High Performance IEC Inlet Filter

The FN 9246 IEC inlet filter combines an IEC inlet and mains filter with excellent filter attenuation in a small form factor. Choosing the FN 9246 product line brings you the rapid availability of a standard filter associated with the necessary safety acceptances. Standard IEC connector filters are a practical solution helping you to pass EMI system approval in a short time. A wide selection on current ratings and low leakage versions for medical applications are designed to offer you the desired solution.

Features and benefits

- Excellent conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- Rear mounting
- FN 9246 B versions comply with the requirements of 1MOP acc. to IEC/EN 60601-1 for creepage and clearance, leakage current and high potential testing
- Rated currents up to 20 A
- Custom-specific versions are available on request

Typical applications

- Electrical and electronic equipment
- Small to medium-sized machines and household equipment
- Single-phase power supplies, switch-mode power supplies
- Test and measurement equipment
- Building automation
- Medical equipment
- Lighting application

Technical specifications

- **Maximum continuous operating voltage**: 250 VAC, 50/60 Hz
- **Operating frequency**: DC to 400 Hz
- **Rated currents**
  - 1 to 10 A (Semko)
  - 16 A (Semko) for 16 and 20 A types
  - 1 to 20 A (UL, CSA)
- **Approvals by rated current**
  - 1 to 10 A (Semko)
  - 16 A (Semko) for 16 and 20 A types
  - 1 to 20 A (UL, CSA)
- **High potential test voltage**
  - P –> PE 2000 VAC for 2 sec (standard types)
  - P –> PE 2500 VAC for 2 sec (B types)
  - P –> N 1100 VAC for 2 sec (1 to 10 A types)
  - P –> N 1100 VDC for 2 sec (16 and 20 A types)
- **Protection category**: IP 40 according to IEC 60529
- **Temperature range (operation and storage)**: -25°C to +85°C (25/85/21)
- **Design corresponding to**: UL 1283, CSA 22.2 No. B 1986, IEC/EN 60939
- **Flammability corresponding to**: UL 94 V-2 or better
- **MTBF @ 40°C/230 V (MIL-HB-217F)**: 1,600,000 hours

The FN 9246 IEC inlet filter combines an IEC inlet and mains filter with excellent filter attenuation in a small form factor. Choosing the FN 9246 product line brings you the rapid availability of a standard filter associated with the necessary safety acceptances. Standard IEC connector filters are a practical solution helping you to pass EMI system approval in a short time. A wide selection on current ratings and low leakage versions for medical applications are designed to offer you the desired solution.
## Filter selection table

<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>Capacitance Cy</th>
<th>Resistance R</th>
<th>Output connections</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN 9246-1-06</td>
<td>1 (1.2)</td>
<td>0.31 (0.18)</td>
<td>50</td>
<td>1.22</td>
<td>2.2</td>
<td>470</td>
<td>-06</td>
<td>140</td>
</tr>
<tr>
<td>FN 9246-3-06</td>
<td>3 (3.5)</td>
<td>0.31 (0.18)</td>
<td>14</td>
<td>1.22</td>
<td>2.2</td>
<td>470</td>
<td>-06</td>
<td>140</td>
</tr>
<tr>
<td>FN 9246-6-06</td>
<td>6 (7.2)</td>
<td>0.31 (0.18)</td>
<td>7</td>
<td>1.22</td>
<td>2.2</td>
<td>470</td>
<td>-06</td>
<td>140</td>
</tr>
<tr>
<td>FN 9246-10-06</td>
<td>10 (12)</td>
<td>0.31 (0.18)</td>
<td>3</td>
<td>1.22</td>
<td>2.2</td>
<td>470</td>
<td>-06</td>
<td>140</td>
</tr>
<tr>
<td>FN 9246-12-06</td>
<td>12 (14)</td>
<td>0.31 (0.18)</td>
<td>1.85</td>
<td>1.22</td>
<td>2.2</td>
<td>470</td>
<td>-06</td>
<td>140</td>
</tr>
<tr>
<td>FN 9246-15-06</td>
<td>15 (18)</td>
<td>0.31 (0.18)</td>
<td>0.89</td>
<td>1.22</td>
<td>2.2</td>
<td>470</td>
<td>-06</td>
<td>140</td>
</tr>
<tr>
<td>FN 9246-16-06</td>
<td>16 (18.5)</td>
<td>0.66 (0.38)</td>
<td>2.5</td>
<td>1.22</td>
<td>4.7</td>
<td>470</td>
<td>-06</td>
<td>275</td>
</tr>
<tr>
<td>FN 9246-20-06</td>
<td>20 (23)</td>
<td>0.66 (0.38)</td>
<td>1.5</td>
<td>1.22</td>
<td>4.7</td>
<td>470</td>
<td>-06</td>
<td>275</td>
</tr>
<tr>
<td>FN 9246 B-1-06</td>
<td>1 (1.2)</td>
<td>0.00</td>
<td>50</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-3-06</td>
<td>3 (3.5)</td>
<td>0.00</td>
<td>14</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-6-06</td>
<td>6 (7.2)</td>
<td>0.00</td>
<td>7</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-10-06</td>
<td>10 (11.6)</td>
<td>0.00</td>
<td>3</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-12-06</td>
<td>12 (14)</td>
<td>0.00</td>
<td>1.85</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-15-06</td>
<td>15 (18)</td>
<td>0.00</td>
<td>0.89</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-16-06</td>
<td>16 (18.5)</td>
<td>0.00</td>
<td>2.5</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>275</td>
<td></td>
</tr>
<tr>
<td>FN 9246 B-20-06</td>
<td>20 (23)</td>
<td>0.00</td>
<td>1.5</td>
<td>1.22</td>
<td>470</td>
<td>-06</td>
<td>275</td>
<td></td>
</tr>
</tbody>
</table>

