

IEC inlet filters FN 370

Versatile filtered power entry module

SCHAFNER

energy efficiency and reliability



- Rated currents up to 6A
- Single or dual-fuse holder
- Fuses Ø6.3 x 32mm or Ø5 x 20mm
- Voltage selector 100/120/230/240V
- General purpose application
- Optional medical versions (B type)

Approvals



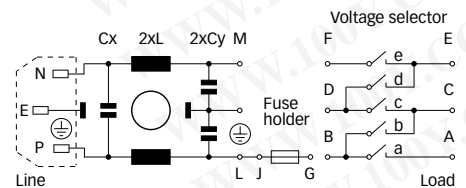
Technical specifications

| | |
|--|---|
| Maximum continuous operating voltage: | 250VAC, 50/60Hz |
| Operating frequency: | dc to 400Hz |
| Rated currents: | 2 to 6A @ 40°C max. |
| High potential test voltage: | P → E 2000VAC for 2 sec (standard types) P → E 2500VAC for 2 sec (B types) |
| | P → N 760VAC for 2 sec |
| Protection category: | IP40 according to IEC 60529 |
| Temperature range (operation and storage): | -25°C to +85°C (25/85/21) |
| Design corresponding to: | UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939 |
| Flammability corresponding to: | UL 94V-2 or better |
| MTBF @ 40°C/230V (Mil-HB-217F): | 550,000 hours |
| Voltage selector description: | VOL-SE 4SP-4 |
| Function: | Series/parallel |
| Voltage marking*: | |
| 1st: | 100 |
| 2nd: | 120 |
| 3rd: | 230 |
| 4th: | 240 |
| Closed internal contact corresponding to: | |
| 1st: | a, c, e |
| 2nd: | b, c, e |
| 3rd: | a, d |
| 4th: | b, d |

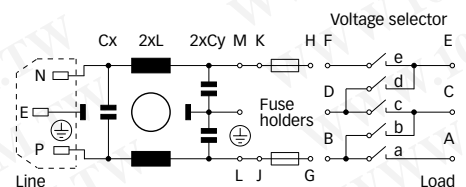
* Other selected voltage marking on request.

Typical electrical schematic

FN 370 / FN 376



FN 372 / FN 378 / FN 379



Features and benefits

The FN 370 power entry module combines an IEC inlet, a mains filter with a single or dual-fuse holder and a voltage selector. Choosing FN 370 product line brings you the rapid availability of a standard filter associated with the necessary safety acceptances. Standard IEC connector filters are a practical solution helping you to pass EMI system approval in a short time. A wide selection on amperage ratings, fuse options, mounting possibilities and filters for medical applications are designed to offer you the desired solution.


- Good conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- Rear/front or snap-in mounting.
- Single or dual-fuse holder.
- USA Ø6.3 x 32mm or EU Ø5 x 20mm fuses.
- Two attenuation performance ranges.
- Voltage selector 100/120/230/240V.
- Custom-specific versions are available on request.

Typical applications

- Portable electrical and electronic equipment
- Consumer goods
- EDP and office equipment
- Single-phase power supplies, switch-mode power supplies
- Test and measurement equipment
- Medical equipment

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Filter selection table

| Filter* | Rated current @ 40°C (25°C) | Leakage current** @ 230VAC/50Hz | Inductance L | Capacitance | | Resistance R | Output connections | Fuses*** [Qty] | Weight [g] |
|---------------|--------------------------------|------------------------------------|-----------------|-------------|------------|-----------------|---|-------------------|---------------|
| | [A] | [μA] | [mH] | Cx [nF] | Cy [nF] | [kΩ] |  | | |
| FN 370-2-2.1 | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 370-4-2.1 | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 370-6-2.1 | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 372-2-2.2 | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 2 | 55 |
| FN 372-4-2.2 | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 2 | 55 |
| FN 372-6-2.2 | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 2 | 55 |
| FN 376-2-2.1 | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 376-4-2.1 | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 376-6-2.1 | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 378-2-2.2 | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 2 | 60 |
| FN 378-4-2.2 | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 2 | 60 |
| FN 378-6-2.2 | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 2 | 60 |
| FN 379-2-2.2 | 2 (2.4) | 373 | 2.00 | 47 | 2.2 | | 13 | 2 | 70 |
| FN 379-4-2.2 | 4 (4.8) | 373 | 0.80 | 47 | 2.2 | | 13 | 2 | 70 |
| FN 379-6-2.2 | 6 (7.2) | 373 | 0.50 | 47 | 2.2 | | 13 | 2 | 70 |
| FN 379B-2-2.2 | 2 (2.4) | 2 | 2.00 | 47 | | 1000 | 13 | 2 | 70 |
| FN 379B-4-2.2 | 4 (4.8) | 2 | 0.80 | 47 | | 1000 | 13 | 2 | 70 |
| FN 379B-6-2.2 | 6 (7.2) | 2 | 0.50 | 47 | | 1000 | 13 | 2 | 70 |

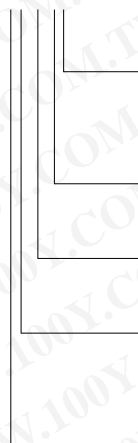
* Select the requested fuse holder for fuse EUR-1 or USA-1.

** Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

*** Filters are delivered without fuse.

Product selector

FN 37xx-y-zz



- 1: Fuse Ø5 x 20mm (FUSE-H EUR-1)
- 2: Fuse Ø6.3 x 32mm (FUSE-H USA-1)
- 2: Voltage selector, series / parallel 100/120/230/240V
- 2 to 6: Rated current
- Blank: Standard version
- B: Medical version (with bleed resistor and without Y2-capacitor)
- 0: Snap-in version, single-fuse, standard performance
- 2: Snap-in version, dual-fuse, standard performance
- 6: Flange mounting version, single-fuse, standard performance
- 8: Flange mounting version, dual-fuse, standard performance
- 9: Flange mounting version, dual-fuse, high performance

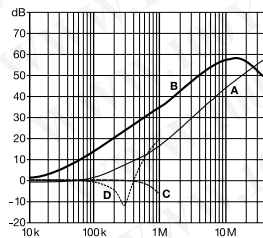
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For example: FN 370-6-21, FN 378-4-22, FN 379B-2-22

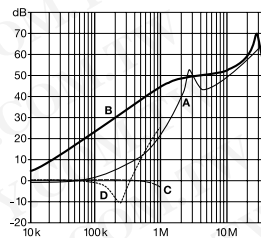
Typical filter attenuation

Per CISPR 17; A = 50Ω/50Ω sym; B = 50Ω/50Ω asym; C = 0.1Ω/100Ω sym; D = 100Ω/0.1Ω sym

FN 370 / FN 372 / FN 376 / FN 378

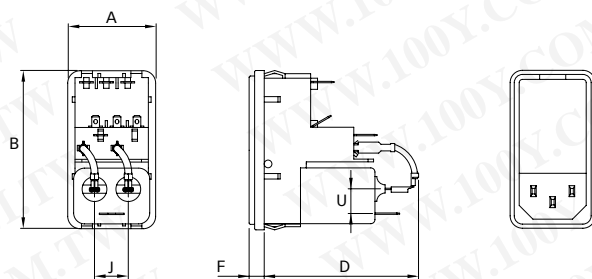


FN 379

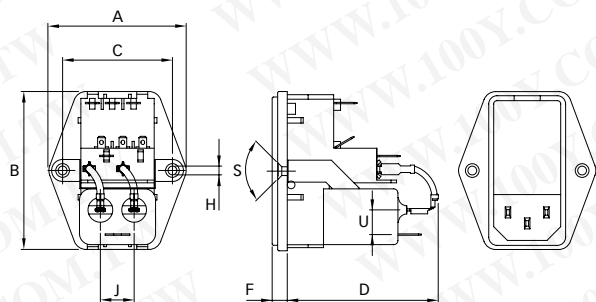


Mechanical data

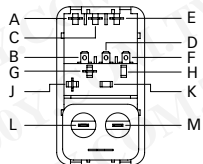
FN 370 / FN 372



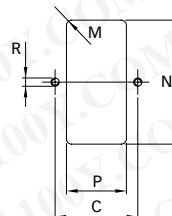
FN 376 / FN 378 / FN 379



Connection designation



Panel cut out



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Dimensions

| | FN 370 | FN 372 | FN 376 | FN 378 | FN 379 | Tolerances |
|---|--------------|--------------|--------------|--------------|--------------|------------|
| A | 32 | 32 | 50 | 50 | 50 | ±0.3 |
| B | 58 | 58 | 58 | 58 | 58 | ±0.3 |
| C | | | 40 | 40 | 40 | ±0.1 |
| D | 54 | 54 | 54 | 54 | 64.5 | |
| F | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | |
| H | | | Ø3.3 | Ø3.3 | Ø3.3 | |
| J | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | |
| M | R ≤ 2 | R ≤ 2 | R ≤ 2 | R ≤ 2 | R ≤ 2 | ±0.1 |
| N | 55.9*/56.2** | 55.9*/56.2** | 55.9*/56.2** | 55.9*/56.2** | 55.9*/56.2** | +0.2/-0 |
| P | 28.5 | 28.5 | 28.5 | 28.5 | 28.5 | +0.2/-0 |
| R | | | M3 | M3 | M3 | |
| S | | | 90° | 90° | 90° | |
| U | 9 | 9 | 9 | 9 | 9 | |

* For a back panel thickness between 0.8 and 2.0mm

** For a back panel thickness between 2.1 and 3.2mm

All dimensions in mm; 1 inch = 25.4mm

Tolerances according: ISO 2768-m / EN 22768-m

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