

# 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.

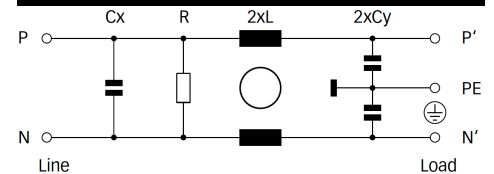
### Technical specifications

<b>Maximum continuous operating voltage</b>	250 VAC, 50/60 Hz
<b>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



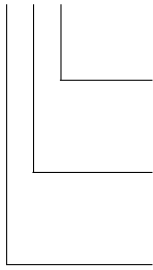
## Filter selection table

Filter	Rated current	Leakage current*	Inductance L	Capacitance		Resistance R	Input/Output connections	Weight
	@ 40 °C (25 °C)	@ 230 VAC/50 Hz		Cx	Cy			
	[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-..



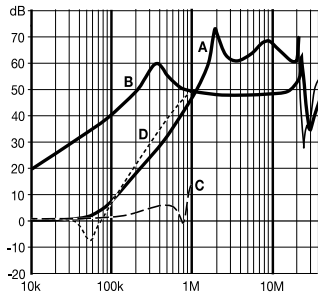
- 02: PCB through hole mounting
- 0.5 to 8.4: Rated current
- Blank: Standard version
- B: Medical version (without Y2-capacitor)

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

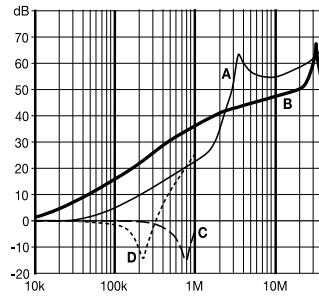
### Typical filter attenuation

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

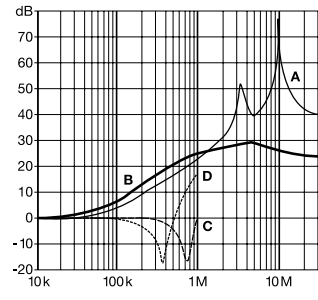
0.5 to 3 A types



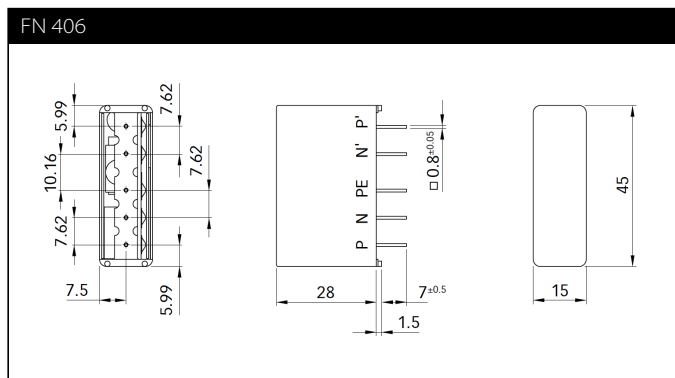
6 A types



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.



## Headquarters, global innovation and development

### Switzerland

#### Schaffner Group

Nordstrasse 11  
4542 Luterbach  
T +41 32 681 66 26  
F +41 32 681 66 30  
[info@schaffner.com](mailto:info@schaffner.com)  
[www.schaffner.com](http://www.schaffner.com)



## Sales and application centers

### China

#### Schaffner EMC Ltd. Shanghai

T20-3, No 565 Chuangye Road  
Pudong New Area  
201201 Shanghai  
T +86 21 3813 9500  
F +86 21 3813 9501 / 02  
[cschina@schaffner.com](mailto:cschina@schaffner.com)  
[www.schaffner.com.cn](http://www.schaffner.com.cn)

### Finland

#### Schaffner Oy

Sauvonrinne 19 H  
08500 Lohja  
T +358 19 35 72 71  
[finlandsales@schaffner.com](mailto:finlandsales@schaffner.com)

