# FCI® CM Series

## Coriolis Mass Flow Meter Systems for Liquids and Gases

**Most Extensive Selection of Wetted Materials and Line Sizes to 12 inch [DN 300]**
**Precision Flow Metering for Industry's Most Challenging Applications**

FCI CM SERIES

- Chemical
- Petroleum
- Oil and Gas Transportation
- Tank Car Loading
- Food & Beverage Production
- Pipeline Transmission
- Custody Transfer
- Pharmaceutical Manufacturing
- Engine Test Stands

FCI® FLUID COMPONENTS INTERNATIONAL LLC

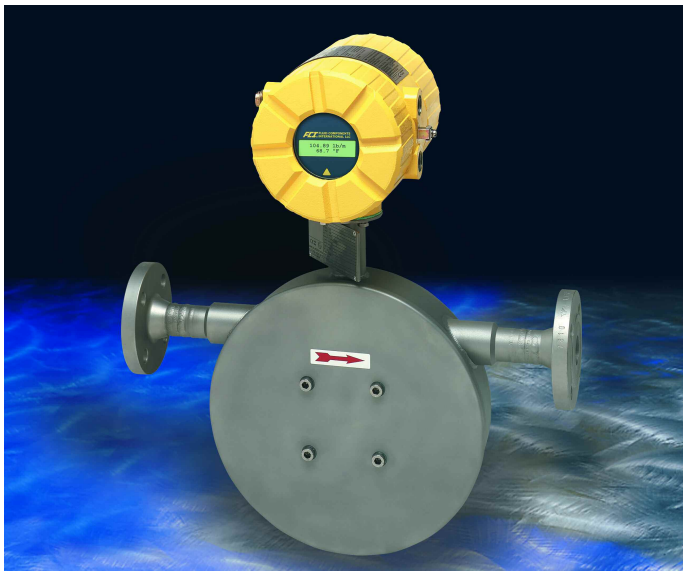
# FCI® CM Series

## Features

- Line sizes to 12 inches [DN 300]
- Flow rates to 80,800 lb/min [2,200 metric tons/hr]
- Industry's widest selection of wetted materials
- Advanced mechanical isolation eliminates vibration effects
- Thick pipe wall construction for ultra-high pressure capability to 13,000 psig [900 bar]
- Wide temperature range: -40° to 500°F [-40° to 260°C]
- Superior heating jacket technology
- Flexible, full-featured transmitter
  – Large, 2-line LC digital display
- Integral or remote transmitter installation
- Custody transfer versions
- Extensive standard outputs
  – Dual 4-20mA with HART
  – Pulse/frequency for total flow
  – Binary of instrument status
- Optional Profibus-PA communications
- AC or DC power supply

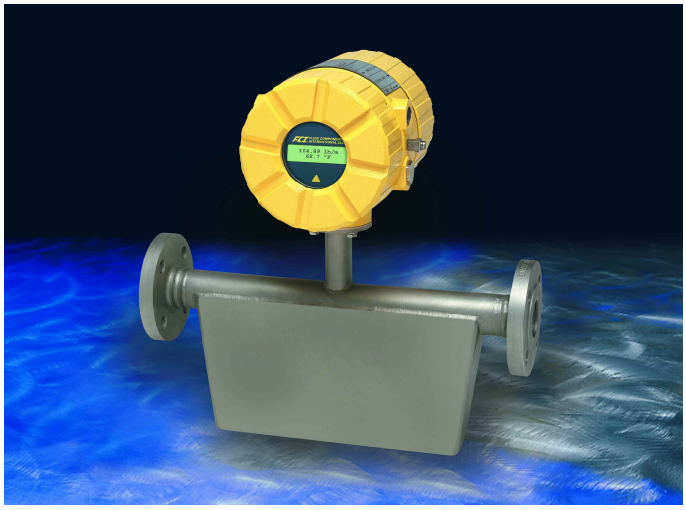
CM Series Coriolis mass flow meters provide precision flow measurement for virtually any liquid or gas application and installation condition. Renown for its superior accuracy and mass flow capabilities, FCI's Coriolis technology product line features the industry's most extensive selection of wetted materials and largest line size selection to serve the broadest range of applications. From clean fluids to the harshest of chemicals, liquids to gases, low flows to as high as 80,000 lb/hr [2,200 metric tons/hr] and everything in-between, there is an optimal CM Series solution.

The CM Series consists of two flow sensor element selections and a full-featured electronic transmitter, along with an array of accessories to configure a precision Coriolis flow meter system. Both of the sensor elements, Models CMM and CMU, offer their own unique set of features and configuration options to best match the application. The Model CT Transmitter is universally used with the CMM and CMU sensor elements and includes options for mounting integral with the sensor or remoted up to 1,000 feet [300 m]. Accessories include various mounting hardware and interface cables to make installation easy and complete.



