

IN-LINE PNEUMATIC FLOW METERS



Both models shown actual size.

FLMG Series



- ✓ Suitable for Monitoring Most Pneumatic or Compressed Gas Systems
- ✓ Flow Rates from 1.2 to 900 SCFM (0.6 to 425 SLPS) @ 100 psi
- ✓ High Pressure to 600 psi—Brass or Aluminum; 1000 psi—Stainless Steel
- ✓ High Temperature to 116°C (240°F) Standard, 204 or 316°C (400 or 600°F) Optional
- ✓ Mounts in Any Position
- ✓ Relay Alarms and Analog Outputs Optional
- ✓ Dual Scale

The FLMG flow meters feature rugged construction, easy installation, and direct-reading flow rates of air. The units are calibrated at 100 psi pressure, suitable for most compressed pneumatic applications.

The spring-and-piston type assembly enables these flow meters to be mounted in any position.

The FLMG models with optional analog output (-MA) are typically used to transmit a signal proportional to the flow rate to a process controller, a PLC, a recorder, or a panel-mount display. With the “-MA” option, the user can choose between reading a 0 to 2000 Hz square-wave pulse, a 0 to 5 Vdc analog signal, or a 2-wire 4 to 20 mA analog signal by connecting the appropriate pins.

SPECIFICATIONS

Measuring Accuracy: ±4% FS over the entire scale range
Repeatability: ±1% FS
Flow Measuring Range: 1.2 to 900 SCFM



FLMG-14012AL



FLMG-38050BR

Maximum Operating Pressure:

Aluminum and Brass Monitors: 40 bar (600 psig)

Stainless Steel Monitors: 70 bar (1000 psig) up to 116°C (240°F)

Maximum Operating Temperature:

Standard: 116°C (240°F)

“-HT” Option: 204°C (400°F)

“-UHT” Option: 316°C (600°F)

Pressure Differential:

Visit us online for graphs

Standard Calibration Fluids:

Air @ 21°C (70°F), 1.0 sg and 6.8 bar (100 psig)

Relay (Optional): 1 or 2 form “C” relays, rated 10 A, 125 or 250 Vac or ¼ A, 250 Vdc

Mechanical Life:

>10⁶ cycles

Analog Output (Optional):

Supply voltage 12 to 35 Vdc, field selectable for 0 to 5 Vdc (100 W minimum load), 0 to 2000 Hz square-wave pulse or 4 to 20 mA
 $P_{max} = 50 (V_s - 12)$
 $(V_s = \text{supply voltage DC})$

Materials of Construction (Wetted Components)

| Description | Aluminum | Brass | Stainless Steel |
|---|---|---|--|
| High-pressure casing, end ports and tapered shaft | Aluminum | Brass | 304 SS |
| Seals | Buna (standard), EPR, FKM or Perfluoroelastomer | Buna (standard), EPR, FKM or Perfluoroelastomer | FKM with PTFE backup (standard), Buna, EPR or Perfluoroelastomer |
| Transfer magnet | PTFE-coated Alnico | PTFE-coated Alnico | PTFE-coated Alnico |
| Floating orifice disk | Stainless steel | Stainless steel | Stainless steel |
| All other internal parts | Stainless steel | Stainless steel | Stainless steel |

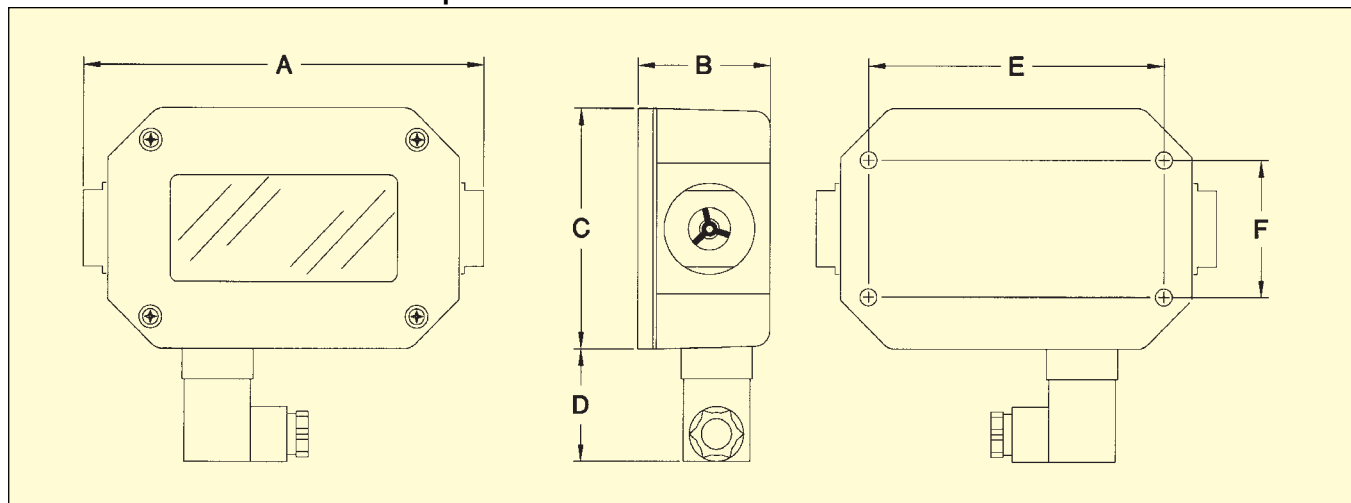
Materials of Construction (Non-Wetted Components)

| Description | Aluminum | Brass | Stainless Steel |
|--------------|----------------------------------|----------------------------------|---------------------------------|
| Window tube | Polycarbonate (standard), Pyrex® | Polycarbonate (standard), Pyrex® | Polycarbonate (standard) Pyrex® |
| Window seals | Buna (standard) | Buna (standard) | Buna (standard) |

| Port Sizes | ¼ to 1½ FNPT |
|-------------------------|--|
| Installation Dimensions | ¼ to ½" Port: 1⅞" OD x 6⅞" length ¾ to 1" Port: 2⅜" OD x 7⅝" length 1¼ to 1½" Port: 3½" OD x 10⅞" length |

