

# M-Series Mass Flow Meters and Controllers

DIFFERENTIAL PRESSURE-BASED MEASUREMENT AND CONTROL OF GAS FLOWS

AVS

*NIST-traceable accuracy  
up to  $\pm 0.5\%$  of reading*

*No warm-up  
required*

*98+ pre-loaded gas  
calibrations*

*5 millisecond  
response times*



*Accurate. Multivariate. Intuitive.*

# M-Series Mass Flow Meters and Controllers

MONITOR OR CONTROL GASES EVEN IN CHANGING PROCESS CONDITIONS

AVS

## Quick Specifications:

### Mass Flow Ranges:

0.5 SCCM–10,000 SLPM

### Accuracy:

Standard:  $\pm 0.6\%$  of reading

High:  $\pm 0.5\%$  of reading

### Measurement Range:

0.01–100% of full scale

### Response Time:

10 ms measurement response;

30 ms control response

### Multi-gas Calibration:

98+ pre-loaded gases

### Repeatability:

Greater of  $\pm 0.1\%$  of reading or

$\pm 0.02\%$  of full scale

### Communications:

Analog, RS–232, RS–485,

DeviceNet, EtherCAT, EtherNet/IP,

TCP/IP, Modbus RTU, PROFIBUS,

PROFINET, IO-Link



### M/MC Meter or Controller

High-accuracy, multivariate flow measurement or control in real time.



### MW/MCW Low Pressure Drop

Measure flow readings near atmospheric pressure with pressure drops as low as 0.07 PSID (4.8 mbarD).



### MB Portable Meter

Easily verify flow anywhere with an 18 hour rechargeable battery and an intuitive interface.

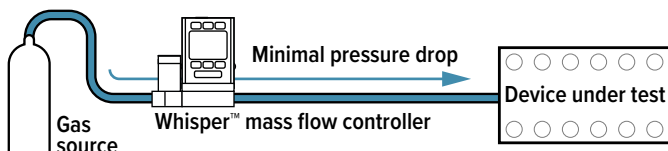


### MCV Vacuum Control

Protect your vacuum process with a pneumatic shutoff valve on a controller built for flow or pressure control.

## Fast and Accurate Leak Testing

A single Whisper multivariate controller is able to maintain a constant pressure in the device under test (DUT) while providing accurate, real-time mass and volumetric flow readings. When the DUT is subjected to a constant pressure within the closed system, any resulting flow is a direct measure of the DUT's leakage.



## Easy Verification and Calibration

Quickly integrate an Alicat into test stands for fast and accurate verification without any warm-up time. For in-field calibrations, a portable, battery-powered flow meter can be easily added into a flow line at any point for rapid system verification.

