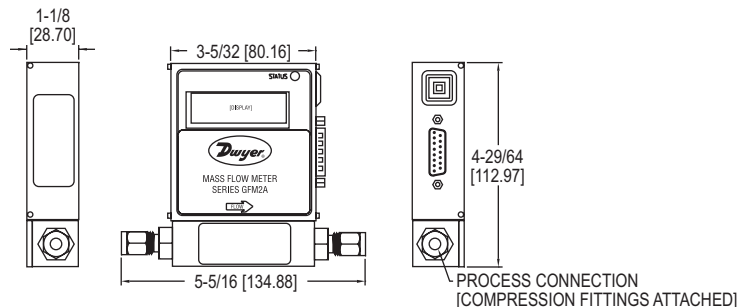


# GAS MASS FLOW METER

±1% FS, Programmable Relays



The **Series GFM2 Gas Mass Flow Meter** is an ideal choice for the measurement of flow rates of a wide variety of gases. Unit can be calibrated for a variety of gases with user selectable 0 to 5 VDC or 4 to 20 mA and two relay outputs and programmable totalizer that indicates total gas quantity.

## FEATURES/BENEFITS

- Utilizes a straight tube sensor with a restrictor flow element to provide a high ±1% FS accuracy and ±0.25% FS repeatability
- Gas flow can be displayed in 23 different engineering units on an optional 2x16 character LCD display with internal conversion factors for up to 32 gases
- Digital RS-232 or RS-485 interfaces allow for easy communication and for multi-drop capability of up to 256 units (RS-485 only)
- User-friendly interface allows for the programming of high and low gas flow alarms, along with two user-programmable electromechanical SPDT relays with latch options
- Stores calibration information for up to 10 different gases, internal or user-specific K-factors
- Automatic sensor zero offset adjustment (via digital interface or local push button)
- NIST traceable certificate included
- Self-diagnostic tests

## APPLICATIONS

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

## SPECIFICATIONS

**Service:** Clean gases compatible with wetted parts.  
**Wetted Materials:** GFM2-X-X-A: Anodized aluminum, brass, 316 SS fluoroelastomer O-rings; GFM2-X-X-S: 316 SS, and fluoroelastomer O-rings; Buna-N, EPR and PTFE O-rings optional.  
**Accuracy:** ±1% FS.  
**Repeatability:** ±0.25% FS.  
**Response Time:** 2 seconds to within ±2% of actual flow.  
**Output Signal:** Linear 0 to 5 VDC (3000 Ω min. load impedance) and 4 to 20 mA (500 Ω max. loop resistance).  
**Relay Rating:** 1 A @ 24 VDC.  
**Max. Particulate Size:** 5 microns.  
**Temperature Limits:** 32 to 122°F (0 to 50°C).  
**Power Supply:** 11 to 26 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.  
**Display:** 2 x 16 character LCD (optional).  
**Pressure Limits:** 500 psig (34.5 bar).  
**Leak Integrity:** 1 x 10<sup>-9</sup> smL/sec of helium.  
**Weight:** 1.05 lb (0.48 kg).

MODEL CHART										
Example	GFM2	-AIR	-010	-A	-V	-A	-N	-A	-2	GFM2-AIR-010-A-V-A-N-A-2
Series	GFM2									Gas mass flow meter
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 Size			010 050 100							Low flow Medium flow High flow
Body Material				A S						Aluminum Stainless steel: Body size = 010 Body size = 050 Body size = 100
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							N L			No display LED display
Output Signal								A B		0 to 5 VDC 4 to 20 mA
Digital Interface									2 5 9	RS232 RS485 PROFIBUS

MAXIMUM FLOW RANGE (l/min)							
Body Size	AIR	AR	C2H2	C3H8	C4H10	CH4	CO
010	10	10	5	2	2	5	10
050	50	50	20	10	5	30	50
100	100	100	50	30	20	60	100

MAXIMUM FLOW RANGE (l/min)							
Body Size	CO2	HE	H2	N2	NH3	O2	SO2
010	5	10	10	10	5	10	5
050	30	50	50	50	30	50	30
100	60	100	100	100	60	100	60

FLOW RANGES	
ml/min	l/min
10	2
20	5
50	10
100	20
200	30
500	40
1000	50
	60
	80
	100
Note: Specify flow range at time of order	

ACCESSORIES	
Model	Description
A-110NA12	110 VAC power supply, 12 VDC with communication interface branch