## Model CMM Mass Flow Meter
### *...Largest Choice in Wetted Materials*

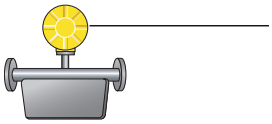
- Choose from Nine Wetted Materials
- Suitable for Harsh Fluid Applications
- Superior Accuracy, to 0.05%
- Flow Rates to 1,460 lb/min [40,000 kg/hr]
- Line Sizes 1/8 to 2 inches [DN 6 to DN 50]
- Measure Mass Flow, Volumetric Flow and Temperature
- Best for High Pressure Applications



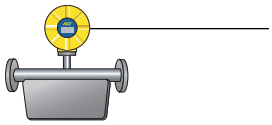
## Model CMU Mass and Density Flow Meter
### *...Highest Flow Rates*

- Flow Rates to 80,000 lb/min [2,200 metric tons/hr]
- Measure Mass Flow, Volumetric Flow, Density and Temperature
- Line Sizes 1/4 to 12 inches [DN 8 to DN 300]
- Excellent 0.1% Accuracy
- 316L Stainless Steel or Hastelloy C22 Wetted Materials
- Enhanced Structural Design Minimizes Installation Costs
- Low Pressure Drop, High Flow Rates per Line Size

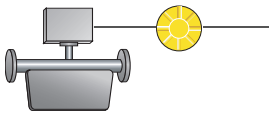
## Flexible mounting schemes to optimize and fit installation conditions



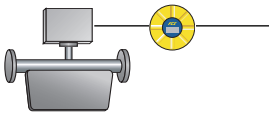
**CT-A0xxx and CT-B0xxx**
*Blind Transmitter integrally mounted with sensor*



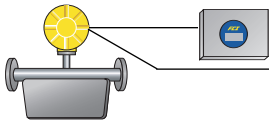
**CT-A1xxx and CT-B1xxx**
*Transmitter with digital display integrally mounted with sensor*



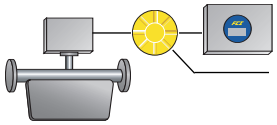
**CT-C0xxx, CT-D0xxx, CT-E0xxx and CT-F0xxx**
*Blind transmitter remote mounted from sensor*



**CT-C1xxx, CT-D1xxx, CT-E1xxx and CT-F1xxx**
*Transmitter with digital display remote mounted from sensor*



**CT-A2xxx and CT-B2xxx**
*Blind transmitter integrally mounted with sensor and externally mounted digital display*



**CT-C2xxx, CT-D2xxx, CT-E2xxx and CT-F2xxx**
*Blind transmitter remote mounted from sensor and externally mounted digital display*

## Superior Fluid Heating Technique

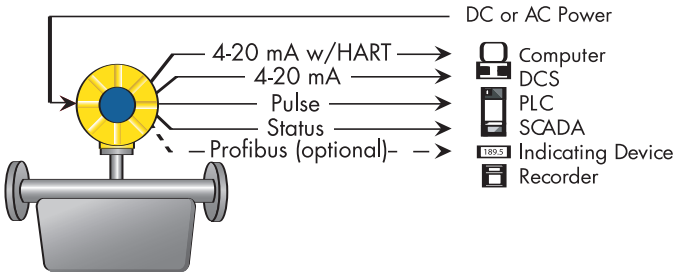
For applications that require heating to ensure the fluid does not solidify under no flow conditions, CM Series sensor elements can be optionally outfitted with heaters. Unlike ordinary Coriolis meters that use an inefficient and bulky externally mounted jacket, the CM Series employs two unique designs depending on line size, that optimize efficiency without increasing its size.

For CM Series line sizes 1.5 inch [DN 40] and smaller, a specially designed heating plate is bonded directly to the sensor containment body. This technique ensures uniform, highly efficient heating without adding excess size. CM Series with line sizes 2 inch [DN 50] and larger, have an exlusive internally mounted heating coil design. This design achieves superior heating efficiency at a low cost without adding any size.

For special applications requiring continuous heating to maintain flow, such as molten sulfur, asphalt and bitumen, FCI can provide multi-path heating coils that will also heat the outer flanges—consult FCI for these application needs.

## Full-Featured, Rugged Transmitter

The universal electronic transmitter provides an extensive array of functions including dual 4-20 mA analog outputs with HART, a pulse/frequency output for flow totalizing, a binary output of instrument operational status and a binary input line for remote reset of the totalizer. Optionally available is a Profibus-PA communications I/O.



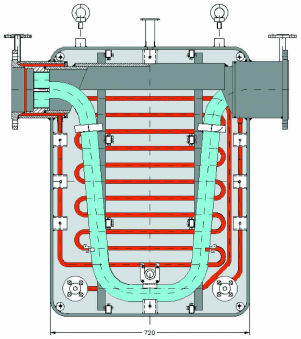

The transmitter can be integrally mounted with the flow element or remotely installed up to 1,000 ft [300 m]. The all-metal transmitter housing provides easy access to wire-up connections and meets FM, ATEX, and CSA agency approvals for installation safety and NEMA and IP ratings for dust and weather proofing. The large 2-line LCD provides a digital readout of all measurements and can be installed within the transmitter or separately panel-mounted up to an additional 1,000 ft [300 m] using an interface cable. All set-up and configuration parameters are accomplished with easy commands via the front-panel keyboard or electronically through the HART or Profibus communications. All configurations are stored and remain in the event of power loss. Power supply selection includes either a wide-range 90 to 265 Vac or 19 to 36 Vdc/22 to 28 Vac.

