Instructions for Replacing Beckett 2N1R LWCO Sensor

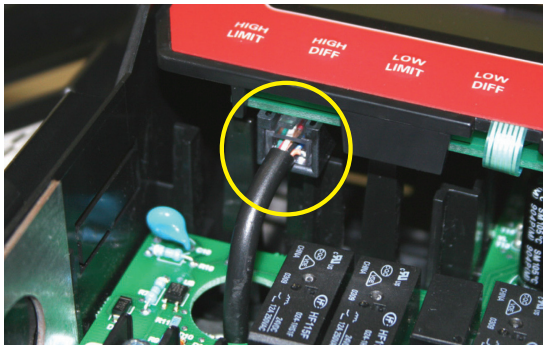
PARTS LIST:

(1) 7600Pxx LWCO Sensor

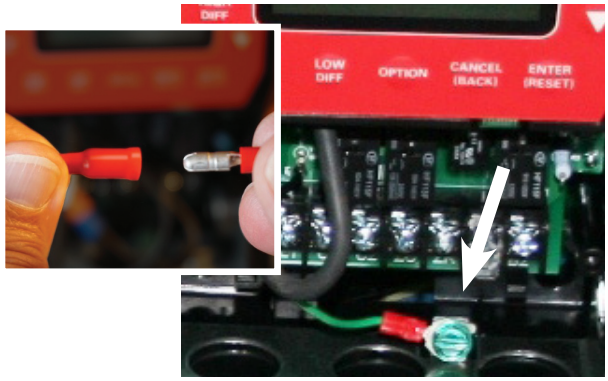
(1) 1K ohm resistor - used for testing sensor

INSTRUCTIONS:

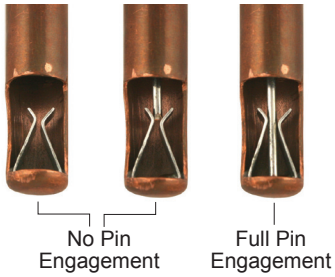
1. Remove power from the AquaSmart control.
2. Unplug the existing sensor from the connection under the display and remove the sensor from the well. If the sensor is mounted remotely from the control, remove the well clip used for holding the sensor cable in place and save for use when installing the new sensor.



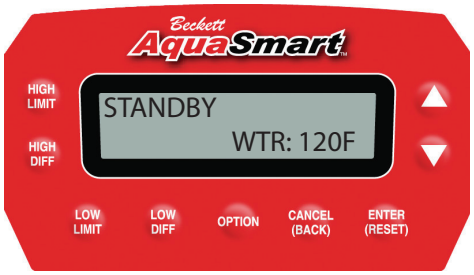
3. Disconnect the green sensor wire from the bullet/ connector, pipe clamp or from the green screw on the AquaSmart control.



4. **Before inserting the new sensor, use an ohm meter to check the continuity of the LWCO circuit.** Attach one of the meter probes to the connector, screw or wire to which the green sensor lead was attached. The second probe should go to metal on the boiler vessel (not the boiler jacket).
5. A good connection reading 5 ohms or less should be possible. Check all connections in the LWCO wiring circuit for possible issues. If the reading is above 10 ohms, run a new ground wire from the green screw on the control case to the boiler vessel. If a new wire is used, connect the green lead on the new sensor to the green screw when the new sensor is installed. **The LWCO function will not operate properly without a good connection from the green sensor lead back to the boiler vessel.**
6. Insert the replacement sensor into the well. Make sure the sensor is fully seated. You should feel a slight resistance when the sensor pin reaches the clip in the well. Continue pushing until the sensor comes to a solid stop. If the sensor is remotely mounted, reinstall the clip used to hold the sensor cable securely in place.



7. Plug the main sensor cable into the connector under the display.
8. Reconnect the green sensor lead to the bullet/ connector, pipe clamp or to the green screw on the AquaSmart control.
9. Restore power to the AquaSmart Control. Allow the control to go through the start-up process. Follow the Control Checkout Procedure in the AquaSmart manual to confirm proper operation of the control. **Proper operation of the control must be confirmed before leaving the installation site.**



Normal Display in Standby

Part No. 62075-001

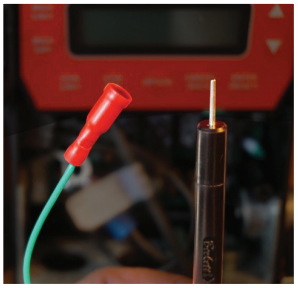
What to do if Low Water Lockout Occurs with New Sensor

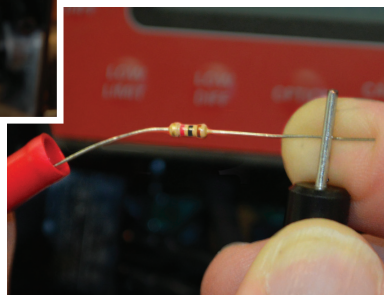
1. Turn off power to the control.
2. Remove sensor from well and disconnect green sensor wire. ***Leave the main sensor cable connected to the control.***
3. Being careful not to allow the sensor or the green wire to touch anywhere in the terminal area of the control, restore power to the control. Within 30 seconds the AquaSmart control should enter into Lockout Water Low.

4. Use the 1,000 Ohm resistor attached to this instruction sheet. Place one resistor lead on the metal pin of the sensor, the second resistor lead should be on a metal portion of the connector for the green wire coming from the sensor (see pictures below). Hold the resistor in place with fingers. Within 30 seconds the Lockout Low Water fault on the display should clear. **If the Lockout Low Water clears, the sensor is operating properly.**

   Other Possible Causes:

   - Poor connections in the LWCO circuit wiring
   - Deposit build up on the well or boiler vessel
   - Conductivity issues with the water.

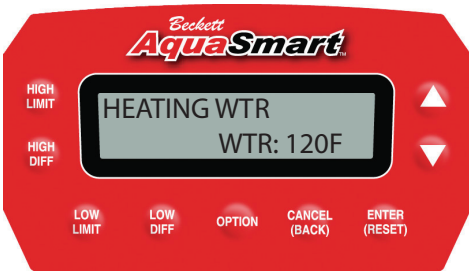




5. Recheck the continuity of the LWCO circuit following the procedure on the previous page.
6. If the sensor is good and the LWCO connection wiring is good, drain water from the boiler, remove the well and check for deposit build up on the well. Clean if necessary and reinstall the well. Refill the boiler. Check for proper operation of the LWCO circuit.
7. If the sensor, LWCO connection wiring and well are good, attempting to measure the resistance through the water may provide some indication of the conductivity of the water in the system. Remove the sensor from the well. Place one of the ohm meter probes on the metal tube inside the well and place the second probe on the metal of the boiler vessel.

   - 100K ohms or above - water not in contact with well, deposit build up in boiler vessel
   - 5K-100K ohms - intermittent operation could occur
   - 5K ohms or below - LWCO should operate

   These are rough guidelines only.



Normal Display Heating Water

1K Ohm Resistor Here

Part No. 62075-001 R00, Printed in the USA 10/15

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