

Catalog: 1654001 Issue Date: 06.2011

Multi-purpose Medical Filter for Power Line Noise Protection

MV Series



UL Recognized CSA Certified VDE Approved



MV Series

- Multi-purpose medical filter
- Improved Line to Ground performance
- A good solution to emission or immunity problems
- Meets leakage current requirements of UL2601 for health care equipment

Specifications

Maximum leakage current each Line to Ground:

@ 120 VAC 60 Hz: .07 mA @250 VAC 50 Hz: .13 mA

Hipot rating (one minute):

Line to Ground: 2250 VDC
Line to Line: 1450 VDC

Rated Voltage (max): 250 VAC

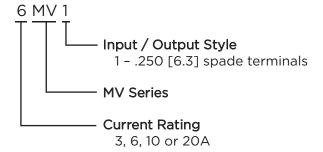
Operating Frequency: 50/60 Hz

Rated Current: 3 to 20A

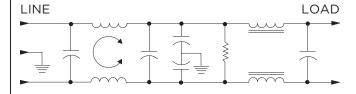
Operating Ambient Temperature Range

(at rated current I_r): -10°C to +40°C In an ambient temperature (I_a) higher than +40°C the maximum operating current (I_o) is calculated as follows: $I_o = I_r \sqrt{(85-Ta)/45}$

Ordering Information



Electrical Schematic



Available Part Numbers

| 3MV1 | 6MV1 |
|-------|-------|
| 10MV1 | 20MV1 |

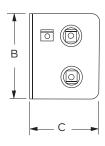


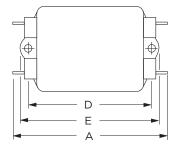
Multi-purpose Medical Filter for Power Line Noise Protection (continued)

MV Series

Case Styles

MV1 (3, 6, 10A)





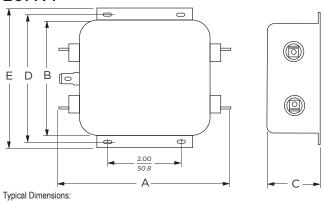
Typical Dimensions:

Line/Load Terminals (4): Ground Terminal (1): Mounting Holes (2): .250 [6.3] with .07 [1.8] Dia. hole .250 [6.3] with .07 x .16 [1.8 x 3.8] slot .188 [4.78] Dia.

.250 [6.3] with .07 [1.8] Dia. hole .250 [6.3] with .07 x .16 [1.8 x 3.8] slot

.188 [4.78] Dia.

20MV1



Case Dimensions

Line/Load Terminals (4):

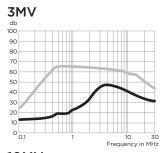
Ground Terminal (1): Mounting Holes (2):

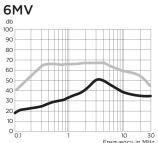
| Part No. | Α | А В | | D | Ε | |
|----------|-------|-------|-------|-------------------------|-------|--|
| Part No. | (max) | (max) | (max) | ± .01 <u>5</u> ± .38 | (max) | |
| 3MV1 | 3.36 | 1.82 | 1.28 | 2.375 | 2.78 | |
| | 85.3 | 46.2 | 32.5 | 60.33 | 70.6 | |
| 6MV1 | 3.86 | 2.08 | 1.53 | 2.938 | 3.34 | |
| | 98.0 | 52.8 | 38.9 | 74.63 | 84.8 | |
| 10MV1 | 3.86 | 2.08 | 1.53 | 2.938 | 3.34 | |
| | 98.0 | 52.8 | 38.9 | 74.63 | 84.8 | |
| 20MV1 | 5.23 | 3.38 | 1.53 | 3.75 | 4.20 | |
| | 132.8 | 85.9 | 38.9 | 95.25 | 106.7 | |
| | | | | | | |

Performance Data

Typical Insertion Loss

Measured in closed 50 Ohm system

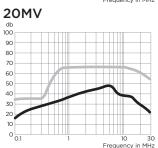




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10MV db 100 90 80 70 60 50 40 30 20 10 0 0.1 1 10 30 Frequency in MHz



Common Mode / Asymmetrical (L-G)
Differential Mode / Symmetrical (L-L)

Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

| Current | Frequency – MHz | | | | | | | |
|---------|-----------------|----|----|----|----|----|----|----|
| Rating | .15 | .5 | 1 | 2 | 5 | 10 | 20 | 30 |
| 3A | 14 | 19 | 20 | 30 | 46 | 40 | 34 | 31 |
| 6A | 19 | 27 | 30 | 38 | 50 | 40 | 35 | 35 |
| 10A | 15 | 25 | 26 | 34 | 46 | 50 | 44 | 42 |
| 20A | 18 | 30 | 34 | 34 | 46 | 40 | 36 | 20 |

Differential Mode / Symmetrical (Line to Line)

| Current | Frequency – MHz | | | | | | | |
|---------|-----------------|----|----|----|----|----|----|----|
| Rating | .15 | .5 | 1 | 2 | 5 | 10 | 20 | 30 |
| 3A | 33 | 65 | 65 | 65 | 65 | 60 | 53 | 50 |
| 6A | 40 | 65 | 65 | 65 | 65 | 60 | 57 | 55 |
| 10A | 33 | 65 | 65 | 65 | 65 | 65 | 55 | 55 |
| 20A | 25 | 65 | 65 | 65 | 65 | 60 | 57 | 45 |