* Maximum leakage under normal operating conditions (acc. to IEC60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

## Typical filter attenuation

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

### 1 A types

![1 A types attenuation graph]

### 3 to 10 A types

![3 to 10 A types attenuation graph]

### 12 and 15 A types

![12 and 15 A types attenuation graph]

### 16 and 20 A types

![16 and 20 A types attenuation graph]

## Product selector

For example: FN 9246-6-06, FN 9246 B-10-06

- **06:** Faston 6.3 x 0.8mm (spade/soldering)
- **1 to 20:** Rated current
  - Standard IEC inlet type C14 (1 to 15A types), C20 (16 and 20A types)
- **Blank:** Standard version
- **B:** Medical version (with bleed resistor and without Y2-capacitor)
Mechanical data

1 to 15 A types

Panel cut out

<table>
<thead>
<tr>
<th></th>
<th>1 A</th>
<th>3 A</th>
<th>6 A</th>
<th>10 A</th>
<th>12 A</th>
<th>15 A</th>
<th>16 A</th>
<th>20 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57.15</td>
<td>57.15</td>
<td>57.15</td>
<td>57.15</td>
<td>57.15</td>
<td>57.15</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>B</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>C</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>D</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>E</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>G</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>H</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
<td>Ø3.5</td>
</tr>
<tr>
<td>I</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>15.5</td>
<td>15.5</td>
</tr>
<tr>
<td>J</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>K</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>L</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>M</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
<td>R ≤ 1.5</td>
</tr>
<tr>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>O</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>P</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>Q</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>17.5</td>
<td>17.5</td>
</tr>
<tr>
<td>R</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
<td>M3 x 10 max.</td>
</tr>
</tbody>
</table>

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

Power Cord with angled Locking System C13

- Locking system for standardized IEC C14 inlet filter
- No accidental disconnection
- Rated current up to 15 A
- Fits any Schaffner IEC C14 inlet filter
- Retrofit for any IEC C14 inlet
- Various power line plugs for international usage

IL 13P IEC C13 Rewireable Angled Connectors with Locking System

- Locking system for standardized IEC C14 inlet filter
- No accidental disconnection
- Rated current up to 15 A
- Fits any Schaffner IEC C14 inlet filter
- Retrofit for any IEC C14 inlet
- Various power line plugs for international usage

IL 13P IEC C13 Rewireable Connectors with Locking System

- Guards against accidental disconnection
- Requires no other equipment or special inlets to secure it
- Rewireable - offering total flexibility when assembling cables
- Fits any Schaffner IEC C14 inlet Filter
- Can be retrofitted
- Various power line plugs for international usage
- LSZH - Low smoke zero halogen

Datasheet PDF >
Headquarters, global innovation and development

Switzerland
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
cchina@schaffner.com
www.schaffner.com.cn

Finland
Schaffner Oy
Savonrinne 19 H
08500 Lohja
T +358 50 468 7284
finlandsales@schaffner.com

France
Schaffner EMC S.A.S.
16-20 Rue Louis Rameau
95875 Bezons
T +33 1 34 34 30 60
f +33 1 39 47 02 28
francesales@schaffner.com

Germany
Schaffner Deutschland GmbH
Schoepplerlenstrasse 128
76185 Karlsruhe
T +49 721 56910
germanysales@schaffner.com

India
Schaffner India Pvt. Ltd
REGUS WORLD TRADE CENTRE
WTC, 22nd Floor Unit No 223B, Brigade
Gateway Campus, 26/F, Dr. Rajkumar Road
Malledhwaran (W)
560055 Bangalore
T +91 80 67935355
indiasales@schaffner.com

Italy
Schaffner EMC S.r.l.
Via Ticino, 30
20900 Monza (MI)
T +39 039 24 10 70
italysales@schaffner.com

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

Singapore
Schaffner EMC Pte Ltd.
#05-09, Kgi Ubi Ind. Estate
408705 Singapore
T +65 6377 3283
F +65 6377 3281
singaporesales@schaffner.com

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

Sweden
Schaffner EMC AB
Ostermalmstorg 1
114 42 Stockholm
T +46 8 5050 2425
swedensales@schaffner.com
www.schaffner.com

Switzerland
Schaffner EMV AG
Industrie Nord
Nordstrasse 11e
4542 Luterbach
T +41 32 681 66 88
T +41 32 681 66 26
switzerlandsales@schaffner.com

Taiwan
Schaffner EMV Ltd.
20 Floor-2, No 97, Section 1, XinTai 5th Road
22175 Xizhi District New Taipei City 22175
T +886 2 2697 5500
F +886 2 2697 5533
taiwansales@schaffner.com
www.schaffner.com.tw

Thailand
Schaffner EMC Co. Ltd.
Northern Region Industrial Estate
67 Moo 4 Tambon Ban Klang
Amphur Muang P.O. Box 14
51000 Lamp hun
T +66 53 58 11 04
F +66 53 58 10 19
thailandsales@schaffner.com

United Kingdom
Schaffner Ltd.
1, Oakmede Place
Binfield
RG42 4JF Berkshire
T +44 118 9770070
F +44 118 9792969
uksales@schaffner.com

USA
Schaffner EMC Inc.
52 Mayfield Avenue
Edison, New Jersey
T +1 732 225 9533
F +1 732 225 4789
usasales@schaffner.com
www.schaffnerusa.com

To find your local partner within Schaffner’s global network: www.schaffner.com
© 2021 Schaffner Group

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.