

Versatile Filtered Power Entry Module

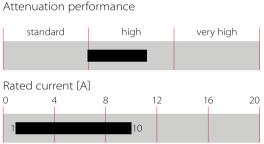


Rated currents up to 10 A		Rated	currents	up	to	10 A	
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- For one or two fuses
- Fuses ø6.3 x 32 mm or ø5 x 20 mm
 2-pole rocker switch
 Voltage selector
- Optional earth line choke (E type)



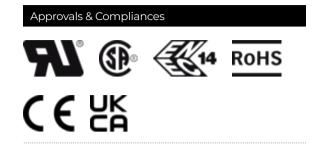
Performance indicators



Technical Specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz			
Nominal operating voltage	230 VAC			
Rated currents	1 to 10 A @ 40°C			
Operating frequency	10 A (4 A), 250 VAC*			
High potential test voltage	P -> PE 2000 VAC for 2 sec P -> N 760 VAC for 2 sec			
Temperature range (operation and storage)	-25℃ to +85℃ (25/85/21)			
Protection category	IP 40 according to IEC 60529			
Flammability corresponding to	UL 94V-0			
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939			
MTBF (Mil-HB-217F)	>2,200,000 h @ 40°C/230 V			
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.			
Rocker switch description				
Switch ratings				
Function	Series/parallel Marking I - 0			
Electrical specifications	Inrush current 51 A 6,000 on-off operations according to UL 1054, TV 5 10,000 on-off operations according to ENEC			
USA (UL) and Canada (C-UL)	10 A, 125 VAC 10 A, 250 VAC 1/3 HP			
Voltage selector description				
Voltage marking				
Series	110-120 V			
Parallel	220-240 V			

Value in () relates to the inductive current charge: cos (phi) = 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.

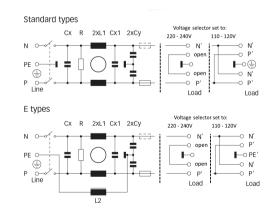
Features and Benefits

- 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 32 mm or EU Ø5 x 20 mm fuses
- 2-pole rocker switch
- Voltage selector 110-120 V/220-240 V
- 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

Typical electrical schematic



Filter Selection Table

Filter	Rated current	Leakage current*	Indu	uctance		Capaci	itance	Resistance	Output	Fuses**	Weight
	@ 40°C (25°C)	@ 230 VAC/50 Hz	L1	L2	Cx	Cx1	Су	R	connections		
	[A]	[µA]	[mH]	[mH]	[nF]	[nF]	[nF]	[kΩ]		[Qty]	[g]
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 393 E-1-05-11	1 (1.2)	560	7.5	0.4	220		3.3	1000	05-11	1	205
FN 393 E-2.5-05-11	2.5 (3)	560	2	0.4	220		3.3	1000	05-11	1	205
FN 393 E-6-05-11	6 (7.2)	560	0.45	0.4	220		3.3	1000	05-11	1	205
FN 394 E-1-05-11	1 (1.2)	560	7.5	0.4	220		3.3	1000	05-11	2	205
FN 394 E-2.5-05-11	2.5 (3)	560	2	0.4	220		3.3	1000	05-11	2	205
FN 394 E-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 394 E-2.5-05-11, FN 1394-10-05-11

Typical Filter Attenuation

Per CISPR 17; A=50 $\Omega/50~\Omega$ sym; B=50 $\Omega/50~\Omega$ asym; C=0.1 $\Omega/100~\Omega$ sym; D=100 $\Omega/0.1~\Omega$ sym

dB

70

60

50

40-

30-

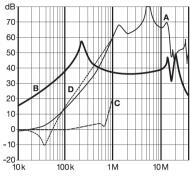
20

10-

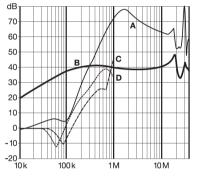
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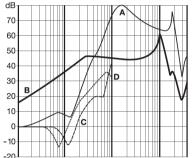
- 10

-20 L 10 k



FN 39x:1 A types





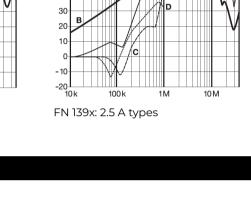
1M

10 M

FN 139x: 1 A types

Mechanical Data

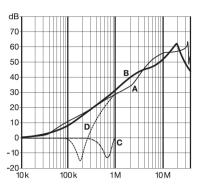




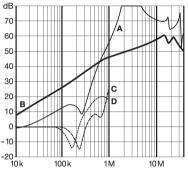
/D

100 k

FN 39x: 2.5 A types



FN 39x: 6 A types



FN 139x: 6 and 10 A types

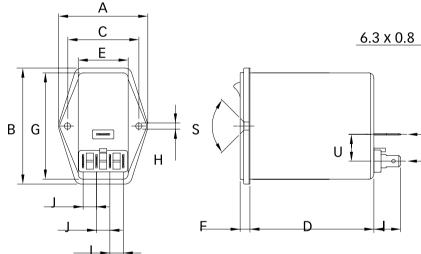
IEC plug type

C14

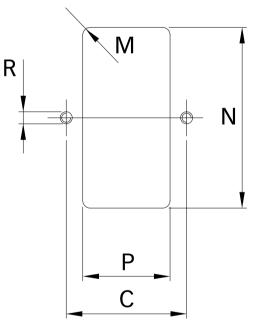
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Panel cut out



Dimensions

	1 to 10 A	Tolerances
Α	50	±0.3
В	65	±0.3
С	40	±0.1
D	70	±0.5
E	28.5	±0.3
F	5.5	±0.3
G	59.8	±0.2
н	Ø 3.3	
I	13.5	±0.5
J	7.5	
М	R ≤ 2.5	
Ν	60	+0.5/-0
Р	29	+0.5/-0
R	M3	
S	90°	
U	15	±0.3

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

Please visit <u>www.schaffner.com</u> to find more details on filter connections.

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group Industrie Nord Nordstrasse 5 4542 Luterbach +41 32 681 66 26 info@schaffner.com

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Sales and Application Centers

Finland

Schaffner Oy Lohjanharjuntie 1109 08500 Lohja + 358 50 468 72 84 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

Germany

Schaffner Deutschland GmbH Ohiostr. 8 76149 Karlsruhe +49 721 56910 germanysales@schaffner.com

Italy

Schaffner EMC S.r.l. Via Ticino, 30 20900 Monza (MB) +39 335 120 44 32 italysales@schaffner.com

Japan

Schaffner EMC K.K. ISM Sangenjaya 7F 1-32-12 Kamiuma Setagaya-ku 154-0011 Tokyo +81 3 5712 3650 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

Sweden

Schaffner EMC AB Östermalmstrorg 1 114 42 Stockholm +46 8 5050 2425 swedensales@schaffner.com

Switzerland

Schaffner EMV AG Industrie Nord Nordstrasse 5 4542 Luterbach +41 32 681 66 26 switzerlandsales@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

United Kingdom

Schaffner Ltd. Suite 1 Oakmede Place Terrace Road RG42 4JF Binfield +44 118 9770070 schaffner.uksales@te.com

United States

Schaffner EMC Inc. 52 Mayfield Avenue Edison, New Jersey +1 732 225 9533 usasales@schaffner.com