

# High Performance Two-stage PCB-mounting EMC Filter



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

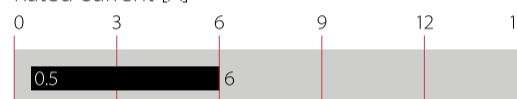


## Performance indicators

Attenuation performance



Rated current [A]



## Approvals & Compliances



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

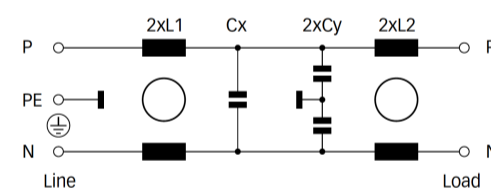
## Technical Specifications

<b>Maximum continuous operating voltage</b>	250 VAC, 50/60 Hz
<b>Nominal operating voltage</b>	230 VAC
<b>Rated currents</b>	0.5 to 6 A @ 40°C
<b>Operating frequency</b>	DC to 400 Hz
<b>High potential test voltage</b>	P → PE 2000 VAC for 2 sec P → N 760 VAC for 2 sec
<b>Temperature range (operation and storage)</b>	-25°C to +100°C (25/100/21)
<b>Flammability corresponding to</b>	UL 94 V-0
<b>Design corresponding to</b>	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
<b>MTBF (Mil-HB-217F)</b>	>675,000 h @ 40°C/230 V

## 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

## Typical electrical schematic



### Filter Selection Table

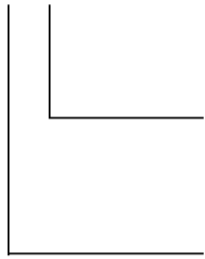
Filter*	Rated current @ 40°C (25°C) [A]	Leakage current* @ 230 VAC/50 Hz [µA]	Inductance**		Capacitance**		Resistance** R [kΩ]	Input/Output connections	Weight [g]
			L1 [mH]	L2 [mH]	Cx [nF]	Cy [nF]			
<b>FN 410-0.5-02</b>	0.5 (0.6)	373	24	24	33	2.2		-02	85
<b>FN 410-1-02</b>	1 (1.2)	373	10	10	33	2.2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

\*\* Tolerances apply: Inductance: -30/+50%, Capacitance: ±20%, Resistance: ±10%

### Product selector

FN 410-yy-..



02: PCB through hole mounting

0.5 to 6: Rated current

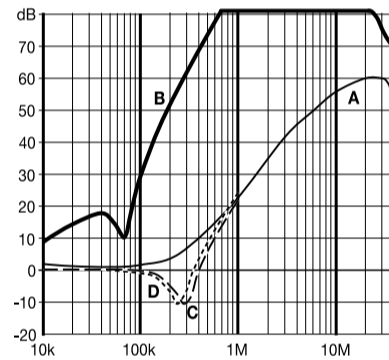
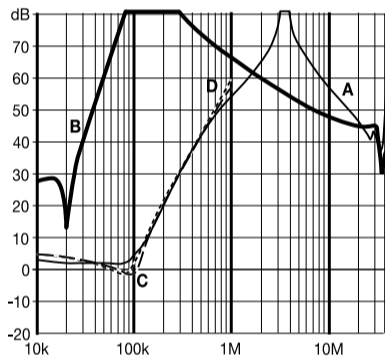
For example: FN 410-0.5-02, FN 410-6-02

### Typical Filter Attenuation

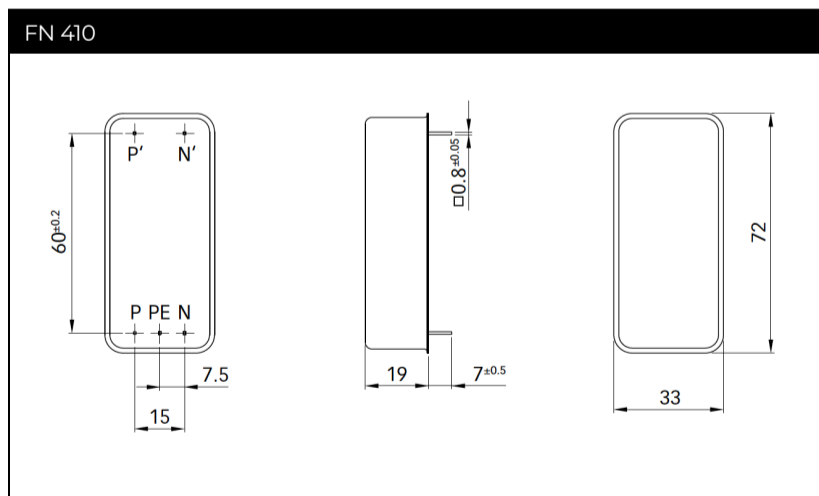
Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym; C=0.1 Ω/100 Ω sym; D=100 Ω/0.1 Ω sym

0.5 and 1 A types

3 and 6 A types



### Mechanical Data



All dimensions in mm; 1 inch = 25.4 mm

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

Please visit [www.schaffner.com](http://www.schaffner.com) to find more details on filter connectors.

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