Technical Data for High Flow MCR Mass Flow Controllers

0 to 100SLPM Full Scale through 0 to 2000SLPM Full Scale

The following specifications are for the standard configuration of the Alicat product. There are many low-cost customization options available.

Specification	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% to 100% Full Scale	Measure and Control
Typical Response Time	100	Milliseconds (Adjustable)
Standard Conditions (STP)	25ºC & 14.696PSIA	Mass Reference Conditions
Operating Temperature	−10 to +50	ºCelsius
Zero Shift	0.02%	Full Scale / ºCelsius / Atm
Span Shift	0.02%	Full Scale / ºCelsius / 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	24 to 30 Vdc	
Supply Current	0.750Amp	
Mounting Attitude Sensitivity	Control response somewhat sensitive to inverted operation.	
Warm-up Time	< 1	Second
Wetted Materials[3]	303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum, 416 Stainless Steel, Nickel, Silicon, Glass.	

1. High Accuracy option not available for units ranged over 500SLPM.
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 Mass Controller	Mechanical Dimensions	Process Connections[1]	Pressure Drop[2] (PSID)
100SLPM	5.5”H x 7.7”W x 2.3”D	1/4” NPT Female	2.6
250SLPM	5.5”H x 7.7”W x 2.3”D	1/2” NPT Female	4.6
500SLPM	5.5”H x 7.4”W x 2.3”D	3/4” NPT Female	6.5
1000SLPM			14.0
1500SLPM			17.0
2000SLPM	5.5”H x 8.1” W x 2.9” D		30.0

1. Compatible with Beswick®, Swagelok® tube, Parker®, face seal, push connect and compression adapter fittings.
2. Venting to atmosphere. Lower Pressure Drops Available, Please contact info@alicatscientific.com or 888-290-6060 .

MCR-100SLPM to 1500SLPM approximate weight: 9.0 lb.
MCR-2000SLPM approximate weight: 12.0 lb.