

Surge protection plug - PT 2X1-12DC/FM-ST - 2920117

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Surge protection plug with integrated diagnostic and status indicator on the module and remote indication contact for two signal wires with common reference potential. Nominal voltage: 12 V DC

Product Features

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



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	30.6 g
Custom tariff number	85369010
Country of origin	Germany

Technical data

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	V0
Color	black
Standards for clearances and creepage distances	VDE 0110-1
	IEC 60664-1
Mounting type	On base element
Type	DIN rail module, two-section, divisible
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	12 V DC
Maximum continuous voltage U_C	13 V DC
	9 V AC
Maximum continuous voltage U_C (wire-ground)	13 V DC
	9 V AC
Nominal current I_N	300 mA (45°C)
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 1 \mu A$ (BE: 2x1+F)
	$\leq 10 \mu A$ (Directly grounded)
Nominal discharge current I_n (8/20) μs (Core-Earth)	10 kA
Total surge current (8/20) μs	20 kA

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Protective circuit

Max. discharge current I_{max} (8/20) μ s maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μ s (Core-Earth)	70 A (25°C / 1x)
	50 A (25 °C)
Impulse discharge current (10/350)# μ s, peak value I_{imp}	2.5 kA (per path)
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	\leq 25 V
	\leq 600 V (BE: 2x1+F)
Output voltage limitation at 1 kV/ μ s (Core-GND) spike	\leq 25 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	\leq 19 V
Output voltage limitation at 1 kV/ μ s (Core-GND) static	\leq 19 V
Residual voltage at I_n (conductor-ground)	\leq 18 V
Residual voltage with I_{an} (10/1000) μ s (conductor-ground)	\leq 23 V
Voltage protection level U_p (core-ground)	\leq 19 V (C1 (500 V/250 A))
	\leq 19 V (C3 - 25 A)
Voltage protection level U_p (core-GND)	\leq 19 V (C1 (500 V/250 A))
	\leq 19 V (C3 - 25 A)
Response time t_A (Core-Earth)	\leq 1 ns
Input attenuation a_E , asym.	typ. 0.5 dB (\leq 600 kHz / 50 Ω)
	typ. 0.2 dB (\leq 200 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), asym. (GND) in 50 Ohm system	typ. 3 MHz
Cut-off frequency f_g (3 dB), asym. (GND) in 150 Ohm system	typ. 1 MHz
Resistance in series	4.7 Ω (7-8/11-12)
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
	C3 (25 A)
Alternating current carrying capacity (conductor-ground)	5 A - 1 s

Connection data

Connection method	Screw connection (in connection with the base element)
Connection type IN	PLUGTRAB plug-in system
Connection type OUT	PLUGTRAB plug-in system
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²

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Conductor cross section solid max.	4 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12

Standards and Regulations

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

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

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Approvals

Approvals

UL Listed / EAC

Ex Approvals

Approvals submitted

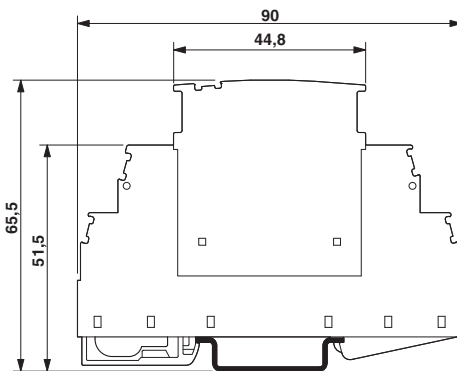
Approval details

UL Listed

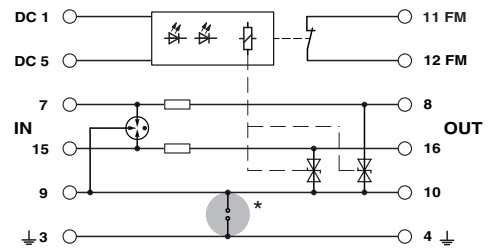
EAC

Drawings

Dimensional drawing



Circuit diagram



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