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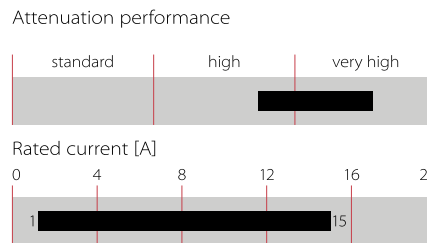
# Excellent Performance EMC/EMI Filter with Earth Line Choke



- Rated currents up to 15 A
- 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



### Approvals



The FN 9244 E IEC inlet filter combines an IEC inlet and mains filter with superior filter attenuation in a small form factor. The FN 9244 E high performance power entry module offers additional EMI suppression on the earth line. Choosing the FN 9244 E 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

<b>Maximum continuous operating voltage</b>	250 VAC, 50/60 Hz
<b>Operating frequency</b>	DC to 400 Hz
<b>Rated currents</b>	1 to 15 A @ 50°C
<b>Approvals by rated current</b>	1 to 10 A (ENEC, CQC) 1 to 15 A (UL, CSA)
<b>High potential test voltage</b>	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
<b>Protection category</b>	IP 40 according to IEC 60529
<b>Temperature range (operation and storage)</b>	-25°C to +85°C (25/85/21)
<b>Design corresponding to</b>	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
<b>Flammability corresponding to</b>	UL 94 V-2 or better
<b>MTBF @ 40°C/230 V (Mil-HB-217F)</b>	2,230,000 hours

