

Solinst® Water Level Meter Complete Electronics Replacement

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Model 101/102

Tools and Materials Needed

1. Complete Electronics Kit (#103558) Includes:
 - Mk2 Circuit Board Assembly (Wiring, Sensitivity Switch and Light and Red Lens, and Test Button)
 - Sonalert (2 x Screws)
 - Battery Tray (4 x Screws and Nuts)
 - 9V Alkaline Battery
2. Phillips Screwdriver
3. 10 mm (3/8") Wrench
4. Wire Cutters (if required)
5. Small Flat Screwdriver (3 mm (1/10"))
6. Pliers



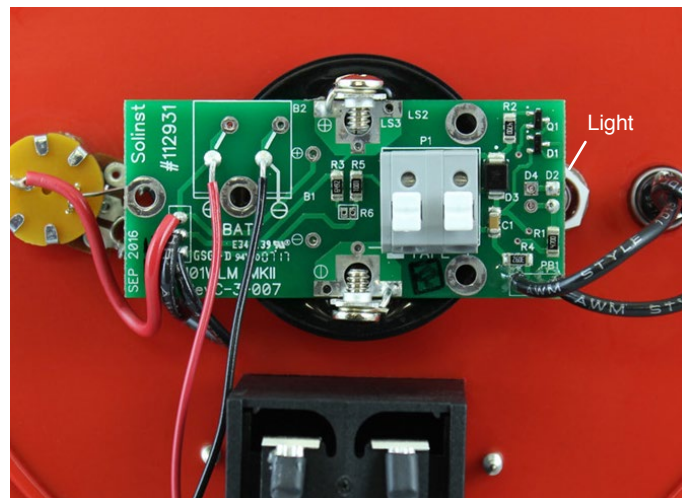
Complete Electronics Kit (#103558)

Instructions

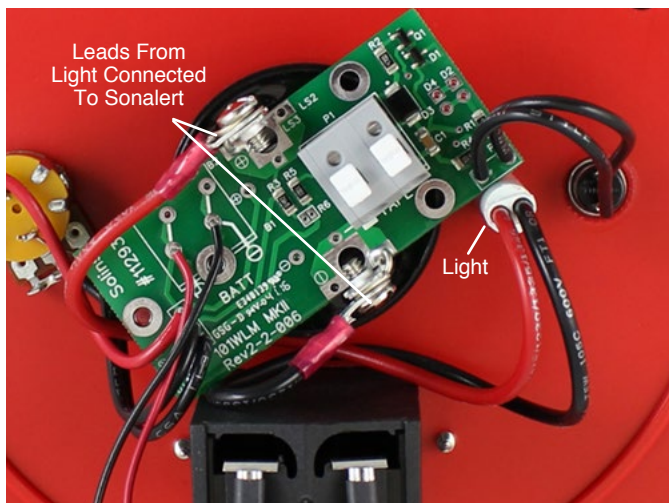
For Mk2 Water Level Meters (Push-Release Tape Connection)

Note: Instructions for Mk1 Water Level Meters (Molex tape connection, soldered connections to battery tray) are on Page 2.

1. Remove the battery from the meter. Undo the three screws holding the faceplate to the reel. Remove the faceplate.
2. Press down on the white terminals of the push-release fittings on the circuit board and pull out to remove the tape leads.
3. From the front of the faceplate, use the wrench to unscrew the nut holding the test button and push the button back out of the faceplate.



Back of Mk2 Water Level Meter Faceplate with New Style Light



Back of Mk2 Water Level Meter Faceplate with Older Style Light

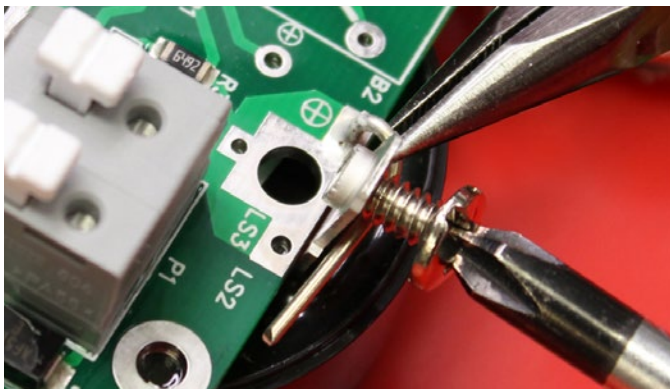
4. If you have an older style light (leads connected to Sonalert terminals – see photo above), cut the red and black wires connected to the light, and push the light out through the front of the faceplate.