## Custody Transfer

For custody transfer applications the CM Series transmitter can be ordered with special tamper-proof software. This software prevents the reset of the internal totalizer and is sealed and certified. Please consult FCI for specific agency and country approval needs.

## Unique, No Recalibration Servicing

The CM's calibration and all relevant sensor data are uniquely stored in removable EEPROM chip within the transmitter. This means any transmitter electronics servicing is fast and minimized with a simple board change because there is no need to pull the instrument from service or perform a costly recalibration.



*Snaked tube array and separate flange area tubing provides efficient, self-contained fluid heating (or cooling).*

# Model CMM Mass and Volume Flow Meter

## Model CMM

The CMM is truly unique because it can be applied to virtually any fluid. CMM sensing tubes are offered in industry's widest selection of materials. A selection from nine different standard materials of construction assure compatibility and long service life even in harsh fluids such as acids and caustics. The CMM is available in line sizes from 1/8 to 2 inch [DN 6 to DN 50] for flow rates up to 1,460 lb/min [40,000 kg/hr]. Its thicker tube construction also makes it the right choice in high-pressure applications.

## Most Extensive Selection of Media Compatible Materials

From water to acids, juices to corrosives, argon to chlorine, hydrogen to ammonia, or even phosgene, CMM wetted parts are available in nine standard materials that will ensure compatibility and long-life in a broad range of liquid or gas fluid. Should your application require another material, FCI will work with you to develop a CMM flow meter element in a material to meet your exact application.

- 316 Stainless Steel
- Carbon Steel
- Hastelloy B
- Hastelloy C-22
- Monel
- Nickel
- Tantalum
- Titanium
- Zirconium

## Enhanced Accuracy Option

For liquid applications demanding the utmost in accuracy, CMM's exclusive 10-point calibration option will boost its accuracy to a superior ±0.05%. FCI performs precision calibration at five (5) points flowing low-to-high and five (5) points flowing high-to-low over the specified flow range. A documented calibration certificate is included.

## Optional Extended Leak Protection

The standard CMM enclosure is a stainless steel body, with either aluminum or stainless steel covers, capable of common leak containment at ambient pressure and temperature conditions. Where protection against leaks is critical, optionally available is a screwed-on or welded-on carbon steel or stainless steel covers with extended ratings of 232 psi at 300°F [PN16, Tmax 150°C].

## Extended High Pressure Capabilities

For applications requiring an ultra high pressure rating, FCI can provide a CMM Coriolis flow meter solution to meet the need. Because CMM sensor elements can be constructed from a variety of materials and wall thicknesses, FCI can produce special versions of the CMM's that will extend their operating pressure range. In operation today are CM Series operating at pressures to 13,000 psi [900 Bar]. These instruments provide the highest margin of safety, stability and reliability for applications such as compressed natural gas (CNG) and pressurized hydrogen as commonly found in fuel cell filling stations. Please consult FCI for any high pressure application needs and how to specify a CMM Coriolis flow meter.

## Specifications

| Sensor | | Flow Ranges | | | | Flow Accuracy (± rdg) | | | | Pressure Rating* | | Sensor Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | Sensor Size | Minimum lb/min [kg/hr] | | Maximum lb/min [kg/hr] | | Liquid (Std) | Liquid (with 10 point cal') | Gas (Std) | Maximum Zero Point Error (kg/hr) | 316SS psi [Bar] | Hastelloy C-22 psi [Bar] | lbs [kg] |
| CMM-B | 1/8 inch [DN 6] | 0 - 0.7 | [0 - 20] | 0 - 7 | [0 - 200] | 0.1% | 0.05% | 0.5% | 0.02 | 3,292 [227] | 4,859 [335] | 11 [5] |
| CMM-C | 1/4 inch [DN 8] | 0 - 1.3 | [0 - 35] | 0 - 13 | [0 - 350] | 0.1% | 0.05% | 0.5% | 0.04 | 3,292 [227] | 4,859 [335] | 11 [5] |
| CMM-D | 3/8 inch [DN 10] | 0 - 4.4 | [0 - 120] | 0 - 44 | [0 - 1,200] | 0.1% | 0.05% | 0.5% | 0.12 | 3,292 [227] | 4,859 [335] | 26 [12] |
| CMM-E | 1/2 inch [DN 15] | 0 - 11 | [0 - 300] | 0 - 110 | [0 - 3,000] | 0.1% | 0.05% | 0.5% | 0.3 | 1,973 [136] | 2,901 [200] | 33 [15] |
| CMM-F | 3/4 inch [DN 20] | 0 - 22 | [0 - 600] | 0 - 220 | [0 - 6,000] | 0.1% | 0.05% | 0.5% | 0.6 | 2,103 [145] | 3,089 [213] | 33 [15] |
| CMM-G | 1 inch [DN 25] | 0 - 73 | [0 - 2,000] | 0 - 730 | [0 - 20,000] | 0.1% | 0.05% | 0.5% | 2.0 | 1,711 [118] | 2,524 [174] | 53 [24] |
| CMM-J | 2 inch [DN 50] | 0 - 146 | [0 - 4,000] | 0 - 1,460 | [0 - 40,000] | 0.1% | 0.05% | 0.5% | 4.0 | 1,421 [98] | 1,987 [137] | 88 [40] |

