



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 three versions to choose from. **The Model 101 P7 Water Level Meter** features a pressure-proof probe and laser marked PVDF tape. **The Model 101 P2 Water Level Meter** features an easy-to-repair probe and laser marked polyethylene tape. **The 101M Mini Water Level Meter** is compact and features narrow, laser marked polyethylene tape and a P10 (10 mm) weighted probe.

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](#)). The Model 101D Water Level DrawDown Meter provides both depth to water and drawdown measurements using one probe (See [Model 101D Data Sheet](#)).

Water Level Meter 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.

Model 101 Water Level Meter 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 or LDPE 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

Water Level Meter Specifications

Operating temperature of reel:	-20°C to +50°C
Submerged operating temperature (tape/probe):	-20°C to +80°C
Wetted materials (tape/probe):	P7: PVDF, Santoprene, *Delrin, *Viton, 316 stainless steel
	P2: LDPE, neoprene, Delrin, 316 stainless steel
	101M: LDPE, *Delrin, *Viton, TPU, 316 stainless steel
Probe pressure rating:	P7: Fully submersible to depth of all tape lengths
Reel IP Rating:	IP64 (dust and splash proof)
Tape lengths:	P7: 100 to 5000 ft, 30 - 1500 m
	P2: 100 to 1000 ft, 30 - 300 m
	101M: 65 ft and 20 m

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P7 Probe

The P7 Probe is submersible the full length of the tape, 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.

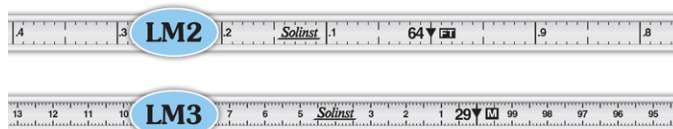


Size: 5/8" dia., 5.38" long (16 mm x 137 mm)

Weight: ~4.5 ounces (128 g)

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



Model 101 Water Level Meter Reels

Length Options

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

Mini Reel	65 ft.	20 m	Medium Reel	500 ft.	150 m
				750 ft.	250 m
Small Reel	100 ft.	30 m		1000 ft.	300 m
	200 ft.	60 m	Large Reel	1250 ft.	400 m
	300 ft.	100 m	X-Large Reel	1650 ft.	500 m
				2000 ft.	600 m

Water Level Meter 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.

The mini reel is sturdy, yet very compact and easy to carry. It also has an on/off sensitivity switch, light, buzzer, and battery test button.



101 P2

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. Laser markings each millimeter or 1/100 ft. allow accurate readings. The 3/8" (10 mm) wide tapes come in standard lengths up to 1000 ft. (300 m).

Each tape conductor contains 13 strands of stainless steel, and 6 strands of copper-coated steel that 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.



LM6 Feet and tenths: with markings every 1/100 ft.

LM7 Meters and centimeters: with markings every mm.



Size: 0.55" dia., 7.5" long (14 mm x 190 mm)

Weight: ~7 ounces (200 g)

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.



101M Mini Water Level Meter

The laser marked, narrow polyethylene flat tape is mounted on a convenient small reel that is light-weight and fits easily into a mini carrying case or backpack. The 1/5" (5 mm) wide tape is accurately marked each millimeter or every 1/100 ft. The **101M Mini Water Level Meter** is available in 20 m and 65 ft lengths.



NM2 Feet and tenths: with markings every 1/100 ft.

NM3 Meters and centimeters: with markings every mm.



P10 Probe: 10 mm dia. x 70 mm long (3/8" x 2.75") stainless steel with 10 stainless steel weights, weighing 174 g (6.14 oz). The flexible weight assembly allows easy well access and keeps the tape hanging straight in monitoring wells.

Other Options

Carrying Cases: Mini, 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. They are available as 12V or 110V.

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



Power Reel

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.



Power Winder and Lateral Winder

The **Solinst Model 101 Power Winder** allows ease of use when deploying longer lengths of tape. It is lightweight and easy to attach to the frame of small, medium and large Model 101 Water Level Meter reels (see [Model 101 Power Winder Data Sheet](#)). A standard drill provides power to the Power Winder, which turns the rollers that are in contact with the reel. The drill is used at various speeds, in forward and reverse, to turn the reel and unwind and rewind the tape.

Combine with a **Solinst Model 101 Lateral Winder** and wind your tape evenly back onto the reel every time (see [Model 101 Lateral Winder Data Sheet](#)).

