Installation Manual
00825-0100-5710, Rev AC
February 2025

Micro Motion™ 4700 Configurable Inputs and Outputs Transmitter

MICRO MOTION™

EMERSON™

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/global 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/global.

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/global, or by calling the Micro Motion Customer Service department.

Contents

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 appropriate 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):

- Micro Motion 4700 Transmitters with Configurable Inputs and Outputs Installation Manual
- Micro Motion 4700 Configurable Inputs and Outputs Transmitter Product Data Sheet

- Micro Motion 4700 Transmitters with Configurable Inputs and Outputs Configuration and Use Manual
- ProLink III with ProcessViz Software User Manual
- *Coriolis Flow Meter with Micro Motion 4700 Configurable Inputs and Outputs Transmitter: Safety Manual for Safety Instrumented Systems (SIS)*
- Sensor installation manual, shipped with the sensor
- FMEDA report for Coriolis Flow Meter with 4700 Transmitter, prepared for Emerson by exida.com LLC

1.4 Meter components

A meter consists of the following components:

- A transmitter
- A sensor

1.5 Installation types

The 4700 transmitter was ordered and shipped for one of three installation types. The fifth character of the transmitter number indicates the installation type.

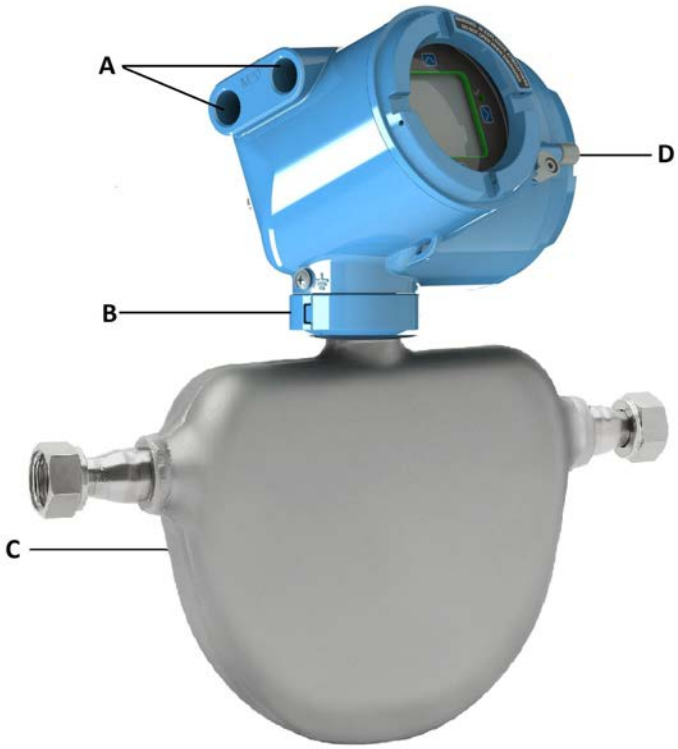
Figure 1-1: Installation type indication for 4700 transmitters

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

Table 1-1: Installation types for 4700 transmitters

Code	Description
I	Integral mount painted aluminum
R	Remote mount 4-wire
C	Remote mount 9-wire

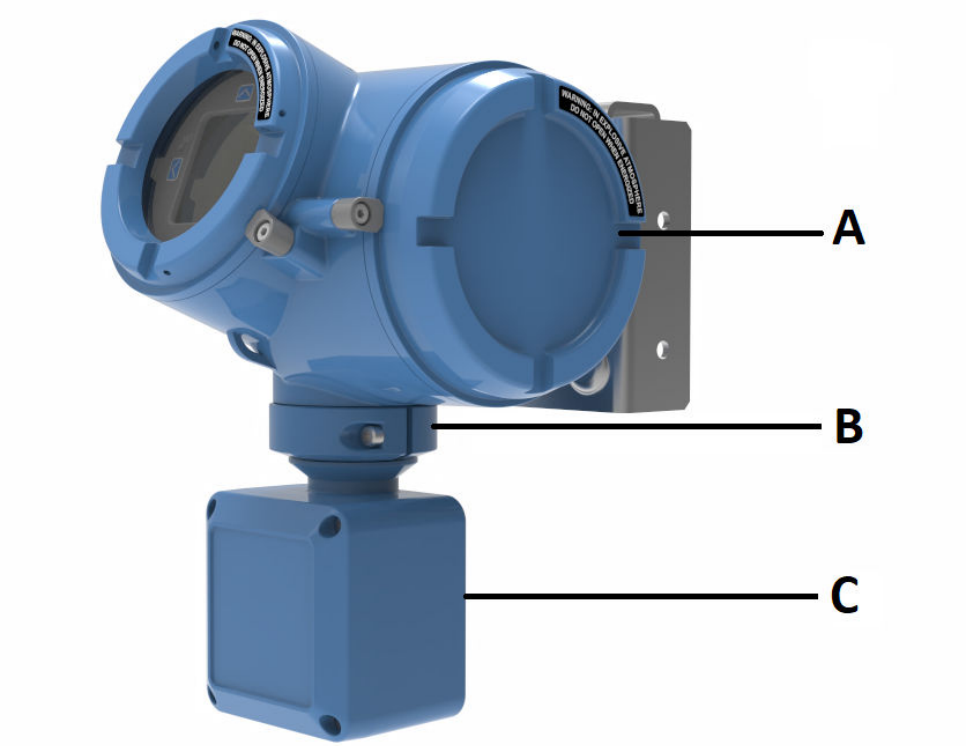
Figure 1-2: 4700 transmitter painted aluminum -- Integral mount



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

The transmitter is installed directly on the sensor.

