

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PT protective connector with protective circuit for two 2-wire floating signal circuits. 5 V DC nominal voltage. HART-compatible.

## 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	2838241
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL2111
Product key	CL2111
Catalog page	Page 123 (C-4-2019)
GTIN	4017918182656
Weight per piece (including packing)	26.08 g
Weight per piece (excluding packing)	20.899 g
Customs tariff number	85363010
Country of origin	DE

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

## Technical data

### Product properties

IEC test classification	C1
	C2
	C3
	D1
Type	Male
Product type	Surge protection for MCR technology
Product family	PLUGTRAB PT
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
----------------------	-----

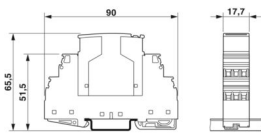
### Electrical properties

Nominal voltage $U_N$	5 V DC
-----------------------	--------

### 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 <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
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

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

Color	black (RAL 9005)
	Copper
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 $U_C$	6 V DC 4 V AC
Rated current	450 mA (45 °C)
Operating effective current $I_C$ at $U_C$	$\leq 1$ mA
Residual current $I_{PE}$	$\leq 1$ $\mu$ A (with PT 2X2+F-BE) $\leq 4$ $\mu$ A
Nominal discharge current $I_n$ (8/20) $\mu$ s (line-line)	10 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s (line-ground)	10 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu$ s	2.5 kA (per path)
Total discharge current $I_{total}$ (8/20) $\mu$ s	20 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (line-line)	10 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (line-earth)	10 kA
Output voltage limitation at 1 kV/ $\mu$ s (line-line) spike	$\leq 12$ V
Output voltage limitation at 1 kV/ $\mu$ s (line-earth) spike	$\leq 450$ V
Output voltage limitation at 1 kV/ $\mu$ s (line-line) static	$\leq 10$ V
Residual voltage at $I_n$ (conductor-conductor)	$\leq 10$ V
Residual voltage at $I_n$ (line-signalground)	$\leq 450$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (line-line)	$\leq 12$ V
Response time $t_A$ (line-line)	$\leq 1$ ns
Response time $t_A$ (line-earth)	$\leq 100$ ns
Input attenuation aE, sym.	0.5 dB ( $\leq 200$ kHz)
Cut-off frequency $f_g$ (3 dB), sym. in 50 $\Omega$ system	typ. 1 MHz
Capacity (Core-Core)	6 nF
Resistance per path	2.2 $\Omega$
Surge protection fault message	none
Impulse durability (line-line)	C2 - 10 kV / 5 kA
Impulse durability (line-earth)	C2 - 10 kV / 5 kA D1 - 2.5 kA

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
----------------------	------

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

Ambient temperature (operation)	-40 °C ... 85 °C
---------------------------------	------------------

## Standards and regulations

### Air clearances and creepage distances

Standards/regulations	VDE 0110-1 / IEC 60664-1
-----------------------	--------------------------

### Standards Information technology specification

Standards/regulations	IEC 61643-21
	DIN EN 61643-21
	UL 497B
	IEC 61643-21
	DIN EN 61643-21
Standards/specifications	UL 497B
Standards/specifications	IEC 61643-21
Note	2000

