



# EMERSON Rosemount 3410 Series Local Display Field Install Kit User Guide

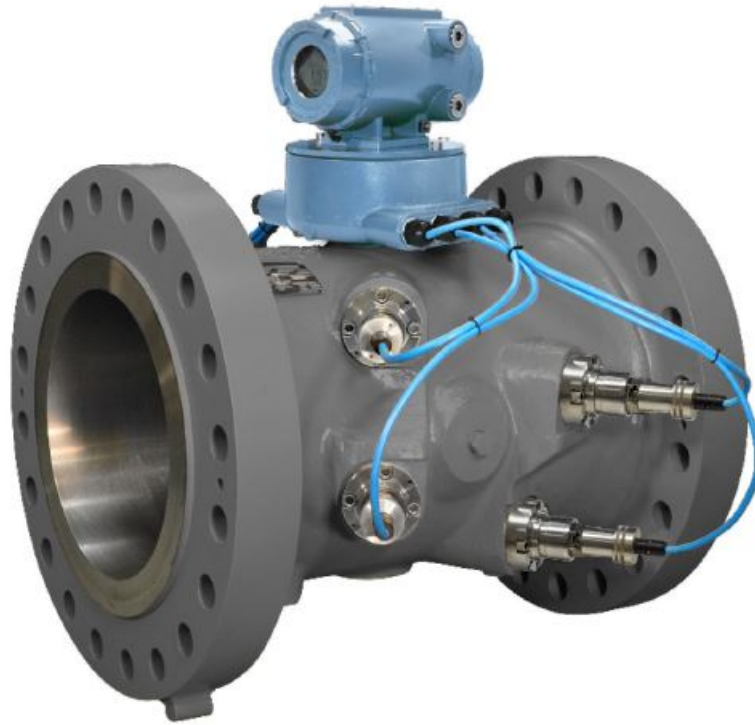
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**EMERSON Rosemount 3410 Series Local Display Field Install Kit**



## Safety and approval information

This Rosemount 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 EU declaration of conformity, with all applicable European directives, and the complete ATEX Installation Drawings and Instructions are available on the internet at [www.emerson.com](http://www.emerson.com) or through your local Emerson support center.

Information affixed to equipment that complies with the Pressure Equipment Directive can be found on the internet at <http://www.emerson.com>.

For hazardous installations in Europe, refer to standard EN 60079-14 if national standards do not apply.

## Other information

Full product specifications can be found in the product data sheet. Troubleshooting information can be found in the user manual. Product data sheets and manuals are available from the Emerson website at <http://www.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. Emerson will not accept your returned equipment if you fail to follow Emerson procedures. Return procedures and forms are available on our web support site at Emerson.com, or by phoning the Emerson Customer Service department.

## Emerson Flow customer service

### Email:

- Worldwide: [http://flow.support@emerson.com](mailto:flow.support@emerson.com)
- Asia-Pacific: [http://APflow.support@emerson.com](mailto:APflow.support@emerson.com)

### Telephone:

North and South America		Europe and Middle East		Asia Pacific	
United States	800 522 6277	U.K.	0870 240 1978	Australia	800 158 727
Canada	+1 303 527 5200	The Netherlands	+31 (0) 704 136 666	New Zealand	099 128 804
Mexico	+41 (0) 41 7686 111	France	0800 917 901	India	800 440 1468
Argentina	+54 11 4837 7000	Germany	0800 182 5347	Pakistan	888 550 2682
Brazil	+55 15 3413 8000	Italy	8008 77334	China	+86 21 2892 9000
		Central & Eastern	+41 (0) 41 7686 111	Japan	+81 3 5769 6803
		Russia/CIS	+7 495 981 9811	South Korea	+82 2 3438 4600
		Egypt	0800 000 0015	Singapore	+65 6 777 8211
		Oman	800 70101	Thailand	001 800 441 6426
		Qatar	431 0044	Malaysia	800 814 008
		Kuwait	663 299 01		
		South Africa	800 991 390		
		Saudi Arabia	800 844 9564		

North and South America		Europe and Middle East		Asia Pacific	
		UAE	800 0444 0684		

## Signal words and symbol

Pay special attention to the following signal words, safety alert symbols and statements:

### Safety alert symbol

This is a safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

- DANGER

Danger indicates a hazardous situation which, if not avoided, will result in death or serious injury.

