# EMC filter surge protection device - SFP 1-15/120AC - 2920683

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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

## Why buy this product

- 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 STK |
| GTIN | 4 046356 158565 |
| GTIN | 4046356158565 |
| Weight per Piece (excluding packing) | 612.300 g |
| Custom tariff number | 85363010 |
| Country of origin | Germany |

## Technical data

### Dimensions

| | |
|---|---|
| Height | 93 mm |
| Width | 112 mm |
| Depth | 79 mm |

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## Technical data

### 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 % |

### General

| | |
|---|---|
| IEC test classification | III |
| | T3 |
| EN type | T3 |
| Number of ports | Two |
| 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 |
| Design | 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) |
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
| Maximum continuous voltage $U_C$ | 150 V AC |
| Rated load current $I_L$ | 15 A (50 °C) |
| Residual current $I_{PE}$ | ≤ 0.6 mA |
| Nominal discharge current $I_n$ (8/20) µs | 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) |
| Voltage protection level $U_p$ | ≤ 0.45 kV |

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## Technical data

### Protective circuit

| | |
|---|---|
| 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 µF ±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

| | |
|---|---|
| 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 AC |
| | 1 A DC (48 V DC) |
| Connection method | Pluggable screw connection |
| Conductor cross section flexible | 0.14 mm² ... 1.5 mm² |
| Conductor cross section solid | 0.14 mm² ... 1.5 mm² |
| Conductor cross section AWG | 26 ... 16 |
| Screw thread | M2 |
| Tightening torque | 0.25 Nm |
| Stripping length | 7 mm |

### Connection data

| | |
|---|---|
| Connection method | Screw terminal blocks |
| Conductor cross section flexible | 2.5 mm² ... 4 mm² |
| Conductor cross section solid | 2.5 mm² ... 6 mm² |
| Conductor cross section AWG | 14 ... 10 |

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## Technical data

### Connection data

| | |
|---|---|
| Screw thread | M3 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| | 4.5 $lb_f$-in. ... 5.5 $lb_f$-in. |
| Stripping length | 8 mm |

### UL specifications

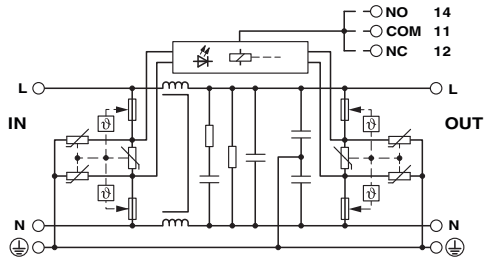
| | |
|---|---|
| SPD Type | 2CA |
| Maximum continuous operating voltage MCOV (L-N) | 150 V AC |
| Maximum continuous operating voltage MCOV (L-G) | 150 V AC |
| Maximum continuous operating voltage MCOV (N-G) | 150 V AC |
| Mode of protection | L-N |
| | L-G |
| | N-G |
| Power distribution system | 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 resistance | 820 kΩ |

## Drawings

Circuit diagram




Diagram

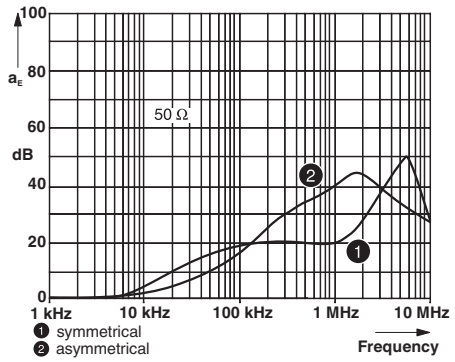


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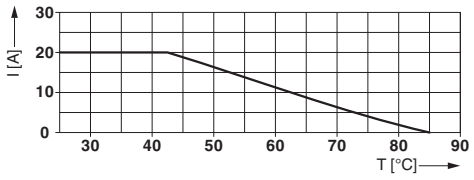
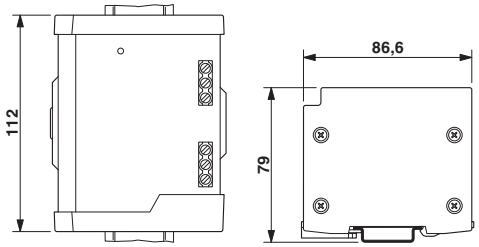
Diagram




Dimensional drawing




## 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 |

### ETIM

| | |
|---|---|
| ETIM 2.0 | EC000942 |
| ETIM 3.0 | EC000942 |
| ETIM 4.0 | EC000942 |
| ETIM 5.0 | EC000942 |
| ETIM 6.0 | EC000942 |

### UNSPSC

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

## Approvals

### Approvals

# EMC filter surge protection device - SFP 1-15/120AC - 2920683

## Approvals

Approvals

UL Recognized / cUL Recognized / EAC / CSAus / CSA / cULus Recognized

Ex Approvals

## Approval details

| | | | |
|---|---|---|---|
| UL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| cUL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| EAC | | | RU C-DE.A*30.B01561 |
| CSAus | | http://www.csagroup.org/services/testing-and-certification/certified-product-listing/ | 70061752 |
| CSA | | http://www.csagroup.org/services/testing-and-certification/certified-product-listing/ | 70061752 |
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | |