

Water Level Measurement Device	Model 101 P7 Water Level Meter	Model 104 Sonic Water Level Meter
Operating Principles	The probe is attached to marked tape fitted on a reel. The probe incorporates an insulating gap between electrodes. When contact is made with water, the circuit is completed, activating an audible indicator and light. The water level is then determined by taking a reading from the tape.	The probe emits a sound wave into the pipe or well and measures the time it takes for the pulse to return after making contact with water. The distance is calculated using the speed of sound and time. Since the speed of sound varies with temperature, an air temperature sensor is located in the probe to adjust for variations.
Water Level Indication	Audible tone and light indicates water level is reached	Reading is displayed on the Control Unit LCD screen
Max. Measurement Depth	Tape lengths up to 1500 m (5000 ft).	Detection range is 600 m (2000 ft)
Probe Diameter	16 mm (5/8")	16 mm (5/8")
Accuracy	PVDF flat tape is laser marked every millimeter or 1/100 foot traceable to National Standards	3 cm (0.1 ft)*
Units of Measure	Metric (m, cm, mm) or Imperial (ft, 1/10 ft, 1/100 ft)	Metric (m, cm) or English (ft, in)
Measurement Time	Time it takes to lower the probe to water level	~ 1 sec @ 150 m (500 ft) ~ 4 sec @ 600 m (2000 ft)
Operating Temperature	Reel: -20 to 50°C (-10 to 122°F) Submerged: -20 to 125°C (-10 to 257°F)	-20 to 45°C (-10 to 110°F)
Power	One standard 9V replaceable alkaline battery	6 AA replaceable alkaline batteries
Weights	Medium Reel (300 m (1000 ft) of tape): 12.7 kg (28.0 lbs) Probe: 128 g (4.5 oz)	Control Unit: 390 g (14 oz) Probe: 345 g (12 oz)
Sizes	Medium Reel (up to 300 m (1000 ft) of tape): 31.75 x 27.31 x 41.91 cm (12.5 x 10.75 x 16.5")	Control Unit: 19 x 9 x 4 cm (3.5 x 7.5 x 1.5") Probe: 16 x 8 x 7 cm (6 x 3 x 3")
Portability	Optional Carry Cases for Small and Medium Reels, sturdy handle and probe holder make transport easy.	Supplied with a Solinst Field Bag
Other Accessories	Includes Tape Guide and optional Probe Shroud.	Includes Plastic disc for covering larger well openings.
Maintenance & Repairs	Battery replacement, decontamination/cleaning, full unit reparability with replacement parts. Repairs can be done by user or through Solinst.	Battery replacement, periodic user Factory Reset, replacement parts available and repairs through Solinst.
Warranty	3 year	3 year
Other Common Names Used	Water Level Indicator, Water Level Tape, Water Level Dip Meter	Sonic Well Sounder, Non-Contact Water Level Meter
Other Features	<ul style="list-style-type: none"> <li>• On/Off Sensitivity control allows buzzer to be turned off while in cascading water, and ensures a clear signal in both high and low conductivity conditions</li> <li>• Battery Test button tests the battery and main circuitry before use</li> <li>• Power Reels are available for longer tape lengths</li> <li>• Durable, ergonomic reel with brake for easy tape handling</li> </ul>	<ul style="list-style-type: none"> <li>• Has a Power Save mode to prolong battery life</li> <li>• Can set the water level measurement range minimum and maximum to ignore interference from known well features, and to narrow down known fluctuation range</li> <li>• Settings allow you to account for different well/drop tube diameters and heights</li> <li>• Allows groundwater temperature to be entered to increase reading accuracy</li> </ul>
Advantages	<ul style="list-style-type: none"> <li>• Very easy to operate</li> <li>• Can measure total well depth with submersible probe</li> <li>• Do not need to know groundwater temperature or water level depth range to get an accurate reading</li> <li>• Can be used in any diameter well (greater than probe diameter)</li> <li>• Tapes are precisely marked and non-stretch for years of accurate use</li> </ul>	<ul style="list-style-type: none"> <li>• A reading is displayed in seconds</li> <li>• Non-contact water level measurement – no equipment lowered down well</li> <li>• Very low maintenance and no decontamination required</li> <li>• Ideal for use at contaminated sites, in wells with narrow or difficult access, in straight or crooked pipes, and on sites where equipment is not allowed to enter well or contact water surface</li> </ul>

\*Accuracy depends on correct setup, the acoustics of the well, tube or pipe being monitored, and the ability to enter known well parameters. Most accurate in wells 8" in diameter or less.