# Surge protection device - PT 2-TELE - 2882828

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Surge protective device, consisting of plug and base element, for protecting a double wire from analog and digital telecommunications interfaces (VDSL up to 50 Mbps, on short paths (< 300 m) up to 100 Mbps).

## Product Description

Surge protection plug for DIN rail mounting, 2-section pluggable, normal mode voltage coarse and fine protection for 2-conductor analog telecommunication interface as well as common mode voltage coarse protection to ground.

## Your advantages

- For ISDN Uk0 and DSL applications
- For analog telecommunications
- Two-piece, plug-in
- Broadband protection for telecommunications lines
- Worldwide use
- High discharge capacity
- Plugs can be checked with CHECKMASTER

## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 pc |
| GTIN | 4 046356 115148 |
| GTIN | 4046356115148 |
| Weight per Piece (excluding packing) | 68.520 g |
| Custom tariff number | 85363010 |
| Country of origin | Germany |

## Technical data

### Dimensions

# Surge protection device - PT 2-TELE - 2882828

## Technical data

### Dimensions

| | |
|---|---|
| Height | 90 mm |
| Width | 17.7 mm |
| Depth | 65.5 mm |
| 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 |
| Ambient temperature (storage/transport) | -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 | DIN rail: 35 mm |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 2 |
| Direction of action | Line-Line & Line-Earth Ground |

### Protective circuit

| | |
|---|---|
| IEC test classification | B2 |
| | C1 |
| | C2 |
| | C3 |
| | D1 |
| VDE requirement class | B2 |
| | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage $U_N$ | 185 V DC |
| | 130 V AC |
| Maximum continuous voltage $U_C$ | 185 V DC |
| | 130 V AC |
| Rated current | 450 mA AC (45 °C) |
| | 130 mA DC (45 °C) |

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## Technical data

### Protective circuit

| | |
|---|---|
| Operating effective current $I_C$ at $U_C$ | ≤ 10 µA |
| Residual current $I_{PE}$ | ≤ 10 µA |
| Nominal discharge current $I_n$ (8/20) µs (line-line) | 10 kA |
| Nominal discharge current $I_n$ (8/20) µs (line-earth) | 10 kA |
| Pulse discharge current $I_{imp}$ (10/350) µs (line-line) | 1 kA |
| Pulse discharge current $I_{imp}$ (10/350) µs (line-earth) | 1 kA |
| Total discharge current $I_{total}$ (8/20) µs | 18 kA |
| Max. discharge current $I_{max}$ (8/20) µs maximum (line-earth) | 18 kA |
| Nominal pulse current Ian (10/700) µs (line-line) | 100 A |
| Nominal pulse current Ian (10/700) µs (line-earth) | 100 A |
| Output voltage limitation at 1 kV/µs (line-line) spike | ≤ 300 V |
| Output voltage limitation at 1 kV/µs (line-earth) spike | ≤ 300 V |
| Output voltage limitation at 1 kV/µs (line-line) static | ≤ 300 V |
| Output voltage limitation at 1 kV/µs (line-earth) static | ≤ 300 V |
| Residual voltage at $I_n$ (line-line) | ≤ 160 V (C2 - 10 kV / 5 kA) |
| Residual voltage at $I_n$ (line-earth) | ≤ 200 V (C2 - 10 kV / 5 kA) |
| Voltage protection level $U_p$ (line-line) | ≤ 250 V (B2 - 1 kV / 25 A) |
| | ≤ 300 V (B2 - 4 kV / 100 A) |
| | ≤ 270 V (C1 - 1 kV/500 A) |
| | ≤ 300 V (C2 - 2 kV/1 kA) |
| | ≤ 320 V (C2 - 4 kV / 2 kA) |
| | ≤ 330 V (C2 - 10 kV / 5 kA) |
| Voltage protection level $U_p$ (line-earth) | ≤ 250 V (B2 - 1 kV / 25 A) |
| | ≤ 300 V (B2 - 4 kV / 100 A) |
| | ≤ 270 V (C1 - 1 kV/500 A) |
| | ≤ 300 V (C2 - 2 kV/1 kA) |
| | ≤ 320 V (C2 - 4 kV / 2 kA) |
| | ≤ 330 V (C2 - 10 kV / 5 kA) |
| Response time $t_A$ (line-line) | ≤ 500 ns |
| Response time $t_A$ (line-earth) | ≤ 500 ns |
| Input attenuation aE, sym. | typ. 0.4 dB (≤ 5 MHz / 100 Ω) |
| Cut-off frequency fg (3 dB), sym. in 100 Ohm system | typ. 20 MHz |
| Capacity (line-line) | typ. 30 pF (f=1 MHz / $V_R$= 0 V) |
| Capacity (line-earth) | typ. 30 pF (f=1 MHz / $V_R$= 0 V) |
| Resistance per path | 2.2 Ω ±10 % |
| Surge protection fault message | none |