** Pressure Rating at 122°F [50°C]. Rating varies for other wetted materials, contact FCI for their specific rating.*

## Specifications

**Process Temperature:** -40 to 500°F [-40 to 260°C]

**Process Connections:** ANSI B16.5 Flange, DN Flange, NPT, Tri-Clamp or any customer specified upon request

**Wetted Parts Available:** 316L(1.4404), Hastelloy C22, Tantalum, Titanium, Monel, Nickel, Hastelloy B, Zirconium, Carbon Steel, other customer specified

**Approvals:** FM, CSA: Class I and II, Div. 1 and 2, Groups A-G (pending); ATEX: (1)2G EEx d [ia] IIB/IIC T3-T6; CRN (pending)

## Transmitter Specifications

**Enclosure:** NEMA 6P [IP68], all aluminum, epoxy-polyester coated

**Operating Temperature:** -4 to 140°F [-20° to 60°C]

**Weight:** 9.9 lbs. [4.5 kg]

| **Output Options:** | **Order Code** | | | |
|---|---|---|---|---|
| | **A** | **B** | **C** | **D** |
| 4-20mA w/HART | • | • | • | |
| 4/20mA | • | • | | |
| Pulse/Frequency | • (active) | • (passive) | • | |
| Status | • | • | • | |
| Custody Transfer | | | • * | |
| Profibus-PA | | | | • |

** Reset capabilities disabled, sealed and certified tamper-proof software*

**Power Supply:**

**DC/AC:** 19 to 36Vdc, 22 to 28Vac

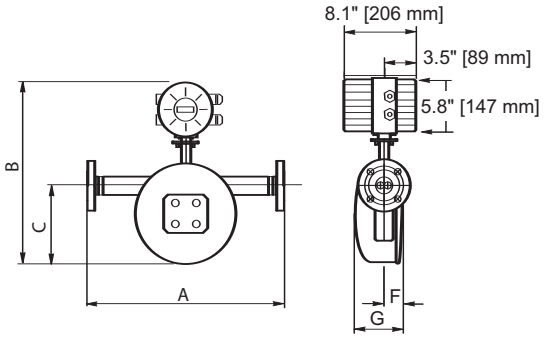
**AC:** 90 to 265Vac, 50/60Hz

**Approvals:** FM, CSA: Class I and II, Div. 1 and 2, Groups A-G (pending); ATEX: (1)2G EEx d [ia] IIB/IIC T3-T6, EExi outputs

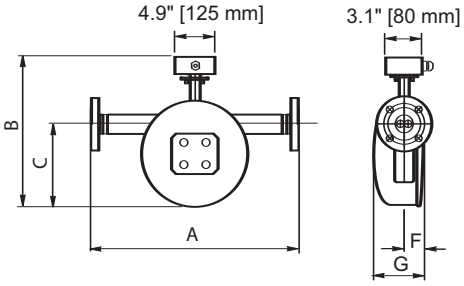
**Display:** LCD, 2 line x 16 characters, characters 0.22" [5.6mm] H; selectable to display flow, temperature, total flow, and service codes

