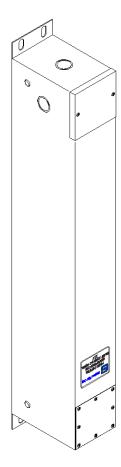


# **Power Line Filters**

GF67940 Capacitive Input
Low Leakage General Performance
100 dB from 150 kHz ~ 18 GHz



# **Product Summary**

EMI/RFI Power Line Filters are used to block unwanted signals and remove interference from entering or exiting through power lines for shielded rooms, SCIFS, screen rooms and many other forms of Faraday cages. This series provides 100 dB attenuation against EMI interference from 150 kHz ~ 18 GHz.







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#### Filter(s)

- Low Pass filter circuits ~ passive components which includes inductors, capacitors, resistors, and optional transient suppression devices
- Manufactured and tested per applicable portions of MIL-PRF-15733
- All circuits provided in single enclosure
- Discharge resistors incorporated to eliminate potential shock hazard

#### **Enclosure**

- Fabricated case of not less than 18 gauge cold rolled steel electro plated or painted Gray (Std. Paint Color)
- Sealed with welded and soldered seams for minimum shielding effectiveness 100 dB from 14 kHz to 18 GHz
- Double knock outs provided on filter case input
- Dual cover access to shielded and unshielded terminals
- Mounting tab provided for easy wall mounting.
- Conduit knockouts provided at unshielded side of filter.
- To maintain shielding effectiveness, no knockouts can be provided at the shielded side of filter. Installer makes the penetration.

## **Applicable Specifications**

- Military Specifications:MIL-PRF-15733 General
- Military Test Methods
  - o MIL-STD-202 Component Parts
  - o MIL-STD-220 Insertion Loss
  - MIL-STD-285 Shielding Effectiveness
- NFPA 70/2011 National Electrical Code
- UL 1283

### **Available Options**

- Surge Suppressors
- · EMI Ring Gaskets

#### **FUNCTIONAL CHARACTERISTICS**

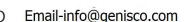
- Voltage Ratings:
  - o 0-1,000 VDC
  - o 120/208 VAC (50/60 Hz)
  - o 277/480 VAC (50/60 Hz)
- Voltage Drop: 2% maximum at full rated unity power factor load.
- Harmonic Distortion: <4% maximum at full rated unity power factor load
- Temperature Rating: MIL-PRF-15733
- Current Overload: 140% maximum current rating
- RF Radiation: Greater than 100 dB isolation
- Dielectric With-Standing Voltage: 2,200 VDC (prior to installation of discharge resistors)
- Insulation Resistance: MIL-PRF-15733 (prior to installation of discharge resistors)
- Insertion loss:
  - o 100 dB from 150kHz to 18 GHz.
  - o 50/50 Ohm System

## 100dB @ 150kHz. LOW LEAKAGE

| FILTER<br>RATED<br>AMPERAGE | 120 VAC. Leakage Current* | 277 VAC.  Leakage Current* |
|-----------------------------|---------------------------|----------------------------|
| 15/30 AMP.                  | 0.361 AMP.                | 0.835 AMP.                 |
| 60/100<br>AMP.              | 0.588 AMP                 | 1.357 AMP.                 |
| 150 AMP.                    | 0.859 AMP.                | 1.984 AMP.                 |
| 200 AMP.                    | 0.950 AMP.                | 2.192 AMP.                 |
| 250 AMP.                    | 1.040 AMP                 | 2.401 AMP.                 |
| 300 AMP.                    | 1.040 AMP                 | 2.401 AMP.                 |
| 400 AMP                     | 1.040 AMP.                | 2.401 AMP.                 |

#### **FILTERS**

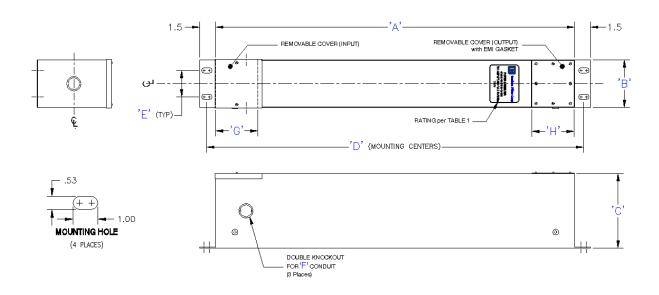
\*Leakage current is approximate, based on frequency, voltage, and component variability.





