

# PT 2X1VA-230AC-ST - Surge protection plug



2839198

<https://www.phoenixcontact.com/gb/products/2839198>

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Protective plug PT with protective circuit for higher signal voltages, 2-channel, visual error warning. Nominal voltage: 230 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	2839198
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CL2111
Product key	CL2111
GTIN	4017918182854
Weight per piece (including packing)	28.97 g
Weight per piece (excluding packing)	24.23 g
Customs tariff number	85363010
Country of origin	DE

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## Technical data

### Notes

#### General

Note	Technical data is valid in association with the following specified base elements: PT -BE/ FM 2839282
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### Product properties

Product family	PLUGTRAB PT
IEC test classification	C1
	C2
	C3
	D1
Type	Male
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.00

#### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Electrical properties

Nominal voltage $U_N$	230 V AC (50/60 Hz)
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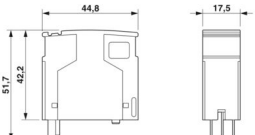
#### Indicator/remote signaling

Switching function	N/C contact
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### 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 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12

### Dimensions

Dimensional drawing	
Width	17.5 mm
Height	44.8 mm

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Depth	51.7 mm
Horizontal pitch	1 Div.
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 6.6

## Mechanical properties

### Mechanical data

Open side panel	No
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## Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Nominal voltage $U_N$	230 V AC (50/60 Hz)
Maximum continuous operating voltage $U_C$	275 V DC
	275 V AC (50/60 Hz)
Rated current	26 A AC (30 °C)
	1 A DC (82 °C)
Operating effective current $I_C$ at $U_C$	$\leq 1.5$ mA AC
	$\leq 2$ mA DC
Protective conductor current $I_{PE}$	$\leq 3$ mA AC
	$\leq 4$ mA DC
Nominal discharge current $I_n$ (8/20) $\mu$ s (line-ground)	2.5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu$ s	500 A
Total discharge current $I_{Total}$ (8/20) $\mu$ s	5 kA
Output voltage limitation at 1 kV/ $\mu$ s (line-earth) spike	$\leq 650$ V
Output voltage limitation at 1 kV/ $\mu$ s (line-earth) static	$\leq 650$ V
Voltage protection level $U_p$ (line-earth)	$\leq 750$ V (C1 - 1.4 kV / 0.7 kA)
	$\leq 900$ V (C2 - 5 kV/2,5 kA)
	$\leq 750$ V (C3 - 100 A)
Response time $t_A$ (line-earth)	$\leq 25$ ns
Input attenuation aE, asym.	typ. 0.3 dB ( $\leq 650$ kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (signal ground) in 150 $\Omega$ system	typ. 2.2 MHz
Capacity (Core-Earth)	typ. 1 nF
Surge protection fault message	optical
Max. required back-up fuse	25 A AC (gL/gG)
	1 A DC (T)
	C1 - 1,4 kV / 0,7 kA

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Impulse durability (line-earth)	C2 - 5 kV / 2.5 kA
	C3 - 100 A
	D1 - 500 A

## 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
Note	2000 + corrigendum 2001 + A1:2008, modified + A2:2012
Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

## Mounting

Mounting type	on base element
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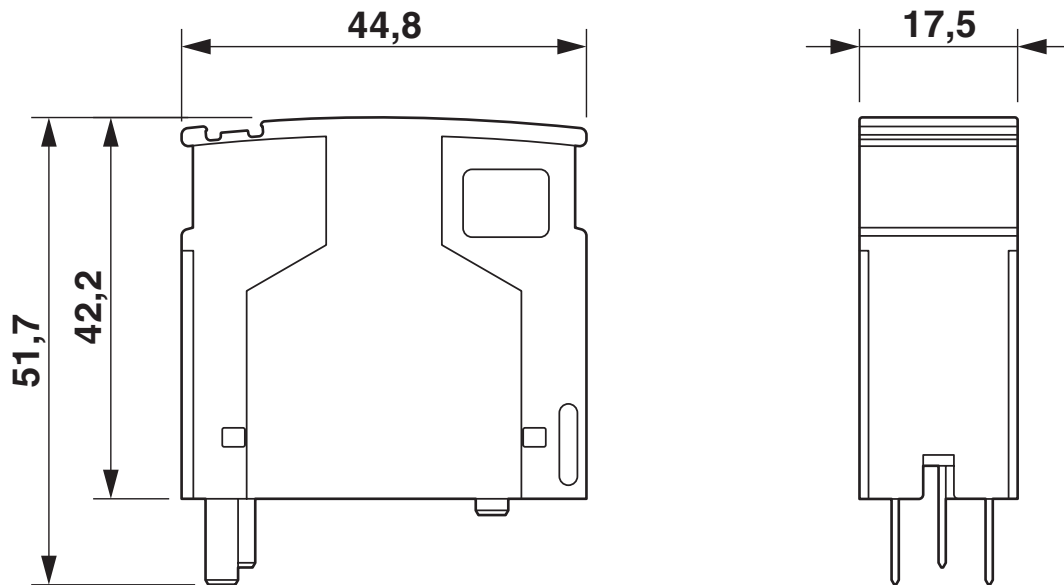
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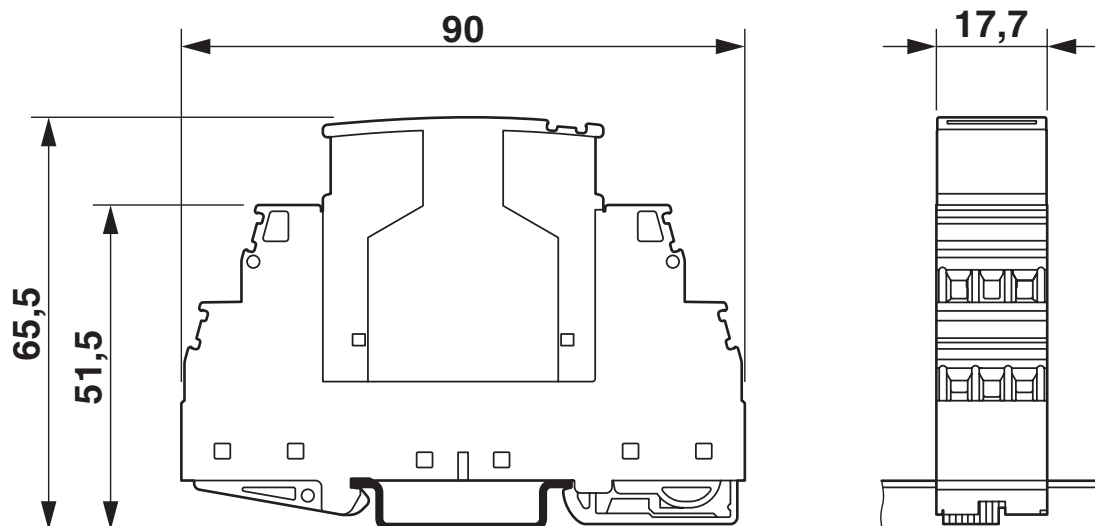


