

Technical Data for Alicat **BASIS** Mass Flow Controllers

0 – 100 sccm Full Scale through 0 – 20 slpm Full Scale

Standard Specifications (Contact Alicat for available options.)

Performance	BASIS Mass Flow Controller
Accuracy at calibration conditions after tare	$\pm(1.5\% \text{ Reading} + 0.5\% \text{ Full Scale})$
Zero Shift and Span Shift	$\pm 0.2\% \text{ FS} / ^\circ\text{C}$
Repeatability	$\pm 0.5\% \text{ Reading}$
Long term drift	0.05% Full Scale / Year
Operating Range / Turndown Ratio	BC-C0100: 1% to 100% Full Scale / 100:1 Turndown BC-C1000: 0.5% to 100% Full Scale / 200:1 Turndown BC-L0020: 0.5% to 100% Full Scale / 200:1 Turndown
Maximum Controllable Flow Rate	102% Full Scale
Typical Response Time	100 ms
Warm-up Time	70 ms to full scale accuracy
Valve Leak Specifications	Internal (leak through) 10^{-5} atm – cc/sec He External (leak out) 10^{-9} atm – cc/sec He

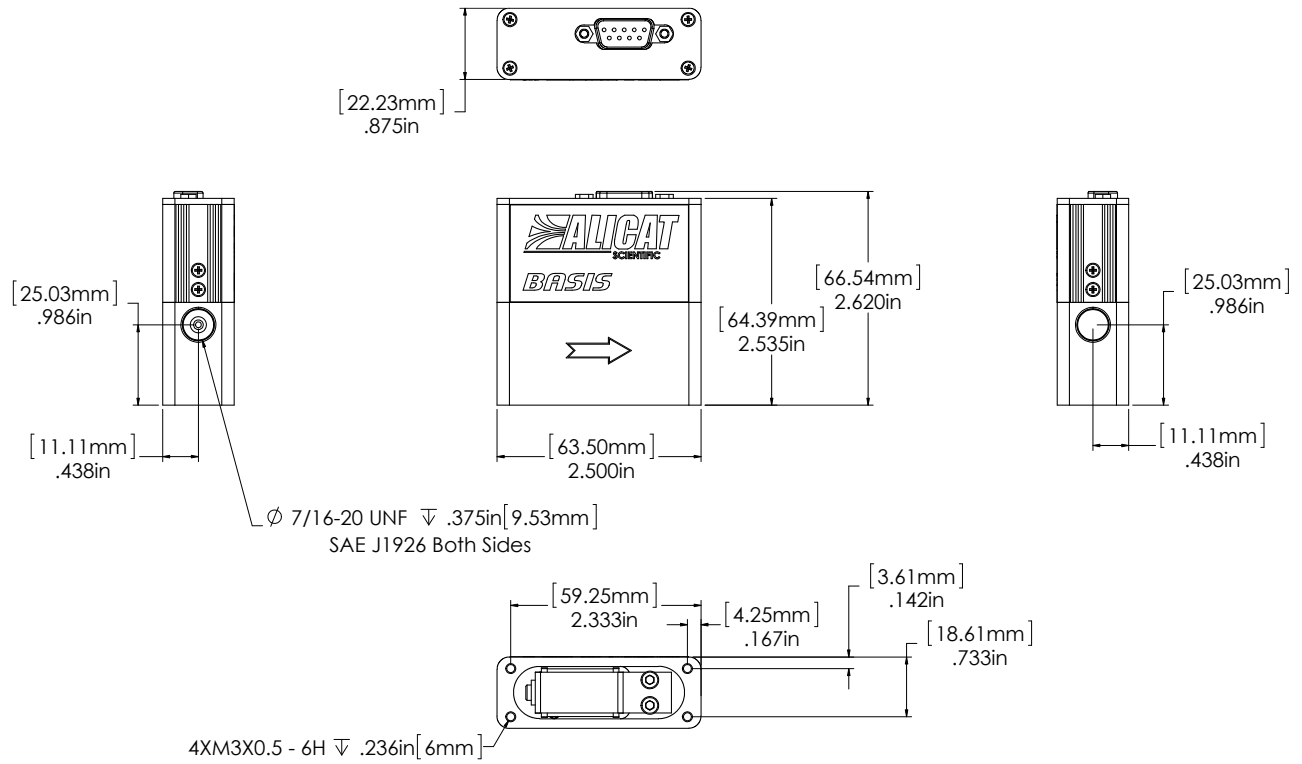
Operating Conditions	BASIS Mass Flow Controller
Calibration Conditions	25°C, 14.696 psia
Operating Temperature	0 to +50 °Celsius
Humidity Range (Non-Condensing)	<90%
Maximum Internal Pressure (Static)	BC-C0100 & BC-C1000: 145 psig BC-L0020: 60 psig
Proof Pressure	175 psig
Vibration	20g; MIL-STD-883E, Method 2002.4.
Mounting Attitude Sensitivity	None
Valve Type	Normally Closed
Ingress Protection	IP40
Wetted Materials	316, silicon nitride, brass, FKM (Viton)