# **Mechanical Dimensions**

# **Table 1 Mechanical Dimensions**



| # of Filters & Max<br>Current Rating | A  | В   | С  | D    | E | F                 | G | н | Approx Weight<br>(lbs) |
|--------------------------------------|----|-----|----|------|---|-------------------|---|---|------------------------|
| 1x15                                 | 24 | 4.5 | 6  | 25.6 | 2 | 1 -<br>1¼         | 4 | 5 | 30                     |
| 1x30                                 | 28 | 4.5 | 6  | 29.6 | 2 | 1 -<br>11/4       | 4 | 5 | 35                     |
| 1x60                                 | 34 | 5   | 6  | 35.6 | 2 | 1 -<br>11/4       | 4 | 5 | 50                     |
| 1x100                                | 34 | 5   | 6  | 35.6 | 2 | 1 -<br>11/4       | 4 | 5 | 50                     |
| 1x150                                | 45 | 6.5 | 8  | 46.6 | 2 | 1 -<br>11/4       | 6 | 7 | 85                     |
| 1x200                                | 45 | 6.5 | 8  | 46.6 | 2 | 1 -<br>11/4       | 6 | 7 | 85                     |
| 1x250                                | 45 | 6.5 | 8  | 46.6 | 2 | 1 -<br>11/4       | 6 | 7 | 100                    |
| 1x300                                | 51 | 8   | 10 | 52.6 | 2 | 11/4<br>-<br>11/2 | 6 | 7 | 150                    |
| 1x400                                | 51 | 8   | 10 | 52.6 | 2 | 11/4<br>-<br>11/2 | 6 | 7 | 150                    |







| # of Filters & Max<br>Current Rating | A  | В  | С | D    | E | F                 | G | н | Approx. Weight (lbs.) |
|--------------------------------------|----|----|---|------|---|-------------------|---|---|-----------------------|
| 2x15                                 | 24 | 8  | 6 | 28.6 | 2 | 1 -<br>1¼         | 4 | 5 | 40                    |
| 2x30                                 | 28 | 8  | 6 | 35.6 | 2 | 1 -<br>1¼         | 4 | 5 | 45                    |
| 2x60                                 | 34 | 10 | 6 | 35.6 | 3 | 1 -<br>1¼         | 4 | 5 | 100                   |
| 2x100                                | 34 | 10 | 6 | 35.6 | 3 | 1 -<br>1¼         | 4 | 5 | 100                   |
| 2x150/200                            | 45 | 11 | 8 | 46.6 | 3 | 11/4<br>-<br>11/2 | 6 | 7 | 125                   |
| 3x15                                 | 24 | 11 | 6 | 24.6 | 3 | 1 -<br>11/4       | 4 | 5 | 55                    |
| 3x30                                 | 28 | 11 | 6 | 28.6 | 3 | 1 -<br>1¼         | 4 | 5 | 55                    |
| 3x60                                 | 34 | 15 | 6 | 35.6 | 3 | 1 -<br>1¼         | 4 | 5 | 75                    |
| 3x100                                | 34 | 15 | 6 | 35.6 | 3 | 1 -<br>11/4       | 4 | 5 | 80                    |
| 4x15                                 | 24 | 14 | 6 | 24.6 | 3 | 1 -<br>1¼         | 4 | 5 | 70                    |
| 4x30                                 | 28 | 14 | 6 | 28.6 | 3 | 1 -<br>1¼         | 4 | 5 | 75                    |

## PART NUMBER BREAKDOWN, USING A GF67940-2X30-00 AS THE **EXAMPLE:**

- GF67940 = BASIC FILTER SERIES
- -2x30 = Number of filter circuits within the filter housing. This is followed by the amperage rating. In this example there are two wire terminations each rated for 30 amps. A line and neutral, two lines, or positive and negative.
- -00. The last one or two characters denote options or special manufacturing notes.

Note: Filters are not designed or intended for short circuit, and are not provided with integral overcurrent protection, or any overcurrent protection. Intended to be installed with suitably rated overcurrent protection upstream to prevent all shortcircuit scenarios from occurring. When a filter is installed downstream of an approved overcurrent protection device (such as a circuit breaker) there is no need for the filter to have an SCCR rating itself, since the upstream protection device will provide protection to the filter.

Information is general and subject to change without notice. Please contact us for help with your project.



