Dwyer

SERIES GFM3 & GFM4

GAS MASS FLOW METER

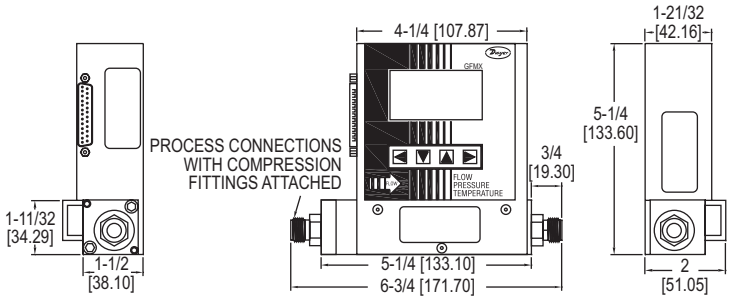
Flow Monitoring, Push-Button Configuration



GFM3



GFM4



The **SERIES GFM3 & GFM4** Gas Mass Flow Meters are an ideal choice for the measurement of flow rates of a wide variety of gases. Unit can be calibrated for a variety of gases via push-button with 0 to 5 VDC, 0 to 10 VDC or 4 to 20 mA and relay outputs.

FEATURES/BENEFITS

- Multi parameter flow meter supports various functions such as flow totalizer, flow, temperature, and pressure alarms, and is available in a choice of 0 to 5 VDC, 0 to 10 VDC, or 4 to 20 mA output signals
- Set alarms remotely via digital interface for flow, pressure, and temperature to alert user of high or low thresholds being exceeded
- Programmable 12-digit totalizer for total gas volume indication, and is available in the choice of 0 to 5 VDC, 0 to 10 VDC, or 4 to 20 mA output signals
- Standard four button keypad and large 128 x 64 graphical LCD with backlight allows easy access to the many features
- Digital interface operates through available RS-485 or RS-232, providing access to internal data parameters and multi-drop capability of up to 255 units (RS-485 only)
- Set alarms remotely via digital interface for flow to alert user of high or low thresholds being exceeded
- Internal conversion factors for up to 32 gases
- NIST traceable certificate included
- Automatic zero adjustment
- Self-diagnostic tests

SPECIFICATIONS

Service: Clean gases compatible with wetted parts.
Wetted Materials: 316 SS, 416 SS; Fluoroelastomer, Buna-N, EPR or PTFE O-rings.
Accuracy: ±1% FS.
Repeatability: ±0.25% FS.
Response Time: 0.6 to 1.0 s to within ±2% of setpoint over 20 to 100% FS.
Output Signal: Linear 0 to 5 VDC (3000 Ω min. load impedance); 0 to 10 VDC (6000 Ω min. load impedance); 4 to 20 mA (500 Ω max. loop resistance).
Relay Rating: 1 A @ 24 VDC.
Max. Particulate Size: 5 microns.
Temperature Limits: Ambient: 32 to 122°F (0 to 50°C); Dry Gases: 14 to 122°F (-10 to 50°C).
Power Supply: 12 VDC; 15 VDC; ±24 VDC.
Process Connections: 1/8″ compression fitting for flow rates ≤ 10 L/min; 1/4″ for ≤ 50 L/min; 3/8″ for ≤ 100 L/min.
Pressure Limits: 500 psia (35 bar).
Leak Integrity: 1 x 10^{-9} smL/sec of helium.
Display: 128 x 64 graphic LCD with backlight.
Weight: 1 lb (.45 kg).

APPLICATIONS

- Gas flow measurement
- Gas flow control
- Operating pumps and valves
- Process equipment
- Vacuum processes
- Glass and metal coating
- Film deposition

MODEL CHART

Example	GFM3	-AIR	-010	-5	-E	-B	-L	-B	-C	-2	GFM3-AIR-010-5-E-B-L-B-C-2
Series	GFM3 GFM4										Gas mass flow meter Gas mass flow meter with temperature
Specialty Gas & K-Factor		AIR AR C2H2 C3H8 C4H10 CH4 CO CO2 HF HE H2 N2 NH3 O2 SO2									Air 1.0000 Argon 1.4573 Acetylene 0.5829 Propane 0.3500 Butane 0.2631 Methane 0.7175 Carbon monoxide 1.0000 Carbon dioxide 0.7382 Hydrogen fluoride 0.9998 Helium 1.4540 Hydrogen 1.0106 Nitrogen 1.0000 Ammonia 0.7310 Oxygen 0.9926 Sulfur dioxide 0.6900
Body Size❷			010 050 100								Low flow Medium flow High flow
Power Supply				5 2 4							±15 VDC 12 VDC 24 VDC
Seal Material					V B E T						Fluoroelastomer Buna-N EPR PTFE
Fittings						A B D					1/4″ compression (low) 1/8″ compression (medium) 3/8″ compression (high)
Display							L				LED display
Flow Output Signal								A B G			0 to 5 VDC 4 to 20 mA 0 to 10 VDC
Temperature & Pressure Output Signal									A B C D E F G H I J		N.A/N.A 0 to 5 VDC/0 to 5 VDC 0 to 5 VDC/4 to 20 mA 0 to 5 VDC/0 to 10 VDC 4 to 20 mA/0 to 5 VDC 4 to 20 mA/4 to 20 mA 4 to 20 mA/0 to 10 VDC 0 to 10 VDC/0 to 5 VDC 0 to 10 VDC/4 to 20 mA 0 to 10 VDC/0 to 10 VDC
Digital Interface										2 5 9	RS232 RS485 PROFIBUS
Note: Specify flow range at time of order❶											

ACCESSORIES

Model	Description
A-110N12	110 VAC power supply, 12 VDC standard interface
A-110N24	110 VAC power supply, 24 VDC standard interface
A-110NA15	110 VAC power supply, 15 VDC standard interface

❶Flow Range Chart: See page 323 (Series GFM2)
❷Max Flow Range Chart (per body size for the given gases): See page 323 (Series GFM2)