## Dimensions

***Integral Mount Transmitter***




***Remote Mount Transmitter***




| **Dimension** | | **A** | **B** | | | | | **C** | **F** | **G** |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Integral Mount Transmitter | | Remote Mount Transmitter | | | | | |
| | | Any Process Connections | -4° to 212°F [-20° to 100°C] | -4° to 302°F [-20° to 150°C] | -40° to 212°F [-40° to 100°C] | -40° to 356°F [-40° to 180°C] | -40° to 500°F [-40° to 260°C] | | | |
| Model | Size | inches [mm] | inches [mm] | inches [mm] | inches [mm] | inches [mm] | inches [mm] | in. [mm] | in. [mm] | in. [mm] |
| CMM-B | 1/8 inch [DN 6] | 13.8 [350] | 16.9 [429] | 20.9 [531] | 13.0 [331] | 17.0 [433] | 21 [533] | 4.9 [125] | 1.7 [42] | 3.7 [94] |
| CMM-C | 1/4 inch [DN 8] | 13.8 [350] | 16.9 [429] | 20.9 [531] | 13.0 [331] | 17.0 [433] | 21 [533] | 4.9 [125] | 1.7 [42] | 3.7 [94] |
| CMM-D | 3/8 inch [DN 10] | 15.7 [400] | 19.0 [482] | 23.0 [584] | 15.1 [384] | 19.1 [486] | 23.1 [586] | 6.7 [170] | 1.8 [45] | 4.4 [112] |
| CMM-E | 1/2 inch [DN 15] | 17.7 [450] | 21.0 [534] | 25.0 [636] | 17.2 [436] | 21.2 [538] | 25.1 [638] | 8.5 [215] | 2.0 [52] | 5.2 [132] |
| CMM-F | 3/4 inch [DN 20] | 21.7 [550] | 21.0 [534] | 25.0 [636] | 17.2 [436] | 21.2 [538] | 25.1 [638] | 8.5 [215] | 2.0 [52] | 5.2 [132] |
| CMM-G | 1 inch [DN 25] | 25.6 [650] | 23.0 [584] | 27.0 [686] | 19.1 [486] | 23.1 [588] | 27.1 [688] | 10.0 [255] | 2.4 [62] | 6.4 [162] |
| CMM-J | 2 inch [DN 50] | 29.5 [750] | 27.5 [699] | 31.5 [801] | 23.7 [601] | 27.7 [703] | 31.6 [803] | 14.9 [378] | 4.0 [102] | 10.7[272] |

# Model CMU Mass Flow and Density Meter

## Model CMU

For high flow rate and large line size applications, the choice is the CMU. Its unique "U" tube design will measure more than 2-times the flow rate within the same size when compared to Model CMM and others. Available in line sizes up to 12 inches [DN 300], the CMU features the highest flow rates available in Coriolis technology. The combination of the "U" tube design and a proprietary tube support system breaks through traditional line-size barriers yet requires no costly or bulky extra structural support in its installation.

In addition to superior 0.1% accuracy true mass flow measurement, the instrument provides fluid temperature, density and volumetric flow making it a truly multivariable process measurement tool. The CMU is available to measure flow ranges from 2.2 lb/hr to 80,000 lb/hr [60 kg/hr to 2,200,000 kg/hr] with the high accuracy and repeatability required in custody transfer applications, precision production line batching and test stand performance measurement.

For high accuracy density measuring and/or in applications with varying fluid densities, special density calibration options are offered. Selections include a 3-point or, for greater accuracy, a 5-point density calibration.

## Large Line Size Breakthrough

Utilizing FCI's minimal weld design, dual "U" tube, vibration dampening design and manufacturing technologies the CMU breaks through line-size barriers all the way to 12" [DN 300]. While ordinary Coriolis meters are limited to pipe sizes 6 inches and smaller, the CMU Series Coriolis flow meter is available in line sizes from 1/4 to 12 inches [DN 8 to DN 300]. The CMU flow element utilizes a lightweight tube design which achieves higher long-term mechanical reliability and lower installation costs when compared to typical heavy die-cast elements. To meet a variety of installation needs, an extensive selection of process connections from female NPT to flanges, in various sizes, ratings and materials are available.

## Rugged Design Saves Installation Costs

The CMU incorporates proprietary internal tube support system and decoupler designs that provide near total isolation from pipe installation effects. It requires no costly or bulky extra structural support in its installation. The sensor element is unaffected by uneven pipe stress, over torquing of the end connections or ambient vibration. The CMU has even been installed in severe vibrating applications such as moving trucks and locomotives without adding structural support.

## Maintains Accuracy Regardless of Pressure Variations

In many applications, fluctuating high-pressures require adding pressure compensation to offset Bourdon-tube effects and to maintain accuracy. The CMU's unique dual "U" tube is unaffected by these fluctuations of pressure effects, and will maintain its accuracy without the need for pressure compensation.