- **WARNING**

Warning indicates a hazardous situation which, if not avoided, could result in death or serious injury.

- **CAUTION**

Caution indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

- **NOTICE**

Notice is used to address safety messages or practices not related to personal injury.

### Important

Important is a statement the user needs to know and consider.

### Tip

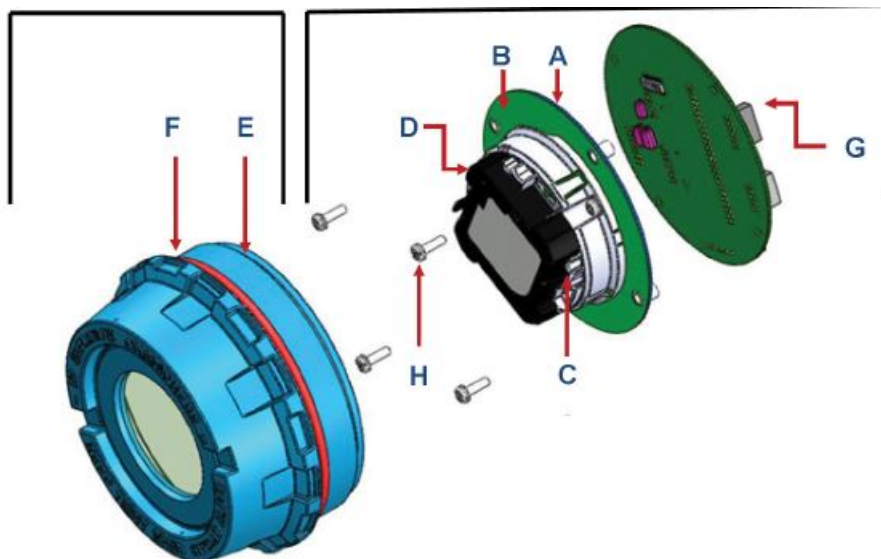
Tip provides information or suggestions for improved efficiency or best results.

### Note

Note is “general by-the-way” content not essential to the main flow of information.

## Component disassembly

### Local display field install kit includes



- **A.** LCD display board
- **B.** LCD display shroud
- **C.** Pan HD screw PH SEMS #6-32 X .38 M/S W/410 EXT 18-8 SST
- **D.** LCD module
- **E.** Cover – HSG LCD type FB100
- **F.** O-ring #2-245
- **G.** Backplane board 3410/3810
- **H.** Pan HD screw PH SEMS #6-32 X .88

### Preassembled assemblies and parts:

- LCD display board, shroud, LCD module

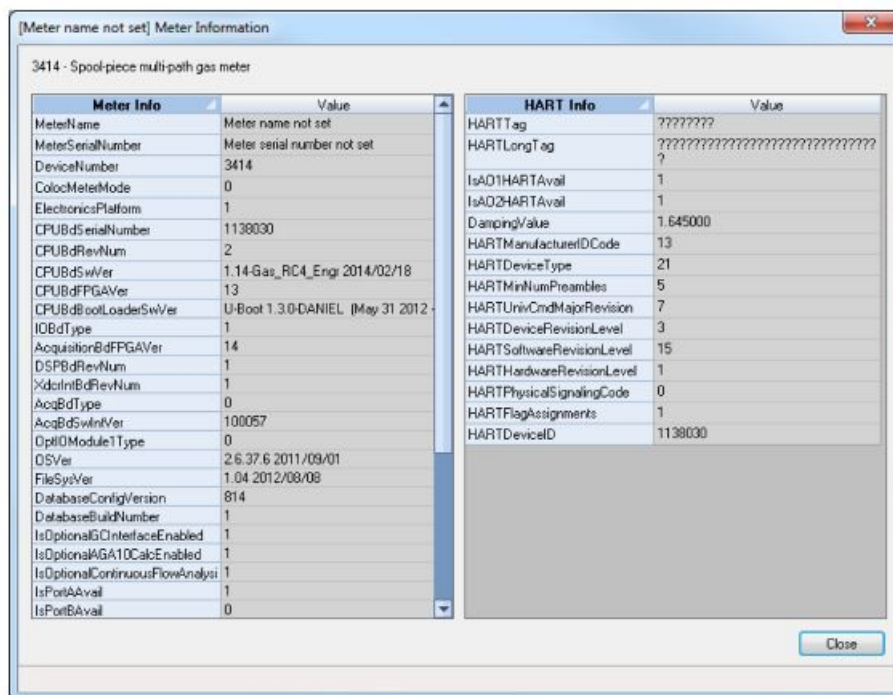
- Cover – Housing (glass end cap) with O-ring— Backplane board
- Pan HD screws #6-32 X .88

