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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)



Performance indicators

Attenuation performance



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

Approvals



(CQC except HI-types)

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.

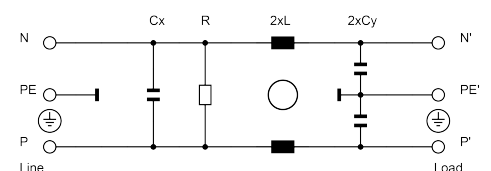
Features and benefits

- 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

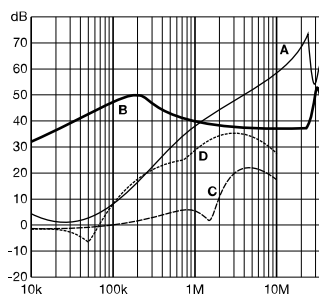
Filter	Rated current	Leakage current*	Inductance L	Capacitance		Resistance R	Output connections	Weight
	@ 50°C (25°C)	@ 250 VAC/50 Hz (@ 120 VAC/60 Hz)		Cx	Cy			
	[A]	[mA]	[mH]	[μF]	[nF]	[kΩ]		[g]
FN 9244 x-1-06	1 (1.2)	0.31 (0.18)	59.53	0.1	2.2		-06	38
FN 9244 x-3-06	3 (3.5)	0.31 (0.18)	13.45	0.1	2.2		-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.

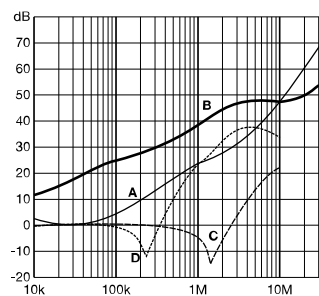
Typical filter attenuation

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

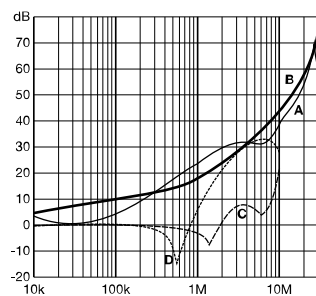
1 and 3 A types



6 to 10 A types

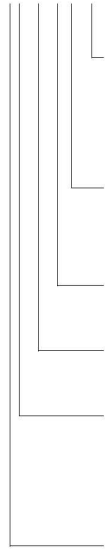


12 and 15 A types



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

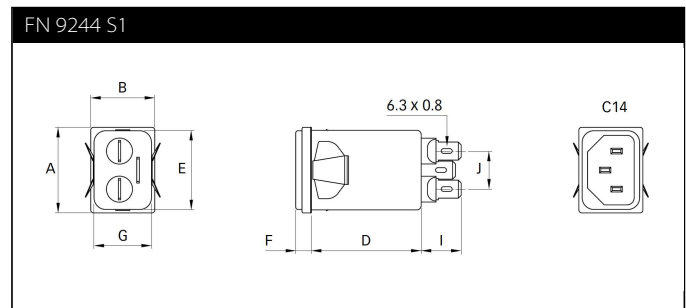
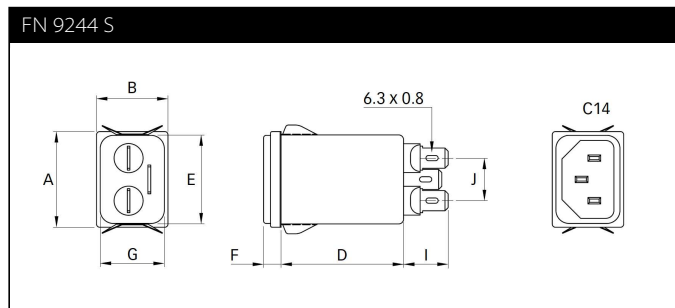
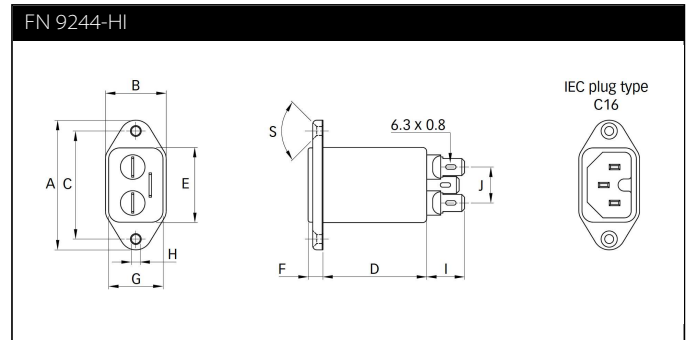
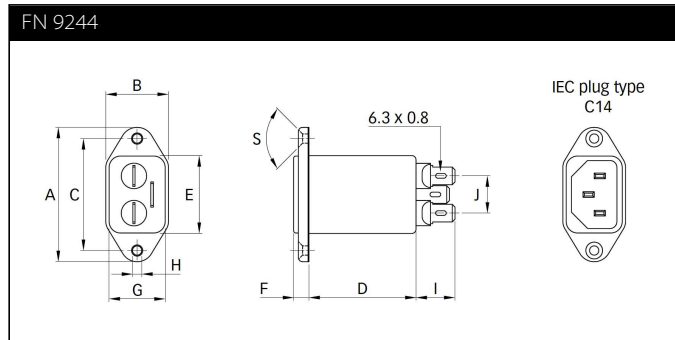
R: Bleed resistor

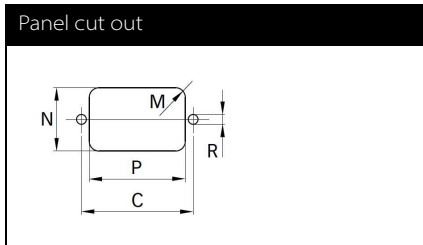
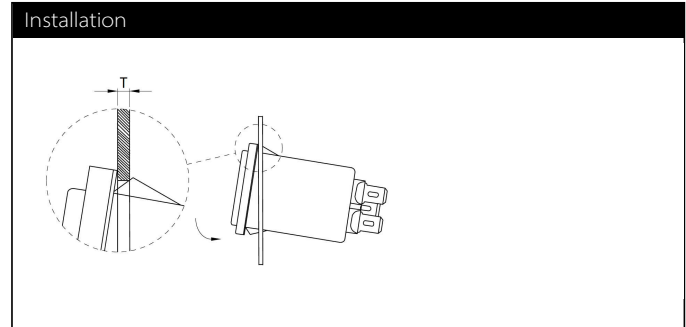
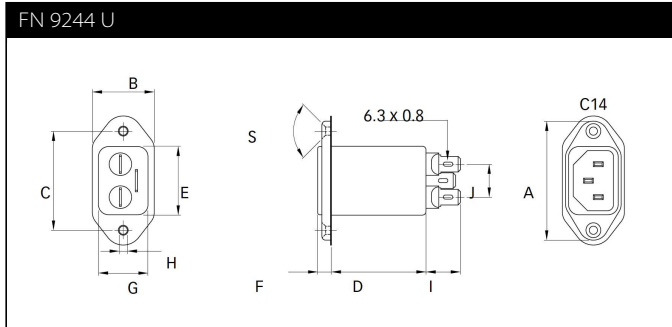
B: Medical version (with bleed resistor and without Y2-capacitor)

-  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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