

Micro Motion™ 4200 2-Wire Transmitter



Safety messages

Safety messages are provided throughout this manual to protect personnel and equipment. Read each safety message carefully before proceeding to the next step.

Safety and approval information

This Micro Motion product complies with all applicable European directives when properly installed in accordance with the instructions in this manual. Refer to the EU Declaration of Conformity for directives that apply to this product. The following are available: the EU Declaration of Conformity, with all applicable European directives, and the complete ATEX installation drawings and instructions. In addition, the IECEx installation instructions for installations outside of the European Union and the CSA installation instructions for installations in North America are available at Emerson.com or through your local Micro Motion support center.

Other information

Troubleshooting information can be found in the appropriate Configuration and Use Manual. Product Data Sheets and Manuals are available from the Micro Motion website at Emerson.com.

Return policy

Follow Emerson procedures when returning equipment. These procedures ensure legal compliance with government transportation agencies and help provide a safe working environment for Emerson employees. If you fail to follow Emerson procedures, then Emerson will not accept your returned equipment.

Return procedures and forms are available on our web support site at Emerson.com, or by calling the Micro Motion Customer Service department.

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1 Planning

1.1 About this document

This manual provides information on planning, mounting, wiring, and initial setup of the Micro Motion transmitter. For information on full configuration, maintenance, troubleshooting, or service of the transmitter, see the [Micro Motion 4200 Transmitters Configuration and Use Manual](#).

The information in this document assumes that users understand basic transmitter and sensor installation, configuration, and maintenance concepts and procedures.

1.2 Hazard messages

This document uses the following criteria for hazard messages based on ANSI standards Z535.6-2011 (R2017).



DANGER

Serious injury or death will occur if a hazardous situation is not avoided.



WARNING

Serious injury or death could occur if a hazardous situation is not avoided.



CAUTION

Minor or moderate injury will or could occur if a hazardous situation is not avoided.

NOTICE

Data loss, property damage, hardware damage, or software damage can occur if a situation is not avoided. There is no credible risk of physical injury.

Physical access



WARNING

Unauthorized personnel can potentially cause significant damage and/or misconfiguration of end users' equipment. Protect against all intentional or unintentional unauthorized use.

Physical security is an important part of any security program and fundamental to protecting your system. Restrict physical access to protect users' assets. This is true for all systems used within the facility.

1.3 Related documentation

See the approval documentation shipped with the transmitter, or download the appropriate documentation from the Micro Motion web site ([Emerson.com/flowmeasurement](https://www.emerson.com/flowmeasurement)):

- [Micro Motion 4200 Transmitters Configuration and Use Manual](#)
- [Micro Motion 4200 2-Wire Transmitter Product Data Sheet](#)
- [Micro Motion 4200 2-Wire Safety Manual for Safety Instrumented Systems \(SIS\)](#)

- [ProLink III with ProcessViz Software User Manual](#)
- [Replacing the Junction Box for the 4200 Transmitter and the 5700 Transmitter](#)
- [Replacing the Sensor Cable for the 4200 Transmitter and the 5700 Transmitter](#)
- Sensor installation manual, which is shipped with the sensor
- Failure Modes, Effects, and Diagnostic Analysis (FMEDA) report for Coriolis Flow Meter with 4200 Transmitter, Prepared for Emerson by exida.com LLC

1.4 Meter components

A 4200 Meter consists of the following components:

- transmitter
- sensor

1.5 Installation types

The 4200 transmitter was ordered and shipped for one of two installation types. The fifth character of the transmitter number indicates the installation type.

Figure 1-1: Installation type indication for 4200 transmitters

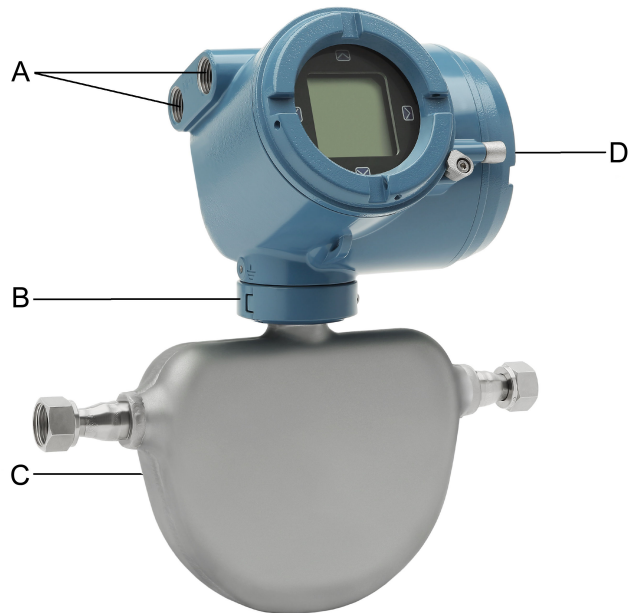
4200I*****
↑

The number is located on the device tag on the side of the transmitter.

Table 1-1: Installation types for 4200 transmitters

Code	Description
I	Integral mount painted aluminum
C	Remote mount painted aluminum
J	Integral mount stainless steel
P	Remote mount stainless steel

Figure 1-2: 4200 transmitter painted aluminum -- Integral mount



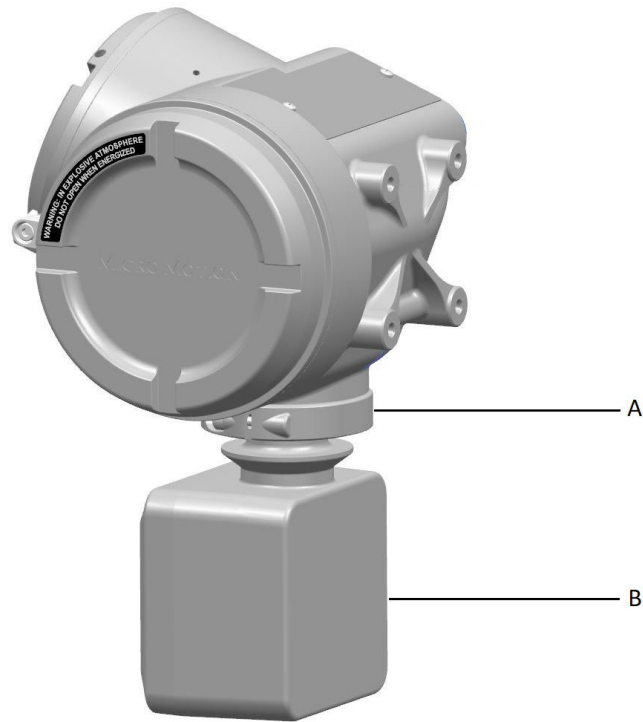
- A. Conduit openings
- B. Clamping ring
- C. Sensor case
- D. Transmitter housing cover (hidden from view)

The transmitter is installed directly on the sensor.

The connections between the transmitter and sensor are 9-wire, and do not require field wiring on the integral mount version.

The input/output connections consist of two channels, each channel being 2-wire. Power must be supplied to Channel A for the transmitter to operate, while Channel B connections are optional.


Figure 1-3: 4200 transmitter stainless steel -- Remote mount



- A. Clamping ring
- B. Junction box

The transmitter is installed remotely from the sensor. The 9-wire connection between the sensor and transmitter must be field wired. Power supply and I/O must be field wired to the transmitter. The sensor connection is in the junction box.

1.6 Installation checklist

- Safety messages are provided throughout this content to protect personnel and equipment. Read each safety message carefully before proceeding to the next step.
- When choosing a location for components, refer to the following guidelines:
 - See the sensor installation manual for information on locating the sensor with remote-mount or extended-mount electronics.
 - Do not install a component in a location where its temperature, humidity, or vibration limits will be exceeded.
 - Maximum distance between components depends on the wire size, the wire type, and the power supply. Ensure that sufficient power is supplied to the transmitter terminals.
-  **WARNING**
If you plan to mount the transmitter in a hazardous area:
 - Verify that the transmitter has the appropriate hazardous area approval. Each transmitter has a hazardous area approval tag attached to the transmitter housing.
 - Ensure that any cable used between the transmitter and the sensor meets the hazardous area requirements.
 - For all hazardous area installations, you must strictly adhere to the safety instructions documented in the ATEX/IECEX and CSA approvals documentation available on the product documentation DVD shipped with the product or at [Emerson.com/flowmeasurement](https://www.emerson.com/flowmeasurement), and /or with requirements specified by the local Authority Having Jurisdiction (AHJ) over the installation.
- Verify that you have the appropriate cable and required cable installation parts for your installation. For wiring between the transmitter and sensor, verify the maximum cable length does not exceed 60 ft (20 m).
- The transmitter can be mounted in any orientation as long as the conduit openings do not point upward.

