

AC Feedthrough Filter

SCHAFNER
energy efficiency and reliability



- IEC/EN 60939 approval
- Rated currents from 10 to 250A
- 5kV pulse test capability
- Class Y2 capacitor

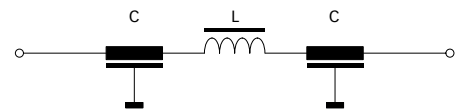
Approvals



Technical specifications

Maximum continuous operating voltage:	300VAC, 50/60Hz (ENEC)
	250VAC, 50/60Hz (UL)
	1000VDC max.
Rated currents:	10 to 250A @ 60°C max.
Capacitor class:	Y2
High potential test voltage:	3000VDC for 2 sec
Insulation resistance (100VDC after 60 sec):	< 0.33μF, R > 15,000MΩ
	> 0.33μF, τ > 5000s
Temperature range (operation and storage):	-40°C to +100°C (40/100/21)
Flammability corresponding to:	UL 94V-2 or better
MTBF @ 60°C/300V (Mil-HB-217F):	< 200A: > 675,000 hours
	≥ 200A: > 494,000 hours

Typical electrical schematic



Feedthrough filters offer a high insertion loss across a broad band of frequencies from a few tens of kHz up to the GHz region. In general, feedthrough filters offer a higher level of EMI suppression than feedthrough capacitors of the same current rating. This is particularly relevant to applications where source impedance is smaller than 50Ω.

Different versions are available offering a wide selection on operating currents and performance levels. AC feedthrough filters are designed and approved for up to 300VAC 50/60Hz operation.

Features and benefits

- Very low internal series inductance.
- Very high self-resonant frequency.
- Self-healing dielectric.
- High quality and reliability.
- Through-bulkhead mounting.
- Anti-twist protection.
- Custom-specific or dual-versions on request.

Typical applications

- Power line filter for 110/240VAC power lines
- Increasing system and information security
- Power supplies
- Switching and cellular equipment
- Computer servers
- UPS power supplies
- Medical equipment
- Shielded rooms

Feedthrough selector table

Feedthrough	Rated current @ 60°C	Leakage current* @ 250VAC/50Hz	Capacitance** C	Inductance L @ 10kHz	DC resistance*** R @ 25°C	Weight
	[A]	[mA]	[nF]	[nH]	[mΩ]	[g]
FN 7611-10-M3	10	1.89	10	70	1.2	55
FN 7612-10-M3	10	8.86	47	70	1.52	70
FN 7611-16-M4	16	4.15	22	70	0.65	80
FN 7612-16-M4	16	18.85	100	70	0.92	90
FN 7611-32-M4	32	4.15	22	70	0.65	80
FN 7612-32-M4	32	18.85	100	70	0.92	90
FN 7611-63-M6	63	28.3	150	186	0.47	250
FN 7612-63-M6	63	88.6	470	124	0.53	500
FN 7612-100-M8	100	188	1000	124	0.23	750
FN 7611-250-M12	250	88.6	470	169	0.23	1086

