

Solinst® Water Level Meter - 110V Power Reel Instructions

Model 101

Operation of the Controller

1. Ensure that the 'FWD/OFF/REV' switch is in the 'OFF' position.
2. Set the 'Speed' potentiometer on zero.
3. Connect AC line power.
4. Select FWD or REV.
5. Slowly turn the 'Speed' potentiometer clockwise until the motor just starts to turn.

Caution: Motor must be grounded in accordance with the national electrical code and local codes by trained personnel to prevent serious electrical shocks.

If down-hole component gets stuck, do not use power motor. To avoid injury, turn motor off immediately, and attempt retrieval manually.

Note: The Power Reel can use heat embossed polyethylene flat tape or Solinst laser-marked flat tape



Controller

Input Ratings

Voltage: 115V AC single phase +/- 10%
(220V Power Reel: 125V AC single phase +/- 10%)

Frequency: 50/60Hz +/- 2Hz

Front Panel Controls

Speed Pot: Adjusts motor speed from MIN SPD (0) setting to MAX SPD (10) setting.

FWD/STOP/REV: Starts and Stops motor, selects motor rotation.

Ambient Temperature Conditions

Temperature: 0 - 40°C

Humidity: 90% RH or less, non-condensing

Motor

Lubrication

The shaft bearings contain grease fittings. After one year, insert multipurpose chassis grease, and re-apply once per year. The gear box is lubricated for life, and should never need to be lubed.

Servicing

Disconnect power source from motor and any accessory devices and allow motor to come to a complete stand still.

Water Level Meter Operation

Equipment Check

1. The level of sensitivity can be adjusted higher or lower by turning the dial clockwise or counter clockwise, and pressing the sensitivity button.
2. Depress the Battery Test button to test the battery and circuitry.
3. Submerge the probe in tap water. This completes the circuit and activates the buzzer and light.

Water Level Measurement

The zero measurement point is at the tip of the sensor pin, located at the centre of the P2 Probes, and where the black Delrin tip meets the stainless steel body of the P7 Probes.

The light and buzzer activate when the zero point enters water. To ensure accuracy, lower and raise the probe a few times and then record the depth measurement from the tape at the top of the well.

Using the Tape Guide

The tape guide has been designed to:

- improve accuracy when reading water levels,
- easily obtain repeatable measurements,
- prevent tape being cut by well casing,
- allow the tape and probe to hang straight from the side of the well.

Operation

Feed the tape into and out of the well using the groove in the top of the Tape Guide.

Tape Guide



When using the tape guide, the measuring point is offset from the top of casing. To adjust your measurements to the top of the casing, simply subtract the amount indicated on the front of the tape guide (i.e. 6 cm or 2/10 ft.).

Routine Care

1. After the depth to water has been recorded, the tape should be carefully rewound onto the reel, the probe wiped dry and placed into the probe holder.
2. The probe, tape and reel can be cleaned with phosphate free (non-abrasive) detergent and warm water.
3. Remove any dirt or water from around the central sensor pin. If the central sensor pin is corroded or coated, use emery cloth to polish it.
4. Check the P2 probe seal/strain relief and replace the black heat shrink if there is any cracking or other damage.
5. Use of the Tape Guide adds to the life of the tape.

Battery Replacement (battery type - alkaline, 9 volt.)

1. The battery is housed conveniently on the front of the box with the sensitivity switch.
2. To replace the battery, open the compartment with a screw driver.
3. Note the polarity and place another new battery in the drawer and slide it back into the faceplate.

Replacement Parts

The following parts can be provided should they become lost or damaged: Probes and seal kits, splice kits, lights, switches, etc., reels, and replacement tapes with probes (complete) or probe seals.

SYMPTOM	CAUSE	REMEDY
No sound when probe immersed in water	Dead battery.	Replace with 9V Alkaline.
	Water conductivity is very low.	Increase sensitivity switch setting (turn clockwise) or call Solinst for assistance.
	Disconnected wires on circuit board.	Check all connections inside hub of reel for loose/disconnected wires - solder or reconnect.
	Broken wire in tape.	Locate break in tape - splice and seal (contact Solinst).
	Disconnected wire inside probe.	Contact Solinst to obtain parts/repair instructions.

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Printed in Canada
February 27, 2012
(#109338)

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