

## CORIOLIS MASS FLOWMETER Model:BCMF

**Advanced technology for  
increased accuracy and  
profitability in the Value Chain**



Coriolis mass flow meters (BCMF) will help you do an easier job of managing flow. Whether it is in installation, managing operations or verifying continuous accuracy, customers rely on to improve the entire value chain of activities. Thanks to their accuracy, they deliver precise information about liquids or gases through a pipe for dosing, product blending, determining cost and other vital functions.

Stressing safety, reliability and quality we have utilized advanced technology to achieve unsurpassed operational performance.

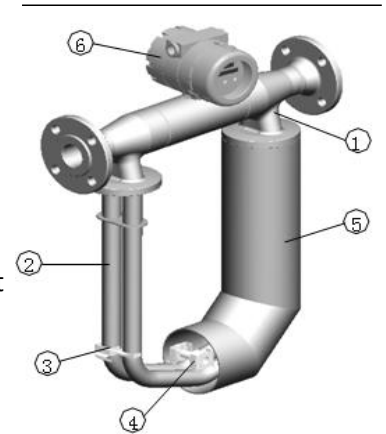
- General Specifications**
- High accuracy – 0.20% of mass flow rate ensures maximum quality and reduced waste flow rate, density, fraction flow and temperature
  - Multi-parameter measurement for mass flow rate, volumetric
  - Measurements are unaffected by variations in pressure, temperature, density, electrical conductivity and viscosity
  - Using technology each flowmeter is calibrated by factory before shipment
  - Maintenance free: no moving parts
  - Flexible and unsurpassed integration with USM II communication platform

**RELIABLE MEASUREMENT AND CONTROL**

## Sensor Structure

BCMF series mass flow meter sensor consists of measurement tube, driving device, position detector, support structure, the temperature sensor, housing, etc.

- 1-) Supporting structure: the measuring tube fixed on the supporting structure as the vibrating axis.
- 2-) The measuring tube (Vibrating tube): consist of two parallel tubes.
- 3-) Position detector: used for the measurement of measuring tube distortion.
- 4-) Drive device: generate electromagnetic force to drive measuring tube to make it vibrate close to resonance frequency.
- 5-) Housing: Protect the measuring tube, driving unit and detector.



## Technical Parameters

Accuracy (Liquid) :( With FT521 Transmitter):

Accuracy of fluid measurement:  $\pm 0.2 \dots 0.5\%$

Repeatability:  $\pm 0.1 \dots 0.25\%$

Density (Liquid) measuring range and accuracy (With FT521 series transmitter)

Range:  $0.5 \dots 2 \text{g/cm}^3$  Accuracy:  $\pm 0.002 \text{g/cm}^3$

Temperature measuring range and accuracy (With FT521 transmitter):

Temperature measuring range:  $100^\circ\text{C} \dots 300^\circ\text{C}$  Accuracy:  $\pm 1^\circ\text{C}$

Working temperature of measured medium:  $-50^\circ\text{C} \dots 200^\circ\text{C}$

Ambient temperature:  $-40^\circ\text{C} \dots 60^\circ\text{C}$

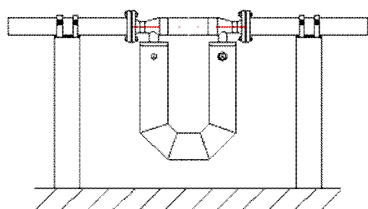
Material : The measuring tube 316L Housing: 304

Working pressure:  $0 \dots 4.0 \text{MPa}$

Explosion-proof level : Exd (ia) IIC T6Gb

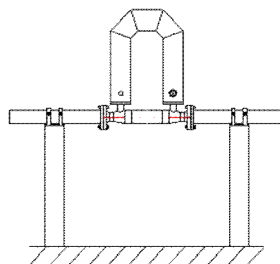
## Installation Methods

The sensor should be installed downward when measuring liquid flow (Figure2.1), so that air cannot get trapped inside the tubes.



(Figure2.1)

The sensor should be installed upward when measuring gas flow (Figure2.2), so that liquid cannot get trapped inside the tubes.



(Figure2.2)

The sensor should be installed sideward when the medium is turbid liquid (Figure2.3). The flow direction of medium goes from the bottom up through the sensor.

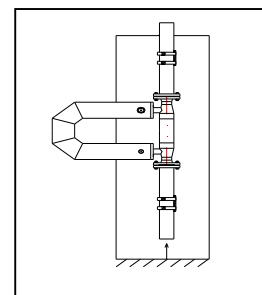


Figure  
(Figure2.3)

## Signal Transmitter

BFT Series Signal transmitter is designed for high performance, easy operation and reduced maintenance equipped with coriolis mass flow meter sensor, which consists of signal basic transmitter and display.

It has the characteristics of sensor vibrating tube driver, phase signal detection, flow rate operation display, flow integrating, signal remote transmitting. It's used with our coriolis mass flow meter sensor and become a local

display function of mass flow meter.



### BFT Series Flow rate signal transmitter application

Transmitter and sensor is required to be installed together;

Transmitter has the requirement of explosion-proof due to the installation condition;

Transmitter has the requirement of higher protection due to the installation condition.

### Technical Parameters

Display	two-line LED display
Measurements Unit	kg/h or t/h (flow rate), kg/m <sup>3</sup> or g/cm <sup>3</sup> (density), kg or T (accumulated amount)
Measured parameters	mass flow rate, working density, working temperature
Accuracy	±0,2%
Communication	RS485, MODBUS
<b>Communication content</b>	mass flow rate, density, temperature measurement signal, flow rate cumulative measurement signal, flow meter working status signal, flow meter parameter setting signal ect.
Output signal	4-20mA, Pulse,
Ambient temperature	-40...60°C
Power Supply	24 VDC ±5%    Power consumption 7W Max 220 VAC ±10%    Power consumption 7W Max
Protection level	IP67
Anti-explosion	Exd (ia) II CT6Gb
Transmitter Housing	Aluminium alloy 125×180mm
Window size	62x32mm

## Application:

Coriolis mass flowmeters are suitable for measuring all liquids and gases. The measurement is independent of changes in process conditions/parameters such as temperature, density, pressure, viscosity, conductivity and flow profile.

Due to this versatility the meter is easy to install and the coriolis flowmeter is recognized for its high accuracy in a wide turn down range which is a paramount in many applications.

**The main applications of the coriolis flowmeter can be found in industries, such as:**

- Chemical & pharmaceutical** : Detergents, bulk chemicals, pharmaceuticals, acids, alkalis
- Food & beverage** : Dairy products, beer, wine, softdrinks, plato/brix, fruit juices and pulps, bottling, CO2 dosing, CIliquids
- Automotive** : Fuel injection nozzle & pump testing, filling of AC units, engine consumption, paint robots
- Oil & gas** : Filling of gas bottles, furnace control, CNG-dispensers, test separators, LPG
- Water & waste water** : Dosing of chemicals for water treatment

**How to Order** : Please email to [info.flowsys@lkssb.com.my](mailto:info.flowsys@lkssb.com.my) contact our sales representative Describe your requirements and receive our prompt quotation.

## RELIABLE MEASUREMENT AND CONTROL

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