5. Use the Phillips screwdriver to undo the two screws from the battery tray. Pull the quick-connect fittings off of the terminals on the battery tray. Remove the battery tray from the faceplate.
6. Use the small flat screwdriver to unscrew the small brass screw on the side of the sensitivity knob. Remove the sensitivity knob. Use the pliers to unscrew the nut holding the sensitivity switch and remove the switch from the faceplate.
7. Unscrew the Sonalert retaining ring from the front of the faceplate and remove the old Sonalert and circuit board assembly from the faceplate.
8. Insert the new battery tray through front of the faceplate. Use the two screws (bolts and nuts where required) to secure the tray to the faceplate.

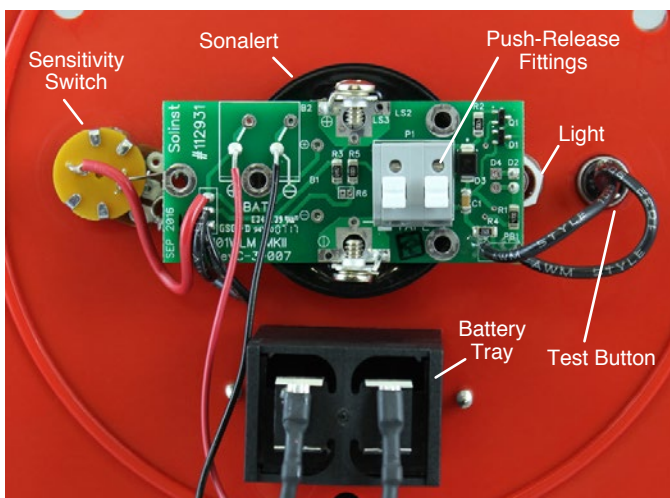
Note: To secure the battery tray, the #4 x 1/2" Phillips Screws are for plastic reels, while the #4-40 x 1/2" Phillips Bolts and Nuts are for metal reels.

Water Level Meter Complete Electronics Replacement

- Put the new Sonalert through the faceplate, and secure it using the retaining ring. Use the photo of the fully assembled faceplate at the bottom of the page as a reference for its position.
- If you had an older style light (or the lens needs replacing) insert the new red lens through the opening in the faceplate and secure using the white nut.
- Place the circuit board assembly in position on top of the Sonalert, ensuring the sides marked +ve and -ve are lined up with the corresponding terminals on the Sonalert and the light seated in the lens.
- To connect the circuit board, loosen the two screws from the Sonalert. Wrap the two bare wires from the circuit board around the screws, between the screw head and Sonalert terminals. Start by bringing the wires underneath the screws (see photo below). Tighten the two screws.



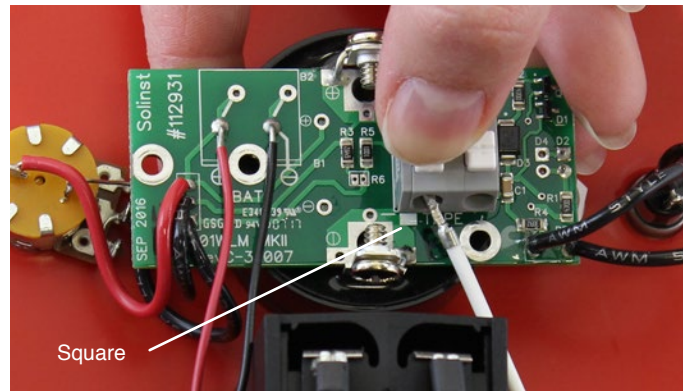
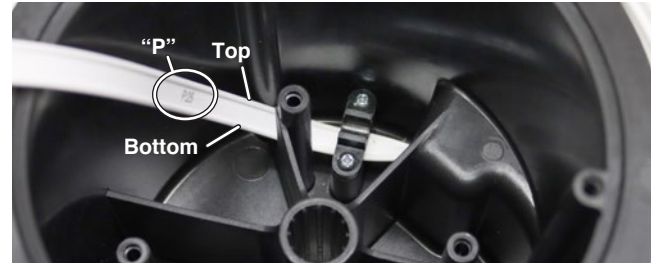
- Insert the test button through the opening in the faceplate, and secure it in place using the nut.
- Insert the sensitivity switch through the faceplate with the three connection prongs positioned towards the battery drawer, slightly towards the centre of the reel. Tighten the nut. Fasten the sensitivity knob on the front of the switch using the brass screw.
- Connect the black wire with quick-connect fitting to the negative terminal on the battery tray. Connect the red wire with quick-connect fitting to the positive terminal.



