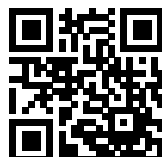


# Versatile Filtered Power Entry Module



- Rated currents up to 6 A
- Single or dual-fuse holder
- Fuses Ø6.3 x 32 mm Ø5 x 20 mm
- 2-pole rocker switch
- General purpose application
- Optional medical versions (B type)



### Performance indicators

Attenuation performance



Rated current [A]



### Approvals & Compliances



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
- Front or snap-in mounting
- Single or dual-fuse holder
- USA Ø6.3 x 32 mm or EU Ø5 x 20 mm fuses
- 2-pole rocker switch

## Technical Specifications

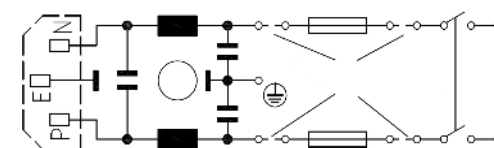
<b>Maximum continuous operating voltage</b>	250 VAC, 50/60 Hz
<b>Operating frequency</b>	50 to 400 Hz DC to 400 Hz
<b>Rated currents</b>	2 to 6 A @ 40°C max
<b>High potential test voltage</b>	P → PE 2000 VAC for 2 sec (standard types) P → PE 2500 VAC for 2 sec (B types) P → N 760 VAC for 2 sec
<b>Protection category</b>	IP 40 according to IEC 60529
<b>Temperature range (operation and storage)</b>	-25°C to +85°C (25/85/21)
<b>Design corresponding to</b>	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
<b>Flammability corresponding to</b>	UL 94 V-2 or better
<b>MTBF @ 40°C/230 V (Mil-HB-217F)</b>	550,000 hours
<b>Function</b>	2-pole, dark not illuminated Marking I - 0
<b>Electrical specifications</b>	Inrush current 51 A 6,000 on-off operations according to UL 1054, TV 5 10,000 on-off operations according to ENEC
<b>Mechanical life</b>	50,000 cycles
<b>Switch ratings</b>	
<b>Europe (ENEC)</b>	6 A (4 A), 250 VAC*
<b>USA (UL)</b>	6 A, 125 VAC; 4 A, 250 VAC; 1/10 HP
<b>Canada (CSA)</b>	6 A, 125 VAC; 4 A, 250 VAC; 1/10 HP

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

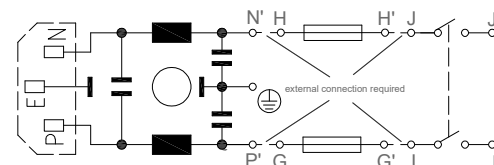
## Typical Applications

- 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 (single fuse)



### Typical electrical schematic (dual fuse)



## Filter Selection Table

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

\* Select the requested fuse holder for fuse EUR-1 or USA-1 (z).

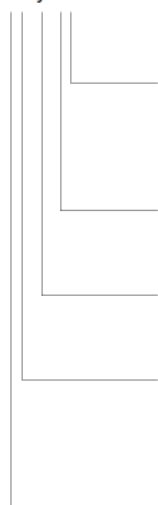
\*\* Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

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

\*\*\*\* Filters are delivered without fuse.

## Product selector

FN 38xx-y-zz



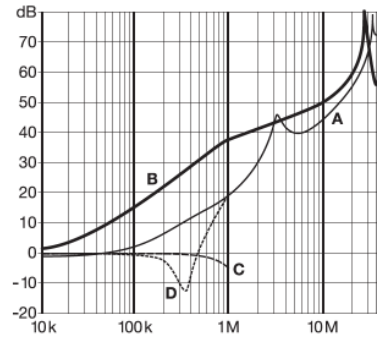
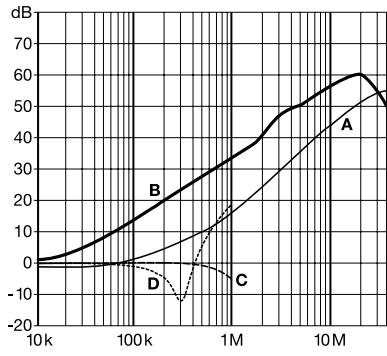
- 1: Fuse Ø5 x 20mm (FUSE-H EUR-1)
- 2: Fuse Ø6.3 x 32mm (FUSE-H USA-1)
- 2: Rocker switch, 2-pole, dark not illuminated
- 2 to 6: Rated current
- Blank: Standard version
- B: Medical version (with bleed resistor and without Y2-capacitor)
- 0: Snap-in version, single-fuse, standard performance
- 2: Snap-in 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

