Multi-stage AC/DC EMI Filter with Excellent Attenuation Performance

**Rated currents from 1 to 30 A**
- Two-stage filter
- Very high differential and common-mode attenuation
- Optional medical versions (B type)
- Optional safety versions (A type)
- Optional enhanced performance versions
- Optional overvoltage protection (Z type)

**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>
<tr>
<td></td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Technical specifications**

- **Rated voltage**
  - 250 VAC, 50/60 Hz; 250 VDC
- **Operating frequency**
  - DC to 400 Hz
- **Rated currents**
  - 1 to 30 A @ 40°C max.
- **High potential test voltage**
  - P → PE 2000 VAC for 2 sec (equiv. cap <88 nF)
  - P → PE 2550 VDC for 2 sec (equiv. cap >88 nF)
  - 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 (25/100/21)**
- **Certified to**
  - UL 1283, CSA 22.2 No. B 1986, IEC/EN 60939 (applies to AC and DC applications)
  - Terminal plastic for -06/-08 version: UL 94 V-0
  - Laces for -07 version: UL 94 VW-1
  - Grommet for -07 version: UL 94 V-0
- **Flammability corresponding to**
  - UL 94 V-0
- **Surge pulse protection (Z type)**
  - Helps compliance to IEC61000-4-5 (Differential Mode only)
- **Overvoltage category**
  - II acc. IEC 60664-1
- **Pollution degree**
  - 2 acc. IEC 60664-1
- **Altitude**
  - 2000m (above derating applies)**
  - 1,300,000 hours (1 to 10 A types)
  - 1,100,000 hours (12 A types)
  - 57,000 hours (16 and 30 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 2090 two-stage filters are designed for easy and fast chassis mounting.
- FN 2090 B versions without capacitors to earth comply to 1MOP for ME (medical equipment) acc. IEC 60601-1
- FN 2090 A versions with low capacitance to earth for safety critical applications with a requirement for low leakage currents.
- FN 2090 filters offers an optimized filter range for enhanced performance AC and DC applications, in same compact size (KK, LL, NN types)
- All filters provide an exceptional conducted attenuation performance, based on chokes with high permeable core material.
- FN 2090 two-stage filters are designed for noisy applications requiring excellent filter performance.
- The higher inductivity offers increased attenuation performance with the same form factor as FN 2060 and FN 2080 series.
- All FN 2090 filters can be delivered with optional surge pulse protection (Z type).
- FN 2090 filters are also available as singlestage filters (FN 2030 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 high filter performance

**Typical electrical schematic**

![ Typical electrical schematic diagram ](attachment:Typical_electrical_schematic.png)
## Filter selection table

