

## EMC filter surge protection device - SFP 1-10/120AC/EX - 2905218

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Device protection, according to type 3/class III, with network interference suppression filter to prevent high-frequency interference voltages, for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE), with remote indication contact. Can be used in potentially explosive areas in zone 2.

### Product Description

Device protection with interference filter



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	620.0 g
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

Height	93 mm
Width	112 mm
Depth	79 mm

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

#### General

Standards/specifications	IEC 61643-1 2005
	EN 61643-11/A11 2007
	UL 1449 ed. 3: 2006 T4 for type 2
	UL 1283 ed. 5: 2005
IEC test classification	III

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### Technical data

#### General

	T3
EN type	T3
Mounting type	DIN rail: 35 mm
Color	black
	silver
Housing material	Aluminum
Flammability rating according to UL 94	V-0
Type	Rail-mountable module, one-piece
Number of positions	2
Surge protection fault message	Optical, remote indicator contact
For country-specific use in	USA, CN, BR

#### Protective circuit

Nominal frequency $f_N$	50 Hz
	60 Hz
Maximum continuous operating voltage $U_C$ (L-N)	150 V AC
Maximum continuous operating voltage $U_C$ (L-PE)	150 V AC
Nominal current $I_N$	10 A (62°C)
Rated load current $I_L$	10 A (62°C)
Residual current $I_{PE}$	$\leq 0.5$ mA
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-N)	3 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-PE)	3 kA
Operating effective current $I_C$ at $U_C$	$\leq 10$ mA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (L-N)	10 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (L-PE)	10 kA
Combination wave $U_{OC}$	6 kV (3 kA)
Energy absorption symmetrical	170 J
Energy absorption, asymmetrical	2x 170 J
Voltage protection level $U_p$ (L-N)	$\leq 450$ V (at 6 kV/3 kA)
Voltage protection level $U_p$ (L-PE)	$\leq 450$ V (at 6 kV/3 kA)
Voltage protection level $U_p$ (N-PE)	$\leq 450$ V (at 6 kV/3 kA)
Residual voltage at $I_n$ , (L-N)	$\leq 450$ V
Residual voltage at $I_n$ , (L-PE)	$\leq 450$ V
Residual voltage at $I_n$ , (N-PE)	$\leq 450$ V
Response time $t_A$ (L-N)	$\leq 25$ ns
Response time $t_A$ (L-PE)	$\leq 25$ ns
Response time $t_A$ (N-PE)	$\leq 25$ ns

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### Technical data

#### Protective circuit

Inductivity in series	2x 1 mH $\pm$ 30 % (with current compensation)
Capacity (L-N)	2 $\mu$ F $\pm$ 10 % (X2, FOW X2-250V)
Capacity (L-PE)	2.2 nF $\pm$ 20 % (Y, FOW X2-250V)
Capacity (L-PEN)	2.2 nF $\pm$ 20 % (Y, FOW X2-250V)
Max. required back-up fuse	20 A (gL / gG)
	20 A (MCB, > 125 V, AIC: 14 kA)
Input attenuation aE, sym.	typ. 40 dB ( $\geq$ 500 kHz / 50 $\Omega$ )
Input attenuation aE, asym.	typ. 30 dB ( $\geq$ 1 MHz / 50 $\Omega$ )

#### Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Connection method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	28
Conductor cross section AWG max.	16

#### Connection data

Connection name	Input/output
Connection method	Screw terminal blocks
Conductor cross section flexible min.	2.5 mm <sup>2</sup>
Conductor cross section flexible max.	4 mm <sup>2</sup>
Conductor cross section solid min.	2.5 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb <sub>f</sub> -in. ... 7 lb <sub>f</sub> -in.
Stripping length	8 mm

#### Protective circuit, filter

Discharge resistor	$\leq$ 390 k $\Omega$
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## Classifications

eCl@ss

eCl@ss 5.1	27130801
eCl@ss 6.0	27130806

## Approvals

Approvals

Approvals


UL Recognized / cUL Recognized / CSAus / CSA / cULus Recognized / cCSAus


Ex Approvals

UL Recognized / cUL Recognized / cULus Recognized

Approvals submitted

## Approval details

UL Recognized 

cUL Recognized 

CSAus

CSA

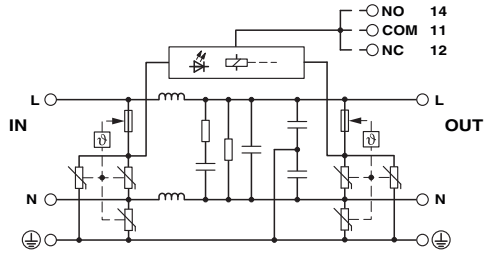
cULus Recognized 

cCSAus

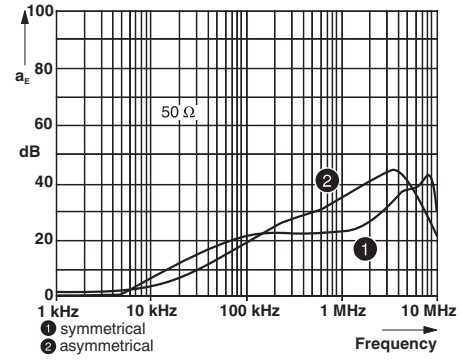
## Drawings

# EMC filter surge protection device - SFP 1-10/120AC/EX - 2905218

Circuit diagram



Diagram



Dimensional drawing