NOTICE

Installing the transmitter with the conduit openings or transmitter display facing upward risks condensation moisture entering the transmitter housing, which could damage the transmitter.

- Any fittings, adapters, or blanking elements used on either conduit entries or threaded joints that are a part of flame-proof joints must comply with the requirements of EN/IEC 60079-1 & 60079-14 or CSA C22.2 No 30 & UL 1203 for Europe/International and North America respectively.
Only qualified personnel can select and install these elements in accordance with EN/IEC 60079-14 for ATEX/IECEX or to National Electrical Code (NEC)/Canadian Electrical Code (CEC) for North America.
- To prevent conduit connectors from seizing in the threads of the conduit openings, apply a conductive anti-galling compound to the threads.
Any anti-galling compound used on Flamepath threads must comply with the requirements of EN/IEC 60079-1 & 60079-14 or CSA C22.2 No 30 & UL 1203 for Europe/International and North America respectively.

- To maintain the Ingress protection thread sealant, a sealing washer or O-ring must be applied.
 - For Zone 1 applications, thread sealant must also comply with the requirements of EN/IEC 60079-14 and thus must be non-setting, non-metallic, non-combustible, and maintain earthing between the equipment and conduit.
 - For Class I, Groups A, B, C, and D applications thread sealant must also comply with the requirements of UL 1203/CSA C22.2 No. 30.
- Minimize the amount of moisture or condensation inside the transmitter housing. Moisture inside the transmitter housing can damage the transmitter and cause measurement error or flow meter failure. To do this:
 - Ensure the integrity of all gaskets and O-rings.
 - Install drip legs on conduit or cable.
 - Seal unused conduit openings.
 - Ensure that all covers are fully tightened.
- Mount the meter in a location and orientation that satisfies the following conditions:
 - Allows sufficient clearance to open the transmitter housing cover. Install with 8–10 in. (200–250 mm) clearance at the wiring access points.
 - Provides clear access for installing cabling to the transmitter.
 - Provides clear access to all wiring terminals for troubleshooting.

1.7 Maximum cable lengths between sensor and transmitter

The maximum cable length between the sensor and transmitter that are separately installed is determined by cable type.

Cable type	Wire gauge	Maximum length
Micro Motion 9-wire remote mount	Not applicable	60 ft (18 m)

2 Mounting and sensor wiring

2.1 Mounting and sensor wiring for integral-mount transmitters

There are no separate mounting requirements for integral transmitters, and there is no need to connect wiring between the transmitter and the sensor.

2.2 Mount the transmitter to a wall or instrument pole

There are two options available for mounting the transmitter:

- Mount the transmitter to a wall or flat surface.
- Mount the transmitter to an instrument pole.

Prerequisites

- If you are mounting the transmitter to a wall or flat surface:
 - Ensure that the surface is flat and rigid and that it does not vibrate or move excessively.
 - Confirm that you have the necessary tools and the mounting kit shipped with the transmitter.
 - Confirm that the mounting surface, method, and surface structure ensures sufficient strength to secure the transmitter (for example, when mounting to drywall use a toggle type drywall anchor).
- If you are mounting the transmitter to an instrument pole:
 - Ensure that the instrument pole extends at least 12 in (305 mm) from a rigid base and is no more than 2 in (51 mm) in diameter.
 - Confirm that you have the necessary tools and the instrument-pole mounting kit shipped with the transmitter.

Procedure

1. Attach the mounting bracket to the transmitter and tighten the screws.

Figure 2-1: Mounting bracket to a painted aluminum transmitter

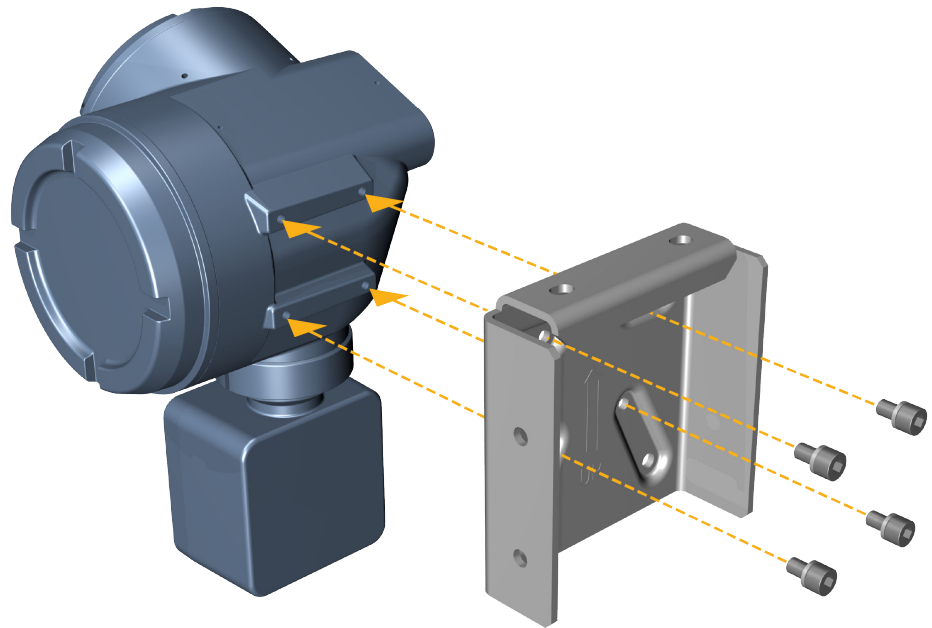
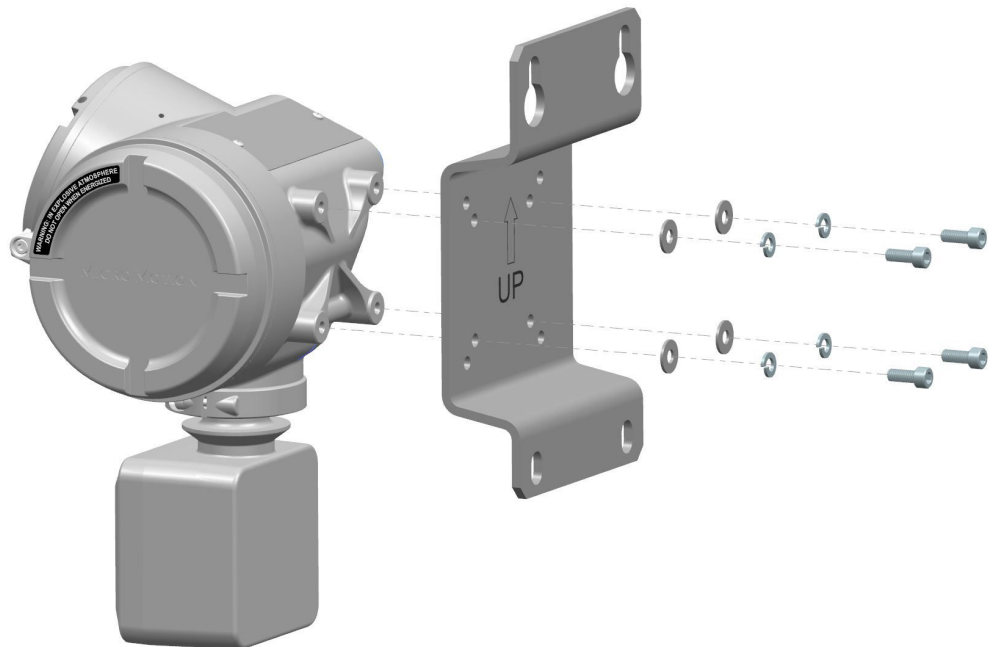


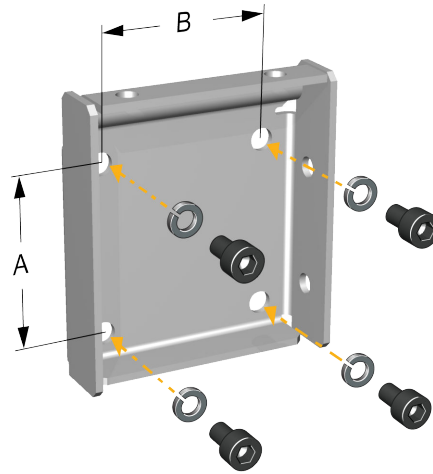
Figure 2-2: Mounting bracket to a stainless steel transmitter



2. Using a wall-mount or pole-mount:

- For wall-mount installations, secure the mounting bracket to the prepared surface.

