

## Surge protection connector - PT 2X1-24DC-ST - 2856087

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Surge protection plug for the base element, coarse and fine protection for two signal wires with common reference potential, common mode voltage coarse protection to ground. Design: 24 V DC


The illustration shows the version PT 2x1- 5 DC-ST

### Why buy this product

- Plugs can be checked with CHECKMASTER
- Installed in conjunction with the PT 2x1...-BE base element
- 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 two conductors with common reference potential
- Impedance-neutral disconnection of plug for test and maintenance purposes



### Key commercial data

Packing unit	1
Minimum order quantity	10
Catalog page	Page 95 (TT-2011)
GTIN	 4 017918 599164
Custom tariff number	85363010
Country of origin	GERMANY

### Technical data

#### General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Total surge current (8/20) $\mu$ s	20 kA
Ambient temperature (operation)	-40 °C ... 85 °C

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## Technical data

### General

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	17.7 mm
Height	45 mm
Depth	52 mm
Pitch unit	1 Div.

### Protective circuit

IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
VDE requirement class	C1
VDE requirement class	C2
VDE requirement class	C3
VDE requirement class	D1
Nominal voltage UN	24 V DC
Maximum continuous operating voltage UC	28 V DC
Maximum continuous operating voltage UC	20 V AC
Maximum continuous voltage UC (wire-ground)	28 V DC
Maximum continuous voltage UC (wire-ground)	20 V AC
Nominal current IN	300 mA (45°C)
Operating effective current IC at UC	≤ 5 µA
Ground conductor current IPE	≤ 1 µA (BE: 2x1+F)
Ground conductor current IPE	≤ 10 µA (Directly grounded)
Nominal discharge surge current In (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)	30 A
Lightning test current (10/350) µs, peak value limp	2.5 kA (per path)
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 45 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 600 V (BE: 2x1+F)
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 40 V
Residual voltage at In, (conductor-ground)	≤ 40 V
Residual voltage with Ian (10/1000)µs (conductor-ground)	≤ 50 V
Protection level UP (Core-Earth)	≤ 80 V (C2 (10 kV/5 kA))
Response time tA (Core-Earth)	≤ 1 ns
Input attenuation aE, asym.	0.5 dB (≤ 1 MHz)

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## Technical data

### Protective circuit

Cut-off frequency $f_g$ (3 dB), asym. (PE) in 50 Ohm system	Typ. 6 MHz
Capacity (Core-Earth)	0.7 nF
Resistance in series	4.7 $\Omega$ (1-2/5-6/7-8/11-12)
Message: Surge protection fault	None
Max. required back-up fuse	315 mA (e.g. T ( IEC 127-2/III))
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (2.5 kA)

### Connection, protective circuit

Standards/regulations	IEC 61643-21
Standards/regulations	DIN EN 61643-21
Standards/regulations	UL 497B

## Classifications

### eclass

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

### etim

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943

### unspsc

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

## Approvals

### Approvals

#### Approvals

UL Listed / GOST / GL

# Surge protection connector - PT 2X1-24DC-ST - 2856087

## Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Recognized

Approvals submitted

## Approval details

UL Listed	
Nominal current IN	0.3 A
Nominal voltage UN	24 V

GOST
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GL
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## Accessories

Accessories

Marking

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

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

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### Accessories

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

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

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

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

# Surge protection connector - PT 2X1-24DC-ST - 2856087

## Accessories

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### Necessary add-on products

#### Surge protection base element - PT 2X1-BE - 2856139



Base element for protective plug PT with protective circuit for 2 conductors of signal circuits grounded on one side. Mounting on NS 35/7.5 und NS 35/15, housing width: 17.5 mm.

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#### Surge protection base element - PT 2X1+F-BE - 2856142



Base element for protective plug PT with protective circuit for 2 conductors of signal circuits grounded on one side. Integrated gas arrester as coarse protection between GND and PE. Mounting on NS 35/7.5 und NS 35/15, housing width: 17.5 mm.

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### Additional products

#### Shield connection - SSA 3-6 - 2839295



shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black

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#### Shield connection - SSA 5-10 - 2839512



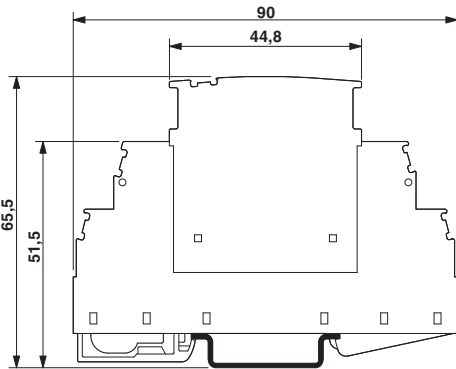
Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

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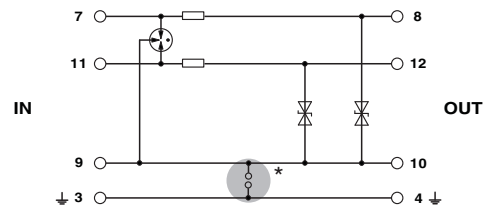
## Drawings

# Surge protection connector - PT 2X1-24DC-ST - 2856087

Dimensioned drawing



Circuit diagram



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



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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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