

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

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Protective plug PT with HF protective circuit for two 2-core floating signal circuits. Nominal voltage: 24 V DC

The illustration shows the version PT 2x2-HF-12 DC-ST

### Product Features

- ✓ 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 pc
Weight per Piece (excluding packing)	26.14 GRM
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

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

#### Ambient conditions

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### Technical data

#### Ambient conditions

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

#### General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1
Mounting type	On base element
Type	DIN rail module, two-section, divisible
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 operating voltage $U_C$	28 V DC
	19.8 V AC
Maximum continuous voltage $U_C$ (wire-wire)	28 V DC
	19.8 V AC
Maximum continuous voltage $U_C$ (wire-ground)	28 V DC (with PT 2x2-BE)
Nominal current $I_N$	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) $\mu s$ (Core-Core)	10 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (Core-Earth)	10 kA
Total surge current (8/20) $\mu s$	20 kA

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### Technical data

#### Protective circuit

Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Core)	10 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Earth)	10 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Core)	30 A
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	2.5 kA
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) spike	$\leq 120$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 450$ V
	$\leq 1$ kV (with PT 2x2+F-BE)
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) static	$\leq 45$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-GND) static	$\leq 450$ V
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 40$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-conductor)	$\leq 50$ V
Voltage protection level $U_p$ (Core-Core)	$\leq 120$ V (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ (Core-Earth)	$\leq 450$ V (C2 - 10 kV / 5 kA)
Response time $t_A$ (Core-Core)	$\leq 500$ ns
Response time $t_A$ (Core-Earth)	$\leq 500$ ns
Input attenuation $a_E$ , sym.	0.2 dB ( $\leq 5$ MHz)
Cut-off frequency $f_g$ (3 dB), sym. in 100 Ohm system	typ. 70 MHz
Capacity (Core-Core)	typ. 30 pF
Resistance in series	2.2 $\Omega$
Max. required back-up fuse	500 mA (e.g. T in acc. with IEC 127-2/III)
Surge current resistance (conductor-conductor)	C2 - 10 kV/5 kA
Surge current resistance (conductor-ground)	C2 - 10 kV/5 kA
	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
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

#### Standards and Regulations

Standards/regulations	IEC 61643-21
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### Classifications

#### eCl@ss

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
eCl@ss 8.0	27130807

#### ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	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

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##### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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Approvals submitted

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#### Approval details

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

### Approvals

UL Listed	
Nominal current IN	0.45 A
Nominal voltage UN	24 V

GOST	
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### Accessories

#### Accessories

#### Device marking

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

#### 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: 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: 5.15 x 5.15 mm

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### Accessories

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

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

### 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: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.1 x 5.2 mm

Zack Marker strip, flat - ZBF 5/WH-100:UNBEDRUCKT - 0808668

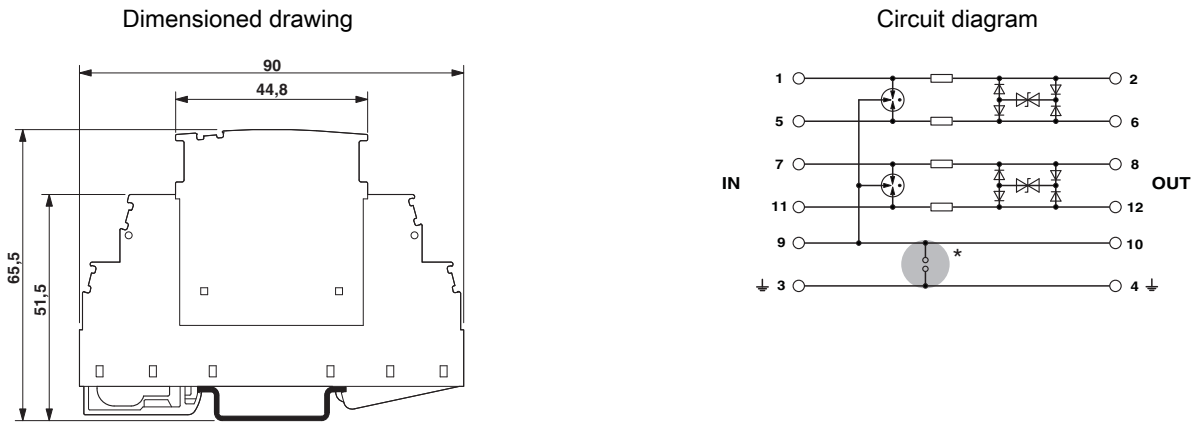


Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

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## Accessories

### Drawings



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

### Catalog photo

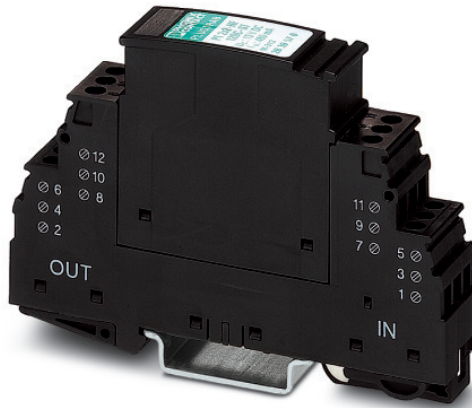


Figure may contain other products.

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Diagram

