

PT 2XEX(I)-24DC-ST

Order No.: 2838225




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PT protective connector with protective circuit for two 2-wire floating Ex-i signal circuits. Nominal voltage: 24 V DC



Commercial data

GTIN (EAN)	 4 017918 182861
Note	Made-to-order
sales group	J205
Pack	10 pcs.
Customs tariff	85363010
Catalog page information	Page 99 (TT-2011)

Product notes

WEEE/RoHS-compliant since: 05/10/2006



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Technical data

General

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

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
	EN 60079-11
Total surge current (8/20) μ s	20 kA
Total surge current (10/350) μ s	2 kA
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	On base element
Design	DIN rail module, two-section, divisible
Number of positions	4
Degree of protection	IP20
Direction of action	Line-Line & Line-Signal Ground/Shield & Signal Ground/Shield-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.00
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
Maximum continuous operating voltage U_C	30 V DC
	21 V AC
Maximum continuous voltage U_C (wire-wire)	30 V DC
	21 V AC
Nominal current I_N	325 mA (40°C)
Operating effective current I_C at U_C	$\leq 5 \mu$ A
Ground conductor current I_{PE}	$\leq 4 \mu$ A

Nominal discharge surge current I_n (8/20) μs (Core-Core)	10 kA
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 I_{max} (8/20) μs maximum (Core-Core)	10 kA
Max. discharge surge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core- Core)	30 A
Lightning test current (10/350) μs , peak value I_{imp}	1 kA (core-core)
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	≤ 1 kV
Output voltage limitation at 1 kV/ μs (Core-Core) static	≤ 45 V
Output voltage limitation at 1 kV/ μs (Core-Earth) static	≤ 1 kV
Residual voltage at I_n , (conductor-conductor)	≤ 45 V
Residual voltage with I_{an} (10/1000) μs (conductor- conductor)	≤ 50 V
Protection level U_p (Core-Core)	≤ 100 V (C2 - 10 kV / 5 kA) ≤ 50 V (C1 - 1 kV/500 A) ≤ 50 V (C3 - 25 A) ≤ 150 V (D1 - 1 kA)
Protection level U_p (Core-Earth)	≤ 1 kV (C2 - 10 kV / 5 kA) ≤ 1 kV (C1 - 1 kV/500 A) ≤ 1 kV (D1 - 1 kA)
Response time t_A (Core-Core)	≤ 1 ns
Response time t_A (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	Typ. 0.5 dB (900 kHz/50 Ω) Typ. 0.2 dB (300 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ohm system	Typ. 4.5 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	Typ. 1.6 MHz
Resistance in series	$\leq 2.2 \Omega \pm 10 \%$ $\leq 2.2 \Omega \pm 10 \%$
Max. required back-up fuse	315 mA (e.g. T in acc. with IEC 127-2/III)

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 (1 kA)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	10 A - 1 s

Connection data

Connection method	Screw connection (in connection with the base element)
Connection type IN	PLUGTRAB plug-in system
Connection type OUT	PLUGTRAB plug-in system
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

Connection, protective circuit

Standards/regulations	EN 61643-21
	EN 60079-0
	EN 60079-11
	EN 60079-26
	EN 61241-0
	EN 61241-11

General

Maximum inner capacitance C _i	1.3 nF
Maximum inner inductance L _i	1 µH
Maximum inner time factor (R _i /L _i)	≤ 0.2 µs
Max. input current I _i	325 mA (T4 / ≤ 80°C)
	325 mA (T5/≤ 55°C)
	325 mA (T6 / ≤ 40°C)
Max. input voltage U _i	30 V DC
Maximum input power P _i	3 W
Insulation voltage to ground	500 V AC

Conformity / approvals

ATEX	Ex II 1G Ex ia IIC T4...T6 Ga
	Ex II 1D Ex ia IIIC T135°C...T85°C Da
IECEX	Ex ia IIC T4...T6 Ga
	Ex ia IIIC T135°C...T85°C Da

Certificates / Approvals



Certification	GOST, UCIEE, UL Listed
Certification Ex:	CUL-EX LIS, KEMA-EX, UL-EX LIS

Accessories

Item	Designation	Description
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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 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
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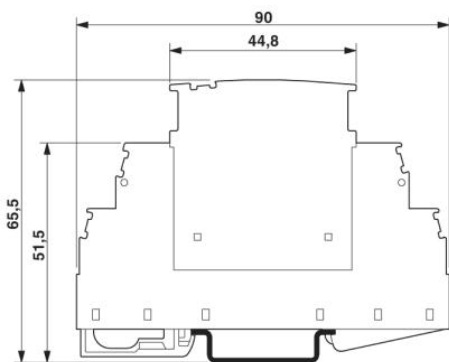
Additional products

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		
2839279	PT 2XEX(I)-BE	Base element for protective plug PT with protective circuit for two 2-core floating EEx ia signal circuits. Mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

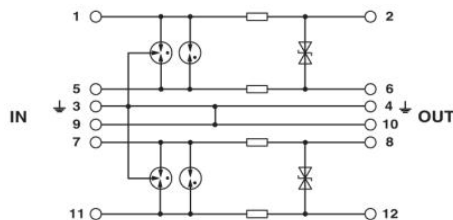
Diagrams/Drawings

Dimensioned drawing



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

Circuit diagram



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