

Surge protection connector - PT 5-HF-12 DC-ST - 2838775

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Protective plug PT with HF protective circuit for 4 signal wires. Nominal voltage: 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
- Protection for fieldbus systems, PROFIBUS, and signal circuits with 3 to 5-wire technology
- Consistent plug-in signal circuit protection
- Impedance-neutral disconnection of plug for test and maintenance purposes



Key commercial data

Packing unit	1 PCE
Minimum order quantity	10 PCE
GTIN	 4 017918 480646
Custom tariff number	85363010
Country of origin	GERMANY

Technical data

General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 61664-1

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Technical data

General

Standards for air and creepage distances	IEC 60664-1
Surge voltage category	III
Pollution degree	2
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	On base element
Design	DIN rail module, two-section, divisible
Number of positions	5
Degree of protection	IP20
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
Width	17.7 mm
Height	45 mm
Depth	52 mm
Pitch unit	1 Div.

Protective circuit

IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
VDE requirement class	C1
VDE requirement class	C2
VDE requirement class	C3
VDE requirement class	D1
Nominal voltage U_N	12 V DC
Maximum continuous operating voltage U_C	14 V DC
Maximum continuous operating voltage U_C	9.8 V AC
Maximum continuous voltage U_C (wire-wire)	14 V DC
Maximum continuous voltage U_C (wire-wire)	9.8 V AC
Maximum continuous voltage U_C (wire-ground)	14 V DC (with PT 2x2-BE)
Nominal current I_N	450 mA (45°C)
Operating effective current I_C at U_C	$\leq 5 \mu\text{A}$
Residual current I_{PE}	$\leq 5 \mu\text{A}$ (with PT 2x2-BE)
Residual current I_{PE}	$\leq 1 \mu\text{A}$ (with PT 2x2+F-BE)
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

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Protective circuit

Max. discharge surge current I_{max} (8/20) μ s maximum (Core-Core)	10 kA
Max. discharge surge current I_{max} (8/20) μ s maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μ s (Core-Core)	67 A
Lightning test current (10/350) μ s, peak value I_{imp}	2.5 kA
Output voltage limitation at 1 kV/ μ s (Core-Core) spike	\leq 55 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	\leq 55 V (PT 2x2-BE)
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	\leq 700 V (with PT 2x2+F-BE)
Output voltage limitation at 1 kV/ μ s (Core-Core) static	\leq 25 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	\leq 25 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	\leq 40 V (PT 2x2+F-BE)
Residual voltage at I_{n_r} (conductor-conductor)	\leq 25 V
Residual voltage at I_{n_r} (conductor-ground)	\leq 40 V (with PT 2x2-BE)
Residual voltage at I_n (conductor-GND)	\leq 25 V (with PT 2x2-BE)
Residual voltage with I_{an} (10/1000) μ s (conductor-conductor)	\leq 25 V
Residual voltage with I_{an} (10/1000) μ s (conductor-GND)	\leq 25 V
Voltage protection level U_P (Core-Core)	\leq 100 V (C2 (10 kV/5 kA))
Voltage protection level U_P (Core-Core)	\leq 45 V (C3 - 25 A)
Voltage protection level U_P (Core-Earth)	\leq 100 V (C2 (10 kV/5 kA) with BE 2839208)
Voltage protection level U_P (Core-Earth)	\leq 600 V (C2 (10 kV/5 kA) with BE 2839224)
Voltage protection level U_P (Core-Earth)	\leq 45 V (C3 - 25 A)
Voltage protection level U_P (Core-GND)	\leq 45 V (C3 - 25 A)
Response time t_A (Core-Core)	\leq 500 ns
Response time t_A (Core-Earth)	\leq 500 ns
Input attenuation a_E , sym.	typ. 0.2 dB (\leq 5 MHz / 100 Ω)
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 \pm 10 %
Max. required back-up fuse	500 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-Core)	C3 (67 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (67 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (2.5 kA)

Connection data

Connection method	Screw connection (in connection with the base element)
Connection type IN	PLUGTRAB plug-in system

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Technical data

Connection data

Connection type OUT	PLUGTRAB plug-in system
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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

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 / GOST / GL

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

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Approvals

Approval details

UL Listed 	
Nominal current IN	0.45 A
Nominal voltage UN	12 V

GOST 
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GL

Accessories

Accessories

Marking

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

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

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Accessories

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

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

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

Required add-on products

Surge protection base element - PT 2X2-BE - 2839208



Base element for protective plug PT with protective circuit for two 2-wire floating signal circuit, bridge between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

Additional products

Shield connection - SSA 3-6 - 2839295



shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black

Shield connection - SSA 5-10 - 2839512

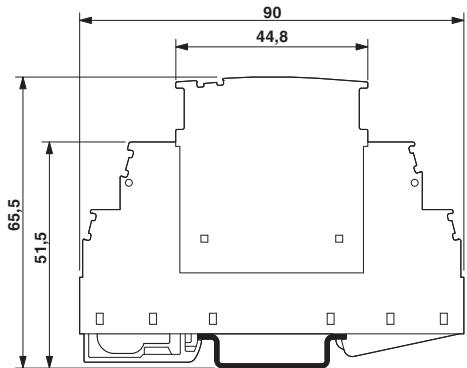


Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

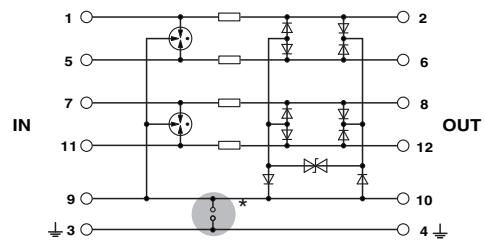
Drawings

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Dimensioned drawing



Circuit diagram



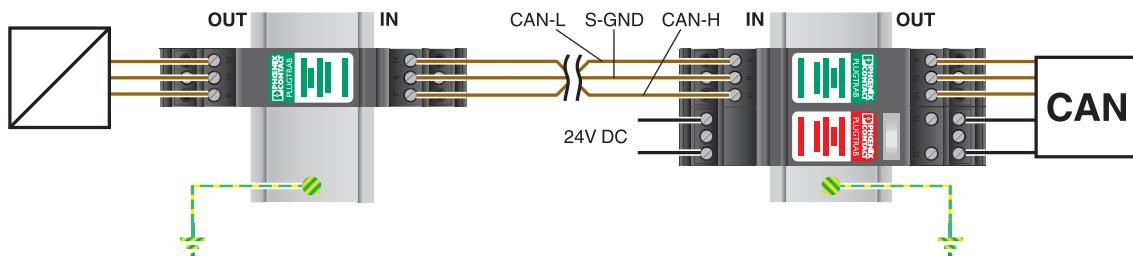
The figure shows the complete module
consisting of a base element and connector

Diagram



Surge protection connector - PT 5-HF-12 DC-ST - 2838775

Application drawing



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