

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


The figure shows the PT 4x1- 24 DC-ST version

Why buy this product

- ✓ Plugs can be checked with CHECKMASTER
- ✓ Installed in conjunction with the PT 4x1...-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 four conductors with common reference potential
- ✓ Impedance-neutral disconnection of plug for test and maintenance purposes



Key Commercial Data

Packing unit	10 STK
GTIN	 4 046356 339865
GTIN	4046356339865

Technical data

Dimensions

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

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Technical data

Ambient conditions

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

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
Standards for clearances and creepage distances	VDE 0110-1
	IEC 60664-1
Mounting type	On base element
Design	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. 3.17

Additional descriptions

Note	Technical data is valid in association with the following specified base elements:
	with PT 4x1+F-BE
	with PT 4x1-BE

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	48 V AC
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	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 1 \mu A$ (with PT 4X1+F-BE)
	$\leq 20 \mu A$ (with PT 4X1-BE)
Nominal discharge current I_n (8/20) μs (core-earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs	2.5 kA
Total discharge current I_{total} (8/20) μs	20 kA
Max. discharge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA (per path)
	20 kA (in total)
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	12 A
Output voltage limitation at 1 kV/ μs (core-GND) spike	$\leq 110 V$ (with PT 4X1-BE)
Residual voltage at I_n (conductor-GND)	$\leq 160 V$
Residual voltage with I_{an} (10/1000) μs (conductor-GND)	$\leq 125 V$

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Protective circuit

Voltage protection level U_p (core-ground)	≤ 150 V (C2 - 10 kV / 5 kA with PT 4X1-BE)
Response time t_A (core-earth)	≤ 1 ns (with PT 4X1+F-BE)
	≤ 1 ns (with PT 4X1-BE)
Input attenuation a_E , 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 f_g (3 dB), asym. (PE) in 50 Ohm system	typ. 10 MHz
Cut-off frequency f_g (3 dB), asym. (PE) in 150 Ohm system	typ. 3.5 MHz
Cut-off frequency f_g (3 dB), asym. (PE) in 600 Ohm system	typ. 900 kHz
Capacity (core-earth)	typ. 400 pF (with PT 4X1-BE)
	typ. 2 pF (with PT 4X1+F-BE)
Resistance in series	4.7 $\Omega \pm 10$ %
Surge protection fault message	None
Max. required back-up fuse	315 mA (e.g. T (IEC 127-2/III))
Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 2.5 kA

Connection data

Connection method	Screw connection (in connection with the base element)
Connection method IN	PLUGTRAB plug-in system
Connection method OUT	PLUGTRAB plug-in system
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Standards and Regulations

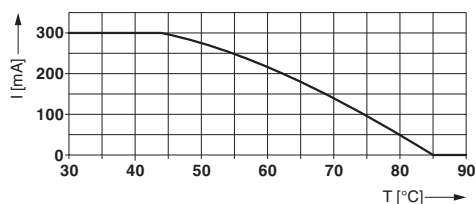
Standards/specifications	IEC 61643-21 A1:2008 (modified)
	EN 61643-21 A1:2009

Drawings

Pictogram

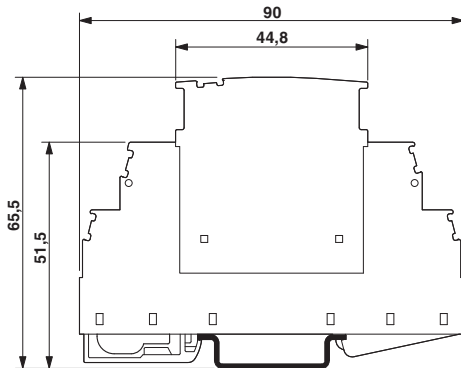


Diagram

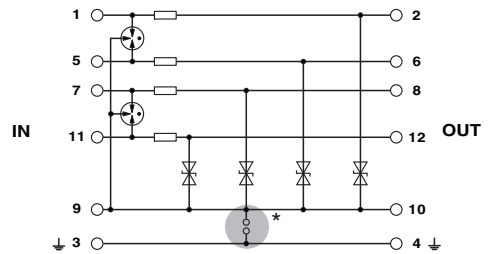


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Dimensional drawing



Circuit diagram



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

Approvals

Approvals

Approvals

EAC

Ex Approvals

Approval details

EAC		RU C- DE.A*30.B01561
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