Figure 1-3: 4700 transmitter painted aluminum -- Remote mount



A. Transmitter housing cover
B. Clamping ring
C. Junction box

The transmitter is installed remotely from the sensor. Both the 4-wire and the 9-wire connection between the sensor and transmitter must be field wired.

For both integral mount and remote mount:

- The power supply and I/O must be field wired to the transmitter
- The I/O connections consist of three licensable channels (refer to Available channels).

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, 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 1000 ft (304.8 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 Power requirements

Universal (self-switching) AC/DC input, automatically recognizes supply voltage:

- 18 VDC to 100 VDC
- 85 VAC (RMS) to 250 VAC (RMS)
- One pair of wiring terminals accepts either AC or DC power
- One internal ground lug for power-supply ground wiring
- Maximum load conditions:
  - 4700 4-Wire: 3.54 W (Maximum)
  - 4700 9-Wire: 2.76 W (Maximum)

Note
For DC power:
- Power requirements assume a single transmitter per cable.
- At start-up for in-rush current, the power source must provide a minimum of 2.0 amps of short-term current (1 ms) per transmitter and not pull voltage below 18 VDC.
- Length and conductor diameter of the power cable must be sized to provide 18 VDC minimum at the power terminals, at a load current of 0.2 amps.

Cable sizing formula

M = 18 V + (R x L x 0.2 A)

- M: minimum supply voltage
- R: cable resistance
- L: cable length (in Ω/ft)

Typical power cable resistance at 68 °F (20.0 °C)

Wire gauge	Resistance
14 AWG	0.0050 Ω/ft
16 AWG	0.0080 Ω/ft
18 AWG	0.0128 Ω/ft
20 AWG	0.0204 Ω/ft
2.5 mm^2	0.0136 Ω/m
1.5 mm^2	0.0228 Ω/m

Wire gauge	Resistance
1.0 mm^2	0.0340 Ω/m
0.75 mm^2	0.0460 Ω/m
0.50 mm^2	0.0680 Ω/m

1.7.1 Maximum cable lengths between sensor and transmitter

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

Cable type	Wire gauge	Maximum length
Micro Motion 4-wire remote mount	Installation specific	• 1,000 ft (305 m) without Ex-approval • 500 ft (152 m) with IIC rated sensors • 1,000 ft (305 m) with IIB rated sensors
Micro Motion 9-wire remote mount	Installation specific	1,000 ft (305 m)(1)
User-supplied 4-wire	VDC 22 AWG (0.326 mm^2)	300 ft (91 m)
	VDC 20 AWG (0.518 mm^2)	500 ft (152 m)
	VDC 18 AWG (0.823 mm^2)	1,000 ft (305 m)
	RS-485 22 AWG (0.326 mm^2) or larger	1,000 ft (305 m)

(1) For Smart Meter Verification, the limit is 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 2.5 in (64 mm) in diameter.
  - Confirm that you have the necessary tools, and the instrument-pole mounting kit shipped with the transmitter.

