

Roxburgh MIF Series EMI Filters

Single-phase Drive Rated EMI Filters - Very High Performance

The MIF series industrial multi-stage EMI filters offer very high performance for use in a variety of applications. Rated at 250V, these filters are used for single-phase motor drives where long motor supply cable runs (above 50m) are necessary and where compliance with industrial and residential noise limits is required.

The MIF series filters are compact and cost-effective, offering flexibility in mounting options while ensuring minimal panel space requirements.

All products are RoHS compliant, include UL and cUL approvals, and are CE labeled.

Features

- 0-250 VAC/VDC, 0-60 Hz, single-phase
- 3A - 23A models
- Metal case
- Insulated screw terminal blocks
- Panel mount, dual mounted - flat or side

* Filter performance curves are available on item page at: www.AutomationDirect.com

Applications

- Ideally suited for products that must conform to part 15, FCC regulations
- Single-phase AC and DC drives
- Machinery design

Standards and Certifications



| MIF Series EMI Filters | | | |
|------------------------|----------|---|---|
| Part Number | Price | Description | Replacement Line & Load Side Protective Cover |
| MIF03 | \$77.00 | EMI Input filter, 120/240 VAC, 1-phase, Very High Performance Filter, 3A | N/A |
| MIF06 | \$86.00 | EMI Input filter, 120/240 VAC, 1-phase, Very High Performance Filter, 6A | |
| MIF10 | \$100.00 | EMI Input filter, 120/240 VAC, 1-phase, Very High Performance Filter, 10A | TER524-AS |
| MIF16 | \$107.00 | EMI Input filter, 120/240 VAC, 1-phase, Very High Performance Filter, 16A | |
| MIF23 | \$124.00 | EMI Input filter, 120/240 VAC, 1-phase, Very High Performance Filter, 23A | N/A |

| General Specifications | |
|------------------------------------|---|
| Voltage Rating | 115/230 VAC, 0-60 Hz |
| Voltage Max. | 250V |
| Voltage Withstand | 2100VDC/60 sec |
| Phase | 1 |
| UL/IEC Pollution Class | Degree II |
| Humidity | 93% RH (non-condensing) |
| Overload Current | 135% 2Hrs, 150% 60s |
| Insulation Resistance | 500VDC >3.5 MΩ |
| Climate Class (IEC 60068-1) | -25/85/21 |
| Temperature Rise | 45°C |
| Temperature Rating | -13 to 185°F; -25 to 85°C |
| Flammability (UL94) | V-2 |
| Case Material | Aluminum |
| Altitude* | 1000m (3000m with derating) |
| Mounting Clearance | ≥50mm gap |
| Agency Approval** | CE (EN 60939-1), cURus: File# E191581 (Standard: UL1283 & C22.2 No.8) |

* Derate 1% per 100m after 1000m; Max 3000m.

**To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific component part number web page.



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| Specifications | | | | | | |
|----------------|--|-----------|-------|------------|-------|-----------|
| | Parameter | MIF03 | MIF06 | MIF10 | MIF16 | MIF23 |
| | Max. Power (kW) | 0.7 | 1.4 | 2.4 | 3.8 | 5.5 |
| | Current Rating (A) | 3 | 6 | 10 | 16 | 23 |
| | SCCR Rating (kA) | 5 | | | | |
| | Ingress Protection | IP20 | | | | |
| GND Terminal | Terminal Style | Spring | | Screw | | |
| | Torque, lb-in (N·m) | N/A | | 10.6 (1.2) | | 4.4 (0.5) |
| | Wire Gauge (AWG) | 12 | | | | |
| Wire Terminal | Terminal Style | Spring | | Screw | | |
| | Torque, lb-in (N·m) | N/A | | 10.6 (1.2) | | 4.4 (0.5) |
| | Max. Wire Gauge (AWG) | 12 | | | | |
| | Operational Leakage Current (mA) | 2.6 | | 45 | | 90 |
| | Total Resistance, Line to Load (mΩ/ph) | 55 | 48.6 | 13.5 | 13.7 | 9.5 |
| | Residual Voltage (V@5s) | 2 | | 1 | | 9 |
| | Heat Dissipation (W/ph) | 0.5 | 1.75 | 1.35 | 3.5 | 5 |
| | Weight lbs (kg) | 0.7 (0.3) | | 1.6 (0.7) | | 2.2 (1.0) |