## Specifications

| Sensor | | Flow Ranges | | | | Flow Accuracy (±rdg) | | | Pressure Rating* | | Sensor Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | Sensor Size | Minimum lb/min [kg/hr] | | Maximum lb/min [kg/hr] | | Accuracy (excl. zero stability) | | Maximum Zero Point Error [kg/hr] | 316L psi [Bar] | Hastelloy C-22 psi [Bar] | lbs [kg] |
| | | | | | | Liquid | Gas | | | | |
| CMU-C | 1/4 inch [DN 8] | 0 - 2.2 | [0 - 60] | 0 - 22 | [0 - 600] | 0.1% | 0.5% | 0.06 | 2,901 [200] | 7,789 [537] | 8 [3.5] |
| CMU-D | 3/8 inch [DN 10] | 0 - 9.2 | [0 - 250] | 0 - 92 | [0 - 2,500] | 0.1% | 0.5% | 0.25 | 2,901 [200] | 4,772 [329] | 9 [4] |
| CMU-E | 1/2 inch [DN 15] | 0 - 44 | [0 - 1,200] | 0 - 440 | [0 - 12,000] | 0.1% | 0.5% | 1.2 | 2,321 [160] | 3,046 [210] | 16 [7] |
| CMU-G | 1 inch [DN 25] | 0 - 110 | [0 - 3,000] | 0 - 1,100 | [0 -30,000] | 0.1% | 0.5% | 3.0 | 1,668 [115] | 2,321 [160] | 33 [15] |
| CMU-H | 1-1/2 inch [DN 40] | 0 - 220 | [0 - 6,000] | 0 - 2,205 | [0 - 60,000] | 0.1% | 0.5% | 6.0 | 1,378 [95] | 2,060 [142] | 64 [29] |
| CMU-J | 2 inch [DN 50 | 0 - 735 | [0 - 20,000] | 0 - 2,940 | [0 - 80,000] | 0.15% | 0.5% | 8.0 | 1,233 [85] | 3,858 [266] | 309 [140] |
| CMU-K | 3 inch [DN 80] | 0 - 920 | [0 - 25,000] | 0 - 4,410 | [0 - 120,000] | 0.15% | 0.5% | 12.0 | 1,088 [75] | 3,350 [231] | 442 [200] |
| CMU-L | 4 inch [DN 100] | 0 - 1,100 | [0 - 30,000] | 0 - 7,350 | [0 - 200,000] | 0.15% | 0.5% | 20.0 | 1,015 [70] | 2,654 [183] | 552 [250] |
| CMU-N | 6 inch [DN 150] | 0 - 2,205 | [0 - 60,000] | 0 - 16,900 | [0 - 460,000] | 0.15% | 0.5% | 46.0 | 1,088 [75] | 1,769 [122] | 1,038 [470] |
| CMU-P | 8 inch [DN 200] | 0 - 5,510 | [0 - 150,000] | 0 - 25,720 | [0 - 700,000] | 0.15% | 0.5% | 70.0 | 1,218 [84] | 1,378 [95] | 1,656 [750] |
| CMU-Q | 10 inch [DN 250] | 0 - 11,000 | [0 - 300,000] | 0 - 55,000 | [0 - 1,500,000] | 0.15% | 0.5% | 150.0 | 856 [59] | 1,261 [87] | 1,874 [850] |
| CMU-R | 12 inch [DN 300] | 0 - 14,700 | [0 - 400,000] | 0 - 80,800 | [0 - 2,200,000] | 0.15% | 0.5% | 220.0 | 711 [49] | 928 [64] | 1,987 [900] |

** Pressure Rating at 122°F [50°C]*

## Additional Sensor Specifications

**Density Measurement:**

**Standard:** Fixed value of application fluid, factory set (user adjustable), temperature compensated

**Optional Calibration (accuracy, g/cc):** 3-point: ±0.005; 5-point: ±0.001 (Models CMU-D, E & G) ±0.002 (all others)

**Repeatability:** 0.05% of rate.

**Process Temperature:** -40 to 500°F [-40 to 260°C]

**Process Connections:** ANSI B16.5 Flange, DN Flange, NPT, Tri-Clamp or any customer specified upon request

**Wetted Parts Available:** 316L(1.4404), Hastelloy C22

**Approvals:** FM, CSA: Class I and II, Div. 1 and 2, Groups A-G (pending); ATEX: (1)2G EEx d [ia] IIB/IIC T3-T6; CRN (pending)

## Transmitter Specifications

**Enclosure:** NEMA 6P [IP68], all aluminum, epoxy-polyester coated

**Operating Temperature:** -4 to 140°F [-20° to 60°C]

**Weight:** 9.9 lbs. [4.5 kg]

**Output Options:**

| | Order Code A | B | C | D |
|---|---|---|---|---|
| 4-20mA w/HART | • | • | • | |
| 4/20mA | • | • | | |
| Pulse/Frequency | • (active) | • (passive) | • | |
| Status | • | • | • | |
| Custody Transfer | | | • * | |
| Profibus-PA | | | | • |

** Reset capabilities disabled, sealed and certified tamper-proof software*

**Power Supply:**

**DC/AC:** 19 to 36Vdc, 22 to 28Vac

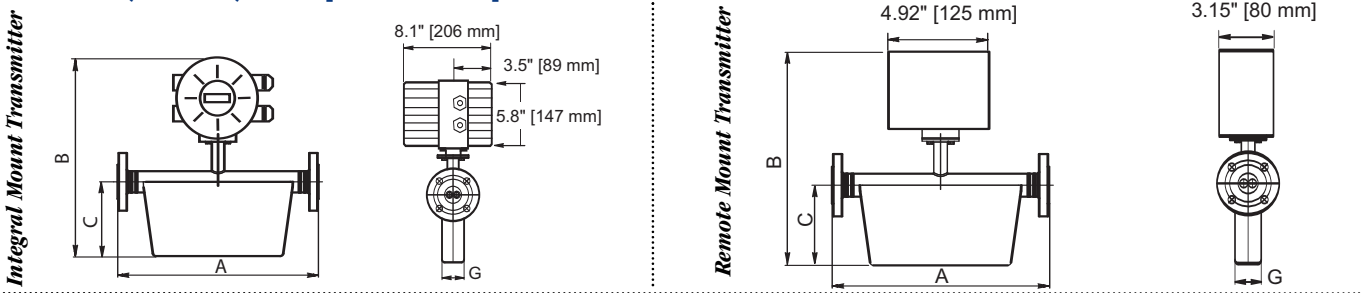
**AC:** 90 to 265Vac, 50/60Hz

**Approvals:** FM, CSA: Class I and II, Div. 1 and 2, Groups A-G (pending); ATEX: (1)2G EEx d [ia] IIB/IIC T3-T6, EExi outputs

