



# SOLINST®

## Sonic Water Level Meter

Model 104 Data Sheet

### Solinst Sonic Water Level Meter

Model 104

The **Solinst Sonic Water Level Meter** is a portable, acoustic ranging instrument designed to simply and quickly measure depth to static water level in a well, piezometer, sounding tube, or any closed pipe.

The Sonic Water Level Meter reports static water level measurements without having to put any instruments down the well, eliminating any introduction of chemicals and the need to decontaminate equipment or wells.

The Solinst Sonic Water Level Meter works in straight or crooked pipes, and is ideal for wells with difficult access. Depth measurements to 600 m (2000 ft) are possible.

### Sonic Water Level Meter Operation

The Solinst Sonic Water Level Meter consists of a Control Unit and connected Probe.

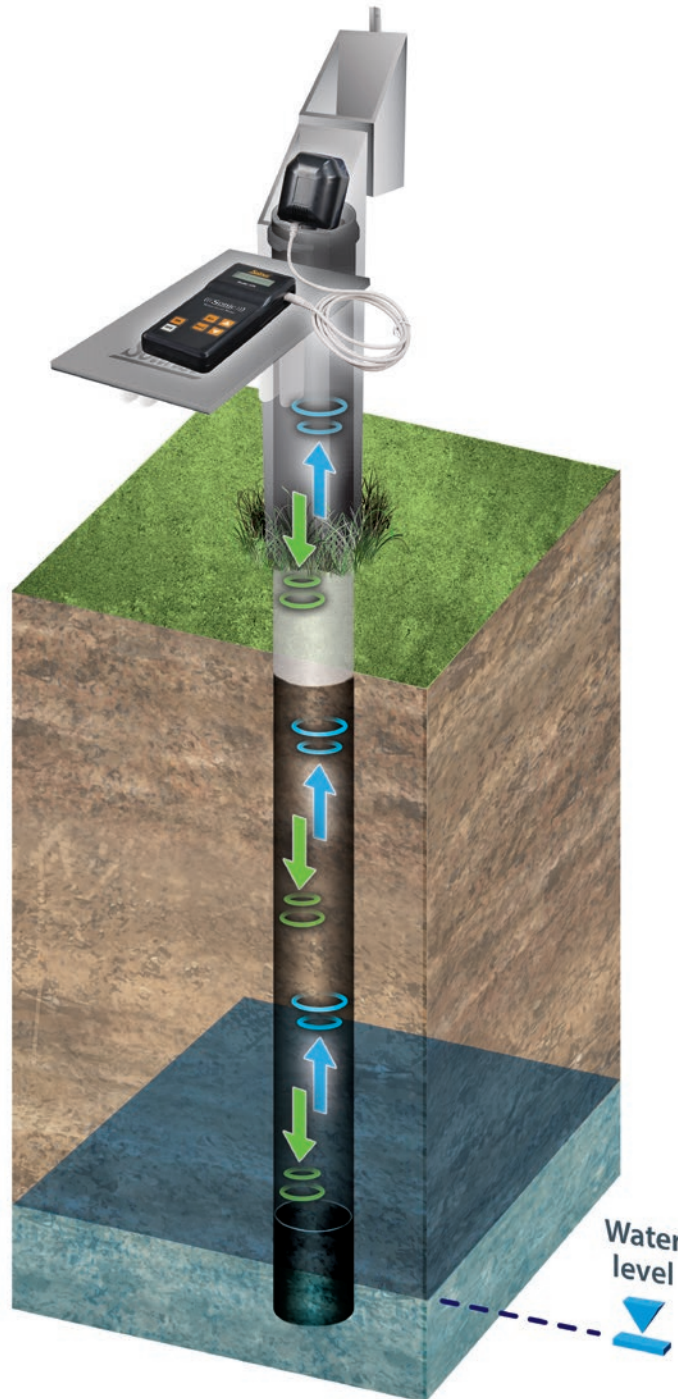
The Control Unit has a clear LCD display, keypad, and comes with 6 AA replaceable batteries. The Control Unit keypad has buttons to turn the Probe on and off, read the depth to water, and controls to scroll through and set other parameters.

The Probe connects to the Control Unit with a 1.8 m (6 ft) cable. The Sonic Water Level Meter Probe is designed to sit in the vent opening of a standard well cap, or the opening in a Solinst 2" Locking Well Cap.

For measurement in larger diameter openings, each Sonic Water Level Meter includes a plastic disc to cover the well opening. This ensures a strong signal and accurate water level reading.

The Sonic Water Level Meter works by the Probe transmitting a sound wave into the pipe or well and measuring 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, a temperature sensor is located in the Probe to adjust for variations.

To account for different well diameters, offsets, well obstructions or features, the Control Unit allows you to input measurement parameters to get the most accurate water level reading possible.



## Sonic Water Level Meter Features

- Measures down to 600 m (2000 ft); water level can be displayed in Metric or English units
- Ability to set in Power Save mode to prolong battery life
- Can set the water level measurement range minimum and maximum to ignore interference from known well features
- Settings allow you to account for different well/drop tube diameters and heights
- Backed by a Solinst 3-year warranty
- Supplied with a plastic cover for larger wells and a convenient Solinst Field Bag



## Sonic Water Level Meter Advantages

- Simple-to-use, handheld, portable unit
- Get a water level reading within seconds
- Water level readings are automatically temperature compensated
- No equipment lowered down a well; no chemicals introduced and no equipment to decontaminate
- Readings are not affected by cascading water
- Works in any closed pipe, straight or angled
- Ideal for wells with very narrow or difficult access to water level

### Sonic Water Level Meter Specifications

Control Unit dimensions:	19 x 9 x 4 cm (3.5 x 7.5 x 1.5")
Control Unit weight:	390 g (14 oz)
Probe dimensions:	16 x 8 x 7 cm (6 x 3 x 3")
Probe diameter:	1.7 cm (5/8")
Cable length:	1.8 m (6 ft)
Operating temperature:	-20 to 45°C (-10 to 110°F)
Power:	6 AA replaceable alkaline batteries
Battery life:	Up to 500 hours of use Up to 21 days in power save mode
Units of measurement:	Metric or English options
Accuracy:	3 cm (0.1 ft)
Resolution:	1 cm (0.05 ft)
Water level reading update time:	~ 1 sec @ 150 m (500 ft) ~ 4 sec @ 600 m (2000 ft)
Operating range:	3 to 600 m (9 to 2000 ft)