<table>
<thead>
<tr>
<th>Filter*</th>
<th>Rated current@ 40°C (25°C)</th>
<th>Leakage current** @ 250V AC/50 Hz (@ 120V AC/60 Hz)</th>
<th>Inductance*** L [mH]</th>
<th>Capacitance*** Cx [μF]</th>
<th>Cy1 [nF]</th>
<th>Cy2 [nF]</th>
<th>Resistance*** R [kΩ]</th>
<th>Input/Output connections</th>
<th>Weight [g]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN 2090-1-..</td>
<td>1 (1.1)</td>
<td>0.45 (0.26)</td>
<td>20</td>
<td>0.22</td>
<td>2.2</td>
<td>1.0</td>
<td>680</td>
<td>-06 -07</td>
<td>73</td>
</tr>
<tr>
<td>FN 2090-3-..</td>
<td>3 (3.4)</td>
<td>0.45 (0.26)</td>
<td>14</td>
<td>0.33</td>
<td>2.2</td>
<td>1.0</td>
<td>470</td>
<td>-06 -07</td>
<td>158</td>
</tr>
<tr>
<td>FN 2090-4-..</td>
<td>4 (4.5)</td>
<td>0.45 (0.26)</td>
<td>14</td>
<td>0.33</td>
<td>2.2</td>
<td>1.0</td>
<td>470</td>
<td>-06 -07</td>
<td>176</td>
</tr>
<tr>
<td>FN 2090-6-..</td>
<td>6 (6.7)</td>
<td>0.61 (0.35)</td>
<td>8</td>
<td>0.47</td>
<td>3.3</td>
<td>1.0</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
</tr>
<tr>
<td>FN 2090-8-..</td>
<td>8 (8.9)</td>
<td>0.61 (0.35)</td>
<td>8</td>
<td>0.47</td>
<td>3.3</td>
<td>1.0</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
</tr>
<tr>
<td>FN 2090-10-..</td>
<td>10 (11.2)</td>
<td>0.61 (0.35)</td>
<td>8</td>
<td>0.47</td>
<td>3.3</td>
<td>1.0</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
</tr>
<tr>
<td>FN 2090-12-..</td>
<td>12 (13.4)</td>
<td>0.93 (0.54)</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>391</td>
</tr>
<tr>
<td>FN 2090-16-..</td>
<td>16 (17.9)</td>
<td>0.93 (0.54)</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>369</td>
</tr>
<tr>
<td>FN 2090-20-..</td>
<td>20 (22.4)</td>
<td>0.93 (0.54)</td>
<td>2.7</td>
<td>1</td>
<td>10</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>530</td>
</tr>
<tr>
<td>FN 2090-30-08</td>
<td>30 (33.5)</td>
<td>0.93 (0.54)</td>
<td>1.5</td>
<td>1</td>
<td>10</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>548</td>
</tr>
<tr>
<td>FN 2090 A-1-..</td>
<td>1 (1.1)</td>
<td>0.13 (0.07)</td>
<td>20</td>
<td>0.22</td>
<td>0.47</td>
<td>0.47</td>
<td>680</td>
<td>-06 -07</td>
<td>73</td>
</tr>
<tr>
<td>FN 2090 A-3-..</td>
<td>3 (3.4)</td>
<td>0.13 (0.07)</td>
<td>14</td>
<td>0.33</td>
<td>0.47</td>
<td>0.47</td>
<td>470</td>
<td>-06 -07</td>
<td>158</td>
</tr>
<tr>
<td>FN 2090 A-4-..</td>
<td>4 (4.5)</td>
<td>0.13 (0.07)</td>
<td>14</td>
<td>0.33</td>
<td>0.47</td>
<td>0.47</td>
<td>470</td>
<td>-06 -07</td>
<td>176</td>
</tr>
<tr>
<td>FN 2090 A-6-..</td>
<td>6 (6.7)</td>
<td>0.13 (0.07)</td>
<td>8</td>
<td>0.47</td>
<td>0.47</td>
<td>0.47</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>191</td>
</tr>
<tr>
<td>FN 2090 A-8-..</td>
<td>8 (8.9)</td>
<td>0.13 (0.07)</td>
<td>8</td>
<td>0.47</td>
<td>0.47</td>
<td>0.47</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
</tr>
<tr>
<td>FN 2090 A-10-..</td>
<td>10 (11.2)</td>
<td>0.13 (0.07)</td>
<td>8</td>
<td>0.47</td>
<td>0.47</td>
<td>0.47</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
</tr>
<tr>
<td>FN 2090 A-12-..</td>
<td>12 (13.4)</td>
<td>0.13 (0.07)</td>
<td>4</td>
<td>1</td>
<td>0.47</td>
<td>0.47</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>391</td>
</tr>
<tr>
<td>FN 2090 A-16-..</td>
<td>16 (17.9)</td>
<td>0.13 (0.07)</td>
<td>4</td>
<td>1</td>
<td>0.47</td>
<td>0.47</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>391</td>
</tr>
<tr>
<td>FN 2090 A-20-..</td>
<td>20 (22.4)</td>
<td>0.13 (0.07)</td>
<td>2.7</td>
<td>1</td>
<td>0.47</td>
<td>0.47</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>530</td>
</tr>
<tr>
<td>FN 2090 A-30-08</td>
<td>30 (33.5)</td>
<td>0.13 (0.07)</td>
<td>1.5</td>
<td>1</td>
<td>10</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>548</td>
</tr>
<tr>
<td>FN 2090 B-1-..</td>
<td>1 (1.1)</td>
<td>0.00</td>
<td>20</td>
<td>0.22</td>
<td>1.0</td>
<td>680</td>
<td>-06 -07</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-3-..</td>
<td>3 (3.4)</td>
<td>0.00</td>
<td>14</td>
<td>0.33</td>
<td>1.0</td>
<td>470</td>
<td>-06 -07</td>
<td>158</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-4-..</td>
<td>4 (4.5)</td>
<td>0.00</td>
<td>14</td>
<td>0.33</td>
<td>1.0</td>
<td>470</td>
<td>-06 -07</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-6-..</td>
<td>6 (6.7)</td>
<td>0.00</td>
<td>8</td>
<td>0.47</td>
<td>1.0</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>191</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-8-..</td>
<td>8 (8.9)</td>
<td>0.00</td>
<td>8</td>
<td>0.47</td>
<td>1.0</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-10-..</td>
<td>10 (11.2)</td>
<td>0.00</td>
<td>8</td>
<td>0.47</td>
<td>1.0</td>
<td>330</td>
<td>-06 -07 -08</td>
<td>330</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-12-..</td>
<td>12 (13.4)</td>
<td>0.00</td>
<td>4</td>
<td>1</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>391</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-16-..</td>
<td>16 (17.9)</td>
<td>0.00</td>
<td>4</td>
<td>1</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>391</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-20-..</td>
<td>20 (22.4)</td>
<td>0.00</td>
<td>2.7</td>
<td>1</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>530</td>
<td></td>
</tr>
<tr>
<td>FN 2090 B-30-08</td>
<td>30 (33.5)</td>
<td>0.00</td>
<td>1.5</td>
<td>1</td>
<td>1.0</td>
<td>220</td>
<td>-06 -07 -08</td>
<td>548</td>
<td></td>
</tr>
</tbody>
</table>

