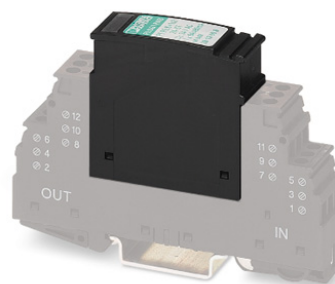


# PT PE/S+1X2-24-ST


Order No.: 2819008



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2819008>


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.



Commercial data	
GTIN (EAN)	 4 017918 819323
sales group	J204
Pack	10 pcs.
Customs tariff	85363010
Catalog page information	Page 96 (TT-2011)

**Product notes**

WEEE/RoHS-compliant since:  
06/02/2006



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## Technical data

General	
Housing material	PA 6.6
Inflammability class acc. to UL 94	V0
Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
	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
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	17.70 mm
Height	52.00 mm
Length	45.00 mm
Pitch unit	1 Div.

**Protective circuit, power supply**

IEC category	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
Ground conductor current $I_{PE}$	$\leq 1$ $\mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s	700 A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-N)	700 A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-PE)	700 A
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s	2 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (L-N)	2 kA
Max. discharge surge 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
Protection level $U_p$ (L-N)	$\leq 180$ V
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
Message: Surge protection fault	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
Ground conductor current $I_{PE}$	$\leq 2$ $\mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Core)	10 kA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA

Max. discharge surge current $I_{max}$ (8/20) $\mu s$ maximum (Core-Core)	10 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu s$ maximum (Core-Earth)	10 kA
Protection level $U_p$ (Core-Core)	$\leq 80$ V (C2 (10 kV/5 kA))
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
Capacity (Core-Core)	1.1 nF
Resistance in series	2.2 $\Omega$
Lightning test current (10/350) $\mu s$ , peak value $I_{imp}$	2.5 kA
Output voltage limitation at 1 kV/ $\mu s$ (wire-wire)	$\leq 55$ V
Output voltage limitation at 1 kV/ $\mu s$ (wire-earth)	$\leq 25$ V
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 55$ V
Residual voltage with $I_{an}$ (10/1000) $\mu s$ (conductor-conductor)	$\leq 65$ 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 category	C1
	C2
	C3
	D1
Standards/regulations	IEC 61643-21

**Certificates / Approvals**



Certification GOST

**Accessories**

Item	Designation	Description
<b>Marking</b>		
0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm
0814717	ZBF 15:SO/CMS	Zack strip, flat, 10-section, divisible, special printing, marking according to customer requirements
0808671	ZBF 5,LGS:FORTL.ZAHLEN	Zack marker strip, flat, printed horizontally: 10-section, with the numbers 1 - 10, 11 - 20, and so on up to 491 - 500, color: white
0810821	ZBF 5,LGS:GERADE ZAHLEN	Zack marker strip, flat, printed horizontally: 10-section, with even numbers, printed with the numbers: 2-20, 22-40, etc. up to 82-100

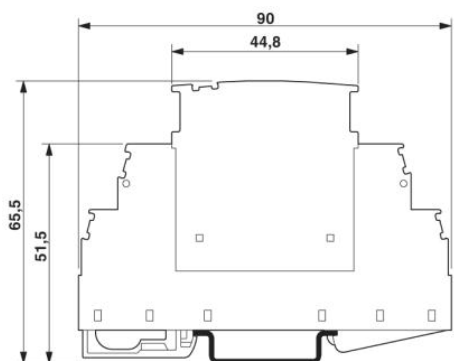
0810863	ZBF 5,LGS:UNGERADE ZAHLEN	Zack strip, flat, printed horizontally: 10-section, with odd numbers, printed with the numbers: 1-19, 21-39 etc. up to 81-99
0808697	ZBF 5,QR:FORTL.ZAHLEN	Zack marker strip, flat, printed vertically: 10-section, with the numbers 1 - 10, 11 - 20, and so on up to 91 - 100, color: white
0808668	ZBF 5/WH-100:UNBEDRUCKT	Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, large batch, sufficient for labeling 1000 terminal blocks, color: white
0808642	ZBF 5:UNBEDRUCKT	Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, sufficient for 100 terminal blocks, color: white
0800763	ZBN 18:SO/CMS	Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White
2809128	ZBN 18:UNBEDRUCKT	Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White

**Additional products**

Item	Designation	Description
<b>General</b>		
2856265	PT PE/S+1X2-BE	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

**Diagrams/Drawings**

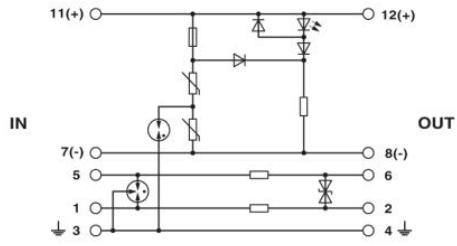
Dimensioned drawing



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

Circuit diagram

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**Address**

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