

## Versatile Filtered Power Entry Module

**SCHAFFNER**  
energy efficiency and reliability



- Rated currents up to 10A
- For one or two fuses
- Fuses Ø6.3 x 32mm or Ø5 x 20mm
- 2-pole rocker switch
- Voltage selector
- Optional earth line choke (E type)

### Approvals



### Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	50 to 400Hz
Rated currents:	1 to 10A @ 40°C max.
High potential test voltage:	P → PE 2000VAC for 2 sec 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):	2,200,000 hours
<b>Voltage selector description:</b>	
Function:	Series/parallel
<b>Voltage marking:</b>	
Series:	110-120V
Parallel:	220-240V
<b>Rocker switch description:</b>	
Function:	2-pole, dark not illuminated Marking I - 0
<b>Electrical specifications:</b>	
	Inrush current 51A
	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>	
USA (UL) and Canada (C-UL):	10A, 125VAC; 10A, 250VAC; 1/3HP
Europe (ENEC):	10A (4A), 250VAC*

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

The FN 390 power entry module combines an IEC inlet, mains filter with single or dual-fuse holder, voltage selector and 2-pole rocker switch. Choosing FN 390 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. Multiple options designed to offer you the desired solution.

### Features and benefits

- High conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- Rear or front 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 electrical schematic

#### Standard types



#### E types



### 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

Filter selection table

Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 230VAC/50Hz [µA]	Inductance		Cx [nF]	Capacitance		Resistance R [kΩ]	Output connections 	Fuses** [Qty]	Weight [g]
			L1 [mH]	L2 [mH]		Cx1 [nF]	Cy [nF]				
FN 393-1-05-11	1 (1.2)	560	7.5		220	3.3		1000	05-11	1	200
FN 393-2.5-05-11	2.5 (3)	560	2		220	3.3		1000	05-11	1	200
FN 393-6-05-11	6 (7.2)	560	0.45		220	3.3		1000	05-11	1	200
FN 394-1-05-11	1 (1.2)	560	7.5		220	3.3		1000	05-11	2	200
FN 394-2.5-05-11	2.5 (3)	560	2		220	3.3		1000	05-11	2	200
FN 394-6-05-11	6 (7.2)	560	0.45		220	3.3		1000	05-11	2	200
FN 393E-1-05-11	1 (1.2)	560	7.5	0.4	220	3.3		1000	05-11	1	205
FN 393E-2.5-05-11	2.5 (3)	560	2	0.4	220	3.3		1000	05-11	1	205
FN 393E-6-05-11	6 (7.2)	560	0.45	0.4	220	3.3		1000	05-11	1	205
FN 394E-1-05-11	1 (1.2)	560	7.5	0.4	220	3.3		1000	05-11	2	205
FN 394E-2.5-05-11	2.5 (3)	560	2	0.4	220	3.3		1000	05-11	2	205
FN 394E-6-05-11	6 (7.2)	560	0.45	0.4	220	3.3		1000	05-11	2	205
FN 1393-1-05-11	1 (1.2)	797	16		220	100	4.7	470	05-11	1	210
FN 1393-2.5-05-11	2.5 (3)	797	8		220	100	4.7	470	05-11	1	210
FN 1393-6-05-11	6 (7.2)	797	2.5		220	100	4.7	470	05-11	1	210
FN 1393-10-05-11	10 (12)	797	0.6		220	100	4.7	470	05-11	1	210
FN 1394-1-05-11	1 (1.2)	797	16		220	100	4.7	470	05-11	2	210
FN 1394-2.5-05-11	2.5 (3)	797	8		220	100	4.7	470	05-11	2	210
FN 1394-6-05-11	6 (7.2)	797	2.5		220	100	4.7	470	05-11	2	210
FN 1394-10-05-11	10 (12)	797	0.6		220	100	4.7	470	05-11	2	210

\* 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.

Note: for medical versions please contact your local partner within Schaffner's global network.

Product selector

FN (1)39xx-y-zz



05-11: Faston 6.3 x 0.8mm

1 to 10: Rated current

Blank: Standard version

E: Optional earth line choke

3: 1 fuse (Ø5 x 20mm or Ø6.3 x 32mm)

4: 2 fuses (Ø5 x 20mm or Ø6.3 x 32mm)

