

DREXELBROOK®

A Leader in Level Measurement

Upgrade Installation Guide

For the

Universal IV™ Lite and Universal IV™ Pro
Model Transmitters

2-Wire RF Admittance / Capacitance Level
Measurement System with HART® Protocol

For Assistance Call 1-800-527-6297
Outside North America + 215-674-1234

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Universal IV™ Transmitter with HART® Protocol



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Universal IV Upgrade Package - Integral

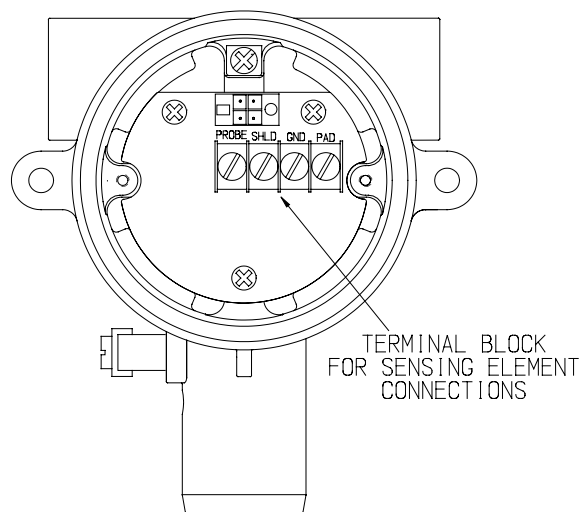
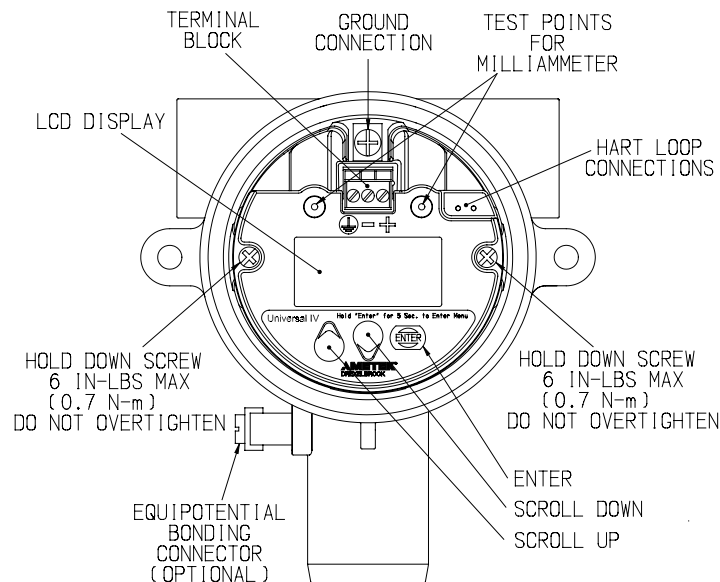
The Universal IV integral upgrade package includes:

- Universal IV electronics in housing
- Interconnect cable
- Heat-shrink tubing
- Extension tube (if applicable)



Note: Not all sensing elements require an extension tube.

Description	Part Number	Upgrade Kit Number										
		R00	R01	R02	R03	R04	R05	R11	R12	R13	R14	R15
Cable Assembly, 2 terminal, 5.25" long	380-9000-079	X	X					X				
Cable Assembly, 3 terminal, 11.5" long	380-9000-127	X		X		X			X		X	
Cable Assembly, 2 terminal, 11.5" long	380-9000-128	X			X		X			X		X
Extension Tube, 3/4 NPT, 5" long	242-0006-100	X		X			X		X			X
Extension Tube, 1 NPT, 8" long	242-0006-113	X			X	X				X	X	
Screw, 6-32 x 1/4", Red	220-0002-115	X		X		X			X		X	
Screw, 6-32 x 1/4", Blue	220-0002-116	X	X	X	X	X	X	X	X	X	X	X
Heat-shrink Tubing, 1" I.D. Expanded	388-0001-067	X	X	X	X	X	X	X	X	X	X	X



ELECTRONIC UNIT REMOVED

Preparing the system for upgrade:

1. Disconnect the loop wires from the existing system.
2. Disconnect the interconnect cable from the transmitter and the sensing element
3. Remove the spark protector from the sensing element (not installed on all systems).

