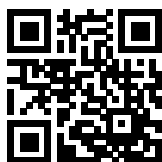


Compact filtered power entry module



- Complies with IEC/EN 60601-1
- Rated currents up to 10 A
- Single or dual-fuse holder
- Fuses Ø5 x 20 mm
- 2-pole rocker switch
- General purpose application
- Optional earth line choke (E type)
- Optional medical versions (B type)



Performance indicators

Attenuation performance



Rated current [A]



Approvals & Compliances



(CQC except HI-types)

Features and Benefits

- High 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
- 2-pole rocker switch
- Custom-specific versions are available on request

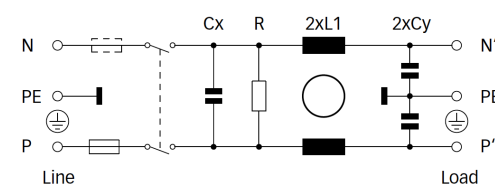
Typical Applications

- 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

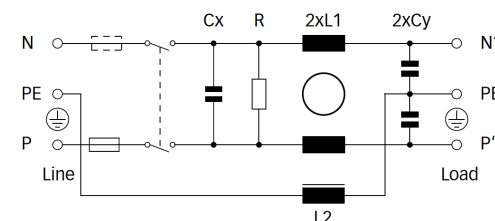
Technical Specifications

| | |
|--|---|
| Maximum continuous operating voltage | 250 VOLT, 50/60 Hz |
| Operating frequency | DC to 400 Hz |
| Rated currents | 1 to 10 A @ 40°C max |
| High potential test voltage | P → PE 2000 VAC for 2 sec (standard types) P → PE 2500 VAC for 2 sec (B types) P → N 760 VAC for 2 sec |
| Protection category | IP 40 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/230 V (Mil-HB-217F) | 1,500,000 hours |
| Fuse holder | 1 or 2 fuses (Ø5 x 20 mm) (certified to IEC 60127-6), power acceptance 1.6W @ Ta 23°C per pole for 2 fuses. 2.5W, if only 1 pole is used. |
| Marking |) Marking max. 250 V ~ (text is print. below fuse symbol) |
| Rocker switch description | |
| Function | 2-pole, dark not illuminated Marking I - 0 |
| Electrical specifications | Inrush current 82 A 6,000 on-off operations according to UL 1054, TV5 10,000 on-off operations according to ENEC |
| Switch ratings | |
| USA (UL) and Canada (C-UL) | 10 A, 125 VAC; 10 A, 250 VAC; 1/3 HP |
| Europe (ENEC) | 10 A (4 A), 250 VAC* |
| Mechanical life | 50,000 cycles |

