

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

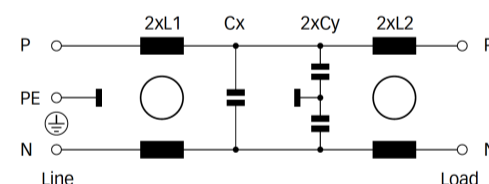
Technical Specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Operating frequency	DC to 400 Hz
Rated currents	0.5 to 6 A @ 40°C max
High potential test voltage	P → PE 2000 VAC for 2 sec P → N 760 VAC 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 94 V-2 or better
MTBF @ 40°C/230 V (Mil-HB-217F)	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

Typical electrical schematic



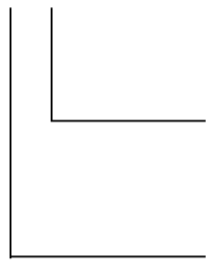
Filter Selection Table

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]			
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.
 ** 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

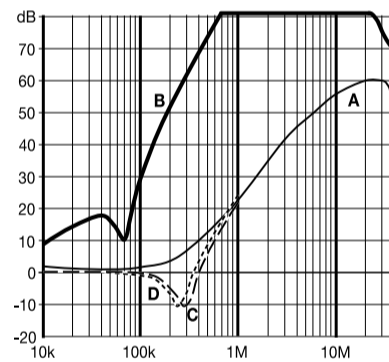
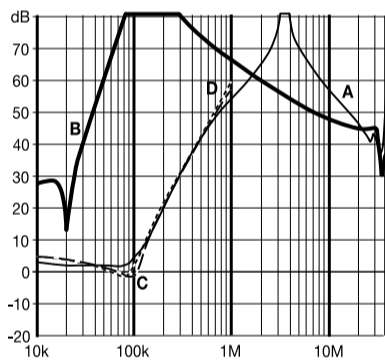
For example: FN 410-0.5-02, FN 410-6-02

Typical Filter Attenuation

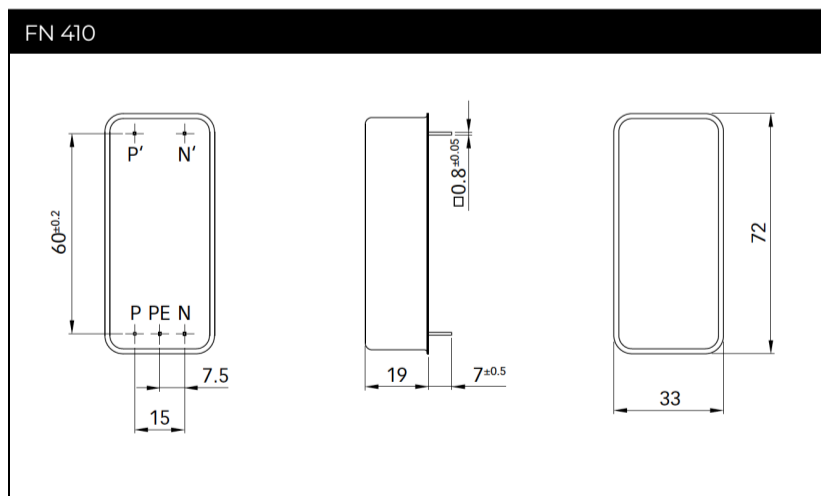
Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym; C=0.1 Ω/100 Ω sym; D=100 Ω/0.1 Ω sym

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 to find more details on filter connectors.

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