Accessories

Device marking

# Surge protection plug - PT 4X1-48DC-ST - 2858014

## Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm

## Labeled terminal marker

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 size: 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 size: 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 size: 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 size: 5.15 x 5.15 mm

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## Accessories

### Marker pen

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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### Terminal marking

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

Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 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: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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### Necessary add-on products

Surge protection base element - PT 4X1-BE - 2839363

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

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# Surge protection plug - PT 4X1-48DC-ST - 2858014

## Accessories

Surge protection base element - PT 4X1+F-BE - 2839376



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

## Additional products

Shield connection - SSA 3-6 - 2839295



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black