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PT 4X1-48AC-ST - Surge protection plug

2804856

https://www.phoenixcontact.com/gb/products/2804856

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Protective plug PT with protective circuit for 4 conductors of signal circuits grounded on one side.
Nominal voltage: 48 V AC

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	2804856
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL2111
Product key	CL2111
Catalog page	Page 135 (C-4-2019)
GTIN	4046356339865
Weight per piece (including packing)	27.19 g
Weight per piece (excluding packing)	25.95 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

Product type	Surge protection for MCR technology
Product family	PLUGTRAB PT
IEC test classification	C1
	C2
	C3
	D1
Type	Male
Surge protection fault message	none
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 3.17

Insulation characteristics

Overvoltage category	III
Pollution degree	2

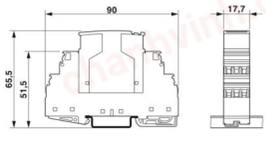
Electrical properties

Nominal voltage U_N	48 V AC

Connection data

Connection method	Screw connection (in connection with the base element)
Screw thread	M3
Tightening torque	0.5 Nm
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section rigid	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 12

Dimensions

Dimensional drawing	
Width	17.7 mm
Height	45 mm
Depth	52 mm
Horizontal pitch	1 Div.
Complete module width	17.7 mm
Complete module height	90 mm
Complete module depth	65.5 mm

Material specifications

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Color	black (RAL 9005)
Flammability rating according to UL 94	V-0
Housing material	PA 6.6

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
Maximum continuous voltage U_C	77 V DC
	55 V AC
Rated current	300 mA (45 °C)
Operating effective current I_C at U_C	≤ 5 µA
Residual current I_{PE}	≤ 1 µA (with PT 4X1+F-BE)
	≤ 20 µA (Directly grounded)
Nominal discharge current I_n (8/20) µs (line-ground)	10 kA
Pulse discharge current I_{imp} (10/350) µs	2.5 kA (per path)
Total discharge current I_{total} (8/20) µs	20 kA
Max. discharge current I_{max} (8/20) µs maximum (line-earth)	10 kA (per path)
	20 kA (in total)
Nominal pulse current Ian (10/1000) µs (line-earth)	12 A
Output voltage limitation at 1 kV/µs (line-earth) spike	≤ 110 V (with PT 4X1-BE)
	≤ 600 V (with PT 4X1+F-BE)
Output voltage limitation at 1 kV/µs (line-earth) static	≤ 50 V (with PT 4X1+F-BE)
Residual voltage at I_n (conductor-ground)	≤ 160 V (spike)
	≤ 110 V (static)
Residual voltage with Ian (10/1000) µs (line-signalground)	≤ 125 V
Voltage protection level U_p (line-earth)	≤ 150 V (C2 - 10 kV / 5 kA with PT 4X1-BE)
Voltage protection level U_p static (line-earth)	≤ 40 V (C2 - 10 kV / 5 kA with PT 4X1-BE)
Response time t_A (line-earth)	≤ 1 ns (with PT 4X1-BE)
	≤ 100 ns (with PT 4X1+F-BE)
Response time t_A (line-signalground)	≤ 1 ns (with PT 4X1+F-BE)
Input attenuation aE, asym.	0.5 dB (≤ 2.5 MHz / 50 Ω)
	0.2 dB (≤ 0.5 MHz / 150 Ω)
	0.1 dB (≤ 0.1 MHz / 600 Ω)
Cut-off frequency fg (3 dB), asym. (PE) in 50 Ω system	typ. 10 MHz
Cut-off frequency fg (3 dB), asym. (PE) in 150 Ω system	typ. 3.5 MHz
Cut-off frequency fg (3 dB), asym. (PE) in 600 Ω system	typ. 900 kHz
Capacity (Core-Earth)	typ. 400 pF (with PT 4X1-BE)
	typ. 2 pF (with PT 4X1+F-BE)
Resistance per path	4.7 Ω ±10 %
Surge protection fault message	none

