

Excellent Performance EMC/EMI Filter



- Superior attenuation performance
- Optional earth line choke
- Complies with IEC/EN 60601-1
- Snap-in versions (S and S1 type)
- Hot inlet versions (HI type)



Approvals



(CQC except HI-types)

Performance indicators

Attenuation performance



The FN 9244 IEC inlet filter combines an IEC inlet and mains filter with superior filter attenuation in a small form factor. Choosing the FN 9244 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.

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 max.
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	IP 40 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/230 V (Mil-HB-217F)	≤8 A: 2,035,000 hours ≤15 A: 1,035,000 hours

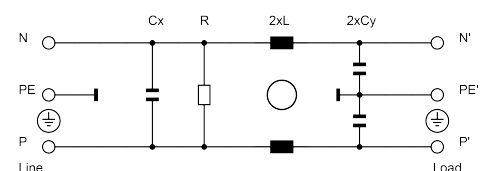
Features and benefits

- Exceptional conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- Rear/front or snap-in mounting
- Standard or wide mounting flange
- Optional medical versions (B type) comply with the requirements of IEC/EN 60601-1 for creepage and clearance, leakage current and high potential testing
- Optional earth line choke see FN 9244 E data sheet
- Custom-specific versions are available on request


Typical applications

- Portable 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

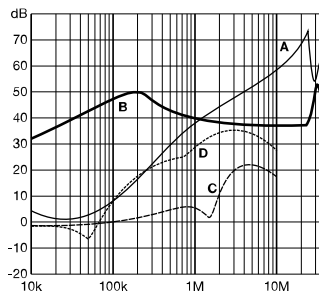
Filter	Rated current	Leakage current*	Inductance L	Capacitance		Resistance R	Output connections	Weight
	@ 50°C (25°C)	@ 250 VAC/50 Hz (@ 120 VAC/60 Hz)		Cx	Cy			
	[A]	[mA]	[mH]	[μF]	[nF]	[kΩ]		[g]
FN 9244 x-1-06	1 (1.2)	0.31 (0.18)	59.53	0.1	2.2		-06	38
FN 9244 x-3-06	3 (3.5)	0.31 (0.18)	13.45	0.1	2.2		-06	38
FN 9244 x-6-06	6 (7.2)	0.31 (0.18)	4.1	0.1	2.2		-06	38
FN 9244 x-8-06	8 (10.6)	0.31 (0.18)	2.3	0.1	2.2		-06	38
FN 9244 x-10-06	10 (11.6)	0.31 (0.18)	1.02	0.1	2.2		-06	38
FN 9244 x-12-06	12 (12)	0.31 (0.18)	0.58	0.1	2.2		-06	38
FN 9244 x-15-06	15 (15)	0.31 (0.18)	0.4	0.1	2.2		-06	38
FN 9244 x-12-06HI	12 (12)	0.31 (0.18)	0.58	0.1	2.2		-06	38
FN 9244 x-15-06HI	15 (15)	0.31 (0.18)	0.4	0.1	2.2		-06	38
FN 9244 xR-1-06	1 (1.2)	0.31 (0.18)	59.53	0.1	2.2	1000	-06	38
FN 9244 xR-3-06	3 (3.5)	0.31 (0.18)	13.45	0.1	2.2	1000	-06	38
FN 9244 xR-6-06	6 (7.2)	0.31 (0.18)	4.1	0.1	2.2	1000	-06	38
FN 9244 xR-8-06	8 (10.6)	0.31 (0.18)	2.3	0.1	2.2	1000	-06	38
FN 9244 xR-10-06	10 (11.6)	0.31 (0.18)	1.02	0.1	2.2	1000	-06	38
FN 9244 xR-12-06	12 (12)	0.31 (0.18)	0.58	0.1	2.2	1000	-06	38
FN 9244 xR-15-06	15 (15)	0.31 (0.18)	0.4	0.1	2.2	1000	-06	38
FN 9244 xR-12-06HI	12 (12)	0.31 (0.18)	0.58	0.1	2.2	1000	-06	38
FN 9244 xR-15-06HI	15 (15)	0.31 (0.18)	0.4	0.1	2.2	1000	-06	38
FN 9244 xB-1-06	1 (1.2)	0.00	59.53	0.1		1000	-06	38
FN 9244 xB-3-06	3 (3.5)	0.00	13.45	0.1		1000	-06	38
FN 9244 xB-6-06	6 (7.2)	0.00	4.1	0.1		1000	-06	38
FN 9244 xB-8-06	8 (10.6)	0.00	2.3	0.1		1000	-06	38
FN 9244 xB-10-06	10 (11.6)	0.00	1.02	0.1		1000	-06	38
FN 9244 xB-12-06	12 (12)	0.00	0.58	0.1		1000	-06	38
FN 9244 xB-15-06	15 (15)	0.00	0.4	0.1		1000	-06	38
FN 9244 xB-12-06HI	12 (12)	0.00	0.58	0.1		1000	-06	38
FN 9244 xB-15-06HI	15 (15)	0.00	0.4	0.1		1000	-06	38