** To compile a complete part number, please replace the -.. with the required I/O connection style.

** For surge pulse protection, please add Z (e.g. FN 2090Z-10-06, FN 2090BZ-20-08). The different letters code the used Cy values in the filter type (A = 0.47nF; K = 22nF; L = 33nF; N = 100nF; as the FN 2090 is a dual stage filter each letter stands for one stage of Cy).

** Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level. Leakage current for DC application is 0 mA

*** Tolerances apply: Inductance: -30%/+50%, Capacitance: ±20%, Resistance: ±10%
Typical filter attenuation

Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym

1 A: Standard type
A type
B type
Enhanced performance

3 A: Standard type
A type
B type
Enhanced performance

4 A: Standard type
A type
B type
Enhanced performance

6 A: Standard type
A type
B type
Enhanced performance

8 A: Standard type
A type
B type
Enhanced performance
Product selector

| FN 2090 sy-sy-yy | 06 | Factor 6.3 x 0.8 mm (base/soldering) |
| 07 | Wire leads |
| 08 | Stud (M4 screws) |
| 1 to 10 | Rated current |
| Blank | Standard version |
| Z | With surge protection |
| Blank | Standard version |
| A | Safety version |
| B | Medical version |
| IK/UL/NN | High-performance version |

Mechanical data

Connection style -06, 1 A types

Connection style -06, 3 to 20 A types

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

Connection style -07, 3 to 20 A types (same dimensions as style -06)