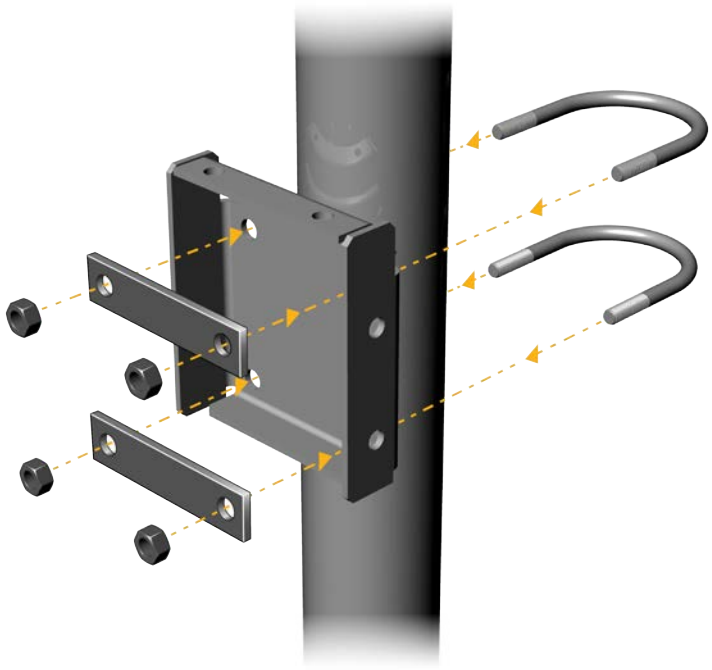
Procedure

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

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

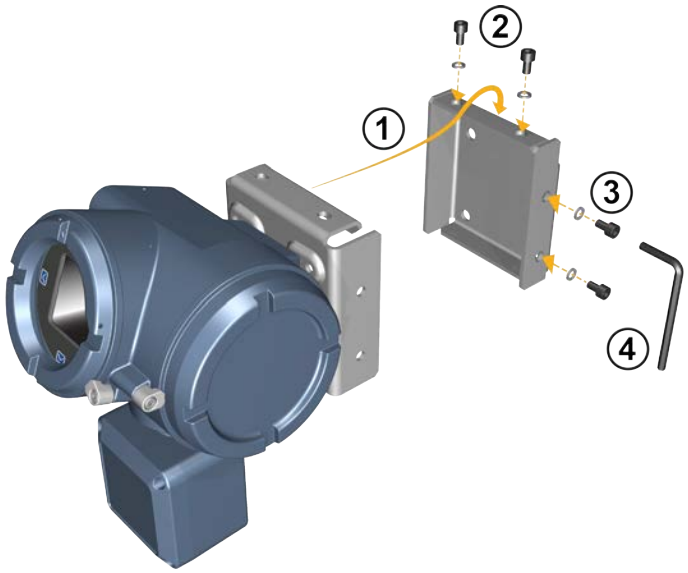
2. Using a wall-mount or pole-mount:
   - For wall-mount installations, secure the mounting bracket to the prepared surface.
   - For pole-mount installations, attach the U-bolt mounting piece to the instrument pole.

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



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

Figure 2-3: 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.

2.3 Wire a remote-mount transmitter to the sensor

Use this procedure to wire a 4-wire or 9-wire remote-mount transmitter to the sensor.

Prerequisites

- Prepare the 9-wire cable as described in the *Micro Motion 9-Wire Flow Meter Cable Preparation and Installation Guide*.
- Connect the cable to the sensor-mounted core processor or 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.

Procedure

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

Figure 2-4: Removal of the transmitter-to-sensor wiring compartment cover

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

Figure 2-5: Sensor wiring feed through

3. Connect the sensor wires to the appropriate terminals.

Figure 2-6: 4-wire transmitter-to-sensor wiring connections

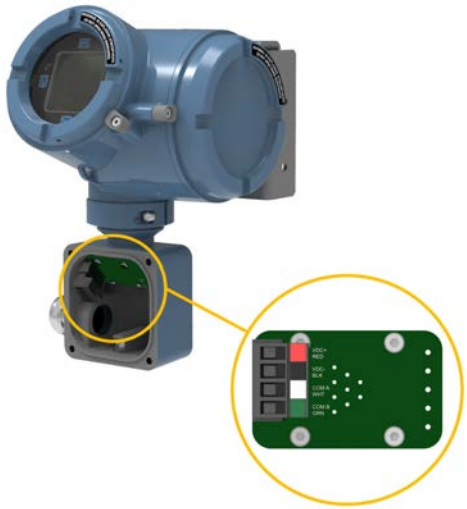
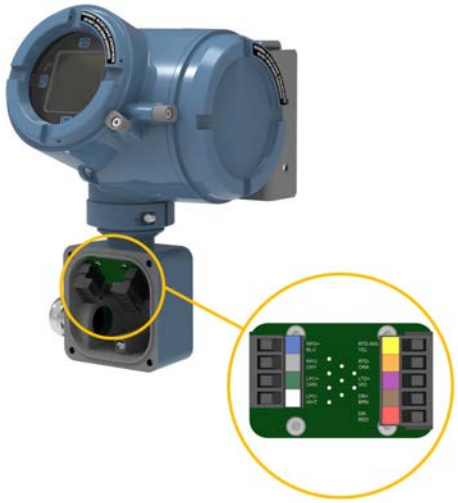


Figure 2-7: 9-wire transmitter-to-sensor wiring connections



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 in lbf (1.58 N m) to 15 in lbf (1.69 N m).

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 mm^2) 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 2-8: Rotating the transmitter on the sensor

Procedure

1. Remove the metal clamping ring from the base of the feed through (refer to Figure 2-8).
2. 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.
3. Rotate the transmitter to the desired position.

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

4. Lower the transmitter, sliding it onto the notches on the feedthrough.
5. 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).

   CAUTION
   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**.

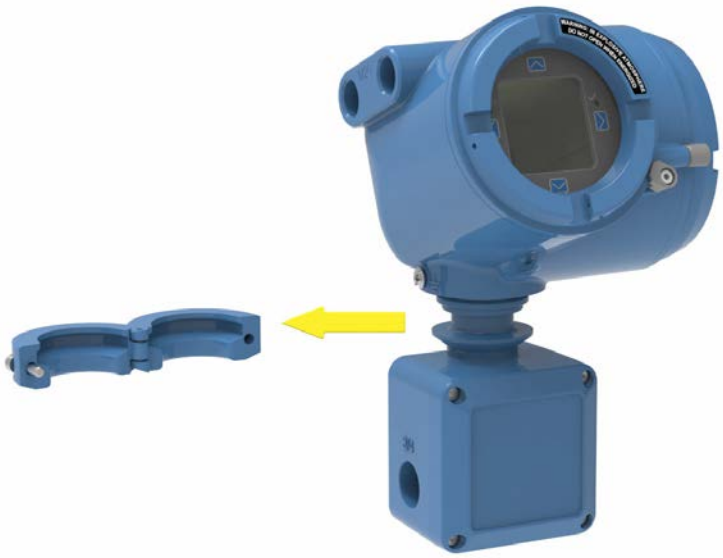
2.7 Rotate the sensor wiring junction box on a remote-mount transmitter (optional)

In remote-mount installations, you can rotate the sensor wiring junction box on the transmitter up to plus or minus 180°.

