

Versatile Filtered Power Entry Module



- Rated currents up to 10 A
- For one or two fuses
- Fuses Ø 6.3 x 32 mm or Ø 5 x 20 mm
- 2-pole rocker switch
- Voltage selector
- Optional earth line choke (E type)



Performance indicators

Attenuation performance



Rated current [A]



Approvals



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 Ø 6.3 x 32 mm or EU Ø 5 x 20 mm fuses
- 2-pole rocker switch
- Voltage selector 110-120 V / 220-240 V
- Custom-specific versions are available on request

Technical specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Operating frequency	50 to 400 Hz
Rated currents	1 to 10 A @ 40 °C max.
High potential test voltage	P → PE 2000 VAC for 2 sec P → N 760 VAC 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
Voltage selector description	
Function	Series/parallel
Voltage marking	
Series	110-120 V
Parallel	220-240 V
Rocker switch description	
Function	2-pole, dark not illuminated 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
Mechanical life	50,000 cycles
Switch ratings	
USA (UL) and Canada (C-UL)	10 A, 125 VAC; 10 A, 250 VAC; 1/3 HP
Europe (ENEC)	10 A (4 A), 250 VAC*

* 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

Filter selection table

Filter	Rated current @ 40 °C (25 °C)	Leakage current* @ 230 VAC/50 Hz	Inductance		Capacitance			Resistance	Output connections	Fuses**	Weight
	[A]	[μA]	L1 [mH]	L2 [mH]	Cx [nF]	Cx1 [nF]	Cy [nF]	R [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 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)

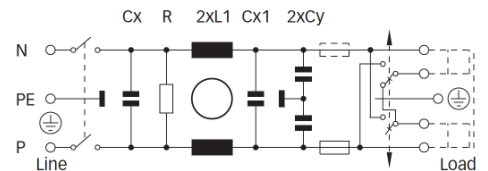
4: 2 fuses (Ø5 x 20mm or Ø6.3 x 32mm)

Blank: Standard version

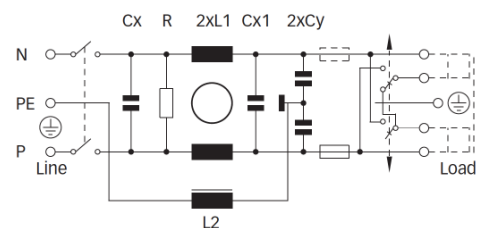
1: Additional Cx1 capacitor and higher inductivity

Typical electrical schematic

Standard types



E types

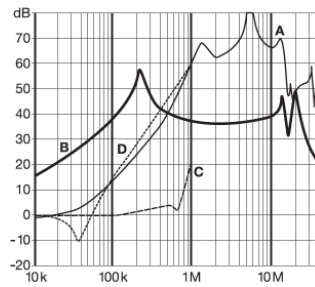


For example: FN 393-1-05-11, FN 394E-2.5-05-11, FN 1394-10-05-11

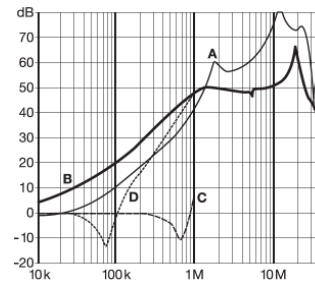
Typical filter attenuation

Per CISPR 17; A = 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

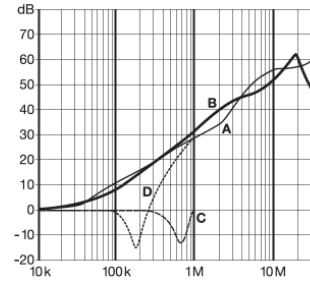
FN 39x: 1 A types



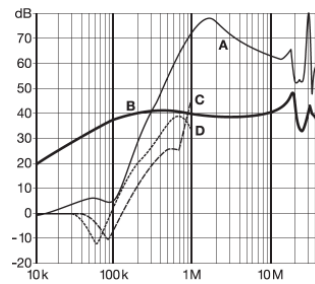
FN 39x: 2.5 A types



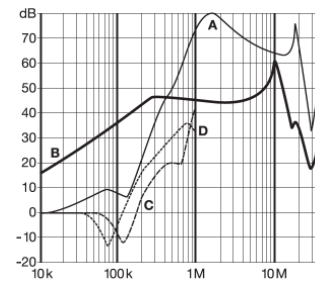
FN 39x: 6 A types



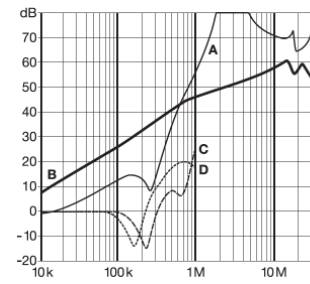
FN 139x: 1 A types



FN 139x: 2.5 A types

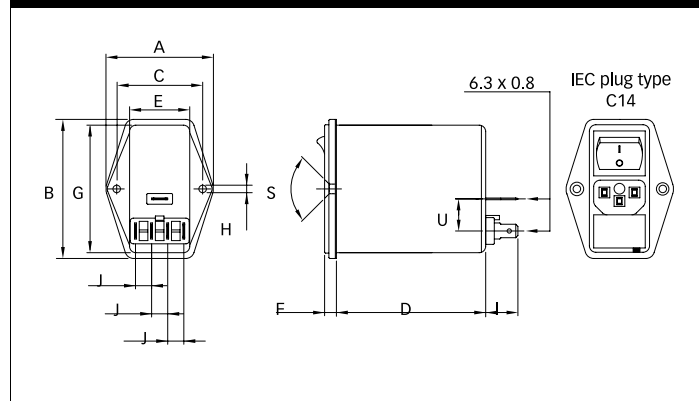


FN 139x: 6 and 10 A types

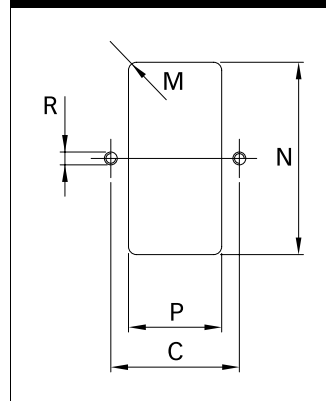


Mechanical data

1 to 10 A 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	Ø 3.3	
I	15	
J	7.5	
M	R ≤ 2.5	
N	60.00	±0.5
P	29.00	±0.5
R	M3	
S	90°	
U	15	

All dimensions in mm; 1 inch = 25.4 mm

Tolerances according: ISO 2768-m / EN 22768-m

Please visit www.schaffner.com to find more details on filter connections.



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