

# KMO Series

## Thermal Mass Flow Sensor

Order from: **C A Briggs Compan**  
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[Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)



- Flow Ranges from 4-20 LPM Air Through 100-500 LPM Air
- Economical, Bare-Bones Design Excellent for OEM applications
- No Moving Parts
- Thermal Measuring Principle Yields Accurate Readings Unaffected by Pressure/Temperature Fluctuations
- 1.5% of Full Scale Accuracy
- 0-5 VDC, 0-10 VDC or 4-20 mA Output



The Kobold KMO series utilizes the thermal sensing principle. Flow enters the body and a small portion is bypassed into a sensing capillary. This capillary is wrapped with two coils in series. The first coil heats the gas by a fixed amount. As the gas passes by the second coil, it senses the amount of heat transferred into the gas. Since heat transfer is directly proportional to mass flowrate, the mass flowrate of the gas can be very accurately determined. Since the KMO series measures mass flow instead of volumetric flow, the readings are virtually unaffected by pressure and temperature fluctuations. The KMO series is a simple, economical design that does not sacrifice quality. The design has no moving parts and is therefore very reliable. A 0-5 VDC, 0-10 VDC or 4-20 mA analog output is available.

### Specifications

**Measuring Principle:** Thermal

**Compatible Gases:** Clean dry gases compatible with wetted materials

**Filtration Reqmt:** 100 Micron

**Available Ranges:** 4-20 SLPM air to 100-500 SLPM air

**Accuracy:** 1.5% of full scale

**Repeatability:** 0.5% of full scale

**Temp. Drift Coef:**  $\pm 0.15\%$  of full scale/ $^{\circ}\text{C}$

**Pressure Drift Coef:**  $\pm 0.02\%$  of full scale/PSI

**Response Time:** 1 Sec. to 97% of final value

**Max. Operating Press:** 150 PSIG

**Max. Pressure Drop:** 0.075 PSI

**Oper. Temp Range:** 0 to 50 $^{\circ}\text{C}$

### Specifications (continued)

#### Wetted Parts

**Body:** Aluminum, 304 SS & 316 SS

**O-ring:** Viton<sup>®</sup>

**Fitting:** Aluminum, Acetal, brass or 316 SS depending on model #

#### Required Loop Load

**0-5 VDC:**  $>2.5\text{ K}\Omega$

**0-10 VDC:**  $>5\text{ K}\Omega$

**4-20 mA:**  $<500\Omega$

**Warm-up Time:** 5 minutes

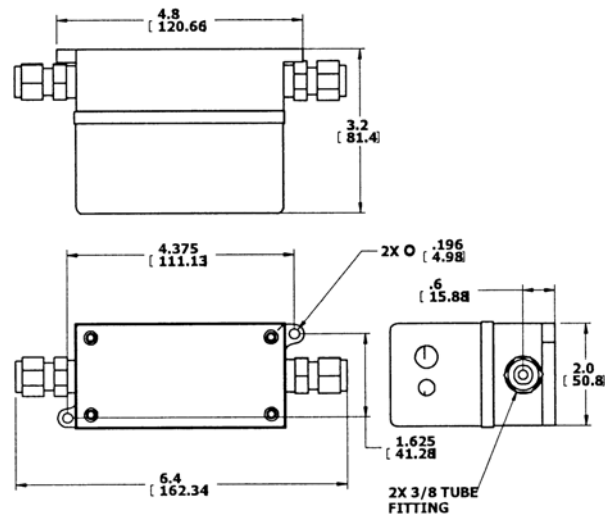
**Electrical Connect:** Via supplied plug with 6 Ft. PVC cable

**Electrical Protection:** NEMA 4/ IP 67

### Electrical Specifications

**Power Supply:** 12 VDC @ 150 mA or 24 VDC @ 80 mA depending on model #

**Output:** 0-5 VDC, 0-10 VDC or 4-20 mA depending on model #



When quality counts, count on KOBOLD

Argentina, Austria, Belgium, Brazil, Canada, Chile, Czech Republic, France, Germany, Indonesia, Italy, Malaysia, Mexico, Netherlands, Peru, Slovakia, Switzerland, Thailand, United Kingdom, USA, Venezuela, Vietnam

**Ordering Information**

**KMO** = Thermal Mass Flowmeter

- 11** = 4-20
- 12** = 10-50
- 13** = 20-100
- 14** = 40-200
- 15** = 100-500

**Measuring Range (SLPM air)**  
 \*Note other gases may alter usable range.  
 Consult factory for details.

- D** = 12 VDC power, 0-5 VDC signal
- B** = 24 VDC power, 0-5 VDC signal
- K** = 12 VDC power, 0-10 VDC signal
- J** = 24 VDC power, 0-10 VDC signal
- C** = 24 VDC power, 4-20 mA output

**Supply Power/Output Signal**

- N6** = 3/8" NPT female
- N8** = 3/4" NPT female
- A6** = 3/8" compression fitting, acetal
- A7** = 1/2" compression fitting, acetal
- B6** = 3/8" compression fitting, brass
- B7** = 1/2" compression fitting, brass
- S6** = 3/8" compression fitting, stainless steel
- S7** = 1/2" compression fitting, stainless steel
- M10** = 10 mm compression fitting, stainless steel
- M12** = 12 mm compression fitting, stainless steel

**Fitting Type (See chart below for available sizes by flow range)**

- G0** = Air (standard)
- G1** = Nitrogen
- G2** = Oxygen
- G3** = Hydrogen
- G4** = Helium
- G5** = Argon
- G6** = CO2
- G7** = Other Single Gas (specify when ordering)
- G8** = Gas Blend (specify gases and percentages)

**Process Gas**

↓      ↓      ↓      ↓      ↓  
**KMO-12**   **C**      **N6**      **G0** = Sample KMO Part Number

**Available Fitting Sizes by Flow Range**

Range	N6	N8	A6	A7	B6	B7	S6	S7	M10	M12
4-20 LPM	✓		✓	✓	✓	✓	✓	✓	✓	✓
10-50 LPM	✓		✓	✓	✓	✓	✓	✓	✓	✓
20-100 LPM	✓			✓		✓		✓		✓
40-200 LPM	✓			✓		✓		✓		✓
100-500 LPM		✓								

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