Procedure

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

Figure 2-9: 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 2-10: 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 2-11: Re-attachment of the clamp

3 Wiring the channels

3.1 Available channels

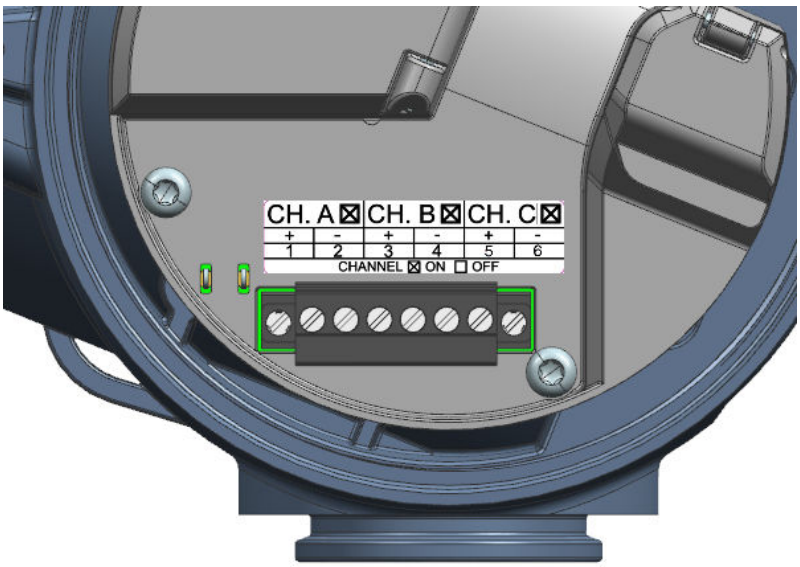
Signal	Channel A		Channel B		Channel C	
Wiring terminals	1	2	3	4	5	6
mA inputs and outputs	mA Output 1 (HART®)		mA Output 2		RS-485	
Frequency outputs	Frequency Output 2		Frequency Output 1			
Discrete outputs	Discrete Output 2		Discrete Output 1			
Discrete inputs			Discrete Input 1			

3.2 Access the wiring channels

Procedure

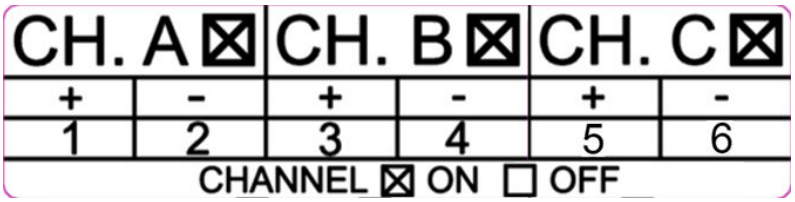
1. Remove the wiring access cover to reveal the I/O wiring terminal block connectors.

Figure 3-1: Channels on the transmitter terminal



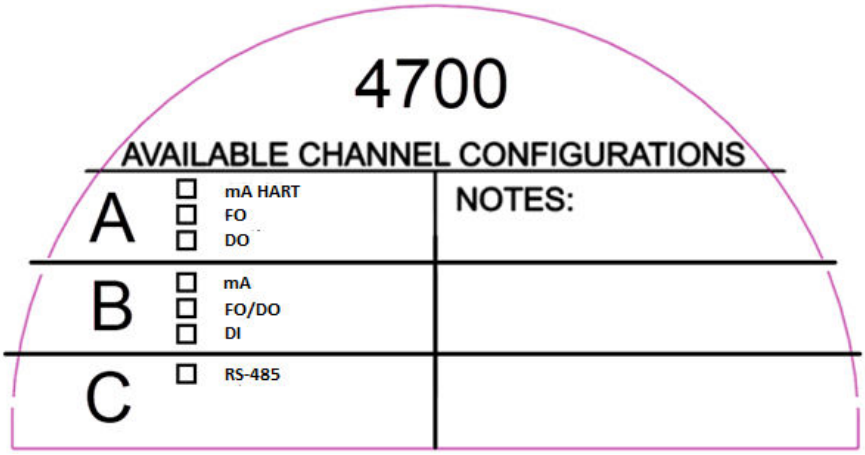
2. Confirm which transmitter channels are activated, or **ON**, and identify the type of configuration you will be wiring to based on the options available.

Figure 3-2: Activated channel identification



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

Figure 3-3: Channel and wiring configurations label



3.3 Wire the mA output

Wire the mA output in explosion-proof, nonincendive, or nonhazardous installations.

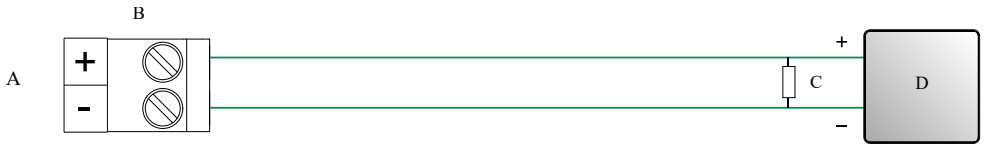
Important
Meter installation and wiring should be performed only by suitably-trained personnel.

3.3.1 Wire the mA output (internally powered)

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-4: mA output wiring (internally powered)



A. mA output
B. Channel A or B
C. 820 Ω maximum loop resistance
D. Signal device

3.3.2 Wire the mA output (externally powered)

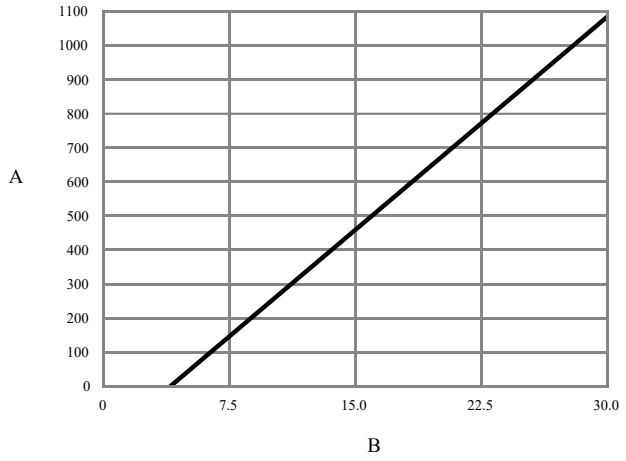
Procedure

Wire to the appropriate output terminal and pins.