Figure 2-3: Wall-mounting bracket dimensions for a painted aluminum transmitter



A. 2.8 in (71.4 mm)

B. 2.8 in (71.4 mm)

- For pole-mount installations, attach the U-bolt mounting piece to the instrument pole.

Figure 2-4: Pole-mounting bracket attachment for a painted aluminum transmitter

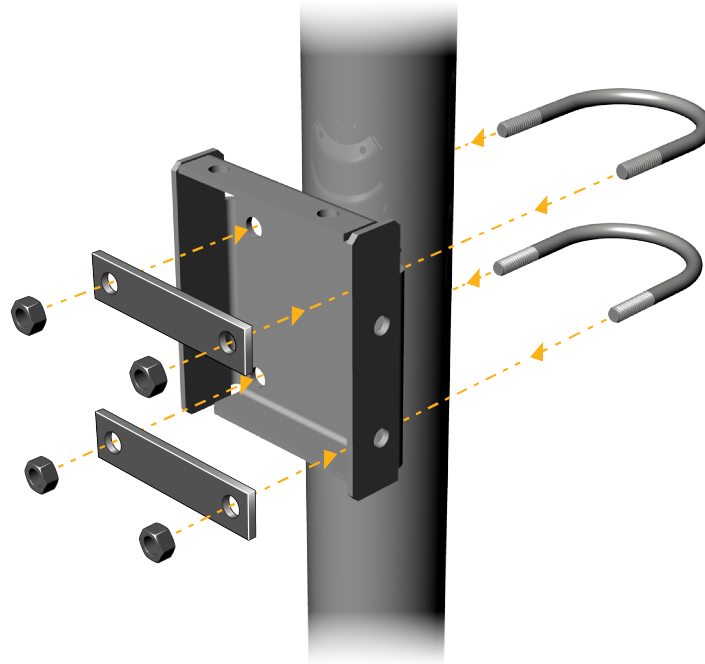
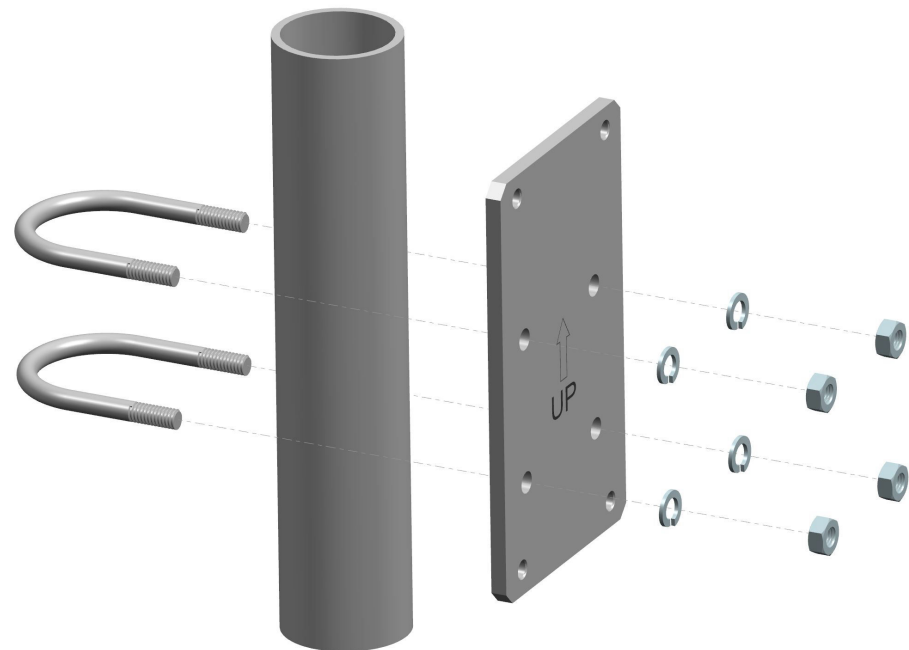
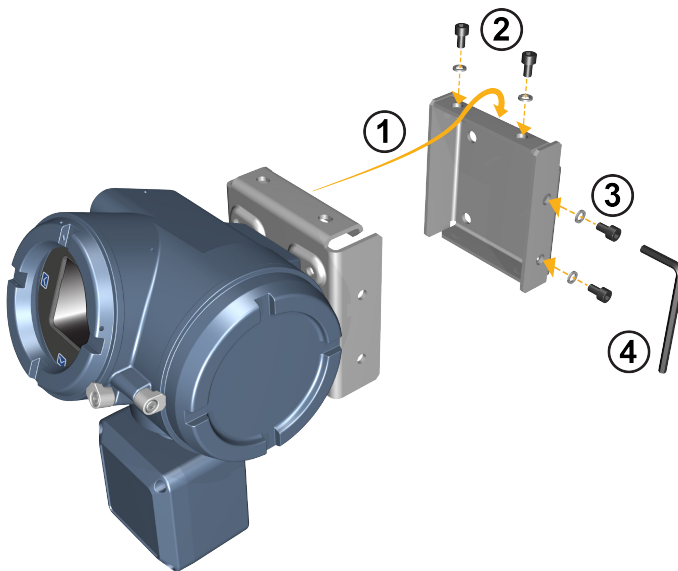


Figure 2-5: Pole-mounting bracket attachment for a stainless steel transmitter



3. Place and attach the transmitter-mounting bracket to the mounting bracket secured to the wall or instrument pole.

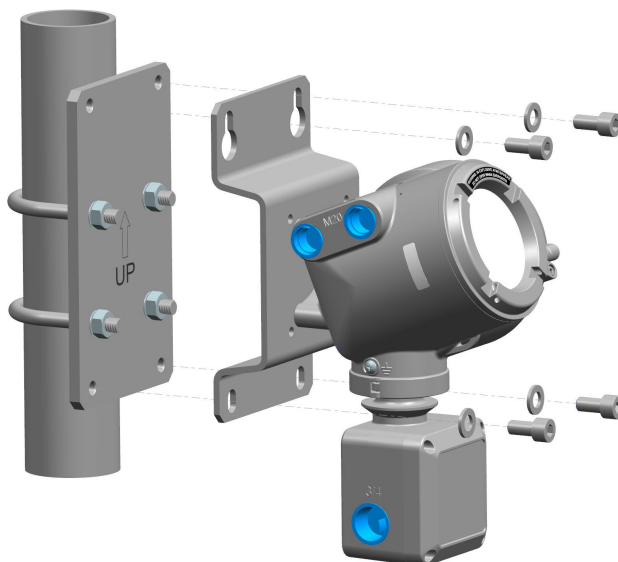
Figure 2-6: Attaching and securing a painted aluminum transmitter to mounting bracket



Tip

To ensure the mounting bracket holes are aligned, insert all attachment bolts into place before tightening.

Figure 2-7: Attaching and securing a stainless steel transmitter to mounting bracket



2.3 Wire the 9-wire remote-mount transmitter to the sensor

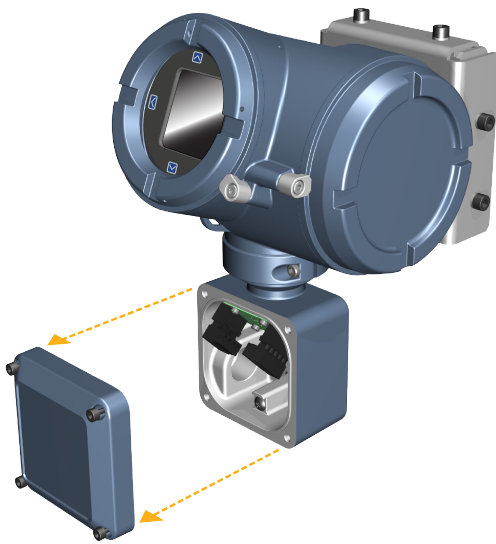
Prerequisites

- Prepare 9-wire cable as described in the sensor documentation.
- Connect the cable to the sensor-mounted junction box as described in the sensor documentation. You can access all product documentation on the documentation DVD shipped with the product or at [Emerson.com/flowmeasurement](https://www.emerson.com/flowmeasurement).

