

# 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



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.

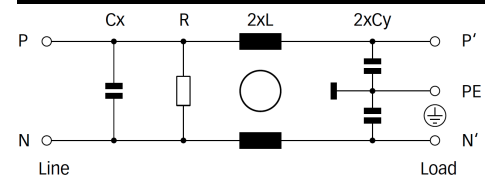
### Technical specifications

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

### 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



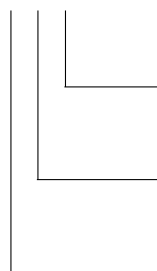
## Filter selection table

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

### Product selector

FN 406x-yy-..



02: PCB through hole mounting

0.5 to 8.4: Rated current

Blank: Standard version

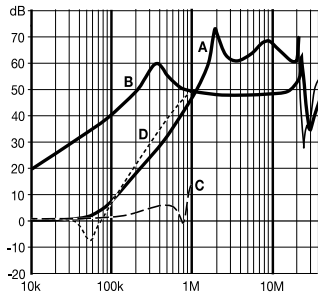
B: Medical version (without Y2-capacitor)

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

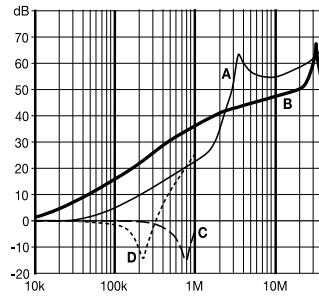
### Typical filter attenuation

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

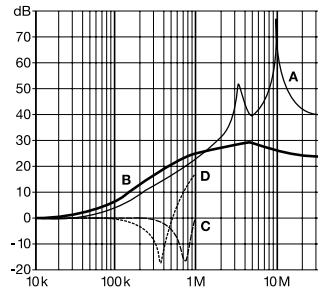
0.5 to 3 A types



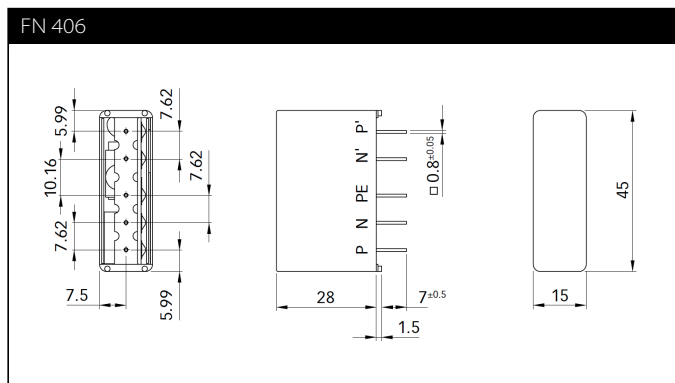
6 A types



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](http://www.schaffner.com) to find more details on filter connectors.



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