Three-stage EMC/EMI Filter

- Rated currents from 6 to 20 A
- IEC inlet for 6 and 10 A versions
- Up to 3 GHz attenuation
- High surge voltage protection

Performance indicators

<table>
<thead>
<tr>
<th>Attenuation performance</th>
<th>standard</th>
<th>high</th>
<th>very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated current [A]</td>
<td>0</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

Technical specifications

- **Maximum continuous operating voltage**: 250 VAC, 50/60 Hz
- **Operating frequency**: DC to 400 Hz
- **Rated currents**: 6 to 20 A @ 40°C max.
- **High potential test voltage**:
  - P → PE: 420 VAC for 2 sec
  - P → N: 420 VAC for 2 sec
- **Temperature range (operation and storage)**: -25°C to +85°C (25/85/21)
- **Flammability corresponding to**: UL 94 V-2 or better
- **Design corresponding to**: UL 1283, CSA 22.2 No. B 1986, IEC/EN 60939
- **MTBF @ 40°C/230 V (Mil-HB-217F)**: 450,000 hours

Approval

- **RoHS**

Features and benefits

- **FN 700 Z series** is designed to meet highest filter attenuation requirements over a wide range starting from a few kilohertz up to 3 GHz
- **High surge voltage protection**
- **Choosing the FN 700 Z product line** brings you the rapid availability of a standard filter associated with the necessary safety acceptances
- **Standard filters** are a practical solution helping you to pass EMI system approval in a short time
- **Exceptional conducted attenuation performance**, based on three-stage design and chokes with high saturation resistance and excellent thermal behavior
- **Integrated gas discharge tubes and suppressors**
- **IEC inlet version for 6 and 10 A types**
- **Custom-specific versions on request**

Typical applications

- Facility management
- Information protection
- Telecommunication
- Data processing
- Medical equipment
- Electrical and electronic equipment

Typical electrical schematic
### Filter selection table

<table>
<thead>
<tr>
<th>Filter*</th>
<th>Rated current @ 40°C (25°C) [A]</th>
<th>Leakage current* @ 230 VAC/50 Hz [μA]</th>
<th>Inductance L [μH]</th>
<th>Capacitance Cx [μF]</th>
<th>capacitance Cs1 [μF]</th>
<th>Capacitance Cy [nF]</th>
<th>Capacitance Cy1 [nF]</th>
<th>Resistance R [MΩ]</th>
<th>Input connections</th>
<th>Output connections</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN 700 Z-6-06</td>
<td>6 (6.9)</td>
<td>440</td>
<td>50</td>
<td>17.1</td>
<td>1</td>
<td>2.5</td>
<td>0.33</td>
<td>IEC C14 -06</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FN 700 Z-10-06</td>
<td>10 (11.6)</td>
<td>440</td>
<td>50</td>
<td>9.4</td>
<td>1</td>
<td>2.5</td>
<td>0.33</td>
<td>IEC C14 -06</td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FN 700 Z-20-03</td>
<td>20 (23)</td>
<td>2600</td>
<td>60</td>
<td>5.5</td>
<td>1</td>
<td>2.2</td>
<td>5</td>
<td>10</td>
<td>0.33</td>
<td>-03</td>
<td>-03</td>
</tr>
</tbody>
</table>

* 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=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

#### Mechanical data

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>6 A</th>
<th>10 A</th>
<th>20 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>200</td>
<td>250</td>
<td>275</td>
</tr>
<tr>
<td>B</td>
<td>80</td>
<td>80</td>
<td>110</td>
</tr>
<tr>
<td>C</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>D</td>
<td>15</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>E</td>
<td>85</td>
<td>100</td>
<td>112.5</td>
</tr>
<tr>
<td>F</td>
<td>50</td>
<td>50</td>
<td>94</td>
</tr>
<tr>
<td>G</td>
<td>40</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>H</td>
<td>30</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>I</td>
<td>20</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>J</td>
<td>40</td>
<td>40</td>
<td>55</td>
</tr>
<tr>
<td>K</td>
<td>20</td>
<td>20</td>
<td>34</td>
</tr>
<tr>
<td>L</td>
<td>40</td>
<td>40</td>
<td>94</td>
</tr>
<tr>
<td>M</td>
<td>M4 x 6</td>
<td>M4 x 6</td>
<td>M4 x 6</td>
</tr>
<tr>
<td>N</td>
<td>6.3 x 0.8</td>
<td>6.3 x 0.8</td>
<td>M4</td>
</tr>
</tbody>
</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 connectors.
To find your local partner within Schaffner’s global network: www.schaffner.com

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