

Excellent Performance EMC/EMI Filter with Earth Line Choke



- | Rated currents up to 15A
- | Superior attenuation performance
- | Integrated earth line choke
- | Complies with IEC/EN 60601-1
- | Snap-in versions (S and S1 type)
- | Hot inlet versions (HI type)

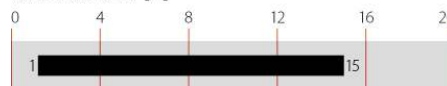


Performance indicators

Attenuation performance



Rated current [A]



Approvals



(CQC except HI-types)

The FN 9244E IEC inlet filter combines an IEC inlet and mains filter with superior filter attenuation in a small form factor. The FN 9244E high performance power entry module offers additional EMI suppression on the earth line. Choosing the FN 9244E 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, output connections, mounting possibilities and filters for medical applications are designed to offer you the desired solution. For types without additional earth line choke please consult the FN 9244 data sheet.

Technical specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Operating frequency	dc to 400 Hz
Rated currents	1 to 15 A @ 50 °C
Approvals by rated current	1 to 10 A (ENEC, CQC) 1 to 15 A (UL, CSA)
High potential test voltage	P → PE 2000 VAC for 2 sec (standard types) P → PE 2500 VAC for 2 sec (B types) P → N 1000 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 94 V-2 or better
MTBF @ 40°C/230V (Mil-HB-217F)	2,230,000 hours

Features and benefits

- | Superior conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- | Rear/front or snap-in mounting.
- | Without earth line choke see FN 9244 data sheet.
- | Optional medical versions (B type) comply with the requirements of IEC/EN 60601-1 for creepage and clearance, leakage current and high potential testing.
- | Wide mounting flanges available.
- | Custom-specific versions are available on request.

Typical applications

- | Electrical and electronic equipment
- | Small to medium-sized machines and household equipment
- | Single-phase power supplies, switch-mode power supplies
- | Test and measurement equipment
- | Medical devices (MDD)
- | In-vitro diagnostic medical devices (IVDD)
- | Rack mounting equipment

Filter selection table

Filter	Rated current @ 50 °C (25 °C) [A]	Leakage current* @ 250 VAC/50 Hz [µA]	Inductance		Capacitance		Resistance R [kΩ]	Output connections	Weight [g]
			L1 [mH]	L2 [mH]	Cx [µF]	Cy [nF]			
FN 9244Ex-1-06	1 (1.2)	373	59.53	0.4	0.1	2.2		-06	46
FN 9244Ex-3-06	3 (3.5)	373	13.45	0.4	0.1	2.2		-06	46
FN 9244Ex-6-06	6 (7.2)	373	4.1	0.4	0.1	2.2		-06	46
FN 9244Ex-8-06	8 (10.6)	373	2.3	0.4	0.1	2.2		-06	46
FN 9244Ex-10-06	10 (11.6)	373	1.02	0.4	0.1	2.2		-06	46
FN 9244Ex-12-06	12 (12)	373	0.58	0.1	0.1	2.2		-06	46
FN 9244Ex-15-06	15 (15)	373	0.4	0.1	0.1	2.2		-06	46
FN 9244Ex-12-06HI	12 (12)	373	0.58	0.1	0.1	2.2		-06	46
FN 9244Ex-15-06HI	15 (15)	373	0.4	0.1	0.1	2.2		-06	46
FN 9244ExR-1-06	1 (1.2)	373	59.53	0.4	0.1	2.2	1000	-06	46
FN 9244ExR-3-06	3 (3.5)	373	13.45	0.4	0.1	2.2	1000	-06	46
FN 9244ExR-6-06	6 (7.2)	373	4.1	0.4	0.1	2.2	1000	-06	46
FN 9244ExR-8-06	8 (10.6)	373	2.3	0.4	0.1	2.2	1000	-06	46
FN 9244ExR-10-06	10 (11.6)	373	1.02	0.4	0.1	2.2	1000	-06	46
FN 9244ExR-12-06	12 (12)	373	0.58	0.1	0.1	2.2	1000	-06	46
FN 9244ExR-15-06	15 (15)	373	0.4	0.1	0.1	2.2	1000	-06	46
FN 9244ExR-12-06HI	12 (12)	373	0.58	0.1	0.1	2.2	1000	-06	46
FN 9244ExR-15-06HI	15 (15)	373	0.4	0.1	0.1	2.2	1000	-06	46
FN 9244ExB-1-06	1 (1.2)	2	59.53	0.4	0.1		1000	-06	46
FN 9244ExB-3-06	3 (3.5)	2	13.45	0.4	0.1		1000	-06	46
FN 9244ExB-6-06	6 (7.2)	2	4.1	0.4	0.1		1000	-06	46
FN 9244ExB-8-06	8 (10.6)	2	2.3	0.4	0.1		1000	-06	46
FN 9244ExB-10-06	10 (11.6)	2	1.02	0.4	0.1		1000	-06	46
FN 9244ExB-12-06	12 (12)	2	0.58	0.1	0.1		1000	-06	46
FN 9244ExB-15-06	15 (15)	2	0.4	0.1	0.1		1000	-06	46
FN 9244ExB-12-06HI	12 (12)	2	0.58	0.1	0.1		1000	-06	46
FN 9244ExB-15-06HI	15 (15)	2	0.4	0.1	0.1		1000	-06	46

* Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

Product selector

FN 9244Exx-yy-...HI-zz

Snap-in range for S version only

Blank: Snap-in range 0.7 to 1.5mm

20: Snap-in range 1.5 to 2.2mm

Blank: Standard IEC inlet type C14

HI: Hot IEC inlet type C16 (12 and 15A types only)

06: Faston 6.3 x 0.8mm (spade/soldering)

1 to 15: Rated current

Blank: Standard version

R: Bleed resistor

B: Medical version (with bleed resistor and without Y2-capacitor)

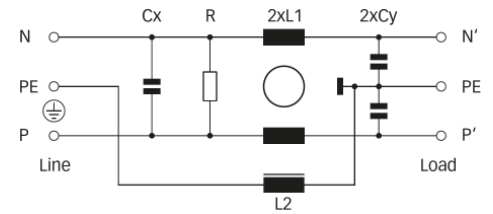
 Blank: Standard housing with mounting flanges

 U: Housing with wider mounting flanges

 S: Snap-in version, snapper on vertical side

 S1: Snap-in version, snapper on horizontal side

Typical electrical schematic

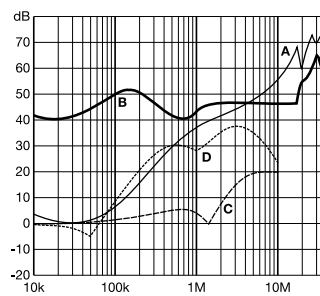


For example: FN 9244E-15-06, FN 9244ES1B-10-06-20, FN 9244ER-12-06HI, FN 9244EUB-8-06

