

1-phase Filters FN 350

Single-phase EMC/RFI Filter for Motor Drives

SCHAFNER
energy efficiency and reliability



- Compact filter solution for single-phase motor drive applications
- Industrial grade safety terminal blocks
- Designed to meet EN 55011/14/22
- Compliant with IEC 60950

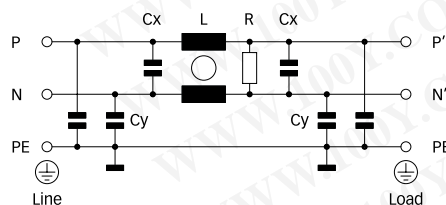
Approvals



Technical specifications

| | |
|--|--|
| Maximum continuous operating voltage: | 1x 250VAC |
| Operating frequency: | dc to 400Hz |
| Rated currents: | 8 to 55A @ 40°C |
| High potential test voltage: | P → E 2000VAC for 2 sec P → N 1100VDC for 2 sec |
| Protection category: | IP20 |
| Overload capability: | 4x rated current at switch on, 1.5x rated current for 1 minute, once per hour |
| Temperature range (operation and storage): | -25°C to +100°C (25/100/21) |
| Flammability corresponding to: | UL 94V-2 or better |
| Design corresponding to: | UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939 |
| MTBF @ 40°C/230V (Mil-HB-217F): | 420,000 hours |

Typical electrical schematic



Features and benefits

- High component values optimized for common and differential-mode attenuation in the lower frequency range makes this filter ideal for a large variety of single-phase motor drive applications.
- Supplied in a relatively small housing design with safety terminal blocks for fast and easy installation in primarily industrial environments.


- FN 350 also meets IEC 60950 requirements, thus providing additional application flexibility.

Typical applications

- Single-phase motor drives
- Automation equipment
- Power supplies, SMPS
- Office equipment
- Testing and measurements equipment

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Filter selection table

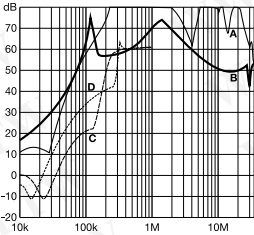
| Filter | Rated current @ 40°C (25°C) | Leakage current* @ 230VAC/50Hz | Power loss @ 25°C/50Hz | Input/Output connections | Weight |
|--------------|--------------------------------|-----------------------------------|---------------------------|---|--------|
| | [A] | [mA] | [W] |  | [kg] |
| FN 350-8-29 | 8 (9.0) | 4.9 | 5.2 | -29 | 0.7 |
| FN 350-12-29 | 12 (13.5) | 4.9 | 5.7 | -29 | 0.7 |
| FN 350-20-29 | 20 (22.4) | 4.9 | 6.1 | -29 | 0.7 |
| FN 350-30-33 | 30 (33.6) | 5.4 | 6.1 | -33 | 0.7 |
| FN 350-55-33 | 55 (61.5) | 11.0 | 9.9 | -33 | 1.2 |

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

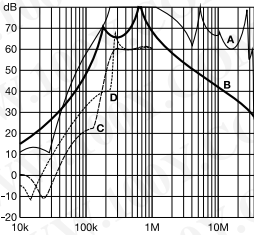
Typical filter attenuation

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

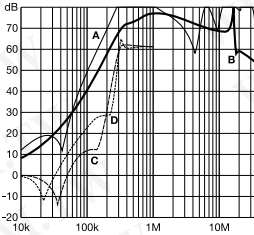
8A types



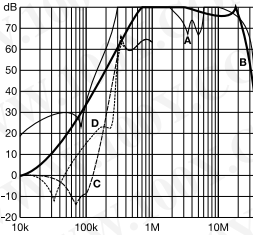
12A types



20 and 30A types

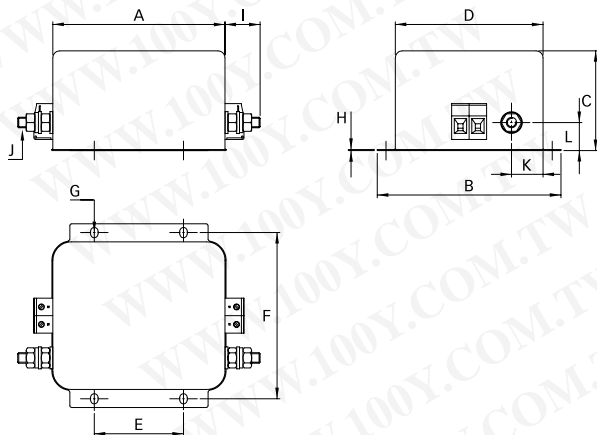


55A types

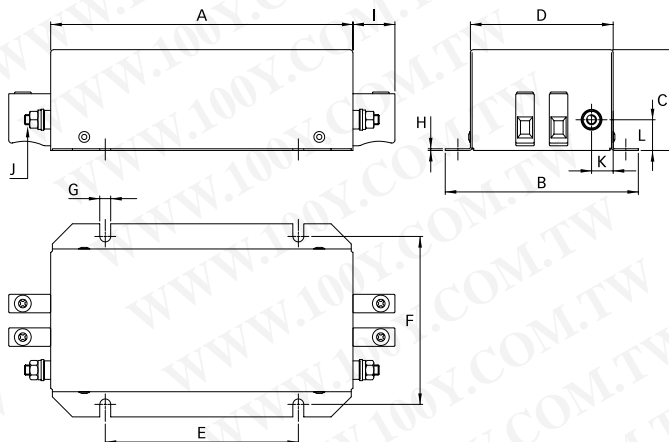


Mechanical data

8 to 30A types



55A types




Dimensions

| | 8A | 12A | 20A | 30A | 55A |
|---|---------|---------|---------|---------|------|
| A | 99.5 | 99.5 | 99.5 | 99.5 | 180 |
| B | 105 | 105 | 105 | 105 | 115 |
| C | 57 | 57 | 57 | 57.6 | 60 |
| D | 84.4 | 84.4 | 84.4 | 84.4 | 85 |
| E | 51 | 51 | 51 | 51 | 115 |
| F | 95 | 95 | 95 | 95 | 100 |
| G | 6 x 4.4 | 6 x 4.4 | 6 x 4.4 | 6 x 4.4 | 6.5 |
| H | 0.6 | 0.6 | 0.6 | 1.2 | 1 |
| I | 19.5 | 19.5 | 19.5 | 25 | 25 |
| J | M6 | M6 | M6 | M6 | M6 |
| K | 18 | 18 | 18 | 16 | 12.9 |
| L | 16 | 16 | 16 | 19 | 18.3 |

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

Filter input/output connector cross sections

| | -29 | -33 |
|---|---|-------------------|
|  |  | |
| Solid wire | 6mm ² | 16mm ² |
| Flex wire | 4mm ² | 10mm ² |
| AWG type wire | AWG 10 | AWG 6 |
| Recommended torque | 0.6 - 0.8Nm | 1.5 - 1.8Nm |

Please visit www.schaffner.com to find more details on filter connectors.