

SFP 1-20/120AC/EX - EMC filter surge protection device

2905220

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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	2905220
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	CL06
Product key	CLC131
GTIN	4046356988469
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)
Switching power max. perm.	0.25 A/250 V DC
	1 A / 48 V AC
Min. permissible switching power	1 A/48 V DC
	100 mA / 12 V AC

Connection data

Input/output

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

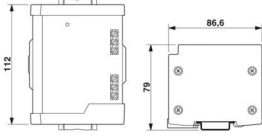
Dimensions

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Dimensional drawing	
Width	112 mm
Height	93 mm
Depth	79 mm

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	20 A (40 °C)
Rated load current I_L	20 A (40 °C)
Protective conductor current I_{PE}	≤ 0.5 mA
Operating effective current I_C at U_C	≤ 10 mA
Nominal discharge current I_n (8/20) μ s (L-N)	3 kA
Nominal discharge current I_n (8/20) μ s (L-PE)	3 kA
Maximum discharge current I_{max} (8/20) μ s (L-N)	10 kA
Maximum discharge current I_{max} (8/20) μ s (L-PE)	10 kA
Energy absorption symmetrical	170 J
Energy absorption, asymmetrical	2x 170 J
Voltage protection level U_p (L-N)	≤ 450 V (at 6 kV/3 kA)
Voltage protection level U_p (L-PE)	≤ 450 V (at 6 kV/3 kA)
Voltage protection level U_p (N-PE)	≤ 450 V (at 6 kV/3 kA)
Residual voltage at I_n	≤ 450 V
	≤ 450 V
	≤ 450 V
Response time t_A (L-N)	≤ 25 ns
Response time t_A (L-PE)	≤ 25 ns

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Response time t_A (N-PE)	≤ 25 ns
Inductivity in series	2x 1 mH ± 30 % (with current compensation)
Capacity (L-N)	2 μ F ± 10 % (X2, FOW X2-250V)
Capacity (L-PE)	2.2 nF ± 20 % (Y, FOW X2-250V)
Capacitance (N-PE)	2.2 nF ± 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 (≥ 500 kHz/50 Ω)
Input attenuation aE, asym.	typ. 30 dB (≥ 1 MHz / 50 Ω)

Filter data

Clamping voltage ringwave (L-N)	100 V (category A 100 kHz 6 kV/200 A)
	195 V (category B 100 kHz 6 kV/500 A)
Clamping voltage ringwave (L-PE)	390 V (category A 100 kHz 6 kV/200 A)
	390 V (category B 100 kHz 6 kV/500 A)
Discharge resistance	≤ 390 k Ω

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

Standards

Standards/regulations	IEC 61643-1
	EN 61643-11/A11
	UL 1449
	UL 1283
	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	DIN 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

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Mounting type

DIN rail: 35 mm

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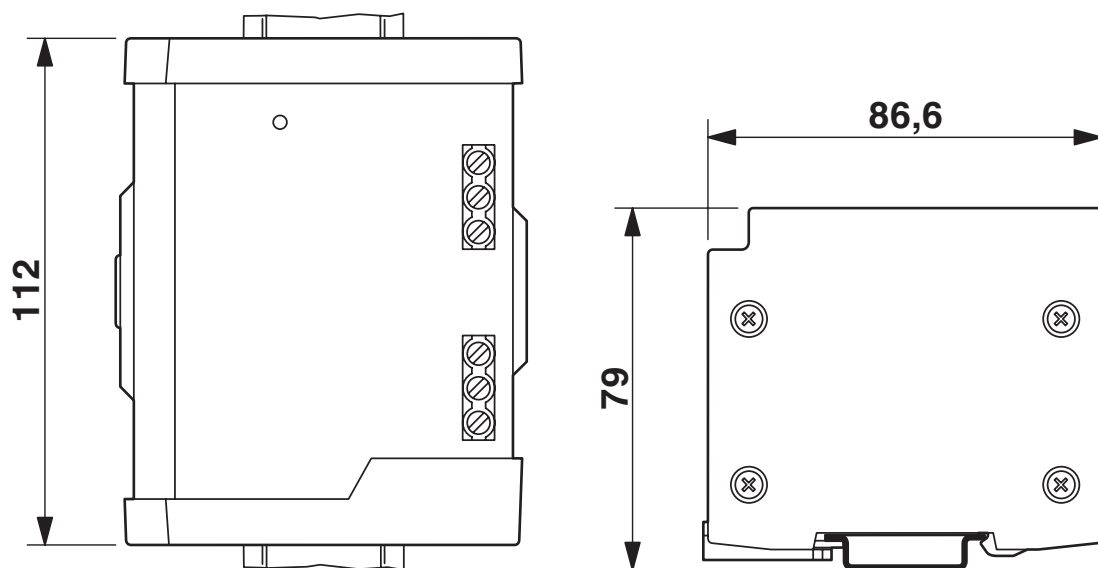


