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.

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
- Consistent plug-in signal circuit protection
- Impedance-neutral disconnection of plug for test and maintenance purposes

Key commercial data

package_quantity	10
GTIN	4017918819323

Technical data

Dimensions

Height	45 mm
Width	17.7 mm
Depth	52 mm
Pitch unit	1 Div.
Height	90 mm
Width	17.7 mm
Depth	65.5 mm

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
Standards for air and creepage distances	IEC 60664-1

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Technical data

General

Standards for air and creepage distances	IEC 61643-1
Total surge current (8/20) µs	20 kA
Color	black
Mounting type	On base element
Design	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
Arrester rated voltage U_C (L-N)	34 V DC
Arrester rated voltage U_C (L-PE)	34 V AC
Arrester rated voltage U_C (L-PE)	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	≤ 1.5 mA
Residual current I_{PE}	≤ 1 µA
Nominal discharge current I_n (8/20) µs	700 A
Nominal discharge current I_n (8/20) µs (L-N)	700 A
Nominal discharge current I_n (8/20) µs (L-PE)	700 A
Max. discharge current I_{max} (8/20) µs	2 kA
Max. discharge current I_{max} (8/20) µs maximum (L-N)	2 kA
Max. discharge current I_{max} (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 U_{OC}	2 kV
Energy absorption symmetrical	28 J
Enery absorption, asymmetrical	14 J
Voltage protection level U_P (L-N)	≤ 180 V
Voltage protection level U_P (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

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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
Standards/regulations	EN 61643-11

Protective circuit, information technology

Nominal voltage U_N	24 V AC
Max. operating voltage U_{max}	28 V AC
Max. operating voltage U_{max}	40 V DC
Arrester rated voltage U_C	40 V DC
Arrester rated voltage U_C	28 V AC
Arrester rated voltage U_C (Core-Earth)	40 V DC
Arrester rated voltage U_C (Core-Earth)	28 V AC
Nominal current I_N	450 mA (45°C)
Operating effective current I_C at U_C	≤ 5 µA
Residual current I_{PE}	≤ 2 µA
Nominal discharge current I_n (8/20) µs (Core-Core)	10 kA
Nominal discharge current I_n (8/20) µs (Core-Earth)	10 kA
Max. discharge current I_{max} (8/20) µs maximum (Core-Core)	10 kA
Max. discharge current I_{max} (8/20) µs maximum (Core-Earth)	10 kA
Voltage protection level U_P (Core-Core)	≤ 80 V (C2 (10 kV/5 kA))
Voltage protection level U_P (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
Impulse discharge current (10/350) µs, peak value I_{imp}	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 I_n, (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)

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Protective circuit, information technology

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)
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 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	4 mm²
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 test classification	C1
IEC test classification	C2
IEC test classification	C3
IEC test classification	D1
Standards/regulations	IEC 61643-21

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	EC000899
ETIM 5.0	EC000899

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classifications

UNSPSC

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

approvals

GOST /

Approval details

GOST

accessories

Marker pen

X-PEN 0,35 - 0811228

Terminal marking

ZBF 5:UNBEDRUCKT - 0808642

ZBF 5/WH-100:UNBEDRUCKT - 0808668

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accessories

Labeled terminal marker

ZBF 5,LGS:FORTL.ZAHLEN - 0808671

ZBF 5,LGS:GERADE ZAHLEN - 0810821

ZBF 5,LGS:UNGERADE ZAHLEN - 0810863

ZBF 5,QR:FORTL.ZAHLEN - 0808697

Device marking

ZBN 18:UNBEDRUCKT - 2809128

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accessories

ZBF 15:SO/CMS - 0814717

ZBF 5:SO/CMS - 0808707

ZBN 18:SO/CMS - 0800763

Drawings

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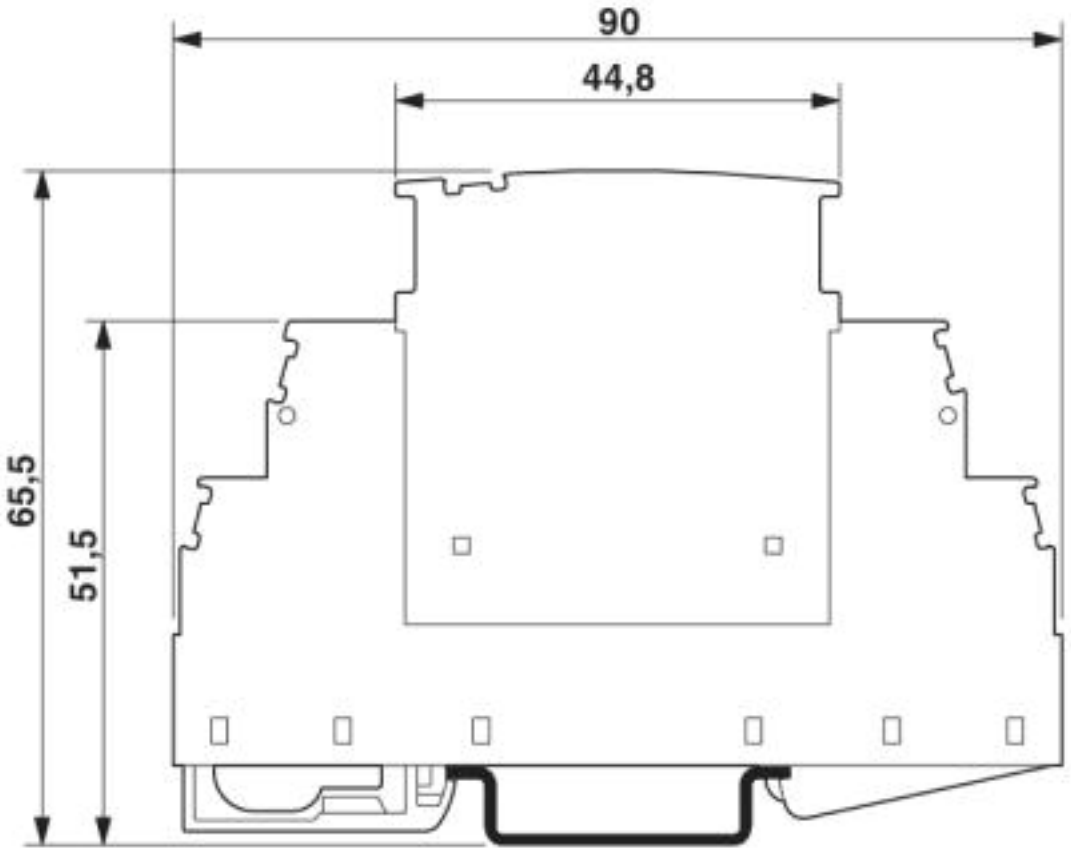
Dimensioned drawing



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

Circuit diagram