

FN2090-20-08

SAP Code: 802710



- Chassis mount
- 20 A EMC filter with screw terminals
- General
- 1 Phase

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Family Technical Specifications

| | |
|--|---|
| Rated voltage* | 250 VAC, 50/60 Hz 250 VDC |
| Operating frequency | DC to 400 Hz |
| Altitude | 2000m (above derating applies)** |
| Rated currents | 20 |
| High potential test voltage | P → N 1100 VDC for 2 sec 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) |
| Temperature range (operation and storage) | -25°C to +100°C (25/100/21)** |
| Certified to | UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939 (applies to AC and DC applications) |
| Flammability corresponding to | Laces for -07 version: UL 94 VW-1 Terminal plastic for -06/-08 version: UL 94 V-0 Grommet for -07 version: 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 |

* 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

Approvals & Compliances



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



General Specification

| | |
|--------------------------|------------|
| Voltage AC | 250 (Volt) |
| Nominal Frequency | 50 |
| Rated Current @ambient | 20 |
| Ambient temperature [°C] | 40 |

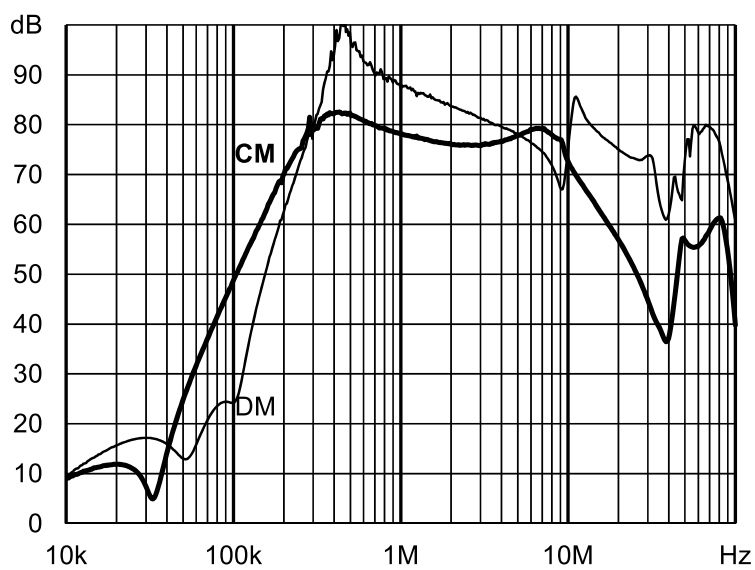
Electric Specification

| | |
|----------------------------------|------------------------|
| Leakage current (IEC60939) [mA] | 0.93 |
| Leakage current (Schaffner) [mA] | 1.86 |
| Input terminal | 08 - M4 screw terminal |
| Output terminal | 08 - M4 screw terminal |
| Resistance | 220 (Kiloohm) |

Attenuation Specification

| | |
|------------------------------|------------------|
| CM attenuation @ 150kHz [dB] | 49 (Decibels) |
| DM attenuation @ 150kHz [dB] | 57 (Decibels) |
| Inductance L1 [μH] | 2.7 (Millihenry) |
| Capacitance Cx1 [μF] | 1 (Microfarad) |
| Capacitance Cy1 [nF] | 10 (Nanofarad) |
| Capacitance Cy2 [nF] | 1 (Nanofarad) |

Attenuation graph

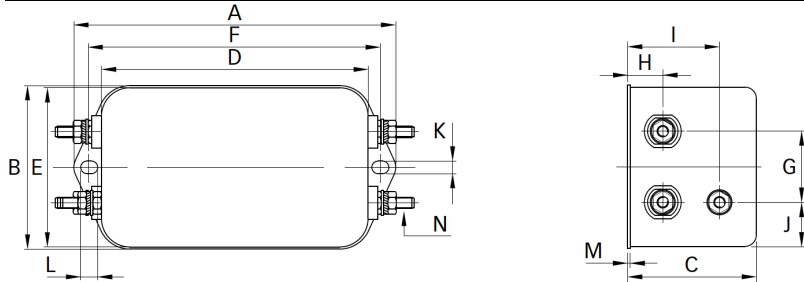


Mechanic Specification

| | |
|---------------------------|------------------------|
| Length [mm] | 94 |
| Width [mm] | 56 |
| Height [mm] | 45.4 |
| Volume [cm ³] | 239 (Cubic Centimeter) |
| NetWeight [g] | 535 (Gram) |
| Power Loss [W] | 8.2 (Watt) |

Schaffner schemes

Mechanical Data Image



Dimensions

| | |
|--------|-------|
| A [mm] | 113.5 |
| B [mm] | 57.5 |
| C [mm] | 45.4 |
| D [mm] | 94 |
| E [mm] | 56 |
| F [mm] | 103 |
| G [mm] | 25 |
| H [mm] | 12.4 |
| I [mm] | 32.4 |
| J [mm] | 15.5 |
| K [mm] | 4.4 |
| L [mm] | 6 |
| M [mm] | 1 |
| N [mm] | M4 |