Figure 3-5: mA output wiring (externally powered)

A. mA output
B. Channel A or B
C. 5–30 VDC (maximum)
D. See Figure 3-6 for maximum loop resistance
E. Signal device

Figure 3-6: Externally-powered mA output: maximum loop resistance



A. Maximum resistance (Ω)
B. External supply voltage (V)

3.4 Wire the mA/HART® output

Wire the mA/HART output in explosion-proof, nonincendive, or nonhazardous installations.

Important
Meter installation and wiring should be performed only by suitably-trained personnel.

3.4.1 Wire the mA/HART® output (internally powered)

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-7: mA/HART output wiring (internally powered)

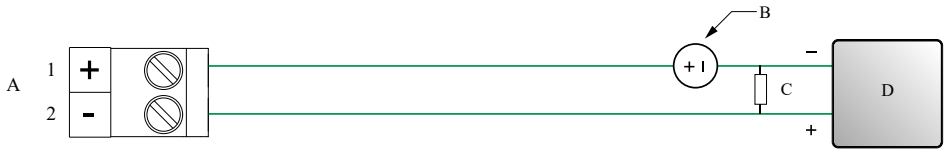
A. mA/HART output
B. 250–600 Ω resistance
C. HART device

3.4.2 Wire the mA/HART® output (externally powered)

Procedure

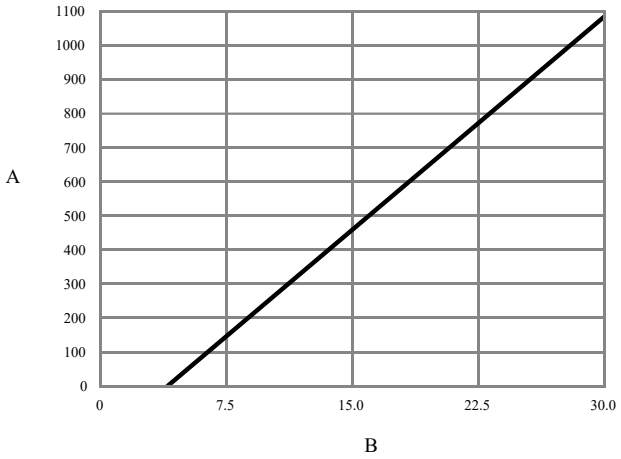
Wire to the appropriate output terminal and pins.

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



A. mA/HART output
B. 5–30 VDC (maximum)
C. 250–600 Ω resistance (see Figure 3-9 for maximum loop resistance)
D. HART device

Figure 3-9: Externally-powered mA/HART output: maximum loop resistance



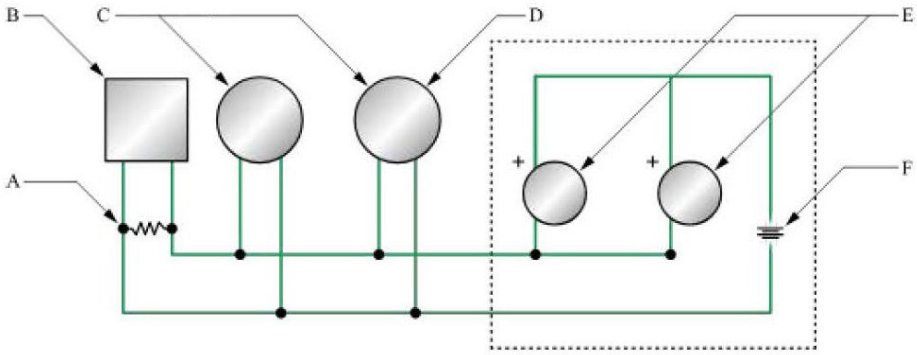
A. Maximum resistance (Ω)
B. External supply voltage (V)

3.4.3 Wire the mA/HART® multidrop installation (internally or externally powered)

Procedure

See the Figure 3-10 for information on wiring a mA/HART multidrop installation.

Figure 3-10: mA/HART multidrop wiring



A. *250–600 Ω resistance*
B. *HART-compatible host or controller*
C. *HART-compatible transmitter (internally powered)*
D. *Micro Motion 4700 transmitter (internally powered) mA/HART connections*
E. *SMART FAMILY™ transmitters*
F. *24 VDC loop power supply required for external transmitter*

3.5 Wire mA Output 2/Discrete Output/Frequency Output/ Discrete Input

Use this procedure to wire the externally-powered mA Output 2 and Discrete Input for Channel B, and Frequency Output and Discrete Output for both Channel A and Channel B.

