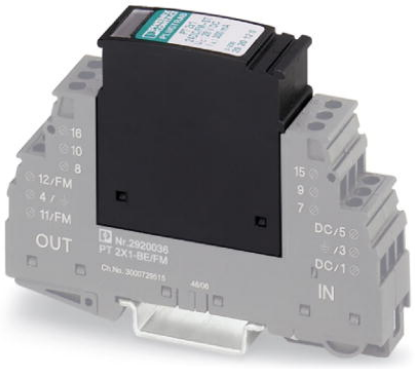
Extract from the online catalog

PT 2X1-24DC/FM-ST

Order No.: 2920120



http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2920120

Surge protection plug with integrated diagnostic and status indicator on the module and remote indication contact for two signal wires with common reference potential. Nominal voltage: 24 V DC

Product notes

WEEE/RoHS-compliant since: 01/01/2007

http://www.download.phoenixcontact.com
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

Commercial data

GTIN (EAN)	4046356154079
sales group	J213
Pack	10 pcs.
Customs tariff	85369010
Weight/Piece	0.03063 KG
Catalog page information	Page 85 (TT-2009)

Technical data

General

Housing material	PA 6.6
Inflammability class acc. to UL 94	V0
Color	black

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
Total surge current (8/20) µs	20 kA
Ambient temperature (operation)	-40 °C ... 85 °C
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
Width	17.70 mm
Height	52.00 mm
Length	45.00 mm
Pitch unit	1 Div.

Protective circuit

IEC category	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC
Max. operating voltage U_{max}	28 V DC
Arrester rated voltage U_C	28 V DC
	20 V AC
Arrester rated voltage U_C (Core-Earth)	28 V DC
	20 V AC
Nominal current I_N	300 mA (45°C)
Operating effective current I_C at U_C	≤ 5 µA
Discharge current to PE at U_C	≤ 1 µA (BE: 2x1+F)
	≤ 10 µA (Directly grounded)
Nominal discharge surge current I_n (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)	33 A (25 °C)
Lightning test current (10/350) µs, peak value I_{imp}	2.5 kA (per path)
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 50 V
	≤ 600 V (BE: 2x1+F)
Output voltage limitation at 1 kV/µs (Core-GND) spike	≤ 50 V
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 40 V
Output voltage limitation at 1 kV/µs (Core-GND) static	≤ 40 V
Residual voltage at I_n, (conductor-ground)	≤ 40 V
Residual voltage with Ian (10/1000)µs (conductor-ground)	≤ 50 V
Protection level U_P (Core-Earth)	≤ 40 V (C1 (500 V/250 A))
	≤ 40 V (C3 (25 A))
Protection level U_P (Core-GND)	≤ 40 V (C1 (500 V/250 A))
	≤ 40 V (C3 (25 A))
Response time tA (Core-Earth)	≤ 1 ns
Input attenuation aE, asym.	Typ. 0.5 dB (≤ 1 MHz / 50 Ω)
	Typ. 0.2 dB (≤ 400 kHz / 150 Ω)
Cut-off frequency fg (3 dB), asym. (GND) in 50 Ohm system	Typ. 6 MHz
Cut-off frequency fg (3 dB), asym. (GND) in 150 Ohm system	Typ. 2.5 MHz
Resistance in series	4.7 Ω (7-8/11-12)
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)
	D1 (2.5 kA)
	C3 (25 A)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	5 A - 1 s

Connection data

Type of connection	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	0.8 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

Connection, protective circuit

Standards/regulations	IEC 61643-21
	DIN EN 61643-21

Certificates / Approvals

Certification GOST, UL Listed

Accessories

Item	Designation	Description
Marking		
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 strip, flat, printed horizontally: 10-section, with the numbers, 1-10, 11-20 etc. up to 991-1000, 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	Flat Zack marker strip, printed vertically: 10-section, with the numbers 1-10, 11-20, etc. up to 151-160, color: White

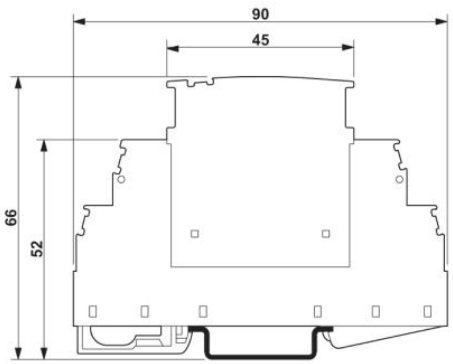
0808668	ZBF 5/WH-100:UNBEDRUCKT	Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, large batch, sufficient for labeling 1000 terminal blocks, color: white
0808642	ZBF 5:UNBEDRUCKT	Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, 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
Assembly		
2839295	SSA 3-6	shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black
2839512	SSA 5-10	Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black
General		
2920049	PT 2X1+F-BE/FM	Base element to accept a protective plug with diagnostic and status indicator for two signal wires with common reference potential, integrated spark gap to provide a high-resistance connection between the ground of the protective circuit of the plug and ground potential.
2920036	PT 2X1-BE/FM	Base element to accept a protective plug with diagnostic and status indicator for two signal wires with common reference potential.

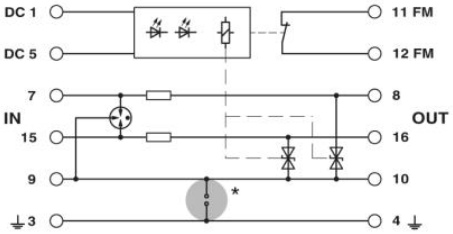
Diagrams/Drawings

Dimensioned drawing



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

Circuit diagram



Address

PHOENIX CONTACT Inc., USA
586 Fulling Mill Road
Middletown, PA 17057,USA
Phone (800) 888-7388
Fax (717) 944-1625
http://www.phoenixcon.com