Technical Data for CODA K-Series Mass Flow Meters

40 GRAMS per hour full scale to 300 KILOGRAMS per hour full scale

Standard specifications. Consult Alicat for available options.



| SENSOR AND CONTROL PERFORMANCE | | | | |
|----------------------------------|---|--|--|--|
| Mass flow accuracy ¹ | Liquid: ±0.6% of reading or ±0.2% of full scale, whichever is greater Gas: ±1% of reading or ±0.2% of full scale, whichever is greater Liquid with high-accuracy option: ±0.2% of reading or ±0.05% of full scale, whichever is greater Gas with high-accuracy option: ±0.5% of reading or ±0.05% of full scale, whichever is greater | | | |
| Flow repeatability (2σ) | $\pm 0.1\%$ of full scale High-accuracy option: $\pm 0.05\%$ of reading or $\pm 0.025\%$ of full scale, whichever is greater | | | |
| Flow measurement range | 1-100% of full scale High-accuracy option: 0.2-100% of full scale | | | |
| Temperature sensitivity | Mass flow zero shift: ±0.02% of full scale per °C from tare temperature ² Mass flow span shift: ±0.01% of reading per °C from 25°C High-accuracy option mass flow zero shift: ±0.01% of full scale per °C from tare temperature ² High-accuracy option mass flow span shift: ±0.005% of reading per °C from 25°C | | | |
| Operating temperature range | -35-70°C | | | |
| Ambient temperature range | 0–60°C Consult Alicat for additional options | | | |
| Typical indication response time | 40–10,000 g/h: <40 ms (T63) 30,000–300,000 g/h: <60 ms (T63) | | | |
| Typical warm-up time | 15 minutes | | | |
| Density accuracy ³ | ±5 kg/m³ | | | |
| Density range | 100-2,000 kg/m³ measurable | | | |
| Viscosity range | 0-200 cP | | | |
| Zero stability | $\pm 0.2\%$ of full scale (included in mass flow accuracy) High-accuracy option: $\pm 0.05\%$ of full scale (included in mass flow accuracy) | | | |

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

2 Mass flow zero shift for 40 g/h is $\pm 0.025\%$ of full scale per °C from tare temperature.

3 Density reading and density accuracy are independent of the mass flow reading and mass flow accuracy.

| MECHANICAL | | | | |
|----------------------------------|--|--|--|--|
| Wetted materials | 316L stainless steel and FKM standard; nickel alloy, FFKM, and EPDM optional Consult Alicat for additional wetted materials options | | | |
| Ingress protection | IP40 or IP67 | | | |
| Mounting orientation sensitivity | None | | | |
| Mounting holes | 2× M5-0.8 threaded, ¥ 0.39" [10 mm] | | | |

| POWER AND COMMUNICATION | | | | |
|----------------------------------|---|--|--|--|
| Digital input and output options | ASCII and Modbus RTU over RS-232 or RS-485, EtherCAT, Ethernet/IP, PROFINET | | | |
| Digital update rate | 50 Hz at 19200 baud | | | |
| Analog input and output options | 0-5 Vdc, 0-10 Vdc, 4-20 mA | | | |
| Analog update rate | 50 Hz | | | |
| Electrical connection options | USB-C and DB-15, M12, RJ45 (industrial protocol models) | | | |
| Power requirements | 9–30 Vdc, 1.6 W via DB15, M12, or power jack (industrial protocol models) 5 Vdc, 1.6 W via USB-C | | | |

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| RANGE-SPECIFIC TECHNICAL DATA | | | | | | | |
|-------------------------------|--------------------------|--|------------------------------------|--|--|--|--|
| Full scale flow (g/h) | Recommended inlet filter | Nominal pressure drop (H ₂ O) | Proof pressure (PSIA) ⁴ | | | | |
| 40 | 2 μm | ≥6 PSID | 1500 | | | | |
| 100-1000 | 20 µm | ≥15 psid | 1500 | | | | |
| 3000-10,000 | 40 µm | ≥15 psid | 1500 | | | | |
| 30,000-100,000 | 120 μm | ≥15 psid | 1500 | | | | |
| 300,000 | 120 μm | ≥110 PSID | 1500 | | | | |

4 4000 PSIA proof option available for ranges \geq 100 g/h.



| DIMENSIONS | | | | | | | WEIGHT | | | |
|------------------------|----------|---------|----------|---------|---------|---------|---------|---------|---------|----------|
| Full scale flow | Width | Depth | Height | А | В | С | E | F | G | |
| 40–10,000 g/h | 4.02″ | 1.12″ | 4.24″ | 0.49″ | 0.56″ | 0.21″ | 0.92″ | 1.02″ | 1.73″ | ≈ 1.5 lb |
| | 102.0 mm | 28.5 mm | 107.7 mm | 12.5 mm | 14.2 mm | 5.3 mm | 23.2 mm | 26.0 mm | 44.0 mm | ≈ 0.7 kg |
| 30,000– 300,000 g/h | 4.39″ | 1.58″ | 5.30″ | 0.63″ | 0.79″ | 0.43″ | 1.14″ | 1.21″ | 1.92″ | ≈ 2.5 lb |
| | 111.5 mm | 40.0 mm | 134.6 mm | 16.0 mm | 20.0 mm | 11.0 mm | 29.0 mm | 30.8 mm | 48.7 mm | ≈ 1.1 kg |