Procedure

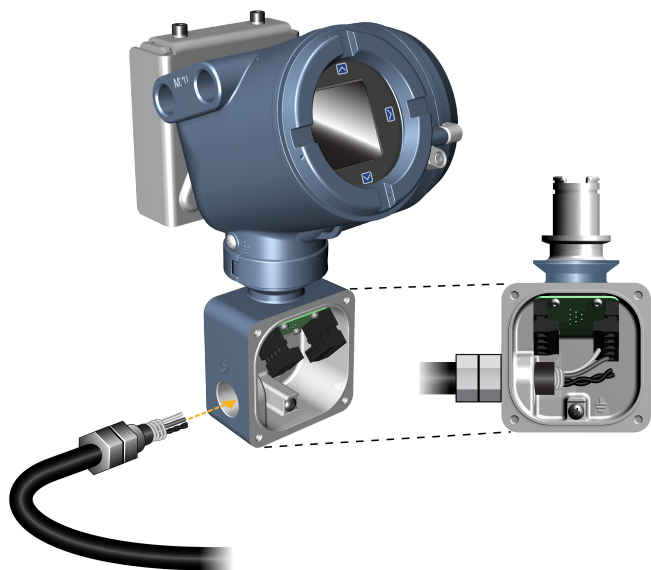
1. Remove the transmitter-to-sensor wiring compartment cover to reveal the terminal connections.

Figure 2-8: Removal of the transmitter-to-sensor wiring compartment cover



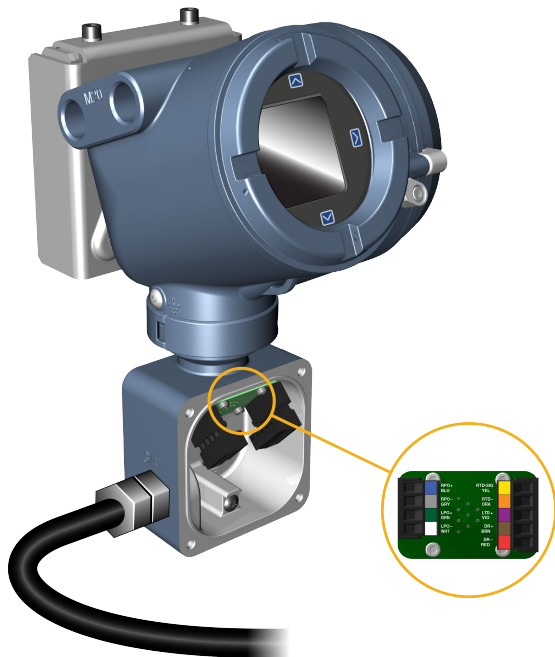
2. Feed the sensor wiring cable into the transmitter wiring compartment.

Figure 2-9: Sensor wiring feedthrough



3. Connect the sensor wires to the appropriate terminals.

Figure 2-10: 9-wire transmitter-to-sensor wiring connections



Note

Connect the four drain wires in the 9-wire cable to the ground screw located inside the junction box.

4. Replace the transmitter-to-sensor wiring compartment cover and tighten the screws to 14-16 in-lbs.

2.4 Ground the meter components

In 9-wire remote installations, the transmitter and sensor are grounded separately.

Prerequisites

NOTICE

Improper grounding could cause inaccurate measurements or meter failure.

WARNING

Failure to comply with requirements for intrinsic safety in a hazardous area could result in an explosion causing death or serious injury.

Note

For hazardous area installations in Europe, refer to standard EN 60079-14 or national standards.

If national standards are not in effect, adhere to the following guidelines for grounding:

- Use copper wire, 14 AWG (2.08 mm²) or larger wire size.
- Keep all ground leads as short as possible, less than 1 Ω impedance.
- Connect ground leads directly to earth, or follow plant standards.

Procedure

1. Ground the sensor according to the instructions in the sensor documentation.
2. Ground the transmitter according to applicable local standards, using the transmitter's internal or external ground screw.
 - The earth ground terminal is located inside the power wiring compartment.
 - The external ground screw is located on the side of the transmitter located below the transmitter tag.

2.5 Rotating the transmitter on the sensor (optional)

For easier access to the user interface or the wiring terminals, the transmitter can be rotated on the sensor in 45° increments, for eight different orientations.

Figure 2-11: Rotating the transmitter on the sensor



A. Clamping ring

Procedure

1. Remove the metal clamping ring from the base of the feed through (refer to [Figure 2-11](#)).
2. If the transmitter consists of painted aluminum, do the following:
 - a) Gently lift the transmitter on the feed through until it disengages from the notches on the feed through. You will not be able to remove the transmitter completely.
 - b) Rotate the transmitter to the desired position.

NOTICE

Do not rotate the housing more than 360°. Excessive rotation can damage the wiring and cause measurement error or flow meter failure.

- c) Lower the transmitter, sliding it onto the notches on the feedthrough.
- d) Replace the clamping ring on the feed through. Tighten the screw to 28 in lbf (3.16 N m)– 32 in lbf (3.62 N m).

NOTICE

Ensure that the connection between the transmitter and the sensor is moisture-proof. Inspect and grease all gaskets and O-rings. Moisture in the electronics can cause measurement error or flow meter failure.

3. If the transmitter consists of stainless steel, do the following:
 - a) Rotate the transmitter to the desired position.

NOTICE

Do not rotate the housing more than 360°. Excessive rotation can damage the wiring and cause measurement error or flow meter failure.

- b) Lower the transmitter, sliding it onto the notches on the feedthrough.
- c) Replace the clamping ring on the feed through. Tighten the screw to 28 in lbf (3.16 N m)– 32 in lbf (3.62 N m).

NOTICE

Ensure that the connection between the transmitter and the sensor is moisture-proof. Inspect and grease all gaskets and O-rings. Moisture in the electronics can cause measurement error or flow meter failure.

2.6 Rotating the display orientation

The user interface orientation for the transmitter can rotate 360° in 90° increments by software selection.

Using the display, select **Menu** → **Configuration** → **Display Settings** → **Rotation**.



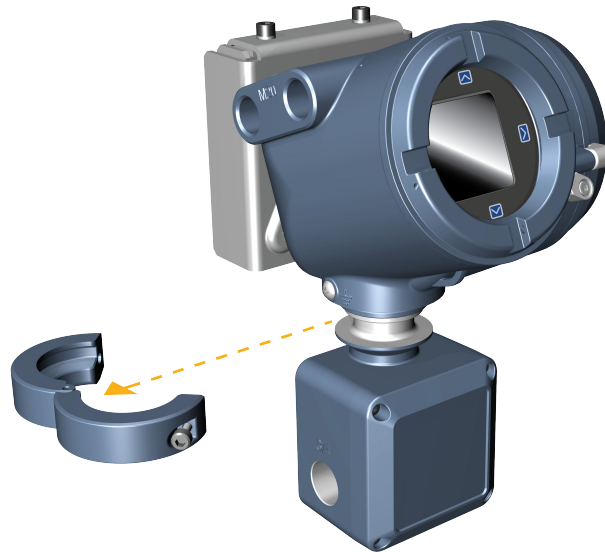
2.7 Rotate the sensor wiring junction box on a remote-mount transmitter (optional)

In remote-mount installations, you can rotate the sensor wiring junction box on the transmitter up to ± 180 degrees.

Procedure

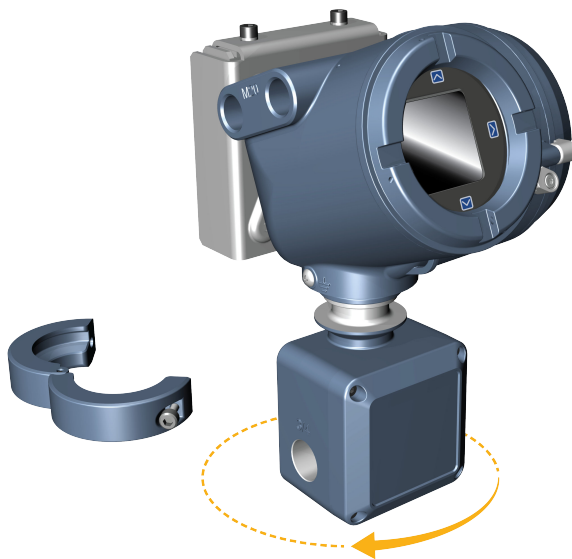
1. Using a 4 mm hex key, loosen and remove the clamp securing the sensor wiring junction box in place.