* Tolerance +20%

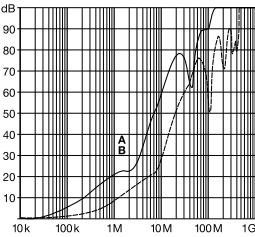
** Tolerance ±20%

*** Tolerance +15%

Typical filter attenuation

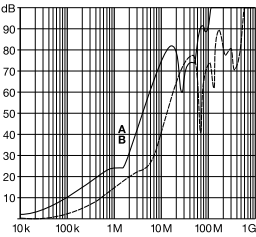
Full load, 50Ω system

10A types



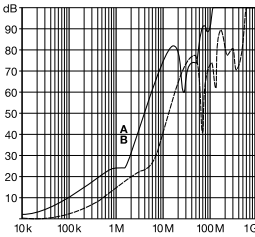
A = FN 7612-10-M3
B = FN 7611-10-M3

16A types



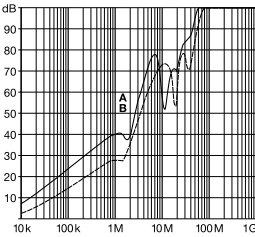
A = FN 7612-16-M4
B = FN 7611-16-M4

32A types



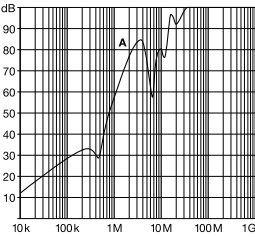
A = FN 7612-32-M4
B = FN 7611-32-M4

63A types



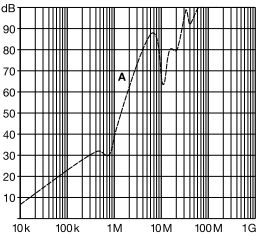
A = FN 7612-63-M6
B = FN 7611-63-M6

100A types



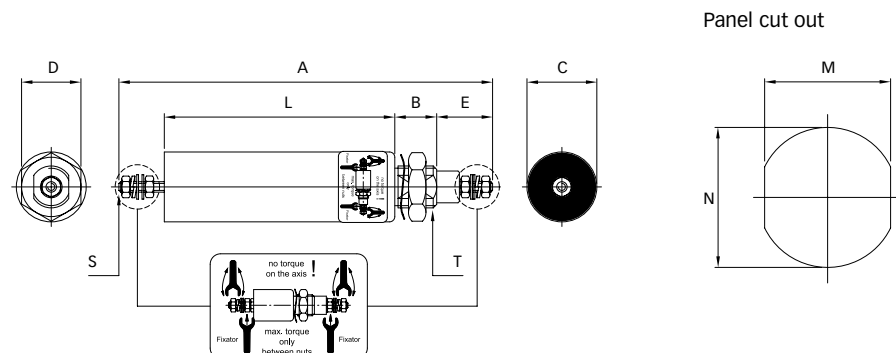
A = FN 7612-100-M8

250A types



A = FN 7611-250-M12

Mechanical data



Dimensions

	A	B	C	D	E	L	M	N	S	T
FN 7611-10-M3	107	12	20	17	16	66	10.3	Ø12.3	M3	M12x1
FN 7612-10-M3	140	12	20	17	16	99	10.3	Ø12.3	M3	M12x1
FN 7611-16-M4	116	14	25	22	18	69	14.3	Ø16.3	M4	M16x1
FN 7612-16-M4	148	14	25	22	18	101	14.3	Ø16.3	M4	M16x1
FN 7611-32-M4	116	14	25	22	18	69	14.3	Ø16.3	M4	M16x1
FN 7612-32-M4	148	14	25	22	18	101	14.3	Ø16.3	M4	M16x1
FN 7611-63-M6	173	16	32	27	26	105	18.3	Ø20.3	M6	M20x1
FN 7612-63-M6	189	19	54	41	26	118	24.3	Ø27.3	M6	M27x1.5
FN 7612-100-M8	227	19	54	41	32	144	24.3	Ø27.3	M8	M27x1.5
FN 7611-250-M12	267	19	54	41	46	160	29.3	Ø32.3	M12	M32x1.5
Tolerances					±2	±0.2				

All dimensions in mm; 1 inch = 25.4mm

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

Recommended torque

	M3	M4	M6	M8	M12	M12x1	M16x1	M20x1	M27x1.5	M32x1.5
Terminal thread	0.5Nm	1.2Nm	2.5Nm	5Nm	11Nm					
Mounting thread						3Nm	4Nm	7Nm	12Nm	14Nm

**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

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

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

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
thailandsales@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

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

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

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:

[FN7610-16-M4](#) [FN7610-63-M6](#) [FN7613-100-M8](#) [FN7610-200-M10](#)