SFP 1-15/120AC - EMC filter surge protection device

2920683

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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.

Product description

Device protection with interference filter

Your advantages

- Optimized protective effect with combined protective circuit for absorbing transient overvoltages for attenuating high-frequency interference
- Symmetrical design of the protective circuit with surge protection components on the input and output sides of the filter
- Protection against excessive heating with thermal monitoring of the protective circuit
- Versatile in use with universal circuit design

Commercial data

Item number	2920683
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL06
Product key	CLC131
GTIN	4046356158565
Weight per piece (including packing)	611.3 g
Weight per piece (excluding packing)	571.28 g
Customs tariff number	85363010
Country of origin	DE

Technical data

Notes

General

Note	For IT systems: only install the device in 120 V IT systems with common HV/LV grounding system.

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

Insulation characteristics

Overvoltage category	III
Pollution degree	2
IEC test classification	III
	T3
EN type	T3
Number of ports	Two

Electrical properties

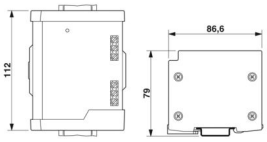
Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	12 V AC ... 250 V AC
	250 V DC (250 mA DC)
Operating current	100 mA AC ... 1 A AC
	1 A DC (48 V DC)

Connection data

Connection method	Screw terminal blocks
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
	4.5 lb_f-in. ... 5.5 lb_f-in.
Conductor cross-section flexible	2.5 mm² ... 4 mm²
Conductor cross-section rigid	2.5 mm² ... 6 mm²
Conductor cross-section AWG	14 ... 10

Dimensions

Dimensional drawing	
Width	112 mm
Height	86.6 mm
Depth	79 mm

Material specifications

Color	black (RAL 9005)
	silver-colored
Flammability rating according to UL 94	V-0
Insulating material	ABS
Housing material	Aluminum

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	L-N & L(N)-PE
Nominal voltage U_N	120 V AC (TN)
	120 V AC (TT - only in use with RCD)
	120 V AC (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	150 V AC
Rated load current I_L	15 A (50 °C)
Protective conductor current I_{PE}	≤ 0.6 mA
Standby power consumption P_C	≤ 7.5 VA (at U_{REF})
	≤ 10 VA (at U_C)
Reference test voltage U_{REF}	132 V AC
Nominal discharge current I_n (8/20) µs	3 kA
Combination wave U_{OC}	6 kV (3 kA)
Voltage protection level U_p	≤ 0.45 kV
TOV behavior at U_T (L-N)	175 V AC (5 s / withstand mode)
	240 V AC (5 s / safe failure mode)
	208 V AC (120 min / safe failure mode)
	208 V AC (5 s / withstand mode)

TOV behavior at U_T (L-PE)	175 V AC (120 min / withstand mode)
	1332 V AC (200 ms / safe failure mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / safe failure mode)
Response time t_A	≤ 25 ns
Capacity (L-N)	1 µF ±10 %
	10 nF ±10 % (X2-275 V)
Capacity (L-PE)	2.2 nF ±20 % (Y2-250 V)
Capacitance (N-PE)	2.2 nF ±20 % (Y2-250 V)
Max. required back-up fuse	20 A (MCB B/general purpose)
	16 A (IT - MCB B/general purpose)
Input attenuation aE, sym.	20 dB (≥ 100 kHz / 50 Ω)
Input attenuation aE, asym.	30 dB (≥ 1 MHz / 50 Ω)
Short-circuit current rating I_{SCCR}	5 kA AC (TN/TT)
	1 kA AC (IT)

Filter data

Discharge resistance	820 kΩ

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	5 % ... 95 %

Approvals

UL specifications

Maximum continuous operating voltage MCOV (L-N)	150 V AC
Maximum continuous operating voltage MCOV (L-G)	150 V AC
Maximum continuous operating voltage MCOV (N-G)	150 V AC
Short-circuit current rating (SCCR)	5 kA
Voltage protection rating VPR (L-N)	500 V
Voltage protection rating VPR (L-G)	500 V
Voltage protection rating VPR (N-G)	500 V
Nominal discharge current I_n	3 kA
Mode of protection	L-N
	L-G
	N-G
Power distribution system	Single phase
Nominal frequency	50/60 Hz
SPD Type	2CA

UL indicator/remote signaling

Operating voltage	12 V AC ... 250 V AC

DC operating voltage	250 V DC (250 mA DC)
AC operating current	100 mA AC ... 1 A AC
DC operating current	1 A DC (48 V DC)

UL connection data

Tightening torque	5 lb_f-in. ... 7 lb_f-in.
Conductor cross-section AWG	12 ... 10

