



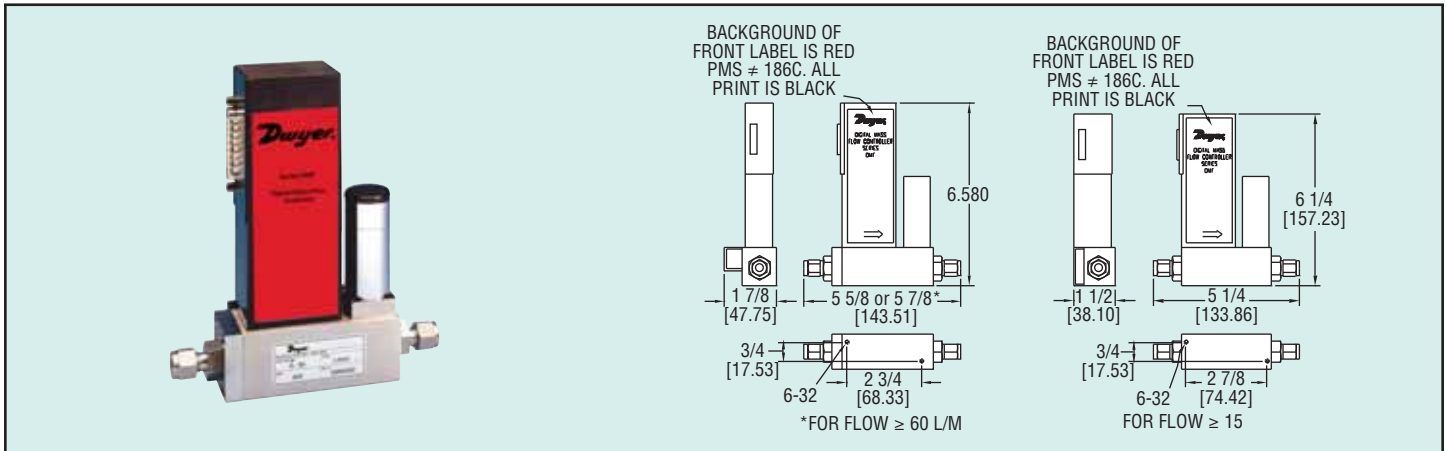
Series
DMF

Digital Mass Flow Controllers

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



Flow



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.

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 set-point over 20% to 100% FS.

Output: Linear 0-5 VDC (2000 Ω min. load impedance); 0-10 VDC (4000 Ω min. load impedance).

Maximum Particulate Size: 100 microns.

Temperature Limits: 41 to 122°F (5 to 50°C).

Power Supply: ± 15 VDC; 13.5 Watts maximum.

Process Connections: 1/4" compression fitting for flow rates ≤ 50 L/m; 3/8" for flows ≥ 60 L/m.

Pressure Limits: 500 psig (34.5 bar).

Leak Integrity: 1×10^{-9} sccs of Helium.

Computer Interface: RS-485.

Agency Approvals: CE.

| Model Number* | Range | Model Number* | 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 ft cable with branch to separate power supply

Model DMF-CBL2, 6 ft cable with branch to computer port