

| SENSOR PERFORMANCE | |
|---|--|
| Mass Flow Accuracy at Calibration Conditions ¹ | ±0.8% of reading and ±0.2% of full scale |
| High Accuracy Option ¹ | ±0.4% of reading and ±0.2% of full scale Available for ≥5 SCCM models |
| Bidirectional Option ¹ | ±0.2% of full scale in addition to base accuracy (above) |
| Repeatability (2σ) | ±(0.2% of reading + 0.02% of full scale) |
| Flow Measurement Range | 0.01–100% of full scale |
| Temperature Sensitivity | Mass flow zero shift and span shift: 0.02% of full scale per °C from 25°C |
| Pressure Sensitivity | Mass flow zero shift and span shift: ±(0.08% of reading + 0.02% of full scale) per atmosphere from calibration conditions |
| Operating Temperature Range | –10–60°C |
| Temperature Accuracy | ±0.75°C |
| Operating Pressure Full Scale | 160 PSIA |
| Pressure Accuracy above 1 atm | ±0.5% of reading |
| Pressure Accuracy below 1 atm | ±0.07 PSIA |
| Totalizer Volume Uncertainty | ±0.5% of reading additional uncertainty |
| Sensor Response Time | <1 ms |
| Typical Indication Response Time ² | <10 ms, flow rate dependent |
| Typical Warm-Up Time | <1 s |

¹ Stated accuracy is after tare under equilibrium conditions, includes repeatability and linearity.

² Indication response time includes user adjustable averaging up to 255 ms.

| MECHANICAL | |
|----------------------------|--|
| Minimum Operating Pressure | 11.5 PSIA common mode pressure (consult Alicat for lower operating pressures) Differential pressure must exceed 1 PSID |
| Maximum Operating Pressure | Damage possible above 200 PSIA common mode pressure Damage possible above 75 PSI differential pressure |
| Ingress Protection | IP40 (consult Alicat for weatherproofing options) |
| Humidity Range | 0–95%, non-condensing |
| Wetted Materials | 302, 303, 304, and 316L stainless steel; FKM, alumina ceramic, glass, gold, heat-cured epoxy, heat-cured silicone rubber, polyamide, silicon |