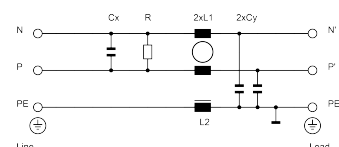
## Features and benefits

- 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

### Typical electrical schematic



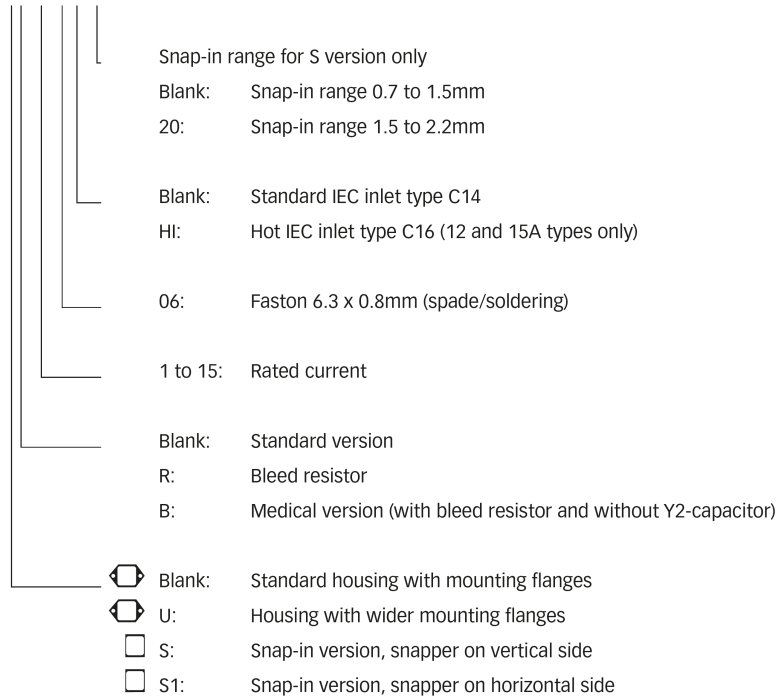
## Filter selection table

Filter	Rated current @ 50°C (25°C)  [A]	Leakage current* @ 250 VAC/50 Hz (@ 120 VAC/60 Hz)  [mA]	Inductance		Capacitance		Resistance R  [kΩ]	Output connections	Weight  [g]
			L1  [mH]	L2  [mH]	Cx  [μF]	Cy  [nF]			
FN 9244 Ex-1-06	1 (1.2)	0.31 (0.18)	59.53	0.4	0.1	2.2		-06	46
FN 9244 Ex-3-06	3 (3.5)	0.31 (0.18)	13.45	0.4	0.1	2.2		-06	46
FN 9244 Ex-6-06	6 (7.2)	0.31 (0.18)	4.1	0.4	0.1	2.2		-06	46
FN 9244 Ex-8-06	8 (10.6)	0.31 (0.18)	2.3	0.4	0.1	2.2		-06	46
FN 9244 Ex-10-06	10 (11.6)	0.31 (0.18)	1.02	0.4	0.1	2.2		-06	46
FN 9244 Ex-12-06	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2		-06	46
FN 9244 Ex-15-06	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2		-06	46
FN 9244 Ex-12-06HI	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2		-06	46
FN 9244 Ex-15-06HI	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2		-06	46
FN 9244 ExR-1-06	1 (1.2)	0.31 (0.18)	59.53	0.4	0.1	2.2	1000	-06	46
FN 9244 ExR-3-06	3 (3.5)	0.31 (0.18)	13.45	0.4	0.1	2.2	1000	-06	46
FN 9244 ExR-6-06	6 (7.2)	0.31 (0.18)	4.1	0.4	0.1	2.2	1000	-06	46
FN 9244 ExR-8-06	8 (10.6)	0.31 (0.18)	2.3	0.4	0.1	2.2	1000	-06	46
FN 9244 ExR-10-06	10 (11.6)	0.31 (0.18)	1.02	0.4	0.1	2.2	1000	-06	46
FN 9244 ExR-12-06	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2	1000	-06	46
FN 9244 ExR-15-06	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2	1000	-06	46
FN 9244 ExR-12-06HI	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2	1000	-06	46
FN 9244 ExR-15-06HI	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2	1000	-06	46
FN 9244 ExB-1-06	1 (1.2)	0.00	59.53	0.4	0.1		1000	-06	46
FN 9244 ExB-3-06	3 (3.5)	0.00	13.45	0.4	0.1		1000	-06	46
FN 9244 ExB-6-06	6 (7.2)	0.00	4.1	0.4	0.1		1000	-06	46
FN 9244 ExB-8-06	8 (10.6)	0.00	2.3	0.4	0.1		1000	-06	46
FN 9244 ExB-10-06	10 (11.6)	0.00	1.02	0.4	0.1		1000	-06	46
FN 9244 ExB-12-06	12 (12)	0.00	0.58	0.1	0.1		1000	-06	46
FN 9244 ExB-15-06	15 (15)	0.00	0.4	0.1	0.1		1000	-06	46
FN 9244 ExB-12-06HI	12 (12)	0.00	0.58	0.1	0.1		1000	-06	46
FN 9244 ExB-15-06HI	15 (15)	0.00	0.4	0.1	0.1		1000	-06	46

\* Maximum leakage under normal operating conditions (acc. to IEC60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

## Product selector

FN 9244Exx-yy...HI-zz

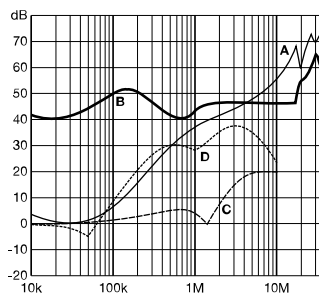


For example: FN 9244 E-15-06, FN 9244 ES1B-10-06-20, FN 9244 ER-12-06HI, FN 9244 EUB-8-06