Communications / Power	BASIS Mass Flow Controller
Digital Input / Output Signal	RS-232 or RS-485 Serial
Analog Input / Output Signal	0-5 Vdc
Electrical Connection Options	9-pin male D-sub (DB9)
Supply Voltage	10 to 30 Vdc
Supply Current	200 mA

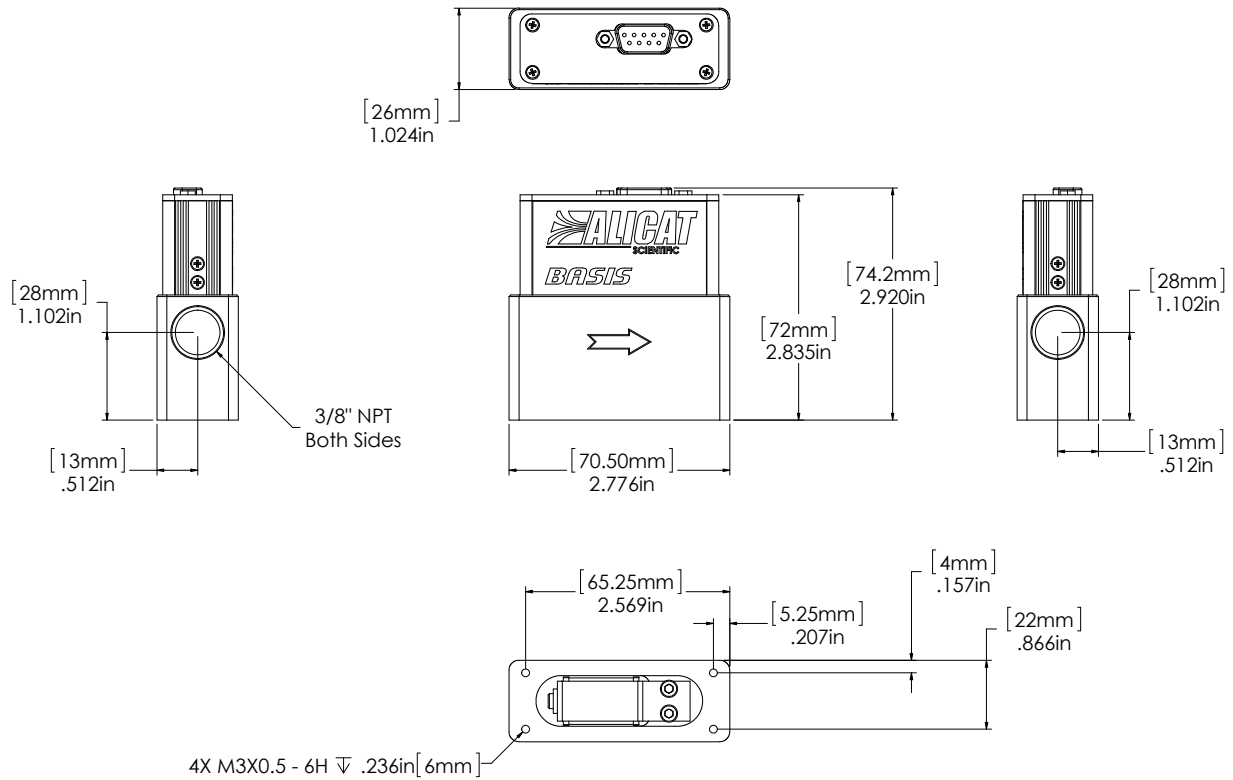
Features	BASIS Mass Flow Controller
Gas Select™	Units calibrated with Air have built-in correction equations that allow you to use the gas select command to switch to Argon, Carbon Dioxide, Nitrogen, Oxygen, or Nitrous Oxide. Note: BC-C1000 units that are set to Carbon Dioxide or Nitrous Oxide are limited to a maximum flow rate of 750 sccm instead of 1000 sccm due to the correction factor equations used for these gases. Note: BC-L0020 units that are set to Carbon Dioxide or Nitrous Oxide are limited to a maximum flow rate of 15 slpm instead of 20 slpm due to the correction factor equations used for these gases. Note: Units calibrated with Hydrogen or Helium can function only with that gas.
CE, RoHS, and REACH	Compliant

Range Specific Specifications

Full Scale Flow Mass Controller	Pressure Drop at FS Flow (mbar) venting to atmosphere	Mechanical Dimensions	Process Connections
BC-C0100: 100 sccm	10	2.6"H x 2.5"W x 0.9"D	7/16 - 20 SAE thread J1926 port or 1/8" NPT Female
BC-C1000: 1000 sccm	10		
BC-L0020: 20 slpm	350	3.0"H x 2.8"W x 0.9"D	9/16 - 18 SAE thread J1926 port or 3/8" NPT Female



BC-C0100 & BC-C1000 shown with SAE ports



BC-L020 shown with NPT ports