Note: Minimum flow rate = 10% of maximum.

Dimensions for Units with “-MA” Option



| DIM | ¼ and ½" Ports | ¾ and 1" Ports | 1¼ and 1½" Ports | 2" Ports* |
|-----|----------------|----------------|------------------|---------------|
| A | 167 mm (6⅝") | 182 mm (7⅝") | 258 mm (10⅞") | 322 mm (12⅝") |
| B | 56 mm (2⅜") | 75 mm (2⅝") | 97 mm (3⅜") | 97 mm (3⅜") |
| C | 101 mm (4") | 114 mm (4½") | 135 mm (5⅝") | 135 mm (5⅝") |
| D | 47 mm (1⅞") | 47 mm (1⅞") | 47 mm (1⅞") | 47 mm (1⅞") |
| E | 128 mm (4⅞") | 127 mm (5") | 172 mm (6¾") | 172 mm (6¾") |
| F | 57 mm (2¼") | 73 mm (2⅞") | 95 mm (3¾") | 95 mm (3¾") |

* For 2" port units consult sales.

| Air Flow meters - ¼ to ½ NPT Sizes | | |
|--------------------------------------|------------------------|-----------------|
| Model No. | SCFM (SLPS) | Connection Size |
| FLMG-14012(*) | 3 to 12 (1.5 to 5.5) | ¼ NPT |
| FLMG-14022(*) | 4 to 23 (2 to 10.5) | ¼ NPT |
| FLMG-14050(*) | 5 to 50 (3 to 23) | ¼ NPT |
| FLMG-14100(*) | 10 to 100 (6 to 50) | ¼ NPT |
| FLMG-38012(*) | 3 to 12 (1.5 to 5.5) | ⅜ NPT |
| FLMG-38022(*) | 4 to 23 (2 to 10.5) | ⅜ NPT |
| FLMG-38050(*) | 5 to 50 (3 to 23) | ⅜ NPT |
| FLMG-38100(*) | 10 to 100 (6 to 50) | ⅜ NPT |
| FLMG-12012(*) | 3 to 12 (1.5 to 5.5) | ½ NPT |
| FLMG-12022(*) | 4 to 23 (2 to 10.5) | ½ NPT |
| FLMG-12050(*) | 5 to 50 (3 to 23) | ½ NPT |
| FLMG-12100(*) | 10 to 100 (6 to 50) | ½ NPT |
| Air Flow meters - ¾ to 1 NPT Sizes | | |
| FLMG-34050(*) | 6 to 50 (3 to 23) | ¾ NPT |
| FLMG-34100(*) | 10 to 100 (6 to 50) | ¾ NPT |
| FLMG-34150(*) | 15 to 150 (10 to 70) | ¾ NPT |
| FLMG-34260(*) | 20 to 250 (10 to 120) | ¾ NPT |
| FLMG-10050(*) | 6 to 50 (3 to 23) | 1 NPT |
| FLMG-10100(*) | 10 to 100 (6 to 50) | 1 NPT |
| FLMG-10150(*) | 15 to 150 (10 to 70) | 1 NPT |
| FLMG-10260(*) | 30 to 330 (10 to 150) | 1 NPT |
| Air Flow meters - 1¼ to 1½ NPT Sizes | | |
| FLMG-1140450(*) | 30 to 470 (10 to 210) | 1¼ NPT |
| FLMG-1141000(*) | 150 to 900 (75 to 425) | 1¼ NPT |
| FLMG-1120450(*) | 30 to 470 (10 to 210) | 1½ NPT |
| FLMG-1121000(*) | 150 to 900 (75 to 425) | 1½ NPT |

Comes complete with operator's manual.

(*) Specify "AL" for aluminum, "BR" for brass, or "SS" for stainless steel.

For units with BSPP threads add "-BSPP" to the model number for additional charge.

Ordering Examples: FLMG-10100BR-MA, 1" brass air flow meter, 10 to 100 SCFM, 4 to 20 mA output.

FLMG-14012BR, ¼ NPT brass air flow meter, 1.2 to 12 SCFM.

Options

| Order Suffix | Description |
|--------------|--|
| -HT | High temperatures, 204°C (400°F) maximum |
| -UHT | Ultra high temperatures, 316°C (600°F) maximum |
| -R1 | Single SPDT relay, 10 A @ 220 Vac |
| -R2 | Dual SPDT relays, 10 A @ 220 Vac |
| -MA | 4 to 20 mA output (12 to 35 Vdc powered) |
| -BDF | Bidirectional flow (not available with 1½" size units, or with UHT, R1, R2, or MA options) |

Note: Only one option may be ordered with each unit.