Surge protection plug - PT 2X2-24DC-ST - 2838228

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The illustration shows version PT 2x2- 5DC-ST

PT protective connector with protective circuit for two 2-wire floating signal circuits. 24 V DC nominal voltage. HART-compatible.

Product Features

- Plugs can be checked with CHECKMASTER
- Installed in conjunction with the PT 2x2...-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 two separate floating signal circuits
- Impedance-neutral disconnection of plug for test and maintenance purposes

Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	25.11 g
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
Flammability rating according to UL 94	V0
Color	black
Standards for cearances and creepage distances	EN 60664-1
	IEC 60664-1
Overvoltage category	2
Degree of pollution	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 voltage U_C	28 V DC
	20 V AC
Maximum continuous voltage U_C (wire-wire)	28 V DC
	20 V AC
Maximum continuous voltage U_C (wire-ground)	28 V DC
	20 V AC
Nominal current I_N	450 mA (45°C)

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Technical data

Protective circuit

Operating effective current I_C at U_C	≤ 5 µA
Residual current I_{PE}	≤ 1 µA (BE: 2x2+F)
	≤ 4 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
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
Impulse discharge current (10/350)#µs, peak value I_{imp}	2.5 kA (per path)
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 at I_n (conductor-GND)	≤ 450 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-ground)	≤ 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
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 1.5 MHz
Capacity (Core-Core)	typ. 1.4 nF
Resistance in series	2.2 Ω #10 % (Path 1 - 2/5 - 6/7 - 8/11 - 12)
Surge protection fault message	None
Max. required back-up fuse	500 mA (e.g. T (IEC 127-2/III))
Impulse durability (conductor-conductor)	C2 - 10 kV/5 kA
	C3 - 25 A
	C1 - 1 kV/500 A

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Technical data

Protective circuit

Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 2,5 kA
	C1 - 1 kV/500 A

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 flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	4 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12

Connection, equipotential bonding

Stripping length	8 mm
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	4 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG 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
eCl@ss 9.0	27130807

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Classifications

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

UL Listed / GL / EAC / EAC

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

GL

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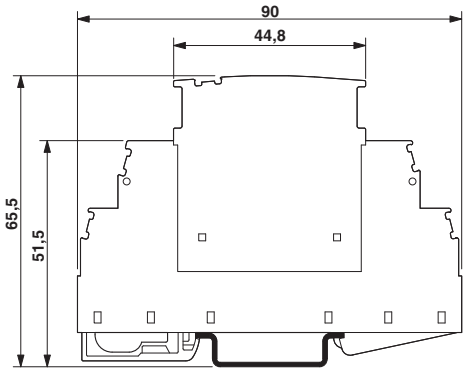
Approvals

EAC

EAC

Drawings

Dimensional drawing



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

Circuit diagram