

# Surge protection connector - PT PE/S+1X2-24-ST - 2819008

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Protective plug PT with surge voltage equipment protection for power supply units, visual fault warning, nominal voltage: 24 V and a 2-core floating signal circuit, nominal voltage: 24 V.

## Why buy this product

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



## Key commercial data

Packing unit	1
Minimum order quantity	1
Catalog page	Page 96 (TT-2011)
GTIN	 4 017918 819323
Custom tariff number	85363010
Country of origin	GERMANY

## Technical data

### General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Standards for air and creepage distances	VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Standards for air and creepage distances	IEC 61643-1
Total surge current (8/20) $\mu$ s	20 kA
Color	black
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	On base element
Design	DIN rail module, two-section, divisible
Degree of protection	IP20

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## Technical data

### General

Current supply arrester can be tested with CHECKMASTER starting with software version:	From SW rev. 1.00
Direction of action	L-N-PE & Signal Line-Signal Line-Earth Ground
Width	17.7 mm
Height	45 mm
Depth	52 mm
Pitch unit	1 Div.

### Protective circuit, power supply

IEC category	III
EN type	T3
Nominal voltage UN	24 V
Arrester rated voltage UC (L-N)	44 V DC
Arrester rated voltage UC (L-N)	34 V DC
Arrester rated voltage UC (L-PE)	34 V AC
Arrester rated voltage UC (L-PE)	44 V DC
Nominal frequency fN	50 Hz (60 Hz)
Nominal current IN	6 A (30 °C)
Operating effective current IC at UC	≤ 1.5 mA
Ground conductor current IPE	≤ 1 µA
Nominal discharge surge current In (8/20) µs	700 A
Nominal discharge surge current In (8/20) µs (L-N)	700 A
Nominal discharge surge current In (8/20) µs (L-PE)	700 A
Max. discharge surge current I <sub>max</sub> (8/20) µs	2 kA
Max. discharge surge current I <sub>max</sub> (8/20) µs maximum (L-N)	2 kA
Max. discharge surge current I <sub>max</sub> (8/20) µs maximum (L-PE)	2 kA
100% lightning impulse sparkover voltage (1.2/50)µs (L-PE)	230 V
100% lightning impulse sparkover voltage (1.2/50)µs (L-PEN)	230 V
Combined surge UOC	2 kV
Energy absorption symmetrical	28 J
Energy absorption, asymmetrical	14 J
Protection level UP (L-N)	≤ 180 V
Protection level UP (L-PE)	≤ 550 V
Total surge current (8/20) µs	20 kA
Response time (L-N)	≤ 25 ns
Response time (L-PE)	≤ 100 ns
Message: Surge protection fault	Optical
Max. required back-up fuse	6 A (gL/gG)
Residual voltage at In, (L-N)	≤ 170 V
Residual voltage at In, (L-PE)	≤ 100 V

### Connection (protective circuit, power supply)

Connection type IN	PLUGTRAB plug-in system
Connection type OUT	PLUGTRAB plug-in system

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## Technical data

### Standards (protective circuit, power supply)

Standards/regulations	IEC 61643-1
Standards/regulations	EN 61643-11

### Protective circuit, information technology

Nominal voltage UN	24 V AC
Max. operating voltage Umax	28 V AC
Max. operating voltage Umax	40 V DC
Arrester rated voltage UC	40 V DC
Arrester rated voltage UC	28 V AC
Arrester rated voltage UC (Core-Earth)	40 V DC
Arrester rated voltage UC (Core-Earth)	28 V AC
Nominal current IN	450 mA (45°C)
Operating effective current IC at UC	≤ 5 μA
Ground conductor current IPE	≤ 2 μA
Nominal discharge surge current In (8/20) μs (Core-Core)	10 kA
Nominal discharge surge current In (8/20) μs (Core-Earth)	10 kA
Max. discharge surge current Imax (8/20) μs maximum (Core-Core)	10 kA
Max. discharge surge current Imax (8/20) μs maximum (Core-Earth)	10 kA
Protection level UP (Core-Core)	≤ 80 V (C2 (10 kV/5 kA))
Protection level UP (Core-Earth)	≤ 450 V (C2 (10 kV/5 kA))
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	0.5 dB (≤ 1.5 MHz)
Input attenuation aE, sym.	0.2 dB (≤ 500 kHz / 150 Ω)
Input attenuation aE, sym.	0.1 dB (≤ 100 kHz / 600 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	Typ. 8 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	Typ. 3 MHz
Cut-off frequency fg (3 dB), sym. in 600 Ohm system	Typ. 800 kHz
Capacity (Core-Core)	1.1 nF
Resistance in series	2.2 Ω
Lightning test current (10/350) μs, peak value limp	2.5 kA
Message: Surge protection fault	Optical, remote indicator contact
Output voltage limitation at 1 kV/μs (wire-wire)	≤ 55 V
Output voltage limitation at 1 kV/μs (wire-earth)	≤ 25 V
Residual voltage at In, (conductor-conductor)	≤ 55 V
Residual voltage with Ian (10/1000)μs (conductor-conductor)	≤ 65 V
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
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)

### Power supply, general

Connection method	Screw connection (in connection with the base element)
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## Technical data

### Power supply, general

Connection type IN	PLUGTRAB plug-in system
Connection type OUT	PLUGTRAB plug-in system
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
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 (protective circuit, information technology)

VDE requirement class	C1
VDE requirement class	C2
VDE requirement class	C3
VDE requirement class	D1
IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
Standards/regulations	IEC 61643-21

## 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

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## Classifications

unspsc

UNSPSC 13.2	39121620
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## Approvals

Approvals

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Approvals

GOST

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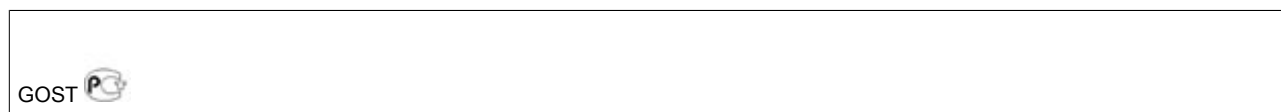
Ex Approvals

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Approvals submitted

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## Approval details



## 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

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## Accessories

### Necessary add-on products

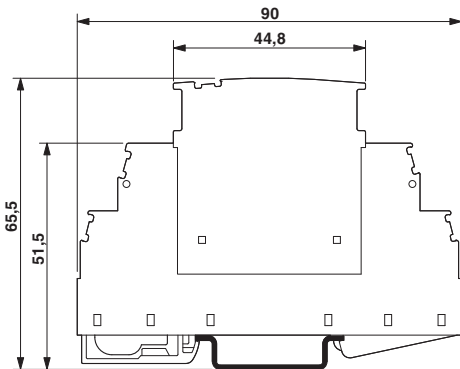
Surge protection base element - PT PE/S+1X2-BE - 2856265



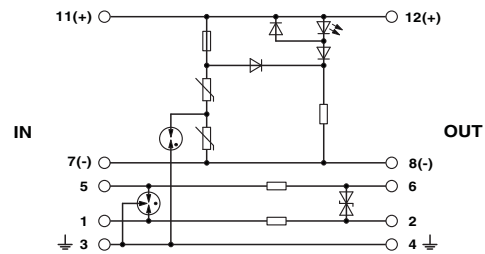
Base element for protective plug PT with surge voltage device protection for the power supply unit and one 2-wire floating signal circuit, mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

## Drawings

### Dimensioned drawing



### Circuit diagram



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



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- Подбор аналогов;
- 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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