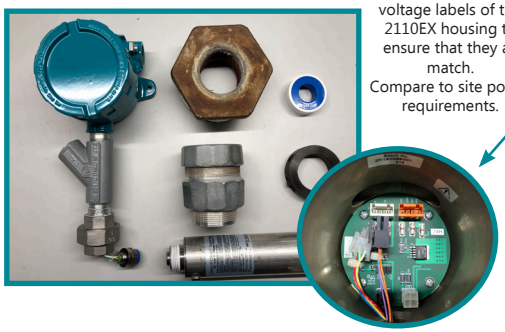
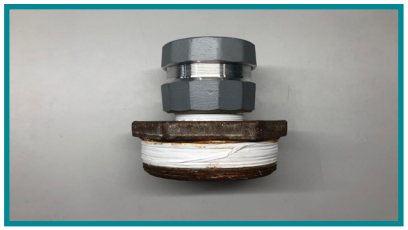
Assembly Instructions for RU Flex DLS 2100 with Explosion Proof Housing (12V or 24V)

1 Confirm that you have all the necessary materials.



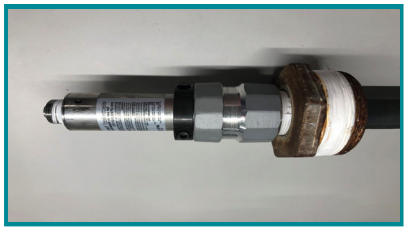
Inspect the model/ voltage labels of the 2110EX housing to ensure that they all match. Compare to site power requirements.

2 Apply thread sealant to the threads of the cord grip & reducer bushing. Join the two components together.

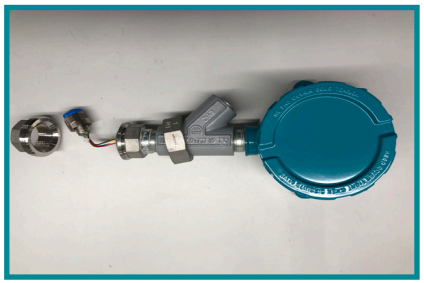


3 Remove the ground screw from the sleeve of the sensor. Slide the cord grip/reducer onto the sleeve, 1' from the top of the sensor.

4 Slide the black, oxide shaft collar onto the steel sleeve of the sensor. Secure directly above the cord grip/reducer.



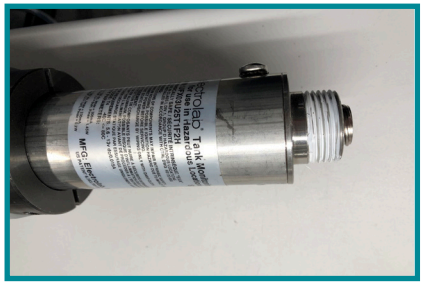
5 Loosen the nut that is atop the 1" union of the 2110EX housing.



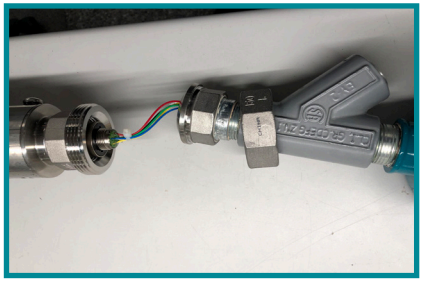
6

Confirm that the number of connector pins on the sensor is compatible with the number of connector pins of the 2110EX housing.

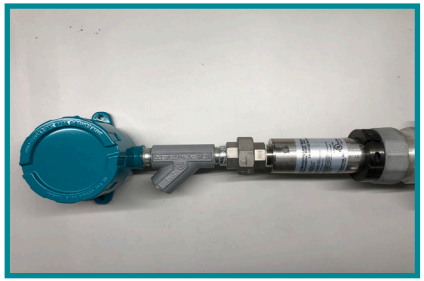
7 Apply thread sealant to the sensor's top plug threads.



