

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
GTIN	 4 017918 480646
Custom tariff number	85363010
Country of origin	GERMANY

Technical data

Dimensions

Height	45 mm
Width	17.7 mm
Depth	52 mm
Pitch unit	1 Div.
Height	90 mm

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Technical data

Dimensions

Width	17.7 mm
Depth	65.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Degree of protection	IP20

General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 61664-1 IEC 60664-1
Surge voltage category	III
Pollution degree	2
Mounting type	On base element
Design	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 operating voltage U_C	14 V DC 9.8 V AC
Maximum continuous voltage U_C (wire-wire)	14 V DC 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	$\leq 5 \mu A$

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Technical data

Protective circuit

Residual current I_{PE}	$\leq 5 \mu A$ (with PT 2x2-BE)
	$\leq 1 \mu A$ (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
Max. discharge surge current I_{max} (8/20) μs maximum (Core-Core)	10 kA
Max. discharge surge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	67 A
Lightning test current (10/350) μs , peak value I_{imp}	2.5 kA
Output voltage limitation at 1 kV/ μs (Core-Core) spike	$\leq 55 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 55 V$ (PT 2x2-BE)
	$\leq 700 V$ (with PT 2x2+F-BE)
Output voltage limitation at 1 kV/ μs (Core-Core) static	$\leq 25 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 25 V$
	$\leq 40 V$ (PT 2x2+F-BE)
Residual voltage at I_n , (conductor-conductor)	$\leq 25 V$
Residual voltage at I_n , (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) μs (conductor-conductor)	$\leq 25 V$
Residual voltage with I_{an} (10/1000) μs (conductor-GND)	$\leq 25 V$
Voltage protection level U_p (Core-Core)	$\leq 100 V$ (C2 (10 kV/5 kA))
	$\leq 45 V$ (C3 - 25 A)
Voltage protection level U_p (Core-Earth)	$\leq 100 V$ (C2 (10 kV/5 kA) with BE 2839208)
	$\leq 600 V$ (C2 (10 kV/5 kA) with BE 2839224)
	$\leq 45 V$ (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 ($\leq 5 MHz / 100 \Omega$)
Cut-off frequency f_g (3 dB), sym. in 100 Ohm system	typ. 70 MHz
Capacity (Core-Core)	typ. 30 pF
Resistance in series	$2.2 \Omega \pm 10 \%$
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)
	C3 (67 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	C3 (67 A)

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Technical data

Protective circuit

	D1 (2.5 kA)
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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
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
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

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

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Approvals

Approvals

Approvals


UL Listed / GOST / GL


Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Listed 	
Nominal current I _N	0.45 A
Nominal voltage U _N	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

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Accessories

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

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

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

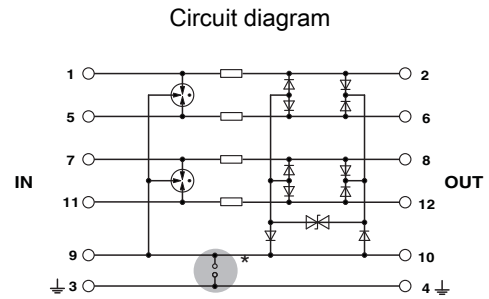
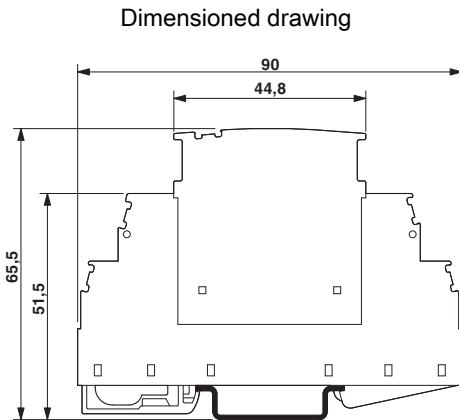


Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

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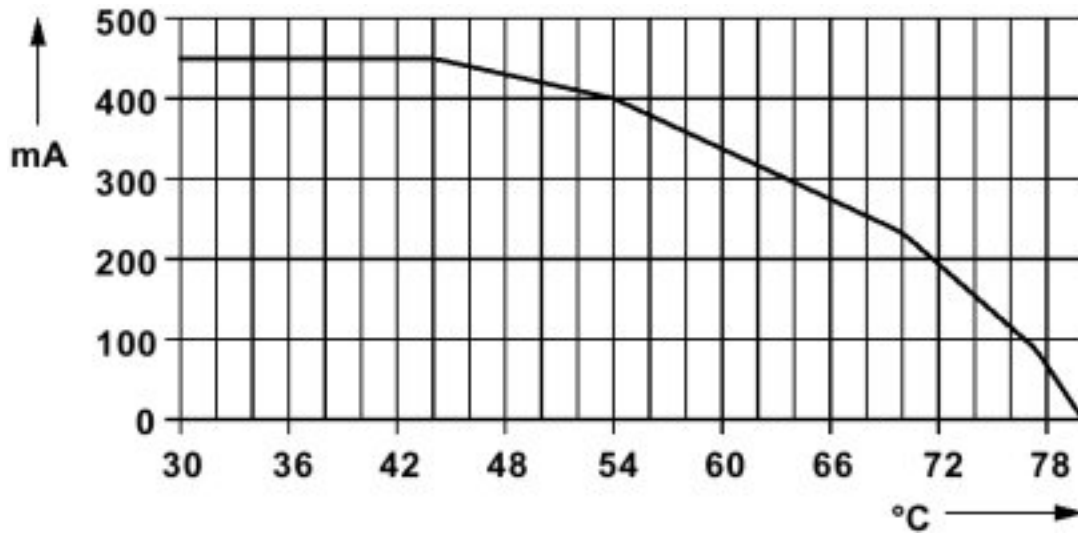
Accessories

Drawings



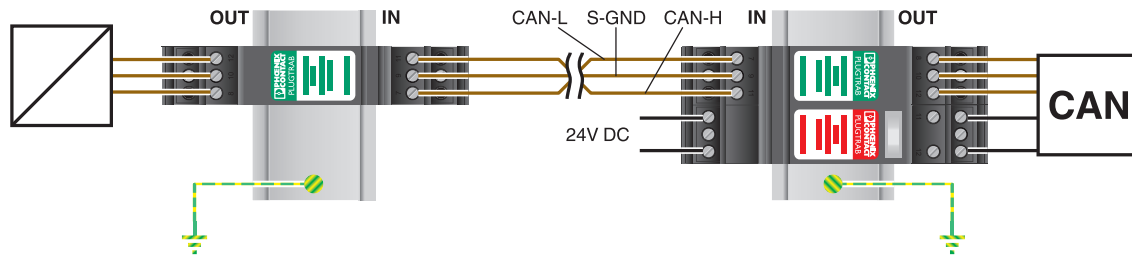
The figure shows the complete module consisting of a base element and connector

Diagram



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

Application drawing



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