QUICK REFERENCE

Micro Motion T-Series Sensors Installation Instructions

For technical assistance, phone the Micro Motion Customer Service Department:

- In the U.S.A., phone 1-800-522-6277
- Outside the U.S.A., phone 303-530-8400
- In Europe, phone +31 (0) 318 549 443
- In Asia, phone 65-770-8155

Micro Motion

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BEFORE YOU BEGIN

This quick reference guide explains *basic* installation guidelines for Micro Motion T-Series sensors. It also explains how to wire the sensor to a remotely mounted Series 1000 or Series 2000 transmitter.

This quick reference guide does not explain how to wire a sensor with a junction box, using custom interface cable supplied by Micro Motion. See the instructions that were shipped with the cable.

This quick reference guide does not provide answers to all possible questions about sensor installation. For more information, refer to the instruction manual that is shipped with the sensor.

European installations

Micro Motion sensors comply with EMC directive 89/336/EEC and low-voltage directive 73/23/EEC, including all amendments, when properly installed in accordance with the guidelines and instructions in this quick reference guide.

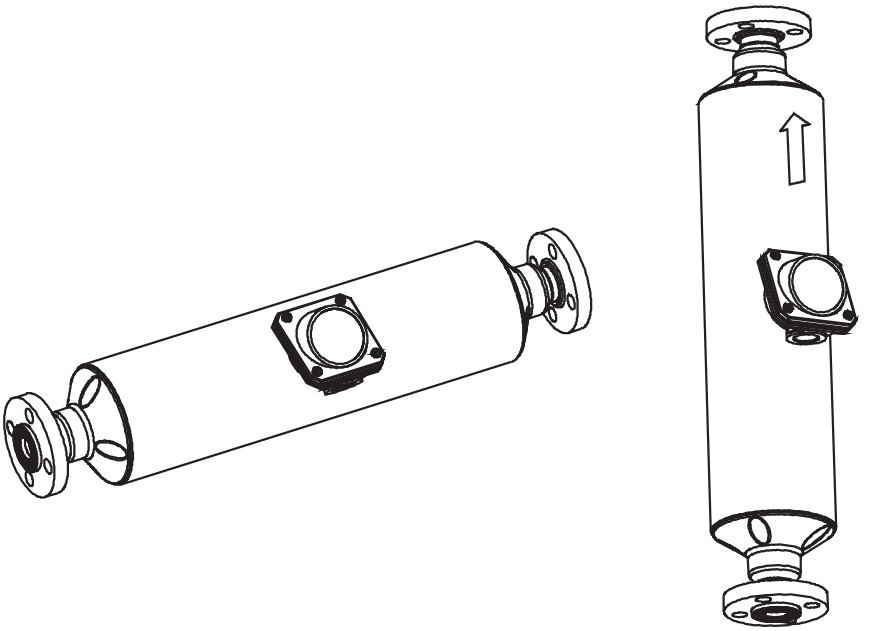
Junction box or core processor

The sensor may have a junction box or a core processor.

STEP 1. ORIENTATION

Keys for sensor orientation

The sensor will function properly in any orientation if the sensor flow tube remains filled with process fluid.



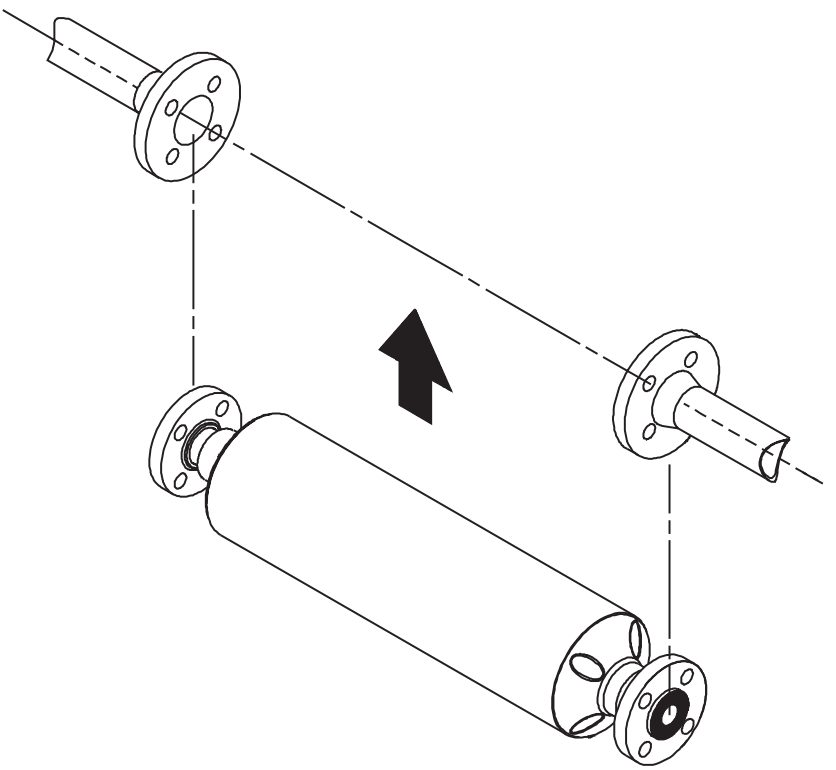
If the sensor is installed in a vertical pipeline, the process fluid should flow upward

