

EMC filter surge protection device - SFP 1-20/120AC - 2856702

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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.

Product Description

Device protection with interference filter

Product Features

- Can be installed in industrial environments
- Thermal monitoring of the protective circuit
- Combined protective circuit for absorbing transient surge voltages and high-frequency interference voltages
- Disconnection status signaled via floating remote indication contact
- Integrated power display switches off automatically when there is a malfunction due to overload.



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	615.2 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 ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C

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Technical data

Ambient conditions

Permissible humidity (operation)	5 % ... 95 %
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General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	III
	T3
EN type	T3
Number of ports	Two
SPD design	Voltage-limiting type
Mode of protection	L-N
	L-PE
	N-PE
Mounting type	DIN rail: 35 mm
Color	black
	silver
Housing material	Aluminum
Degree of pollution	2
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 voltage U_N	120 V AC (TN)
	120 V AC (TT - only in use with RCD)
	120 V AC (IT - only in use with RCD)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	150 V AC
Nominal current I_N	20 A (40°C)
Rated load current I_L	20 A (40°C)
Residual current I_{PE}	≤ 0.6 mA
Nominal discharge current I_n (8/20) μ s	3 kA
Standby power consumption P_C	≤ 7.5 VA (at U_{REF})
	≤ 10 VA (at U_C)
Reference test voltage U_{REF}	132 V AC
Combination wave U_{OC}	6 kV (3 kA)

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Protective circuit

Voltage protection level U_p	≤ 0.5 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)
TOV behavior at U_T (L-PE)	208 V AC (5 s / withstand mode) 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 μ F ± 10 % 10 nF ± 10 % (X2-275 V)
Capacity (L-PE)	2.2 nF ± 20 % (Y2-250 V)
Capacity (L-PEN)	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)

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Operating voltage	12 V AC ... 250 V AC 250 V DC (250 mA DC)
Operating current	100 mA AC ... 1 A 1 A (48 V DC)
Connection method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section AWG	26 ... 16

Connection data

Connection method	Screw terminal blocks
Conductor cross section AWG	14 ... 10
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm

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Technical data

Connection data

	4.5 lb _f -in. ... 5.5 lb _f -in.
Stripping length	8 mm

UL specifications

SPD Type	2CA
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
Mode of protection	L-N
	L-G
	N-G
Power distribution system	1
Nominal frequency	50/60 Hz
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
Short-circuit current rating (SCCR)	5 kA

Protective circuit, filter

Discharge resistor	820 kΩ
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)

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	27130806
eCl@ss 7.0	27130806
eCl@ss 8.0	27130806
eCl@ss 9.0	27130806

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Classifications

ETIM

ETIM 2.0	EC000942
ETIM 3.0	EC000942
ETIM 4.0	EC000942
ETIM 5.0	EC000942

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

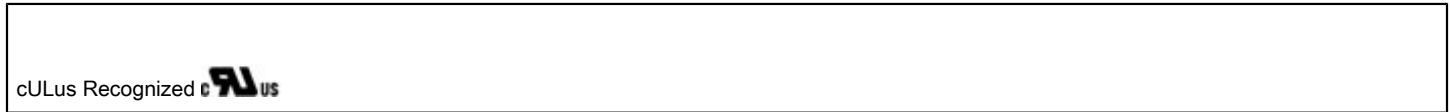
UL Recognized

cUL Recognized

EAC

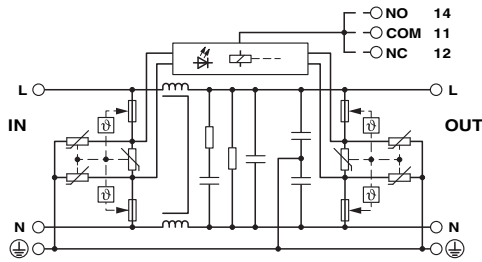
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Approvals

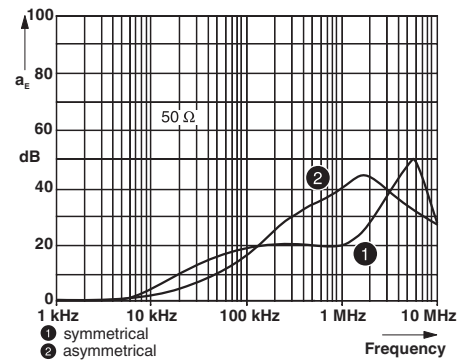


Drawings

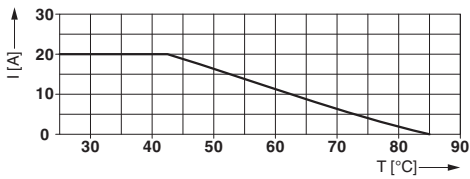
Circuit diagram



Diagram



Diagram



Dimensional drawing

