# EMC filter surge protection device - SFP 1-10/120AC - 2920670



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 | 0 |
| Minimum order quantity | 1 |
| Catalog page | Page 230 (TT-2011) |
| GTIN | 4 046356 158480 |
| Custom tariff number | 85363010 |
| Country of origin | GERMANY |

## 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 |
| 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) | -25 °C ... 60 °C |
| For country-specific use in | USA, CN, BR |
| 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 | 120 V AC |
| Arrester rated voltage UC (L-N) | 150 V AC |
| Arrester rated voltage UC (L-PE) | 150 V AC |
| Nominal frequency fN | 50 Hz |
| Nominal frequency fN | 60 Hz |
| Nominal current IN | 10 A (62°C) |
| Operating effective current IC at UC | ≤ 10 mA |
| Ground conductor current IPE | ≤ 0.5 mA |
| Nominal discharge surge current In (8/20) µs (L-N) | 3 kA |
| Nominal discharge surge current In (8/20) µs (L-PE) | 3 kA |
| Max. discharge surge current Imax (8/20) µs maximum (L-N) | 10 kA |
| Max. discharge surge current Imax (8/20) µs maximum (L-PE) | 10 kA |
| Combined surge UOC | 6 kV (3 kA) |
| Energy absorption symmetrical | 170 J |
| Enery absorption, asymmetrical | 2x 170 J |
| Protection level UP (L-N) | ≤ 450 V (at 6 kV/3 kA) |
| Protection level UP (L-PE) | ≤ 450 V (at 6 kV/3 kA) |
| Protection level UP (N-PE) | ≤ 450 V (at 6 kV/3 kA) |
| Residual voltage at In, (L-N) | ≤ 450 V |
| Residual voltage at In, (L-PE) | ≤ 450 V |
| Residual voltage at In, (N-PE) | ≤ 450 V |
| 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) | 2 µF ±10 % (X2, FOW X2-250V) |
| Capacity (L-PE) | 2.2 nF ±20 % (Y, FOW X2-250V) |
| Capacity (L-PEN) | 2.2 nF ±20 % (Y, FOW X2-250V) |
| Max. required back-up fuse | 20 A (gL / gG) |
| Max. required back-up fuse | 20 A (MCB, > 125 V, AIC: 14 kA) |
| Input attenuation aE, sym. | Typ. 40 dB (≥ 500 kHz / 50 Ω) |

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## Technical data

### Protective circuit

| | |
|---|---|
| Input attenuation aE, asym. | Typ. 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) |
| Screw thread | M3 |
| Stripping length | 8 mm |
| Conductor cross section stranded min. | 4 mm² |
| Conductor cross section stranded max. | 4 mm² |
| Conductor cross section solid min. | 4 mm² |
| Conductor cross section solid max. | 6 mm² |
| 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 mm² |
| Conductor cross section stranded max. | 1.5 mm² |
| Conductor cross section solid min. | 0.14 mm² |
| Conductor cross section solid max. | 1.5 mm² |
| Conductor cross section AWG/kcmil min. | 28 |
| Conductor cross section AWG/kcmil max | 16 |
| Maximum operating voltage Umax. AC | 250 V AC |
| Max. operating current Imax | 1 A (250 V AC) |
| Max. operating current Imax | 0.25 A (250 V DC) |
| Max. operating current Imax | 1 A (48 V DC) |

### Connection, protective circuit

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

### Protective circuit, filter

| | |
|---|---|
| Discharge resistor | ≤ 390 kΩ |

# EMC filter surge protection device - SFP 1-10/120AC - 2920670

## 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 |

### 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

CSA / UL Recognized / cUL Recognized / GOST / CSAus / cULus Recognized

Ex Approvals

Approvals submitted

### Approval details

CSA

UL Recognized

# EMC filter surge protection device - SFP 1-10/120AC - 2920670

## Approvals

cUL Recognized

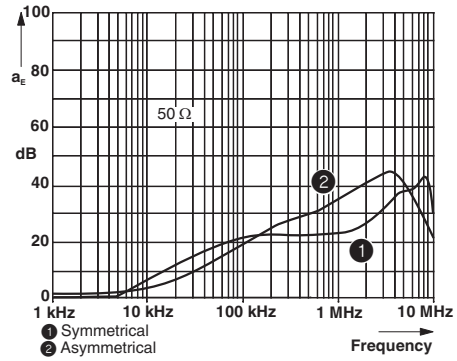
GOST

CSAus

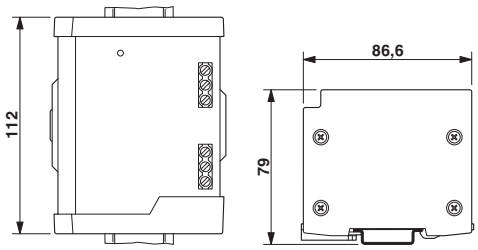
cULus Recognized

## Drawings

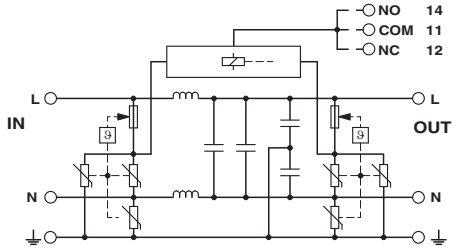
Diagram




Dimensioned drawing




Circuit diagram



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