

EMC filter surge protection device - SFP 1-20/120AC/EX - 2905220

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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
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 ... 40 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

General

Standards/specifications	IEC 61643-1 2005
	DIN EN 61643-11/A11 2007
	UL 1449 ed. 3: 2006 T4 for type 2
	UL 1283 ed. 5: 2005
IEC test classification	III
	T3

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Technical data

General

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
	150 V AC
Nominal current I_N	20 A (40°C)
Rated load current I_L	20 A (40°C)
Residual current I_{PE}	≤ 0.5 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
Operating effective current I_C at U_C	≤ 10 mA
Max. discharge current I_{max} (8/20) μ s maximum (L-N)	10 kA
Max. discharge current I_{max} (8/20) μ 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)	≤ 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 , (L-N)	≤ 450 V
Residual voltage at I_n , (L-PE)	≤ 450 V
Residual voltage at I_n , (N-PE)	≤ 450 V
Response time t_A (L-N)	≤ 25 ns
Response time t_A (L-PE)	≤ 25 ns
Response time t_A (N-PE)	≤ 25 ns
Inductivity in series	2x 1 mH ± 30 % (with current compensation)

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Protective circuit

Capacity (L-N)	2 μ 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 Ω)
Input attenuation aE, asym.	typ. 30 dB (\geq 1 MHz / 50 Ω)

Indicator/remote signaling

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

Connection data

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

Protective circuit, filter

Discharge resistor	\leq 390 k Ω
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)

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Protective circuit, filter

	390 V (category B 100 kHz 6 kV/500 A)
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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

ETIM

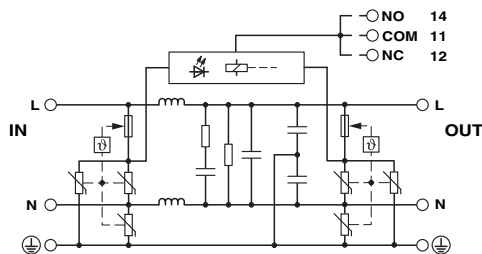
ETIM 2.0	EC000942
ETIM 3.0	EC000942
ETIM 4.0	EC000942

UNSPSC

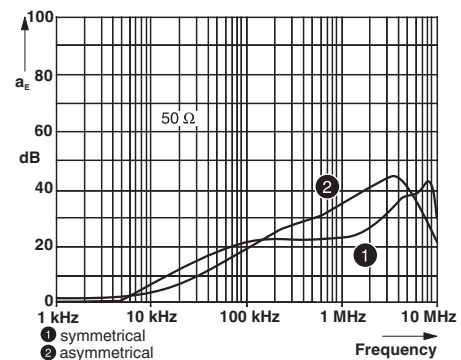
UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Drawings

Circuit diagram



Diagram



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Dimensional drawing

