



**THE DATASHEET OF  
FN9244SB-12-06**



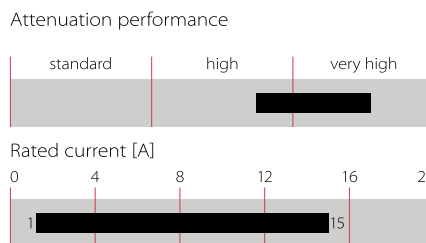
# Excellent Performance EMC/EMI Filter with Earth Line Choke



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



### Performance indicators



### Approvals & Compliances



(CQC except HI-types)

The FN 9244 E IEC inlet filter combines an IEC inlet and mains filter with superior filter attenuation in a small form factor. The FN 9244 E high performance power entry module offers additional EMI suppression on the earth line. Choosing the FN 9244 E 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 without additional earth line choke please consult the FN 9244 data sheet.

## Technical specifications

|  |   |
|--|---|
| <b>Maximum continuous operating voltage</b>      | 250 VAC, 50/60 Hz   |
| <b>Operating frequency</b>                       | DC to 400 Hz  |
| <b>Rated currents</b>                            | 1 to 15 A @ 50°C  |
| <b>Approvals by rated current</b>                | 1 to 10 A (ENEC, CQC)<br>1 to 15 A (UL, CSA)  |
| <b>High potential test voltage</b>               | P → PE 2000 VAC for 2 sec (standard types)<br>P → PE 2500 VAC for 2 sec (B types)<br>P → N 1000 VAC for 2 sec |
| <b>Protection category</b>                       | IP 40 according to IEC 60529  |
| <b>Temperature range (operation and storage)</b> | -25°C to +85°C (25/85/21)   |
| <b>Design corresponding to</b>                   | UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939  |
| <b>Flammability corresponding to</b>             | UL 94 V-2 or better   |
| <b>MTBF @ 40°C/230 V (Mil-HB-217F)</b>           | 2,230,000 hours   |

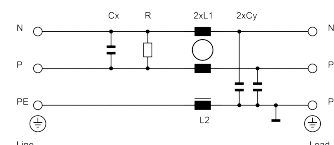
## Features and benefits

- Superior conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- Rear/front or snap-in mounting
- Without earth line choke see FN 9244 data sheet
- FN 9244 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
- 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
- Medical devices (MDD)
- In-vitro diagnostic medical devices (IVDD)
- Rack mounting equipment