#### Local display field install kit parts list

Item(1)	Quantity	Description
		Preassembled:
		LCD display field install kit

Item(1)	Quantity	Description
A	1	LCD display board
B	1	LCD display shroud
C	2	Pan HD screw PH SEMS #6-32 X .38 M/S W/410 EXT 18-8 SST
D	1	LCD module
		Preassembled:
E	1	Cover – HSG LCD type FB100
F	1	O-ring #2-245
G	1	Backplane board 3410/3810
H	4	Pan HD screw PH SEMS #6-32 X .88

#### Check firmware version before powering off the meter

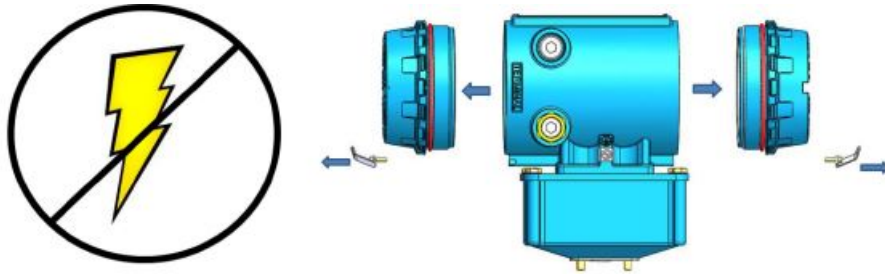


#### Application options:

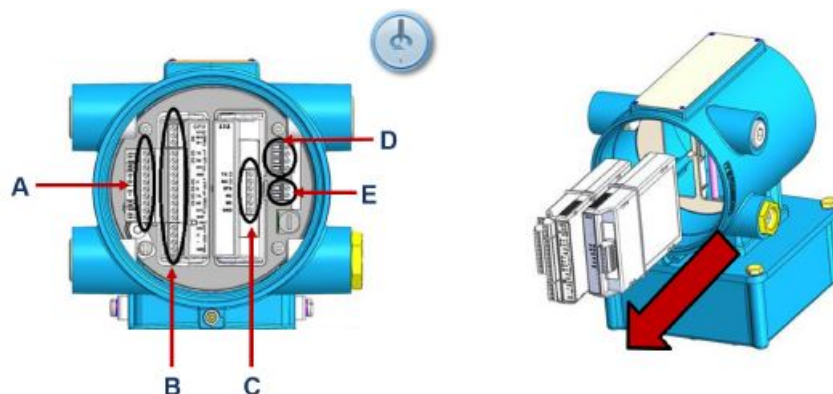
- MeterLink

- AMS® Device Manager
- Field Communicator
- Requirements: Firmware Version 1.06 and Uboot Version January 31, 2013 or later
- If necessary to upgrade firmware
  - Open MeterLink™ and connect to the meter
  - Open an Internet browser
  - Navigate to the Emerson website: [emerson.com/Rosemount](http://emerson.com/Rosemount)
  - Use Quick Links and click MeterLink Registration and Download to access the latest firmware
  - Go to MeterLink and use the Tools|Program Download menu to download a file to the meter. Click Open to display an Open Download File dialog. Select the desired file and click Open. MeterLink only downloads components that are different than what is currently installed in the meter.

