

IEC inlet filters FN 380

Versatile filtered power entry module



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

Approvals

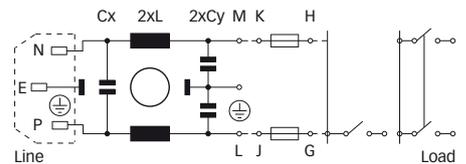


Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	50 to 400Hz
Rated currents:	1 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
Rocker switch description:	
Function:	2-pole, dark not illuminated Marking I - 0
Electrical specifications:	
	Inrush current 51A
	6,000 on-off operations according to UL 1054, TV 5
	10,000 on-off operations according to ENEC
Mechanical life:	
Switch ratings:	50,000 cycles
Switch ratings:	
USA (UL):	6A, 125VAC; 4A, 250VAC; 1/10HP
Canada (CSA):	6A, 125VAC; 4A, 250VAC; 1/10HP
Europe (ENEC):	6A (4A), 250VAC*

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

Typical electrical schematic



Features and benefits

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.

- 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.
- 2-pole rocker switch.
- Voltage selector 110-120V / 220-240V.
- 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

Filter selection table

Filter*	Rated current @ 40°C (25°C)	Leakage current** @ 230VAC/50Hz	Inductance L	Capacitance Cx Cy		Resistance R	Output connections	Fuses*** [Qty]	Weight [g]
	[A]	[µA]	[mH]	[nF]	[nF]	[kΩ]			
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

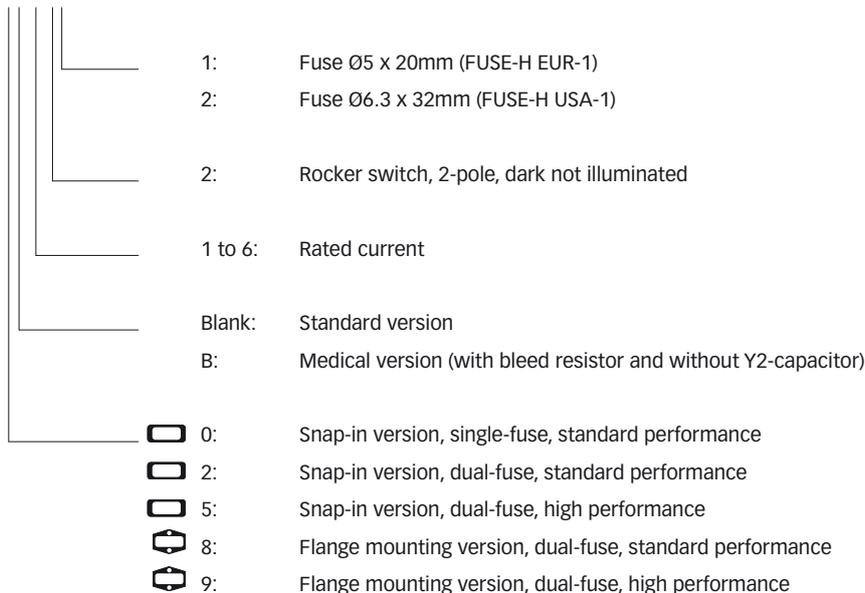
* Select the requested fuse holder for fuse EUR-1 or USA-1.

** 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

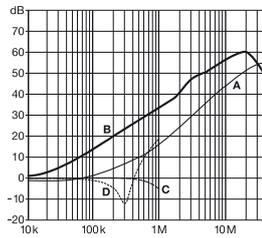


For example: FN 380-6-21, FN 388-4-22, FN 389B-2-21

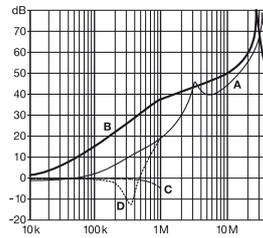
Typical filter attenuation

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

FN 380 / FN 382 / FN 388

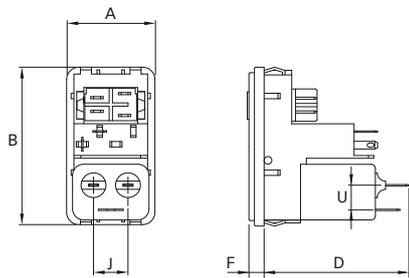


FN 385 / FN 389

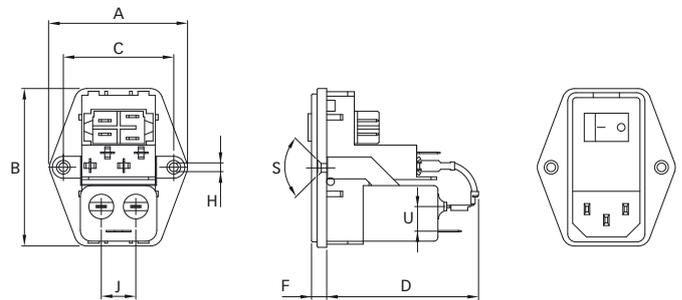


Mechanical data

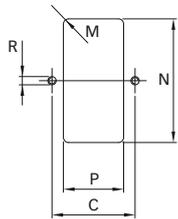
FN 380 / FN 382 / FN 385



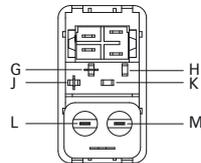
FN 388 / FN 389



Panel cut out



Connection designation



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				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	
S				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



energy efficiency and reliability

Headquarters

Schaffner EMV AG

4542 Luterbach, Switzerland

T +41 32 681 66 26

F +41 32 681 66 41

sales@schaffner.com

www.schaffner.com

China

Schaffner EMC Ltd. Shanghai

T +86 21 6813 9855

cschina@schaffner.com

Finland

Schaffner Oy

T +358 19 357 271

finlandsales@schaffner.com

France

Schaffner EMC S.A.S.

T +33 1 34 34 30 60

francesales@schaffner.com

Germany

Schaffner EMV GmbH

T +49 721 56910

germanysales@schaffner.com

Schaffner Jacke GmbH

T +49 2951 6001 0

jacke-trafo@schaffner.com

Italy

Schaffner EMC S.r.l.

T +39 02 66 04 30 45

italysales@schaffner.com

Japan

Schaffner EMC K.K.

T +81 3 5456 0180

japansales@schaffner.com

Singapore

Schaffner EMC Pte Ltd.

T +65 6377 3283

singaporesales@schaffner.com

Sweden

Schaffner EMC AB

T +46 8 5792 1121

swedensales@schaffner.com

Switzerland

Schaffner EMV AG

T +41 32 681 66 26

sales@schaffner.ch

Taiwan

Schaffner EMV Ltd.

T +886 2 87525050

taiwansales@schaffner.com

Thailand

Schaffner EMC Co. Ltd.

T +66 53 58 11 04

thailandsales@schaffner.com

UK

Schaffner Ltd.

T +44 118 9770070

uksales@schaffner.com

USA

Schaffner EMC Inc.

T +1 732 225 9533

Toll free 1 800 367 5566

usasales@schaffner.com

To find your local partner within Schaffner's global network, please go to

www.schaffner.com

May 2008

© 2008 Schaffner EMC.

Specifications subject to change without notice. All trademarks recognized.

Schaffner is an ISO-registered company. Its products are designed and manufactured under the strict quality and environmental requirements of the ISO 9001 and ISO 14001 standards.

This document has been carefully checked. However, Schaffner does not assume any liability for errors or inaccuracies.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Schaffner:](#)

[FN388B-2-21](#)