

Versatile Filtered Power Entry Module



- Rated currents up to 6 A
- Single or dual-fuse holder
- Fuses Ø 6.3 x 32 mm Ø 5 x 20 mm
- 2-pole rocker switch
- General purpose application
- Optional medical versions (B type)



Performance indicators

Attenuation performance



Rated current [A]



Technical specifications

| | |
|--|---|
| Maximum continuous operating voltage | 250 VAC, 50/60 Hz |
| Operating frequency | 50 to 400 Hz |
| Rated currents | 2 to 6 A @ 40 °C max. |
| High potential test voltage | P → PE 2000 VAC for 2 sec (standard types) P → N 760 VAC for 2 sec P → PE 2500 VAC for 2 sec (B types) |
| 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 94 V-2 or better |
| MTBF @ 40°C/230V (Mil-HB-217F) | 550,000 hours |
| Rocker switch description | |
| Function | 2-pole, dark not illuminated Marking I - 0 |
| Electrical specifications | Inrush current 51 A 6,000 on-off operations according to UL 1054, TV 5 10,000 on-off operations according to ENEC |
| Mechanical life | 50,000 cycles |
| Switch ratings | |
| Europe (ENEC) | 6 A (4 A), 250 VAC* |
| USA (UL) | 6A, 125 VAC; 4 A, 250 VAC; 1/10 HP |
| Canada (CSA) | 6 A, 125 VAC; 4 A, 250 VAC; 1/10 HP |

* Value in () relates to the inductive current charge: $\cos \varphi = 0.65$

Approvals



The FN 380 power entry module combines an IEC inlet, a mains filter with a single or dual-fuse holder and a 2-pole rocker switch. Choosing FN 380 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.

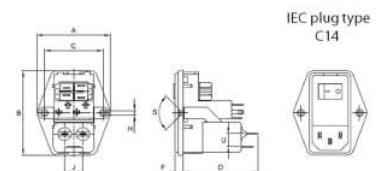
Features and benefits

- 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 Ø 6.3 x 32 mm or EU Ø 5 x 20 mm fuses
- 2-pole rocker switch
- 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

Typical electrical schematic



Filter selection table

| Filter* | Rated current @ 40 °C (25 °C) | Leakage current** @ 230 VAC/50 Hz | Inductance L | Capacitance | | Resistance | Output connections | Fuses*** | Weight |
|---------------------|----------------------------------|--------------------------------------|-----------------|-------------|------------|------------|---|----------|--------|
| | [A] | [µA] | [mH] | Cx [nF] | Cy [nF] | R [kΩ] |  | [Qty] | [g] |
| FN 380-2-2. | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 380-4-2. | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 380-6-2. | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 1 | 55 |
| FN 382-2-2. | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 2 | 55 |
| FN 382-4-2. | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 2 | 55 |
| FN 382-6-2. | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 2 | 55 |
| FN 385-2-2. | 2 (2.4) | 373 | 2.00 | 47 | 2.2 | | 13 | 2 | 65 |
| FN 385-4-2. | 4 (4.8) | 373 | 0.80 | 47 | 2.2 | | 13 | 2 | 65 |
| FN 385-6-2. | 6 (7.2) | 373 | 0.50 | 47 | 2.2 | | 13 | 2 | 65 |
| FN 388-2-2. | 2 (2.4) | 373 | 0.70 | 47 | 2.2 | | 13 | 2 | 60 |
| FN 388-4-2. | 4 (4.8) | 373 | 0.30 | 47 | 2.2 | | 13 | 2 | 60 |
| FN 388-6-2. | 6 (7.2) | 373 | 0.18 | 47 | 2.2 | | 13 | 2 | 60 |
| FN 389-2-2. | 2 (2.4) | 373 | 2.00 | 47 | 2.2 | | 13 | 2 | 70 |
| FN 389-4-2. | 4 (4.8) | 373 | 0.80 | 47 | 2.2 | | 13 | 2 | 70 |
| FN 389-6-2. | 6 (7.2) | 373 | 0.50 | 47 | 2.2 | | 13 | 2 | 70 |
| FN 382B-2-2. | 2 (2.4) | 2 | 0.70 | 47 | | 1000 | 13 | 2 | 55 |
| FN 382B-4-2. | 4 (4.8) | 2 | 0.30 | 47 | | 1000 | 13 | 2 | 55 |
| FN 382B-6-2. | 6 (7.2) | 2 | 0.18 | 47 | | 1000 | 13 | 2 | 55 |
| FN 389B-2-2. | 2 (2.4) | 2 | 2.00 | 47 | | 1000 | 13 | 2 | 70 |
| FN 389B-4-2. | 4 (4.8) | 2 | 0.80 | 47 | | 1000 | 13 | 2 | 70 |
| FN 389B-6-2. | 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 38xx-y-zz

- 1: Fuse Ø5 x 20mm (FUSE-H EUR-1)
 2: Fuse Ø6.3 x 32mm (FUSE-H USA-1)
- 2: Rocker switch, 2-pole, dark not illuminated
- 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
 5: Snap-in version, dual-fuse, high performance
 8: Flange mounting version, dual-fuse, standard performance
 9: Flange mounting version, dual-fuse, high performance