Back of Fully Assembled Water Level Meter Faceplate

- Connect the tape to the new circuit board assembly by pressing down on the white terminals on the circuit board and inserting the tape leads. Release the terminals and the leads should be secured. The lead on the top of the tape is inserted into the terminal with a white square below it on the circuit board.

Note: There is a "P" etched on the tape to help denote the proper orientation of the tape – top and bottom leads.



Press Down on the White Terminals on the Circuit Board and Insert the Tape Leads

- Install the new battery.
- With the probe in a glass of tap water, turn the Water Level Meter to the 'ON' position. If the connections are correct the buzzer and light will activate. If they do not activate, check all connections and the polarity of the battery.
- Reattach the faceplate to the reel using the three screws.

Water Level Meter Complete Electronics Replacement

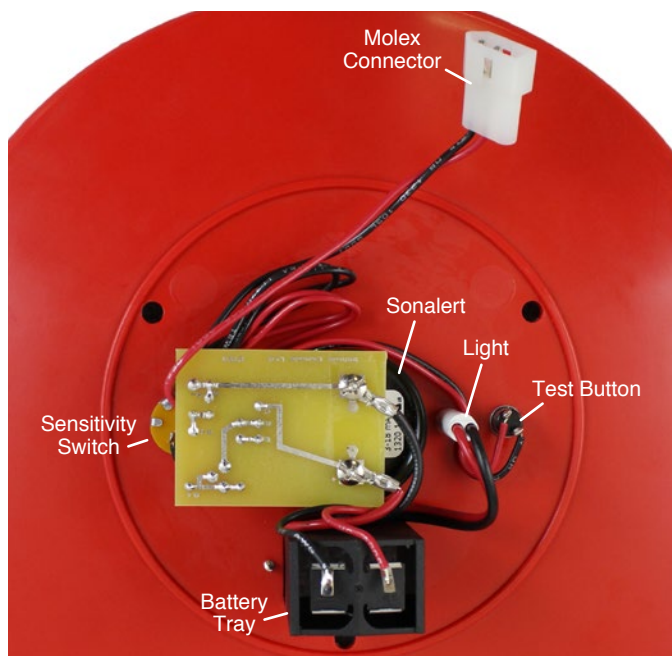
Instructions

For Mk1 Water Level Meters (Molex Tape Connection)

Note: Instructions for Mk2 Water Level Meters are on Page 1 (tape connection using push-release fittings on circuit board and quick-connect fittings to battery tray).

Tools and Materials Needed

- Complete Electronics Kit (#103558) Includes:
 - Mk2 Circuit Board Assembly (Wiring, Sensitivity Switch and Knob, Light and Red Lens, and Test Button)
 - Sonalert (2 x Screws)
 - Battery Tray (4 x Screws and Nuts)
 - 9V Alkaline Battery
- Phillips Screwdriver
- 10 mm (3/8") Wrench
- Wire Cutters
- Small Flat Screwdriver (3 mm (1/10"))
- Pliers



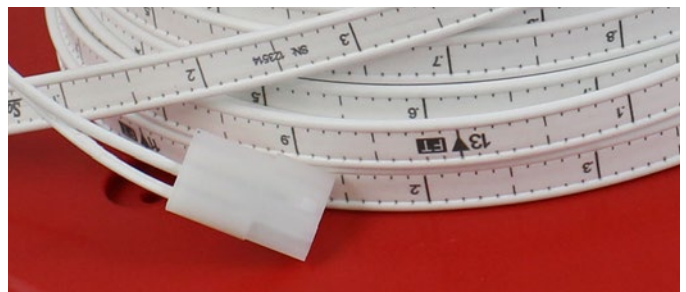
Back of Mk1 Water Level Meter Faceplate

- Remove the battery from the meter. Undo the three screws holding the faceplate to the reel. Remove the faceplate.
- Disconnect the Molex connector that connects the circuit board to the tape.
- From the front of the faceplate, use the wrench to unscrew the nut holding the test button and push the button back out of the faceplate.
- Cut the red and black wires connected to the light, and push the light out through the front of the faceplate.
- Use the Phillips screwdriver to undo the two screws from the battery tray. Cut the red and black wires from the battery tray. Remove the battery tray from the faceplate.

