

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Protective plug PT with HF protective circuit for two 2-core floating signal circuits. Nominal voltage: 24 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
- 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 | 10 pc |
| GTIN |  4 017918 607210 |
| GTIN | 4017918607210 |

Technical data

Dimensions

| | |
|------------------|---------|
| Height | 45 mm |
| Width | 17.7 mm |
| Depth | 52 mm |
| Horizontal pitch | 1 Div. |

Ambient conditions

| | |
|---------------------------------|------------------|
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Degree of protection | IP20 |

General

| | |
|--|-----|
| Housing material | PA |
| Flammability rating according to UL 94 | V-0 |

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Technical data

General

| | |
|--|--|
| Color | black |
| Standards for clearances and creepage distances | DIN VDE 0110-1 |
| | IEC 60664-1 |
| Mounting type | on base element |
| Type | Male |
| Number of positions | 5 |
| 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 | 24 V DC |
| Maximum continuous voltage U_C | 28 V DC |
| | 19.8 V AC |
| Rated current | 450 mA (45 °C) |
| Operating effective current I_C at U_C | $\leq 5 \mu A$ |
| Residual current I_{PE} | $\leq 4 \mu A$ (with PT 2X2-BE) |
| | $\leq 1 \mu A$ (with PT 2X2+F-BE) |
| 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 | 2.5 kA |
| Total discharge current I_{total} (8/20) μs | 20 kA |
| Max. discharge current I_{max} (8/20) μs maximum (line-line) | 10 kA |
| Max. discharge current I_{max} (8/20) μs maximum (line-earth) | 10 kA |
| Nominal pulse current I_{an} (10/1000) μs (line-line) | 30 A |
| Output voltage limitation at 1 kV/ μs (line-line) spike | $\leq 120 V$ |
| Output voltage limitation at 1 kV/ μs (line-earth) spike | $\leq 450 V$ |
| | $\leq 1 kV$ (with PT 2X2+F-BE) |
| Output voltage limitation at 1 kV/ μs (line-line) static | $\leq 45 V$ |
| Output voltage limitation at 1 kV/ μs (line-signalground) static | $\leq 450 V$ |
| Residual voltage at I_n (line-line) | $\leq 40 V$ |
| Residual voltage with I_{an} (10/1000) μs (line-line) | $\leq 50 V$ |
| Voltage protection level U_p (line-line) | $\leq 120 V$ (C2 - 10 kV / 5 kA) |

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Technical data

Protective circuit

| | |
|--|----------------------------------|
| Voltage protection level U_p (line-earth) | ≤ 450 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. | 0.2 dB (≤ 5 MHz) |
| Cut-off frequency f_g (3 dB), sym. in 100 Ohm system | typ. 70 MHz |
| Capacity (line-line) | typ. 30 pF |
| Resistance per path | 2.2 Ω |
| Surge protection fault message | none |
| Max. required back-up fuse | 500 mA (T) |
| Impulse durability (line-line) | C2 - 10 kV / 5 kA |
| 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) |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section solid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section AWG | 24 ... 12 |

