

Surge protection plug - PT 2X2-HF-12 DC-ST - 2839570

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Surge protection plug for the base element, normal mode voltage coarse and fine protection for two floating double wires in IT. Design: 12 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
- Consistent plug-in signal circuit protection
- Protection for fieldbus systems, PROFIBUS, and signal circuits with 3 to 5-wire technology
- Impedance-neutral disconnection of plug for test and maintenance purposes



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	25.87 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.

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
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Technical data

Ambient conditions

Degree of protection	IP20
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General

Housing material	PA
Flammability rating according to UL 94	V0
Color	black
Standards for clearances and creepage distances	DIN VDE 0110-1
	IEC 60664-1
Mounting type	On base element
Type	DIN rail module, two-section, divisible
Number of positions	5
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	12 V DC
Maximum continuous voltage U_C	13 V DC
	9 V AC
Maximum continuous voltage U_C (wire-wire)	13 V DC
	9 V AC
Maximum continuous voltage U_C (wire-ground)	13 V DC (with PT 2x2-BE)
Nominal current I_N	450 mA (45°C)
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 4 \mu A$ (with PT 2x2-BE)
	$\leq 1 \mu A$ (with PT 2x2+F-BE)
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

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Protective circuit

Max. discharge current $I_{\max}$ (8/20) μs maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	67 A
Impulse discharge current (10/350) μs , peak value I_{imp}	2.5 kA
Output voltage limitation at 1 kV/ μs (Core-Core) spike	$\leq 50 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 450 \text{ V}$
	$\leq 1 \text{ kV}$ (with PT 2x2+F-BE)
Output voltage limitation at 1 kV/ μs (Core-Core) static	$\leq 25 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-GND) static	$\leq 450 \text{ V}$
Residual voltage at I_n (conductor-conductor)	$\leq 25 \text{ V}$
Residual voltage with I_{an} (10/1000) μs (conductor-conductor)	$\leq 23 \text{ V}$
Voltage protection level U_p (core-core)	$\leq 100 \text{ V}$ (C2 - 10 kV/5 kA)
Voltage protection level U_p (core-ground)	$\leq 450 \text{ V}$ (C2 - 10 kV/5 kA)
Response time t_A (Core-Core)	$\leq 500 \text{ ns}$
Response time t_A (Core-Earth)	$\leq 500 \text{ ns}$
Input attenuation a_E , sym.	0.2 dB ($\leq 5 \text{ MHz}$)
Cut-off frequency f_g (3 dB), sym. in 100 Ohm system	typ. 70 MHz
Capacity (Core-Core)	typ. 30 pF
Resistance in series	2.2 Ω
Max. required back-up fuse	500 mA (e.g. T in acc. with IEC 127-2/III)
Impulse durability (conductor-conductor)	C2 - 10 kV/5 kA
Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 2,5 kA

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 flexible min.	0.2 mm ²
Conductor cross section flexible 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 min.	24
Conductor cross section AWG max.	12

Standards and Regulations

Standards/regulations	IEC 61643-21
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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

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 / cULus Listed

Approvals submitted

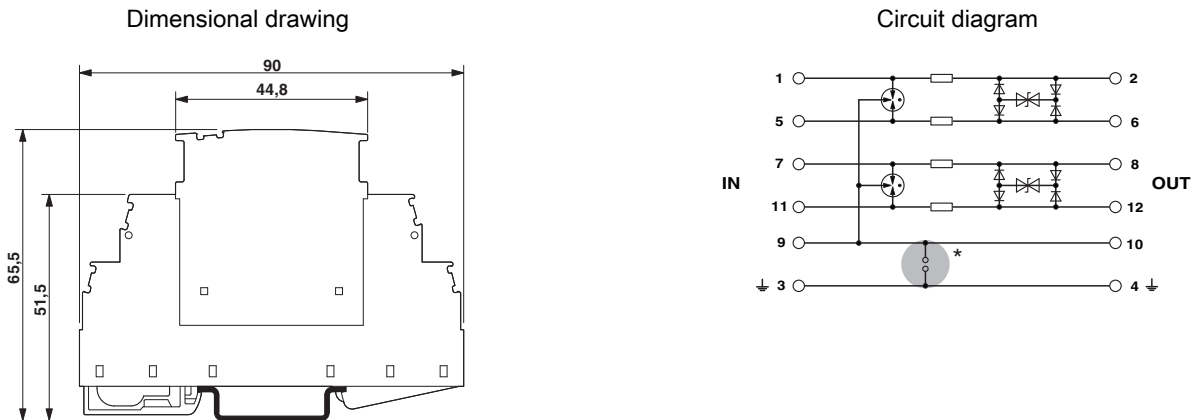
Approval details

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Approvals

UL Listed 	
Nominal current IN	0.45 A
Nominal voltage UN	24 V
GL	
EAC	
EAC	

Drawings



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

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Diagram

