Technical Data for Micro-Flow and Ultra-Low Flow Mass Flow Controllers

0 to 0.5SCCM Full Scale through 0 to 50SCCM 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	± (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, VolumetricFlow, Pressure & Temperature	RS-232 Serial or PROFIBUS[1]
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	0.250Amp	
Mounting Attitude Sensitivity	None	
Warm-up Time	< 1	Second
Wetted Materials[2]	303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum, Brass, 410 Stainless Steel, Silicon, Glass.	

1.If selecting PROFIBUS no analog signal is available. PROFIBUS units do not have the display. See PROFIBUS specifications for PROFIBUS supply voltages and currents.
2. If your application demands a different material, please contact Application Assistance for available options.

Mechanical Specifications

Full Scale Flow Mass Controller	Mechanical Dimensions	Process Connections[1]	Pressure Drop[2] (PSID)
0.5SCCM to 50SCCM	3.9”H x 3.4”W x 1.1”D	**M-5 (10-32) Female Thread***	1.0

Units ≤50SCCM F.S. are shipped with M-5 (10-32) Male Buna-N O-ring face seal to 1/8” Female NPT fittings.
These adaptor fittings were selected for customer convenience in process connection. It should be noted that the 1/8” Female NPT introduces additional dead volume. To minimize dead volume, please see Accessories for the M-5 (10-32) Male to 1/8”OD compression fitting.
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 Application Assistance.

0.5SCCM to 50SCCM approximate shipping weight: 1.1 lb.