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

Channel	Option	Location
A	FO2	Wire the frequency output (internally powered) Wire the frequency output (externally powered)
B	FO1	Wire the frequency output (internally powered (Channel B) Wire the frequency output (externally powered Channel B)
A	DO2	Wire the discrete output (internally powered) Wire the discrete output (externally powered) Channel A or Channel B
B	DO1	
B	DI	Wire the discrete input (internally powered) Wire the discrete input (externally powered)

3.5.1 Wire the frequency output (Channel A)

Use this section to wire the frequency output in explosion-proof, nonincendive, or nonhazardous installations.

Important
Meter installation and wiring should be performed only by suitably-trained personnel.

Wire the frequency output (internally powered)

Use this procedure to wire the internally-powered frequency output for Channel A.

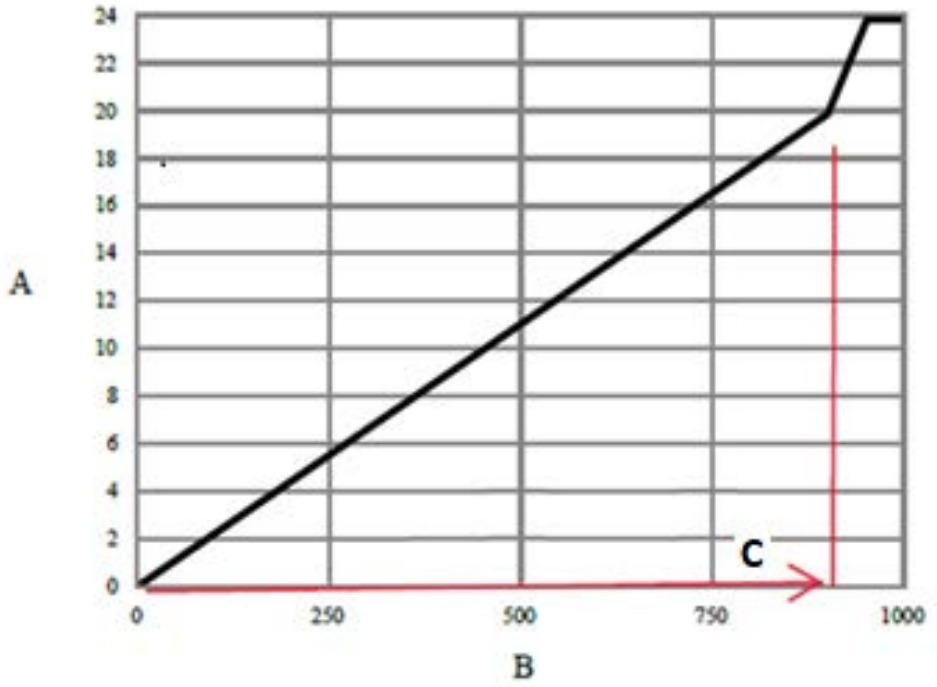
Procedure

Wire to the appropriate output terminal and pins.

Figure 3-11: Frequency output wiring (internally powered)

A. Frequency output
B. Channel A
C. See Figure 3-12 for output amplitude versus load resistance
D. Counter

Figure 3-12: Internally powered frequency output: output amplitude versus load resistance [24 VDC (Nom) open circuit]



A. Output amplitude (V) where V= 22mA x Load Resistor in Linear Range
B. Load resistor (Ω)
C. Linear Range

Wire the frequency output (externally powered)

Use this procedure to wire the externally-powered frequency output for Channel A.

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-13: Frequency output wiring (externally powered)

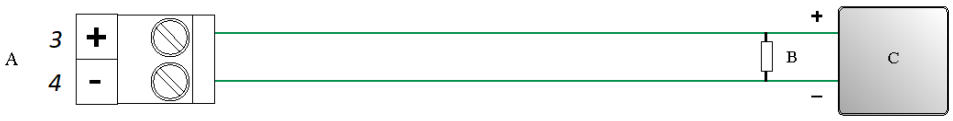
A. Frequency output
B. Channel A
C. 3-30 VDC (maximum)
D. Rload: Maximum sinking curent = 500mA
E. Signal device

Wire the frequency output (internally powered (Channel B)

Procedure

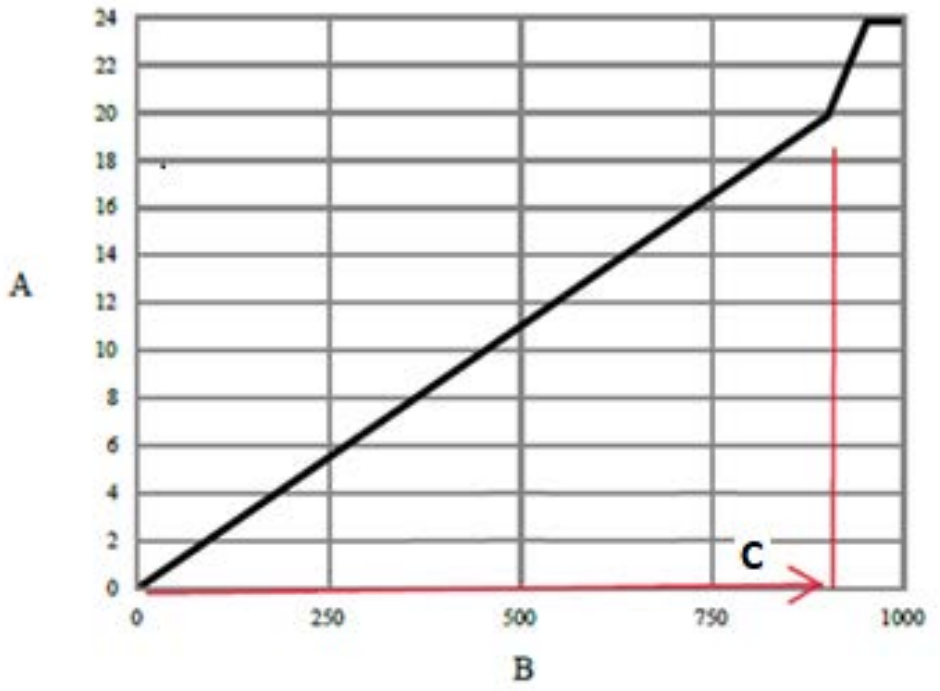
Wire to the appropriate output terminal and pins.

