Surge protection plug - PT 1X2-24DC-ST - 2856032

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The figure shows the PT 1x2-48DC-ST version

PT protective connector with protective circuit for a 2-wire floating signal circuit. HART-compatible.

Product Features

- Plugs can be checked with CHECKMASTER
- Installed in conjunction with the PT 1x2...-BE base element
- 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
- Protection for a floating signal circuit
- Impedance-neutral disconnection of plug for test and maintenance purposes

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	19.78 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.

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Technical data

Dimensions

Complete module height	90 mm
Complete module width	17.7 mm
Complete module 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
Color	black
Standards for air and creepage distances	EN 60664-1
	IEC 60664-1
Surge voltage category	2
Pollution degree	III
Mounting type	On base element
Type	DIN rail module, two-section, divisible
Direction of action	Line-Line & Line-Signal Ground/Shield & optional 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	28 V DC
	20 V AC
Maximum continuous voltage UC (wire-wire)	28 V DC
Maximum continuous voltage U_C (wire-ground)	20 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 (Directly grounded)

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Technical data

Protective circuit

	≤ 1 µA (BE: 1x2+F)
Nominal discharge current I_n (8/20) µs (Core-Core)	10 kA
Nominal discharge current I_n (8/20) µs (Core-Earth)	10 kA
Total surge current (8/20) µs	20 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
Nominal pulse current Ian (10/1000) µs (Core-Core)	30 A
Impulse discharge current (10/350)#µs, peak value I_{imp}	2.5 kA
Output voltage limitation at 1 kV/µs (Core-Core) spike	≤ 45 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 450 V
	≤ 1 kV (BE: 1x2+F)
Output voltage limitation at 1 kV/µs (Core-Core) static	≤ 40 V
Residual voltage at I_n, (conductor-conductor)	≤ 40 V
Residual voltage with Ian (10/1000)µs (conductor-conductor)	≤ 50 V
Voltage protection level U_P (Core-Core)	≤ 70 V (C1 - 1 kV/500 A)
	≤ 50 V (C3 - 25 A)
	≤ 70 V (C2 - 10 kV / 5 kA)
	≤ 60 V (6 kV/3 kA)
Voltage protection level U_P (Core-Earth)	≤ 450 V (C1 - 1 kV/500 A)
	≤ 550 V (C2 - 10 kV / 5 kA)
	≤ 500 V (6 kV/3 kA)
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	0.5 dB (≤ 1 MHz)
	0.5 dB (≤ 1 MHz / 50 Ω)
	0.25 dB (≤ 400 kHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 4.5 MHz
Capacity (Core-Core)	typ. 1.4 nF
Resistance in series	2.2 Ω #10 % (7-8/11-12)
Surge protection fault message	None
Max. required back-up fuse	500 mA (e.g. T (IEC 127-2/III))
Surge current resistance (conductor-conductor)	C2 - 10 kV/5 kA
	C3 - 25 A
	C1 - 1 kV/500 A
Surge current resistance (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 2,5 kA
	C1 - 1 kV/500 A

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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
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, equipotential bonding

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

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	EC000943
ETIM 5.0	EC000943

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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

Approvals

Approvals

UL Listed / GOST / GL

Ex Approvals

UL Listed / cUL Listed / ATEX / cULus Listed

Approvals submitted

Approval details

UL Listed

Nominal current IN	0.45 A
Nominal voltage UN	24 V

GOST

GL

Accessories

Accessories

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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

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

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Accessories

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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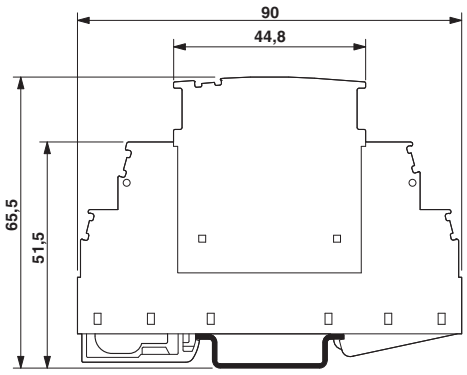
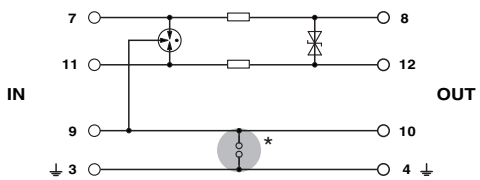
Dimensioned drawing



Circuit diagram



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

Catalog photo

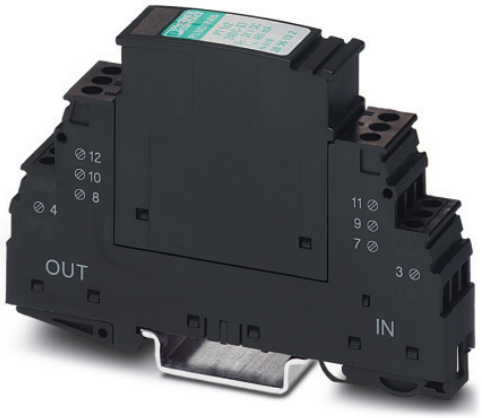


Figure may contain other products.