

## Surge protection plug - PT 2X1-12DC-ST - 2856074

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Surge protection plug for the base element, coarse and fine protection for two signal wires with common reference potential, common mode voltage coarse protection to ground. Design: 12 V DC

### Why buy this product

- ✓ Plugs can be checked with CHECKMASTER
- ✓ Installed in conjunction with the PT 2x1...-BE base element
- ✓ Maximum ease of maintenance thanks to the two-piece design
- ✓ Base element remains an integral part of the installation
- ✓ Consistent plug-in signal circuit protection
- ✓ Protection for two conductors with common reference potential
- ✓ Impedance-neutral disconnection of plug for test and maintenance purposes



### Key Commercial Data

Packing unit	10 STK
GTIN	 4 017918 599171
GTIN	4017918599171

### Technical data

#### Dimensions

Height	44.8 mm
Width	17.5 mm
Depth	51.7 mm
Horizontal pitch	1 Div.
Complete module height	90 mm
Complete module width	17.7 mm
Complete module depth	65.5 mm

#### Ambient conditions

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## Technical data

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Degree of protection	IP20

### General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	black
Standards for clearances and creepage distances	VDE 0110-1
	IEC 60664-1
Mounting type	on base element
Type	Male
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

### Protective circuit

IEC test classification	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage $U_N$	12 V DC
Maximum continuous voltage $U_C$	13 V DC
	9 V AC
Rated current	300 mA (45°C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu A$
Residual current $I_{PE}$	$\leq 1 \mu A$ (with PT 2X1+F-BE)
	$\leq 10 \mu A$ (Directly grounded)
Nominal discharge current $I_n$ (8/20) $\mu s$ (line-earth)	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-earth)	10 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu s$ (line-earth)	67 A
Output voltage limitation at 1 kV/ $\mu s$ (line-earth) spike	$\leq 23 V$
	$\leq 600 V$ (with PT 2X1+F-BE)
Output voltage limitation at 1 kV/ $\mu s$ (line-earth) static	$\leq 18 V$
Residual voltage at $I_n$ (line-earth)	$\leq 18 V$
Residual voltage with $I_{an}$ (10/1000) $\mu s$ (line-earth)	$\leq 23 V$
Voltage protection level $U_p$ (line-earth)	$\leq 65 V$ (C2 - 10 kV / 5 kA)

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## Technical data

### Protective circuit

Response time $t_A$ (line-earth)	$\leq 1$ ns
Input attenuation aE, asym.	0.5 dB ( $\leq 600$ kHz)
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 50 Ohm system	typ. 3 MHz
Capacity (line-earth)	1.5 nF
Resistance in series	4.7 $\Omega$ (1-2/5-6/7-8/11-12)
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
Impulse durability (line-earth)	C2 - 10 kV/5 kA
	D1 - 2.5 kA

### Connection data

Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section solid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

### Standards and Regulations

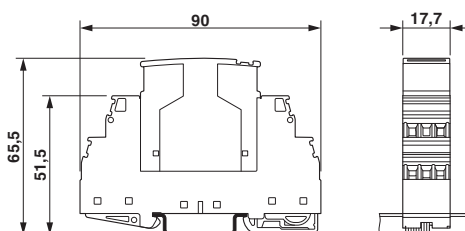
Standards/regulations	IEC 61643-21
	DIN EN 61643-21
	UL 497B
Standards/specifications	IEC 61643-21 2000

## Drawings

### Pictogram



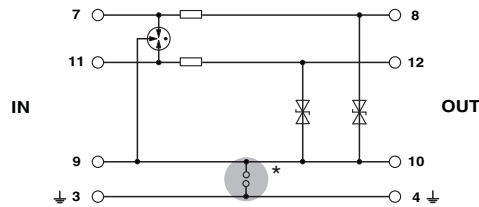
### Dimensional drawing



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

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Circuit diagram



## Approvals

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Approvals

UL Listed / EAC / EAC / DNV GL

Ex Approvals

UL Listed / cUL Listed / cULus Listed

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
Nominal voltage UN		12 V	
Nominal current IN		0.3 A	

EAC		EAC-Zulassung
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EAC		RU C- DE.A*30.B01561
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DNV GL	<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAE00001N6
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