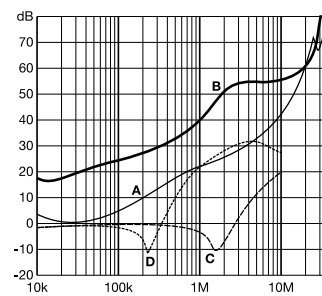
Typical filter attenuation

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

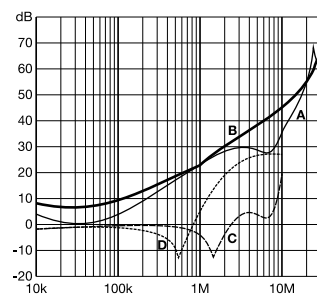
1 and 3 A types



6 to 10 A types

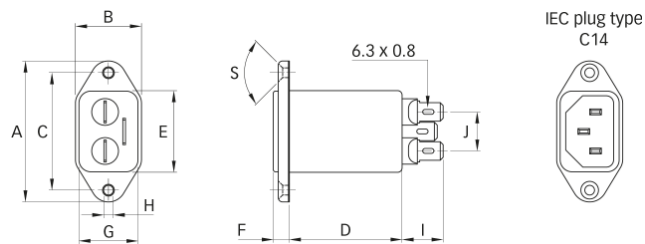


12 and 15 A types

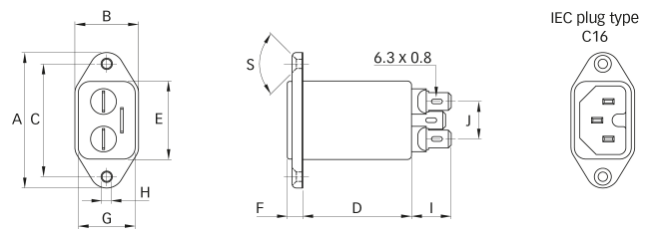


Mechanical data

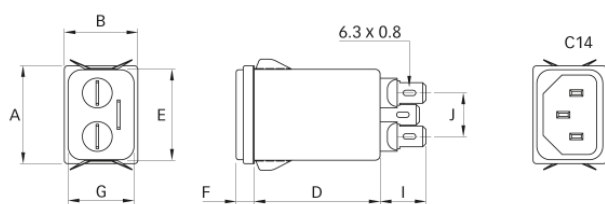
FN 9244E



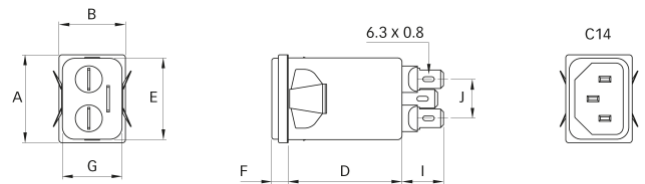
FN 9244E-HI



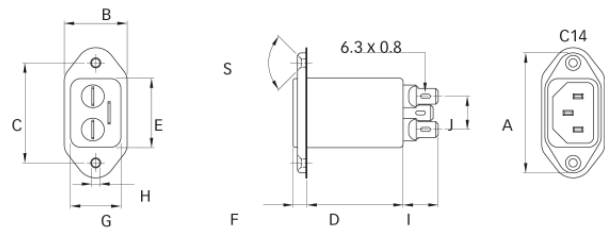
FN 9244ES



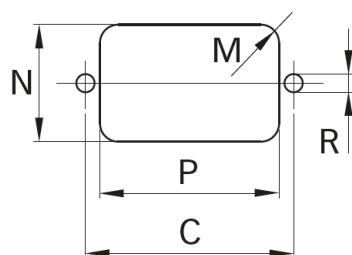
FN 9244ES1



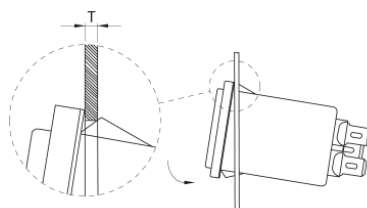
FN 9244EU



Panel cut out



Installation



Dimensions

	FN 9244E	FN 9244EU	FN 9244ES	FN 9244ES1	FN 9244E-HI
A	48	51.85	29.9	29.9	48
B	22.5	25	22.4	22.4	22.5
C	40 ±0.2	40 ±0.2			40 ±0.2
D	46.8	46.8	46.8	46.8	46.8
E	27.8	27.8	27.8	27.8	27.8
F	5.5	5.5	5.5	5.5	5.5
G	20.1	20.1	20.1	20.1	20.1
H	Ø3.3	Ø3.3			Ø3.3
I	14	14.1	14	14	14
J	13.3	13.3	13.3	13.3	13.3
M	R ≤ 3	R ≤ 3	R ≤ 1.5	R ≤ 1.5	R ≤ 3
N	21.5	21.5	20.8	21.9	21.5
P	28.5	28.5	29.4	28.5	28.5
R	M3	M3			M3
S	90°	90°			90°
T*			0.7 - 1.5	0.7 - 1.5	
T*			1.5 - 2.2	1.5 - 2.2	

* For selecting the panel thickness, please refer to the filter selector table.

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 connectors.



Headquarters, global innovation and development center

Switzerland

Schaffner Group

Nordstrasse 11
4542 Luterbach
T +41 32 6816 626
F +41 32 6816 630
info@schaffner.com
<http://www.schaffner.com>



Sales and application centers

China

Schaffner EMC Ltd. Shanghai

T20-3, No 565 Chuangye Road
Pudong New Area
201201 Shanghai
T +86 21 3813 9500
F +86 21 3813 9501 / 02
cschina@schaffner.com
<http://www.schaffner.com.cn/>

Finland

Schaffner Oy

Sauvonrinne 19 H
08500 Lohja
T +358 19 35 72 71
finlandsales@schaffner.com

France

Schaffner EMC S.A.S.

112, Quai de Bezons
Boîte postale 133
95103 Argenteuil
T +33 1 34 34 30 60
F +33 1 39 47 02 28
francesales@schaffner.com

Germany

Schaffner Deutschland GmbH

Schoemperlenstrasse 12B
76185 Karlsruhe
T +49 721 56910
F +49 721 569110
germanysales@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.

1-32-12, Kamiyama, Setagaya-ku
7F Mitsui-seimei Sangenjaya Bldg.
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
<http://www.schaffner.jp>

Singapore

Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1
05-09 Kampong Ubi Industrial Estate
408705 Singapore
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

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 6816 626
F +41 32 6816 641
sales@schaffner.ch

Taiwan R.O.C.

Schaffner EMV Ltd.

6 Floor, No. 413
Rui Guang Road
114 Neihs District Taipei City
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
51000 Lamphun
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
RG41 2PL Berkshire
T +44 118 9770070
F +44 118 9792969
uksales@schaffner.com
<http://www.schaffner.uk.com>

USA

Schaffner EMC Inc.

52 Mayfield Avenue
08837 Edison, New Jersey
T +1 800 367 5566
T +1 732 225 9533
F +1 732 225 4789
usasales@schaffner.com
<http://www.schaffner.com/us>

Schaffner MTC LLC

6722 Thirlane Road
24019 Roanoke, Virginia
T +1 276 228 7943
F +1 276 228 7953
<http://www.schaffner-mtc.com>

Schaffner Trencos LLC

2550 Brookpark Road
44134 Cleveland, Ohio
T +1 216 741 5282
F +1 216 741 4860
www.schaffner-trencos.com

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