## Drawings

Dimensional drawing



Dimensional drawing



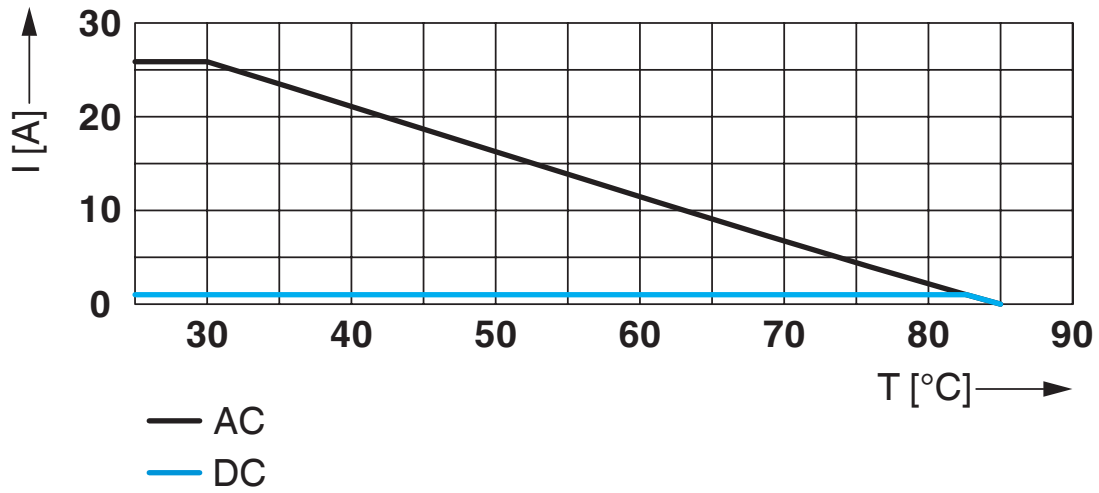
The figure shows the complete module consisting of a base element and connector

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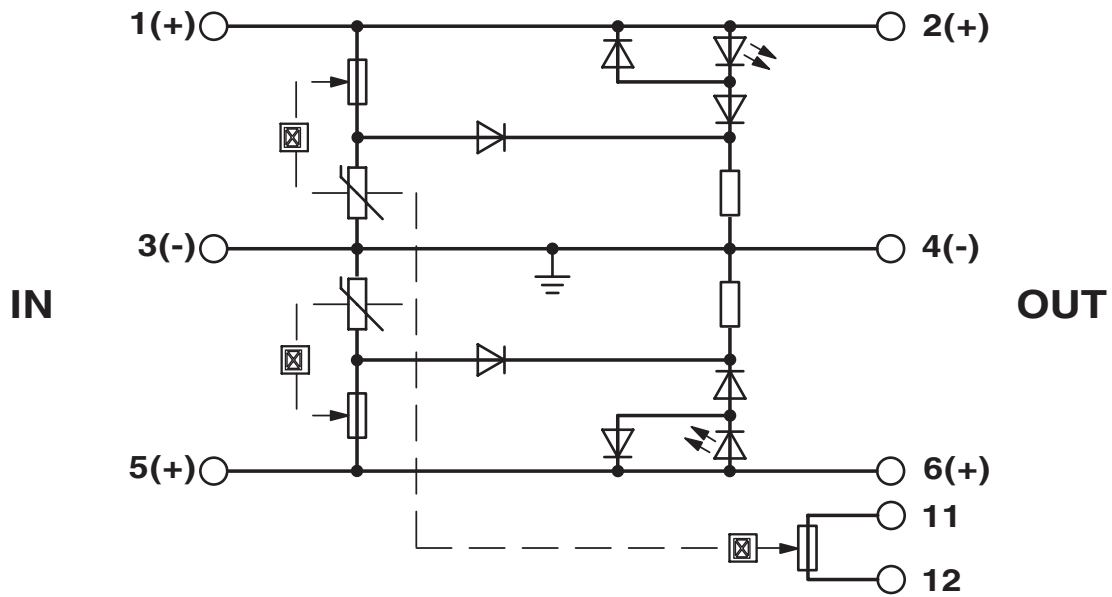
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Diagram



Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2839198>



**UL Listed**

Approval ID: FILE E 138168

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## Classifications

### ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

### 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	0b2eaf9c-02a7-4cbb-ad90-124d95b39c31

### EF3.1 Climate Change

CO2e kg	2.164 kg CO2e
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