Typical electrical schematic



E types



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

Filter Selection Table

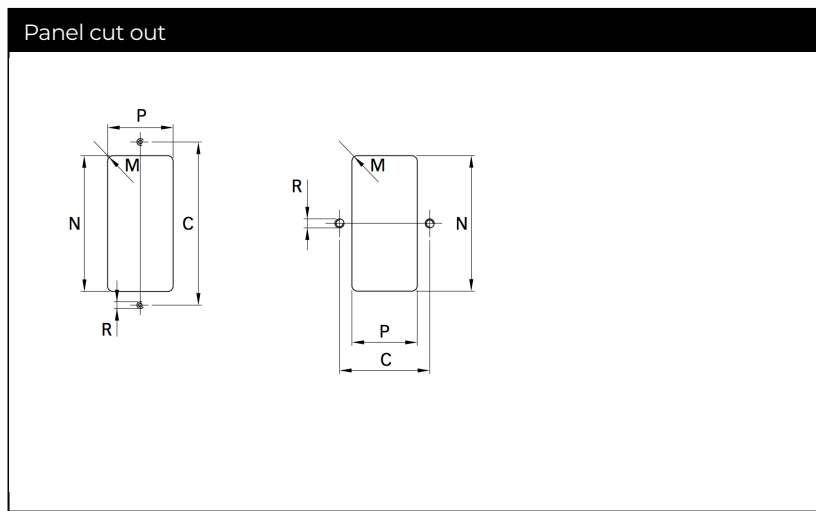
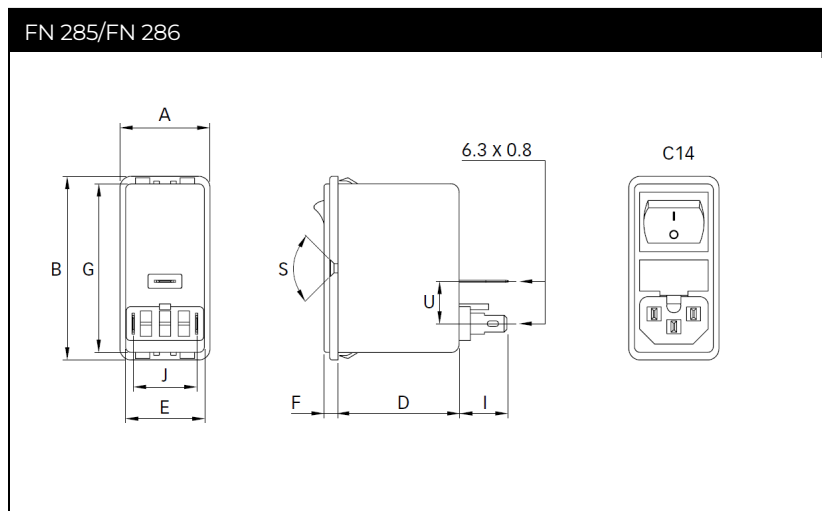
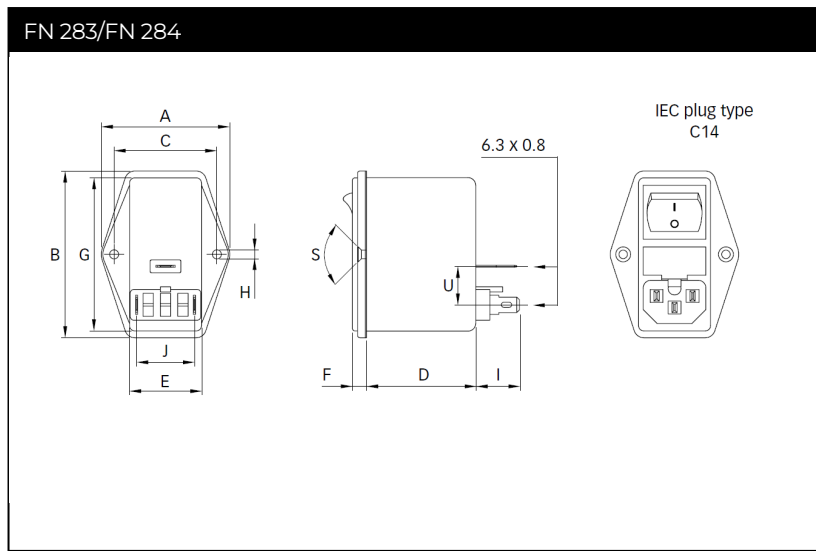
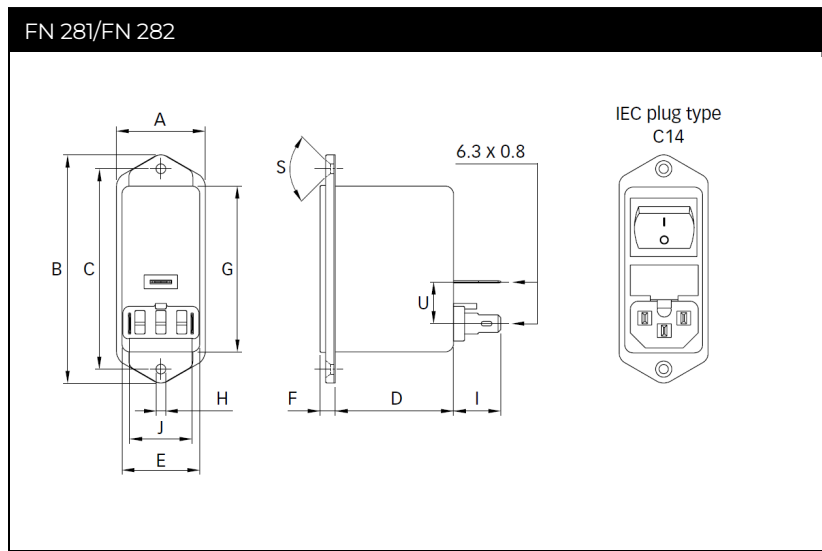
| Filter | Rated current @ 40°C (25°C) [A] | Leakage current* @ 230 VAC/50 Hz [µA] | Inductance** | | Capacitance** | | Resistance** R [kΩ] | Output connections | Fuses*** [Qty] | Weight [g] | |
|-----------------------|---------------------------------------|---|--------------|------------|---------------|------------|---------------------------|-----------------------|-------------------|---------------|-----|
| | | | L1 [mH] | L2 [mH] | Cx [nF] | Cy [nF] | | | | | |
| FN 281-1-06 | 1 (1.2) | 373 | 7.5 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 281-2-06 | 2 (2.4) | 373 | 2 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 281-4-06 | 4 (4.8) | 373 | 1 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 281-6-06 | 6 (7.2) | 373 | 0.45 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 281-10-06 | 10 (11.6) | 373 | 0.34 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 282-1-06 | 1 (1.2) | 373 | 7.5 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 282-2-06 | 2 (2.4) | 373 | 2 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 282-4-06 | 4 (4.8) | 373 | 1 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 282-6-06 | 6 (7.2) | 373 | 0.45 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 282-10-06 | 10 (11.6) | 373 | 0.34 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 283-1-06 | 1 (1.2) | 373 | 7.5 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 283-2-06 | 2 (2.4) | 373 | 2 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 283-4-06 | 4 (4.8) | 373 | 1 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 283-6-06 | 6 (7.2) | 373 | 0.45 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 283-10-06 | 10 (11.6) | 373 | 0.34 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 284-1-06 | 1 (1.2) | 373 | 7.5 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 284-2-06 | 2 (2.4) | 373 | 2 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 284-4-06 | 4 (4.8) | 373 | 1 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 284-6-06 | 6 (7.2) | 373 | 0.45 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 284-10-06 | 10 (11.6) | 373 | 0.34 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 285-1-06 | 1 (1.2) | 373 | 7.5 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 285-2-06 | 2 (2.4) | 373 | 2 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 285-4-06 | 4 (4.8) | 373 | 1 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 285-6-06 | 6 (7.2) | 373 | 0.45 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 285-10-06 | 10 (11.6) | 373 | 0.34 | | | 220 | 2.2 | 1000 | -06 | 1 | 90 |
| FN 286-1-06 | 1 (1.2) | 373 | 7.5 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 286-2-06 | 2 (2.4) | 373 | 2 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 286-4-06 | 4 (4.8) | 373 | 1 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 286-6-06 | 6 (7.2) | 373 | 0.45 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 286-10-06 | 10 (11.6) | 373 | 0.34 | | | 220 | 2.2 | 1000 | -06 | 2 | 90 |
| FN 283 E-1-06 | 1 (1.2) | 373 | 7.5 | 0.4 | | 220 | 2.2 | 1000 | -06 | 1 | 100 |
| FN 283 E-2-06 | 2 (2.4) | 373 | 2 | 0.4 | | 220 | 2.2 | 1000 | -06 | 1 | 100 |
| FN 283 E-4-06 | 4 (4.8) | 373 | 1 | 0.4 | | 220 | 2.2 | 1000 | -06 | 1 | 100 |
| FN 283 E-6-06 | 6 (7.2) | 373 | 0.45 | 0.4 | | 220 | 2.2 | 1000 | -06 | 1 | 100 |
| FN 284 E-1-06 | 1 (1.2) | 373 | 7.5 | 0.4 | | 220 | 2.2 | 1000 | -06 | 2 | 100 |
| FN 284 E-2-06 | 2 (2.4) | 373 | 2 | 0.4 | | 220 | 2.2 | 1000 | -06 | 2 | 100 |
| FN 284 E-4-06 | 4 (4.8) | 373 | 1 | 0.4 | | 220 | 2.2 | 1000 | -06 | 2 | 100 |
| FN 284 E-6-06 | 6 (7.2) | 373 | 0.45 | 0.4 | | 220 | 2.2 | 1000 | -06 | 2 | 100 |
| FN 282 B-1-06 | 1 (1.2) | 2 | 7.5 | | | 220 | | 1000 | -06 | 2 | 90 |
| FN 282 B-2-06 | 2 (2.4) | 2 | 2 | | | 220 | | 1000 | -06 | 2 | 90 |
| FN 282 B-4-06 | 4 (4.8) | 2 | 1 | | | 220 | | 1000 | -06 | 2 | 90 |
| FN 282 B-6-06 | 6 (7.2) | 2 | 0.45 | | | 220 | | 1000 | -06 | 2 | 90 |
| FN 282 B-10-06 | 10 (11.6) | 2 | 0.34 | | | 220 | | 1000 | -06 | 2 | 90 |