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Max. required back-up fuse	315 mA (T)
Impulse durability (line-earth)	C2 - 10 kV / 5 kA
	D1 - 2.5 kA

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m (amsl)

Standards and regulations

Standards/specifications	IEC 61643-21
Note	2000

Mounting

Mounting type	on base element

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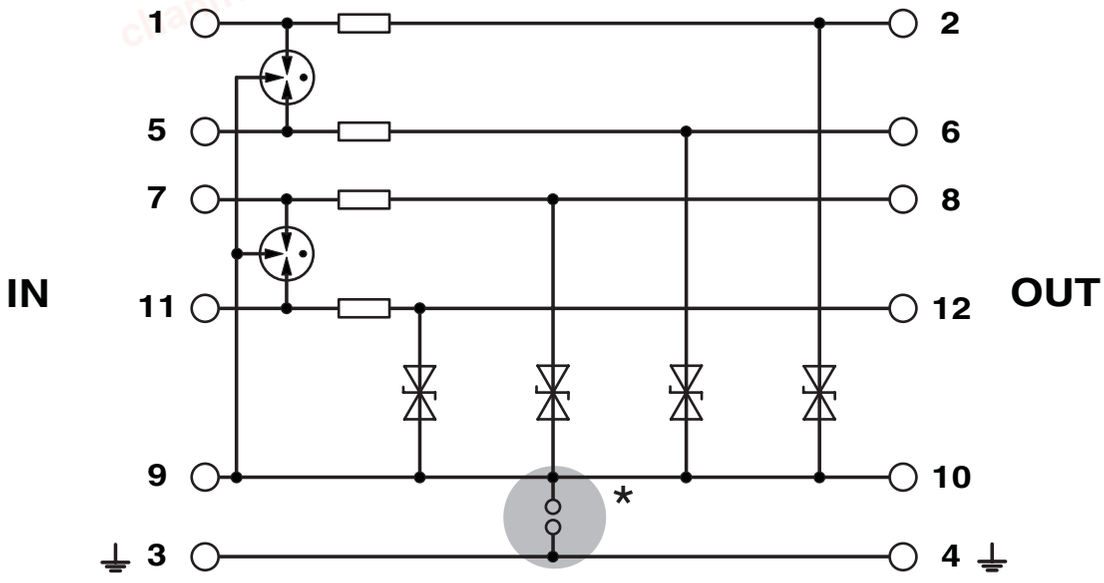
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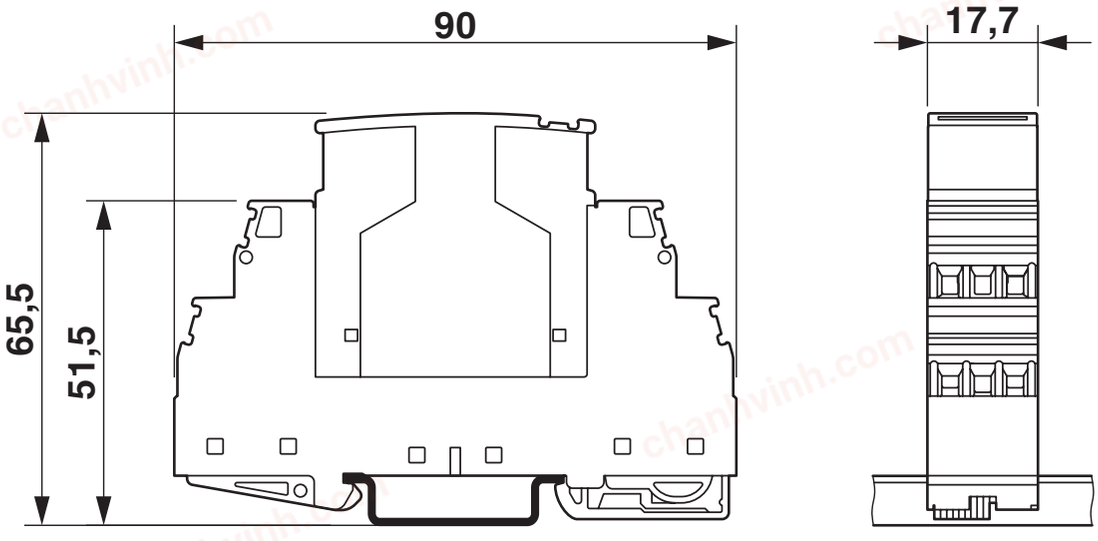
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Drawings

