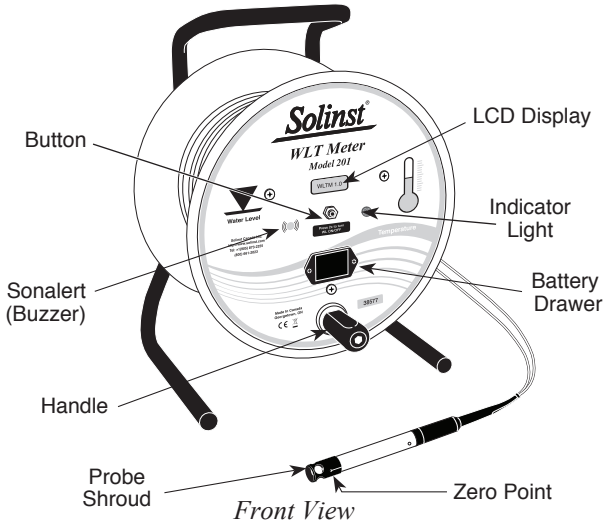
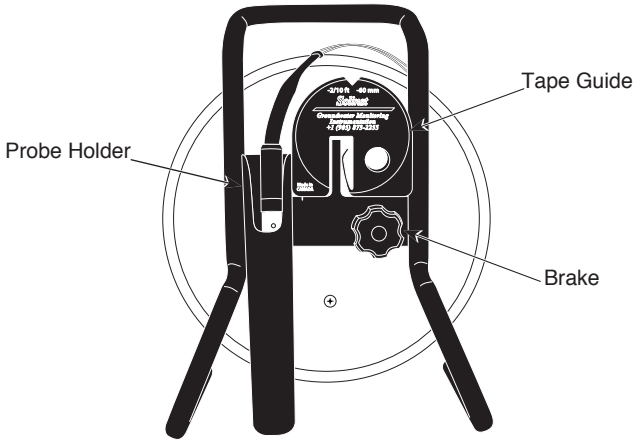
Solinst® Water Level Temperature Meter Instructions

Model 201



Front View



Back View

Operating Principles

The Solinst Model 201 Water Level Temperature (WLT) Meter measures water level and temperature. Temperature readings are displayed on the LCD screen and water level is read from the tape as with a conventional Water Level Meter. When the probe is immersed in a conductive fluid, a circuit is completed and the water level is indicated by a tone and light.

Equipment Check

Upon receipt of your Solinst Model 201 Water Level Temperature Meter, and always before heading out to the field, the following checks are recommended:

1. Press the button to turn the meter on. The display should briefly show the firmware version of the meter (e.g. WLTM 1.0), then the air temperature (e.g. 21.12 C). If the battery is low, a 'LOW BATT' warning appears and the 9 volt alkaline battery should be replaced. If "No Comm" appears, check the probe connection (call Solinst if message persists). If the display is blank, install a new 9V battery.
2. Ensure the probe tip and shroud are clean.
3. Submerse the probe in tap water. This completes the circuit and activates the buzzer and light.

Taking Water Level & Temperature Measurements

Notes:

1. Leave the probe shroud installed. It is only removed for cleaning.
2. The zero measurement point of the Water Level Temperature Meter is located near the sensor tip of the probe.
3. If the display indicates 'LOW BATT' there is still some life left in the battery, but it is recommended that you change the batteries as soon as possible.

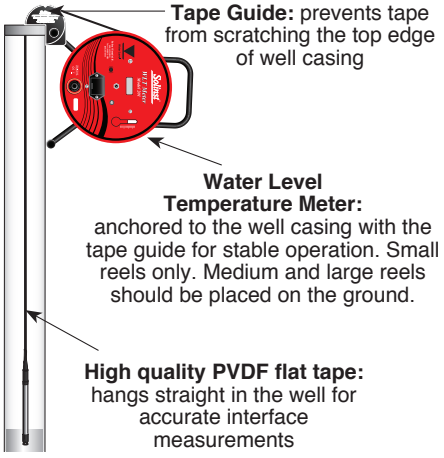
1. Turn the meter on and lower the probe into water. A tone and light indicate that water has been reached and the depth can be read off the tape and recorded. Lower and raise the probe slowly a few times to verify the depth.
2. Once in water, the screen displays temperature of the water at the zero point. Lower the probe to the desired depth. Record the depth and the associated temperature reading when stabilized.

Note: Temperature readings are most accurate when the entire probe is submersed.