Figure 2-12: Removal of the clamp



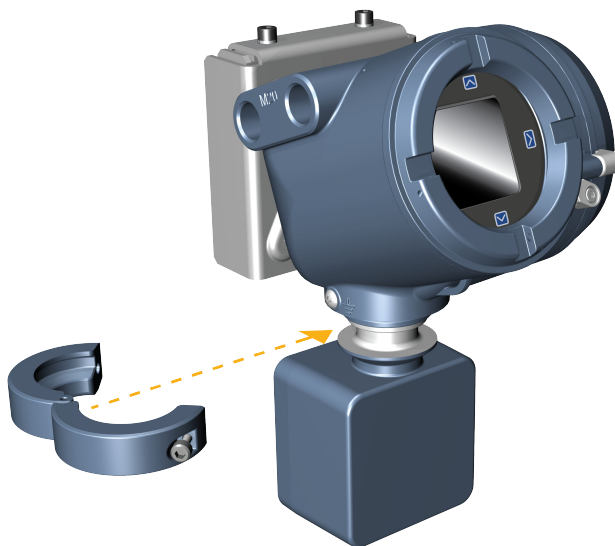
2. Gently rotate the junction box to the desired position.
You can rotate the junction box plus or minus 180° to any position.

Figure 2-13: Rotation of the sensor wiring junction box



-
3. Gently set the junction box into its new position, confirming that the position is locked.
 4. Replace the clamp in its original position and tighten the cap screw. Tighten the screw to 28 in lbf (3.16 N m)– 32 in lbf (3.62 N m).
-

Figure 2-14: Re-attachment of the clamp



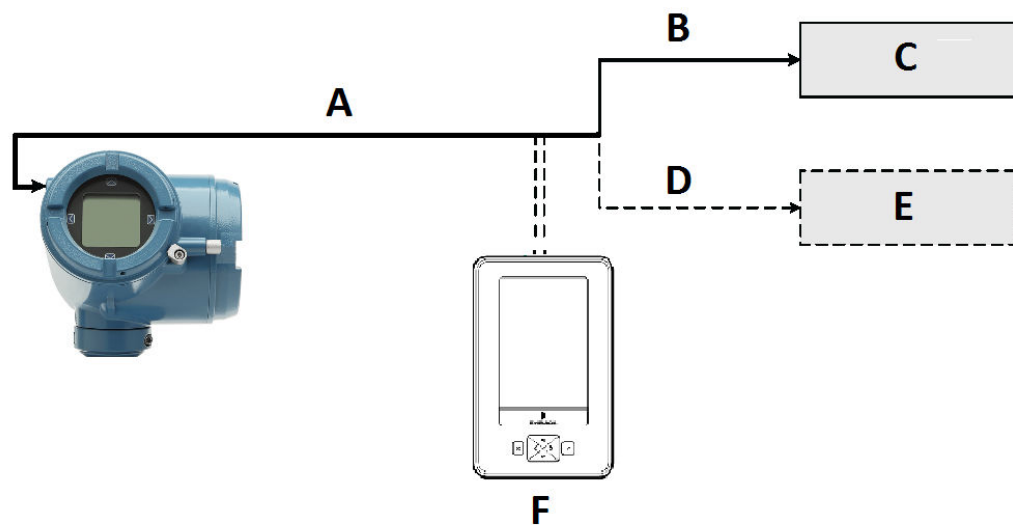
3 Wiring the channels

3.1 Installation types for the 4200 transmitter

! WARNING

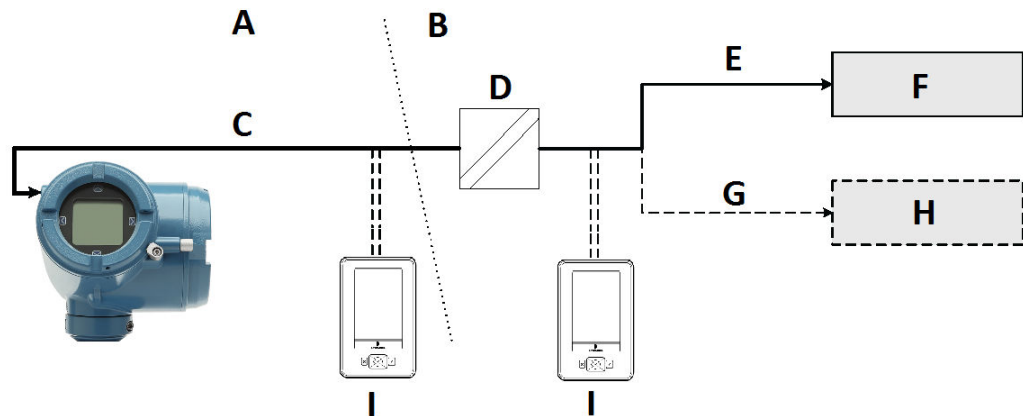
If you are installing the transmitter in a hazardous area, refer to Micro Motion approval instructions, shipped with the product or available from the Emerson web site ([Emerson.com/flowmeasurement](https://www.emerson.com/flowmeasurement)). Improper installation in a hazardous area can cause an explosion.

General configuration



- A. 2-wire cable power and signal
 - B. 4-20 mA
 - C. mA receiving device
 - D. HART® variables
 - E. Distributed Control System (DCS)
 - F. Emerson AMS Trex communicator
-

Connection example for cases where a barrier is required



- A. Hazardous area
- B. Safe area
- C. 2-wire cable power and signal
- D. Barrier
- E. 4-20 mA
- F. mA receiving device
- G. HART variables
- H. Distributed Control System (DCS)
- I. Emerson AMS Trex communicator

3.2 Available channels

Signal	Channel A		Channel B	
Wiring terminals	1	2	3	4
mA outputs	4-20 mA loop powered (HART®)		(Optional licensed channel) Configurable as passive 4-20mA / Frequency Output / Discrete Output	

Note

Remember when using the second configurable output (Channel B), all power to the electronics is still supplied over the primary 4 - 20 mA signal wiring (Channel A).

3.3 Barriers verified by Micro Motion

The following table lists the barriers that Micro Motion has verified with the 4200 transmitter. For other barriers, refer to the manufacturer's data sheet.

Table 3-1: Barriers verified by Micro Motion

Vendor	Barrier
Micro Motion	505

Table 3-1: Barriers verified by Micro Motion (continued)

Vendor	Barrier
Pepperl & Fuchs	KFD2-STC1-EX1
Pepperl & Fuchs	KFD2-STC4-EX1
MTL	7875+
MTL	7707P+
MTL	7787+
MTL	5042
MTL	3046B
MTL	7728P+
MTL	4541
STAHL	9002/13-280-110-00
PR Electronics	5106

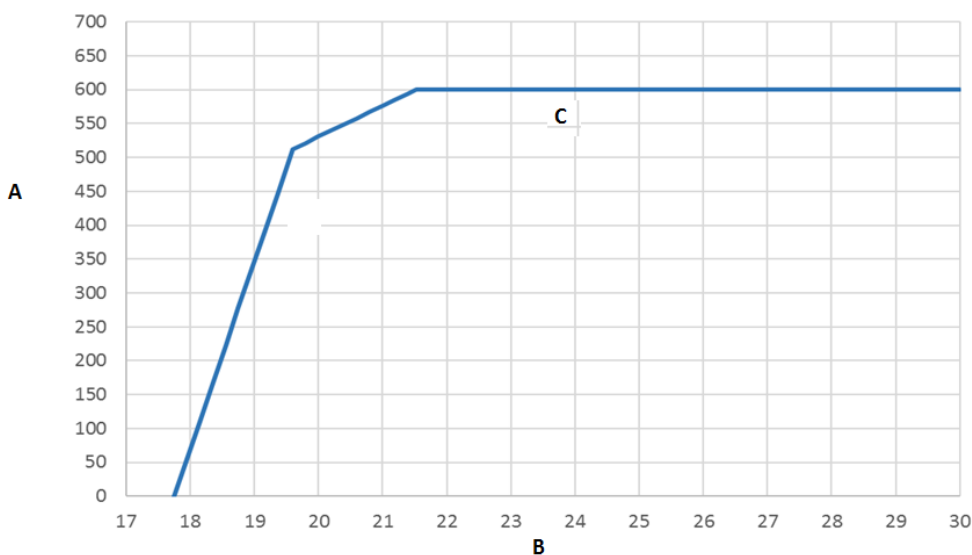
3.4 Channel power requirements

The supply voltage required by the 4200 transmitter depends on the total resistance in the mA loop. This includes all sense resistance and wire resistance.

