

# Low Cost PCB Filter



- Rated currents from 0.5 to 6.5 A
- Compact PCB-mountable design
- Very low profile
- Optional medical versions (B type)



### Performance indicators

Attenuation performance



Rated current [A]



### Approvals & Compliances



The FN 402 PCB filter is a single-phase filter designed for easy and fast PCB-mounting. Choosing the FN 402 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 cost low profile
- Custom specific versions on request

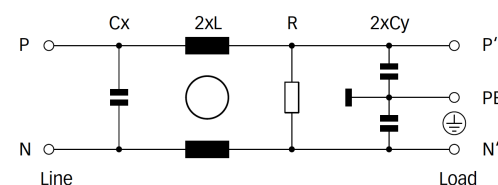
## Technical Specifications

<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 6.5 A @ 40°C max
<b>High potential test voltage</b>	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
<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 or better
<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

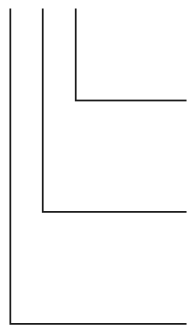
Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 230 VAC/50 Hz [μA]	Inductance** L [mH]	Capacitance**		Resistance** R [kΩ]	Input/Output connections ┆	Weight [g]
				Cx [nF]	Cy [nF]			
<b>FN 402-0.5-02</b>	0.5 (0.6)	373	40	100	2.2	1000	-02	40
<b>FN 402-1-02</b>	1 (1.2)	373	10	100	2.2	1000	-02	40
<b>FN 402-1.6-02</b>	1.6 (1.9)	373	6	100	2.2	1000	-02	40
<b>FN 402-2.5-02</b>	2.5 (3)	373	2	100	2.2	1000	-02	40
<b>FN 402-4-02</b>	4 (4.7)	373	1	100	2.2	1000	-02	40
<b>FN 402-6.5-02</b>	6.5 (7.5)	373	1	100	2.2	1000	-02	40
<b>FN 402 B-0.5-02</b>	0.5 (0.6)	2	40	100		1000	-02	40
<b>FN 402 B-1-02</b>	1 (1.2)	2	10	100		1000	-02	40
<b>FN 402 B-1.6-02</b>	1.6 (1.9)	2	6	100		1000	-02	40
<b>FN 402 B-2.5-02</b>	2.5 (3)	2	2	100		1000	-02	40
<b>FN 402 B-4-02</b>	4 (4.7)	2	1	100		1000	-02	40
<b>FN 402 B-6.5-02</b>	6.5 (7.5)	2	1	100		1000	-02	40

\*\* 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 402x-yy-..



02: PCB through hole mounting

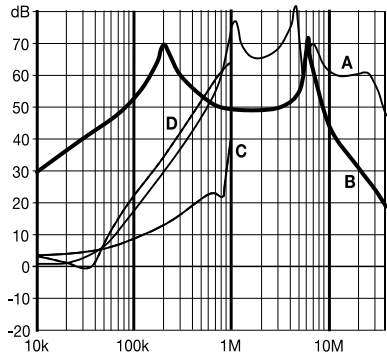
0.5 to 6.5: Rated current

Blank: Standard version

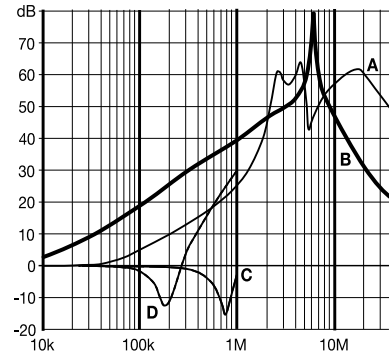
B: Medical version (without Y2-capacitor)

