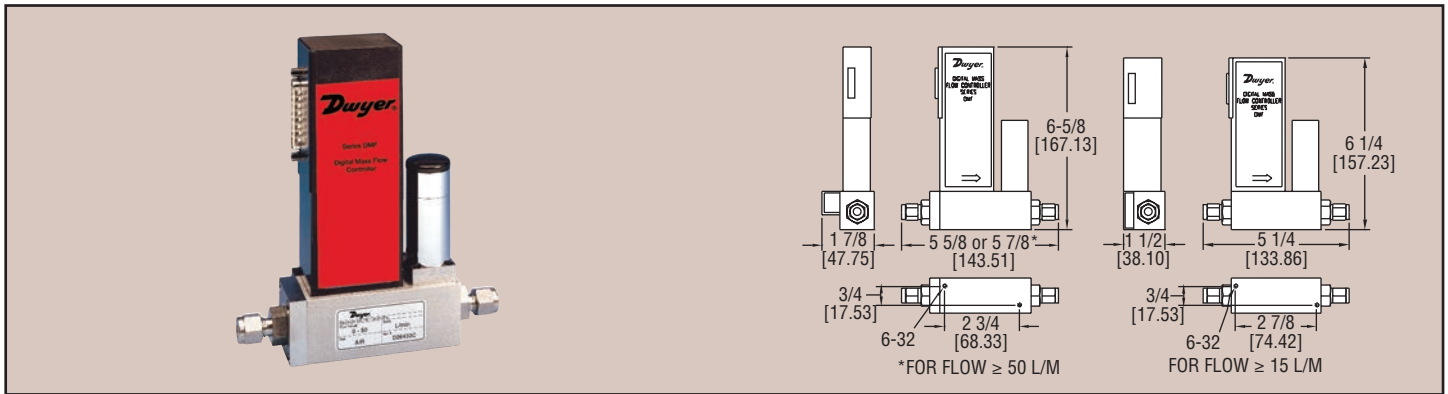




Series  
DMF

# Digital Mass Flow Controllers

Programmable, RS485 Interface, Up To 500 psig,  $\pm 1\%$  Accuracy



**Program, record, analyze, and control** flow rates of various gases with Series DMF Digital Mass Flow Controller. Controllers are designed with straight tube sensors with restrictor flow elements to ensure laminar gas flow for accurate and repeatable results. Series DMF are unaffected by temperature and pressure variations. Controllers can be programmed for various control functions including flow set point, totalizer, stop totalizer, totalize from preset flow, stop and preset total, auto zero, and more. Auto zero feature utilizes an automatic balancing circuit that virtually eliminates drift of zero and span. In addition, Series DMF controllers have two dry contact closures to operate pumps, valves, or other process equipment.

The Series DMF features an auto tune function to optimize control response for a specific gas under actual process conditions. Self diagnostic tests are run at power up to ensure the controller is in optimum working condition. Calibration information for up to 10 gases and conversion factors for up to 256 different gases are stored in memory. High and low gas flow alarm limits are programmed via RS-485 interface. Software supports programmable flow modes, allowing execution of custom programming of up to ten steps.

Model*	Range	Model*	Range
DMF-41401	0 to 10 sccm	DMF-41408	0 to 2 L/min
DMF-41402	0 to 20 sccm	DMF-41409	0 to 5 L/min
DMF-41403	0 to 50 sccm	DMF-41411	0 to 15 L/min
DMF-41404	0 to 100 sccm	DMF-41431	0 to 30 L/min
DMF-41405	0 to 200 sccm	DMF-41433	0 to 50 L/min
DMF-41406	0 to 500 sccm	DMF-41842	0 to 100 L/min
DMF-41407	0 to 1 L/min		

\*Specified flow ranges are for an equivalent flow of nitrogen at 70°F (21°C) @ 760 mm Hg.

## ACCESSORIES

- Model DMF-110P, 110V power supply with 25-pin connector
- Model DMF-220PE, 220V power supply with 25-pin connector
- Model DMF-CBL1, 6' cable with branch to separate power supply
- Model DMF-CBL2, 6' cable with branch to computer port

## SPECIFICATIONS

- Service:** Clean gases compatible with wetted parts.
- Wetted Materials:** 316 SS, 416 SS, fluoroelastomer O-rings.
- Accuracy:**  $\pm 1\%$  FS including linearity between 59 to 77°F (15 to 25°C) and 10 to 60 psia (0.7 to 4 bar);  $\pm 2\%$  FS from 32 to 122°F (0 to 50°C) and 5 to 150 psia (0.3 to 10 bar).
- Repeatability:**  $\pm 0.15\%$  of full-scale.
- Response Time:** 0.6 to 1.0 second to within  $\pm 2\%$  of setpoint over 20% to 100% FS.
- Output:** Linear 0-5 VDC (2000  $\Omega$  min. load impedance); 0-10 VDC (4000  $\Omega$  min. load impedance).
- Maximum Particulate Size:** 100 microns.
- Temperature Limits:** 41 to 122°F (5 to 50°C).
- Power Supply:**  $\pm 15$  VDC; 13.5 watts maximum.
- Process Connections:** 1/4" compression fitting for flow rates  $\leq 50$  L/m; 3/8" for flows  $\geq 60$  L/m.
- Pressure Limits:** 500 psig (34.5 bar).
- Leak Integrity:**  $1 \times 10^{-9}$  sccs of helium.
- Computer Interface:** RS-485.
- Agency Approvals:** CE.

FLOW

Mass Flowmeters/  
Controllers