

PT 5-HF- 5 DC-ST - Surge protection plug



2838762

<https://www.phoenixcontact.com/gb/products/2838762>

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

Your advantages

- Easy testing and documentation with CHECKMASTER 2 with pluggable protective modules
- Maximum ease of maintenance, thanks to the 2-piece design
- Easy selection for all possible demands in MCR applications with a complete product portfolio
- The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs



Commercial data

Item number	2838762
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CL3121
Product key	CL3121
GTIN	4017918480653
Weight per piece (including packing)	26.2 g

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Weight per piece (excluding packing)	25.26 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

Product type	Surge protection for information technology
Product family	PLUGTRAB PT
IEC test classification	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Type	Male
Number of positions	5
Surge protection fault message	none
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.00
Wire pairs per module	2

Insulation characteristics

Overvoltage category	III
Pollution degree	2

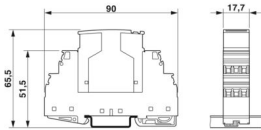
Electrical properties

Nominal voltage U_N	5 V DC
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Connection data

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

Dimensions

Dimensional drawing	
Width	17.7 mm
Height	45 mm
Depth	52 mm

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Horizontal pitch	1 HP
Complete module width	17.7 mm
Complete module height	90 mm
Complete module depth	65.5 mm

Material specifications

Color	black (RAL 9005) copper color
Flammability rating according to UL 94	V-0
Housing material	PA

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
Nominal voltage U_N	5 V DC
Maximum continuous operating 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	$\leq 300 \mu A$
Protective conductor 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-ground)	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) $\leq 700 V$ (with PT 2X2+F-BE)
Output voltage limitation at 1 kV/ μs (line-line) static	$\leq 15 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 15 V$ $\leq 30 V$ (with PT 2X2+F-BE)
Residual voltage at I_n (conductor-conductor)	$\leq 15 V$
Residual voltage at I_n (conductor-ground)	$\leq 30 V$ (with PT 2X2-BE)
Residual voltage at I_n (line-signal ground)	$\leq 15 V$ (with PT 2X2-BE)
Residual voltage with I_{an} (10/1000) μs (line-line)	$\leq 15 V$
Residual voltage with I_{an} (10/1000) μs (line-signal ground)	$\leq 15 V$ $\leq 70 V$ (C1 - 1 kV / 500 A)

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Voltage protection level U_p (line-line)	≤ 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-signal ground)	≤ 45 V (C3 - 25 A)
Response time t_A (line-line)	≤ 500 ns
Response time t_A (line-earth)	≤ 500 ns
Response time t_A (line-signal ground)	≤ 500 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 5 MHz / 100 Ω)
Cut-off frequency f_g (3 dB), sym. in 100 Ω system	typ. 60 MHz
Capacity (Core-Core)	typ. 30 pF
Resistance per path	2.2 $\Omega \pm 10$ % (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

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

VDE requirement class	C1
	C2
	C3
	D1

Air clearances and creepage distances

Standards/regulations	DIN EN 61664-1 / IEC 60664-1
Standards/specifications	EN 61643-21/A1
Note	2009
Standards/specifications	IEC 61643-21/A1
Note	2008

Mounting

Mounting type	on base element
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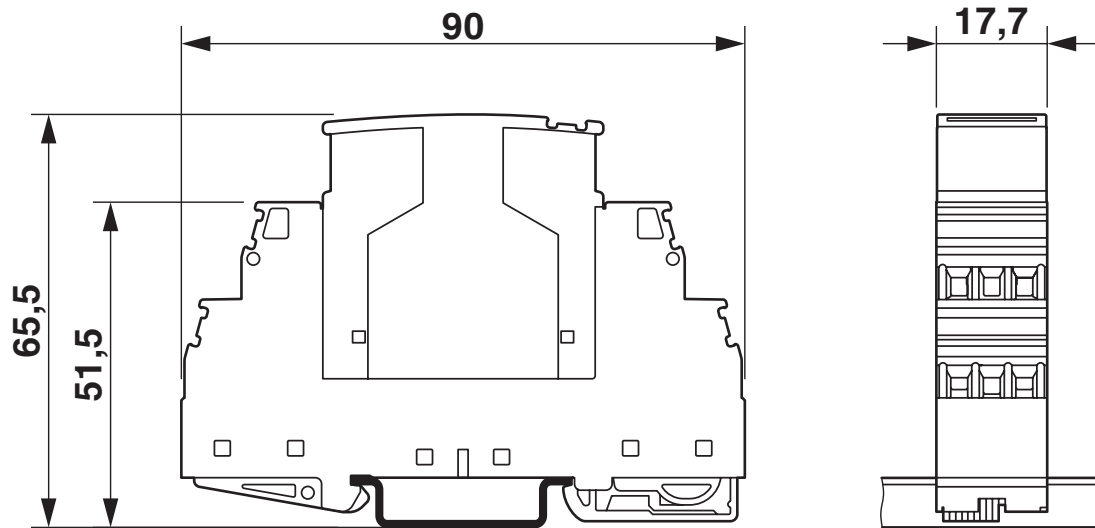
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Drawings

Dimensional drawing



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

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Diagram



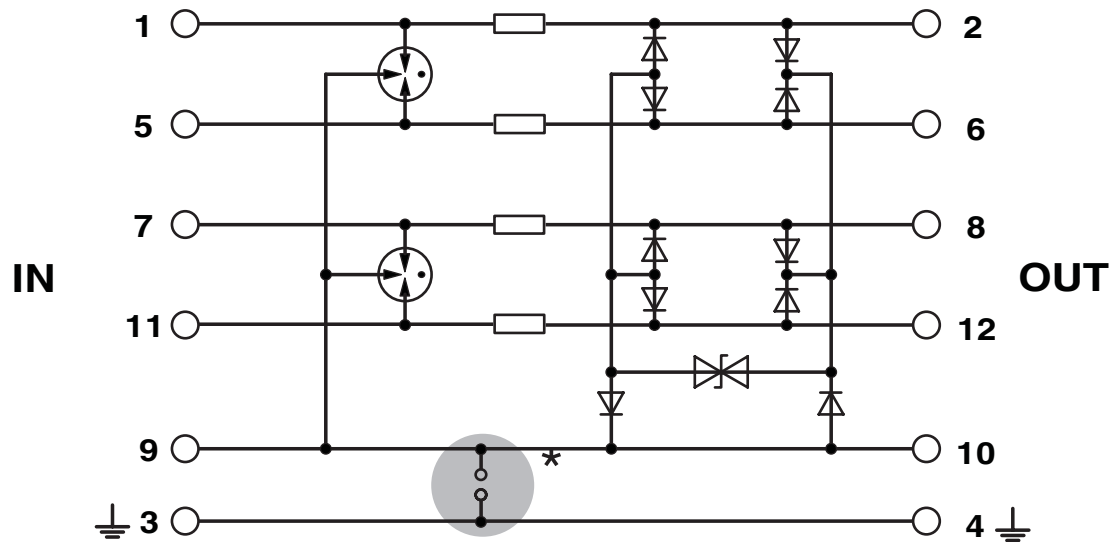
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Circuit diagram



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Approvals

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<div>UL Listed Approval ID: FILE E 138168</div>				
	Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
keine				
	5 V	0.45 A	-	-

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Classifications

ECLASS

ECLASS-13.0	27171503
ECLASS-15.0	27171503

ETIM

ETIM 10.0	EC001466
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	b12a237d-b0ec-436d-af0b-9600d9272cbb

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