

# 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]



## Approvals



The FN 380 power entry module combines an IEC inlet, a mains filter with single or dualfuse 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

## Technical specifications


<b>Maximum continuous operating voltage</b>	250 VAC, 50/60 Hz
<b>Operating frequency</b>	50 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 → N 760 VAC for 2 sec P → PE 2500 VAC for 2 sec (B types)
<b>Protection category</b>	IP40 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/230V (Mil-HB-217F)</b>	550,000 hours
<b>Rocker switch description</b>	
<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>	6A, 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

### Filter selection table

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

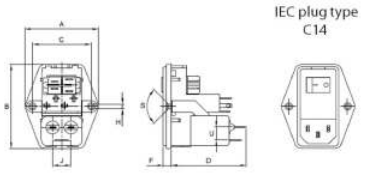
\*\*\* Filters are delivered without fuse.

**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 electrical schematic**



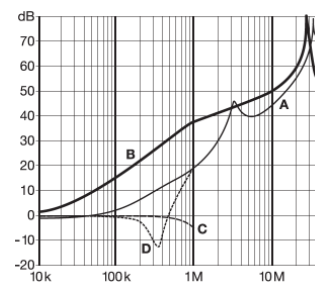
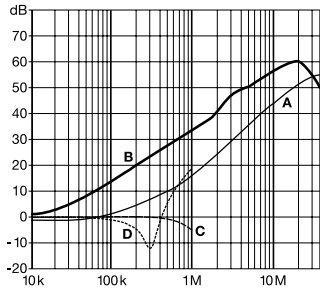
IEC plug type C14

### Typical filter attenuation

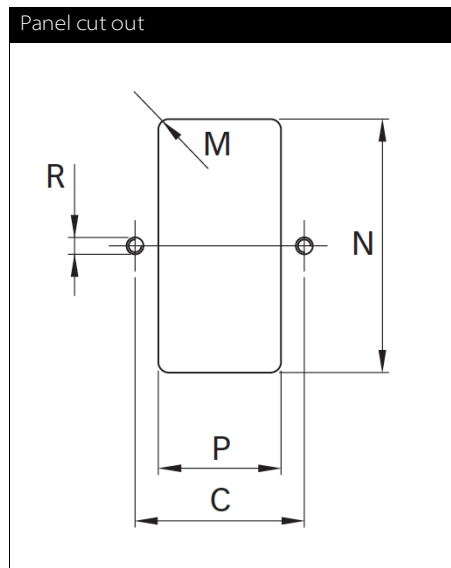
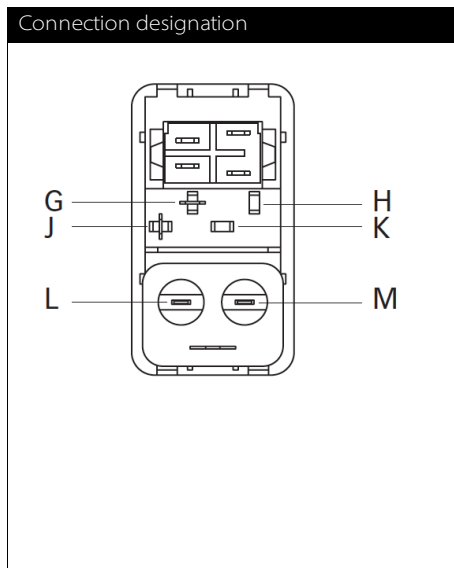
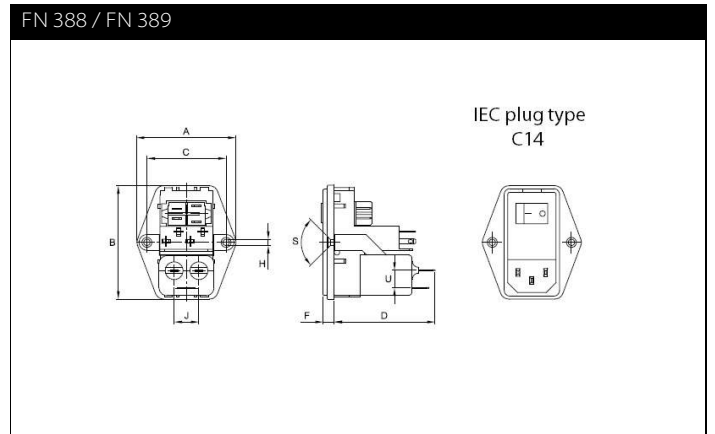
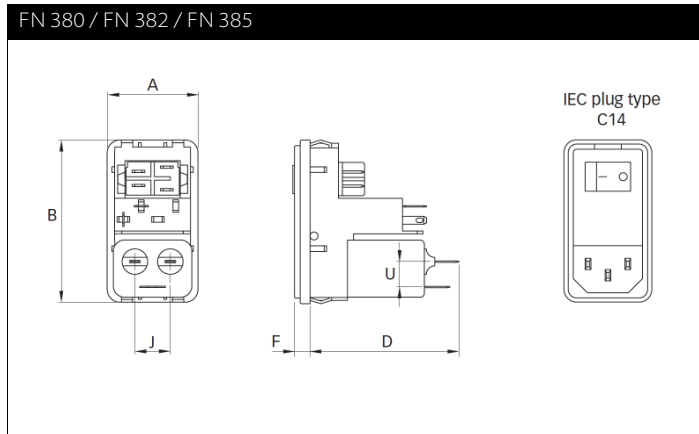
Per CISPR 17; A = 50 Ω/50 Ω sym; B = 50 Ω/50 Ω asym; C = 0.1 Ω/100 Ω sym; D = 100 Ω/0.1 Ω sym