Connection style -08, 10 to 30 A types
## Dimensions

<table>
<thead>
<tr>
<th></th>
<th>1 A</th>
<th>3 A</th>
<th>4 A</th>
<th>6 A</th>
<th>8 A</th>
<th>10 A</th>
<th>12 A</th>
<th>16 A</th>
<th>20 A</th>
<th>30 A</th>
<th>Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>71</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>113.5 ±1</td>
<td>113.5 ±1</td>
<td>113.5 ±1</td>
<td>113.5 ±1</td>
<td>113.5 ±1</td>
<td>113.5 ±1</td>
<td>±0.5</td>
</tr>
<tr>
<td>B</td>
<td>46.6</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>57.5 ±1</td>
<td>57.5 ±1</td>
<td>57.5 ±1</td>
<td>57.5 ±1</td>
<td>57.5 ±1</td>
<td>57.5 ±1</td>
<td>±0.5</td>
</tr>
<tr>
<td>C</td>
<td>22.3</td>
<td>30.3</td>
<td>30.3</td>
<td>30.3</td>
<td>45.4 ±1</td>
<td>45.4 ±1</td>
<td>45.4 ±1</td>
<td>45.4 ±1</td>
<td>45.4 ±1</td>
<td>45.4 ±1</td>
<td>±0.5</td>
</tr>
<tr>
<td>D</td>
<td>50.5</td>
<td>64.8</td>
<td>64.8</td>
<td>64.8</td>
<td>94 ±1</td>
<td>94 ±1</td>
<td>94 ±1</td>
<td>94 ±1</td>
<td>94 ±1</td>
<td>94 ±1</td>
<td>±0.5</td>
</tr>
<tr>
<td>E</td>
<td>±4.5</td>
<td>49.8</td>
<td>49.8</td>
<td>49.8</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>±0.5</td>
</tr>
<tr>
<td>F</td>
<td>61</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>±0.5</td>
</tr>
<tr>
<td>G</td>
<td>21</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>±0.5</td>
</tr>
<tr>
<td>H</td>
<td>10.8</td>
<td>12.3</td>
<td>12.3</td>
<td>12.3</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>±0.5</td>
</tr>
<tr>
<td>I</td>
<td>16.8</td>
<td>20.8</td>
<td>20.8</td>
<td>20.8</td>
<td>32.4</td>
<td>32.4</td>
<td>32.4</td>
<td>32.4</td>
<td>32.4</td>
<td>32.4</td>
<td>±0.5</td>
</tr>
<tr>
<td>J</td>
<td>25.25</td>
<td>19.9</td>
<td>19.9</td>
<td>19.9</td>
<td>15.5</td>
<td>15.5</td>
<td>15.5</td>
<td>15.5</td>
<td>15.5</td>
<td>15.5</td>
<td>±0.5</td>
</tr>
<tr>
<td>K</td>
<td>5.3</td>
<td>5.3</td>
<td>5.3</td>
<td>5.3</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>±0.5</td>
</tr>
<tr>
<td>L</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>±0.5</td>
</tr>
<tr>
<td>M</td>
<td>±0.7</td>
<td>±0.7</td>
<td>±0.7</td>
<td>±0.7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>±0.3</td>
</tr>
</tbody>
</table>

### Connection style -06

<table>
<thead>
<tr>
<th></th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
<th>6.3 x 0.8</th>
</tr>
</thead>
</table>

### Connection style -07

<table>
<thead>
<tr>
<th></th>
<th>8.3</th>
<th>8.3</th>
<th>8.3</th>
<th>8.3</th>
<th>8.4</th>
<th>8.4</th>
<th>8.4</th>
<th>8.4</th>
<th>8.4</th>
<th>±0.5</th>
</tr>
</thead>
</table>

### AWG type wire

<table>
<thead>
<tr>
<th></th>
<th>AWG 20</th>
<th>AWG 20</th>
<th>AWG 20</th>
<th>AWG 18</th>
<th>AWG 18</th>
<th>AWG 18</th>
<th>AWG 16</th>
<th>AWG 16</th>
</tr>
</thead>
</table>

### Wire length

<table>
<thead>
<tr>
<th></th>
<th>140</th>
<th>140</th>
<th>140</th>
<th>140</th>
<th>140</th>
<th>140</th>
<th>140</th>
</tr>
</thead>
</table>

### Recommended torque (Nm)

<table>
<thead>
<tr>
<th></th>
<th>M4</th>
<th>M4</th>
<th>M4</th>
<th>M4</th>
</tr>
</thead>
</table>

### Earth terminal

<table>
<thead>
<tr>
<th></th>
<th>1.5 - 1.7</th>
<th>1.5 - 1.7</th>
<th>1.5 - 1.7</th>
<th>1.5 - 1.7</th>
</tr>
</thead>
</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.
Headquarters, global innovation and development

Schaffner Group
Industrie Nord
Nordstrasse 11e
4542 Luterbach
T +41 32 681 66 26
info@schaffner.com

Sales and application centers

China
Schaffner EMC Ltd. Shanghai
T20-3 C, No 565 Chuangye Road, Pudong district
201201 Shanghai
T +86 21 3813 9500
csschina@schaffner.com
www.schaffner.com.cn

Finland
Schaffner Oy
Sauvonrinne 19 H
08500 Lohja
T +358 10 567 2855
finlandsales@schaffner.com

France
Schaffner EMC S.A.S.
16-20 Rue Louis Rameau
95875 Bezons
T +33 1 34 34 30 60
fancesales@schaffner.com

Germany
Schaffner Deutschland GmbH
Schoemperlenstrasse 12B
76185 Karlsruhe
T +49 721 56910
germanysales@schaffner.com

