

## Surge protection plug - PT 2X1-5DC/FM-ST - 2920104

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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: 5 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
- ✓ Permanent and independent monitoring by a diagnostics unit
- ✓ With floating remote indication contact
- ✓ 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)	30.0 GRM
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.
Complete module height	90 mm

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### Technical data

#### Dimensions

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
Inflammability class according to UL 94	V0
Color	black
Standards for air 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 $U_N$	5 V DC
Maximum continuous operating voltage $U_C$	6 V DC
	4 V AC
Maximum continuous voltage $U_C$ (wire-ground)	6 V DC
	4 V AC
Nominal current $I_N$	300 mA (45°C)
Operating effective current $I_C$ at $U_C$	$\leq 1$ mA
Residual current $I_{PE}$	$\leq 1$ $\mu$ A (BE: 2x1+F)
	$\leq 2$ mA (Directly grounded)
Nominal discharge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA
Total surge current (8/20) $\mu$ s	20 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Earth)	10 kA

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### Technical data

#### Protective circuit

Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Earth)	145 A (25°C / 1x)
	50 A (25 °C)
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	2.5 kA (per path)
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 14$ V
	$\leq 600$ V (BE: 2x1+F)
Output voltage limitation at 1 kV/ $\mu$ s (Core-GND) spike	$\leq 14$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) static	$\leq 11$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-GND) static	$\leq 11$ V
Residual voltage at $I_n$ , (conductor-ground)	$\leq 10$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-ground)	$\leq 12$ V
Voltage protection level $U_p$ (Core-Earth)	$\leq 11$ V (C1 (500 V/250 A))
	$\leq 10$ V (C3 - 25 A)
Voltage protection level $U_p$ (Core-GND)	$\leq 11$ V (C1 (500 V/250 A))
	$\leq 10$ V (C3 - 25 A)
Response time $t_A$ (Core-Earth)	$\leq 1$ ns
Input attenuation $a_E$ , asym.	typ. 0.5 dB ( $\leq 200$ kHz / 50 $\Omega$ )
	typ. 0.2 dB ( $\leq 100$ kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 50 Ohm system	typ. 1 MHz
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 150 Ohm system	typ. 0.4 MHz
Resistance in series	4.7 $\Omega$ (7-8/11-12)
Max. required back-up fuse	315 mA (e.g. T ( IEC 127-2/III))
Surge current resistance (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 stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>

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### Technical data

#### Connection data

Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil 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

#### 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

UL Listed / GOST

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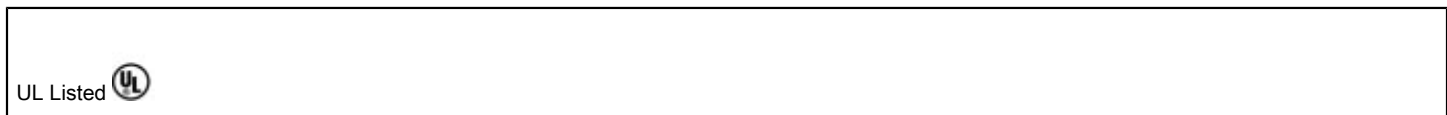
## Approvals

Ex Approvals

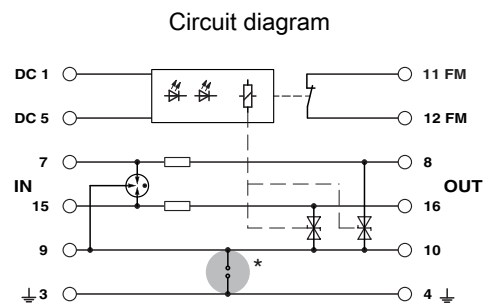
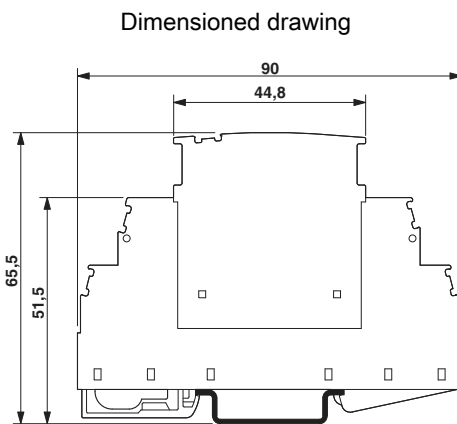
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Approvals submitted

## Approval details



## Drawings



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

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Catalog photo



Figure may contain other products.

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