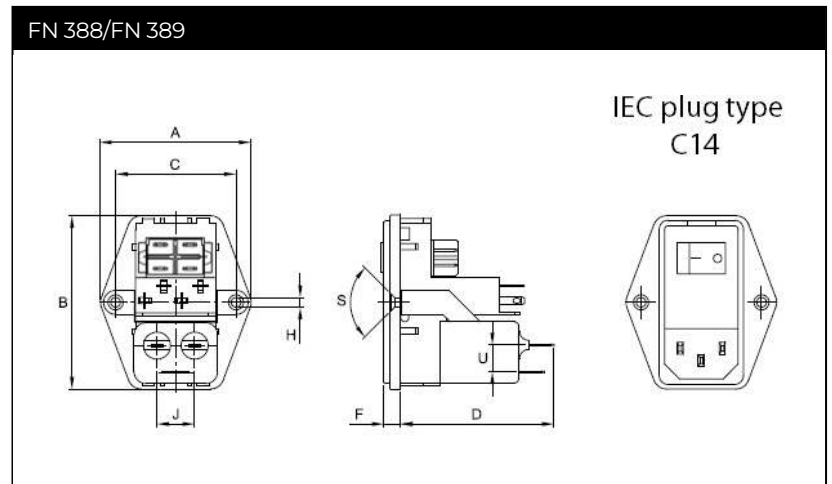
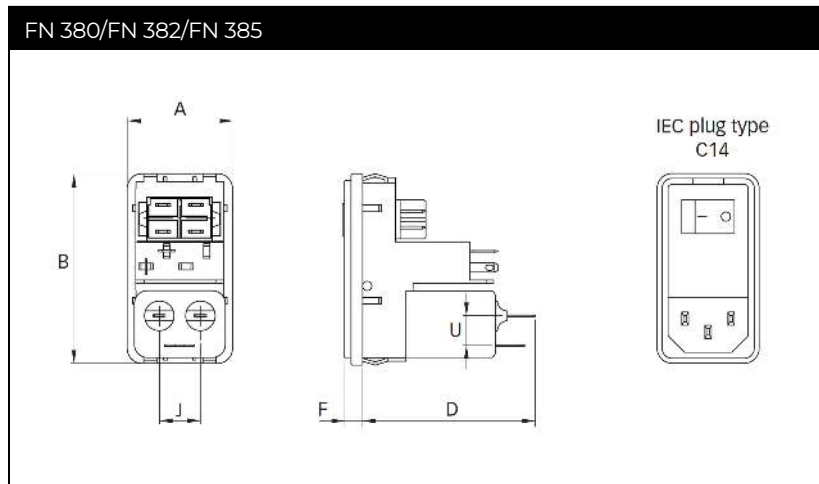
Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym; C=0.1 Ω/100 Ω sym; D=100 Ω/0.1 Ω sym

FN 380/FN 382/FN 388

FN 385/FN 389



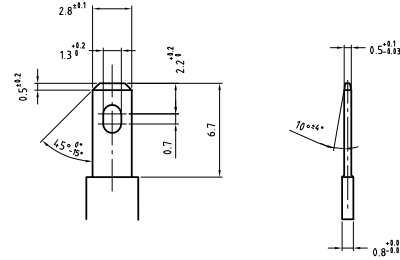
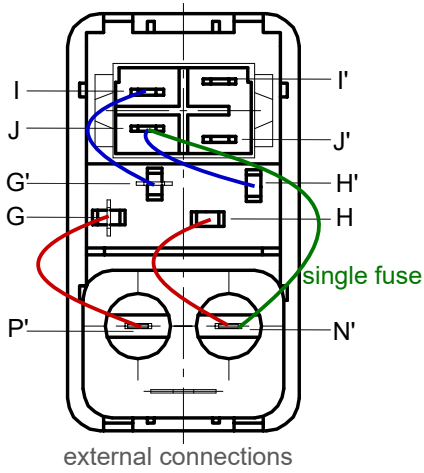
### Mechanical Data



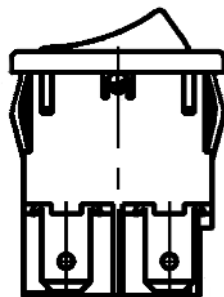
Connection designation

Output terminal (Filter and Fuse)

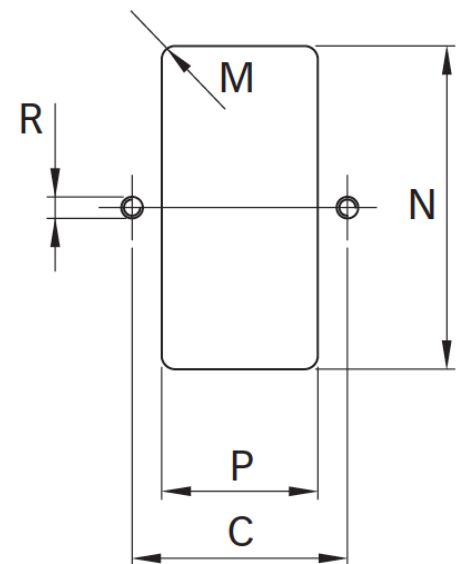
Panel cut out



Output terminal (Switch)



Blade terminals of switch acc. DIN 46 244-A4.8-0.8 (do not connect by soldering)



## Dimensions

	FN 380	FN 382	FN 385	FN 388	FN 389	Tolerances
<b>A</b>	32	32	32	50	50	±0.3
<b>B</b>	58	58	58	58	58	±0.3
<b>C</b>				40	40	±0.1
<b>D</b>	51	51	61	51	61	
<b>F</b>	5.5	5.5	5.5	5.5	5.5	
<b>H</b>				Ø3.3	Ø3.3	
<b>J</b>	12.5	12.5	12.5	12.5	12.5	
<b>M</b>	R ≤2	R ≤2	R ≤2	R ≤2	R ≤2	±0.1
<b>N</b>	55.9*/56.2**	55.9*/56.2**	55.9*/56.2**	55.9*/56.2**	55.9*/56.2**	+0.2/-0
<b>P</b>	28.5	28.5	28.5	28.5	28.5	+0.2/-0
<b>R</b>				M3	M3	
<b>S</b>				90°	90°	
<b>U</b>	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](http://www.schaffner.com) to find more details on filter connectors.