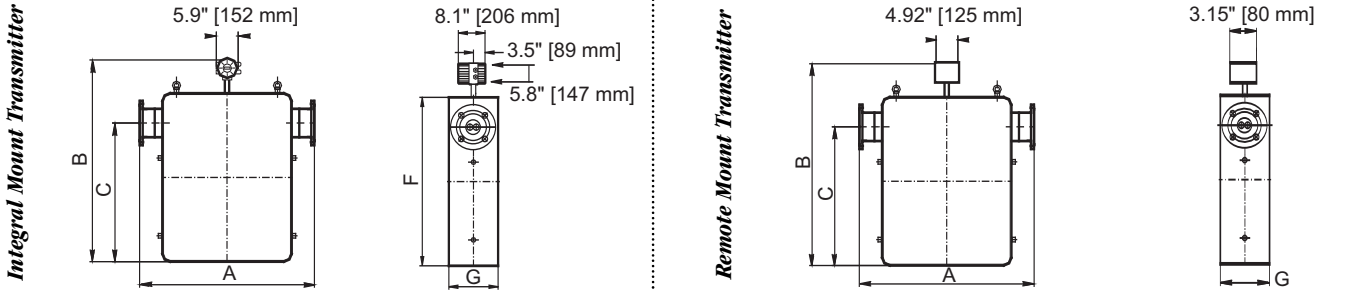
**Display:** LCD, 2 line x 16 characters, characters 0.22" [5.6mm] H; selectable to display flow, temperature, total flow, density, and service codes

