

## Water Level Meter

### Model 101

For measuring the depth to water in wells, boreholes, standpipes, and tanks, Model 101 Water Level Meters are the industry standard for portable hand operated meters. They are sturdy, easy to use and read accurately to 1/100 ft. or each millimeter.

There are two versions to choose from. The Model 101 P7 Water Level Meter features a pressure-proof probe rated to 500 psi and laser marked PVDF tape. The Model 101 P2 Water Level Meter features an easy-to-repair probe and heat embossed polyethylene tape.

Also available, are the less expensive Model 102 and 102M Coaxial Cable Water Level Meters for use in small diameter tubes, and the basic Model 101B Water Level Meter (see Model 102 and 101B Data Sheets).

## Operating Principles

Model 101 Water Level Meters use corrosion proof stainless steel probes attached to permanently marked flat tape, fitted on a well-balanced reel. They are powered by a standard 9 volt battery.

The probes incorporate an insulating gap between electrodes. When contact is made with water, the circuit is completed, activating a loud buzzer and a light. The water level is then determined by taking a reading directly from the tape at the top of the well casing or borehole.

A sensitivity control allows the buzzer to be turned off while in cascading water, and ensures a clear signal in both high and low conductivity conditions.

## Reels

With a stand-alone design, convenient carrying handle, and sturdy probe holder, the standard reels are ergonomically designed for ease of use. They are robust and smooth running. The battery is housed in a convenient drawer in the front of the reel, allowing quick replacement. The reels are equipped with an on/off sensitivity switch, light, buzzer, battery test button, brake and a tape guide stored on the frame.

## P7 Probe

The P7 Probe is submersible up to 1000 ft. (300 m), therefore, you can measure total well depth in ideal conditions. The sensor at the tip of the probe provides consistent measurements with almost zero displacement. The tape seal plug design allows the probe to be quickly and easily replaced, if required.

**Size:** 5/8" dia., 5.38" long (16 mm x 137 mm)

**Weight:** ~4.5 ounces (128 g)



Zero Measurement Point

101 P7



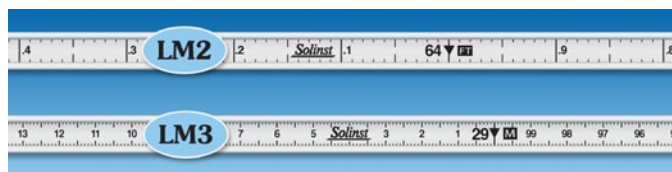
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## PVDF Laser Marked Tape

The Model 101 P7 Water Level Meter uses extremely durable, PVDF flat tape, traceable to NIST and EU measurement standards. Each tape conductor contains 13 strands of stainless steel, and 6 strands of copper-coated steel, making the tape non-stretch and high in tensile strength and electrical efficiency. The tape has a thick dog bone design that prevents adherence to wet surfaces, and allows it to hang straight in application. It is also easy to splice. The 3/8" (10 mm) tape comes with permanent laser markings every 1/100 ft. or each millimeter, in lengths up to 5000 ft. (1500 m).

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

**LM3:** Meters and centimeters: with markings every mm



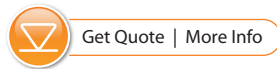
## Features

- Accurate:**
  - Markings each 1/100 ft. or millimeter
  - Traceable to national standards
  - Sensitivity adjustable to conductivity
  - Probes avoid false readings in cascading water
- Reliable:**
  - Permanent laser markings
  - Non-stretch PVDF tape with stainless steel conductors
- Long Life:**
  - Rugged, corrosion proof components
  - Strong, flexible tapes
  - Easy to splice and repair
- Flexible:**
  - PVDF replacement tapes are interchangeable with other meters

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101 P2



## P2 Probe

The P2 Probe is shielded in design to reduce or eliminate false readings in cascading water. The probe consists of a stainless steel body with a neoprene heat shrink seal. It is not suitable for submergence to any significant depth. Its simple design makes it easy to repair.

**Size:** 0.55" dia., 7.5" long (14 mm x 190 mm)  
**Weight:** ~7 ounces (200 g)



## Polyethylene Tape

The Model 101 P2 Water Level Meter uses high quality polyethylene tape that reels smoothly, remains flexible and hangs straight in the well. Heat embossed marking each millimeter or 1/100 ft. allow accurate readings. The 3/8" (10 mm) wide tapes come in lengths up to 1000 ft. (300 m).

Seven stranded stainless steel conductors resist corrosion, provide strength and are non-stretch. They make the tape very easy to repair and splice. The dog-bone design reduces adherence to wet surfaces.

**M2** Feet and tenths: with markings every 1/100 ft.  
**M3** Meters and centimeters: with markings every mm.



## Length Options

Solinst Model 101 P7 and P2 Water Level Meters are available on reels as shown below, in the following standard lengths:

<b>Small Reel</b>	* 100 ft. 30 m	<b>Medium Reel</b>	* 500 ft. 150 m
	* 200 ft. 60 m		* 750 ft. 250 m
	* 300 ft. 100 m		* 1000 ft. 300 m
		<b>Large Reel</b>	1250 ft. 400 m
			1650 ft. 500 m
			2000 ft. 600 m

\* Polyethylene tapes are only available in these lengths



Model 101 Water Level Meter Reels



## Other Options

**Carrying Case:** Small and medium padded nylon carrying cases are available, as an optional extra. Their design has a convenient shoulder strap, zippered front pocket, zippered top, and a grommet in the base to prevent moisture build-up.



**Power Reels:** Power reels can be very useful to allow faster or less strenuous operation of longer lengths of tape.

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

## Tape Guide/Datum

A tape guide is provided with each Meter. It protects the tape from damage on rough edges of well casing and ensures easy, consistent measurements, regardless of who takes the readings. It can also provide support on the casing, for small reels.