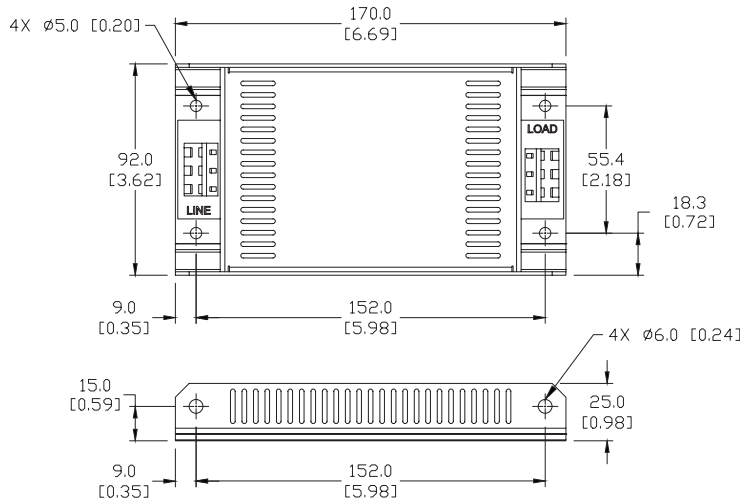
| Temperature Derating Chart above 40°C* | | | | | | | | | | |
|--|-------------|------------|-------|-------|-------|-------|-------|-------|-------|------|
| | Part Number | Ambient °C | | | | | | | | |
| | | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| Continuous Ampacity at Ambient °C | MIF03 | 3.00 | 2.80 | 2.60 | 2.38 | 2.15 | 1.91 | 1.64 | 1.33 | 0.93 |
| | MIF06 | 6.00 | 5.60 | 5.19 | 4.76 | 4.31 | 3.82 | 3.28 | 2.65 | 1.86 |
| | MIF10 | 10.00 | 9.34 | 8.65 | 7.94 | 7.18 | 6.36 | 5.46 | 4.42 | 3.10 |
| | MIF16 | 16.00 | 14.94 | 13.84 | 12.70 | 11.49 | 10.18 | 8.74 | 7.08 | 4.96 |
| | MIF23 | 23.00 | 21.48 | 19.90 | 18.25 | 16.51 | 14.64 | 12.56 | 10.17 | 7.13 |

* NOTE: Using these filters above 40°C would comprise a non-UL application of device.

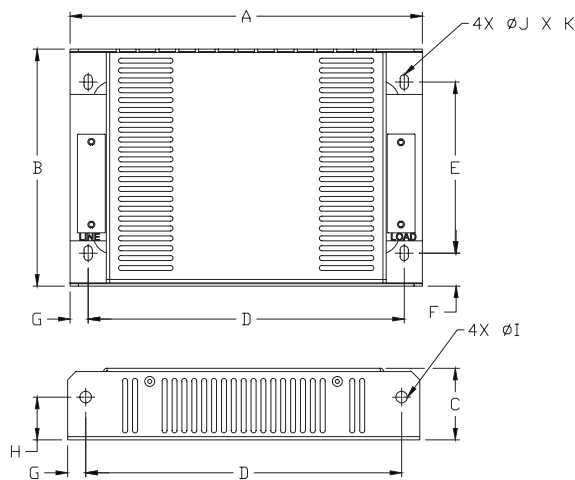
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Dimensions mm [inches]

MIF03
MIF06



MIF10
MIF16
MIF23



| PART NUMBER | A | B | C | D | E | F | G | H | ϕI | ϕJ | K |
|-------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|---------------|---------------|---------------|
| MIF10 | 214.0 [8.42] | 144.0 [5.67] | 43.5 [1.71] | 192.0 [7.56] | 104.0 [4.09] | 20.0 [0.79] | 11.0 [0.43] | 26.0 [1.02] | 7.0 [0.28] | 5.0 [0.20] | 9.0 [0.35] |
| MIF16 | 214.0 [8.42] | 144.0 [5.67] | 43.5 [1.71] | 192.0 [7.56] | 104.0 [4.09] | 20.0 [0.79] | 11.0 [0.43] | 26.0 [1.02] | 7.0 [0.28] | 5.0 [0.20] | 9.0 [0.35] |
| MIF23 | 214.0 [8.42] | 204.0 [8.03] | 50.0 [1.97] | 192.0 [7.56] | 164.0 [6.45] | 20.0 [0.79] | 11.0 [0.43] | 27.5 [1.08] | 7.0 [0.28] | 5.0 [0.20] | N/A |