

## High Performance Two-stage PCB-mounting EMC Filter

**SCHAFFNER**  
energy efficiency and reliability



- Rated currents from 0.5 to 6A
- High attenuation two-stage design
- PCB-mountable design

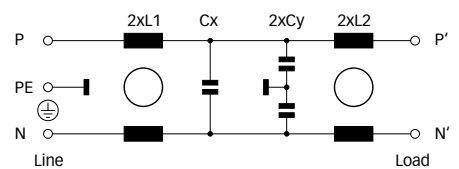
### Approvals



### Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	dc to 400Hz
Rated currents:	0.5 to 6A @ 40°C max.
High potential test voltage:	P → PE 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):	675,000 hours

### Typical electrical schematic



The FN 410 PCB filter is a single-phase, two-stage filter designed for easy and fast PCB-mounting. Choosing the FN 410 product line brings you the rapid availability of a standard high performance 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

- Very good conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- Two-stage single-phase design.
- PCB through hole mounting.
- 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

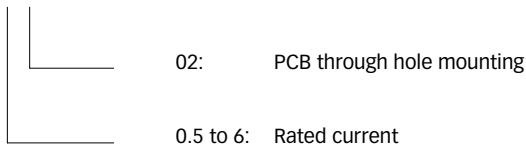
**Filter selection table**

Filter	Rated current @ 40°C (25°C)	Leakage current* @ 230VAC/50Hz	Inductance		Capacitance		Resistance	Input/Output connections	Weight
	[A]	[μA]	L1 [mH]	L2 [mH]	Cx [nF]	Cy [nF]	R [kΩ]		
FN 410-0.5-02	0.5 (0.6)	373	24	24	33	2.2		-02	85
FN 410-1-02	1 (1.2)	373	10	10	33	2.2		-02	85
FN 410-3-02	3 (3.6)	373	2	2	33	2.2		-02	85
FN 410-6-02	6 (6.9)	373	0.8	0.8	33	2.2		-02	85

\* Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

**Product selector**

FN 410-yy-..

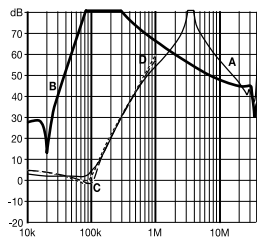


For example: FN 410-0.5-02, FN 410-6-02

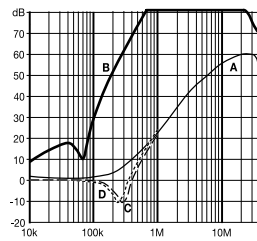
**Typical filter attenuation**

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

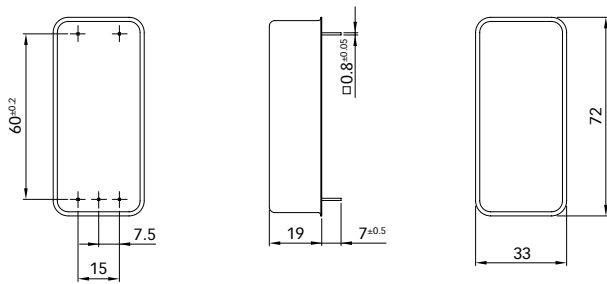
0.5 and 1A types



3 and 6A types



**Mechanical data**



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

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May 2011

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