

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



2905218

<https://www.phoenixcontact.com/us/products/2905218>

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Device protection, according to type 3/class III, with mains interference 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.

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2905218 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | CL06 |
| Product key | CLC131 |
| GTIN | 4046356988452 |
| Weight per piece (including packing) | 615 g |
| Weight per piece (excluding packing) | 615 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--------------------------------|-----------------------------------|
| Product type | EMC filters |
| Product family | SFP |
| Type | DIN rail module, one-piece |
| Number of positions | 2 |
| For country-specific use in | USA, CN, BR |
| Surge protection fault message | Optical, remote indicator contact |
| IEC test classification | III |
| | T3 |
| EN type | T3 |

Electrical properties

Indicator/remote signaling

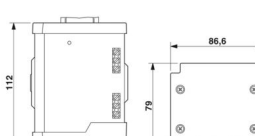
| | |
|--|--------------------------------|
| Connection name | Remote fault indicator contact |
| Switching function | Changeover contact |
| Maximum operating voltage U_{max} AC | 250 V AC |
| Max. operating current I_{max} | 1 A (250 V AC) |
| | 0.25 A (250 V DC) |
| | 1 A (48 V DC) |

Connection data

Input/output

| | |
|---------------------------------------|---|
| Connection method | Screw terminal blocks |
| Screw thread | M3 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| | 5 lb _F -in. ... 7 lb _F -in. |
| Conductor cross-section flexible min. | 2.5 mm ² |
| Conductor cross-section flexible max. | 4 mm ² |
| Conductor cross-section, rigid min. | 2.5 mm ² |
| Conductor cross-section, rigid max. | 6 mm ² |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 112 mm |
| Height | 93 mm |

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| | |
|-------|-------|
| Depth | 79 mm |
|-------|-------|

Material specifications

| | |
|--|----------|
| Flammability rating according to UL 94 | V-0 |
| Insulating material | ABS |
| Housing material | Aluminum |

Mechanical properties

Mechanical data

| | |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

Protective circuit

| | |
|---|--|
| Direction of action | L-N & L(N)-PE |
| Nominal frequency f_N | 50 Hz |
| | 60 Hz |
| Maximum continuous operating voltage U_C (L-N) | 150 V AC |
| Maximum continuous operating voltage U_C (L-PE) | 150 V AC |
| Nominal current I_N | 10 A (62°C) |
| Rated load current I_L | 10 A (62°C) |
| Protective conductor current I_{PE} | ≤ 0.5 mA |
| Operating effective current I_C at U_C | ≤ 10 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 |
| Maximum discharge current I_{max} (8/20) μ s (L-N) | 10 kA |
| Maximum discharge current I_{max} (8/20) μ s (L-PE) | 10 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 | ≤ 450 V |
| | ≤ 450 V |
| | ≤ 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) |
| Capacity (L-N) | 2 μ F ± 10 % (X2, FOW X2-250V) |
| Capacity (L-PE) | 2.2 nF ± 20 % (Y, FOW X2-250V) |
| Capacitance (N-PE) | 2.2 nF ± 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 (≥ 500 kHz/50 Ω) |
| Input attenuation aE, asym. | typ. 30 dB (≥ 1 MHz / 50 Ω) |

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Filter data

| | |
|----------------------|----------|
| Discharge resistance | ≤ 390 kΩ |
|----------------------|----------|

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

Standards and regulations

Standards

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

Air clearances and creepage distances

| | |
|--------------------------|--|
| Standards/regulations | DIN VDE 0110-1 / IEC 60664-1 / IEC 61643-1 |
| Standards/specifications | IEC 61643-1 |
| Note | 2005 |
| Standards/specifications | EN 61643-11/A11 |
| Note | 2007 |
| Standards/specifications | UL 1449 |
| Note | ed. 3: 2006 T4 for type 2 |
| Standards/specifications | UL 1283 |
| Note | ed. 5: 2005 |

Mounting

| | |
|---------------|-----------------|
| Mounting type | DIN rail: 35 mm |
|---------------|-----------------|

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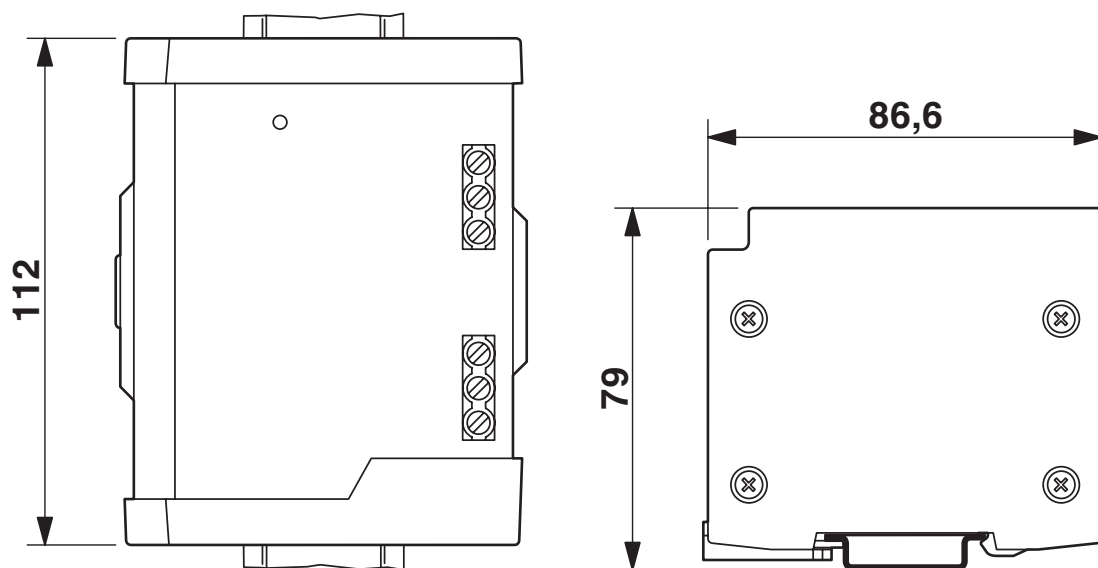


