

Technical Data for MCV Mass Flow Controller for Vacuum Applications

0 to 0.5SCCM Full Scale through 0 to 20SLPM Full Scale

Specification	MCV Mass Controller	Description
Accuracy	± (0.8% of Reading + 0.2% of Full Scale)	At calibration conditions after tare
High Accuracy Option ¹	± (0.4% of Reading + 0.2% of Full Scale)	At calibration conditions after tare
Repeatability	± 0.2%	Full Scale
Operating Range	1/2% to 100%	Full Scale
Turndown Ratio	200 : 1	
Typical Response Time	100	Milliseconds (Adjustable)
Standard Conditions (STP)	25°C & 14.696PSIA	Mass Reference Conditions
Operating Temperature	-10 to +50	°Celsius
Zero Shift	0.02%	Full Scale / °Celsius / Atm
Span Shift	0.02%	Full Scale / °Celsius / Atm
Humidity Range	0 to 100%	Non-Condensing
Controllable Flow Rate	102.4%	Full Scale
Maximum Pressure	145	PSIG
Input /Output Signal Digital	Mass Flow, Volumetric Flow, Pressure & Temperature	RS-232 Serial or RS-485 Serial or PROFIBUS or DeviceNet ²
Input / Output Signal Analog	Mass Flow	0-5Vdc
Optional Input / Output Signal Secondary Analog	Mass Flow, Volumetric Flow, Pressure or Temperature	0-5 Vdc or 0-10Vdc or 4-20mA
Electrical Connections	8 Pin Mini-DIN or DB-15	
Supply Voltage	12 to 30 Vdc (15-30Vdc for 4-20mA outputs)	
Supply Current	0.300Amp	
Mounting Attitude Sensitivity	None	
Warm-up Time	< 1	Second
Integrated Valve Leak Integrity	1 x 10 ⁻⁹ atm sccm/sec Helium max	
Wetted Materials ³	316L,303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum, Brass, 430FR Stainless Steel, Silicon, Glass, PCTFE.	

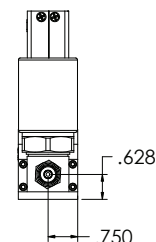
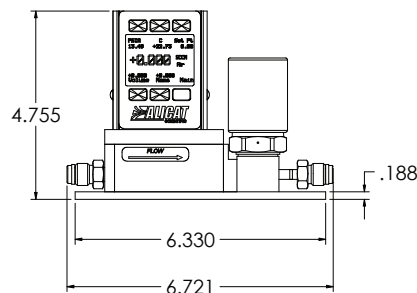
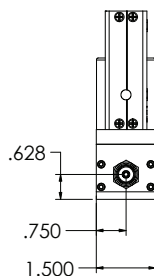
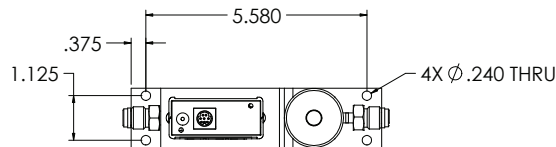
1. High Accuracy Option not available for ranges below 5SCCM.
 2. If selecting PROFIBUS or DeviceNet no analog signal is available. PROFIBUS / DeviceNet units do not have the display. See PROFIBUS or DeviceNet specifications for PROFIBUS or DeviceNet supply voltages and currents.
 3. If your application demands a different material, please contact info@alicatscientific.com or 888-290-6060 for available options.

Mechanical Specifications

Full Scale Flow MCV Controller	Mechanical Dimensions	Process Connections
0.5SCCM to 20SLPM	4.8"H x 6.8"W x 1.5"D	1/4" VCR® Male

Welded VCR® fittings (process connections) are recommended for MCV applications. Please contact Alicat.

MCV Series
All ranges



MCV approximate weight: 3.0 lb.