Figure 3-14: Frequency output wiring (internally powered)



A. Frequency output
B. See Figure 3-15 for output amplitude versus load resistance
C. Counter

Figure 3-15: Internally powered frequency output: output amplitude versus load resistance [24 VDC (Nom) open circuit]



A. Output amplitude (V) where V= 22mA x Load Resistor in Linear Range
B. Load resistor (Ω)
C. Linear Range

Wire the frequency output (externally powered Channel B)

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-16: Frequency output wiring (externally powered)

A. Frequency output
B. 3–30 VDC (maximum)
C. Rload: Maximum sinking curent = 500mA
D. Signal device

3.5.2 Wire the discrete output (internally powered)

Use this procedure to wire the internally-powered discrete output for Channel A or B.

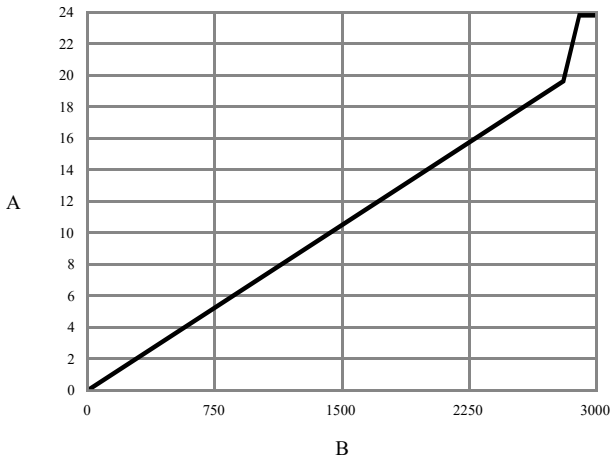
Procedure

Wire to the appropriate output terminal and pins.

Figure 3-17: Discrete output wiring (internally powered)

A. Discrete output
B. Channel A (Pins 1 and 2) or Channel B (Pins 3 and 4)
C. See Figure 3-18 for output amplitude versus load resistance
D. Counter

Figure 3-18: Internally powered discrete output: output amplitude versus load resistance [24 VDC (Nom) open circuit]



A. Output amplitude (V)
B. Load resistor (Ω)

3.5.3 Wire the discrete output (externally powered) Channel A or Channel B

Use this procedure to wire the externally-powered discrete output.

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-19: Discrete output wiring (externally powered)

A. Discrete output
B. Channel A (Pins 1 and 2) or Channel B (Pins 3 and 4)
C. 3–30 VDC (maximum)
D. Rload: Maximum sinking curent = 500mA
E. Counter

3.5.4 Wire the discrete input (Channel B)

Use this section to wire the discrete input in explosion-proof, nonincendive, or nonhazardous installations.

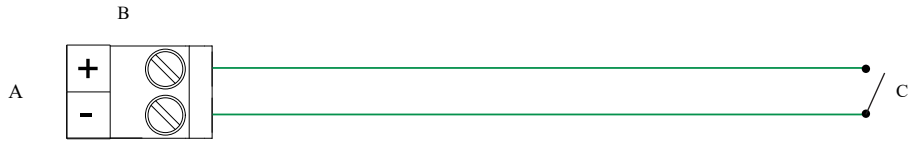
Important
Meter installation and wiring should be performed only by suitably-trained personnel.

Wire the discrete input (internally powered)

Procedure

Wire to the appropriate input terminal and pins.

Figure 3-20: Discrete input wiring (internally powered)



A. Discrete input
B. Channel B
C. Mechanical Switch (Push-Button or Relay)

Wire the discrete input (externally powered)

Procedure

Wire to the appropriate input terminal and pins.

Note
Use external powered for voltage signals input to the 4700 DI.

Figure 3-21: Discrete input wiring (externally powered)

A. Discrete input
B. Channel B
C. 30 VDC (maximum)

Note
- Maximum positive threshold is 3 VDC.
- Minimum negative threshold is 0.6 VDC.

3.6 Wire the RS-485 output (Channel C)

Use this section to wire the RS-485 output in explosion-proof, nonincendive, or nonhazardous installations.

Procedure

Wire to the appropriate output terminal and pins.

Figure 3-22: RS-485 output wiring

A. RS-485 output

Note
The transmitter does not provide any RS-485 termination resistance.

