



Water Level Temperature Meter

Model 201

The Model 201 Water Level Temperature (WLT) Meter is ideal for measuring static water levels, as well as profiling temperature in wells, boreholes, tanks and open water.

Accurate temperature measurements are clearly displayed on an LCD readout on the faceplate, from -20°C to +125°C.

Water level and probe depth measurements are read off the Solinst durable PVDF flat tape. Tape lengths are available up to 600 m (2000 ft).

Also from Solinst, the Model 107 TLC Meter measures water level, temperature and conductivity. (See Model 107 TLC Meter Data Sheet). For datalogging of water level and temperature, see the Model 3001 Levellogger 5 Data Sheet.



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Water Level & Temperature Applications

Water temperature has a direct affect on the biological activity of aquatic plants and animals, as well as many aspects of water quality and chemistry; therefore, it is an important parameter to monitor.

The Model 201 Water Level Temperature Meter is ideal for:

- Profiling temperature in wells and open water
- Detecting runoff, points of inflow, or other sources of thermal pollution
- Early warning of changes in water quality, including dissolved oxygen levels and conductivity
- Monitoring and predicting changes in aquatic environments
- Geothermal drilling and studies

Water Level Temperature Meter Features

- Accurately measure temperature from -20°C to +125°C
- Tape lengths to 600 m (2000 ft)
- Corrosion and chemical-resistant PVDF flat tape
- Standard 9V alkaline battery gives 90 hours of use
- Automatic shut-off after 8 minutes
- Sturdy, standalone reel with ergonomic handle and brake
- No user calibration is required

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Water Level & Temperature Probe

The 201 Probe is made of high quality 316 stainless steel. The pressure-proof probe can be submerged the full length of the tape. The zero measurement point on the probe is close to the tip, keeping water displacement at a minimum.

The temperature sensor is located at the stainless steel tip of the probe, however, since the probe body acts as a heat sink, best accuracy is obtained when the probe is completely submerged. The tape seal plug design allows the probe to be easily replaced, if required.



Laser Marked PVDF Flat Tape

The WLT Meter uses extremely durable PVDF flat tape. The tape is non-stretch and has a dog bone design that prevents adherence to wet surfaces. The tape reels smoothly, remains flexible and hangs straight, regardless of temperature. It is also easy to repair and splice.

The 10 mm (3/8") wide tape has permanent laser markings each millimeter or every 1/100 ft, traceable to NIST and EU measurement standards.

LM2: Feet and tenths: with markings every 1/100 ft.

LM3: Meters and centimeters: with markings every mm



WLT Meter Measurement Principles

When the zero point of the 201 Probe enters water, an electric circuit is completed, activating the buzzer and light. The depth to water is then read off the flat tape.

Temperature readings are read off the LCD display. As the probe is lowered to take temperature measurements at discrete depths, the buzzer can be turned off by pressing the button two times quickly. This is ideal when profiling temperature.

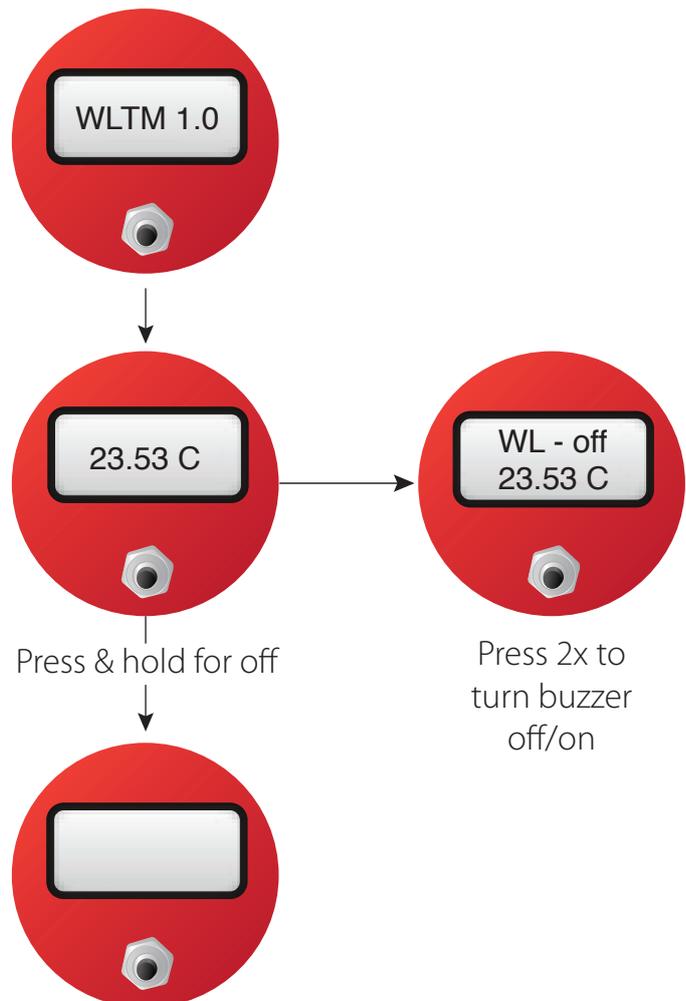


A Tape Guide allows depth measurements to be read at the marked position on the Tape Guide, to give reliable, repeatable, accurate depth measurements when profiling a well. The Tape Guide protects the tape from damage on rough edges of well casing.

Water Temperature Display Menu

When the meter is turned on, the LCD screen displays the firmware version of the WLT Meter (e.g. "WLTM 1.0") for about two seconds. The LCD will then display the temperature reading, in or out of water.

The LCD menu is simple to operate. Pressing the button two times quickly deactivates the buzzer (the light stays active). To reactivate, press the button two times quickly. To turn the meter off, press and hold the button for two seconds.



WLT Meter Specifications

Temperature reading range:	-20.00°C to +125.00°C
Temperature reading accuracy:	+/-0.10°C from -5°C to +50°C; +/-0.50°C outside of that range
Temperature resolution:	0.01°C
Temperature stabilization time	15 seconds per °C
Probe pressure rating:	Fully submersible tape – all lengths
Probe weight:	87 grams (3.07 ounces)
Probe size:	16 mm dia., 129 mm long (5/8" x 5.08")
Wetted materials (tape/probe):	PVDF, Santoprene, Delrin®, Viton®, 316 stainless steel
Operating temperature of reel:	-20°C to +60°C
Battery life:	90 hours
Auto-off:	8 minutes
Standard Tape lengths:	Meters: 30, 60, 100, 150, 250, 300 Feet: 100, 200, 300, 500, 750, 1000

Other Options

Power Winder: Lightweight and easy to attach to small, medium and large reel frames, the Power Winder is designed to allow effortless winding of longer lengths of tape. The Power Winder makes temperature profiling with the Model 201 Water Level Temperature Meter easy. Simply uses a standard power drill to operate the Power Winder (see 101 Power Winder Data Sheet).



Carrying Case: An optional padded nylon carrying bag with a shoulder strap is available to fit medium and small reels. The sturdy bags have a zippered top and front pocket and a vent in the base to allow moisture to dissipate. They provide protection during transport as well as handling convenience.



Replacement Parts: Replacement probes, tapes, faceplates and other spare parts are available.