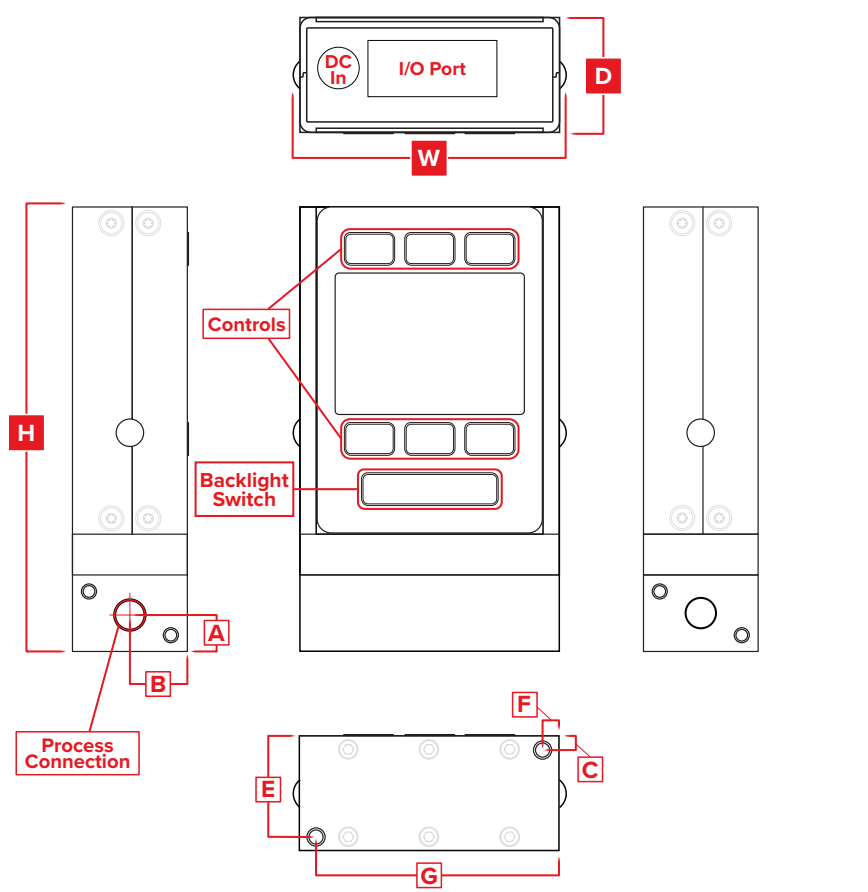
| COMMUNICATIONS | |
|---------------------------------------|--|
| Analog I/O Options ³ | 4–20 mA, 0–5 VDC, 1–5 VDC, 0–10 VDC |
| Digital I/O Options ³ | RS-232 Serial by default RS-485 Serial, Modbus RTU (over RS-232 or RS-485), Modbus TCP/IP, DeviceNet, EtherCAT, EtherNet/IP, Profibus Portable devices (MB models): Serial over Micro-USB |
| Electrical Connection Options | 6 pin locking, 8 pin mini-DIN, 8 pin M12, DB-9, DB-15 (contact Alicat for custom pinouts) Portable devices (MB models): Power over Micro-USB Type B |
| Power Requirements ⁴ | 9–24 VDC, 40 mA (12–24 VDC, 80 mA if equipped with 4–20 mA or 0–10 VDC output) Portable devices (MB models): 5 VDC, 1 A recommended via an outlet adapter to USB. |
| Battery Life (MB Series) | Monochrome screen: 18 hours, user configurable, contrast dependent Color TFT screen: 8 hours, user configurable, contrast dependent |
| Digital Data Update Rate ⁴ | 40 Hz at 19200 baud |
| Analog Data Update Rate ⁴ | 1 kHz |
| Display Update Rate | 10 Hz |
| Analog Signal Accuracy | ±0.1% of full scale additional uncertainty |

³ Analog outputs unavailable on portable devices.

⁴ Consult the individual operating bulletins for specific industrial protocol power requirements and data transmission specifications.

| FEATURES | |
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| STP Reference Conditions | 25°C and 1 atm (default), user configurable |
| NTP Reference Conditions | 0°C and 1 atm (default), user configurable |
| Monochrome LCD or Color TFT Display with Integrated Touchpad | Simultaneously displays mass flow, volumetric flow, temperature, and pressure |
| Gas Select™ | 98 user-selectable gases stored internally. Each gas optimized to match NIST's REFPROP 10 gas property calculations across the operating temperature and pressure ranges for highest accuracy. |
| COMPOSER™ | 20 user-definable gas mixes. Each mix may have up to 5 gases with 0.01% composition precision. |

| RANGE-SPECIFIC TECHNICAL DATA | | | |
|-------------------------------|---|--|--------------------------------|
| Full scale flow | Pressure drop at full scale flow venting to atmosphere ⁵ | Process connections ⁶ | Mount tap size |
| 0.5–5 sccm | 1.0 PSID | M5 female thread (10-32 compatible) ⁷ | 2× 8-32 UNC 0.175 in [4.45 mm] |



| DIMENSIONS ⁸ | | | | | | | | | | WEIGHT |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Full scale flow | Height | Width | Depth | A | B | C | E | F | G | |
| 0.5–5 sccm | 3.897 in | 2.375 in | 1.050 in | 0.336 in | 0.525 in | 0.125 in | 0.925 in | 0.150 in | 2.225 in | ≈ 0.8 lb |
| | 98.98 mm | 60.33 mm | 26.67 mm | 8.53 mm | 13.34 mm | 3.18 mm | 23.50 mm | 3.81 mm | 56.52 mm | ≈ 0.4 kg |

⁸ Portable devices (MB Series) add 1.646" [41.81 mm] to height, and 0.2 lb. [90.72 g] to weight.