High Performance EMC/EMI Filter

- Rated currents up to 15 A
- Excellent attenuation performance
- Complies with IEC/EN 60601-1
- Snap-in versions (S and S1 type)
- Hot inlet versions (HI type)

Performance indicators

<table>
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<th>Attenuation performance</th>
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<th>high</th>
<th>very high</th>
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<td>Rated current [A]</td>
<td>0</td>
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<td>8</td>
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Approvals & Compliances

The FN 9233 IEC inlet filter combines an excellent IEC inlet and mains filter with excellent filter attenuation in a small form factor. Choosing the FN 9233 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 amperage ratings, output connections, mounting possibilities and filters for medical applications are designed to offer you the desired solution. For types with additional earth line choke please consult the FN 9233 E data sheet.

Features and benefits

- Exceptional conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- Rear/front or snap-in mounting
- Optional earth line choke see FN 9233 E data sheet
- FN 9233 B versions comply with the requirements of 1MOP acc. to IEC/EN 60601-1 for creepage and clearance, leakage current and high potential testing
- Wide mounting flanges available
- Different output connections offering maximum flexibility for assembly
- Custom-specific versions are available on request

Typical applications

- Portable electrical and electronic equipment
- Small to medium-sized machines and household equipment
- Single-phase power supplies, switch-mode power supplies
- Test and measurement equipment
- Medical equipment
- Rack-mounting equipment

Technical specifications

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<th>Specification</th>
<th>Value</th>
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<tr>
<td>Maximum continuous operating voltage</td>
<td>250 VAC, 50/60 Hz</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 15 A @ 50°C</td>
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<td>Approvals by rated current</td>
<td>1 to 10 A (ENEC, CQC)</td>
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<td>1 to 15 A (UL, CSA)</td>
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<td>High potential test voltage</td>
<td>P -&gt; PE 2000 VAC for 2 sec (standard types)</td>
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<td>P -&gt; PE 2500 VAC for 2 sec (B types)</td>
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<td>P -&gt; N 1000 VAC for 2 sec</td>
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<tr>
<td>Protection category</td>
<td>IP 40 according to IEC 60529</td>
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<td>Temperature range (operation and storage)</td>
<td>-25°C to +85°C (25/85/21)</td>
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<td>Design corresponding to</td>
<td>UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939</td>
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<tr>
<td>Flammability corresponding to</td>
<td>UL 94 V-2 or better</td>
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<td>MTBF @ 40°C/230 V (MII-HB-217F)</td>
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## Filter selection table

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<tr>
<th>Filter</th>
<th>Rated current @ 50°C (25°C)</th>
<th>Leakage current* @ 250 VAC/50 Hz (120 VAC/60 Hz)</th>
<th>Inductance L</th>
<th>Capacitance Cx1</th>
<th>Capacitance Cx2</th>
<th>Capacitance Cy</th>
<th>Resistance R</th>
<th>Output connections</th>
<th>Weight</th>
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<td>1 (1.2)</td>
<td>0.31 (0.18)</td>
<td>22.5</td>
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</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.
Product selector

For example: FN 9233-15-06, FN 9233 S1B-10-06-20, FN 9233 R-12-OGH1

Typical filter attenuation

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

For example: FN 9233-15-06, FN 9233 S1B-10-06-20, FN 9233 R-12-OGH1
### Mechanical data

**FN 9233**

![FN 9233 Diagram]

**FN 9233-HI**

![FN 9233-HI Diagram]

**FN 9233 S**

![FN 9233 S Diagram]

**FN 9233vS1**

![FN 9233vS1 Diagram]

**FN 9233 U**

![FN 9233 U Diagram]

**Panel cut out**

![Panel cut out Diagram]

**Installation**

![Installation Diagram]
### Dimensions

<table>
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<th>FN 9233 U</th>
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<th>FN 9233 S</th>
<th>FN 9233 S1</th>
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</table>

* Recommended torque for M3 (90° countersunk flat head) is 0.5 Nm

** For selecting the panel thickness, please refer to the filter selector 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 connectors.
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

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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

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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

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
cschina@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
frenchsales@schaffner.com

Germany
Schaffner Deutschland GmbH
Schoeperlenstrasse 128
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/F, Dr. Rajkumar Road Malledwaram (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.
Taiju-Seimei Senganjaya Bldg.
1-32-12, Kansumia, 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, Edificio E
El Soto de Moraleja, Alcobendas
28109 Madrid
T +34 917 912 900
F +34 917 912 901
spainsales@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 Klung
Amphur Muang P.O. Box 14
51000 Lamphun
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

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