### Remove power to the equipment and remove transmitter electronics enclosure endcaps

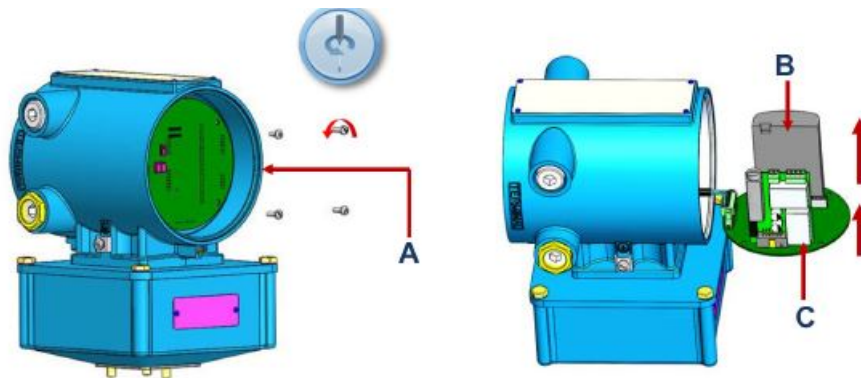


- Remove endcap security seals, if installed, and security latches.
- Remove power from equipment before removing endcaps if possible and/or ensure explosive atmosphere is not present before opening the transmitter electronics enclosure.
- Unplug CPU Module terminal board connectors (TB-1 and TB-2).
- Unplug I/O Module, and Power Supply terminal board connectors.
- Pull the CPU and I/O Modules from the enclosure.



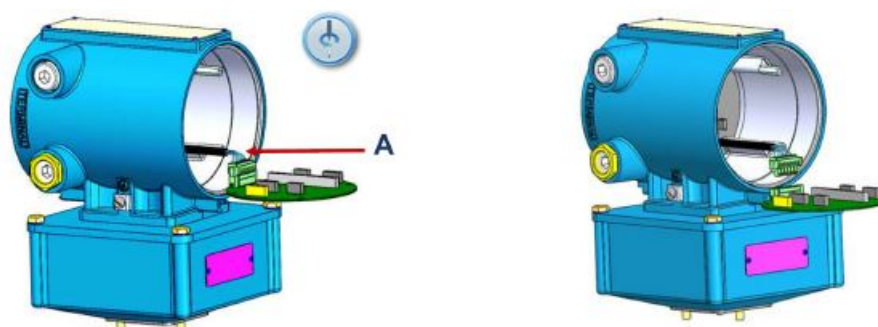
- A. CPU TB-2
- B. CPU TB-1
- C. I/O module connectors
- D. 24V loop power
- E. 10.4VDC – 36VDC power

## Remove the backplane board



- A. Backplane board
- B. I.S. barrier board
- C. Power supply board
  - Remove four screws with lock washers.
  - Pull Backplane from housing.
  - Remove Power Supply and I.S. Barrier boards from Backplane.

