

# 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:**  $\pm 2.5\%$  FS in the center third of the measuring range;  $\pm 4\%$  FS over the entire scale range  
**Repeatability:**  $\pm 1\%$  FS  
**Flow Measuring Range:** 1.2 to 900 SCFM

#### 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)



FLMG-14012SS

FLMG-138050BR

#### Relay (Optional): 1 or 2 form "C"

relays, rated 10 A, 125 or 250 Vac or 1/4 A, 250 Vdc

#### Mechanical Life:

>10<sup>6</sup> 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

$R_{max} = 50 (V_s - 12)$

( $V_s$  = supply voltage DC)

**Materials of Construction (Wetted Components)**

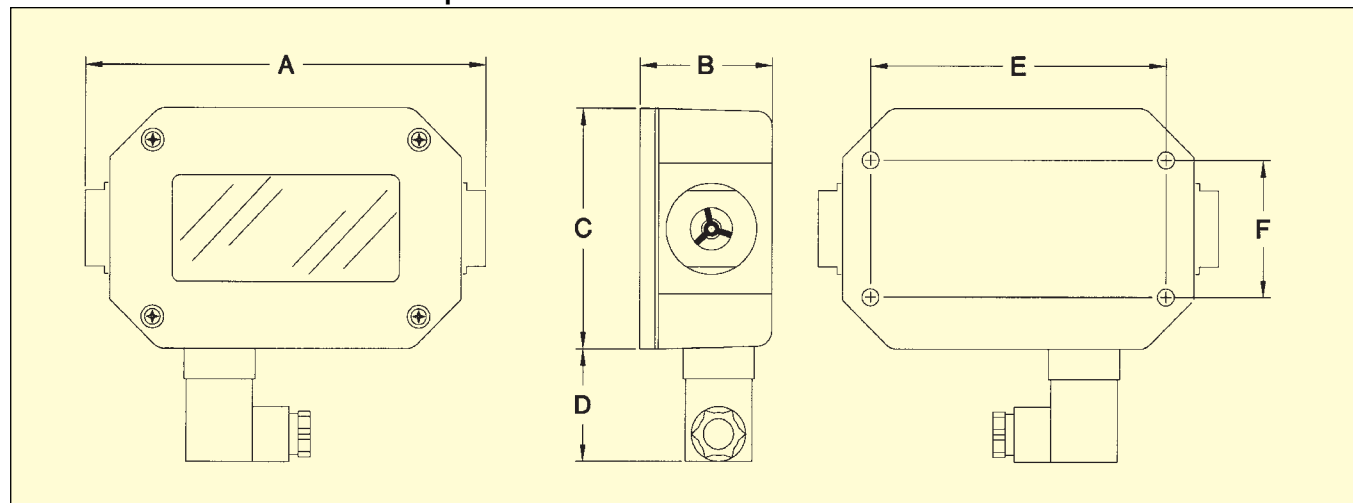
Description	Aluminum	Brass	Stainless Steel
High-pressure casing, end ports and tapered shaft	Aluminum	Brass	304 SS
Seals	Buna (standard), EPR, FKM or Perfluoroelastomer	Buna (standard), EPR, FKM or Perfluoroelastomer	FKM with PTFE backup (standard), Buna, EPR or Perfluoroelastomer
Transfer magnet	PTFE-coated 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 (6⅞")	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.