* 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.

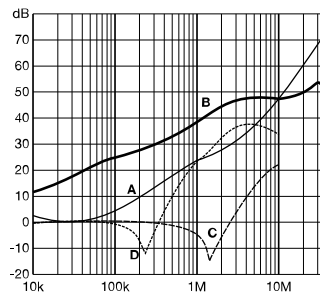
Typical filter attenuation

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

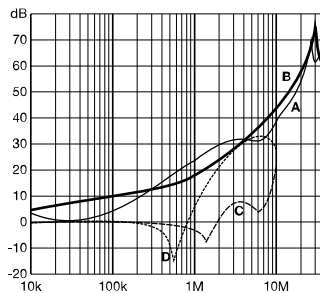
1 and 3 A types



6 to 10 A types

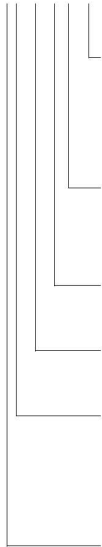


12 and 15 A types



Product selector

FN 9244xx-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)

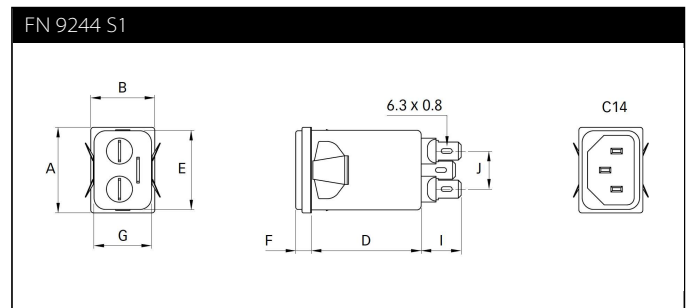
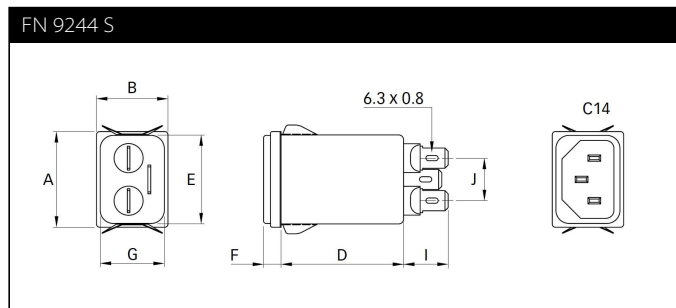
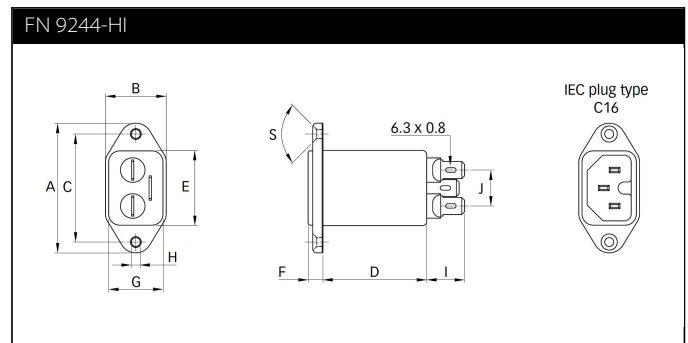
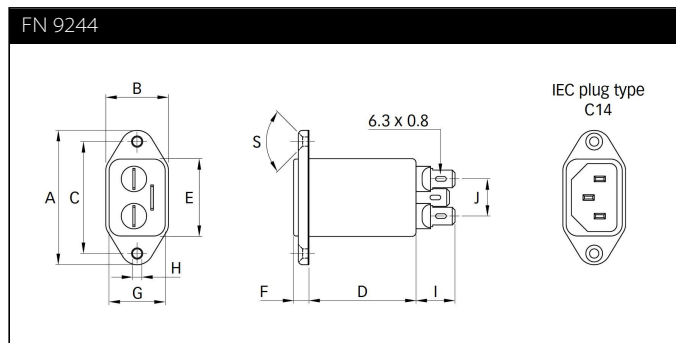
- 1 to 15: Rated current