# Dimensions

### For line sizes 1/4 to 1 1/2 inch [DN 8 to DN 40]




### For line sizes 2 to 12 inch [DN 50 to DN 300]

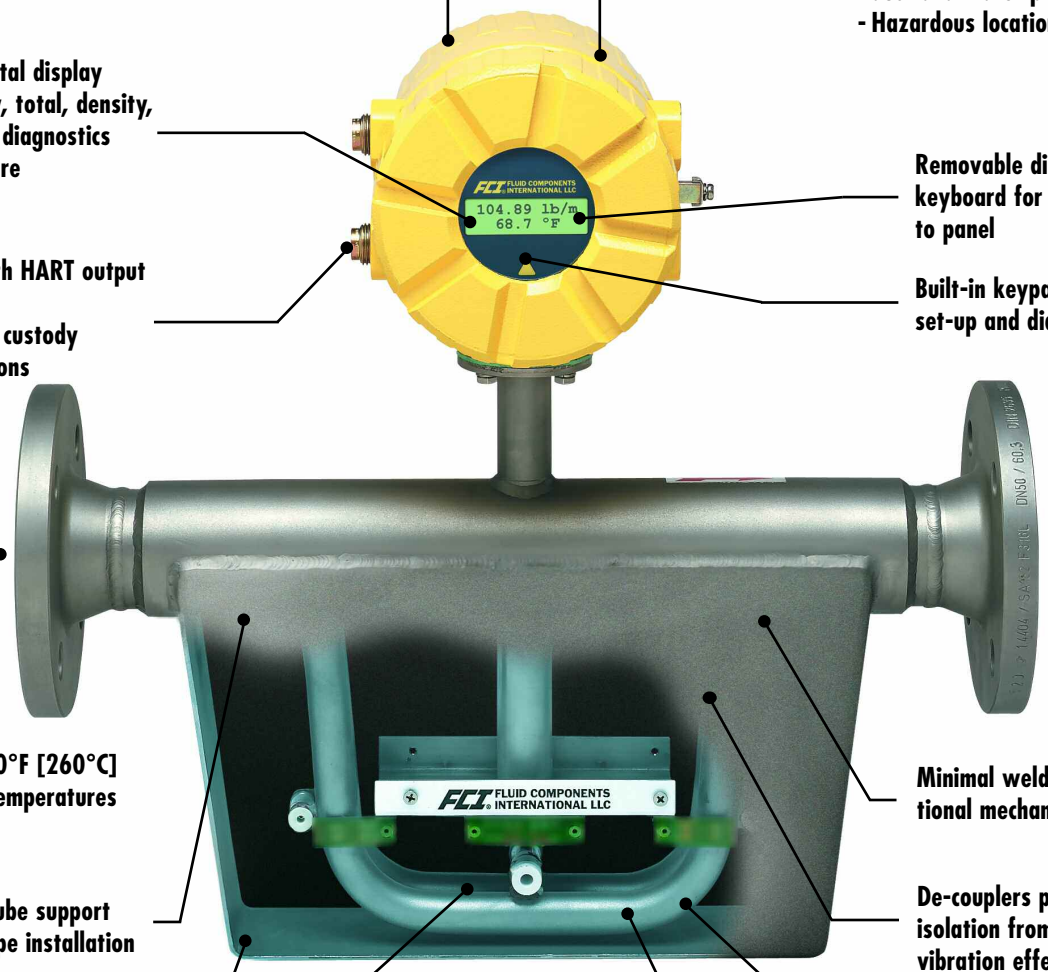



| Dimension | | A | B | | | | | C | G |
|---|---|---|---|---|---|---|---|---|---|
| | | | Integral Mount Transmitter | | Remote Mount Transmitter | | | | |
| | | Nominal with 150lb flange | -4° to 212°F [-20° to 100°C] | -4° to 302°F [-20° to 150°C] | -40° to 212°F [-40° to 100°C] | -40° to 356°F [-40° to 180°C] | -40° to 500°F [-40° to 260°C] | | |
| Model | Size | inches [mm] | inches [mm] | inches [mm] | inches [mm] | inches [mm] | inches [mm] | inches [mm] | inches [mm] |
| For Line Sizes 1/4 to 1 1/2 inch [DN 8 to DN 40] | | | | | | | | | |
| CMU-C | 1/4 inch [DN 8] | 14.4 [366] | 12.9 [328] | 16.5 [430] | 8.9 [225] | 12.9 [327] | 16.8 [427] | 3.3 [85] | 1.6 [40] |
| CMU-D | 3/8 inch [DN 10] | 16.4 [416] | 13.5 [343] | 17.5 [445] | 9.4 [240] | 13.5 [342] | 17.4 [442] | 3.9 [100] | 1.6 [40] |
| CMU-E | 1/2 inch [DN 15] | 21.1 [535] | 15.6 [395] | 19.6 [497] | 11.5 [292] | 15.5 [394] | 19.4 [494] | 5.8 [148] | 1.9 [48] |
| CMU-G | 1 inch [DN 25] | 26.1 [664] | 18.1 [460] | 22.1 [562] | 14.1 [357] | 18.1 [459] | 22.0 [559] | 7.9 [200] | 2.9 [74] |
| CMU-H | 1 1/2 inch [DN 40] | 31.7 [804] | 20.8 [528] | 24.8 [630] | 16.7 [425] | 20.7 [527] | 24.7 [627] | 10.0 [255] | 4.0 [101] |
| For Line Sizes 2 to 12 inch [DN 50 to DN 300] | | | | | | | | | |
| CMU-J | 2 inch [DN 50] | 41.5 [1,053] | 39.8 [1,010] | 43.8 [1,112] | 25.7 [907] | 39.7 [1,009] | 43.7 [1,109] | 24.2 [615] | 9.1 [230] |
| CMU-K | 3 inch [DN 80] | 48.0[1,218] | 47.6 [1,210] | 51.7 [1,312] | 43.6 [1,107] | 47.6 [1,209] | 51.5 [1,309] | 31.5 [800] | 9.8 [250] |
| CMU-L | 4 inch [DN 100] | 55.1[1,400] | 48.4 [1,230] | 52.4 [1,332] | 44.4 [1,127] | 48.4 [1,229] | 52.3 [1,329] | 32.1 [815] | 10.6 [270] |
| CMU-N | 6 inch [DN 150] | 70.7 [1,796] | 61.4 [1,560] | 65.4 [1,662] | 57.4 [1,457] | 61.4 [1,559] | 65.3 [1,659] | 42.1 [1,070] | 15.0 [380] |
| CMU-P | 8 inch [DN 200] | 89.4 [2,270] | 67.7 [1,720] | 71.7 [1,822] | 63.7 [1,617] | 67.7 [1,719] | 71.6 [1,819] | 47.6 [1,210] | 15.7 [400] |
| CMU-Q | 10 inch [DN 250] | 92.4 [2,348] | 73.2 [1,860] | 77.2 [1,962] | 69.2 [1,757] | 73.2 [1,859] | 77.1 [1,959] | 51.2 [1,300] | 21.7 [550] |
| CMU-R | 12 inch [DN 300] | 117.4 [2,995] | 73.4 [1,865] | 77.4 [1,967] | 69.4 [1,762] | 73.4 [1,864] | 77.3 [1,964] | 55.1 [1,400] | 20.1 [510] |

# CM Series Coriolis Mass Flow Meters

## High Accuracy, Mass Flow Measurement

Precise flow measuring for line sizes up to 12 inches [DN 300] and flow rate to more than 80,000 lb/min [2,200 metric tons/hr]. Industry's most extensive selection of sensor materials of construction and installation configuration options ensure a flowmeter matched to the application with trouble-free, long-life operation. Feature rich transmitter electronics are housed in a rugged industrial enclosure that maximizes process controls and provides superior durability.

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Rugged enclosure ensures longest life in all installations
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