Channel A mA HART® terminal requirements

Use the chart below to determine the required supply voltage for Channel A based on loop resistance.

Figure 3-1: Channel A output supply voltage and loop resistance



- A. Loop resistance (Ohms)
- B. Supply voltage (Vs)
- C. Maximum loop resistance (Ohms)

Table 3-2: For maximum loop resistance for Channel A

Condition	Equation
17.75 V < Vs < 19.6 V	$(Vs - 17.75) / 3.6\text{mA}$
19.6 V < Vs < 21.5 V	$(Vs - 8.32\text{V}) / 22\text{mA}$
21.5 V < Vs < 30 V	600 Ohms

Note

If display backlighting is enabled (refer to [Configure the display backlight](#)), the minimum input voltage required is 1V higher than the chart indicates.

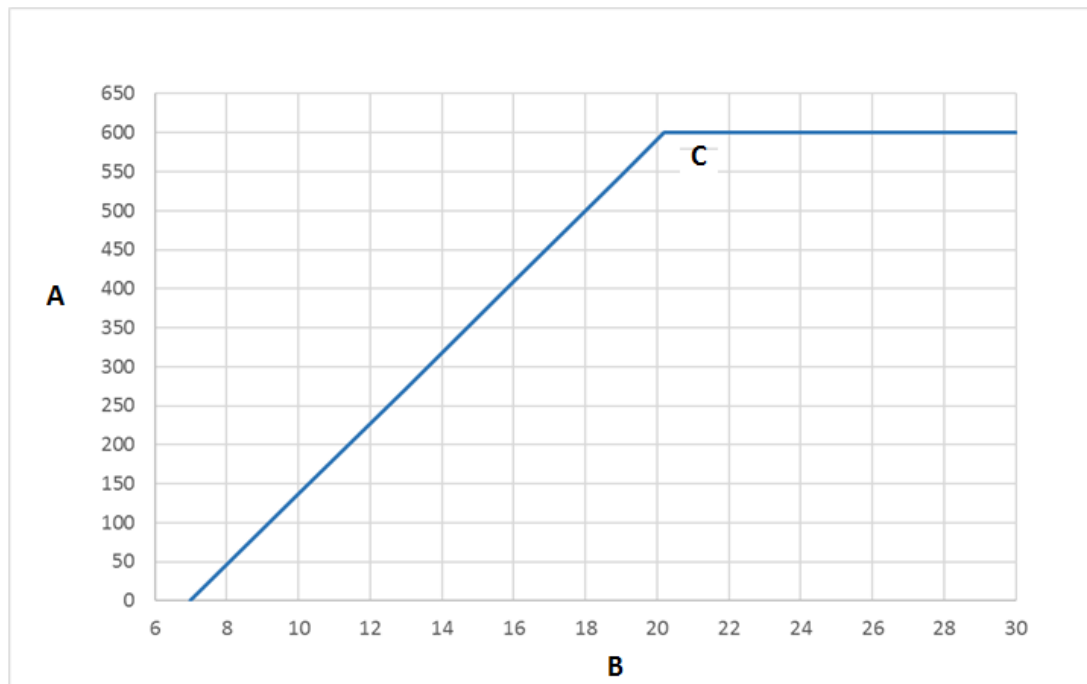
Channel B mA terminal requirements

Use the following chart to determine the required supply voltage for Channel B mA based on loop resistance.

Note

Remember when using the second configurable output (Channel B), all power to the electronics is still supplied over the primary 4 - 20 mA signal wiring (Channel A).

Figure 3-2: Channel B output supply voltage and loop resistance



- A. Loop resistance (Ohms)
- B. Supply voltage (Vs)
- C. Maximum loop resistance (Ohms)

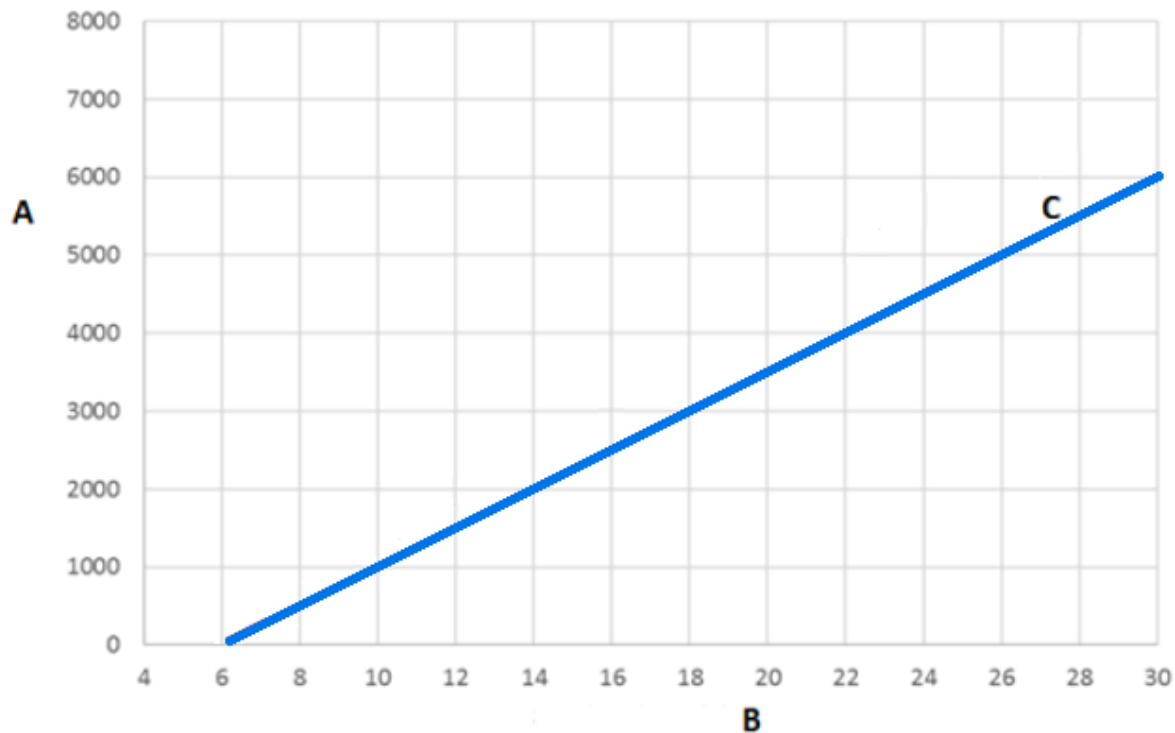
Table 3-3: For maximum loop resistance for Channel B

Condition	Equation
$7.0\text{ V} < V_s < 20.2\text{ V}$	$(V_s - 7.0\text{ V}) / 22\text{mA}$
$20.2\text{ V} < V_s < 30\text{ V}$	600 Ohms

Channel B Discrete Output/Frequency Output terminal requirements

Use the chart below to determine the required supply voltage for Channel B for DO/FO.

Figure 3-3: Channel B FO/DO output supply voltage and loop resistance



- A. Loop resistance (Ohms)
- B. Supply voltage (Vs)
- C. Maximum loop resistance (Ohms)

