Technical Data for Micro-Flow and Ultra-Low Flow Mass & Volumetric Flow Meters
0 to 0.5SCCM Full Scale through 0 to 50SCCM Full Scale

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

Specification	Mass Meter	Volumetric Meter	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
Accuracy: Bi-directional Meters Only	± (0.8% of reading + 0.2% of total span positive full scale to negative full scale)		At calibration conditions after tare
Repeatability	± 0.2%		Full Scale
Operating Range	1% to 100% Full Scale		Measure
Typical Response Time	10		Milliseconds (Adjustable)
Standard Conditions (STP)	25°C & 14.696PSIA	Not Applicable	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
Measurable Flow Rate	128%		Full Scale
Maximum Pressure	145	145[1]	PSIG
Output Signal Digital	Mass, Volume, Pressure & Temperature	Volumetric Flow	RS-232 Serial
Output Signal Analog	Mass Flow	Volumetric Flow	0-5Vdc
Optional Output Signal Secondary Analog	Mass, Volumetric Pressure or Temperature	Volumetric Flow	0-5 Vdc or 0-10Vdc or 4-20mA
Electrical Connections	8 Pin		Mini-DIN
Supply Voltage	7 to 30 Vdc (15-30Vdc for 4-20mA outputs)		
Supply Current	0.035Amp (+ output current on 4-20mA)		
Mounting Attitude Sensitivity	0%		Tare after installation
Warm-up Time	< 1		Second
Wetted Materials[2]	303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum.		

1. **Volumetric meters only:** Operating pressure limitations determined by Reynolds number thresholds. For operating pressures >10PSIG, please contact Application Assistance for more details.
2. If your application demands a different material, please contact Application Assistance for available options.

Mechanical Specifications

Full Scale Flow Mass Meter	Full Scale Flow Volumetric Meter	Mechanical Dimensions	Process Connections[1]	Pressure Drop[2] (PSID)
0.5SCCM to 1SCCM	0.5CCM to 1CCM	3.9"H x 2.4"W x 1.1"D	**M-5 (10-32) Female Thread***	1.0
2SCCM to 50SCCM	2CCM to 50CCM			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 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.

Technical Data for Low Flow Mass & Volumetric Flow Meters
0 to 100 SCCM Full Scale through 0 to 20 SLPM Full Scale

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

Specification	Mass Meter	Volumetric Meter	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
Accuracy: Bi-directional Meters Only	± (0.8% of reading + 0.2% of total span positive full scale to negative full scale)		At calibration conditions after tare
Repeatability	± 0.2%		Full Scale
Operating Range	1% to 100% Full Scale		Measure
Typical Response Time	10		Milliseconds (Adjustable)
Standard Conditions (STP)	25°C & 14.696PSIA	Not Applicable	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
Measurable Flow Rate	128%		Full Scale
Maximum Pressure	145	145[1]	PSIG
Output Signal Digital	Mass, Volume, Pressure & Temperature	Volumetric Flow	RS-232 Serial
Output Signal Analog	Mass Flow	Volumetric Flow	0-5Vdc
Optional Output Signal Secondary Analog	Mass, Volumetric Pressure or Temperature	Volumetric Flow	0-5 Vdc or 0-10Vdc or 4-20mA
Electrical Connections	8 Pin		Mini-DIN
Supply Voltage	7 to 30 Vdc (15-30Vdc for 4-20mA outputs)		
Supply Current	0.035Amp (+ output current on 4-20mA)		
Mounting Attitude Sensitivity	0%		Tare after installation
Warm-up Time	< 1		Second
Wetted Materials[2]	303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum.		

1. **Volumetric meters only:** Operating pressure limitations determined by Reynolds number thresholds. For operating pressures >10PSIG, please contact Application Assistance for more details.
2. If your application demands a different material, please contact Application Assistance for available options.

Mechanical Specifications

Full Scale Flow Mass Meter	Full Scale Flow Volumetric Meter	Mechanical Dimensions	Process Connections[1]	Pressure Drop[2] (PSID)
100SCCM to 10SLPM	100CCM to 10LPM	4.1"H x 2.4"W x 1.1"D	1/8" NPT Female	1.0
20SLPM	20LPM	4.1"H x 2.4"W x 1.1"D	1/8" NPT Female	1.0

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 Application Assistance.

