

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



2905218

<https://www.phoenixcontact.com/us/products/2905218>

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Device protection, according to type 3/class III, with mains interference 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.

## Commercial data

Item number	2905218
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	CL06
Product key	CLC131
GTIN	4046356988452
Weight per piece (including packing)	615 g
Weight per piece (excluding packing)	615 g
Customs tariff number	85363010
Country of origin	DE

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## Technical data

### Product properties

Product type	EMC filters
Product family	SFP
Type	DIN rail module, one-piece
Number of positions	2
For country-specific use in	USA, CN, BR
Surge protection fault message	Optical, remote indicator contact
IEC test classification	III
	T3
EN type	T3

### Electrical properties

#### Indicator/remote signaling

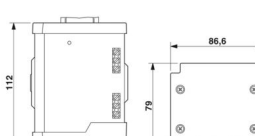
Connection name	Remote fault indicator contact
Switching function	Changeover contact
Maximum operating voltage $U_{max}$ , AC	250 V AC
Max. operating current $I_{max}$	1 A (250 V AC)
	0.25 A (250 V DC)
	1 A (48 V DC)

### Connection data

#### Input/output

Connection method	Screw terminal blocks
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb <sub>F</sub> -in. ... 7 lb <sub>F</sub> -in.
Conductor cross-section flexible min.	2.5 mm <sup>2</sup>
Conductor cross-section flexible max.	4 mm <sup>2</sup>
Conductor cross-section, rigid min.	2.5 mm <sup>2</sup>
Conductor cross-section, rigid max.	6 mm <sup>2</sup>

### Dimensions

Dimensional drawing	
Width	112 mm
Height	93 mm

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Depth	79 mm
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## Material specifications

Flammability rating according to UL 94	V-0
Insulating material	ABS
Housing material	Aluminum

## Mechanical properties

### Mechanical data

Open side panel	No
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## Protective circuit

Direction of action	L-N & L(N)-PE
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)
Protective conductor current $I_{PE}$	$\leq 0.5$ mA
Operating effective current $I_C$ at $U_C$	$\leq 10$ 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
Maximum discharge current $I_{max}$ (8/20) $\mu$ s (L-N)	10 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s (L-PE)	10 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 $I_n$	$\leq 450$ V
	$\leq 450$ V
	$\leq 450$ 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
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)
Capacitance (N-PE)	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 $\Omega$ )

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## Filter data

Discharge resistance	≤ 390 kΩ
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## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

### Standards

Standards/regulations	IEC 61643-1
	EN 61643-11/A11

### Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1 / IEC 61643-1
Standards/specifications	IEC 61643-1
Note	2005
Standards/specifications	EN 61643-11/A11
Note	2007
Standards/specifications	UL 1449
Note	ed. 3: 2006 T4 for type 2
Standards/specifications	UL 1283
Note	ed. 5: 2005

## Mounting

Mounting type	DIN rail: 35 mm
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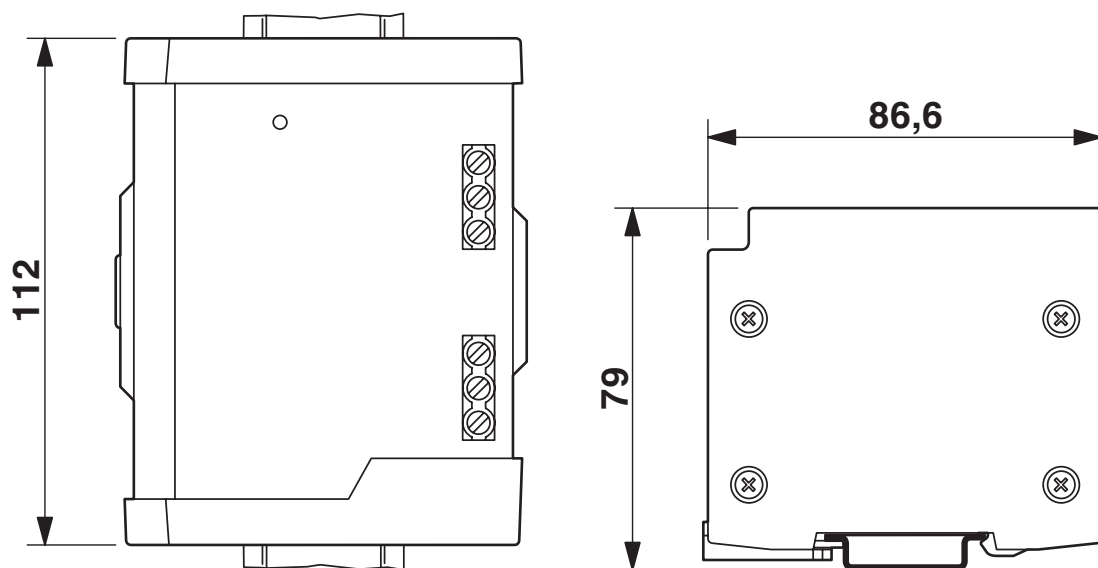


