

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]



Technical Specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Nominal operating voltage	230 VAC
Rated currents	0.5 to 6.5 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 or better
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

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.

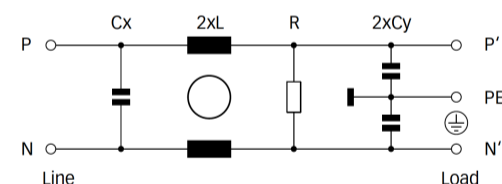
Features and Benefits

- 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

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

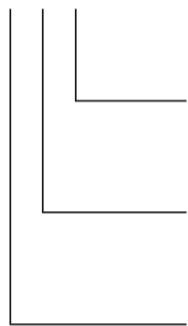
Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 230 VAC/50 Hz [μA]	Inductance** L [mH]	Capacitance**		Resistance** R [kΩ]	Input/Output connections ┆	Weight [g]
				Cx [nF]	Cy [nF]			
FN 402-0.5-02	0.5 (0.6)	373	40	100	2.2	1000	-02	40
FN 402-1-02	1 (1.2)	373	10	100	2.2	1000	-02	40
FN 402-1.6-02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

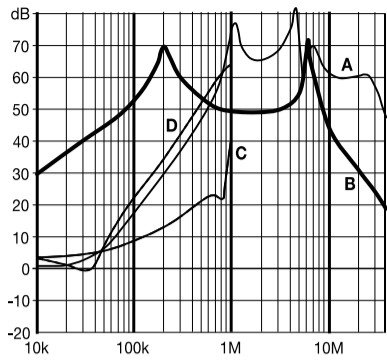
0.5 to 6.5: Rated current

Blank: Standard version

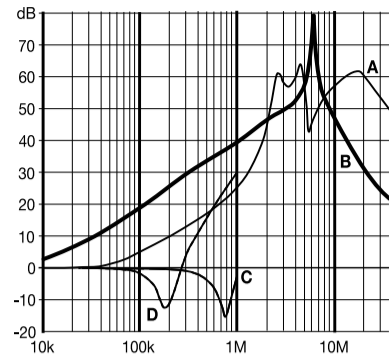
B: Medical version (without Y2-capacitor)

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

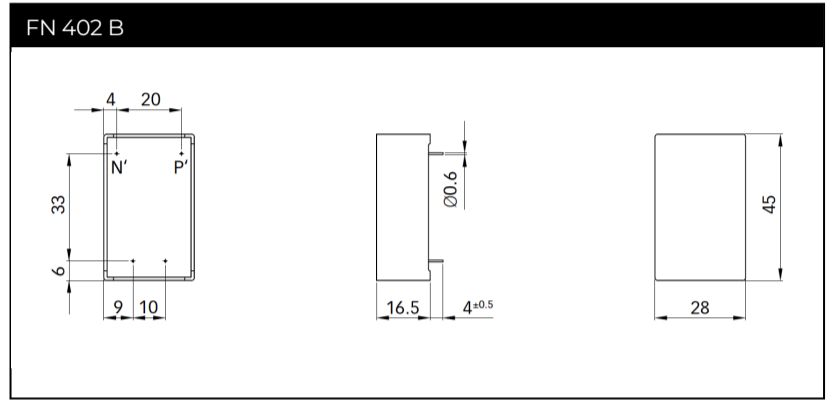
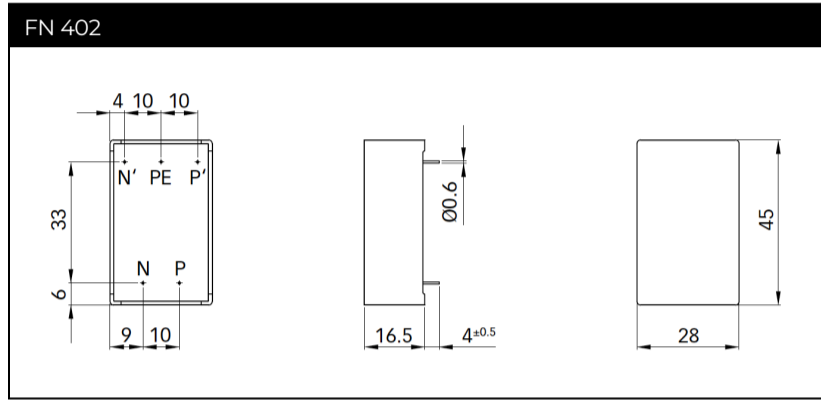
0.5 to 1.6 A types



2.5 to 6.5 A types



Mechanical Data



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

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group
Industrie Nord
Nordstrasse 5
4542
Luterbach
+41 32 681 66 26
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

Sweden

Schaffner EMC AB
Östermalmstrorg 1
114 42
Stockholm
+46 8 5050 2425
swedensales@schaffner.com

Switzerland

Schaffner EMV AG
Industrie Nord
Nordstrasse 5
4542
Luterbach
+41 32 681 66 26
switzerlandsales@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

Italy

Schaffner EMC S.r.l.
Via Ticino, 30
20900
Monza (MB)
+39 335 120 44 32
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

Singapore

Schaffner EMC Pte Ltd.
Blk 3015A Ubi Road 1 #05-09 Kampong Ubi
Industrial Estate
408705
Singapore
+65 63773283
singaporesales@schaffner.com

Finland

Schaffner Oy
Lohjanharjuntie 1109
08500
Lohja
+ 358 50 468 72 84
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

Germany

Schaffner Deutschland GmbH
Ohiostr. 8
76149
Karlsruhe
+49 721 56910
germanysales@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

United Kingdom

Schaffner Ltd.
Suite 1 Oakmede Place
Terrace Road
RG42 4JF
Binfield
+44 118 9770070
schaffner.uksales@te.com

United States

Schaffner EMC Inc.
52 Mayfield Avenue
Edison, New Jersey
+1 732 225 9533
usasales@schaffner.com

To find your local partner within Schaffner's global network schaffner.com

© 2025 Schaffner Group

The content of this document has been carefully checked and understood. However, neither Schaffner nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG. Latest publications and a complete disclaimer can be downloaded from the Schaffner website. All trademarks recognized.