

# Model CMB Coriolis Mass Flow Meter

## General Purpose Liquid or Gas Mass Flow Measurement



- › For Liquids and Gases
- › Line Sizes 1/8 inch to 3 inch [DN 6 to DN 80]
- › Flow Rates to 2,205 lb/min [60,000 kg/hr]
- › ± 0.15% Accuracy
- › All 316L Stainless Steel Wetted Parts
- › Wide Operating Temperature Range
- › Integral or Remote Mounted Transmitter
- › Optional Fluid Heating/Cooling

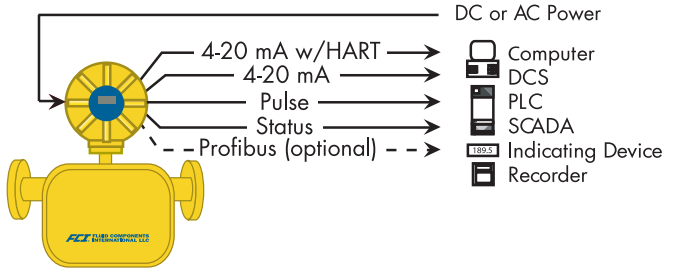
The model CMB is the clear choice for high accuracy mass flow measurements of most liquids and gases within line sizes 3 inch [DN 80] or smaller and flow rates up to 2,205 lb/min [60,000 kg/hr]. The CMB is matched with a model CT transmitter to configure the complete flow measuring system.

### Model CMB Sensor Element

The CMB's sensor material is all 316LSS which ensures compatibility and long-life with most fluids. The flow tubes are thick-wall construction, which minimizes susceptibility to vibration and provides an additional margin of insurance against leakage and excessive pressure. The sensor operates over a wide fluid temperature range, -40 to 356°F [-40° to 180°C]. Its sensing elements are encased within a rugged die-cast housing to ensure long-life in industrial plant installations. Process connections are RF flanges, either 150 lb or 300 lb.

### Full-Featured Transmitter

The CT Transmitter provides the electronic interface to the sensor and choice of outputs. It can be installed integral with the sensor or remote up to 1,000 ft (300 m). Standard outputs include dual 4-20mA with HART and a pulse/frequency. Optionally available are Profibus-PA communication or custody transfer, tamper-proof software. The CT can be ordered as either a blind transmitter or with a 2-line, alphanumeric digital display that will display both flow and total flow.



### Specifications

#### Sensor

- Accuracy:** ±0.15% rdg (liquids); ±0.5% rdg (gas)
- Material of Construction:** 316L stainless steel wetted parts
- Process Connections:** ANSI B16.5 Flange
- Pressure Rating:** 580 PSI [40 Bar(g)]
- Temperature Rating:** -40° to 356°F [-40° to 180°C]
- Approvals:** *FM:* Class I, Div. 1, Groups A, B, C, D.; *FMC:* Class I, Div. 1, Groups A, B, C, D.; *ATEX:* (1)2G EEx d [ia] IIB/IIC T3-T6.

#### Transmitter

- Enclosure:** All aluminum, epoxy coated, NEMA 6P [IP68]
- Display:** LCD, 2-line x 16 character alphanumeric, 0.22 inch [5.6 mm]H; selectable to display flow, temperature, total flow and service codes.
- Power Supply:** DC/AC: 19 to 36Vdc, 22 to 28Vac; AC: 90 to 265Vac, 50/60Hz
- Operating Temperature:** -4° to 140°F [-20° to 60°C]
- Weight:** 9.9 lbs [4.5 kg]
- Approvals:** *FM:* Class I, Div. 1, Groups A, B, C, D.; *FMC:* Class I, Div. 1, Groups A, B, C, D.; *ATEX:* (1)2G EEx d [ia] IIB/IIC T3-T6 EExi output.

| Sensor |                  |                    | Flow Ranges            |                         | Max Zero Point Error | Sensor Weight |
|--------|------------------|--------------------|------------------------|-------------------------|----------------------|---------------|
| Model  | Sensor Size      | Process Connection | Minimum lb/min [kg/hr] | Maximum lbs/min [kg/hr] | [kg/hr]              | lbs [kg]      |
| CMB-B  | 1/8 inch [DN 6]  | 1/2" RF Flange     | 0 - 0.7 [0 - 20]       | 0 - 7 [0 - 200]         | 0.02                 | 29 [13]       |
| CMB-C  | 1/4 inch [DN 8]  | 1/2" RF Flange     | 0 - 1.3 [0 - 35]       | 0 - 13 [0 - 350]        | 0.04                 | 29 [13]       |
| CMB-D  | 3/8 inch [DN 10] | 3/4" RF Flange     | 0 - 4.4 [0 - 120]      | 0 - 44 [0 - 1,200]      | 0.12                 | 29 [13]       |
| CMB-E  | 1/2 inch [DN 15] | 1" RF Flange       | 0 - 11 [0 - 300]       | 0 - 110 [0 - 3,000]     | 0.3                  | 44 [20]       |
| CMB-F  | 3/4 inch [DN 20] | 1" RF Flange       | 0 - 22 [0 - 600]       | 0 - 220 [0 - 6,000]     | 0.6                  | 44 [20]       |
| CMB-G  | 1 inch [DN 25]   | 2" RF Flange       | 0 - 73 [0 - 2,000]     | 0 - 730 [0 - 20,000]    | 2.0                  | 60 [27]       |
| CMB-J  | 2 inch [DN 50]   | 3" RF Flange       | 0 - 146 [0 - 4,000]    | 0 - 1,460 [0 - 40,000]  | 4.0                  | 110 [50]      |
| CMB-K  | 3 inch [DN 80]   | 3" RF Flange       | 0 - 220 [0 - 6,000]    | 0 - 2,205 [0 - 60,000]  | 6.0                  | 115 [52]      |

