

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

Your advantages

- ✓ 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 pc
GTIN	
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

Ambient conditions

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Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP20

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
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. 3.17

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	≤ 5 μA
Residual current I_{PE}	≤ 1 μA (with PT 4X1+F-BE)
	≤ 20 μA (Directly grounded)
Nominal discharge current I_n (8/20) μs (line-earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs	2.5 kA (per path)
Total discharge current I_{total} (8/20) μs	20 kA
Max. discharge current I_{max} (8/20) μs maximum (line-earth)	10 kA (per path)
	20 kA (in total)
Nominal pulse current I_{an} (10/1000) μs (line-earth)	12 A
Output voltage limitation at 1 kV/μs (line-earth) spike	≤ 110 V (with PT 4X1-BE)
	≤ 600 V (with PT 4X1+F-BE)
Output voltage limitation at 1 kV/μs (line-earth) static	≤ 50 V (with PT 4X1+F-BE)
Residual voltage at I_n (line-earth)	≤ 160 V (spike)
	≤ 110 V (static)
Residual voltage with I_{an} (10/1000) μs (line-signalground)	≤ 125 V
Voltage protection level U_p (line-earth)	≤ 150 V (C2 - 10 kV / 5 kA with PT 4X1-BE)
Voltage protection level U_p static (line-earth)	≤ 40 V (C2 - 10 kV / 5 kA with PT 4X1-BE)
Response time t_A (line-signalground)	≤ 1 ns (with PT 4X1+F-BE)

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Protective circuit

Response time t_A (line-earth)	≤ 1 ns (with PT 4X1-BE)
	≤ 100 ns (with PT 4X1+F-BE)
Input attenuation a_E , asym.	0.5 dB (≤ 2.5 MHz / 50Ω)
	0.2 dB (≤ 0.5 MHz / 150Ω)
	0.1 dB (≤ 0.1 MHz / 600Ω)
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 (line-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 (T)
Impulse durability (line-earth)	C2 - 10 kV/5 kA
	D1 - 2.5 kA

Connection data

Connection method	Screw connection (in connection with the base element)
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section flexible	$0.2 \text{ mm}^2 \dots 2.5 \text{ mm}^2$
Conductor cross section solid	$0.2 \text{ mm}^2 \dots 4 \text{ mm}^2$
Conductor cross section AWG	24 ... 12

Standards and Regulations

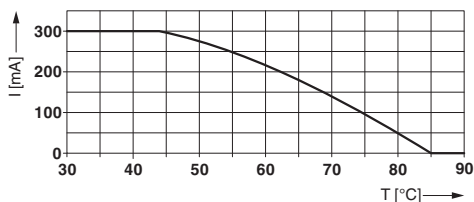
Standards/specifications	IEC 61643-21 2000
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Drawings

Pictogram

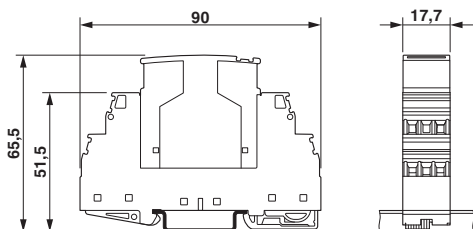


Diagram

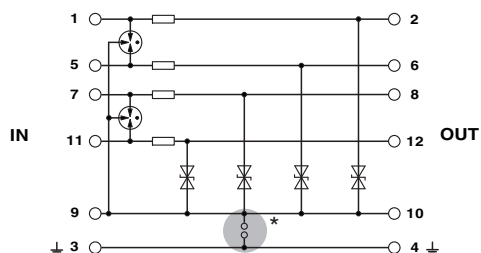


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Dimensional drawing



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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