Circuit diagram



Dimensional drawing



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

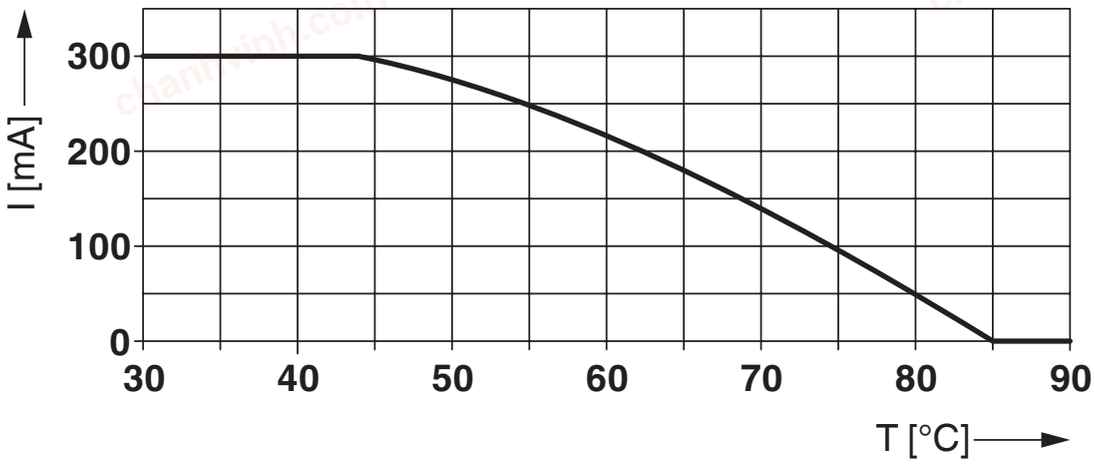
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Diagram



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/2804856

EAC
Approval ID: RU C-DE.*09.B.00169

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

ETIM

ETIM 9.0	EC001625

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	abb24f8c-e2e2-4d6f-9a97-5648321969da

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Mandatory accessories

PT 4X1-BE - Surge protection base-element

2839363

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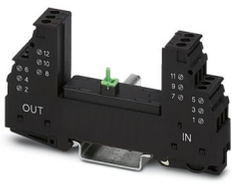


Base element for protective plug PT with protective circuit for 4 conductors of signal circuits grounded on one side, with bridge between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

PT 4X1+F-BE - Surge protection base-element

2839376

https://www.phoenixcontact.com/gb/products/2839376



Base element for protective plug PT with protective circuit for 4 signal wires, with gas-filled surge arrester 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

Accessories

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ZBF 5:UNBEDRUCKT - Zack Marker strip, flat

0808642

https://www.phoenixcontact.com/gb/products/0808642



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm, Number of individual labels: 10

ZBF 5/WH-100:UNBEDRUCKT - Zack Marker strip, flat

0808668

https://www.phoenixcontact.com/gb/products/0808668



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 1000

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ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

https://www.phoenixcontact.com/gb/products/2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

ZBN 18 CUS - Zack marker strip

0825059

https://www.phoenixcontact.com/gb/products/0825059



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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SSA 3-6 - Shield connection

2839295

https://www.phoenixcontact.com/gb/products/2839295



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm^2, color: black

SSA 5-10 - Shield connection

2839512

https://www.phoenixcontact.com/gb/products/2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm^2, color: black

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X-PEN 0,35 - Marker pen

0811228

https://www.phoenixcontact.com/gb/products/0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

SZS 0,6X3,5 VDE - Screwdriver

1212602

https://www.phoenixcontact.com/gb/products/1212602



Screwdriver, slot-headed, VDE insulated, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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