4 Powering up the transmitter

Prerequisites

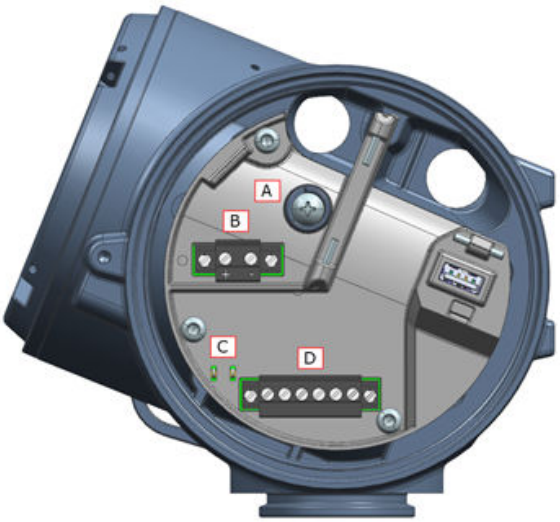
The transmitter must be powered up for all configuration and commissioning tasks, or for process measurement.

Procedure

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

   DANGER
   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.

   Figure 4-1: Transmitter with Power and USB Doors Hidden

   A. Ground Connection
   B. Power Connection
   C. HART Connection
   D. Output Terminal Connection

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.

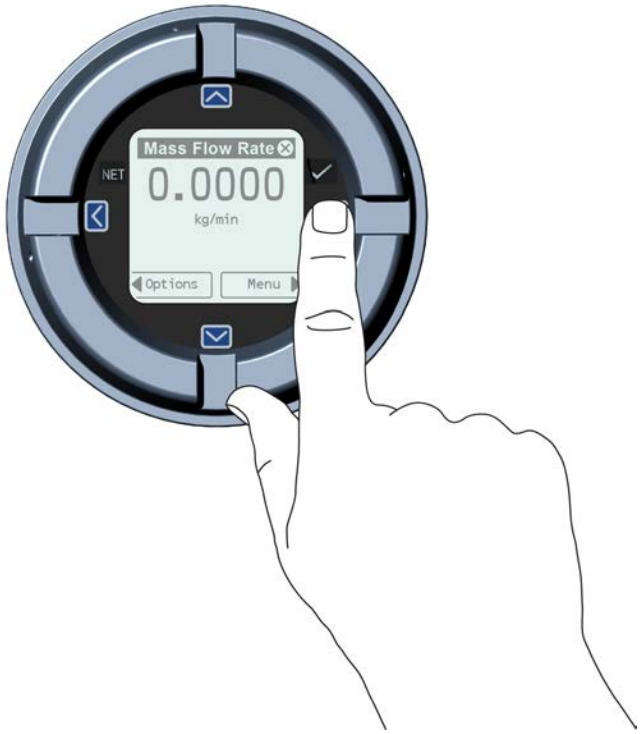
Procedure

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 examples 1 and 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 ON.

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.

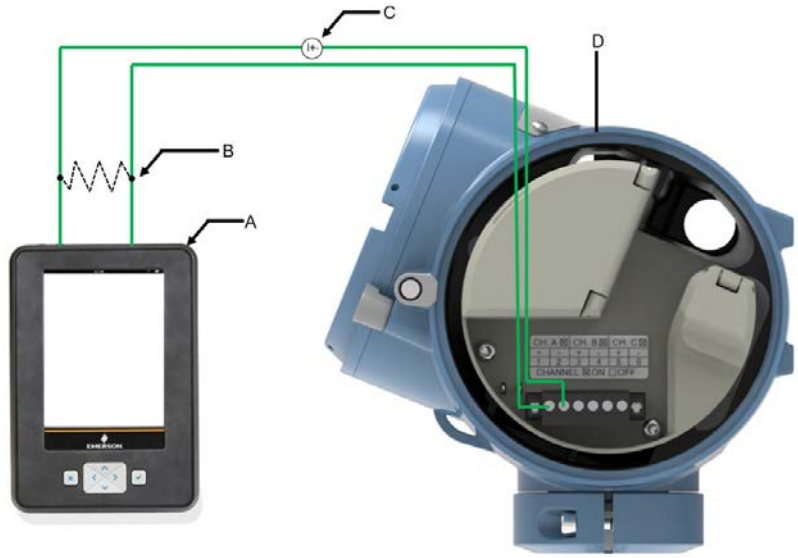
Procedure

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

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

8 Wireless certifications

8.1 FCC notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: This device may not cause harmful interference; this device must accept any interference received, including interference that may cause undesired operation.

This device must be installed to ensure a minimum antenna separation distance of 20 cm from all persons. Changes or modification to the equipment not expressly approved by Micro Motion Inc. could void the user's authority to operate the equipment.

8.2 ISED notice

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science, and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: This device may not cause interference. This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conformé à la norme RSS-247 Industrie Canada exempt de licence. Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interférence, y compris les interférences pouvant causer un mauvais fonctionnement du dispositif.

8.3 Korea Wireless certification

Figure 8-1: Bluetooth Label

상호 또는 성명	EMERSON PROCESS MANAGEMENT - ROSEMOUNT DIVISION
기자재 명칭	Coriolis Configurable I/O Transmitter
모델명	4700
인증번호	R-R-K8C-4700, R-R-K8C-EMR303
제조년월	2024
제조자/제조국가	EMERSON PROCESS MANAGEMENT - ROSEMOUNT DIVISION, Micro Motion, Inc. / 미국, 네덜란드, 루마니아, 멕시코, 중국

8.4 Telecommunication compliance (for wireless products only)

All wireless devices require certification to ensure that they adhere to regulations regarding the use of the radio frequency (RF) spectrum. Nearly every country requires this type of product certification. Emerson is working with governmental agencies around the world to supply fully compliant products and remove the risk of violating country directives or laws governing wireless device usage.

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使 用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射 頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應 立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理 法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及 醫療用電波輻射性電機設備之干擾。

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