### France

#### Schaffner EMC S.A.S.

112 Quai de Bezons  
Boîte postale 133  
95100 Argenteuil  
T +33 1 34 34 30 60  
F +33 1 39 47 02 28  
[francesales@schaffner.com](mailto:francesales@schaffner.com)

### Germany

#### Schaffner Deutschland GmbH

Schoemperlenstrasse 12B  
76185 Karlsruhe  
T +49 721 56910  
F +49 721 569110  
[germanysales@schaffner.com](mailto:germanysales@schaffner.com)

### India

#### Schaffner India Pvt. Ltd

Unit 59, Level, Mfar Greenheart 7  
Manyata Tech Park, Hebbal Outer Ring Road  
560045 Bangalore  
T +91 80 6781 9805  
F +91 80 6781 9998  
[indiasales@schaffner.com](mailto:indiasales@schaffner.com)

### Italy

#### Schaffner EMC S.r.l.

Via Galileo Galilei 47  
20092 Cinisello Balsamo (MI)  
T +39 02 66 04 30 45 /47  
F +39 02 61 23 943  
[italysales@schaffner.com](mailto:italysales@schaffner.com)

### Japan

#### Schaffner EMC K.K.

1-32-12, Kamiuma, Setagaya-ku  
7F Mitsui-seimei Sanganjaya Bldg.  
154-0011 Tokyo  
T +81 3 5712 3650  
F +81 3 5712 3651  
[japansales@schaffner.com](mailto:japansales@schaffner.com)  
[www.schaffner.jp](http://www.schaffner.jp)

### Singapore

#### Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1  
408705 Singapore  
T +65 6377 3283  
F +65 6377 3281  
[singaporesales@schaffner.com](mailto:singaporesales@schaffner.com)

### Spain

#### Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E  
El Soto de Moraleja, Alcobendas  
28109 Madrid  
T +34 917 912 900  
F +34 917 912 901  
[spainsales@schaffner.com](mailto:spainsales@schaffner.com)

### Sweden

#### Schaffner EMC AB

Turebergstorg 1, 6  
19147 Sollentuna  
T +46 8 5792 1121 / 22  
F +46 8 92 96 90  
[swedensales@schaffner.com](mailto:swedensales@schaffner.com)

### Switzerland

#### Schaffner EMV AG

Nordstrasse 11  
4542 Luterbach  
T +41 32 681 66 26  
[switzerlandsales@schaffner.com](mailto:switzerlandsales@schaffner.com)

### Taiwan R.O.C.

#### Schaffner EMV Ltd.

6 Floor, No. 413, Rui Guang Road  
114 Neihu District Taipei City  
T +886 2 87525050  
F +886 2 87518086  
[taiwansales@schaffner.com](mailto:taiwansales@schaffner.com)  
[www.schaffner.tw](http://www.schaffner.tw)

### Thailand

#### Schaffner EMC Co. Ltd.

Northern Region Industrial Estate  
67 Moo 4 Tambon Ban Klang  
Amphur Muangng P.O. Box 14  
51000 Lamphun  
T +66 53 58 11 04  
F +66 53 58 10 19  
[thailandsales@schaffner.com](mailto:thailandsales@schaffner.com)

### UK

#### Schaffner Ltd.

5 Ashville Way, Molly Millars Lane  
Wokingham  
RG41 2PL Berkshire  
T +44 118 9770070  
F +44 118 9792969  
[uksales@schaffner.com](mailto:uksales@schaffner.com)

### USA

#### Schaffner EMC Inc.

52 Mayfield Avenue  
08837 Edison, New Jersey  
T +1 800 367 5566  
T +1 732 225 9533  
F +1 732 225 4789  
[usasales@schaffner.com](mailto:usasales@schaffner.com)  
[www.schaffnerusa.com](http://www.schaffnerusa.com)

#### Schaffner North America

6722 Thirlane Road  
24019 Roanoke, Virginia  
T +1 276 228 7943  
F +1 276 228 7953

#### Schaffner North America

823 Fairview Road  
24382 Wytheville, Virginia  
T +1 276 228 7943  
F +1 276 228 7258

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