

Surge protection plug - PT 4-EX(I)-24DC-ST - 2839253

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PT protective connector with protective circuit for a 4-wire floating Ex-i signal circuit. Nominal voltage: 24 V DC

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
- ✓ Tailored to the special requirements of intrinsically safe circuits
- ✓ Consistent plug-in signal circuit protection
- ✓ Impedance-neutral disconnection of plug for test and maintenance purposes



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	26.15 GRM
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

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Technical data

Dimensions

Complete module depth	65.5 mm
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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	V-0
Color	blue
Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1
	EN 60079-11
Mounting type	On base element
Type	DIN rail module, two-section, divisible
Number of positions	4
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

Protective circuit

IEC test classification	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	500 mA (40°C)
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 4 \mu A$
Nominal discharge current I_n (8/20) μs (Core-Core)	308 A
Nominal discharge current I_n (8/20) μs (Core-Earth)	10 kA

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Technical data

Protective circuit

Total surge current (8/20) μ s	20 kA
Total surge current (10/350) μ s	2 kA
Max. discharge current $I_{\max}$ (8/20) μ s maximum (Core-Core)	308 A
Max. discharge current $I_{\max}$ (8/20) μ s maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μ s (Core-Core)	59 A
Impulse discharge current (10/350) μ s, peak value I_{imp}	1 kA
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 1 kV
Output voltage limitation at 1 kV/ μ s (Core-Core) static	≤ 45 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 1 kV
Residual voltage at I_{n} (conductor-conductor)	≤ 70 V
Residual voltage with I_{an} (10/1000) μ s (conductor-conductor)	≤ 65 V
Voltage protection level U_{p} (Core-Core)	≤ 60 V (C1 - 500 V / 250 A)
	≤ 50 V (C3 - 25 A)
Voltage 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. 0.1 dB (1 MHz / 50 Ω)
	typ. 0.1 dB (500 kHz / 150 Ω)
Cut-off frequency f_{g} (3 dB), sym. in 50 Ohm system	typ. 7 MHz
Cut-off frequency f_{g} (3 dB), sym. in 150 Ohm system	typ. 2.5 MHz
Surge protection fault message	None
Max. required back-up fuse	500 mA (e.g. T in acc. with IEC 127-2/III)
Surge current resistance (conductor-conductor)	C1 - 500 V / 250 A
Surge current resistance (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 1 kA
Alternating current carrying capacity (conductor-ground)	5 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

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Technical data

Connection data

Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

Standards and Regulations

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	1.1 nF
Maximum inner inductance L_i	1 μ H
Maximum inner time factor (R_i/L_i)	$\leq 10 \mu$ s
Max. input current I_i	500 mA ($T4 / \leq 80^\circ\text{C}$)
	500 mA ($T5/\leq 55^\circ\text{C}$)
	500 mA ($T6 / \leq 40^\circ\text{C}$)
Max. input voltage U_i	30 V DC
Maximum input power P_i	850 mW ($T4 / \leq 80^\circ\text{C}$)
	700 mW ($T5/\leq 55^\circ\text{C}$)
	700 mW ($T6 / \leq 40^\circ\text{C}$)
Insulation voltage to ground	500 V AC
Ambient temperature (operation)	-40 $^\circ\text{C}$... 80 $^\circ\text{C}$ (T4)
	-40 $^\circ\text{C}$... 55 $^\circ\text{C}$ (T5)
	-40 $^\circ\text{C}$... 40 $^\circ\text{C}$ (T6)

Conformity / approvals

ATEX	# II 1G Ex ia IIC T4...T6 Ga
	# II 1D Ex ia IIIC T135 $^\circ\text{C}$...T85 $^\circ\text{C}$ Da
IECEX	Ex ia IIC T4...T6 Ga
	Ex ia IIIC T135 $^\circ\text{C}$...T85 $^\circ\text{C}$ Da

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801

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Classifications

eCl@ss

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	EC000943
ETIM 5.0	EC000943

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

IECEX / ATEX / INMETRO

Approvals submitted

Approval details

GOST 
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Accessories

Accessories

Device marking

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

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Accessories

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

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

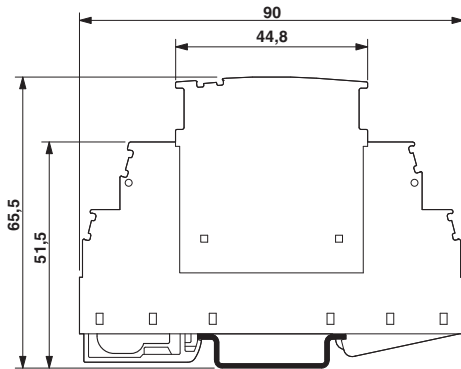


Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

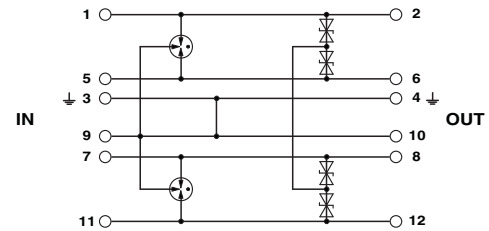
Drawings

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Dimensioned drawing



Circuit diagram



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

Catalog photo

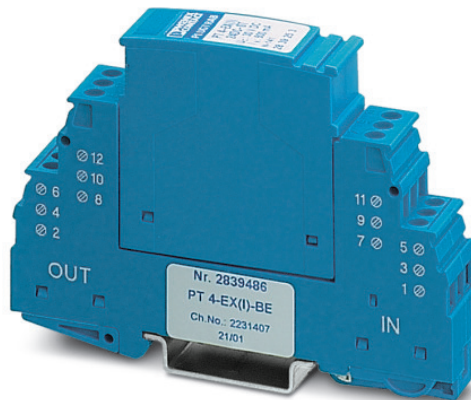


Figure may contain other products.