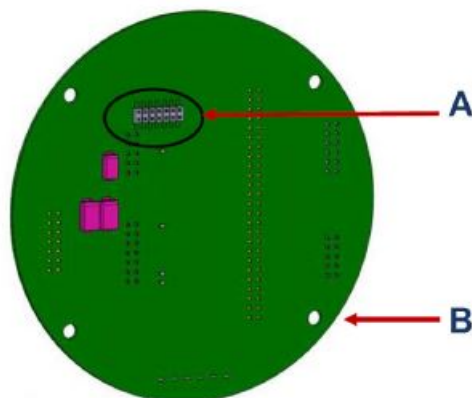
## Disconnect the acquisition cable



- A. Acquisition cable

## Component assembly

### Backplane board with 14 pin connector

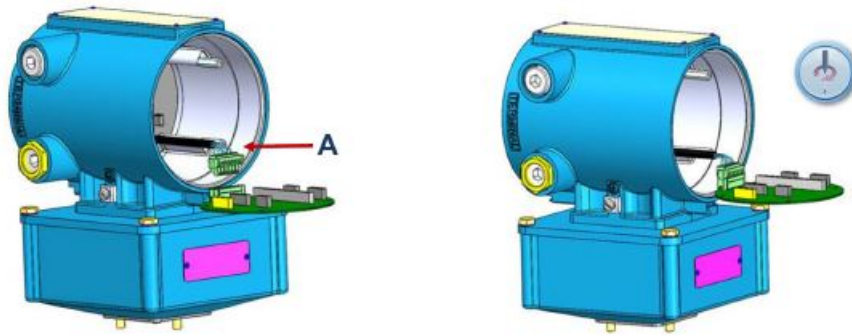


- A. 14 pin connector
- B. Backplane board

## Note

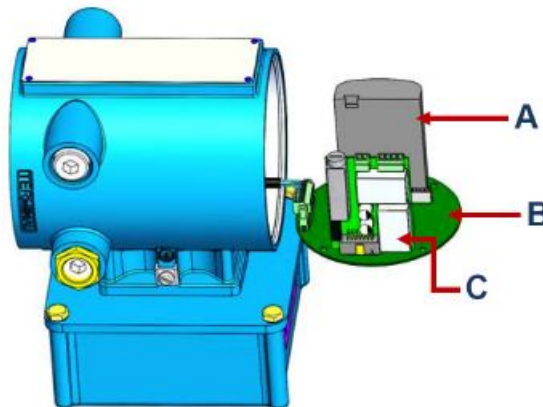


Check existing 3410/3810 Series Backplane board minimum for 14 pin connector (J8).  
If equipped, use this board. If not, use board included with the Local Display Field Install Kit.



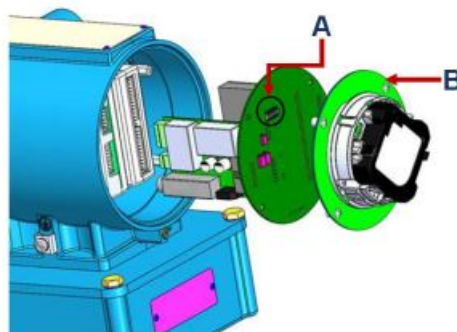
- A. Acquisition cable
  - Attach acquisition cable to backplane
  - Tighten connector screws

**Plug power supply board and I.S. barrier module onto backplane board with 14 pin connector**



- A. I.S. barrier board
- B. Backplane board
- C. Power supply board

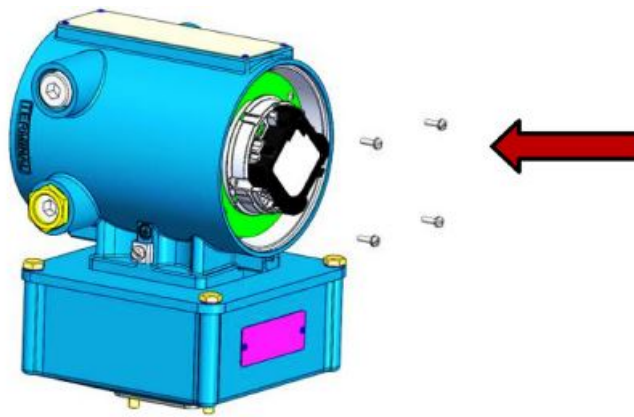
**Plug local display board into the backplane 14 pin connector**



- A. 14 pin connector
- B. Local display board
  - Make sure LCD board is fully seated to backplane 14 pin connector.