Standards and Regulations

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

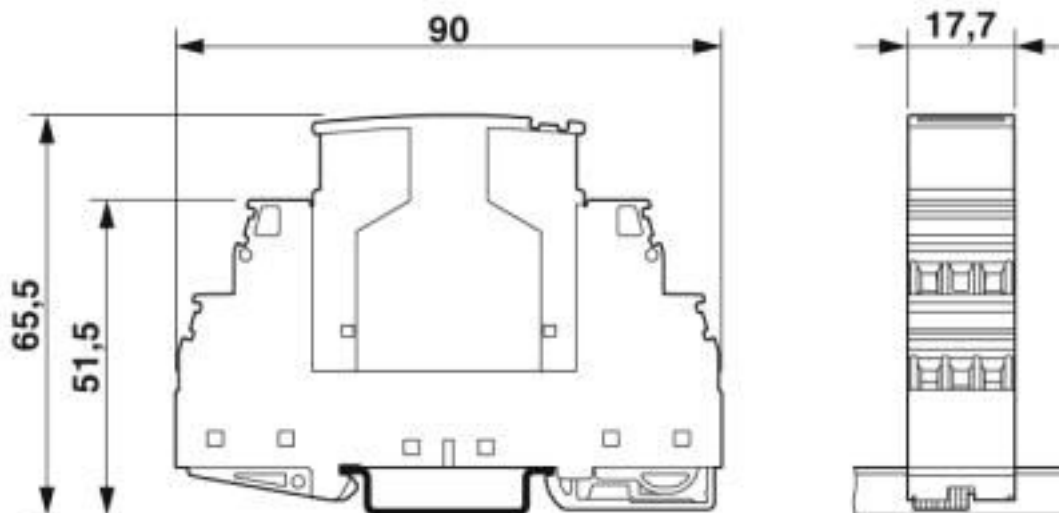
Environmental Product Compliance

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

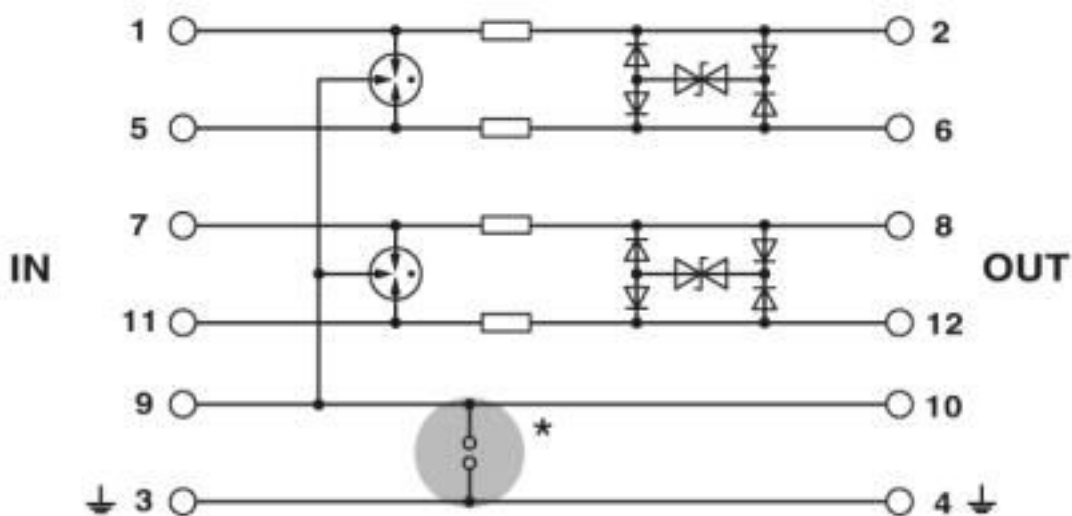
Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Dimensional drawing



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

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 |
| eCl@ss 7.0 | 27130807 |

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Classifications

eCl@ss

| | |
|------------|----------|
| 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 / EAC / EAC

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

| | | | |
|--------------------|---|---|---------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm | FILE E 138168 |
| Nominal voltage UN | 24 V | | |
| Nominal current IN | 0.45 A | | |

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Approvals

| | | |
|-----|--|---------------|
| EAC | | EAC-Zulassung |
|-----|--|---------------|

| | | |
|-----|--|-------------------------|
| EAC | | RU C- DE.*09.B.00169 |
|-----|--|-------------------------|

Accessories

Accessories

Device marking

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, Number of individual labels: 5

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, Number of individual labels: 10

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, Number of individual labels: 10

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, Number of individual labels: 10

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Accessories

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, Number of individual labels: 10

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

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, Number of individual labels: 10

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, Number of individual labels: 10

Necessary add-on products

Surge protection base element - PT 2X2+F-BE - 2839224



Base element for protective plug PT with protective circuit for two 2-wire floating signal circuit, 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

Surge protection plug - PT 2X2-HF-24 DC-ST - 2839729

Accessories

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

Phoenix Contact 2020 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>