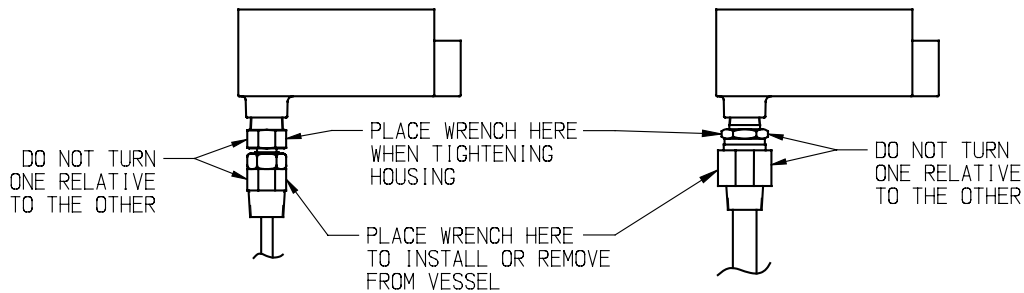


Note: The spark protector will not be reinstalled; the Universal IV electronics has built-in spark protection.

4. Remove the housing from the sensing element by rotating counterclockwise.



Warning: Be careful not to loosen the packing gland on the sensing element.



TYPICAL PACKING GLAND CONFIGURATIONS

Upgrade to Universal IV Electronics:

5. Remove the lid from the housing to expose the electronic unit.
6. Loosen the two (2) hold-down screws on the top of the electronic unit.
7. Carefully remove the electronic unit from the housing.
8. Connect the new interconnect cable to the sensing element. Use the blue screw for the center wire and the red screw for the shield wire.



Note: Not all sensing elements use the shield wire connection.

9. Slide the heat-shrink tube over the back end of the sensing element.
10. Apply heat to the heat-shrink tube until it fits tightly on the sensing element.



Note: If the heat-shrink tube cannot be heated, wrap the back end of the sensing element with an insulated electrical tape.

11. If required, install the extension tube over the interconnect cable and thread it clockwise onto the back end of the sensing element and tighten (Use thread sealant on pipe thread connections to prevent galling and to create a weather tight seal)..



Warning: Do not overtighten the packing gland on the sensing element. *See Figure 1.*

12. Insert the interconnect cable through the bottom hub of the housing.

- Thread the extension tube, on the back end of the sensing element, clockwise into the housing and tighten. (Use thread sealant on pipe thread connections to prevent galling and to create a weather tight seal).



Warning: Do not overtighten the packing gland on the sensing element.

- Connect the interconnect cable to the terminal block in the bottom of the housing. Connect the cable's center wire (blue) to the "PROBE" terminal and the cable's shield wire (red) to the "SHLD" terminal.

- Reinstall the electronic unit.



Note: Make sure that the unit is properly seated on the connector socket.

- Tighten the two (2) hold-down screws on the electronic unit.



Caution: Do not over tighten the hold-down screws, 6 in-lbs (0.7 N-m) maximum torque.

- Connect the loop wires to the terminal block on the top of the electronic unit.