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## Technical data

### Protective circuit

| | |
|---|---|
| Impulse durability (line-line) | B2 - 4 kV / 100 A |
| | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 25 A |
| | D1 - 1 kA |
| Impulse durability (line-earth) | B2 - 4 kV / 100 A |
| | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 25 A |
| | D1 - 1 kA |

### Connection data

| | |
|---|---|
| Connection method | Screw connection |
| Connection method IN | Screw terminal blocks |
| Connection method OUT | Screw terminal blocks |
| Screw thread | M3 |
| Tightening torque | 0.5 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 |
| | EN 61643-21 2002 |

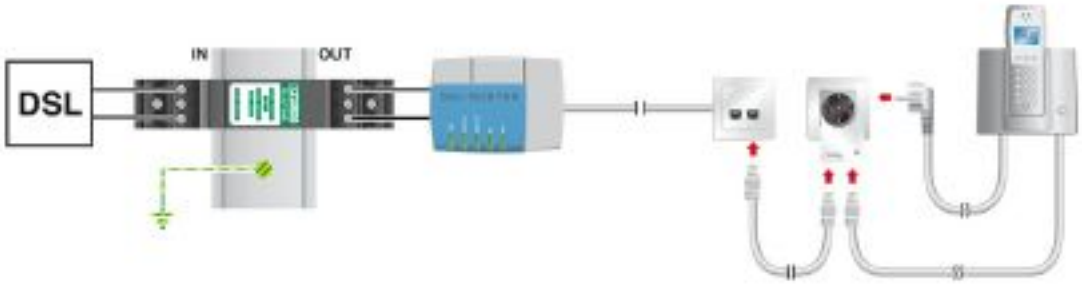
### Environmental Product Compliance

| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration” |

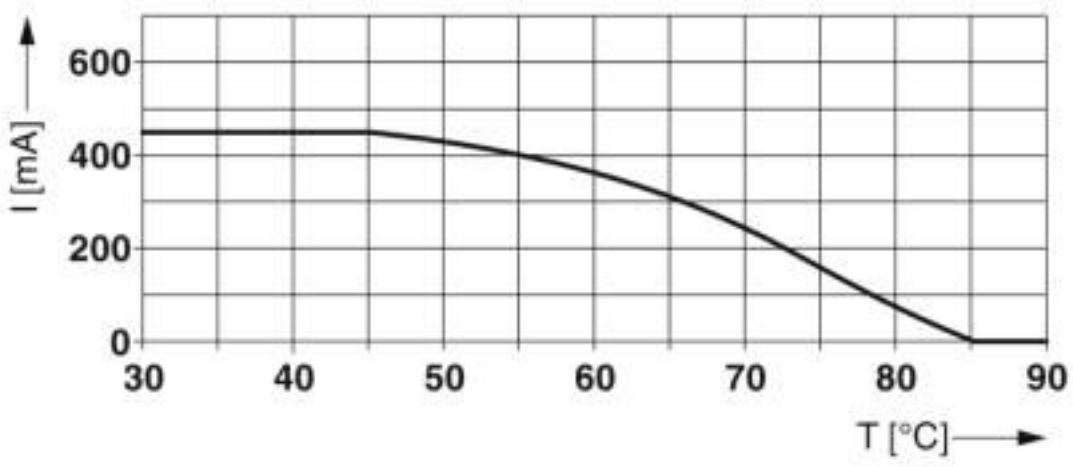
## Drawings

# Surge protection device - PT 2-TELE - 2882828

Application drawing




Diagram



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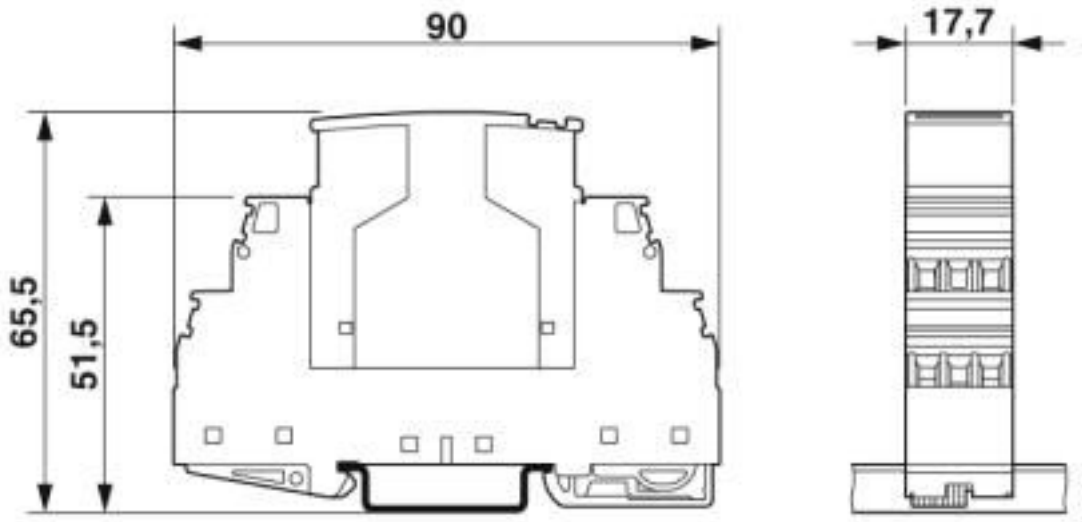
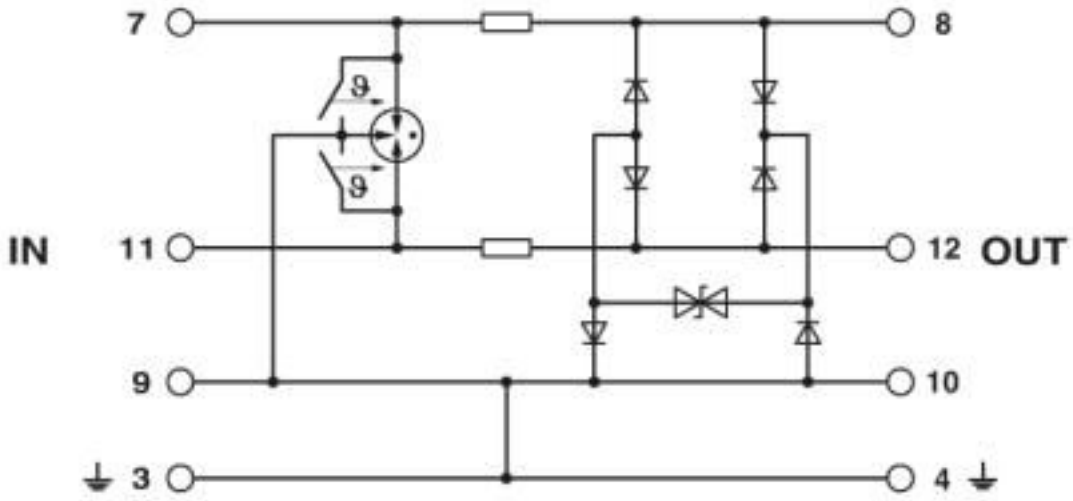
Dimensional drawing




Circuit diagram




## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27130807 |
| eCl@ss 4.0 | 27130800 |
| eCl@ss 4.1 | 27130800 |
| eCl@ss 5.0 | 27130800 |
| 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 |
| UNSPSC 18.0 | 39121620 |
| UNSPSC 19.0 | 39121620 |
| UNSPSC 20.0 | 39121620 |
| UNSPSC 21.0 | 39121620 |

## Approvals

### Approvals

Approvals

UL Listed / cUL Listed / EAC / EAC / cULus Listed

Ex Approvals

### Approval details

| | | | |
|---|---|---|---|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 477688 |

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## Approvals

| | | | |
|---|---|---|---|
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 477688 |
| EAC | | | EAC-Zulassung |
| EAC | | | RU C-DE.A*30.B01561 |
| cULus Listed | | | |

## Accessories

### Accessories

### Labeled terminal marker

Zack marker strip - ZB 5,LGS:FORTL.ZAHLEN - 1050017

Zack marker strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

### Terminal marking

Zack marker strip - ZB 5,8:UNBEDRUCKT - 2715209

Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 5.8 mm, lettering field size: 5.75 x 10.5 mm, Number of individual labels: 10

### Additional products

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## Accessories

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

## Spare parts

Surge protection plug - PT 2-TELE-ST - 2838733

Surge protection plug for base element, for protecting a double conductor of analog telecommunication interfaces.

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.