

PCB filters FN 406

Ultra compact EMC filter

SCHAFFNER
energy efficiency and reliability



- Rated currents from 0.5 to 8.4A
- Aluminum case
- Very compact PCB-mountable design
- Low profile
- Optional medical versions (B type)

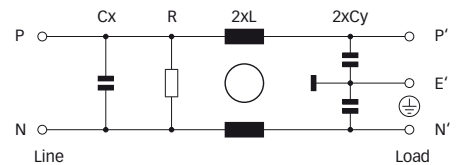
Approvals



Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	dc to 400Hz
Rated currents:	0.5 to 8.4A @ 40°C max.
High potential test voltage:	P → E 2000VAC for 2 sec (standard types) P → E 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 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.

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

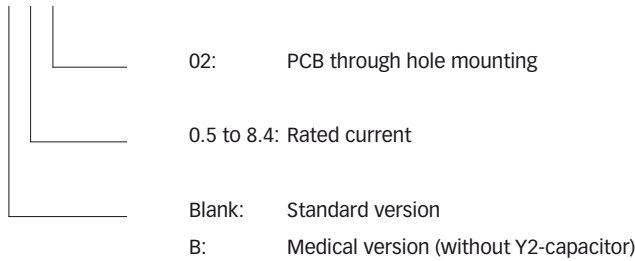
Filter selection table

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

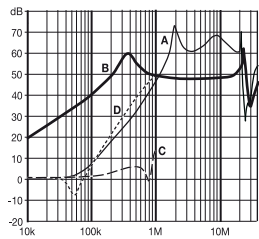


For example: FN 406-0.5-02, FN 406B-8.4-02

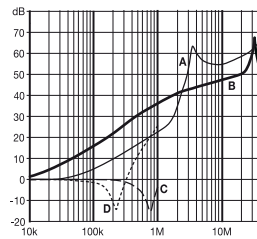
Typical filter attenuation

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

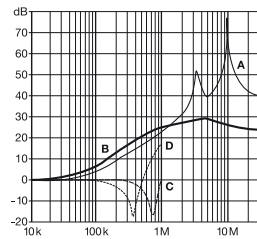
0.5 to 3A types



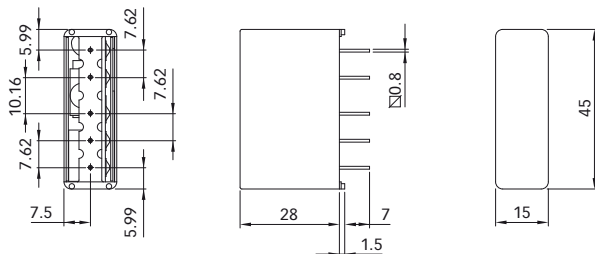
6A types



8.4A types



Mechanical data



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