Standards and regulations

Air clearances and creepage distances

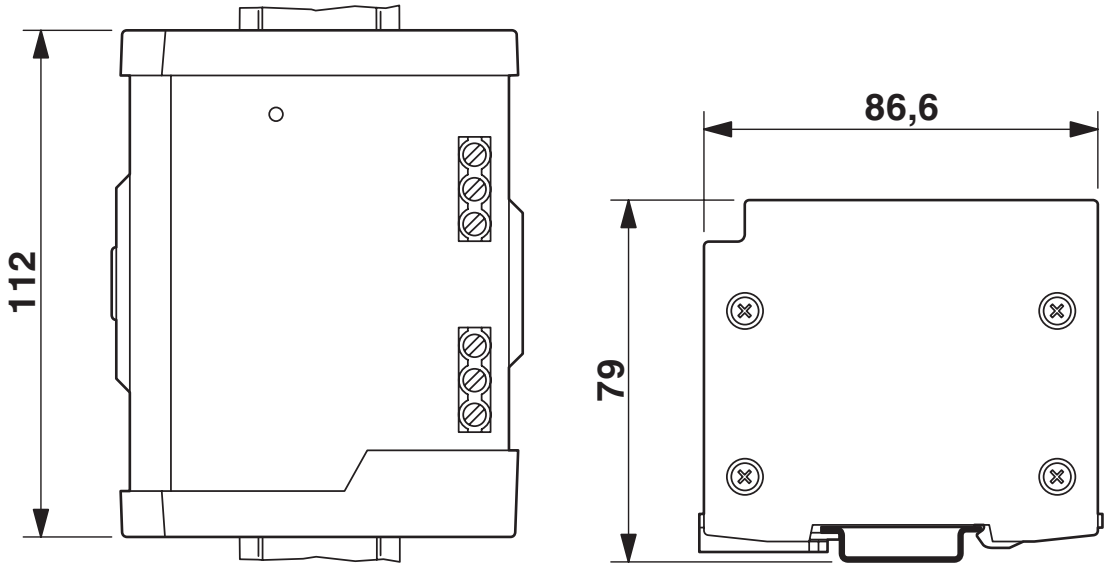
Standards/regulations	DIN VDE 0110-1 / IEC 60664-1 / IEC 61643-1
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

