

Surge protection plug - 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

Your advantages

- 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	10 pc
GTIN	 4 017918 480653
GTIN	4017918480653
Weight per Piece (excluding packing)	25.260 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.
Complete module height	90 mm
Complete module width	17.7 mm
Complete module depth	65.5 mm

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Altitude	max. 2000 m
Degree of protection	IP20

General

Housing material	PA
Flammability rating according to UL 94	V-0
Color	black
Standards for clearances and creepage distances	DIN EN 61664-1
	IEC 60664-1
Mounting type	on base element
Type	Male
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 voltage U_C	5.2 V DC
	3.6 V AC
Rated current	450 mA (45°C)
Operating effective current I_C at U_C	$\leq 300 \mu A$
Residual current I_{PE}	$\leq 300 \mu A$ (with PT 2X2-BE)
	$\leq 1 \mu A$ (with PT 2X2+F-BE)
Nominal discharge current I_n (8/20) μs (line-line)	10 kA
Nominal discharge current I_n (8/20) μs (line-earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs	2.5 kA
Total discharge current I_{total} (8/20) μs	20 kA
Max. discharge current I_{max} (8/20) μs maximum (line-line)	10 kA
Max. discharge current I_{max} (8/20) μs maximum (line-earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (line-line)	90 A
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 55 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 55 V$ (with PT 2X2-BE)

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Technical data

Protective circuit

	≤ 700 V (with PT 2X2+F-BE)
Output voltage limitation at 1 kV/μs (line-line) static	≤ 15 V
Output voltage limitation at 1 kV/μs (line-earth) static	≤ 15 V
	≤ 30 V (with PT 2X2+F-BE)
Residual voltage at I _n (line-line)	≤ 15 V
Residual voltage at I _n (line-earth)	≤ 30 V (with PT 2X2-BE)
Residual voltage at I _n (line-signalground)	≤ 15 V (with PT 2X2-BE)
Residual voltage with I _{an} (10/1000) μs (line-line)	≤ 15 V
Residual voltage with I _{an} (10/1000) μs (line-signalground)	≤ 15 V
Voltage protection level U _p (line-line)	≤ 70 V (C1 - 1 kV/500 A)
	≤ 45 V (C3 - 25 A)
	≤ 100 V (C2 - 10 kV / 5 kA)
	≤ 70 V (6 kV / 3 kA)
Voltage protection level U _p (line-earth)	≤ 80 V (C1 - 1 kV/500 A)
	≤ 110 V (C2 - 10 kV / 5 kA)
	≤ 100 V (6 kV / 3 kA)
	≤ 45 V (C3 - 25 A)
Voltage protection level U _p (line-signalground)	≤ 45 V (C3 - 25 A)
Response time t _A (line-line)	≤ 500 ns
Response time t _A (line-signalground)	≤ 500 ns
Response time t _A (line-earth)	≤ 500 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 5 MHz / 100 Ω)
Cut-off frequency f _g (3 dB), sym. in 100 Ohm system	typ. 60 MHz
Capacity (line-line)	typ. 30 pF
Resistance in series	2.2 Ω ±10 % (1-2/5-6/7-8/11-12)
Surge protection fault message	none
Max. required back-up fuse	500 mA (T)
Impulse durability (line-line)	C2 - 10 kV/5 kA
	C3 - 90 A
Impulse durability (line-earth)	C2 - 10 kV/5 kA
	C3 - 90 A
	D1 - 2.5 kA

Connection data

Connection method	Screw connection (in connection with the base element)
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

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Technical data

Connection, equipotential bonding

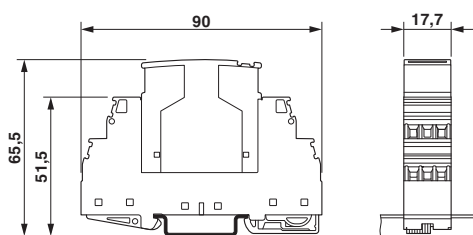
Stripping length	8 mm
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12

Standards and Regulations

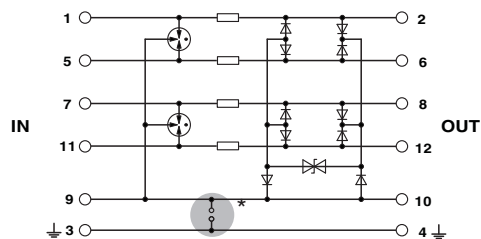
Standards/specifications	EN 61643-21/A1 2009
	IEC 61643-21/A1 2008

Drawings

Dimensional drawing



Circuit diagram



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

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
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

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Classifications

ETIM

ETIM 6.0	EC000943
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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 / EAC / EAC





Ex Approvals

UL Listed / cUL Listed / cULus Listed



Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 138168
Nominal voltage UN		5 V	
Nominal current IN		0.45 A	

EAC		EAC-Zulassung
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EAC		RU C- DE.A*30.B01561
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Accessories

Accessories

Device marking

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Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm

Labeled terminal marker

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 size: 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 size: 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 size: 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 size: 5.15 x 5.15 mm

Marker pen

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Accessories

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

Terminal marking

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 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: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

Necessary 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 connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

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Accessories

Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

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