Surge protection connector - PT 5-HF- 5 DC-ST - 2838762

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Protective plug PT with HF protective circuit for 4 signal wires. Nominal voltage: 5 V DC

The illustration shows variant PT 5-HF-12 DC-ST

Product Features

- Protection for up to five signal wires
- Fast response time
- For high transmission speeds
- High discharge capacity
- Plugs can be checked with CHECKMASTER

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	25.45 GRM
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
Width	17.7 mm

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Technical data

Dimensions

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
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	5 V DC
Maximum continuous operating voltage U_C	5.2 V DC
	3.6 V AC
Maximum continuous voltage UC (wire-wire)	5.2 V DC
	3.6 V AC
Maximum continuous voltage U_C (wire-ground)	5.2 V DC (with PT 2x2-BE)
Nominal current I_N	450 mA (45°C)
Operating effective current I_C at U_C	≤ 300 µA
Residual current I_{PE}	≤ 300 µA (with PT 2x2-BE)
	≤ 1 µA (with PT 2x2+F-BE)
Nominal discharge current I_n (8/20) µs (Core-Core)	10 kA

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Technical data

Protective circuit

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)	90 A
Impulse discharge current (10/350) µs, peak value I_{imp}	2.5 kA
Output voltage limitation at 1 kV/µs (Core-Core) spike	≤ 55 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 55 V (PT 2x2-BE)
	≤ 700 V (with PT 2x2+F-BE)
Output voltage limitation at 1 kV/µs (Core-Core) static	≤ 15 V
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 15 V
	≤ 30 V (PT 2x2+F-BE)
Residual voltage at I_n, (conductor-conductor)	≤ 15 V
Residual voltage at I_n, (conductor-ground)	≤ 30 V (with PT 2x2-BE)
Residual voltage at In, (conductor-GND)	≤ 15 V (with PT 2x2-BE)
Residual voltage with Ian (10/1000)µs (conductor-conductor)	≤ 15 V
Residual voltage with Ian (10/1000)µs (conductor-GND)	≤ 15 V
Voltage protection level U_P (Core-Core)	≤ 100 V (C2 (10 kV/5 kA))
	≤ 34 V (C3 - 25 A)
Voltage protection level U_P (Core-Earth)	≤ 100 V (C2 (10 kV/5 kA) with BE 2839208)
	≤ 600 V (C2 (10 kV/5 kA) with BE 2839224)
	≤ 34 V (C3 - 25 A)
Voltage protection level U_P (Core-GND)	≤ 38 V (C3 - 25 A)
Response time tA (Core-Core)	≤ 500 ns
Response time tA (Core-Earth)	≤ 500 ns
Input attenuation aE, sym.	typ. 0.2 dB (≤ 5 MHz / 100 Ω)
Cut-off frequency fg (3 dB), sym. in 100 Ohm system	typ. 70 MHz
Capacity (Core-Core)	typ. 30 pF
Resistance in series	2.2 Ω ±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 (90 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	C3 (90 A)
	D1 (2.5 kA)

Connection data

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Technical data

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 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

UNSPSC

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

Approvals

Approvals

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Approvals

Approvals

UL Listed / GOST

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Listed

Nominal current IN	0.45 A
Nominal voltage UN	5 V

GOST

Accessories

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

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Accessories

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

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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

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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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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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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

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Accessories

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

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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

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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

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Additional products

Shield connection - SSA 3-6 - 2839295

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

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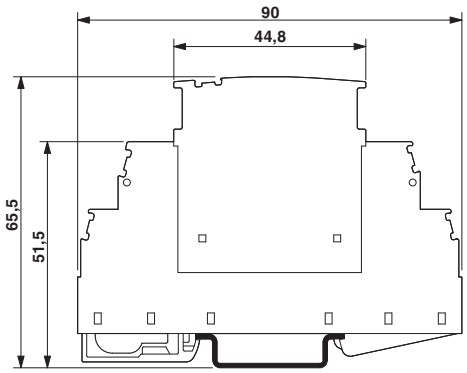
Accessories

Shield connection - SSA 5-10 - 2839512

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

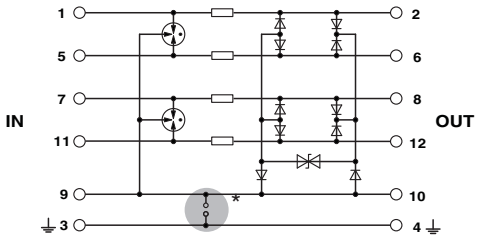
Drawings

Dimensioned drawing



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

Circuit diagram



Diagram