Multi-stage General Purpose AC/DC EMI Filter

- Rated currents from 1 to 30 A
- High differential and common-mode attenuation
- Optional medical versions (B type)
- Optional safety versions (A type)

**Technical specifications**

<table>
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<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Rated voltage*</td>
<td>250 VAC, 50/60 Hz; 250 VDC</td>
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<tr>
<td>Operating frequency</td>
<td>DC to 400 Hz</td>
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<tr>
<td>Rated currents</td>
<td>1 to 30 A @ 40°C max</td>
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</tbody>
</table>
| High potential test voltage    | P → PE 2000 VAC for 2 sec  
P → PE 2500 VAC for 2 sec (B types)  
P → N 1100 VDC for 2 sec        |
| Temperature range (operation and storage) | -25°C to +100°C (25/100/23)**                        |
| Certified to                   | UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939 (applies to AC and DC applications) |
| Flammability corresponding to  | UL 94 V-2 or better                                                          |
| Design corresponding to        | UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939                                  |
| Overvoltage category           | II, acc. IEC 60664-1                                                         |
| Pollution degree               | 2 acc. IEC 60664-1                                                           |
| Altitude                       | 2000m (above derating applies)                                               |
| MTBF @ 40°C/230 V (MIL-HB-217F) | 1,650,000 hours (B types)  
950,000 hours (A types)              |

* maximum RMS operating voltage at rated frequency or the maximum DC operating voltage
** for dedicated requests exceeding this specification (e.g. -40 °C or higher altitude) please contact your local Schaffner Sales office

**Features and benefits**

- FN 2060 two-stage filters are designed for easy and fast chassis mounting
- FN 2060 filters are also available as B versions without Y-capacitors for medical applications as well as A version with low capacitance for safety critical applications with necessity for low leakage currents
- All filters provide a high conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- FN 2060 two-stage filters are designed for noisy applications requiring good differential and common-mode attenuation
- FN 2060 filters are also available as single-stage filters (FN 2010 series)
- Various terminal options allow you to select the desired connection style

**Typical applications**

- Electrical and electronic equipment
- Consumer goods
- Household equipment
- Building automation
- Industrial applications
- Machinery
- Medical equipment
- Electronic data processing equipment
- Office automation and datacom equipment
- Various noisy applications requiring good filter performance

**Typical electrical schematic**
<table>
<thead>
<tr>
<th>Filter*</th>
<th>Rated current@ 40°C (25°C)</th>
<th>Leakage current**@ 250 VAC/50 Hz (@ 120 VAC/60 Hz)</th>
<th>Inductance*** L</th>
<th>Capacitance*** Cx</th>
<th>Cy</th>
<th>Resistance*** R</th>
<th>Input/Output connections</th>
<th>Weight [g]</th>
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</thead>
<tbody>
<tr>
<td>FN 2060-1-..</td>
<td>1 (1.2)</td>
<td>0.66 (0.38)</td>
<td>12</td>
<td>0.22</td>
<td>4.7</td>
<td>1000</td>
<td>-06</td>
<td>-07</td>
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<tr>
<td>FN 2060-3-..</td>
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<td>0.66 (0.38)</td>
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<tr>
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<tr>
<td>FN 2060-30-08</td>
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</table>

* To compile a complete part number, please replace the -.. with the required I/O connection style (e.g. FN 2070-25-08, FN 2070B-10-06).
** Maximum leakage under usual AC operating conditions (acc. IEC60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
*** Tolerances apply: Inductance: -30%/+50%, Capacitance: ±20%, Resistance: ±10%
Typical filter attenuation

dPer 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
16 A: Standard type

A type

B type

20 A: Standard type

A type

B type

30 A: Standard type

A type

B type
## Product selector

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tr>
<td>06</td>
<td>Wire leads</td>
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<tr>
<td>07</td>
<td>Studs (M4 screw)</td>
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<td>08</td>
<td>Rated current</td>
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### Mechanical data

#### Connection style -06, 1 to 12 A types

![Diagram of Connection style -06, 1 to 12 A types]

#### Connection style -06, 16 A types

![Diagram of Connection style -06, 16 A types]

#### Connection style -08, 10 to 16 A types

![Diagram of Connection style -08, 10 to 16 A types]

#### Connection style -08, 20 A types

![Diagram of Connection style -08, 20 A types]

#### Connection style -08, 30 A types

![Diagram of Connection style -08, 30 A types]

#### Connection style -07, 1 to 16 A types (same dimensions as style -06)

![Diagram of Connection style -07, 1 to 16 A types (same dimensions as style -06)]

#### Connection style -08, 20 A types

![Diagram of Connection style -08, 20 A types]
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<th>6 A</th>
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<th>12 A</th>
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<th>30 A</th>
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Connection style -06

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Connection style -07

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Connection style -08

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AWG type wire

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Wire length

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Recommended torque (Nm)

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Earth terminal

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</table>

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 connections.
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