

High Performance Two-stage PCB-mounting EMC Filter



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

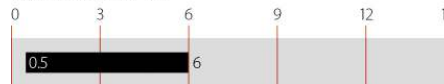


Performance indicators

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

| | |
|--|--|
| 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/230V (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

Filter selection table

| Filter* | Rated current @ 40 °C (25 °C) | Leakage current* @ 230 VAC/50 Hz | Inductance | | Capacitance | | Resistance | Input/Output connections | Weight [g] |
|----------------------|----------------------------------|-------------------------------------|------------|------------|-------------|------------|------------|-----------------------------|---------------|
| | [A] | [mA] | 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.

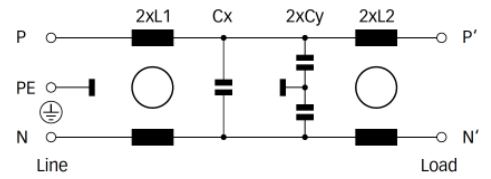
Product selector

FN 410-yy-..

02: PCB through hole mounting

0.5 to 6: Rated current

Typical electrical schematic



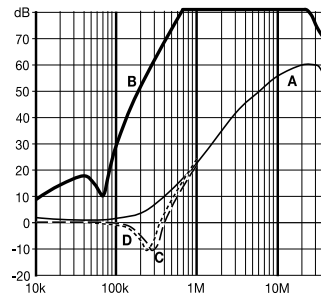
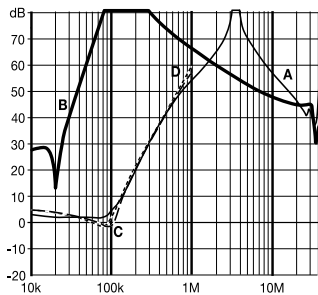
For example: FN 410-0.5-02, FN 410-6-02

Typical filter attenuation

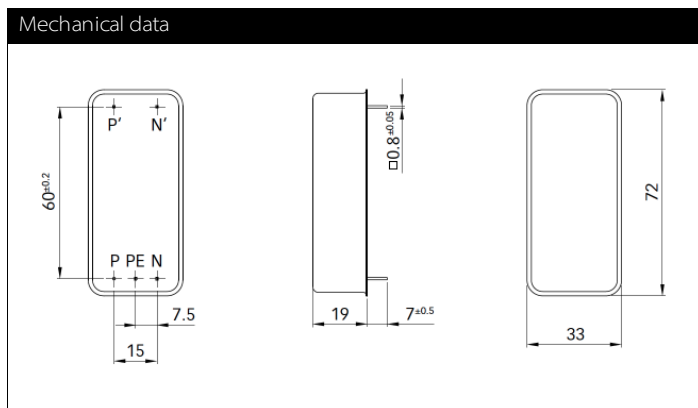
Per CISPR 17; A = 50 Ω/50Ω sym; B = 50 Ω/50 Ω asym; C = 0.1 Ω/100 Ω sym; D = 100 Ω/0.1 Ω sym

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 to find more details on filter connectors.



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