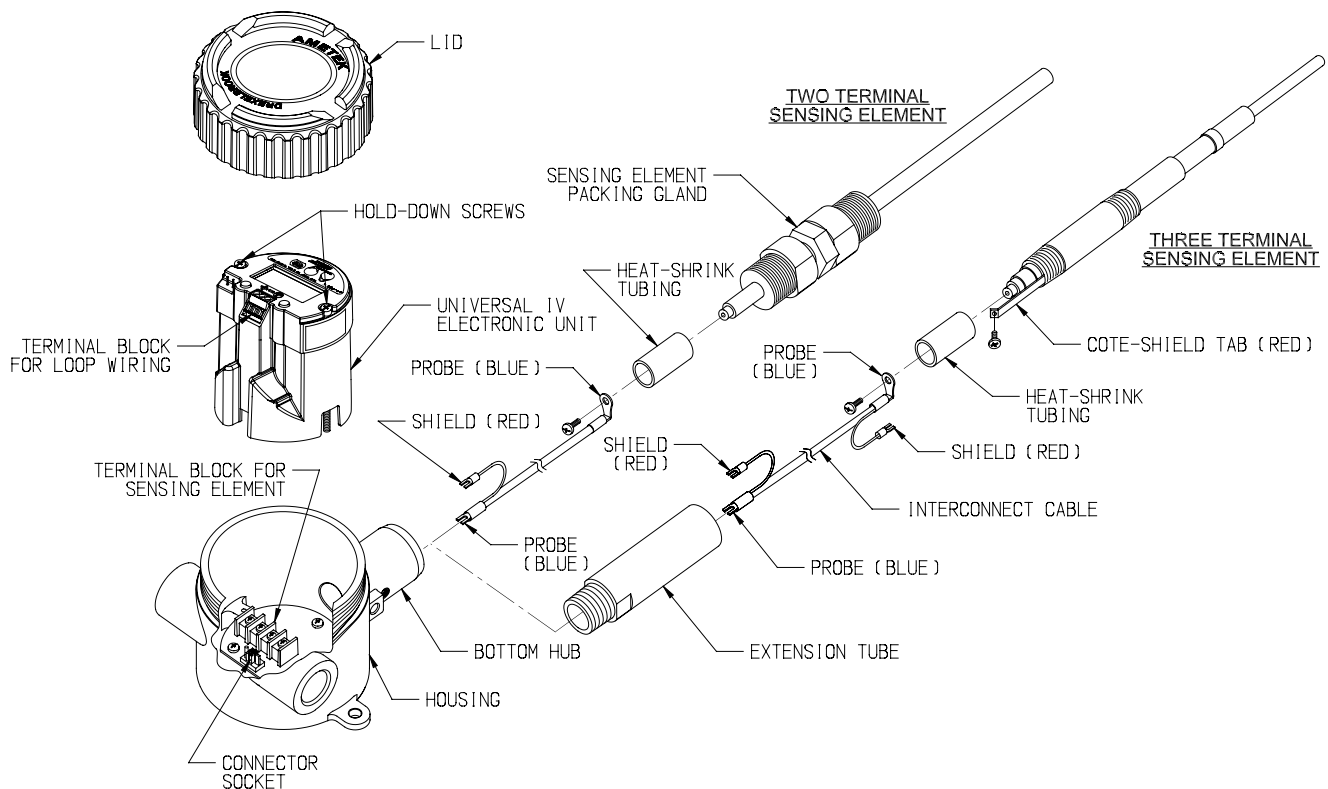
- Reinstall the housing lid.



Important: The lid must be fully seated to insure a weather tight seal.



Note: For hazardous (classified) locations, refer to the: Universal IV Installation and Operating Instructions (UIV-LM)



Universal IV Upgrade Package - Remote

The Universal IV integral upgrade package includes:

- Universal IV electronics in housing

Preparing the system for upgrade:

1. Disconnect the loop wires from the existing system.
2. Disconnect the sensing element connections from the transmitter.
3. Remove the housing and transmitter.

Upgrade to Universal IV electronics:

4. Remove the lid from the housing to expose the electronic unit.
5. Loosen the two (2) hold-down screws on the top of the electronic unit.
6. Carefully remove the electronic unit from the housing by grasping the hold-down screws and lifting. (The hold-down screws are captive and will not fall out of the electronic unit).
7. Securely mount the Universal IV housing in place of the old housing.
8. Connect the three-terminal cable from the sensing element to the terminal block in the bottom of the housing.
9. Reinstall the electronic unit.

Note: Make sure that the unit is properly seated on the connector socket.

10. Tighten the two (2) hold-down screws on the electronic unit.



Caution: Do not over tighten the hold-down screws, 6 in-lbs (0.7 N-m) maximum torque.