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Drawings

Dimensional drawing



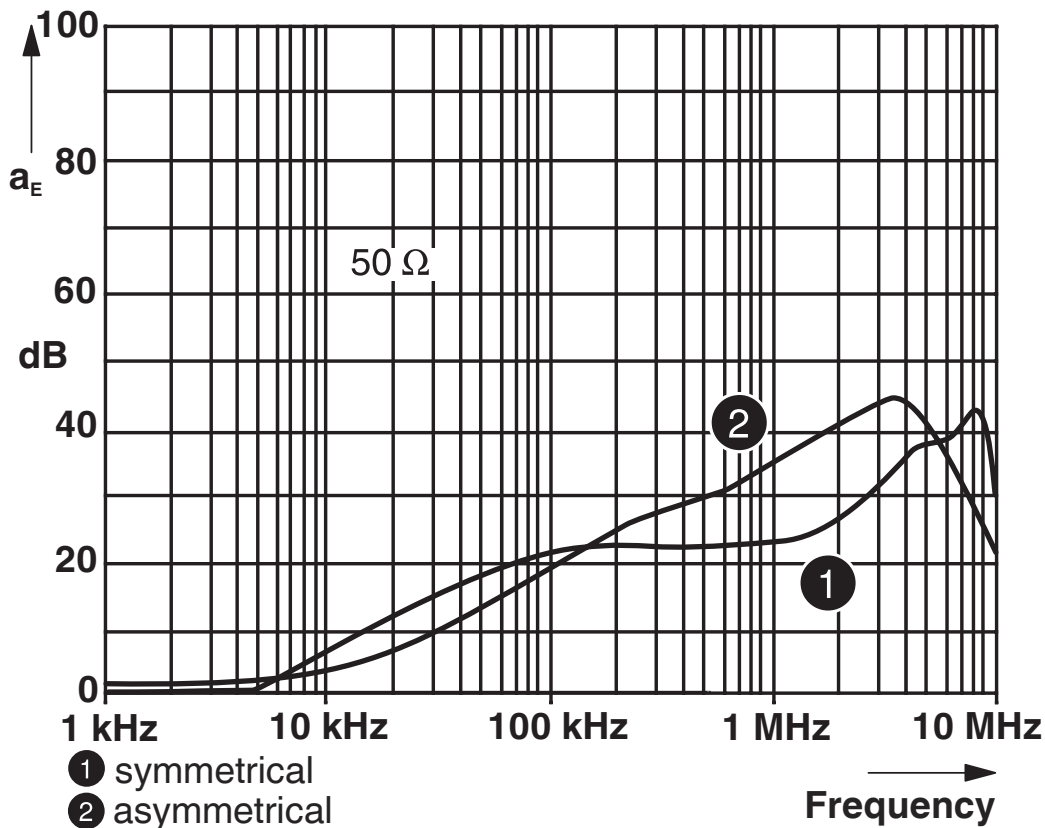
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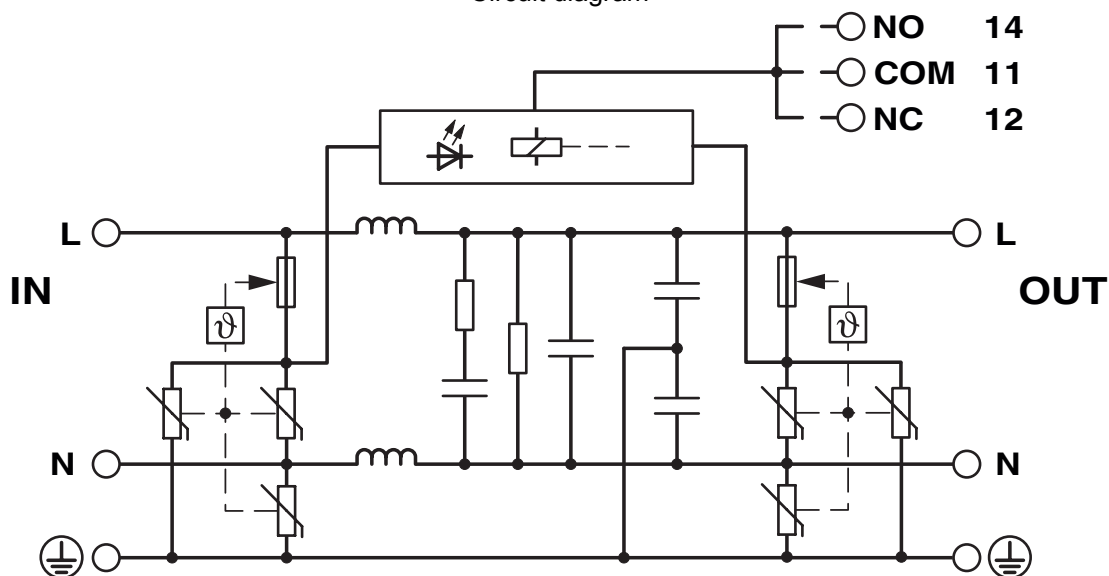
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Diagram



Circuit diagram



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Environmental product compliance

EU REACH SVHC

| REACH candidate substance (CAS No.) | |
|-------------------------------------|--|
|-------------------------------------|--|

| | |
|--|----------------------------|
| | No substance above 0.1 wt% |
|--|----------------------------|

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