Dear Customer,

Thank you for your purchase. We appreciate this opportunity to service your flow measurement and control needs with a Brooks Instrument device. Brooks’ award-winning meters and controllers consistently rank at the top of their class in the industry. But Brooks’ products are only half of the story. You are backed by Brooks’ unsurpassed local technical expertise in virtually every corner of the planet. Your local Brooks product and application specialist is truly your “partner in flow”. They have been extensively trained to help you select the optimal solutions for your flow measurement or control needs and offer years of experience solving application problems just like yours.


Step 1: Location/Orientation

The instrument may be located anywhere in the process line, as long as the following conditions are met:
- Before operation, you must be able to stop flow through the meter. During the zeroing procedure, flow must be stopped completely, and the flow meter sensor tube must be full of process fluid to achieve an accurate zero.
- During operation, the flow sensor tube must be full of process fluid.
- Ambient temperature must remain between 0° and 65°C (32°F and 149°F).
- The instrument (cable connections, wiring compartments and/or conduit openings) should be accessible for service.
- Any rotation of the inlet or outlet fitting during installation of a metal seal device may result in a leak. Always use two wrenches when attaching gas line to prevent rotation. A small pin or round item can be inserted into the process line to prevent rotation while tightening the gas line fittings.
- Conduit openings should be accessible for service.
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For your product’s complete instruction manual, please download it at www.BrooksInstrument.com/Manuals. Search for the product name to locate your manual.

Step 2: Mounting the Quantim

Mount the device in the proper orientation and location for your process.

Preferred mounting orientation for most LIQUID applications:
- Sensor tube DOWN
- Horizontal pipeline

Preferred mounting orientation for most GAS applications:
- Sensor tube UP
- Vertical pipeline

A small pin or round item can be inserted into the process line to prevent rotation while tightening the gas line fittings.

WARNING

Any rotation of the inlet or outlet fitting during installation of a metal seal device may result in a leak. Always use two wrenches when attaching gas line to prevent rotation.

### Quick Start Guide
**Quantim® Coriolis Mass Flow Controllers & Meters**

**Coriolis Mass Flow**

**Step 1: Location/Orientation**
- Location
- Orientation
- Mounting the device

**Step 2: Mounting the Quantim**
- Mounting orientation
- Preferred orientation

**Step 3: Zeroing**
- Zeroing procedure
- Flow sensor tube

**Step 4: Setting the Flow**
- Process fluid
- Flow measurement

**Step 5: Calibrating**
- Calibration procedure
- Accuracy

**Step 6: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 7: Calibration**
- Calibration intervals
- Calibration instructions

**Step 8: Troubleshooting**
- Common problems
- Solutions

**Step 9: Installation**
- Installation checklist
- Safety precautions

**Step 10: Operation**
- Operating instructions
- Troubleshooting

**Step 11: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 12: Calibration**
- Calibration intervals
- Calibration instructions

**Step 13: Troubleshooting**
- Common problems
- Solutions

**Step 14: Installation**
- Installation checklist
- Safety precautions

**Step 15: Operation**
- Operating instructions
- Troubleshooting

**Step 16: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 17: Calibration**
- Calibration intervals
- Calibration instructions

**Step 18: Troubleshooting**
- Common problems
- Solutions

**Step 19: Installation**
- Installation checklist
- Safety precautions

**Step 20: Operation**
- Operating instructions
- Troubleshooting

**Step 21: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 22: Calibration**
- Calibration intervals
- Calibration instructions

**Step 23: Troubleshooting**
- Common problems
- Solutions

**Step 24: Installation**
- Installation checklist
- Safety precautions

**Step 25: Operation**
- Operating instructions
- Troubleshooting

**Step 26: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 27: Calibration**
- Calibration intervals
- Calibration instructions

**Step 28: Troubleshooting**
- Common problems
- Solutions

**Step 29: Installation**
- Installation checklist
- Safety precautions

**Step 30: Operation**
- Operating instructions
- Troubleshooting

**Step 31: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 32: Calibration**
- Calibration intervals
- Calibration instructions

**Step 33: Troubleshooting**
- Common problems
- Solutions

**Step 34: Installation**
- Installation checklist
- Safety precautions

**Step 35: Operation**
- Operating instructions
- Troubleshooting

**Step 36: Maintenance**
- Maintenance schedule
- Troubleshooting

**Step 37: Calibration**
- Calibration intervals
- Calibration instructions

**Step 38: Troubleshooting**
- Common problems
- Solutions

**Step 39: Installation**
- Installation checklist
- Safety precautions

**Step 40: Operation**
- Operating instructions
- Troubleshooting
WARNING
Lifting hazard. Single person lift could cause injury. Use assistance when moving or lifting.

3-B1

Terminal Block Pin Out Connections
For QmB NEMA 4X / IP66

* Do not apply power to these terminals.

3-B2

Step 3C: Mounting and Electrical Connections
IP66XP Explosion-Proof Meter/Controller

* Do not apply power to these terminals.

3-C1

Step 3B: Electrical Connections
NEMA 4X / IP66 Weather-Proof
Meter/Controller

3-C2

Step 3A: Electrical Connections
NEMA 1 / IP40 Meter/Controller

3-A1

D-Connector for QmB NEMA 1 / IP40
Pin Out Connections

3-A2

NOTE: Chassis ground is available through the D-Connector back shell.

Step 4: Zeroing Procedure

To assure measurement accuracy, the instrument must be zeroed to the operational installation conditions:

- Apply power to instrument for approximately 45 minutes to reach a stable thermal condition prior to applying flow.
- Flow the process fluid into the instrument and allow sufficient time for the sensor to reach normal operating temperature.
- Close the shutoff valve downstream to eliminate any pressure differential across the instrument.
- After confirming a NO flow condition, press the zeroing button for at least 3 seconds
- Zeroing button is located on the outlet side of the instrument’s housing.
- The zeroing process takes approximately 30 seconds. Status light will flash red.
- A solid Green LED means a successful zero.
- A solid Red LED means an unsuccessful zero.

Note: If a solid Red LED is indicated, recycle power and repeat zeroing procedure or contact the Technical Services at Brooks Instrument.

Step 5: Operation

After confirming a NO flow condition, press the zeroing button for at least 3 seconds.

• Flow the process fluid into the instrument and allow sufficient time for the sensor to reach normal operating temperature.
• Apply power to instrument for approximately 45 minutes to reach a stable thermal condition prior to applying flow.
• Flow the process fluid into the instrument and allow sufficient time for the sensor to reach normal operating temperature.
• Close the shutoff valve downstream to eliminate any pressure differential across the instrument.

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Step 5: Operation

After the flowmeter or flow controller has been installed in the system it is ready for operation.

Meter: The meter will provide a flow signal proportional to the full scale flow of the device as indicated on the device label.

Controller: You must provide a setpoint/command signal to the controller. The controller will read the setpoint signal and will automatically adjust the valve to the appropriate position to achieve the desired flow and will provide a flow signal proportional to the full scale flow of the device as indicated on the device label.

Equipment Receipt and Return Procedures

Receipt of Equipment

If the packing case is damaged, the local carrier should be notified at the time of delivery.

Return Shipments

Please note that prior to returning any instrument to the factory Brooks Instrument requires the completion of Form BROX03-1, a Brooks Instrument Decontamination Statement, as well as a Materials Safety Data Sheet (MSDS) for fluids used in the instrument. Copies of these forms can be found online at BrooksInstrument.com/Returns along with complete details on how to process your return shipment or you can contact your nearest Brooks location for the necessary forms and instructions.