FN 380 / FN 382 / FN 388

FN 385 / FN 389



### Mechanical data



## 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>				Ø 3.3	Ø 3.3	
<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 center

### Switzerland

#### Schaffner Group

Nordstrasse 11  
4542 Luterbach  
T +41 32 6816 626  
F +41 32 6816 630  
[info@schaffner.com](mailto:info@schaffner.com)  
<http://www.schaffner.com>



## Sales and application centers

### China

#### Schaffner EMC Ltd. Shanghai

T20-3, No 565 Chuangye Road  
Pudong New Area  
201201 Shanghai  
T +86 21 3813 9500  
F +86 21 3813 9501 / 02  
[cschina@schaffner.com](mailto:cschina@schaffner.com)  
<http://www.schaffner.com.cn/>

### Finland

#### Schaffner Oy

Sauvonrinne 19 H  
08500 Lohja  
T +358 19 35 72 71  
[finlandsales@schaffner.com](mailto:finlandsales@schaffner.com)

### France

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

112, Quai de Bezons  
Boîte postale 133  
95103 Argenteuil  
T +33 1 34 34 30 60  
F +33 1 39 47 02 28  
[francesales@schaffner.com](mailto:francesales@schaffner.com)

### Germany

#### Schaffner Deutschland GmbH

Schoemperlenstrasse 12B  
76185 Karlsruhe  
T +49 721 56910  
F +49 721 569110  
[germanysales@schaffner.com](mailto:germanysales@schaffner.com)

### Italy

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

Via Galileo Galilei 47  
20092 Cinisello Balsamo (MI)  
T +39 02 66 04 30 45/47  
F +39 02 61 23 943  
[italysales@schaffner.com](mailto:italysales@schaffner.com)

### Japan

#### Schaffner EMC K.K.

1-32-12, Kamiyama, Setagaya-ku  
7F Mitsui-seimei Sangenjaya Bldg.  
154-0011 Tokyo  
T +81 3 5712 3650  
F +81 3 5712 3651  
[japansales@schaffner.com](mailto:japansales@schaffner.com)  
<http://www.schaffner.jp>

### Singapore

#### Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1  
05-09 Kampong Ubi Industrial Estate  
408705 Singapore  
T +65 6377 3283  
F +65 6377 3281  
[singaporesales@schaffner.com](mailto:singaporesales@schaffner.com)

### Spain

#### Schaffner EMC España

Calle Caléndula 93  
Miniparc III, Edificio E  
El Soto de la Moraleja  
Alcobendas  
28109 Madrid  
T +34 618 176 133  
[spainsales@schaffner.com](mailto:spainsales@schaffner.com)

### Sweden

#### Schaffner EMC AB

Turebergstorg 1, 6  
19147 Sollentuna  
T +46 8 5792 1121 / 22  
F +46 8 92 96 90  
[swedensales@schaffner.com](mailto:swedensales@schaffner.com)

### Switzerland

#### Schaffner EMV AG

Nordstrasse 11  
4542 Luterbach  
T +41 32 6816 626  
F +41 32 6816 641  
[sales@schaffner.ch](mailto:sales@schaffner.ch)

### Taiwan R.O.C.

#### Schaffner EMV Ltd.

6 Floor, No. 413  
Rui Guang Road  
114 Neihu District Taipei City  
T +886 2 87525050  
F +886 2 87518086  
[taiwansales@schaffner.com](mailto:taiwansales@schaffner.com)

### Thailand

#### Schaffner EMC Co. Ltd.

Northern Region Industrial Estate  
67 Moo 4 Tambon Ban Klang  
Amphur Muang P.O. Box 14  
51000 Lamphun  
T +66 53 58 11 04  
F +66 53 58 10 19  
[thailandsales@schaffner.com](mailto:thailandsales@schaffner.com)

### UK

#### Schaffner Ltd.

5 Ashville Way  
Molly Millars Lane  
Wokingham  
RG41 2PL Berkshire  
T +44 118 9770070  
F +44 118 9792969  
[uksales@schaffner.com](mailto:uksales@schaffner.com)  
<http://www.schaffner.uk.com>

### USA

#### Schaffner EMC Inc.

52 Mayfield Avenue  
08837 Edison, New Jersey  
T +1 800 367 5566  
T +1 732 225 9533  
F +1 732 225 4789  
[usasales@schaffner.com](mailto:usasales@schaffner.com)  
<http://www.schaffner.com/us>

#### Schaffner MTC LLC

6722 Thirlane Road  
24019 Roanoke, Virginia  
T +1 276 228 7943  
F +1 276 228 7953  
<http://www.schaffner-mtc.com>

#### Schaffner Trencos LLC

2550 Brookpark Road  
44134 Cleveland, Ohio  
T +1 216 741 5282  
F +1 216 741 4860  
[www.schaffner-trencos.com](http://www.schaffner-trencos.com)

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