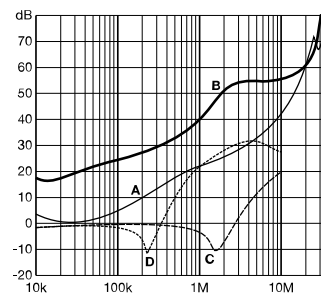
## Typical filter attenuation

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

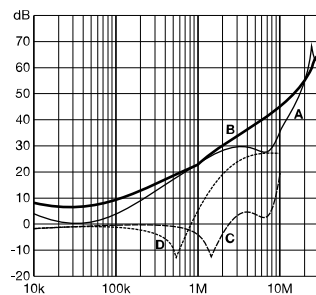
1 and 3 A types



6 to 10 A types

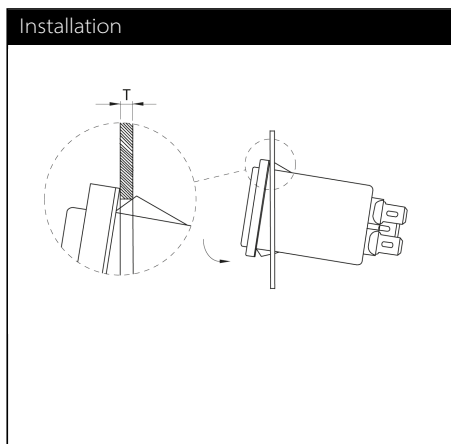
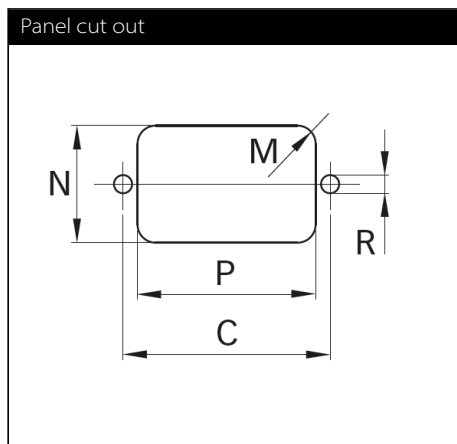
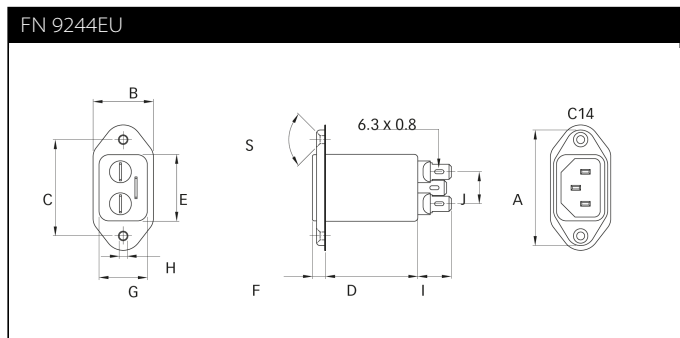
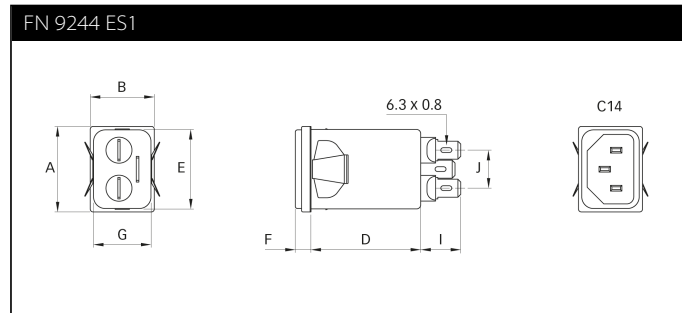
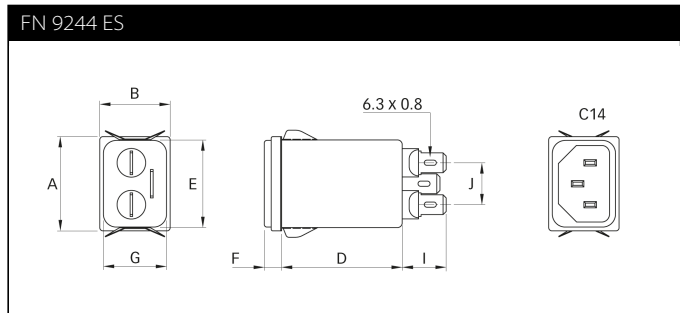
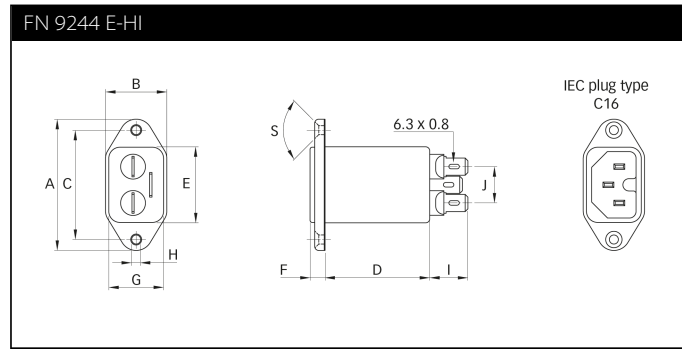
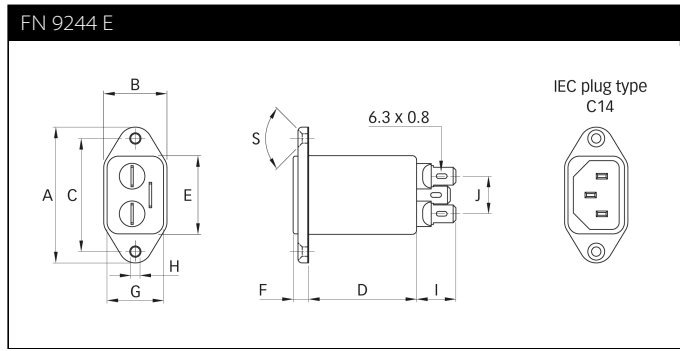


12 and 15 A types





**Mechanical data**



## Dimensions

	<b>FN 9244 E</b>	<b>FN 9244 EU</b>	<b>FN 9244 ES</b>	<b>FN 9244 ES1</b>	<b>FN 9244 E-HI</b>
<b>A</b>	48	48	29.9	29.9	48
<b>B</b>	22.4	25	22.4	22.4	22.4
<b>C</b>	40 ±0.2	40 ±0.2			40 ±0.2
<b>D</b>	46.8	46.7	46.8	46.8	46.8
<b>E</b>	27.8	27.9	27.9	27.9	27.8
<b>F</b>	5.7	5.7	5.7	5.7	5.7
<b>G</b>	20.5	20.5	20.5	20.5	20.5
<b>H</b>	Ø3.3	Ø3.3			Ø3.3
<b>I</b>	14	14	14	14	14
<b>J</b>	13.3	13.3	13.3	13.3	13.3
<b>M</b>	R ≤3	R ≤3	R ≤1.5	R ≤1.5	R ≤3
<b>N</b>	21.5	21.5	20.8	21.9	21.5
<b>P</b>	28.5	28.5	29.4	28.5	28.5
<b>R</b>	M3	M3			M3
<b>S</b>	90°	90°			90°
<b>T*</b>			0.7 - 1.5	0.7 - 1.5	
<b>T*</b>			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](http://www.schaffner.com) to find more details on filter connectors.



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