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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# EMC filter surge protection device - SFP 1-20/230AC - 2859987

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Device surge protection filter to limit powerful surge voltages, mounting on NS 35.

## Product description

Device protection with interference filter

## Why buy this product

- Can be installed in industrial environments
- Combined protective circuit for absorbing transient surge voltages and high-frequency interference voltages
- Thermal monitoring of the protective circuit
- Disconnection status signaled via floating remote indication contact



## Key commercial data

Packing unit	1
Minimum order quantity	1
Catalog page	Page 230 (TT-2011)
GTIN	 4 046356 098175
Custom tariff number	85363010
Country of origin	GERMANY

## Technical data

### Standards

Housing material	ABS, V0(UL-94)
Inflammability class according to UL 94	V0
Color	aluminum
Standards for air and creepage distances	DIN VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Standards for air and creepage distances	IEC 61643-1
Degree of protection	IP20
Design	Rail-mountable module, one-piece
Mounting type	DIN rail: 35 mm
Number of positions	2

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## Technical data

### Standards

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (operation)	-40 °C ... 70 °C
For country-specific use in	D, A, I, NL, S, E, FIN, P
Direction of action	L-N & L(N)-PE
Width	112 mm
Height	93 mm
Depth	79 mm

### Protective circuit

IEC category	III
IEC category	T3
EN type	T3
Nominal voltage UN	230 V AC
Arrester rated voltage UC (L-N)	264 V AC
Nominal frequency fN	50 Hz
Nominal frequency fN	60 Hz
Nominal current IN	20 A (40°C)
Ground conductor current IPE	≤ 0.57 mA
Nominal discharge surge current In (8/20) μs (L-N)	5 kA
Nominal discharge surge current In (8/20) μs (L-PE)	5 kA
Max. discharge surge current I <sub>max</sub> (8/20) μs maximum (L-N)	10 kA
Max. discharge surge current I <sub>max</sub> (8/20) μs maximum (L-PE)	10 kA
Combined surge UOC	10 kV
Protection level UP (L-N)	≤ 1 kV
Protection level UP (L-PE)	≤ 1 kV
Protection level UP (N-PE)	≤ 1 kV
Response time tA (L-N)	≤ 25 ns
Response time tA (L-PE)	≤ 25 ns
Response time tA (N-PE)	≤ 25 ns
Inductivity in series	2x 1 mH ±30 % (with current compensation)
Capacity (L-N)	1 μF ±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 (gL / gG)
Input attenuation aE, sym.	20 dB (≥ 100 kHz / 50 Ω)
Input attenuation aE, asym.	30 dB (≥ 1 MHz / 50 Ω)
Message: Surge protection fault	Remote indicator contact

### Non-heating apparatus connection, power supply

Connection name	Input/output
Connection method	Screw terminal blocks
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Connection method	3-conductor (shielded)

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### Technical data

#### Non-heating apparatus connection, power supply

Screw thread	M3
Stripping length	8 mm
Conductor cross section stranded min.	4 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section solid min.	4 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	10

#### Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U <sub>max</sub> . AC	250 V AC
Max. operating current I <sub>max</sub>	1 A (250 V AC)
Max. operating current I <sub>max</sub>	0.25 A (250 V DC)
Max. operating current I <sub>max</sub>	1 A (48 V DC)

#### Connection, protective circuit

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

#### Protective circuit, filter

Discharge resistor	≤ 680 kΩ
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### Classifications

#### eClass

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

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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

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Approvals

GOST

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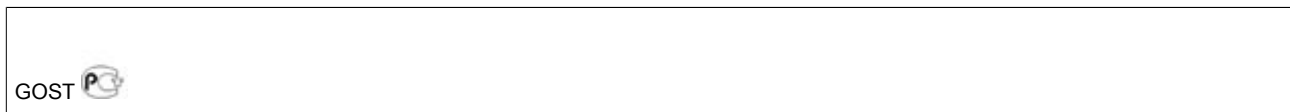
Ex Approvals

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Approvals submitted

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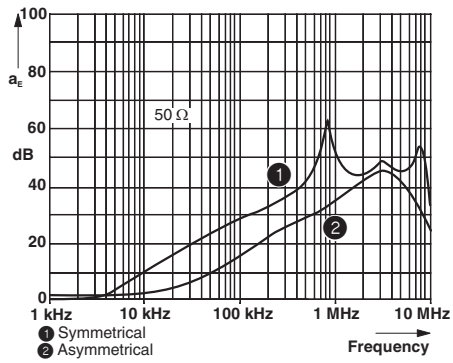
### Approval details



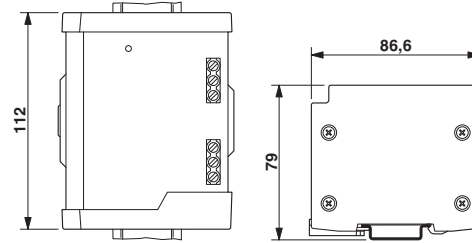
## Drawings

# EMC filter surge protection device - SFP 1-20/230AC - 2859987

Diagram



Dimensioned drawing



Circuit diagram

