Three-stage EMC/EMI Filter

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
- 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

Technical specifications

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

Approvals & Compliances

[UK CA CE ROHS]

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

Typical electrical schematic

```
<table>
<thead>
<tr>
<th>P</th>
<th>L</th>
<th>Ck</th>
<th>Gy</th>
<th>Cy</th>
<th>Cx</th>
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<tr>
<td>PE</td>
<td></td>
<td></td>
<td></td>
<td>Cy</td>
<td></td>
</tr>
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<td>N</td>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>Cy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y1</td>
<td></td>
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</tbody>
</table>
```

Line | Load
Filter selection table

<table>
<thead>
<tr>
<th>Filter*</th>
<th>Rated current@ 40°C (25°C)</th>
<th>Leakage current@ 230 VAC/50 Hz</th>
<th>Inductance</th>
<th>Capacitance</th>
<th>Resistance</th>
<th>Input connections</th>
<th>Output connections</th>
<th>Weight</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</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</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>0.33</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

6 A types

10 to 20 A types

Mechanical data

6 and 10 A types

20 A types

Dimensions

<table>
<thead>
<tr>
<th></th>
<th>6 A</th>
<th>10 A</th>
<th>20 A</th>
<th>Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>200</td>
<td>250</td>
<td>275</td>
<td>±0.3</td>
</tr>
<tr>
<td>B</td>
<td>80</td>
<td>80</td>
<td>110</td>
<td>±0.3</td>
</tr>
<tr>
<td>C</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>±0.2</td>
</tr>
<tr>
<td>D</td>
<td>15</td>
<td>25</td>
<td>25</td>
<td>±0.3</td>
</tr>
<tr>
<td>E</td>
<td>85</td>
<td>100</td>
<td>112.5</td>
<td>±0.2</td>
</tr>
<tr>
<td>F</td>
<td>50</td>
<td>50</td>
<td>94</td>
<td>±0.2</td>
</tr>
<tr>
<td>G</td>
<td>40</td>
<td>40</td>
<td>60</td>
<td>±0.3</td>
</tr>
<tr>
<td>H</td>
<td>30</td>
<td>30</td>
<td>25</td>
<td>±0.5</td>
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<tr>
<td>I</td>
<td>20</td>
<td>20</td>
<td>15</td>
<td>±0.3</td>
</tr>
<tr>
<td>J</td>
<td>40</td>
<td>40</td>
<td>55</td>
<td>±0.3</td>
</tr>
<tr>
<td>K</td>
<td>20</td>
<td>20</td>
<td>34</td>
<td>±0.3</td>
</tr>
<tr>
<td>L</td>
<td>40</td>
<td>40</td>
<td>94</td>
<td>±0.1</td>
</tr>
<tr>
<td>M</td>
<td>M4 x 6</td>
<td>M4 x 6</td>
<td>M4 x 6</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>6.3 x 0.8</td>
<td>6.3 x 0.8</td>
<td>M4</td>
<td></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 to find more details on filter connectors.
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