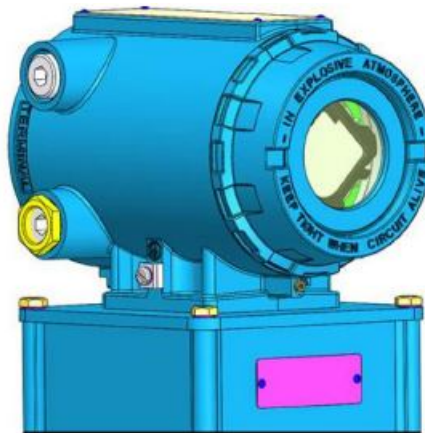
**Slide backplane, power supply, I.S. barrier module and local display module assembly into transmitter enclosure and fasten with 4 pan head screws.**





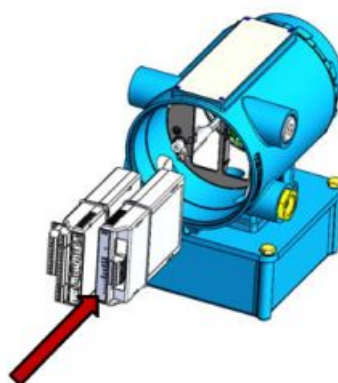
- Make sure boards are aligned in the enclosure and I.S. barrier board is inside card cage key retainer.
- Use the long Pan HD Screws #6-32 X .88 provided with the kit.

### Install endcap with sight glass

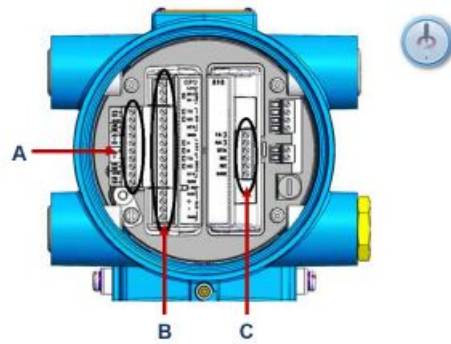


- Make sure endcap O-ring is installed.

### Reinstall CPU module and I/O module in the enclosure

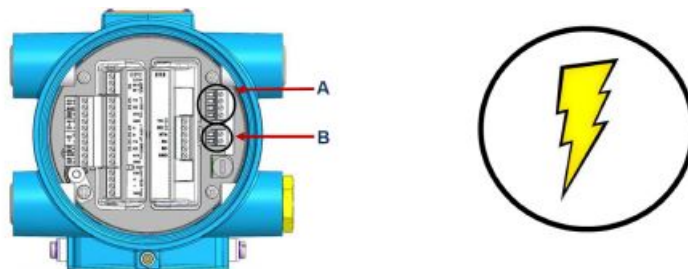


### Install CPU module TB-1 and TB-2 and I/O module terminal connectors

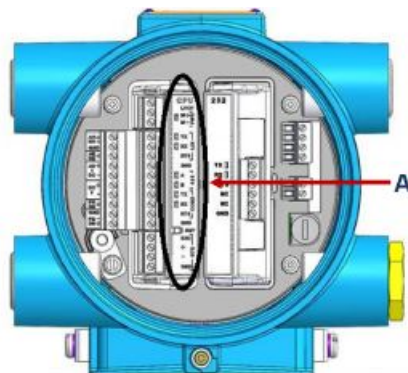


- A. CPU TB-2
- B. CPU TB-1
- C. I/O module connectors

**If explosive atmosphere is not present, connect the power supply terminal connectors and apply power to the unit**

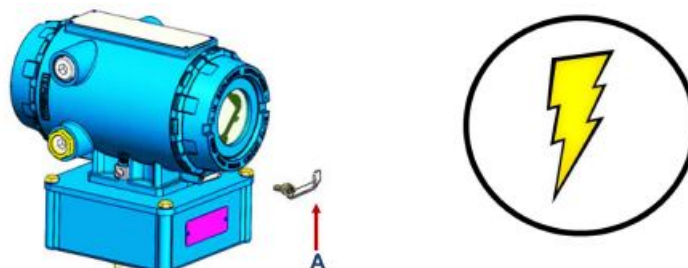


- A. 24V loop power
- B. 10.4VDC – 36VDC power
  - Ensure all CPU LEDs are green



- A. CPU LEDs
  - Observe Local Display startup sequence (see Observe local display startup sequence)