Technical Data for Moderate Flow Mass & Volumetric Flow Meters
0 to 50 SLPM Full Scale through 0 to 250 SLPM Full Scale

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

Specification	Mass Meter	Volumetric Meter	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
Accuracy: Bi-directional Meters Only	± (0.8% of reading + 0.2% of total span positive full scale to negative full scale)		At calibration conditions after tare
Repeatability	± 0.2%		Full Scale
Operating Range	1% to 100% Full Scale		Measure
Typical Response Time	10		Milliseconds (Adjustable)
Standard Conditions (STP)	25°C & 14.696PSIA	Not Applicable	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
Measurable Flow Rate	128%		Full Scale
Maximum Pressure	145	145[1]	PSIG
Output Signal Digital	Mass, Volume, Pressure & Temperature	Volumetric Flow	RS-232 Serial
Output Signal Analog	Mass Flow	Volumetric Flow	0-5Vdc
Optional Output Signal Secondary Analog	Mass, Volumetric Pressure or Temperature	Volumetric Flow	0-5 Vdc or 0-10Vdc or 4-20mA
Electrical Connections	8 Pin		Mini-DIN
Supply Voltage	7 to 30 Vdc (15-30Vdc for 4-20mA outputs)		
Supply Current	0.035Amp (+ output current on 4-20mA)		
Mounting Attitude Sensitivity	0%		Tare after installation
Warm-up Time	< 1		Second
Wetted Materials[2]	303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum.		

1. **Volumetric meters only:** Operating pressure limitations determined by Reynolds number thresholds. For operating pressures >10PSIG, please contact Application Assistance for more details.
2. If your application demands a different material, please contact Application Assistance for available options.

Mechanical Specifications

Full Scale Flow Mass Meter	Full Scale Flow Volumetric Meter	Mechanical Dimensions	Process Connections[1]	Pressure Drop[2] (PSID)
50SLPM	50LPM	4.4"H x 4.0"W x 1.6"D	1/4" NPT Female	2.0
100SLPM	100LPM			2.5
250SLPM	250LPM	5.0"H x 4.0"W x 1.6"D	1/2" NPT Female	4.0

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 Application Assistance.

Technical Data for High Flow Mass & Volumetric Flow Meters
0 to 500 SLPM Full Scale through 0 to 1500 SLPM Full Scale

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

Specification	Mass Meter	Volumetric Meter	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
Accuracy: Bi-directional Meters Only	± (0.8% of reading + 0.2% of total span positive full scale to negative full scale)		At calibration conditions after tare
Repeatability	± 0.2%		Full Scale
Operating Range	1% to 100% Full Scale		Measure
Typical Response Time	10		Milliseconds (Adjustable)
Standard Conditions (STP)	25ºC & 14.696PSIA	Not Applicable	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
Measurable Flow Rate	128%		Full Scale
Maximum Pressure	145	145[1]	PSIG
Output Signal Digital	Mass, Volume, Pressure & Temperature	Volumetric Flow	RS-232 Serial
Output Signal Analog	Mass Flow	Volumetric Flow	0-5Vdc
Optional Output Signal Secondary Analog	Mass, Volumetric Pressure or Temperature	Volumetric Flow	0-5 Vdc or 0-10Vdc or 4-20mA
Electrical Connections	8 Pin		Mini-DIN
Supply Voltage	7 to 30 Vdc (15-30Vdc for 4-20mA outputs)		
Supply Current	0.035Amp (+ output current on 4-20mA)		
Mounting Attitude Sensitivity	0%		Tare after installation
Warm-up Time	< 1		Second
Wetted Materials[2]	303 & 302 Stainless Steel, Viton®, Silicone RTV (Rubber), Glass Reinforced Nylon, Aluminum.		

1. **Volumetric meters only:** Operating pressure limitations determined by Reynolds number thresholds. For operating pressures >10PSIG, please contact Application Assistance for more details.
2. If your application demands a different material, please contact Application Assistance for available options.

Mechanical Specifications

Full Scale Flow Mass Meter	Full Scale Flow Volumetric Meter	Mechanical Dimensions	Process Connections[1]	Pressure Drop[2] (PSID)
500SLPM	500LPM	5.0"H x 4.0"W x 1.6"D	3/4" NPT Female	5.5
1000SLPM	1000LPM			6.0
1500SLPM	1500LPM			9.0

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 Application Assistance.