For example: FN 402-0.5-02, FN 402 B-6.5-02

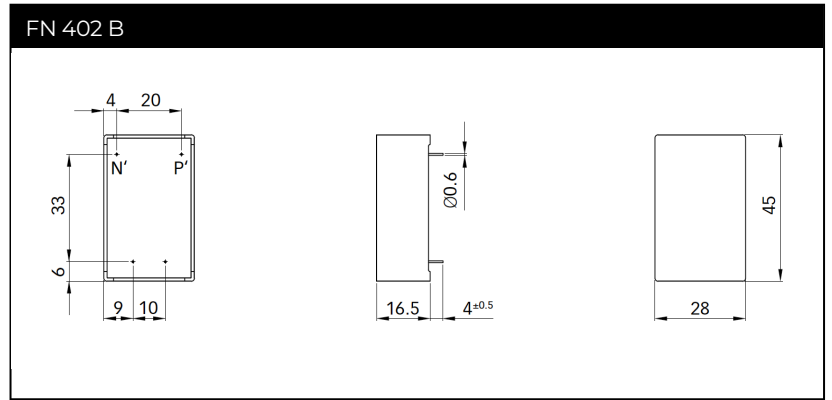
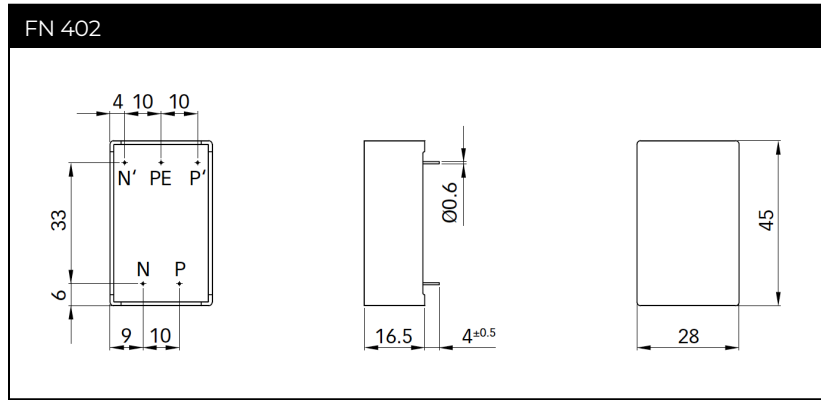
0.5 to 1.6 A types



2.5 to 6.5 A types



**Mechanical Data**



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

## Headquarters, Global Innovation and Development

### Switzerland

#### Schaffner Holding AG

Industrie Nord  
 Nordstrasse 11e  
 4542  
 Luterbach  
 +41 32 681 66 26  
[info@schaffner.com](mailto:info@schaffner.com)

## Sales and Application Centers

### China

#### Schaffner EMC Ltd. Shanghai

T20-3 C, No 565 Chuangye Road, Pudong district  
 201201  
 Shanghai  
 +86 2138139500  
[cschina@schaffner.com](mailto:cschina@schaffner.com)

### Finland

#### Schaffner Oy

Sauvonrinne 19 H  
 8500  
 Lohja  
 +358 50 468 7284  
[finlandsales@schaffner.com](mailto:finlandsales@schaffner.com)

### France

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

16-20 Rue Louis Rameau  
 95875  
 Bezons  
 +33 1 34 34 30 60  
[francesales@schaffner.com](mailto:francesales@schaffner.com)

### Germany

#### Schaffner Deutschland GmbH

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

### India

#### Schaffner India Pvt. Ltd

Regus World Trade Centre  
 WTC, 22nd Floor Unit No 2238, Brigade Gateway Campus, 26/1, Dr. Rajkumar Road Malleshwaram (W)  
 560055  
 Bangalore  
 +91 8067935355  
[indiasales@schaffner.com](mailto:indiasales@schaffner.com)

### Italy

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

Via Ticino, 30  
 20900  
 Monza (MB)  
 +39 039 21 41 070  
[italysales@schaffner.com](mailto:italysales@schaffner.com)

### Japan

#### Schaffner EMC K.K.

ISM Sangenjaya 7F  
 1-32-12 Kamiyama, Setagaya-ku  
 154-0011  
 Tokyo  
 +81 3 5712 3650  
[japansales@schaffner.com](mailto:japansales@schaffner.com)

### Singapore

#### Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1, #05-09, Kampong Ubi Industrial Estate  
 408705  
 Singapore  
 +65 63773283  
[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  
 +34 917 912 900  
[spainsales@schaffner.com](mailto:spainsales@schaffner.com)

### Sweden

#### Schaffner EMC AB

Östermalmstrorg 1  
 114 42  
 Stockholm  
 +46 8 5050 2425  
[swedensales@schaffner.com](mailto:swedensales@schaffner.com)

### Switzerland

#### Schaffner EMV AG

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

### Taiwan

#### Schaffner EMV Ltd.

U-Town  
 20 Floor-2, No 97, Section 1, XinTai 5th Road, XiZhi District  
 22175  
 New Taipei City  
 +886 226975500  
[taiwansales@schaffner.com](mailto:taiwansales@schaffner.com)

### Thailand

#### Schaffner EMC Co. Ltd.

Sathorn Square Tower  
 Room 3780, 37FL, 98 North-Sathorn Rd, Silom, Bangrak  
 10500  
 Bangkok  
 +66 621056397  
[thailandsales@schaffner.com](mailto:thailandsales@schaffner.com)

### United Kingdom

#### Schaffner Ltd.

1, Oakmede Place  
 Terrace Road  
 RG42 4JF  
 Binfield  
 +44 118 9770070  
[uksales@schaffner.com](mailto:uksales@schaffner.com)

### United States

#### Schaffner EMC Inc.

52 Mayfield Avenue  
 Edison, New Jersey  
 +1 732 225 9533  
[usasales@schaffner.com](mailto:usasales@schaffner.com)

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