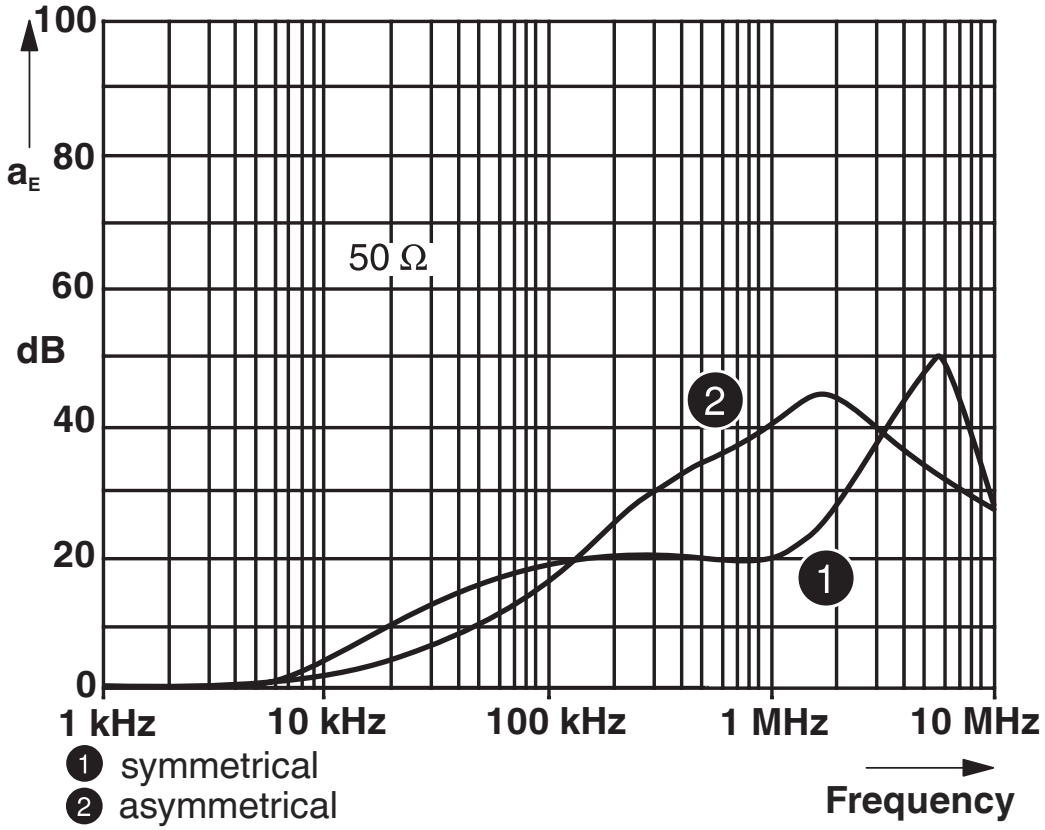
Mounting type	DIN rail: 35 mm

Drawings

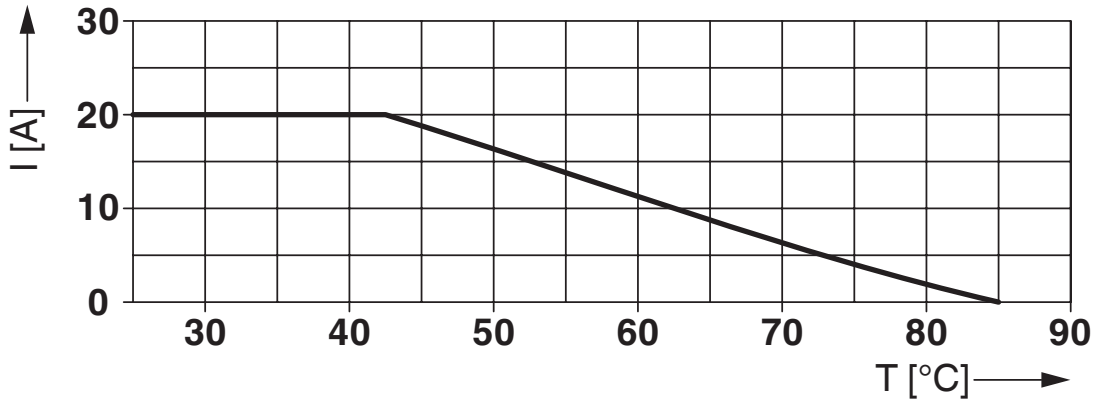
Dimensional drawing



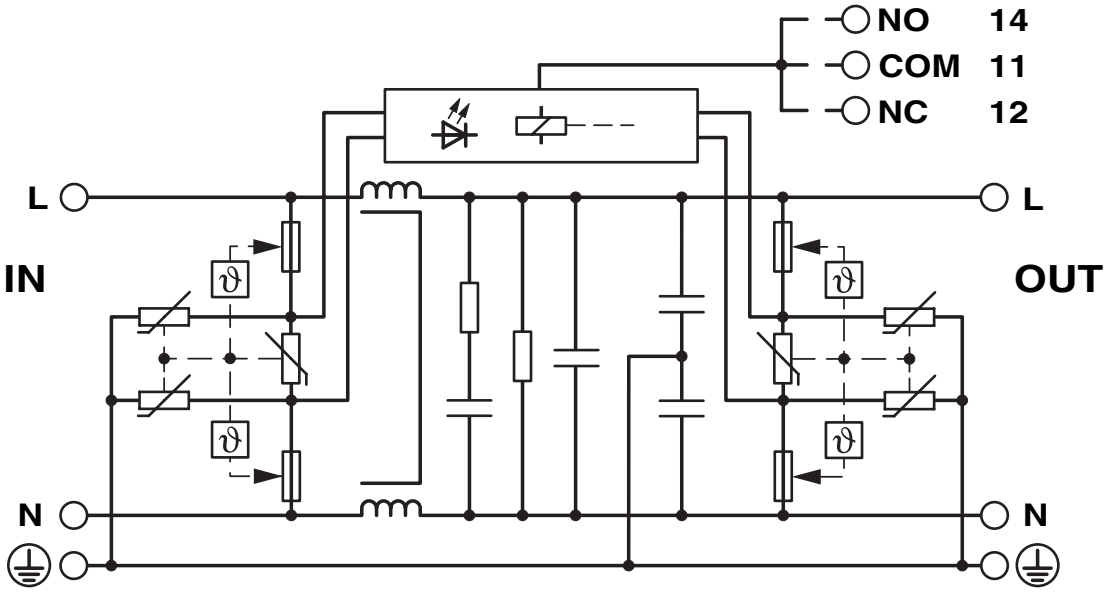
Diagram



Diagram



Circuit diagram



Approvals

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cUL Recognized
Approval ID: FILE E 330181

UL Recognized
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CSA
Approval ID: 13631

CSAus
Approval ID: 13631

UAE-RoHS
Approval ID: 23-10-88892

Classifications

ECLASS

ECLASS-13.0	27171203
ECLASS-15.0	27171203

ETIM

ETIM 9.0	EC000942

UNSPSC

UNSPSC 21.0	39121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a)

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)
SCIP	88f39971-ceb6-4b21-a181-ac7e1d301152

EF3.1 Climate Change

CO2e kg	10.965 kg CO2e

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