11. Connect the loop wires to the terminal block on the top of the electronic unit.
12. Reinstall the housing lid.

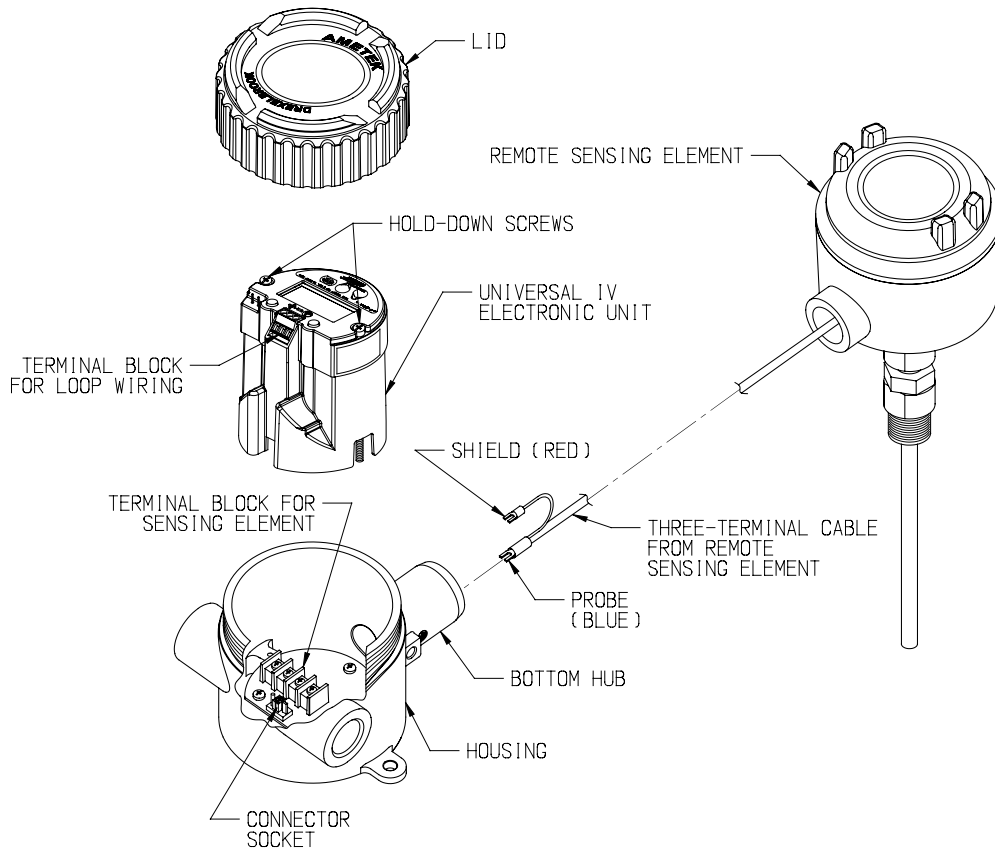


Important: The lid must be fully seated to insure a weather tight seal.

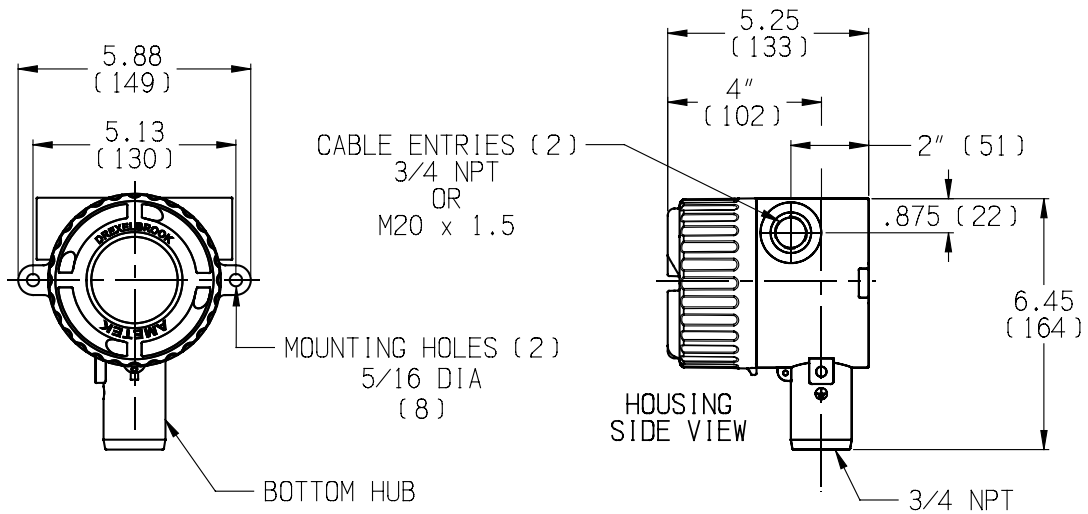


Note: For hazardous (classified) locations, refer to the: Universal IV Installation and Operating Instructions (UIV-LM)

Remote Installation



Housing Dimensions



DIMENSIONS ARE IN INCHES
(mm)

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