

Ultra Compact EMC Filter



- Rated currents from 0.5 to 8.4 A
- Aluminium case
- Very compact PCB-mountable design
- Low profile
- Optional medical versions (B type)



Performance indicators

Attenuation performance



Rated current [A]



Approvals & Compliances



The FN 406 PCB filter is a single-phase filter designed for easy, fast and compact PCB-mounting. Choosing the FN 406 product line brings you the rapid availability of a standard filter associated with the necessary safety acceptance. Standard PCB single-phase filters are a practical solution helping you to pass EMI system approval in a short time. A selection on amperage ratings and medical types are designed to offer you the desired standard product.

Features and Benefits

- Good conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- PCB through hole mounting.
- Low profile.
- Custom specific versions on request.

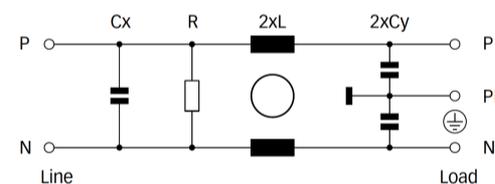
Technical Specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Nominal operating voltage	230 VAC
Rated currents	0.5 to 8.4 A @ 40°C
Operating frequency	DC to 400 Hz
High potential test voltage	P → PE 2000 VAC for 2 sec (standard types) P → PE 2500 VAC for 2 sec (B types) P → N 760 VAC for 2 sec
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Flammability corresponding to	UL 94 V-0
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
MTBF (Mil-HB-217F)	>1,900,000 h @ 40°C/230 V

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 equipment

Typical electrical schematic



Filter Selection Table

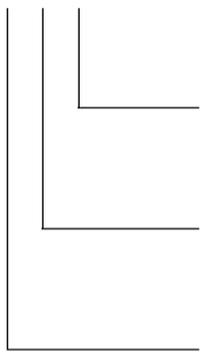
Filter	Rated current @ 40 °C (25 °C) [A]	Leakage current* @ 230 VAC/50 Hz [μA]	Inductance** L [mH]	Capacitance**		Resistance** R [kΩ]	Input/Output connections ┆	Weight [g]
				Cx [nF]	Cy [nF]			
FN 406-0.5-02	0.5 (0.6)	373	24	100	2.2	1000	-02	36
FN 406-1-02	1 (1.2)	373	12	100	2.2	1000	-02	36
FN 406-3-02	3 (3.6)	373	2.5	100	2.2	1000	-02	36
FN 406-6-02	6 (6.9)	373	0.78	100	2.2	1000	-02	36
FN 406-8.4-02	8.4 (9.6)	373	0.3	100	2.2	1000	-02	36
FN 406 B-0.5-02	0.5 (0.6)	2	24	100		1000	-02	36
FN 406 B-1-02	1 (1.2)	2	12	100		1000	-02	36
FN 406 B-3-02	3 (3.6)	2	2.5	100		1000	-02	36
FN 406 B-6-02	6 (6.9)	2	0.78	100		1000	-02	36
FN 406 B-8.4-02	8.4 (9.6)	2	0.3	100		1000	-02	36

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

** Tolerances apply: Inductance: -30/+50%, Capacitance: ±20%, Resistance: ±10%

Product selector

FN 406x-yy-..



02: PCB through hole mounting

0.5 to 8.4: Rated current

Blank: Standard version

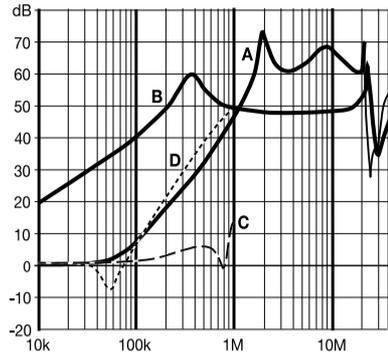
B: Medical version (without Y2-capacitor)

For example: FN 406-0.5-02, FN 406 B-8.4-02

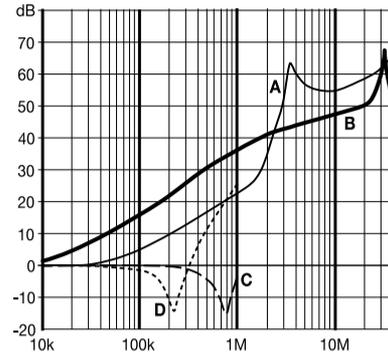
Typical Filter Attenuation

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

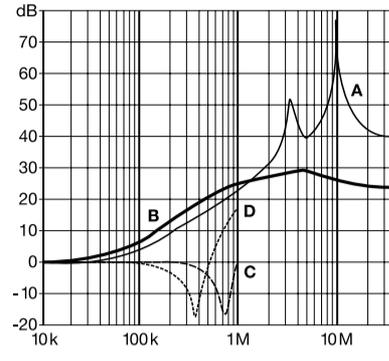
0.5 to 3 A types



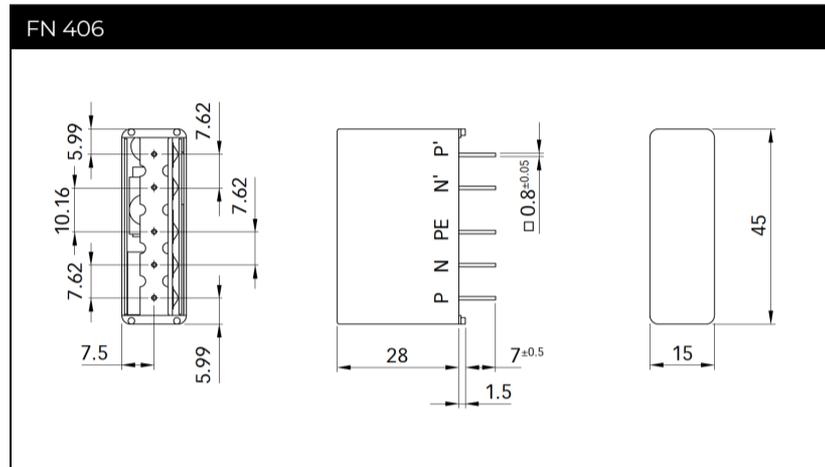
6 A types



8.4 A types



Mechanical Data



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.

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