**If explosive atmosphere is present, install endcaps and apply site power to equipment**



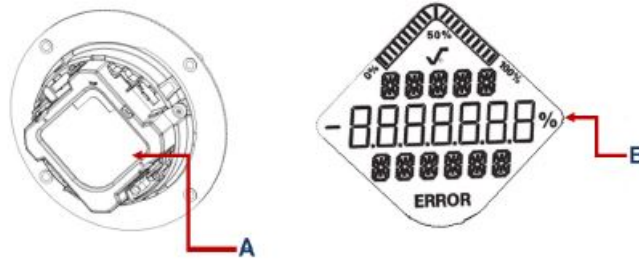
- A. Endcap security latch

- Reinstall endcap security latches
- Apply site power

## Note

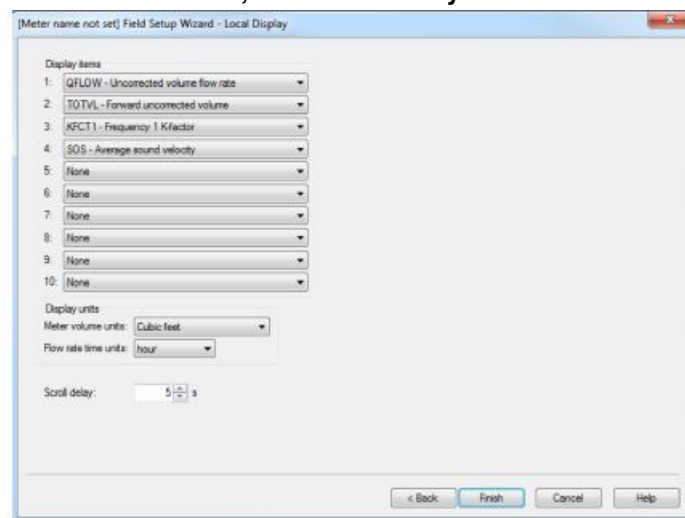
If an explosive atmosphere is present and site power initializes the unit, a Service technician should observe the Local Display startup sequence (see Observe local display startup sequence).

## Observe local display startup sequence



- A. Local display
- B. Startup sequence – All segments displayed
  - Two seconds after power up, the “Rosemount” logo appears at the bottom of the LCD screen.
  - The Checksum displays.
  - Make sure all segments are displayed (all the segments will come on and stay on for about 4 seconds). Pay careful attention and make sure that all segments are functioning and no segments are missing.
  - The Wait command displays, and then the four default Display Items scroll on the display.

## Configure display items, measurement units, and scroll delay



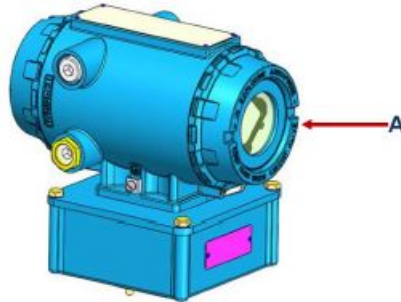
## Configuration applications options:

- MeterLink™ – Field Setup Wizard
- AMS® Device Manager
- Field Communicator
- Reference manuals:
  - HART® Field Device Specification 3410 Series Gas Ultrasonic Meters— HART Field Device Specification 3810 Series Liquid Ultrasonic Meters— 3410 Series Gas Ultrasonic Meters Installation Manual

- 3810 Series Liquid Ultrasonic Meters Installation Manual
- 3812 Liquid Ultrasonic Meters Installation Manual

**Reinstall wire security seals on the endcaps, if necessary**

**Installation complete**




- A. 3410/3810 series transmitter with local display

For more information: [www.emerson.com](http://www.emerson.com)

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## Documents / Resources

	<p><a href="#">EMERSON Rosemount 3410 Series Local Display Field Install Kit</a> [pdf] User Guide Rosemount 3410 Series, Local Display Field Install Kit, Rosemount 3410 Series Local Display Field Install Kit, Rosemount 3810 Series</p>
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## References

- [Emerson Global | Emerson](#)
- [Emerson Global | Emerson](#)
- [Rosemount | Emerson US](#)
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