STEP 2. MOUNTING

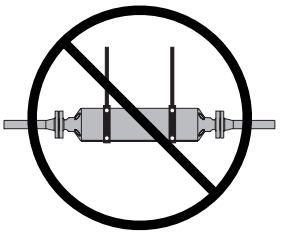
Keys for sensor mounting

Use your common piping practices to minimize:

- Torque on process connections
- Bending load on process connections



⚠ CAUTION



Using the sensor to support piping can damage the sensor or cause measurement error.

Do not use sensor to support pipe.

Other mounting considerations

- Micro Motion sensors do not require a straight run of pipe upstream or downstream.
- A valve downstream from the sensor is required. A valve upstream from the sensor is recommended.

STEP 3. GROUNDING THE SENSOR

Ground the sensor and transmitter independently.

- The sensor can be grounded via the piping, if joints in the pipeline are ground-bonded, or by means of a ground screw on the outside of the core processor housing.
- The transmitter is grounded by means of a ground screw on the outside of the transmitter housing.

⚠ WARNING

Improper grounding could cause measurement error.

To reduce the risk of measurement error:

- Ground the flowmeter to earth, or follow ground network requirements for the facility.
- For installation in an area that requires intrinsic safety, refer to Micro Motion UL, CSA, or CENELEC installation instructions.
- For hazardous area installations in Europe, refer to standard EN 60079-14 if national standards do not apply.

If national standards are not in effect, adhere to these guidelines:

- Use copper wire, 14 AWG (2.5 mm^2) or larger wire size, for grounding.
- Keep all ground leads as short as possible.
- Ground leads must have less than 1 ohm impedance.
- Connect ground leads directly to earth, or follow plant standards.

STEP 4. WIRING

- For wiring instructions if the sensor has a junction box, see the cable preparation instructions that are shipped with the sensor cable.
- If the sensor is integrally mounted to a Model 1700 or 2700 transmitter with a core processor, no sensor-to-transmitter wiring is required.
- If the sensor has a core processor and the Model 1700 or 2700 transmitter is remotely mounted, see below.

Wiring the core processor to a remotely mounted Model 1700 or 2700 transmitter

Shielded 4-wire cable should be used unless the cable is run in continuous, metallic conduit.

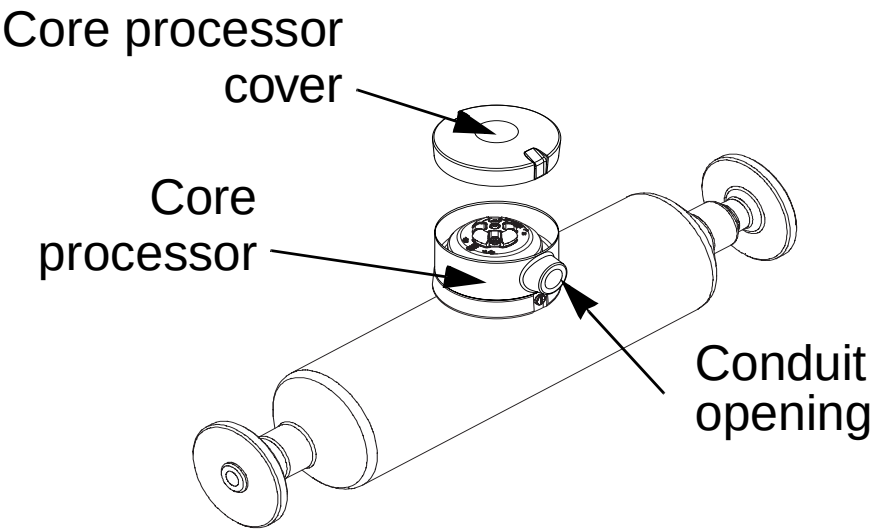
Maximum wire lengths are:

- 300 feet (100 meters) of 22 AWG (0.35 mm^2)
- 1000 feet (300 meters) of 18 AWG (0.8 mm^2)

Wiring at core processor

To connect wiring at the core processor:

- Use one of the following methods to shield the wiring from the core processor to the remote transmitter:
  - Install shielded wiring with drain wires connected at both ends, or
  - Install unshielded wiring in continuous metallic conduit that provides 360° termination shielding for the enclosed wiring.



- Prepare cable for connection by cutting back sheathing and stripping wire ends. Unwind shield wires back to sheathing and twist the ends together.
- Remove the cover from the core processor.
- Pass the cable end through the conduit opening.
- Connect the four wires to the numbered slots on the core processor, matching corresponding numbered terminals on the transmitter.
- Connect the shield wire ends to the ground screw.
- Reattach the core processor cover.

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