### Typical electrical schematic



## Filter selection table

| Filter                   | Rated current | Leakage current* | Inductance |      | Capacitance |      | Resistance | Output connections | Weight |
|--------------------------|---------------|------------------|------------|------|-------------|------|------------|--------------------|--------|
|                          | @ 50°C (25°C) | @ 250 VAC/50 Hz  | L1         | L2   | Cx          | Cy   | R          |                    |        |
|                          | [A]           | [mA]             | [mH]       | [mH] | [μF]        | [nF] | [kΩ]       |                    |        |
| <b>FN9244Ex-1-06</b>     | 1 (1.2)       | 0.31 (0.18)      | 59.53      | 0.4  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-3-06</b>     | 3 (3.5)       | 0.31 (0.18)      | 13.45      | 0.4  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-6-06</b>     | 6 (7.2)       | 0.31 (0.18)      | 4.1        | 0.4  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-8-06</b>     | 8 (10.6)      | 0.31 (0.18)      | 2.3        | 0.4  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-10-06</b>    | 10 (11.6)     | 0.31 (0.18)      | 1.02       | 0.4  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-12-06</b>    | 12 (12)       | 0.31 (0.18)      | 0.58       | 0.1  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-15-06</b>    | 15 (15)       | 0.31 (0.18)      | 0.4        | 0.1  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-12-06HI</b>  | 12 (12)       | 0.31 (0.18)      | 0.58       | 0.1  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244Ex-15-06HI</b>  | 15 (15)       | 0.31 (0.18)      | 0.4        | 0.1  | 0.1         | 2.2  |            | -06                | 46     |
| <b>FN9244ExR-1-06</b>    | 1 (1.2)       | 0.31 (0.18)      | 59.53      | 0.4  | 0.1         | 2.2  | 1000       | -06                | 46     |
| <b>FN9244ExR-3-06</b>    | 3 (3.5)       | 0.31 (0.18)      | 13.45      | 0.4  | 0.1         | 2.2  | 1000       | -06                | 46     |
| <b>FN9244ExR-6-06</b>    | 6 (7.2)       | 0.31 (0.18)      | 4.1        | 0.4  | 0.1         | 2.2  | 1000       | -06                | 46     |
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| <b>FN9244ExR-12-06</b>   | 12 (12)       | 0.31 (0.18)      | 0.58       | 0.1  | 0.1         | 2.2  | 1000       | -06                | 46     |
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| <b>FN9244ExR-12-06HI</b> | 12 (12)       | 0.31 (0.18)      | 0.58       | 0.1  | 0.1         | 2.2  | 1000       | -06                | 46     |
| <b>FN9244ExR-15-06HI</b> | 15 (15)       | 0.31 (0.18)      | 0.4        | 0.1  | 0.1         | 2.2  | 1000       | -06                | 46     |
| <b>FN9244ExB-1-06</b>    | 1 (1.2)       | 0.00             | 59.53      | 0.4  | 0.1         |      | 1000       | -06                | 46     |
| <b>FN9244ExB-3-06</b>    | 3 (3.5)       | 0.00             | 13.45      | 0.4  | 0.1         |      | 1000       | -06                | 46     |
| <b>FN9244ExB-6-06</b>    | 6 (7.2)       | 0.00             | 4.1        | 0.4  | 0.1         |      | 1000       | -06                | 46     |
| <b>FN9244ExB-8-06</b>    | 8 (10.6)      | 0.00             | 2.3        | 0.4  | 0.1         |      | 1000       | -06                | 46     |
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| <b>FN9244ExB-12-06</b>   | 12 (12)       | 0.00             | 0.58       | 0.1  | 0.1         |      | 1000       | -06                | 46     |
| <b>FN9244ExB-15-06</b>   | 15 (15)       | 0.00             | 0.4        | 0.1  | 0.1         |      | 1000       | -06                | 46     |
| <b>FN9244ExB-12-06HI</b> | 12 (12)       | 0.00             | 0.58       | 0.1  | 0.1         |      | 1000       | -06                | 46     |
| <b>FN9244ExB-15-06HI</b> | 15 (15)       | 0.00             | 0.4        | 0.1  | 0.1         |      | 1000       | -06                | 46     |

\* 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.

## Distributor inventory

Check stock levels at global distributors at <https://products.schaffner.com/stock>  
(Also available via the QR code)



### Stock level per types 1 - 15 A

#### Standard housing types

#### Housing with wider mounting flanges (U)

#### Snap-in housing types (S&S1)

#### Medical versions (B)

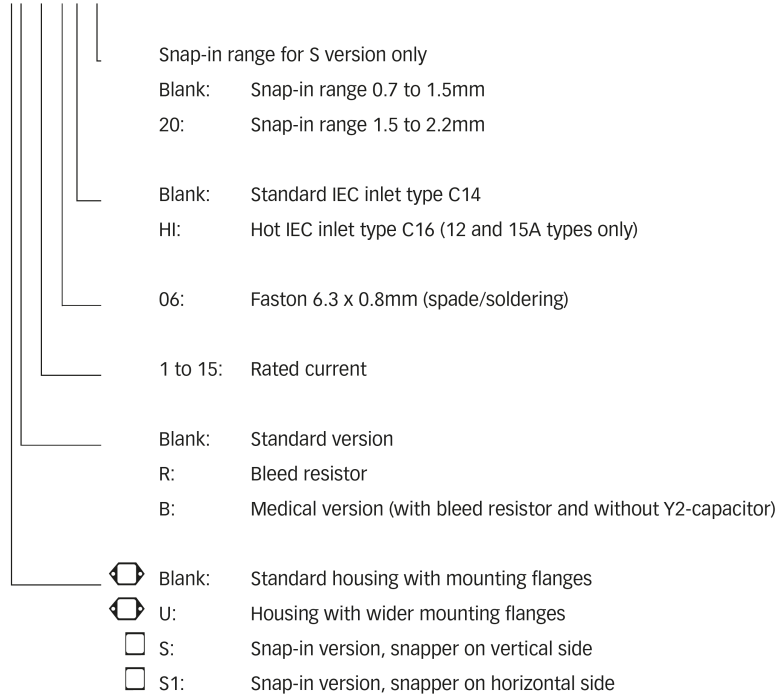
#### Bleed resistor types (R)

