High-current EMC/RFI Filter

- Off-the-shelf high power filter for rated currents up to 2500 A
- HV versions applicable for IT power networks
- Busbars for convenient and universal electrical connection
- Protective plastic covers optionally available for unsurpassed safety

Performance indicators

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Technical specifications

- **Maximum continuous operating voltage**: 3x 520/300 VAC (FN 3359)
  3x 760/440 VAC (FN 3359 HV)
- **Operating frequency**: DC to 60 Hz
- **Rated currents**: 150 to 2500 A @ 50°C
- **High potential test voltage**:
  - P –> E: 2750 VDC for 2 sec (FN 3359)
  - P –> P: 2250 VDC for 2 sec (FN 3359)
  - P –> E: 3200 VDC for 2 sec (FN 3359 HV)
  - P –> P: 3270 VDC for 2 sec (FN 3359 HV)
- **Protection category**: IP 00
- **Overload capability**: 4x rated current at switch on, 1.5x rated current for 1 minute, once per hour
- **Temperature range (operation and storage)**: -25°C to +100°C (25/100/21)
- **Flammability corresponding to**: UL 94 V-2 or better
- **Design corresponding to**: UL 1283, CSA 22.2 No. B 1986, IEC/EN 60939
- **MTBF @ 45°C/480 V (Mil-HB-217F)**: 130,000 hours

Features and benefits

- High-power filter for Class A compliance. With approval measurement also Class B compliance possible for some applications
- Extremely compact high-current filter solution with minimum space requirement
- FN 3359 HV versions are applicable for IT power networks
- Optionally available transparent protective covers for all filters up to 1000 A, to protect the installer, operator or inspector from undeliberate touching of life conductors. They can easily be retrofitted even if the filter is already installed and connected
- FN 3359 also improves conducted immunity of installations

Approvals

- UL up to 1000A: 600/400 VAC; ENEC up to 1600A: 690/400 VAC

Typical applications

- High-power motor drives, inverters and converters
- Industrial three-phase systems
- Entire factories, plants and installations
- Large UPS
- Machinery
- Mining equipment
- Photovoltaic systems with galvanic isolation*
- Wind turbines

* For EMI solutions for PV system without galvanic isolation, please contact your local Schaffner partner.

Typical electrical schematic

Note: HV versions without discharge resistor to ground.
## Filter selection table

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<tr>
<th>Filter</th>
<th>Rated current @ 50°C (40°C) [A]</th>
<th>Typical drive power rating* [kW]</th>
<th>Leakage current** @ 520/760 VAC/50 Hz [mA]</th>
<th>Power loss @ 25°C/50 Hz [W]</th>
<th>Input/Output connections</th>
<th>Weight</th>
<th>Protective covers*** [kg]</th>
<th>Order code</th>
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* Calculated at rated current, 480 VAC (FN 3359)/690 VAC (FN 3359 HV) and cos phi=0.8. The exact value depends upon the efficiency of the drive, the motor and the entire application.

** Standardized calculated leakage current acc. IEC60939 under normal operating conditions (FN 3359 at 520 VAC and FN 3359 HV at 760 VAC).

*** Please contact your local Schaffner partner to order the optional protective covers with the order code in the table above (n.a.: not available)

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## 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

150 to 180 A types  
250 to 600 A types  
800 and 1000 A types  
1600 and 2500 A types
Mechanical data

150 to 250 A types

320 to 2500 A types

Busbar connections

120 to 1000 A types

1600 A types

2500 A types

Dimensions

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All dimensions in mm; 1 inch = 25.4 mm
Tolerances according: ISO 2768-m/EN 22768-m
(n.a.: not applicable)
Please visit www.schaffner.com to find more details on filter connectors.
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