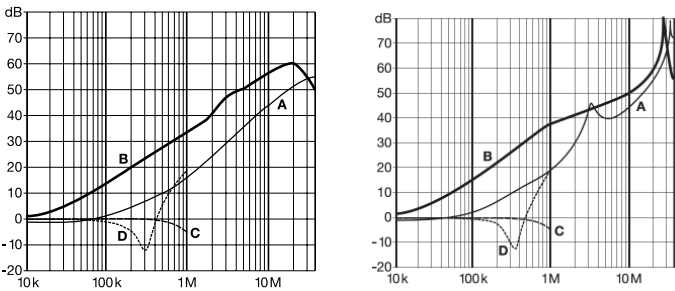
Typical filter attenuation

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

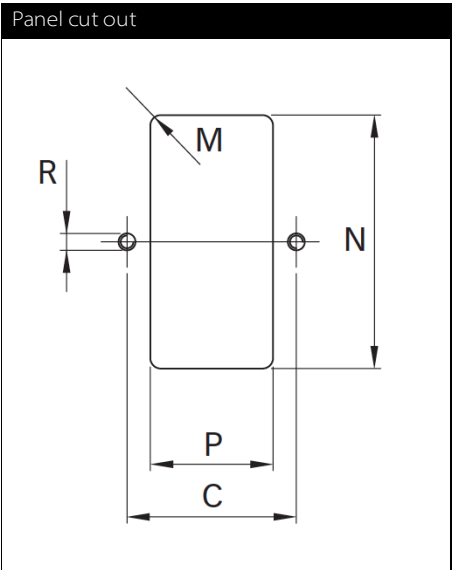
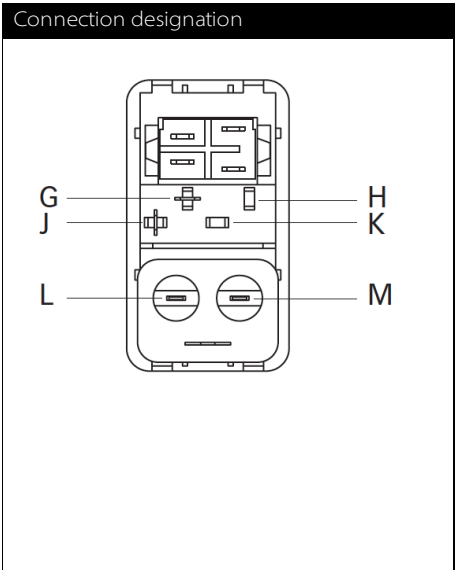
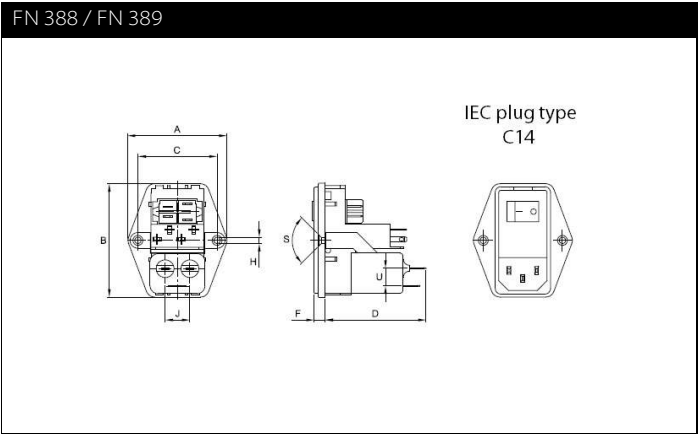
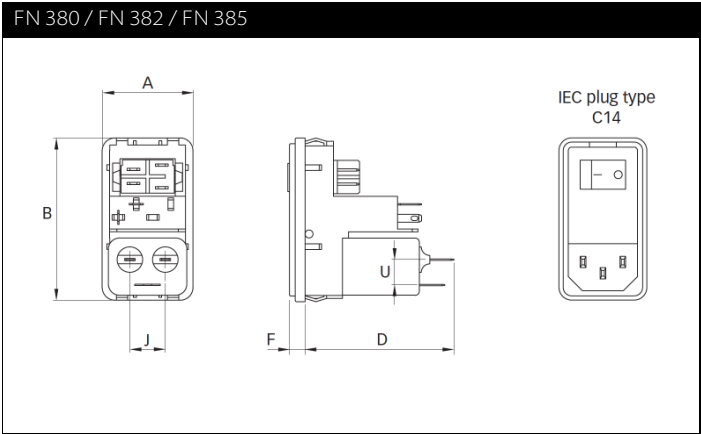
FN 380 / FN 382 / FN 388

FN 385 / FN 389

6A Types only



Mechanical data



Dimensions

| | FN 380 | FN 382 | FN 385 | FN 388 | FN 389 | Tolerances |
|----------|--------------|--------------|--------------|--------------|--------------|------------|
| A | 32 | 32 | 32 | 50 | 50 | ±0.3 |
| B | 58 | 58 | 58 | 58 | 58 | ±0.3 |
| C | | | | 40 | 40 | ±0.1 |
| D | 51 | 51 | 61 | 51 | 61 | |
| F | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | |
| H | | | | Ø 3.3 | Ø 3.3 | |
| 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 | |
| S | | | | 90° | 90° | |
| U | 9 | 9 | 9 | 9 | 9 | |

* For a back panel thickness between 0.8 and 2.0 mm

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

All dimensions in mm; 1 inch = 25.4 mm

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

Please visit www.schaffner.com to find more details on filter connectors.