## Headquarters, Global Innovation and Development

### Switzerland

#### Schaffner Holding AG

Industrie Nord  
 Nordstrasse 11e  
 4542  
 Luterbach  
 +41 32 681 66 26  
[info@schaffner.com](mailto:info@schaffner.com)

## Sales and Application Centers

### China

#### Schaffner EMC Ltd. Shanghai

T20-3 C, No 565 Chuangye Road, Pudong district  
 201201  
 Shanghai  
 +86 2138139500  
[cschina@schaffner.com](mailto:cschina@schaffner.com)

### Finland

#### Schaffner Oy

Sauvonrinne 19 H  
 8500  
 Lohja  
 +358 50 468 7284  
[finlandsales@schaffner.com](mailto:finlandsales@schaffner.com)

### France

#### Schaffner EMC S.A.S.

16-20 Rue Louis Rameau  
 95875  
 Bezons  
 +33 1 34 34 30 60  
[francesales@schaffner.com](mailto:francesales@schaffner.com)

### Germany

#### Schaffner Deutschland GmbH

Schoemperlenstrasse 12B  
 76185  
 Karlsruhe  
 +49 721 56910  
[germanysales@schaffner.com](mailto:germanysales@schaffner.com)

### India

#### Schaffner India Pvt. Ltd

Regus World Trade Centre  
 WTC, 22nd Floor Unit No 2238, Brigade Gateway Campus, 26/1, Dr. Rajkumar Road Malleshwaram (W)  
 560055  
 Bangalore  
 +91 8067935355  
[indiasales@schaffner.com](mailto:indiasales@schaffner.com)

### Italy

#### Schaffner EMC S.r.l.

Via Ticino, 30  
 20900  
 Monza (MB)  
 +39 039 21 41 070  
[italysales@schaffner.com](mailto:italysales@schaffner.com)

### Japan

#### Schaffner EMC K.K.

ISM Sangenjaya 7F  
 1-32-12 Kamiyama, Setagaya-ku  
 154-0011  
 Tokyo  
 +81 3 5712 3650  
[japansales@schaffner.com](mailto:japansales@schaffner.com)

### Singapore

#### Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1, #05-09, Kampong Ubi Industrial Estate  
 408705  
 Singapore  
 +65 63773283  
[singaporesales@schaffner.com](mailto:singaporesales@schaffner.com)

### Spain

#### Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E El Soto de Moraleja, Alcobendas  
 28109  
 Madrid  
 +34 917 912 900  
[spainsales@schaffner.com](mailto:spainsales@schaffner.com)

### Sweden

#### Schaffner EMC AB

Östermalmstrorg 1  
 114 42  
 Stockholm  
 +46 8 5050 2425  
[swedensales@schaffner.com](mailto:swedensales@schaffner.com)

### Switzerland

#### Schaffner EMV AG

Industrie Nord  
 Nordstrasse 11e  
 4542  
 Luterbach  
 +41 32 681 66 26  
[switzerlandsales@schaffner.com](mailto:switzerlandsales@schaffner.com)

### Taiwan

#### Schaffner EMV Ltd.

U-Town  
 20 Floor-2, No 97, Section 1, XinTai 5th Road, XiZhi District  
 22175  
 New Taipei City  
 +886 226975500  
[taiwansales@schaffner.com](mailto:taiwansales@schaffner.com)

### Thailand

#### Schaffner EMC Co. Ltd.

Sathorn Square Tower  
 Room 3780, 37FL, 98 North-Sathorn Rd, Silom, Bangrak  
 10500  
 Bangkok  
 +66 621056397  
[thailandsales@schaffner.com](mailto:thailandsales@schaffner.com)

### United Kingdom

#### Schaffner Ltd.

1, Oakmede Place  
 Terrace Road  
 RG42 4JF  
 Binfield  
 +44 118 9770070  
[uksales@schaffner.com](mailto:uksales@schaffner.com)

### United States

#### Schaffner EMC Inc.

52 Mayfield Avenue  
 Edison, New Jersey  
 +1 732 225 9533  
[usasales@schaffner.com](mailto:usasales@schaffner.com)

To find your local partner within Schaffner's global network [schaffner.com](http://schaffner.com)

© 2022 Schaffner Group

The content of this document has been carefully checked and understood. However, neither Schaffner nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG. Latest publications and a complete disclaimer can be downloaded from the Schaffner website. All trademarks recognized.