

Surge protection plug - PT 4-24AC-ST - 2800078

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Protective connector PT with protective circuit for a 4-wire floating signal circuit. Nominal voltage: 24 V AC


The illustration shows the version PT 4-5 DC-ST

Why buy this product

- ✓ Plugs can be checked with CHECKMASTER
- ✓ 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
- ✓ Impedance-neutral disconnection of plug for test and maintenance purposes



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 462211
GTIN	4046356462211

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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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

Additional descriptions

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

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V AC
Maximum continuous voltage U_C	40 V DC
	28 V AC
Rated current	2 A AC (80 °C)
	500 mA DC (80 °C)
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 4 \mu A$ (with PT 4-BE)
	$\leq 1 \mu A$ (with PT 4+F-BE)
Nominal discharge current I_n (8/20) μs (Core-Core)	187 A
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-Core)	187 A
Max. discharge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	36 A
Output voltage limitation at 1 kV/ μs (core-core) spike	$\leq 75 V$

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Protective circuit

Output voltage limitation at 1 kV/ μ s (core-earth) spike	≤ 450 V (with PT 4-BE)
	≤ 1 kV (with PT 4+F-BE)
Output voltage limitation at 1 kV/ μ s (core-core) static	≤ 75 V
Output voltage limitation at 1 kV/ μ s (core-earth) static	≤ 25 kV (with PT 4-BE)
	≤ 50 V (with PT 4+F-BE)
Residual voltage at I_n (conductor-conductor)	≤ 105 V
Residual voltage with I_{an} (10/1000) μ s (conductor-conductor)	≤ 80 V
Voltage protection level U_p (core-core)	≤ 85 V (C1 - 500 V / 250 A)
	≤ 70 V (C3 - 10 A)
	≤ 75 V (C3 - 25 A)
Voltage protection level U_p (core-ground)	≤ 450 V (C2 - 10 kV / 5 kA with PT 4-BE)
	≤ 1 kV (C2 - 10 kV / 5 kA with PT 4+F-BE)
Voltage protection level U_p static (core-ground)	≤ 50 V (C2 - 10 kV / 5 kA with PT 4-BE)
	≤ 100 V (C2 - 10 kV / 5 kA with PT 4+F-BE)
Response time t_A (core-core)	≤ 1 ns
Response time t_A (core-earth)	≤ 100 ns
Input attenuation aE, sym.	0.1 dB (≤ 2 MHz / 50 Ω)
	0.1 dB (≤ 600 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ohm system	typ. 10 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 3 MHz
Capacity (core-core)	typ. 0.7 nF
Capacity (core-earth)	typ. 40 pF (with PT 4-BE)
	typ. 20 pF (with PT 4+F-BE)
Resistance in series	0 Ω
Surge protection fault message	None
Max. required back-up fuse	2 A
Impulse durability (conductor-conductor)	C1 - 500 V / 250 A
	C3 - 10 A
	C3 - 25 A
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

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Connection data

Conductor cross section AWG	24 ... 12
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Standards and Regulations

Standards/specifications	IEC 61643-21 2000
	EN 61643-21 2001
	DIN EN 61643-21 2002

Drawings

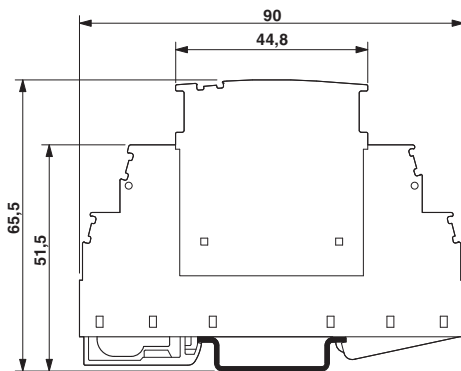
Pictogram



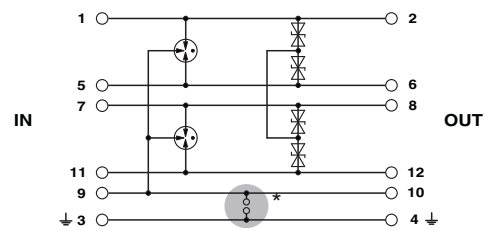
Pictogram



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

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Approvals

EAC



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