8 Hold the 2110EX over the top of the sensor. Screw circular connector onto the connector of the top plug.



9 Remove lower section of the 1" union and secure it to the sensor threads.



Join the 2110EX housing's 1" union with the top plug of the sensor, ensuring no wires are clipped in the process. Tighten to secure.

10

Connect the external RS485 communication and power wires to the orange connector.

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Follow the control drawings provided on our website!

11

If sensor is HLS option, repeat Step 10 for the gray connector.

12

Seal the incoming conduit with a certified EX fitting. Seal within 18-inches from the 2110EX enclosure.

Sensor is now ready for communications test!
See reverse side of page for instructions.

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Required Equipment

- ❑ RU Flex 2100 DLS ready for installation.
- ❑ HHC-1000 or Computer w/ Terminal Emulation program
- ❑ DMM (Digital Multi-Meter)
- ❑ Large pipe wrench, 24" minimum

Pre-Installation Sensor Communications Test

Communications Test:

1. Open the housing of the RU Flex 2100 DLS to access the fuse board.
2. Configure the HHC-1000 or computer for the Baud Rate that is marked on the DLS with masking tape. Connect the HHC-1000 or computer to the fuse board.
3. Request data from the sensor to verify that the level and temperature values are valid and the sensor is reading the location of the floats.
4. Verify there are no errors indicated.
5. Configure sensor for the proper Unit Number, Address, or protocol.

Please note readings of 999.99" or 000.00" indicate an error. If an error code is reported, determine the cause of the error and correct it before proceeding. Refer to the *RU Flex 2100 DLS User Guide* found online at *www.electrolabcontrols.com*

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Special Installation Considerations

Failure to use the required weight for the RU Flex 2100 DLS will void the warranty. Some installations may require the addition of a riser to ensure the tube sits within the cord grip and prevents movement of the sensor tube. See table below.

Tank Height (A)	Port Height[1] (B)	Length from Bottom of Tank to Top of Port[2] (A+B)	Weight Required	
ft.	*in.*	*ft.-in.*	*tank flow*	*lbs.*
15	3	15-3	Standard	1 x 12
			Turbulent	2 x 8
16	3	16-3	Standard	1 x 12
			Turbulent	2 x 8
20	3	20-3	Standard	1 x 12
			Turbulent	2 x 8
25	3	25-3	Standard	2 x 8
			Turbulent	(1 x 12) + (1 x 8)
30	3	30-3	Standard	2 x 8
			Turbulent	(1 x 12) + (1 x 8)
35	3	35-3	Standard	(1 x 12) + (1 x 8)
			Turbulent	2 x 12
36	3	36-3	Standard	(1 x 12) + (1 x 8)
			Turbulent	2 x 12

1 - All calculations were done with standard port height of 3". Adjust accordingly for longer port lengths.

2 - Measurement does not account for curvature at the top of the tank. Common measurement if mounting at center of tank is a difference of 6".

Installation in the Tank

1. Carry the assembled RU-Flex 2100 DLS and its weight separately to the top of the tank. *Do **not** attach weights on sensor until ready to install sensor in tank.*
2. Uncoil the sensor onto the catwalk.
3. Position the sensor for installation and screw the weight onto the bottom of the sensor.
4. Lower the sensor into the tank port, keeping an arch in the hose with its natural curve. Keep hands 18-inches apart to prevent bending the sensor past a safe point.
5. When the weight reaches the bottom of the tank, loosen the cord grip of the sensor to be attached to the tank port. Secure the cord grip onto the tank port.
6. Raise the sensor 1/2-inch from the bottom of the tank and allow the hose to relax.
7. Secure the cord grip by fully hand-tightening the top nut. Secure the black, oxide shaft collar clamp above the cord grip. Proceed to "Electrical Connection."

Electrical Connection

1. ***With the power disconnected***, feed the external cables to the sensor through the open port on the side of the housing. Unplug the gray, 6-position connector from the internal fuse board.
2. Install the power signal wires using the white depressor tool. It is recommended to save the white depressor tool for future use.
3. Plug the connector into the fuseboard. Route wires away from the housing threads and screw in the housing cover.