- Use the small flat screwdriver to unscrew the small brass screw on the side of the sensitivity knob. Remove the sensitivity knob. Use the pliers to unscrew the nut holding the sensitivity switch and remove the switch from the faceplate.
- Unscrew the Sonalert retaining ring from the front of the faceplate and remove the old Sonalert and circuit board assembly from the faceplate.
- Insert the new battery tray through front of the faceplate. Use the two screws (bolts and nuts where required) to secure the tray to the faceplate.

Note: To secure the battery tray, the #4 x 1/2" Phillips Screws are for plastic reels, while the #4-40 x 1/2" Phillips Bolts and Nuts are for metal reels.

- Put the new Sonalert through the faceplate, and secure it using the retaining ring. Use the photo of the fully assembled faceplate on Page 2 as a reference for its position.
- Insert the new red lens through the opening for the light in the faceplate and secure using the white nut.
- Place the circuit board assembly in position on top of the Sonalert, ensuring the sides marked +ve and -ve are lined up with the corresponding terminals on the Sonalert and the light seated in the lens.
- To connect the circuit board, loosen the two screws from the Sonalert. Wrap the two bare wires from the circuit board around the screws, between the screw head and Sonalert terminals. Start by bringing the wires underneath the screws (see photo on Page 2). Tighten the two screws.
- Insert the test button through the opening in the faceplate, and secure it in place using the nut.
- Insert the sensitivity switch through the faceplate with the three connection prongs positioned towards the battery drawer, slightly towards the centre of the reel. Tighten the nut. Fasten the sensitivity knob on the front of the switch using the brass screw.
- Connect the black wire with quick-connect fitting to the negative terminal on the battery tray. Connect the red wire with quick-connect fitting to the positive terminal.
- Remove the Molex connector from the tape leads by pushing out the two pins. Cut each pin in half (see image for correct location). Use pliers to flatten the remainder of the pins against the tape lead, so it fits easily into the terminals on the circuit board.

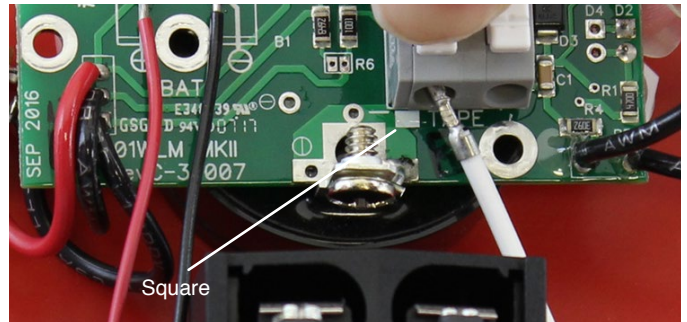
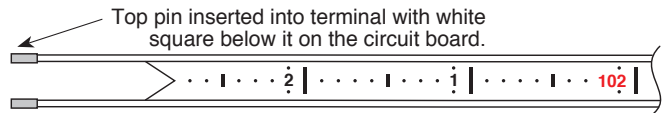


Remove the Pins from the Tape Molex Connector (Mk1)



Cut the Pins on Each Tape Lead in Half (as shown)

17. Connect the tape to the new circuit board assembly by pressing down on the white terminals on the circuit board and inserting the tape leads. Release the terminals and the leads should be secured. The lead on the top of the tape (numbers facing up) is inserted into the terminal with a white square below it on the circuit board.



18. Install the new battery.
19. With the probe in a glass of tap water, turn the Water Level Meter to the 'ON' position. If the connections are correct the buzzer and light will activate. If they do not activate, check all connections and the polarity of the battery.
20. Reattach the faceplate to the reel using the three screws.

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