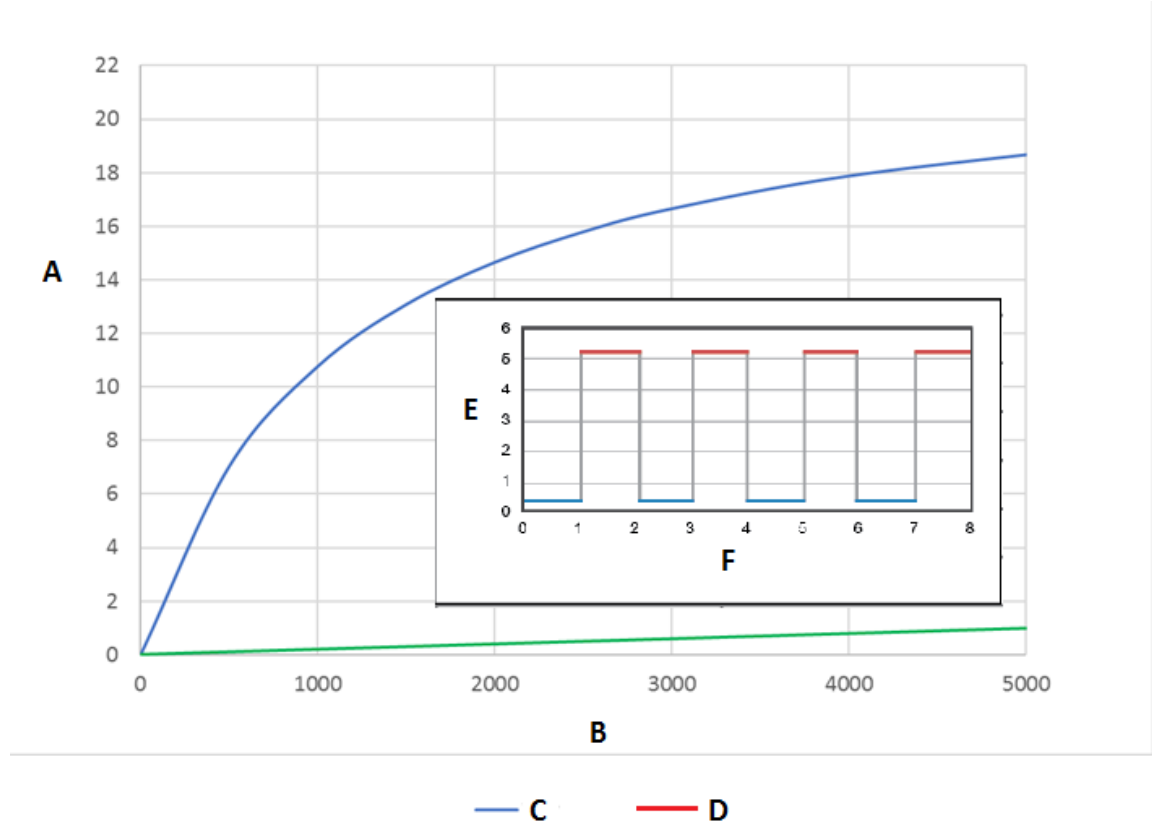
Note

For Maximum Loop Resistance:

- $(V_s - 6.0\text{ V}) / 4.0\text{mA}$.

Channel B Discrete Output/Frequency Output high and low voltages for nonhazardous installations

Figure 3-4: Output high and low voltages



- A. Output voltage (V)
- B. Load resistance (Ohm)
- C. Low voltage
- D. High voltage
- E. Voltage (volts)
- F. Time

High and low voltage equations

High voltage $\approx (V_{\text{supply}} - 1.08V) * RL / (1130 + RL)$

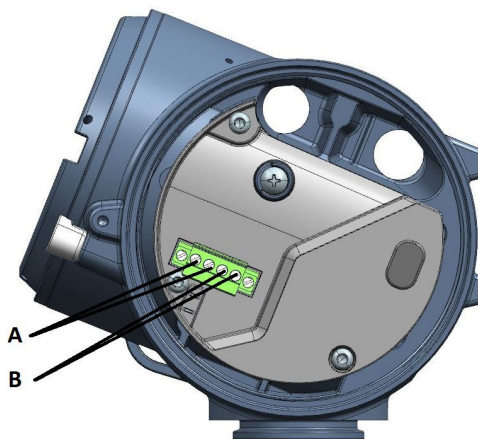
Low voltage $\approx 0.0002 * RL$

3.5 Access the wiring channels

Procedure

1. Remove the wiring access cover to reveal the I/O wiring terminal block connectors.

Figure 3-5: Channels on the transmitter terminal



- A. Channel A connections
- B. Channel B connections

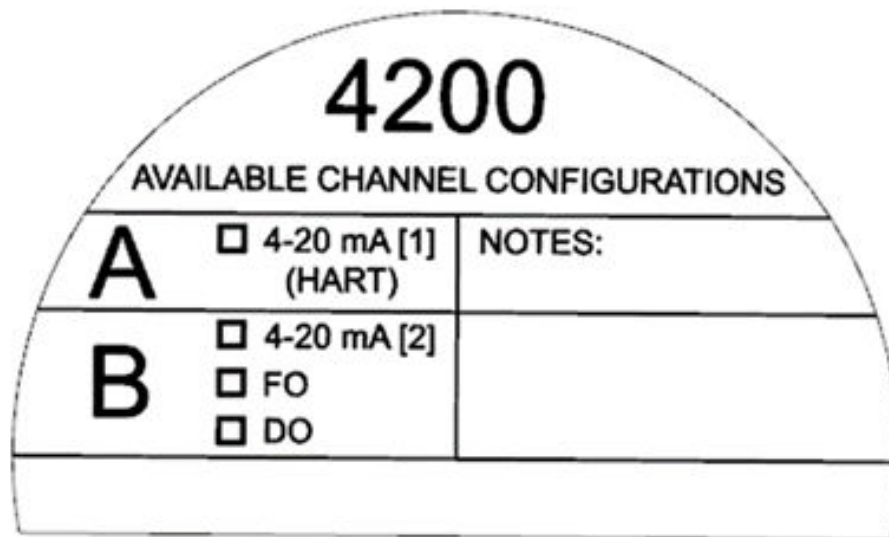
2. Confirm which transmitter channels are activated, or **ON**, and identify the type of configuration you will be wiring to based on the options available.

Figure 3-6: Activated channel identification

CH. A <input checked="" type="checkbox"/>		CH. B <input type="checkbox"/>	
+	-	+	-
1	2	3	4
CHANNEL <input checked="" type="checkbox"/> ON		<input type="checkbox"/> OFF	

3. (Recommended) Record the channel and wiring configuration on the label provided inside the transmitter housing cover.

Figure 3-7: Channel and wiring configurations label



3.6 Wire the Channel A mA HART[®] output

To wire the mA/HART output in explosion-proof, intrinsically safe, or nonhazardous installations, follow this procedure.

⚠ WARNING

Meter installation and wiring should be performed only by suitably-trained personnel using the appropriate government and corporate safety standards.

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-8: Channel A mA/HART output wiring (externally powered)



- A. mA HART output
- B. Supply voltage (See Figure 3-1.)
- C. Loop resistance (See Figure 3-1 for maximum loop resistance.)
- D. Input device

3.7 Wire the Channel B mA output

To wire the mA output in explosion-proof, intrinsically safe, or nonhazardous installations, follow this procedure.

⚠ WARNING

Meter installation and wiring should be performed only by suitably-trained personnel using the appropriate government and corporate safety standards.

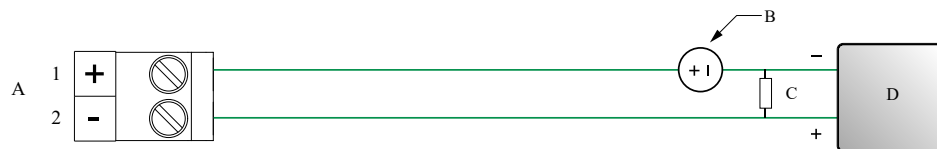
Note

Remember when using the second configurable output (Channel B), all power to the electronics is still supplied over the primary 4 - 20 mA signal wiring (Channel A).

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-9: Channel B mA output wiring (externally powered)



- A. mA output
- B. Supply voltage (See Figure 3-2.)
- C. Loop resistance (See Figure 3-2 for maximum loop resistance.)
- D. Input device

3.8 Wire Frequency Output/Discrete Output (Channel B)

Use this procedure to wire the externally-powered Frequency Output or Discrete Output for Channel B.

⚠ WARNING

Meter installation and wiring should be performed only by suitably-trained personnel using the appropriate government and corporate safety standards.

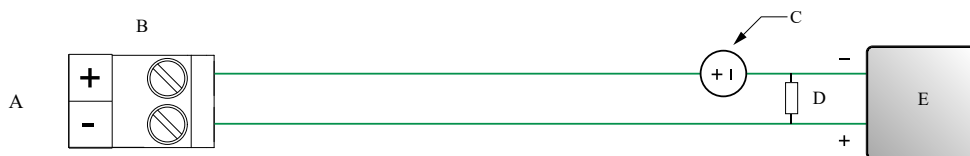
Note

Remember when using the second configurable output (Channel B), all power to the electronics is still supplied over the primary 4 - 20 mA signal wiring (Channel A).

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-10: Discrete Output wiring (externally powered)



- A. Frequency/ Discrete Output
- B. Channel B
- C. Supply voltage (See [Figure 3-3](#).)
- D. Loop resistance (See [Figure 3-3](#) for maximum loop resistance.)
- E. Counter or Discrete Output

3.9 Wire the mA/Safety Integrity Level (SIL) output

Refer to the [Micro Motion 4200 2-Wire Safety Manual for Safety Instrumented Systems \(SIS\)](#) for additional information regarding installation and commissioning that complies with SIS requirements.