Blank: Standard version

1: Additional Cx1 capacitor and higher inductivity

For example: FN 393-1-05-11, FN 394E-2.5-05-11, FN 1394-10-05-11

**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 39x: 1A types



FN 39x: 2.5A types



FN 39x: 6A types



FN 139x: 1A types



FN 139x: 2.5A types

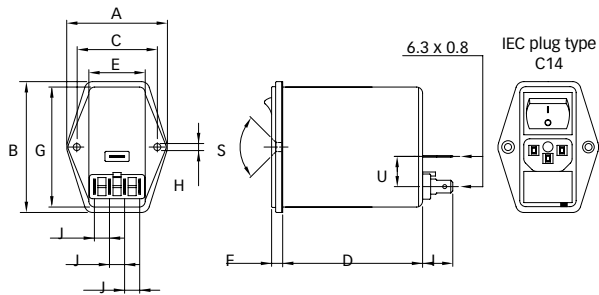


FN 139x: 6 and 10A types



**Mechanical data**

1 to 10A types



Panel cut out



**Dimensions**

	1 to 10A	Tolerances
A	50	±0.3
B	65	±0.3
C	40	±0.1
D	69.5	±0.3
E	28	
F	5.5	±0.3
G	59.6	
H	Ø3.3	
I	15	
J	7.5	
M	R ≤ 2.5	
N	60.03	±0.2
P	29.03	±0.2
R	M3	
S	90°	
U	15	

All dimensions in mm; 1 inch = 25.4mm  
Tolerances according: ISO 2768-m / EN 22768-m

**Headquarters and  
global innovation and  
development center**

**Schaffner Group**  
Nordstrasse 11  
4542 Luterbach  
Switzerland  
T +41 32 681 66 26  
F +41 32 681 66 30  
info@schaffner.ch  
[www.schaffner.com](http://www.schaffner.com)

**Sales and application centers**

**China**  
**Schaffner EMC Ltd. Shanghai**  
Building 11, Lane 1365  
East Kangqiao Road  
Shanghai 201319  
T +86 21 6813 9855  
F +86 21 6813 9811  
cschina@schaffner.com  
[www.schaffner.com](http://www.schaffner.com)

**Germany**  
**Schaffner Deutschland GmbH**  
Schoemperlenstrasse 12B  
76185 Karlsruhe  
T +49 721 56910  
F +49 721 569110  
germanysales@schaffner.com

**Finland**  
**Schaffner Oy**  
Tynninkuja 7  
08700 Lohja  
T +358 19 35 72 71  
F +358 19 32 66 10  
finlandsales@schaffner.com

**France**  
**Schaffner EMC S.A.S.**  
112, Quai de Bezons  
95103 Argenteuil  
T +33 1 34 34 30 60  
F +33 1 39 47 02 28  
francesales@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

**Japan**  
**Schaffner EMC K.K.**  
Mitsui-Seimei Sangenjaya Bldg. 7F  
1-32-12, Kamiyama, Setagaya-ku  
Tokyo 154-0011  
T +81 3 5712 3650  
F +81 3 5712 3651  
japansales@schaffner.com  
[www.schaffner.jp](http://www.schaffner.jp)

**Sweden**  
**Schaffner EMC AB**  
Turebergstorg 1, 6  
19147 Sollentuna  
T +46 8 5792 1121/22  
F +46 8 92 96 90  
swedensales@schaffner.com

**Switzerland**  
**Schaffner EMV AG**  
Nordstrasse 11  
4542 Luterbach  
T +41 32 681 66 26  
F +41 32 681 66 41  
sales@schaffner.ch

**Singapore**  
**Schaffner EMC Pte Ltd.**  
Blk 3015A Ubi Road 1  
05-09 Kampong Ubi Industrial  
Estate  
T +65 6377 3283  
F +65 6377 3281  
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

**Taiwan**  
**Schaffner EMV Ltd.**  
6th Floor, No 413  
Rui Guang Road  
Neihu District  
Taipei City 114  
T +886 2 87525050  
F +886 2 87518086  
taiwansales@schaffner.com

**Thailand**  
**Schaffner EMC Co. Ltd.**  
Northern Region Industrial Estate  
67 Moo 4 Tambon Ban Klang  
Amphur Muang P.O. Box 14  
Lamphun 51000  
T +66 53 58 11 04  
F +66 53 58 10 19  
thailsales@schaffner.com

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

**USA**  
**Schaffner EMC Inc.**  
52 Mayfield Avenue  
Edison, New Jersey 08837  
T +1 732 225 9533  
F +1 732 225 4789  
usasales@schaffner.com  
[www.schaffner.com/us](http://www.schaffner.com/us)

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

[www.schaffner.com](http://www.schaffner.com)

May 2011

© 2011 Schaffner EMC.  
Specifications subject to change without  
notice. All trademarks recognized.

Schaffner is an ISO-registered company.  
Its products are designed and manufac-  
tured under the strict quality and environ-  
mental 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 inac-  
curacies.

# Mouser Electronics

Authorized Distributor

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

## Schaffner:

[FN394-6-05-11](#) [FN1394-6-05-11](#) [FN1393-6-05-11](#) [FN1393-10-05-11](#) [FN1394-10-05-11](#) [FN393-2.5-05-11](#) [FN393-1-05-11](#) [FN393-6-05-11](#) [FN1393-2.5-05-11](#) [FN394-1-05-11](#) [FN394-2.5-05-11](#) [FN394E-1-05-11](#) [FN394E-2.5-05-11](#)  
[FN394E-6-05-11](#)

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9