

High Performance IEC Inlet Filter



- | Rated currents up to 20 A
- | Optional medical versions (B type)
- | Rear mounting
- | Excellent attenuation in the lower frequency range



Approvals



The FN 9246 IEC inlet filter combines an IEC inlet and mains filter with excellent filter attenuation in a small form factor. Choosing the FN 9246 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 current ratings and low leakage versions 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 20 A @ 50 °C
Approvals by rated current	1 to 10 A (Semko) 16 A (Semko) for 16 and 20 A types 1 to 20 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 1100 VAC for 2 sec (1 to 10 A types) P → N 1100 VDC for 2 sec (16 and 20 A types)
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)	1,600,000 hours

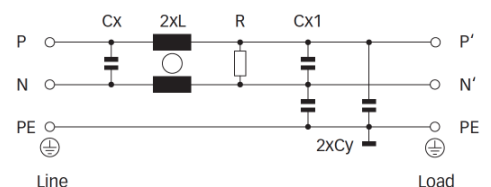
Features and benefits

- | Excellent conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- | Rear mounting
- | Optional low leakage current versions for medical applications
- | Rated currents up to 20 A
- | 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
- | Building automation
- | Medical equipment
- | Lighting application

Typical electrical schematic



Filter selection table

Filter	Rated current @ 40 °C (25 °C)	Leakage current* @ 230 VAC/50 Hz	Inductance L	Capacitance		Resistance R	Output connections 	Weight [g]
	[A]	[µA]	[mH]	Cx [µF]	Cy [nF]	[kΩ]		
FN9246-1-06	1 (1.2)	373	50	1.22	2.2	470	-06	140
FN9246-3-06	3 (3.5)	373	14	1.22	2.2	470	-06	140
FN9246-6-06	6 (7.2)	373	7	1.22	2.2	470	-06	140
FN9246-10-06	10 (12)	373	3	1.22	2.2	470	-06	140
FN9246-12-06	12 (14)	373	1.85	1.22	2.2	470	-06	140
FN9246-15-06	15 (18)	373	0.89	1.22	2.2	470	-06	140
FN9246-16-06	16 (18.5)	797	2.5	1.22	4.7	470	-06	275
FN9246-20-06	20 (23)	797	1.5	1.22	4.7	470	-06	275
FN9246B-1-06	1 (1.2)	2	50	1.22		470	-06	140
FN9246B-3-06	3 (3.5)	2	14	1.22		470	-06	140
FN9246B-6-06	6 (7.2)	2	7	1.22		470	-06	140
FN9246B-10-06	10 (11.6)	2	3	1.22		470	-06	140
FN9246B-12-06	12 (14)	2	1.85	1.22		470	-06	140
FN9246B-15-06	15 (18)	2	0.89	1.22		470	-06	140
FN9246B-16-06	16 (18.5)	2	2.5	1.22		470	-06	275
FN9246B-20-06	20 (23)	2	1.5	1.22		470	-06	275

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

Typical filter attenuation

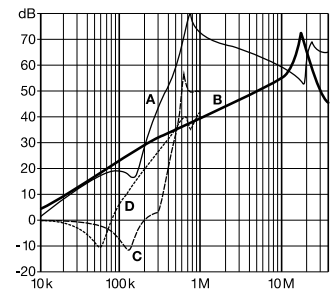
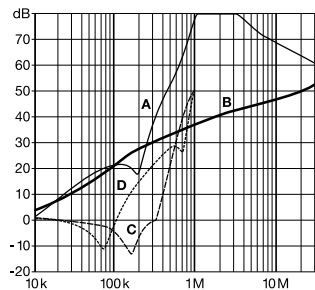
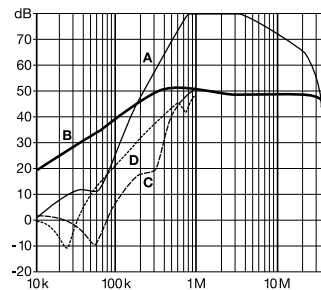
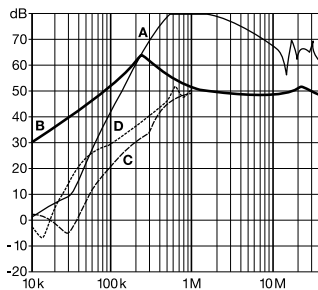
Per CISPR 17; A = 50 Ω/50 Ω sym; B = 50 Ω/50 Ω asym; C = 0.1 Ω/100 Ω sym; D = 100 Ω/0.1 Ω sym