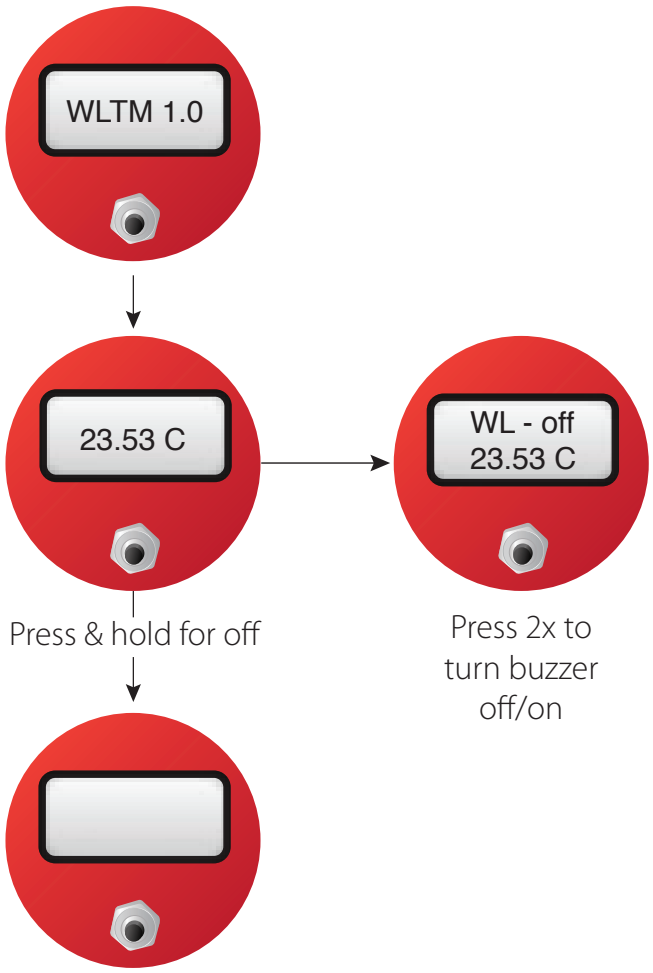
3. To turn the buzzer off while you are obtaining a temperature profile, press the button 2 times quickly. "WL-off" will display above the temperature reading on the LCD. To turn the buzzer back on, press the button 2 times quickly.
4. To conserve battery power, the display has an auto off after 8 minutes of use. If the display is blank when you wish to take a measurement, press the button to display temperature reading.
5. Repeat at each desired depth.
6. After each use remove the probe shroud and clean the sensor pin with a soft cloth and rinse with deionized water (see cleaning instructions for more details).
7. To turn the Water Level Temperature Meter off, press and hold the button for about 2 seconds.

Tape Guide Instructions

1. Fit the Tape Guide over the top of the well, small end in.
2. Insert the leg of the Water Level Temperature Meter into the hole on the Tape Guide and rest the Water Level Temperature Meter on the side of the well casing (small reels only, see diagram).
3. Take all measurements at the 'V' notch on the Tape Guide, and adjust readings according to the offset stamped on the Tape Guide (i.e. subtract 6 cm or 2/10 ft).
4. When finished, store the Tape Guide by clipping it onto the support bracket on the back of the Water Level Temperature Meter.



Display Menu



Notes:

1. To turn the WLT Meter buzzer off, press the button 2 times quickly.
2. To turn the WLT Meter off, press and hold the button for 2 seconds.

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 wiped clean with phosphate free (non-abrasive) detergent and warm water. Do not submerge the reel.
3. Use of the Carrying Bag adds to the service life of the meter.
4. Use of the Tape Guide adds to the life of the tape.

Probe Care and Cleaning

1. Pull the shroud straight off the probe (this may take some force as it is a friction fit).
2. Clean the shroud, probe and sensor with a cloth or paper towel.
3. To remove hard deposits, or stains on the probe and sensor pin, use either pure white vinegar (acetic acid) or CLR diluted by 50%. Try a 30 minute soak followed by gently rubbing with Q-tip, or soft cloth.
4. Rinse thoroughly with de-ionized water.
5. After cleaning, replace the shroud by pushing straight onto the probe until it fully seats.

Battery Replacement

- Battery type - alkaline, 9 volt.

1. The battery is housed in a convenient battery drawer located in the faceplate of the Water Level Temperature Meter.
2. To replace the battery, simply press the drawer in, lift then pull.
3. The battery drawer should slide out of the faceplate enough to pull it out.
4. Note the polarity (positive (+) terminal should be towards the small notch in the end of the drawer) and place 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.

1. Probes and probe shrouds
2. Tape with Tape Seal Plug
3. Tape Seal Plug on short lengths of tape (3 ft or 1 m) and splice kit
4. Faceplate electronics
5. Reels, faceplate, etc.

Troubleshooting

SYMPTOM	CAUSE	REMEDY
No display, blank screen, or no sound when probe in water.	Dead battery.	Replace 9V alkaline battery.
	Wire disconnected on faceplate.	Check all connections inside reel for loose/disconnected wires - solder or reconnect.
	Broken wire in tape.	Locate break in tape - splice and seal, or replace. (Contact Solinst)
	Disconnected wire inside probe.	Contact Solinst to obtain parts/repair instructions.
Temperature readings are inaccurate/bouncing.	Probe is dirty.	See cleaning instructions.
Meter continuously sounds.	Water in probe or probe is dirty.	Remove and check probe for dirt and moisture.
"No Comm" "WLTM 1.0" always displayed.	Probe disconnected or leaking,	Ensure probe is properly connected to tape seal plug and that there are no leaks.
	Broken wire in tape.	Locate break in tape - splice and seal, or replace. (Contact Solinst)
	Wire disconnected on faceplate.	Check all connections inside reel for loose/disconnected wires - solder or reconnect.

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