Link



**Product selector**

FN 9244Exx-yy...HI-zz

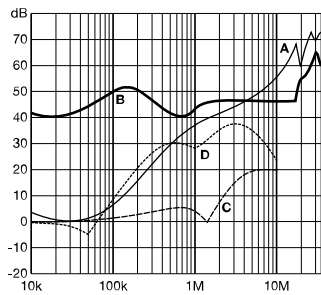


For example: FN 9244 E-15-06, FN 9244 ES1B-10-06-20, FN 9244 ER-12-06HI, FN 9244 EUB-8-06

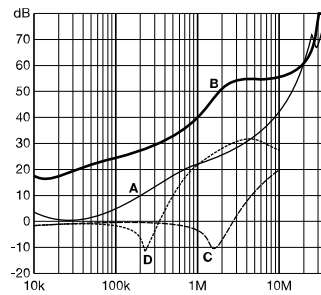
**Typical filter attenuation**

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

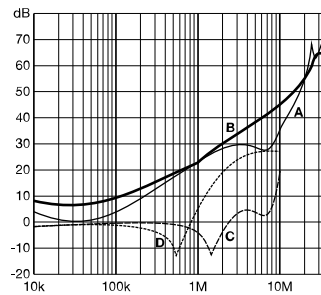
1 and 3 A types



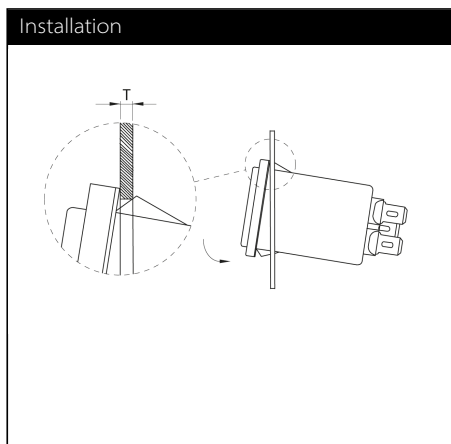
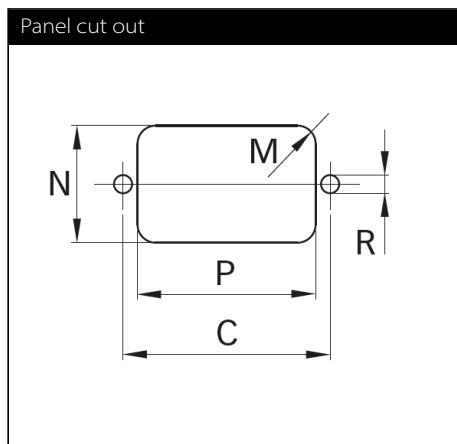
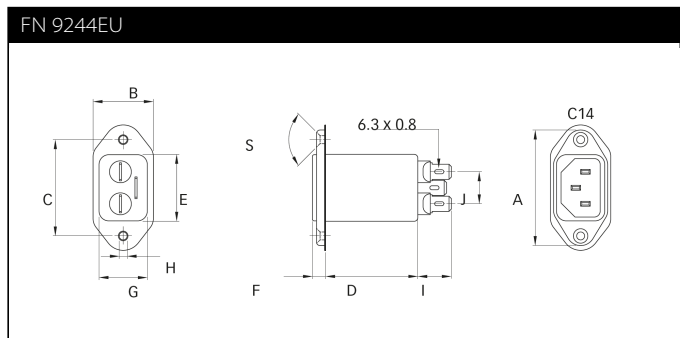
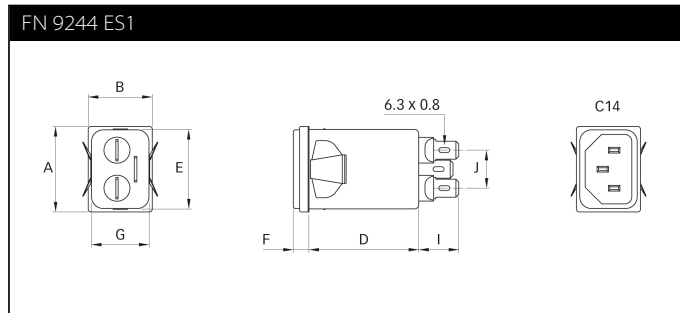
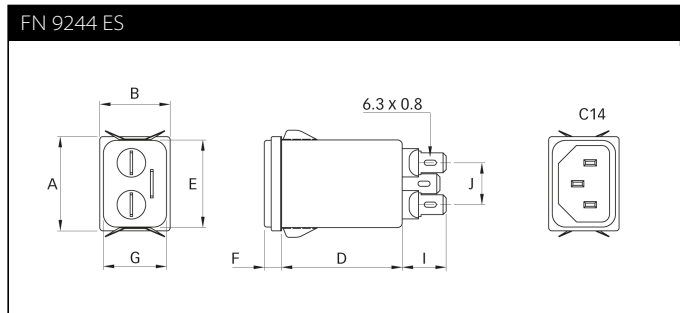
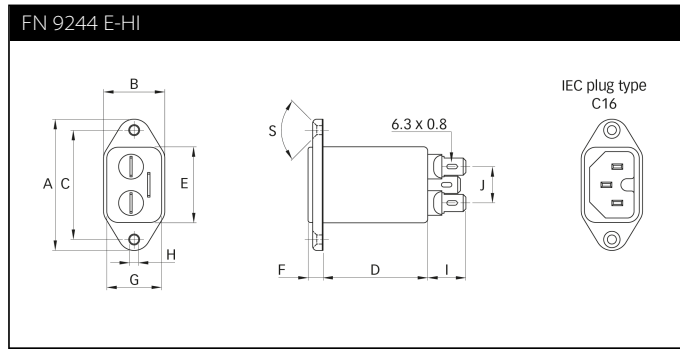
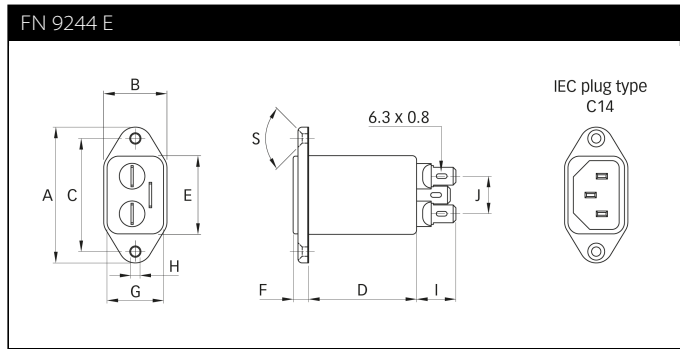
6 to 10 A types



