

PCB Filters FN 402

Low Cost PCB Filter

SCHAFNER
energy efficiency and reliability



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

Approvals

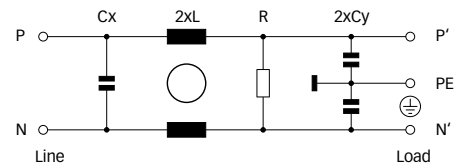


RoHS
2002/95/EC

Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	dc to 400Hz
Rated currents:	0.5 to 6.5A @ 40°C max.
High potential test voltage:	P → PE 2000VAC for 2 sec (standard types) P → PE 2500VAC for 2 sec (B types) P → N 760VAC for 2 sec
Temperature range (operation and storage):	-25°C to +100°C (25/100/21)
Design corresponding to:	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
Flammability corresponding to:	UL 94V-2 or better
MTBF @ 40°C/230V (Mil-HB-217F):	1,900,000 hours

Typical electrical schematic



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

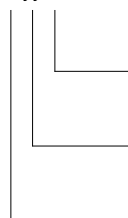
Filter selection table

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

Product selector

FN 402x-yy-..



02: PCB through hole mounting

0.5 to 6.5: Rated current

Blank: Standard version

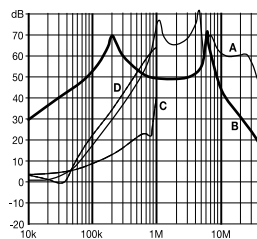
B: Medical version (without Y2-capacitor)

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

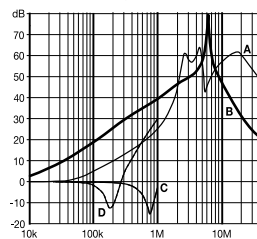
Typical filter attenuation

Per CISPR 17; A = 50Ω/50Ω sym; B = 50Ω/50Ω asym; C = 0.1Ω/100Ω sym; D = 100Ω/0.1Ω sym

0.5 to 1.6A types

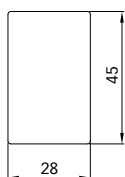
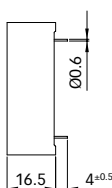
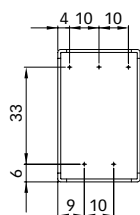


2.5 to 6.5A types

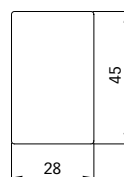
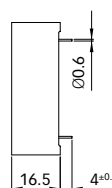
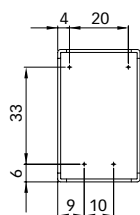


Mechanical data

FN 402



FN 402B



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

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