



## Mass Flowmeters and Controllers

The CONCOA Mass Flowmeter (MFM) and Mass Flow Controller (MFC) Series are based on a modular design. At the heart of each instrument is an insulated thermal transfer sensor which provides enhanced zero stability. This sensor is designed to virtually eliminate long downtime due to clogging. Additionally, the MFM/MFC design features an integral filter and an easily replaceable closed loop electronics card.



MFC 202 Shown

Features	Applications
±1% Of full-scale accuracy <sup>1</sup>	Leak testing
Proven reliability	Medical research
Range—20,000 SCCM (N <sub>2</sub> equivalent)	Vapor deposition
NIST traceable calibration	R&D and process flows
	Semiconductor processes
	Pollution monitoring
	Gas blending
	Chromatography

## Specifications

MFM 200	
Accuracy <sup>†</sup> and Linearity	±1% F.S.
Repeatability	±0.05% F.S.
Standard Pressure Rating	500 PSIG (34 BAR)
Pressure Coefficient	-0.0067%/PSI (0-1000 PSIG/0-70 BAR N <sub>2</sub> ) typical
Leak Integrity	<1x10 <sup>-9</sup> SCCS
Temperature Coefficient	Zero ±0.035% FS/°C 0-60°C (0-140°F) Span ±0.05% RDG/°C 0-60°C (0-140°F)
STP	0°C and 760 TORR
Power	±15 VDC @ ±25 mA
Flow Signal	(Inherently linear) 0-5.00 VDC
Wetted Material	316 stainless steel, Viton®, 82/18 Au/Ni braze, trace silver solder
Connector	15-pin subminiature D
Weight	1.8 lb (0.82 kg)

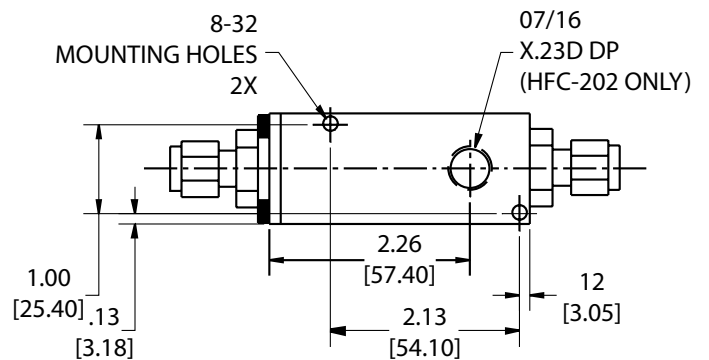
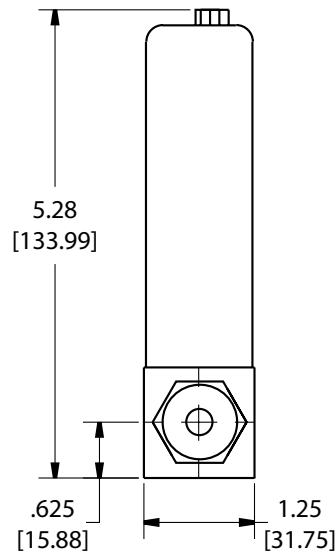
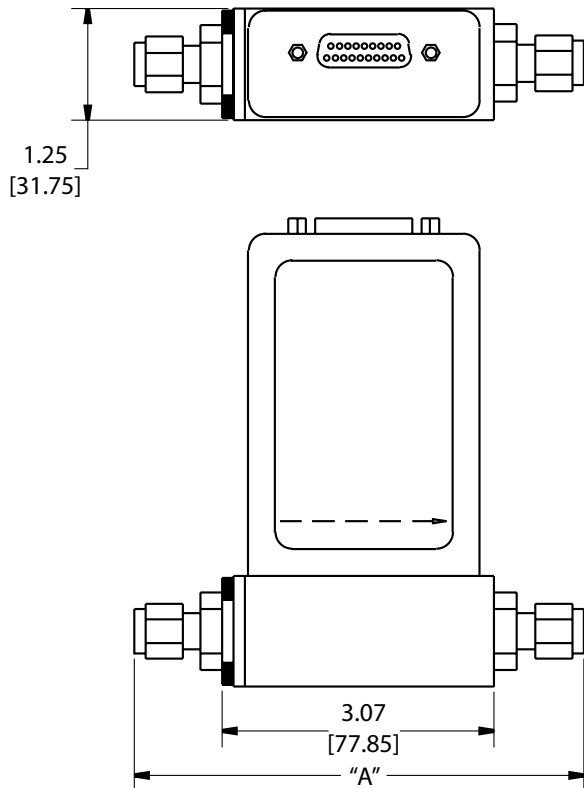
MFC 202	
Accuracy <sup>†</sup> and Linearity	±1% F.S.
Repeatability	±0.05% F.S.
Standard Pressure Rating	500 PSIG (34 BAR)
Pressure Coefficient	-0.0067%/PSI 0-1000 PSIG (0-70 BAR) N <sub>2</sub> typical
Control Valve DP <sup>†</sup>	15-65 PSIG (1-4.5 BAR)
Leak Integrity	<1x10 <sup>-9</sup> scc/sec
Temperature Coefficient	Zero ±0.035% FS/°C 0-60°C (0-140°F) Span ±0.05% RDG/°C 0-60°C (0-140°F)
STP	0°C and 760 TORR
Power	±15 VDC @ ±60 mA/-185 mA
Flow Signal	(Inherently linear) 0-5.00 VDC
Command Signal	0-500 VDC or 4-20 mA
Wetted Material	316 stainless steel, 302 stainless steel, nickel, Viton®, 82/18 Au/Ni braze, trace silver solder, Kalrez®
Connector	15-pin subminiature D
Weight	1.8 lb (0.82 kg)

\* See product manual for critical information on instrument accuracy and the use of GCFs (gas conversion factors). Stated accuracy is for nitrogen or other gas specific calibration and use with this gas only.

† Consult CONCOA for other pressures.

MFM & MFC Fitting Type	Dim "A"
1/8" tube fitting with nut	4.84 (122.94)
1/4" tube fitting with nut	5.02 (127.51)

## Installation Dimensions



FLOW CONTROL

### Mass Flow Meter Ordering Information

Part Number	Range NEFR	Tube Fitting
MFM 200-2-10	0-10 SCCM	1/8"
MFM 200-2-100	0-100 SCCM	1/8"
MFM 200-2-500	0-500 SCCM	1/8"
MFM 200-2-1000	0-1000 SCCM	1/8"
MFM 200-4-3L	0-3 SLM	1/4"
MFM 200-4-5L	0-5 SLM	1/4"
MFM 200-4-10L	0-10 SLM	1/4"
MFM 200-4-20L	0-20 SLM	1/4"

### Mass Flow Controller Ordering Information

Part Number	Range NEFR	Tube Fitting
MFC 202-2-10	0-10 SCCM	1/8"
MFC 202-2-100	0-100 SCCM	1/8"
MFC 202-2-500	0-500 SCCM	1/8"
MFC 202-2-1000	0-1000 SCCM	1/8"
MFC 202-4-3L	0-3 SLM	1/4"
MFC 202-4-5L	0-5 SLM	1/4"
MFC 202-4-10L	0-10 SLM	1/4"
MFC 202-4-20L	0-20 SLM	1/4"