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## Drawings

Dimensional drawing



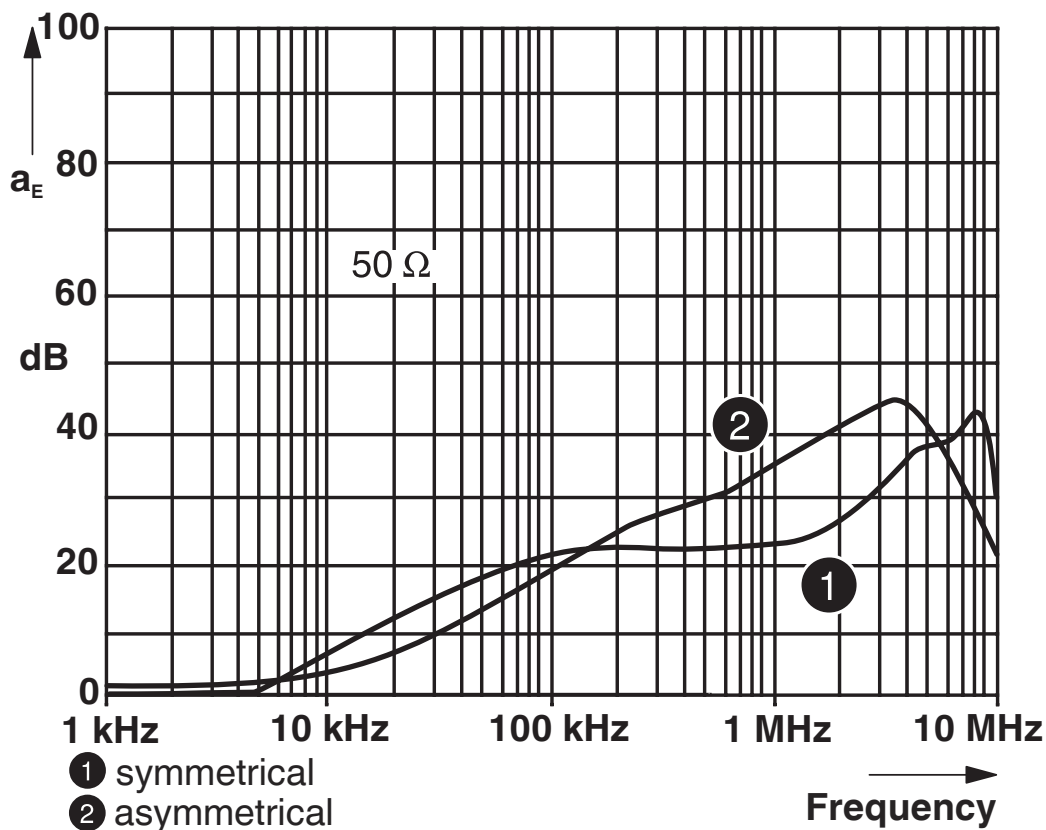
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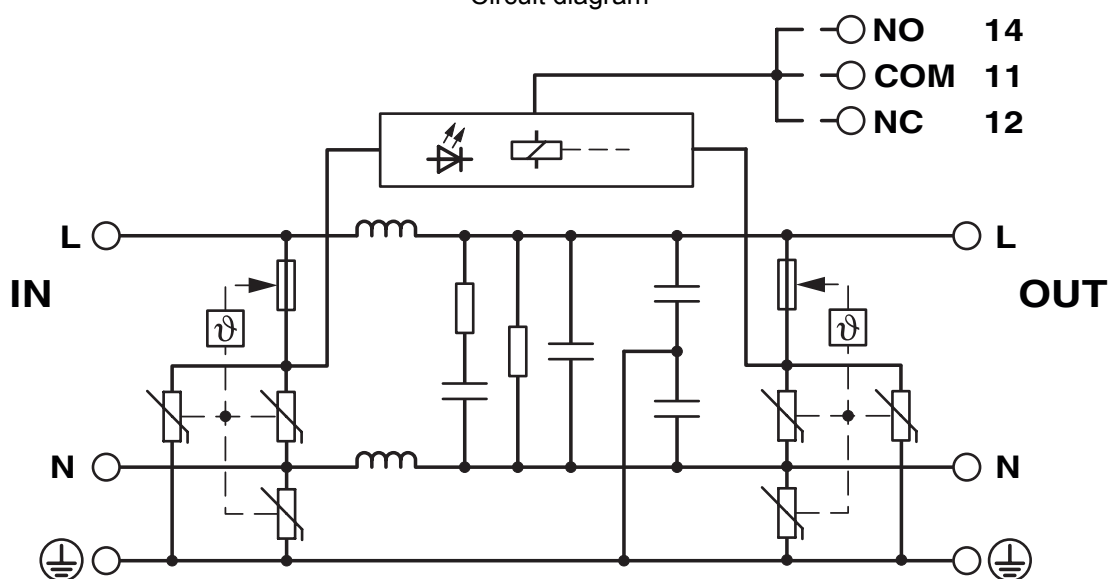
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Diagram



Circuit diagram



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## Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	
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	No substance above 0.1 wt%
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