12 and 15 A types



**Mechanical data**



## Dimensions

|            | <b>FN 9244 E</b> | <b>FN 9244 EU</b> | <b>FN 9244 ES</b> | <b>FN 9244 ES1</b> | <b>FN 9244 E-HI</b> | <b>Tol.</b> |
|------------|------------------|-------------------|-------------------|--------------------|---------------------|-------------|
| <b>A</b>   | 48               | 48                | 29.9              | 29.9               | 48                  |             |
| <b>B</b>   | 22.4             | 25                | 22.4              | 22.4               | 22.4                |             |
| <b>C</b>   | 40               | 40                |                   |                    | 40                  | ±0.2        |
| <b>D</b>   | 46.8             | 46.7              | 46.8              | 46.8               | 46.8                |             |
| <b>E</b>   | 27.8             | 27.7              | 27.8              | 27.8               | 27.8                | +0.6/-0     |
| <b>F</b>   | 5.7              | 5.7               | 5.7               | 5.7                | 5.7                 |             |
| <b>G</b>   | 20.1             | 20.1              | 20.1              | 20.1               | 20.1                | +0.6/-0     |
| <b>H</b>   | Ø3.3             | Ø3.3              |                   |                    | Ø3.3                |             |
| <b>I</b>   | 14               | 14                | 14                | 14                 | 14                  |             |
| <b>J</b>   | 13.3             | 13.3              | 13.3              | 13.3               | 13.3                |             |
| <b>M</b>   | R ≤3             | R ≤3              | R ≤1.5            | R ≤1.5             | R ≤3                |             |
| <b>N</b>   | 21.5             | 21.5              | 20.8              | 21.9               | 21.5                |             |
| <b>P</b>   | 28.5             | 28.5              | 29.4              | 28.5               | 28.5                |             |
| <b>R*</b>  | M3               | M3                |                   |                    | M3                  |             |
| <b>S</b>   | 90°              | 90°               |                   |                    | 90°                 |             |
| <b>T**</b> |                  |                   | 0.7 - 1.5         | 0.7 - 1.5          |                     |             |
| <b>T**</b> |                  |                   | 1.5 - 2.2         | 1.5 - 2.2          |                     |             |

\* 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 filter 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

[Datasheet PDF >](#)

### 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

[Datasheet PDF >](#)

### 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

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