PCB filters
FN 405

PCB-mounting filter

SCHAFFNER
energy efficiency and reliability

- **Rated currents from 0.5 to 10A**
- **Compact PCB-mountable design**
- **Low profile**

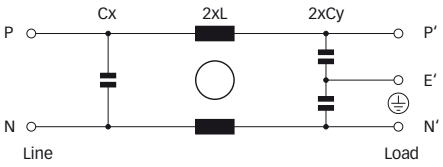
Approvals

RoHS 2002/95/EC

Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	dc to 400Hz
Rated currents:	0.5 to 10A @ 40°C max.
High potential test voltage:	P –> E 2000VAC for 2 sec
	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):	1,600,000 hours

Typical electrical schematic



The FN 405 PCB filter is a single-phase filter designed for easy and fast PCB-mounting. Choosing the FN 405 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 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

Filter selection table

Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 230VAC/50Hz [µA]	Inductance L [mH]	Capacitance Cx [nF]	Capacitance Cy [nF]	Resistance R [kΩ]	Input/Output connections	Weight [g]
FN 405-0.5-02	0.5 (0.6)	373	24	15	2.2		-02	40
FN 405-1-02	1 (1.2)	373	10	15	2.2		-02	40
FN 405-3-02	3 (3.6)	373	2	15	2.2		-02	40
FN 405-6-02	6 (6.9)	373	0.8	15	2.2		-02	40
FN 405-10-02	10 (11.5)	373	0.5	15	2.2		-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 405-yy-..

02: PCB through hole mounting

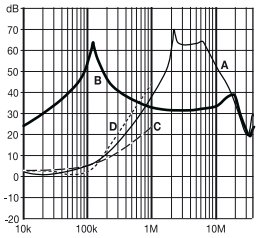
0.5 to 10: Rated current

For example: FN 405-0.5-02, FN 405-10-02

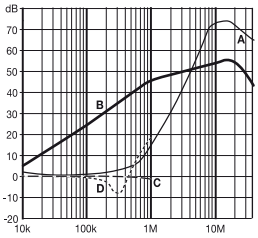
Typical filter attenuation

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

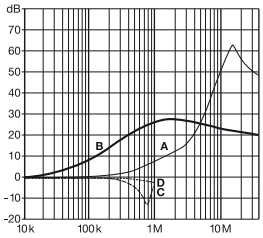
0.5 and 1A types



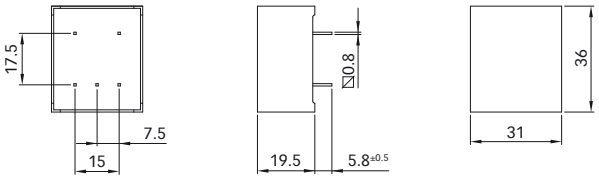
3 and 6A types



10A types



Mechanical data



All dimensions in mm; 1 inch = 25.4mm

Tolerances according: ISO 2768-m / EN 22768-m