

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

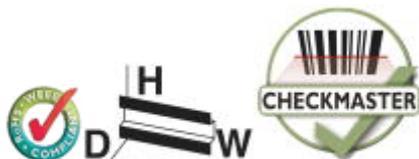
Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



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	10 pc
GTIN	 4 017918 819323
Weight per Piece (excluding packing)	25.83 g
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.
Complete module height	90 mm
Complete module width	17.7 mm
Complete module depth	65.5 mm

#### Ambient conditions

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

## Technical data

### Ambient conditions

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

### General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1
	IEC 61643-1
Total surge current (8/20) $\mu$ s	20 kA
Color	black
Mounting type	On base element
Type	DIN rail module, two-section, divisible
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

### Protective circuit, power supply

IEC test classification	III
EN type	T3
Nominal voltage $U_N$	24 V
Arrester rated voltage $U_C$ (L-N)	44 V DC
	34 V DC
Arrester rated voltage $U_C$ (L-PE)	34 V AC
	44 V DC
Nominal frequency $f_N$	50 Hz (60 Hz)
Nominal current $I_N$	6 A (30 °C)
Operating effective current $I_C$ at $U_C$	$\leq 1.5$ mA
Residual current $I_{PE}$	$\leq 1$ $\mu$ A
Nominal discharge current $I_n$ (8/20) $\mu$ s	700 A
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-N)	700 A
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-PE)	700 A
Max. discharge current $I_{max}$ (8/20) $\mu$ s	2 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (L-N)	2 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (L-PE)	2 kA
100% lightning impulse sparkover voltage (1.2/50) $\mu$ s (L-PE)	230 V
100% lightning impulse sparkover voltage (1.2/50) $\mu$ s (L-PEN)	230 V
Combined surge $U_{OC}$	2 kV
Energy absorption symmetrical	28 J
Energy absorption, asymmetrical	14 J
Voltage protection level $U_P$ (L-N)	$\leq 180$ V

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

### Technical data

#### Protective circuit, power supply

Voltage protection level $U_p$ (L-PE)	$\leq 550$ V
Total surge current (8/20) $\mu$ s	20 kA
Response time (L-N)	$\leq 25$ ns
Response time (L-PE)	$\leq 100$ ns
Surge protection fault message	Optical
Max. required back-up fuse	6 A (gL/gG)
Residual voltage at $I_n$ , (L-N)	$\leq 170$ V
Residual voltage at $I_n$ , (L-PE)	$\leq 100$ V

#### Connection (protective circuit, power supply)

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

#### Standards (protective circuit, power supply)

Standards/regulations	IEC 61643-1
	EN 61643-11

#### Protective circuit, information technology

Nominal voltage $U_N$	24 V AC
Max. operating voltage $U_{max}$	28 V AC
	40 V DC
Arrester rated voltage $U_C$	40 V DC
	28 V AC
Arrester rated voltage $U_C$ (Core-Earth)	40 V DC
	28 V AC
Nominal current $I_N$	450 mA (45°C)
Operating effective current $I_C$ at $U_C$	$\leq 5$ $\mu$ A
Residual current $I_{PE}$	$\leq 2$ $\mu$ A
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
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
Voltage protection level $U_p$ (Core-Core)	$\leq 80$ 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)	$\leq 1$ ns
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
Input attenuation aE, sym.	0.5 dB ( $\leq 1.5$ MHz)
	0.2 dB ( $\leq 500$ kHz / 150 $\Omega$ )
	0.1 dB ( $\leq 100$ kHz / 600 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 50 Ohm system	typ. 8 MHz
Cut-off frequency $f_g$ (3 dB), sym. in 150 Ohm system	typ. 3 MHz
Cut-off frequency $f_g$ (3 dB), sym. in 600 Ohm system	typ. 800 kHz

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

### Technical data

#### Protective circuit, information technology

Capacity (Core-Core)	1.1 nF
Resistance in series	2.2 Ω
Impulse discharge current (10/350) μs, peak value I <sub>imp</sub>	2.5 kA
Surge protection fault message	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 I <sub>n</sub> , (conductor-conductor)	≤ 55 V
Residual voltage with I <sub>an</sub> (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)
	D1 (2.5 kA)

#### Power supply, general

Connection method	Screw connection (in connection with the base element)
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
	C2
	C3
	D1
IEC test classification	C1
	C2
	C3
	D1
Standards/regulations	IEC 61643-21

### Classifications

#### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801

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

## Classifications

### eCl@ss

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	EC000899
ETIM 5.0	EC000899

### UNSPSC

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

## Approvals

### Approvals

---

Approvals

### GOST

---

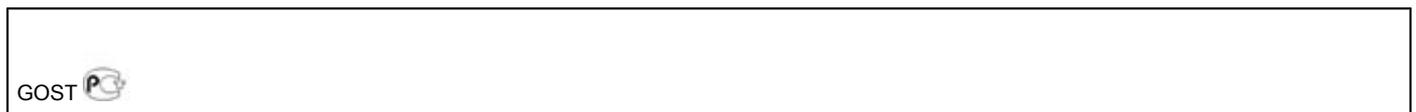
Ex Approvals

---

Approvals submitted

---

Approval details



## Accessories

### Accessories

### Device marking

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

### Accessories

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

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

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

### Accessories

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

---

### Necessary add-on products

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



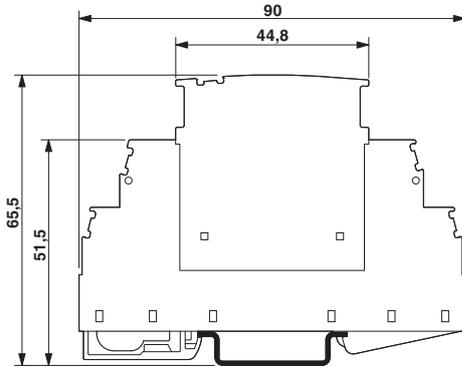
Base element for protective plug PT with surge voltage device protection for the power supply unit and one 2-wire floating signal circuit, mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

---

### Drawings

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

Dimensioned drawing



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

Circuit diagram