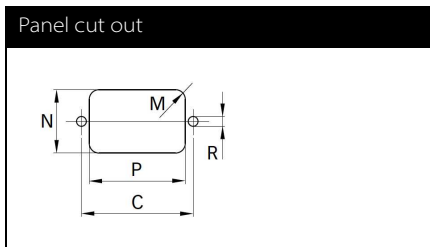
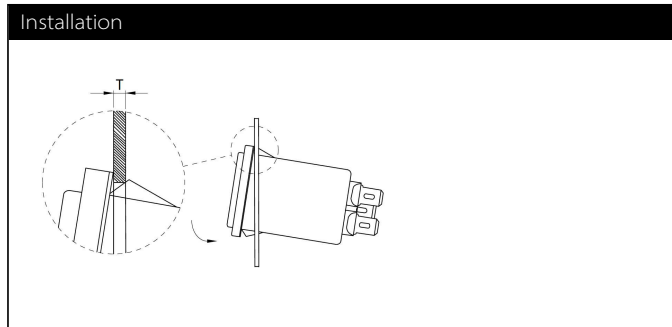
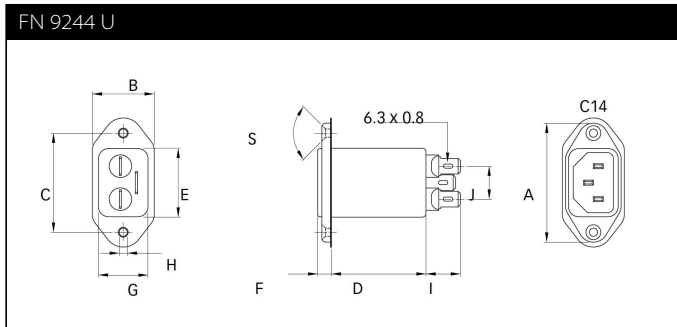
- Blank: Standard version
- R: Bleed resistor
- B: Medical version (with bleed resistor and without Y2-capacitor)

- 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

For example: FN 9244 B-15-06, FN 9244 S1B-10-06-20, FN 9244 R-12-06HI, FN 9244 UB-8-06

Mechanical data





Dimensions

	FN 9244	FN 9244 U	FN 92244 S	FN 92244 S1	FN 9244-HI
A	48	48	29.9	29.9	48
B	22.4	25	22.4	22.4	22.4
C	40 ±0.2	40 ±0.2			40 ±0.2
D	38.25	38.25	38.25	38.25	38.25
E	27.8	27.8	27.8	27.8	27.8
F	5.7	5.7	5.7	5.7	5.7
G	20.1	20.1	20.1	20.1	20.1
H	Ø3.3	Ø3.3			Ø3.3
I	14	14	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

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