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

** Tolerances apply: Inductance: -30/+50%, Capacitance: ±20%, Resistance: ±10%

*** Filters are delivered without fuse.

Mechanical Data



Dimensions

| | FN 281 | FN 282 | FN 283 | FN 284 | FN 285 | FN 286 | Tolerances |
|----------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|
| A | 32 | 32 | 50 | 50 | 32 | 32 | ±0.3 |
| B | 82 | 82 | 65 | 65 | 65 | 65 | ±0.3 |
| C | 72 | 72 | 40 | 40 | | | ±0.1 |
| D | 43.1 | 43.1 | 43.1 | 43.1 | 43.6 | 43.6 | ±0.3 |
| E | 28.5 | 28.5 | 28.5 | 28.5 | 28.5 | 28.5 | ±0.25 |
| F | 5.5 | 5.5 | 5.5 | 5.5 | 5 | 5 | ±0.3 |
| G | 59.95 max. | 59.95 max. | 59.95 max. | 59.95 max. | 59.95 max. | 59.95 max. | |
| H | Ø3.5 | Ø3.5 | Ø3.3 | Ø3.3 | | | |
| I | 13.4 | 16.2 | 13.4 | 16.2 | 13.9 | 16.7 | ±0.3 |
| J | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | |
| M | R ≤2.5 | R ≤2.5 | R ≤2.5 | R ≤2.5 | R ≤2.5 | R ≤2.5 | |
| N | 60 | 60 | 60 | 60 | 61.5+0.2/-0* | 61.5+0.2/-0* | +0.5/-0 |
| P | 29 | 29 | 29 | 29 | 29 | 29 | +0.5/-0 |
| R | M3 | M3 | M3 | M3 | | | |
| S | 90° | 90° | 90° | 90° | | | |

* For a panel thickness between 0.8 and 3 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.

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