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Drawings

Dimensional drawing



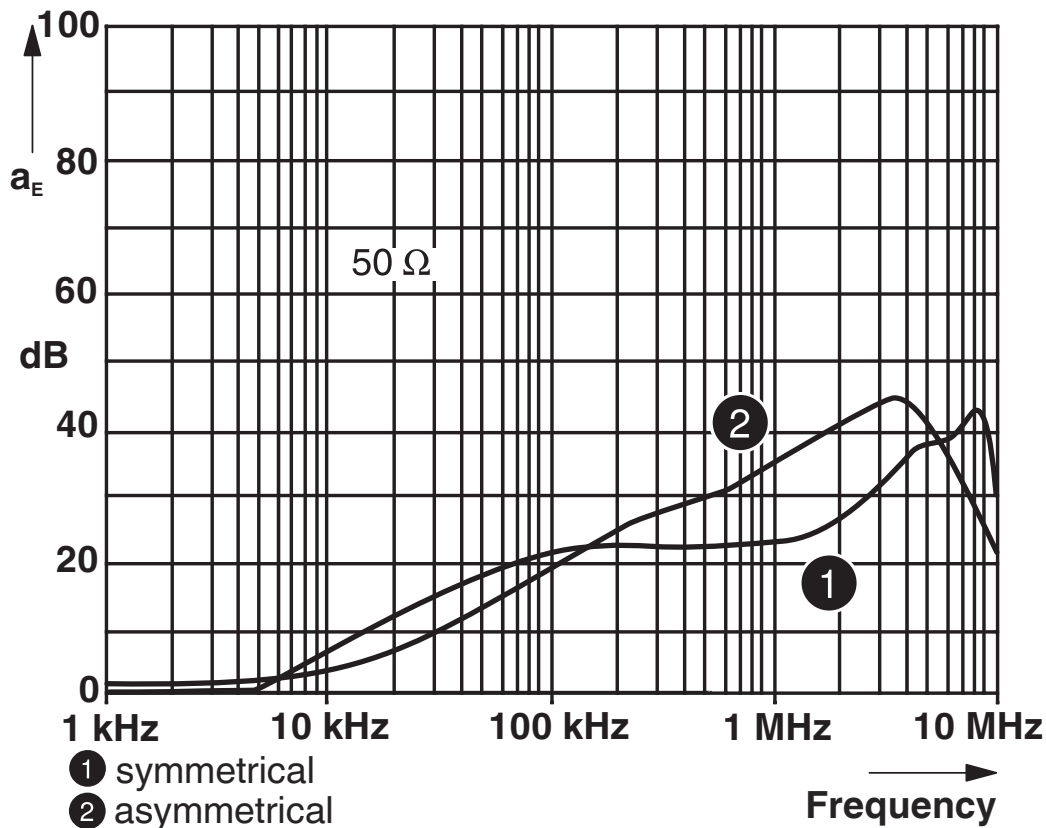
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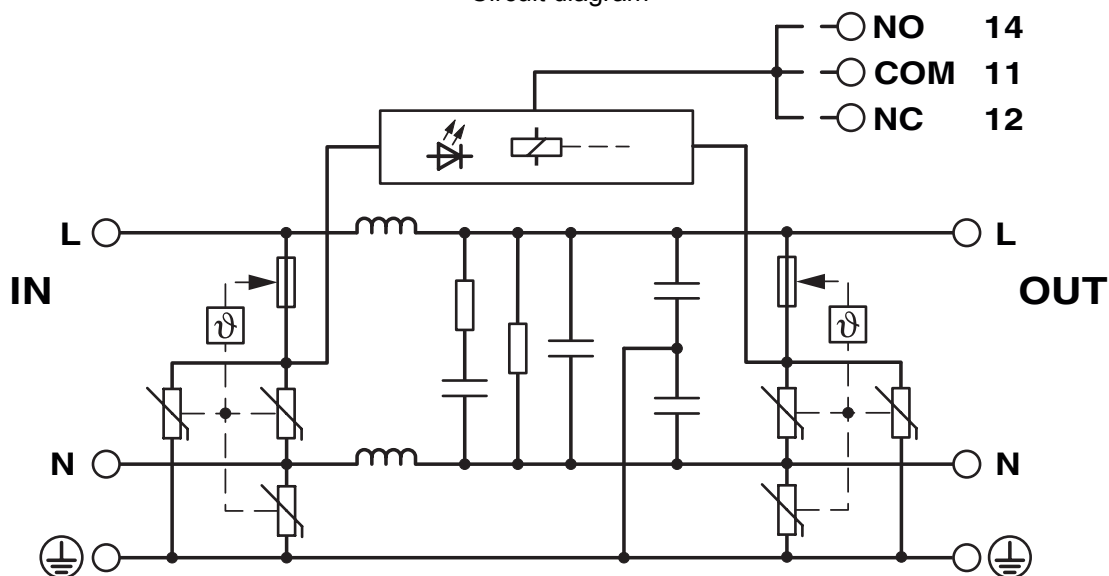
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Diagram



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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