1 A types

3 to 10 A types

12 and 15 A types

16 and 20 A types



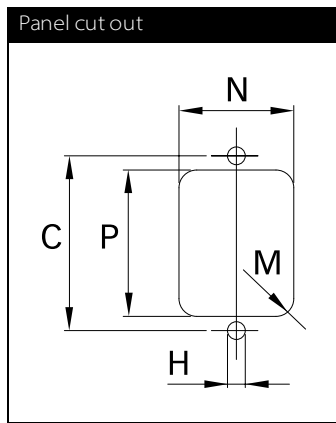
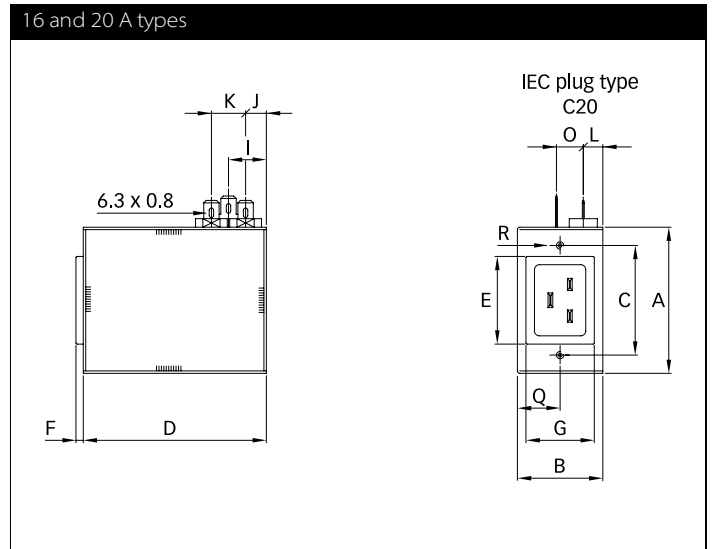
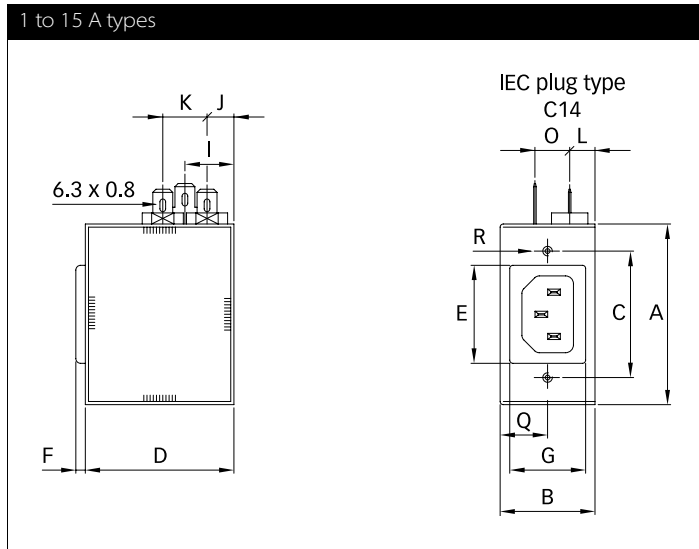
Product selector

FN 9246x-yy-..

- 06: Faston 6.3 x 0.8mm (spade/soldering)
- 1 to 20: Rated current
Standard IEC inlet type C14 (1 to 15A types), C20 (16 and 20A types)
- Blank: Standard version
- B: Medical version (with bleed resistor and without Y2-capacitor)

For example: FN 9246-6-06, FN 9246B-10-06

Mechanical data



	1 A	3 A	6 A	10 A	12 A	15 A	16 A	20 A
A	57.15	57.15	57.15	57.15	57.15	57.15	60	60
B	30	30	30	30	30	30	35	35
C	40	40	40	40	40	40	45	45
D	47	47	47	47	47	47	75	75
E	31	31	31	31	31	31	36	36
F	3	3	3	3	3	3	3	3
G	24	24	24	24	24	24	28	28
H	∅ 3.5	∅ 3.5	∅ 3.5	∅ 3.5	∅ 3.5	∅ 3.5	∅ 3.5	∅ 3.5
I	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
J	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
K	14	14	14	14	14	14	14	14
L	8	8	8	8	8	8	8	8
M	R ≤ 1.5	R ≤ 1.5	R ≤ 1.5	R ≤ 1.5	R ≤ 1.5	R ≤ 1.5	R ≤ 1.5	R ≤ 1.5
N	25	25	25	25	25	25	29	29
O	11	11	11	11	11	11	11	11
P	32	32	32	32	32	32	37	37
Q	15	15	15	15	15	15	17.5	17.5
R				M3 x 10 max.				

All dimensions in mm; 1 inch = 25.4 mm
Tolerances according: ISO 2768-m / EN 22768-m



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