## Mounting

Mounting type	on base element
---------------	-----------------

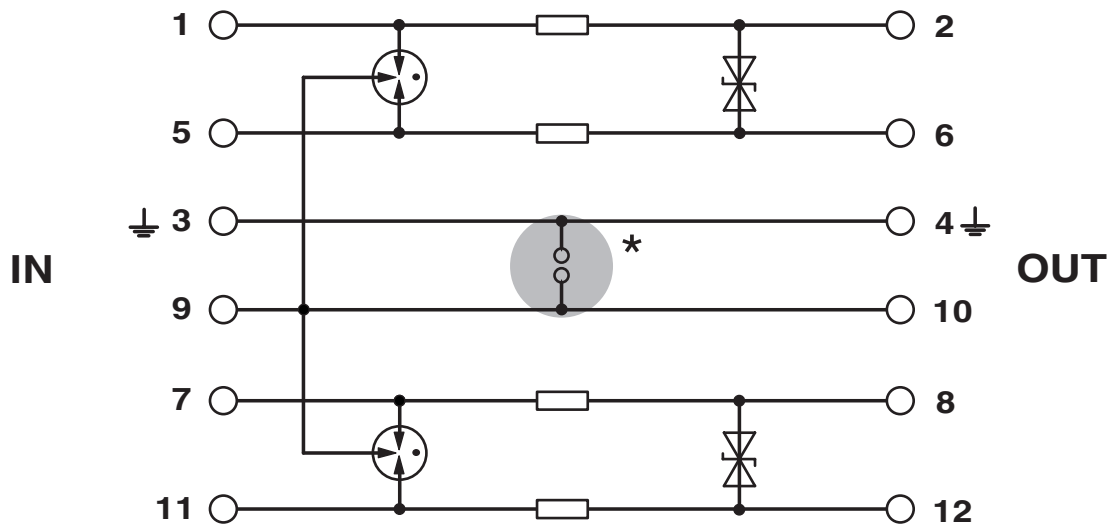
# PT 2X2- 5DC-ST - Surge protection plug

2838241

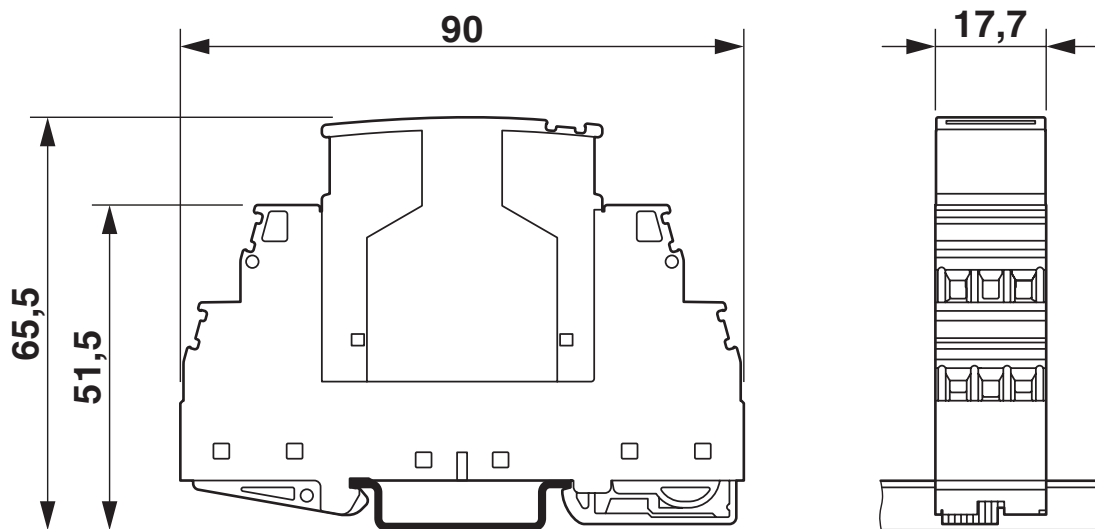
<https://www.phoenixcontact.com/au/products/2838241>

## Drawings

Circuit diagram



Dimensional drawing



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

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/2838241>



**EAC**

Approval ID: EAC-Zulassung



**EAC**

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



**UL Listed**

Approval ID: FILE E 138168

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	5 V	0.45 A	-	-



**cUL Listed**

Approval ID: FILE E 333250



**UL Listed**

Approval ID: FILE E 333250

**cULus Listed**

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

## Classifications

### ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

### ETIM

ETIM 9.0	EC001625
----------	----------

### UNSPSC

UNSPSC 21.0	39121600
-------------	----------

# PT 2X2- 5DC-ST - Surge protection plug



2838241

<https://www.phoenixcontact.com/au/products/2838241>

## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

PHOENIX CONTACT PTY Ltd  
Unit 7, 2-8 South Street  
Rydalmere NSW 2116  
1300 786 411  
[customerservice@phoenixcontact.com.au](mailto:customerservice@phoenixcontact.com.au)