

## SFP 1-20/120AC


Order No.: 2856702



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DIN rail module with device surge protection type 3 and mains suppression filter against high-frequency interference voltages. Integrated power display switches off automatically when there is a malfunction due to overload. Mounting on NS 35.

### Commercial data

GTIN (EAN)	 4 017918 952648
sales group	J041
Pack	1 pcs.
Customs tariff	85363010
Catalog page information	Page 230 (TT-2011)

### Product notes

WEEE/RoHS-compliant since:  
06/23/2006



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### Product description

Device protection with interference filter

## Technical data

### Standards

Housing material	ABS, aluminum
Inflammability class according to UL 94	V0
Color	aluminum
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10
	IEC 61643-1
Surge voltage category	III
Pollution degree	2
Degree of protection	IP20
Design	Rail-mountable module, one-piece
Mounting type	DIN rail: 35 mm
Number of positions	2
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (operation)	-25 °C ... 40 °C
For country-specific use in	USA, CN, BR
Direction of action	L-N & L(N)-PE
Width	112.00 mm
Height	79.00 mm
Length	93.00 mm

### Protective circuit

IEC category	III
	T3
EN type	T3
Nominal voltage $U_N$	120 V AC
Arrester rated voltage $U_C$ (L-N)	150 V AC
Arrester rated voltage $U_C$ (L-PE)	150 V AC
Nominal frequency $f_N$	50 Hz
	60 Hz
Nominal current $I_N$	20 A (40°C)
Operating effective current $I_C$ at $U_C$	≤ 10 mA
Ground conductor current $I_{PE}$	≤ 0.5 mA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-N)	3 kA

Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-PE)	3 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (L-N)	10 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (L-PE)	10 kA
Combined surge $U_{oc}$	6 kV (3 kA)
Energy absorption symmetrical	170 J
Energy absorption, asymmetrical	2x 170 J
Protection level $U_p$ (L-N)	$\leq 450$ V (at 6 kV/3 kA)
Protection level $U_p$ (L-PE)	$\leq 450$ V (at 6 kV/3 kA)
Protection level $U_p$ (N-PE)	$\leq 450$ V (at 6 kV/3 kA)
Residual voltage at $I_n$ , (L-N)	$\leq 450$ V
Residual voltage at $I_n$ , (L-PE)	$\leq 450$ V
Residual voltage at $I_n$ , (N-PE)	$\leq 450$ V
Response time $t_A$ (L-N)	$\leq 25$ ns
Response time $t_A$ (L-PE)	$\leq 25$ ns
Response time $t_A$ (N-PE)	$\leq 25$ ns
Inductivity in series	2x 1 mH $\pm 30$ % (with current compensation)
Capacity (L-N)	2 $\mu$ 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 $\Omega$ )
Input attenuation aE, asym.	Typ. 30 dB ( $\geq 1$ MHz / 50 $\Omega$ )
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)
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 contact
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)
	0.25 A (250 V DC)
	1 A (48 V DC)
Min. permissible switching capacity	(1.00 A / 48 V DC)
	(100 mA / 12 V AC)
Switching capacity max. perm.	(0.25 A / 250 V DC)
	(1.0 A / 48 V AC)

#### Connection, protective circuit

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

#### Protective circuit, filter

Discharge resistor	≤ 390 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)

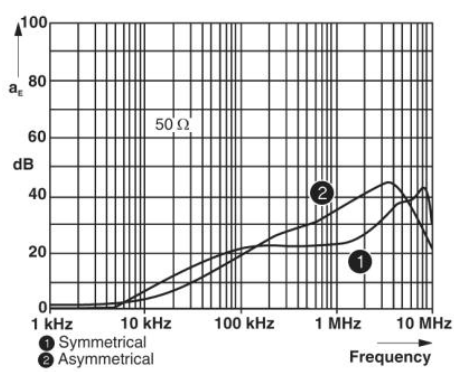
**Certificates / Approvals**



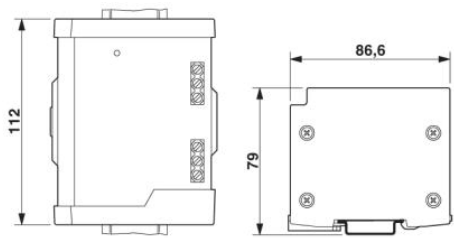
Certification CSA, CSAus-COMP, CUL, GOST, UL

**Diagrams/Drawings**

Diagram

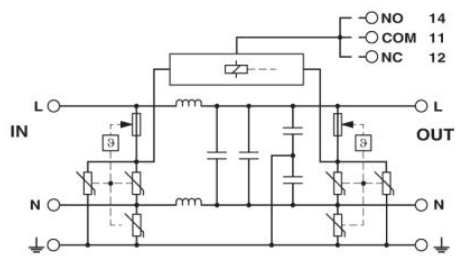


Dimensioned drawing



Circuit diagram

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**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



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