4 Powering up the transmitter

Prerequisites

The transmitter must be powered up for all configuration and commissioning tasks, or for process measurement.

Procedure

1. Ensure that all transmitter and sensor covers and seals are closed.



To prevent ignition of flammable or combustible atmospheres, ensure that all covers and seals are tightly closed. For hazardous area installations, applying power while housing covers are removed or loose can cause an explosion.

2. Turn on the electrical power at the power supply.
The transmitter will automatically perform diagnostic routines. During this period, the `Warming Up` alert is active. The diagnostic routines should complete in approximately 30 seconds.

Postrequisites

Although the sensor is ready to receive process fluid shortly after power-up, the electronics can take up to 10 minutes to reach thermal equilibrium. Therefore, if this is the initial startup, or if power has been off long enough to allow components to reach ambient temperature, allow the electronics to warm up for approximately 10 minutes before relying on process measurements. During this warm-up period, you may observe minor measurement instability or inaccuracy.

5 Configuring the transmitter with Guided Setup

At initial startup of the transmitter, click the right arrow for the **Menu** option to access Guided Setup. This tool guides you through basic configuration of the transmitter. The Guided Setup allows you to upload configuration files, set the transmitter display options, configure channels, and review sensor calibration data.

Procedure

To access the guided setup screen from the display main menu, go to: **Startup Tasks** → **Guided Setup**.

6 Using the display controls

The transmitter display interface includes a display (LCD panel) and four capacitive buttons – left, up, down, and right arrow keys – used to access the display menus and navigate the display screens.

Procedure

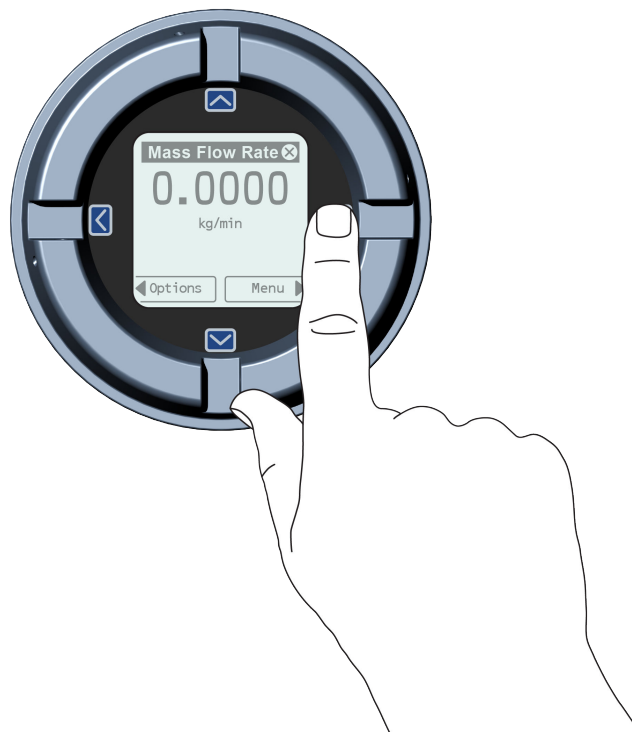
1. To activate a capacitive button, press the desired button that is designated with arrows (up, down, left, and right).

You can activate the capacitive button through the lens. Do not remove the transmitter housing cover.

Important

The transmitter only detects one button selection at a time. Be sure to press your thumb or finger on a single capacitive button.

Figure 6-1: Proper finger positioning for activating a capacitive button

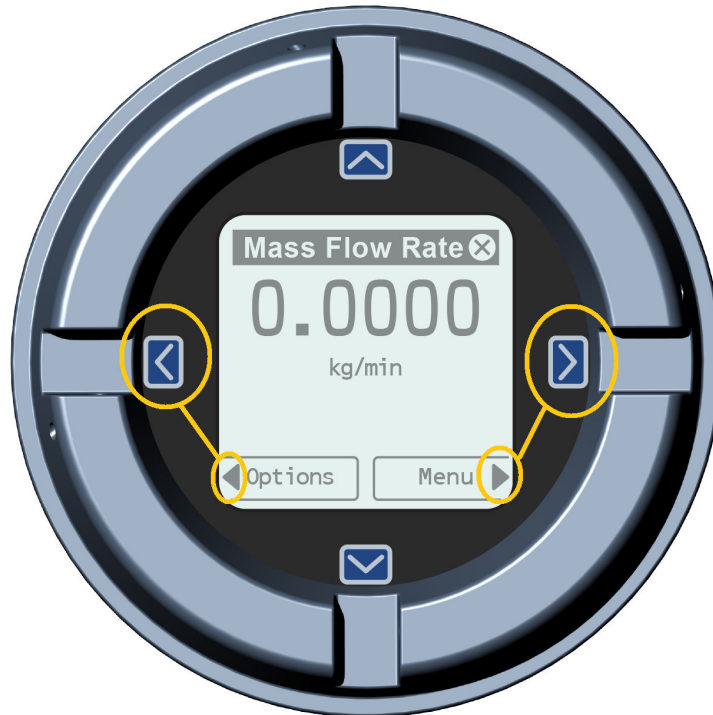


2. Use the arrow indicators on the display screen to identify which capacitive button to use to navigate the screen (see example 1 and [Figure 6-2](#)).

Important

When using the arrow keys, you must first activate the capacitive button, then release the same button by removing your finger from the glass to move up, down, right, left or to make a selection. To enable auto-scroll when navigating up or down, activate the appropriate button and continue to hold for one second. Release the button when the desired selection is highlighted.

Figure 6-2: Example 2: Active arrow indicators on the transmitter display



6.1 Configure the display backlight

By default, the backlight is set to **OFF**. The backlight requires an additional 1V in voltage over no backlight.

Procedure

To configure the backlight, select **Menu** → **Configuration** → **Display Settings** → **Backlight**.

7 Communicating with the transmitter

Use either the HART® terminals connected to ProLink™ III or a Trex unit to download or upload data from/to the transmitter, because the service port is for factory use only.

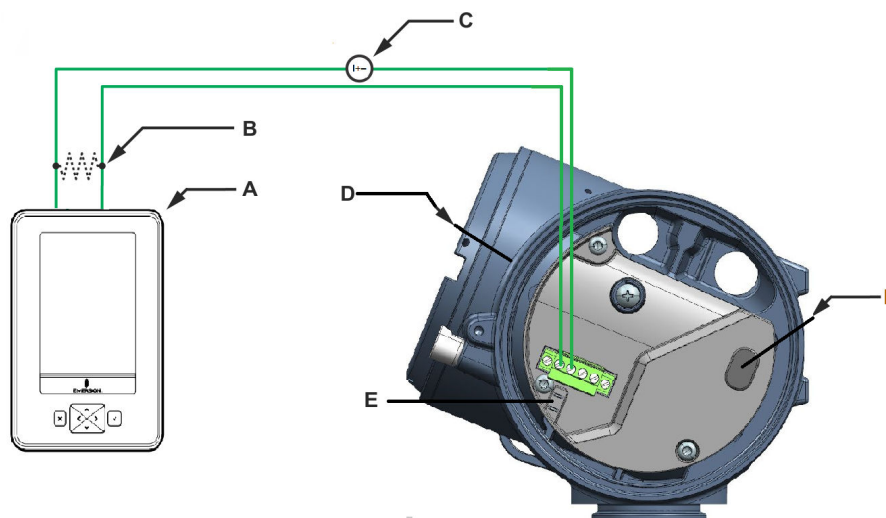
Procedure

1. To connect to the transmitter terminals or to the HART connection posts:
 - a) Remove the transmitter end cap.
 - b) Attach the leads from the Field Communicator to terminals 1 and 2 on the transmitter, or to the HART connection posts, and add resistance as required.The Field Communicator must be connected across a resistance of 250–600 Ω .

Tip

HART connections are not polarity-sensitive. It does not matter which lead you attach to which terminal.

Figure 7-1: Field Communicator connection to transmitter terminals



- A. Field Communicator
- B. 250–600 Ω resistance
- C. External power supply, if required
- D. Transmitter with end-cap removed
- E. HART connection posts
- F. Factory use only

2. Turn on the Field Communicator and wait until the main menu is displayed.



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