

Surge protection plug - PT 1X2-24AC/FM-ST - 2920094

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Surge protection plug with integrated diagnostic and status indicator on the module and remote indication contact for a 2-wire floating signal circuit.

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
- ✓ With floating remote indication contact
- ✓ Permanent and independent monitoring by a diagnostics unit
- ✓ Impedance-neutral disconnection of plug for test and maintenance purposes
- ✓ Optical status indication for the individual arresters



Key Commercial Data

Packing unit	10 STK
GTIN	
GTIN	4046356153997

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Height	45 mm
Width	17.7 mm
Depth	52 mm
Horizontal pitch	1 Div.

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Dimensions

Complete module height	90 mm
Complete module width	17.7 mm
Complete module depth	65.5 mm

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

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V AC
Maximum continuous voltage U_C	40 V DC
	28 V AC
Rated current	450 mA (45°C)
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 2 \mu A$ (Directly grounded)
	$\leq 1 \mu A$ (with PT 1X2+F-BE)
Nominal discharge current I_n (8/20) μs (line-line)	10 kA
Nominal discharge current I_n (8/20) μs (line-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)	10 kA
Max. discharge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	23 A (25 °C)

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Protective circuit

Output voltage limitation at 1 kV/ μ s (core-core) spike	≤ 70 V
Output voltage limitation at 1 kV/ μ s (core-earth) spike	≤ 450 V
	≤ 1 kV (with PT 1X2+F-BE)
Output voltage limitation at 1 kV/ μ s (core-core) static	≤ 55 V
Residual voltage at I_n (line-line)	≤ 55 V
Residual voltage with I_{an} (10/1000) μ s (conductor-conductor)	≤ 65 V
Voltage protection level U_p (core-core)	≤ 55 V (C1 - 500 V / 250 A)
	≤ 55 V (C3 - 10 A)
Voltage protection level U_p (core-ground)	≤ 450 V (C2 - 10 kV / 5 kA)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.5 dB (≤ 1.5 MHz / 50 Ω)
	typ. 0.2 dB (≤ 500 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ohm system	typ. 8 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 3 MHz
Capacity (core-core)	typ. 1.1 nF
Capacity (core-earth)	typ. 4 pF
Resistance in series	2.2 $\Omega \pm 10\%$ (7-8/11-12)
Surge protection fault message	Optical, remote indicator contact
Max. required back-up fuse	500 mA (T)
Impulse durability (conductor-conductor)	C2 - 10 kV/5 kA
	C3 - 10 A
Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 2.5 kA
	C3 - 100 A
Alternating current carrying capacity (line-signalground)	5 A - 1 s

Connection data

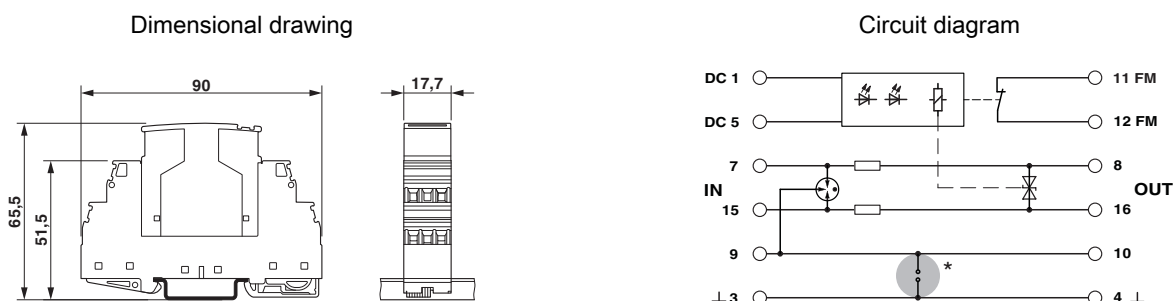
Connection method	Screw connection (in connection with the base element)
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Standards and Regulations

Standards/regulations	IEC 61643-21
	DIN EN 61643-21
Standards/specifications	IEC 61643-21 2002

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Drawings



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

Approvals

Approvals

Approvals

UL Listed / EAC

Ex Approvals

Approval details

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 138168

EAC



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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>