

# High Performance Two-stage PCB-mounting EMC Filter



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

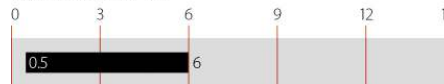


## Performance indicators

Attenuation performance



Rated current [A]



## Approvals



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>Operating frequency</b>	dc to 400 Hz
<b>Rated currents</b>	0.5 to 6 A @ 40 °C max.
<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>Design corresponding to</b>	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
<b>Flammability corresponding to</b>	UL 94 V-2 or better
<b>MTBF @ 40°C/230V (Mil-HB-217F)</b>	675,000 hours

## 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	Leakage current*	Inductance		Capacitance		Resistance	Input/Output connections	Weight
	@ 40 °C (25 °C)	@ 230 VAC/50 Hz	L1	L2	Cx	Cy	R		
	[A]	[mA]	[mH]	[mH]	[nF]	[nF]	[kΩ]		[g]
<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.

**Product selector**

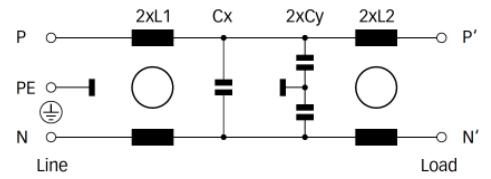
FN 410-yy-..

02: PCB through hole mounting

0.5 to 6: Rated current

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

### Typical electrical schematic

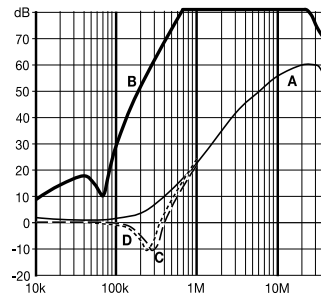
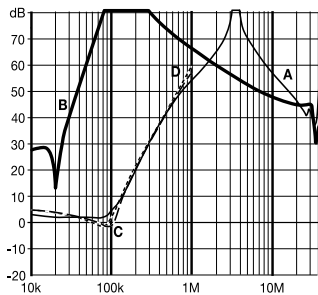


### Typical filter attenuation

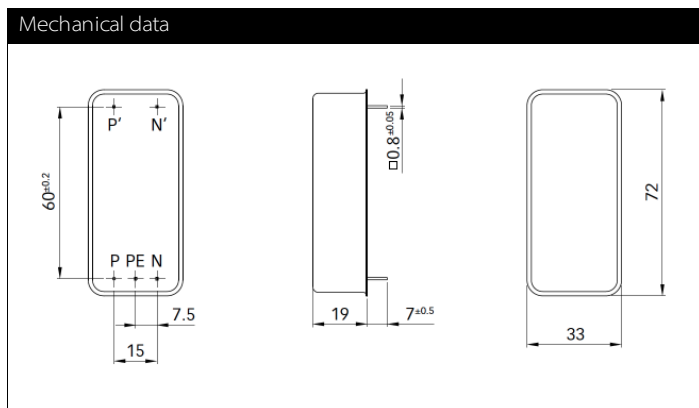
Per CISPR 17; A = 50 Ω/50Ω sym; B = 50 Ω/50 Ω asym; C = 0.1 Ω/100 Ω sym; D = 100 Ω/0.1 Ω sym

0.5 and 1 A types

3 and 6 A types



### Mechanical data



All dimensions in mm; 1 inch = 25.4 mm  
Tolerances according to: 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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