India
Schaffner India Pvt. Ltd
REGUS WORLD TRADE CENTRE
WTC, 22nd Floor Unit No 2238, Brigade
Gateway Campus, 26/1, Dr. Rajkumar Road
Malleshwaram (W)
560055 Bangalore
T +91 80 67935355
indiasales@schaffner.com

Italy
Schaffner EMC S.r.l.
Via Ticino, 30
20900 Monza (MB)
T +39 039 21 41 070
italysales@schaffner.com

Japan
Schaffner EMC K.K.
Taju-Seimei Sangenjaya Bldg.
1-32-12, Kamsuma, Setagaya-ku
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
www.schaffner.jp

Spain
Schaffner EMC España
Calle Calendula 93, Miniparc III, Edificio E
El Soto de Moraleja, Alcobendas
28109 Madrid
T +34 917 912 900
F +34 917 912 901
spanisales@schaffner.com

China
Schaffner EMC Ltd. Shanghai
T20-3 C, No 565 Chuangye Road, Pudong district
201201 Shanghai
T +86 21 3813 9500
csschina@schaffner.com
www.schaffner.com.cn

Finland
Schaffner Oy
Sauvonrinne 19 H
08500 Lohja
T +358 10 567 2855
finlandsales@schaffner.com

France
Schaffner EMC S.A.S.
16-20 Rue Louis Rameau
95875 Bezons
T +33 1 34 34 30 60
fancesales@schaffner.com

Germany
Schaffner Deutschland GmbH
Schoemperlenstrasse 12B
76185 Karlsruhe
T +49 721 56910
germanysales@schaffner.com

India
Schaffner India Pvt. Ltd
REGUS WORLD TRADE CENTRE
WTC, 22nd Floor Unit No 2238, Brigade
Gateway Campus, 26/1, Dr. Rajkumar Road
Malleshwaram (W)
560055 Bangalore
T +91 80 67935355
indiasales@schaffner.com

Italy
Schaffner EMC S.r.l.
Via Ticino, 30
20900 Monza (MB)
T +39 039 21 41 070
italysales@schaffner.com

Japan
Schaffner EMC K.K.
Taju-Seimei Sangenjaya Bldg.
1-32-12, Kamsuma, Setagaya-ku
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
www.schaffner.jp

Spain
Schaffner EMC España
Calle Calendula 93, Miniparc III, Edificio E
El Soto de Moraleja, Alcobendas
28109 Madrid
T +34 917 912 900
F +34 917 912 901
spanisales@schaffner.com

China
Schaffner EMC Ltd. Shanghai
T20-3 C, No 565 Chuangye Road, Pudong district
201201 Shanghai
T +86 21 3813 9500
csschina@schaffner.com
www.schaffner.com.cn

Finland
Schaffner Oy
Sauvonrinne 19 H
08500 Lohja
T +358 10 567 2855
finlandsales@schaffner.com

France
Schaffner EMC S.A.S.
16-20 Rue Louis Rameau
95875 Bezons
T +33 1 34 34 30 60
fancesales@schaffner.com

Germany
Schaffner Deutschland GmbH
Schoemperlenstrasse 12B
76185 Karlsruhe
T +49 721 56910
germanysales@schaffner.com

India
Schaffner India Pvt. Ltd
REGUS WORLD TRADE CENTRE
WTC, 22nd Floor Unit No 2238, Brigade
Gateway Campus, 26/1, Dr. Rajkumar Road
Malleshwaram (W)
560055 Bangalore
T +91 80 67935355
indiasales@schaffner.com

Italy
Schaffner EMC S.r.l.
Via Ticino, 30
20900 Monza (MB)
T +39 039 21 41 070
italysales@schaffner.com

Japan
Schaffner EMC K.K.
Taju-Seimei Sangenjaya Bldg.
1-32-12, Kamsuma, Setagaya-ku
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
www.schaffner.jp

Spain
Schaffner EMC España
Calle Calendula 93, Miniparc III, Edificio E
El Soto de Moraleja, Alcobendas
28109 Madrid
T +34 917 912 900
F +34 917 912 901
spanisales@schaffner.com

The content of this document has been carefully checked and understood. However, neither Schaffner nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG. Latest publications and a complete disclaimer can be downloaded from the Schaffner website. All trademarks recognized.