

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Phoenix Contact](#)  
[2838270](#)

For any questions, you can email us directly:  
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

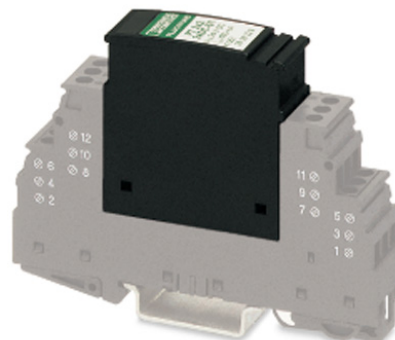


Extract from the online catalog

## PT 2X2-12AC-ST

Order No.: 2838270


The illustration shows version PT 2x2- 5DC-ST



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270>


Surge protection plug for the base element, for two floating double wires, common mode voltage coarse protection to ground. Nominal voltage: 12 V AC



Commercial data	
GTIN (EAN)	4  017918 182670
sales group	J204
Pack	10 pcs.
Customs tariff	85363010
Catalog page information	Page 87 (TT-2009)

**Product notes**

WEEE/RoHS-compliant since:  
07/14/2006



<http://www.download.phoenixcontact.com>  
 Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

### Technical data

General	
Housing material	PA 6.6
Inflammability class acc. to UL 94	V0
Color	black

PT 2X2-12AC-ST Order No.: 2838270

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270>

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
Total surge current (8/20) $\mu$ s	20 kA
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	On base element
Design	DIN rail module, two-section, divisible
Degree of protection	IP20
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
Width	17.70 mm
Height	52.00 mm
Length	45.00 mm
Pitch unit	1 Div.

**Protective circuit**

IEC category	C1
	C2
	C3
	D1
VDE requirement class	D1
Nominal voltage $U_N$	12 V AC
Maximum continuous operating voltage $U_C$	18 V DC
	13 V AC
Maximum continuous voltage $U_C$ (wire-wire)	18 V DC
	13 V AC
Maximum continuous voltage $U_C$ (wire-ground)	18 V DC
	13 V AC
Nominal current $I_N$	450 mA (45°C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu$ A
Ground conductor current $I_{PE}$	$\leq 1 \mu$ A (BE: 2x2-F)
	$\leq 4 \mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Core)	10 kA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA

PT 2X2-12AC-ST Order No.: 2838270

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270>

Total surge current (8/20) $\mu$ s	20 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Core)	10 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Earth)	10 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Core)	49 A
Lightning test current (10/350) $\mu$ s, peak value $I_{imp}$	2.5 kA (per path)
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) spike	$\leq 25$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 450$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) static	$\leq 25$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) static	$\leq 450$ V
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 25$ V
Protection level $U_p$ (Core-Core)	$\leq 55$ V
Protection level $U_p$ (Core-Earth)	$\leq 450$ V
Response time $t_A$ (Core-Core)	$\leq 1$ ns
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
Input attenuation aE, sym.	Typ. 0.5 dB ( $\leq 700$ kHz)
Cut-off frequency $f_g$ (3 dB), sym. in 50 Ohm system	Typ. 4 MHz
Capacity (Core-Core)	2.5 nF
Resistance in series	2.2 $\Omega$ (Path 1-2/5-6) 2.2 $\Omega$ (Path 7-8, 11-12)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA) D1 (2.5 kA)

**Connection data**

Type of connection	Screw connection (in connection with the base element)
Connection type IN	PLUGTRAB plug-in system
Connection type OUT	PLUGTRAB plug-in system
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm

PT 2X2-12AC-ST Order No.: 2838270

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270>

Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

**Connection, protective circuit**

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

**Certificates / Approvals**



Certification GOST, UL Listed

Certification Ex: CUL-EX LIS, UL-EX LIS

**Accessories**

Item	Designation	Description
<b>Marking</b>		
0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm
0814717	ZBF 15:SO/CMS	Zack strip, flat, 10-section, divisible, special printing, marking according to customer requirements
0808671	ZBF 5,LGS:FORTL.ZAHLEN	Zack marker strip, flat, printed horizontally: 10-section, with the numbers 1 - 10, 11 - 20, and so on up to 491 - 500, color: white
0810821	ZBF 5,LGS:GERADE ZAHLEN	Zack marker strip, flat, printed horizontally: 10-section, with even numbers, printed with the numbers: 2-20, 22-40, etc. up to 82-100
0810863	ZBF 5,LGS:UNGERADE ZAHLEN	Zack strip, flat, printed horizontally: 10-section, with odd numbers, printed with the numbers: 1-19, 21-39 etc. up to 81-99
0808697	ZBF 5,QR:FORTL.ZAHLEN	Zack marker strip, flat, printed vertically: 10-section, with the numbers 1 - 10, 11 - 20, and so on up to 91 - 100, color: white

PT 2X2-12AC-ST Order No.: 2838270

http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270

0808668	ZBF 5/WH-100:UNBEDRUCKT	Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, large batch, sufficient for labeling 1000 terminal blocks, color: white
0808642	ZBF 5:UNBEDRUCKT	Zack strip, flat, unprinted: 10-section, for individual labeling with M-PEN or ZBF-T, sufficient for 100 terminal blocks, color: white
0800763	ZBN 18:SO/CMS	Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White
2809128	ZBN 18:UNBEDRUCKT	Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White

### Additional products

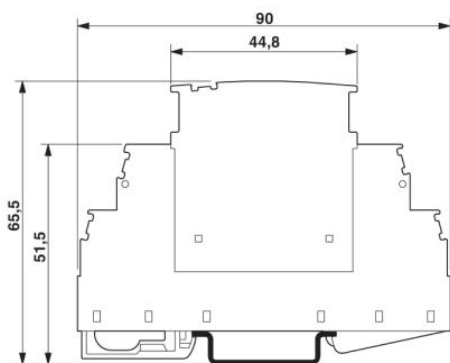
Item	Designation	Description
<b>Assembly</b>		
2839295	SSA 3-6	shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black
2839512	SSA 5-10	Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

### General

2839224	PT 2X2+F-BE	Base element for protective plug PT with protective circuit for two 2-wire floating signal circuit, 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
2839208	PT 2X2-BE	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

### Diagrams/Drawings

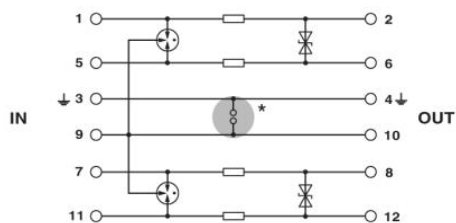
Dimensioned drawing



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

PT 2X2-12AC-ST Order No.: 2838270  
<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270>

Circuit diagram



PT 2X2-12AC-ST Order No.: 2838270

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838270>

---

#### Address

PHOENIX CONTACT Deutschland GmbH  
Flachsmarktstr. 8  
32825 Blomberg, Germany  
Phone +49 5235 3 12000  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.de>



© 2010 Phoenix Contact  
Technical modifications reserved;