

TLC Meter

Temperature, Level, Conductivity
Model 107

The TLC Meter is ideal for profiling conductivity and temperature in wells and open water. It displays accurate measurements of conductivity and temperature on a convenient LCD display that rotates for ease of reading.

Water level and probe depth measurements are read off the accurate Solinst flat-tape marked every 1/100 ft. or each millimeter.

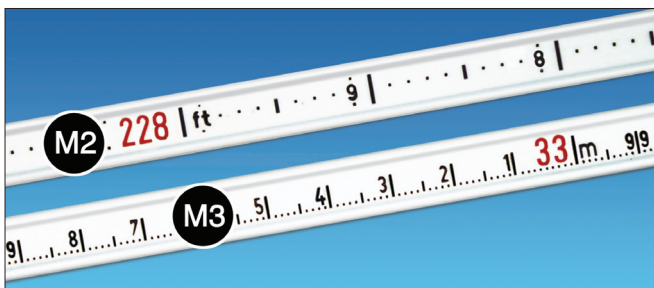
Conductivity Made Easy

- Accuracy is to the greater of 30 μS or 2% of reading
- Rugged Solinst reel and accurate tape
- Lengths to 300 ft. (100 m), probe dia. is 3/4" (19 mm)
- Display that rotates for easy reading
- Standard 9V alkaline battery gives 90 hrs. of use
- Auto-Off after 8 minutes

High Quality Tape

The high quality polyethylene tape reels smoothly, remains flexible and hangs straight in the well, irrespective of temperature. The tape is mounted on a sturdy, well-balanced Solinst reel, with a convenient battery drawer for the 9 Volt alkaline battery. Permanent markings each 1/100 ft. or millimeter allow accurate readings.

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: Each 1/100 ft. and 1/10 ft. in black; feet in red
M3: Each millimeter in black; meters in red

Lengths: 100 ft., 150 ft., 300 ft., (30 m, 50 m, 100 m)



Conductivity Measurements

The TLC Meter uses a 'smart' conductivity sensor with platinum electrodes to read conductivity from 0 – 80,000 μS . The conductivity is displayed on the rotating screen along with the associated temperature measurement. The 'smart' conductivity probe displays conductivity automatically standardized to 25°C, i.e. specific conductance. The conductance temperature coefficient is 2.0% per °C.

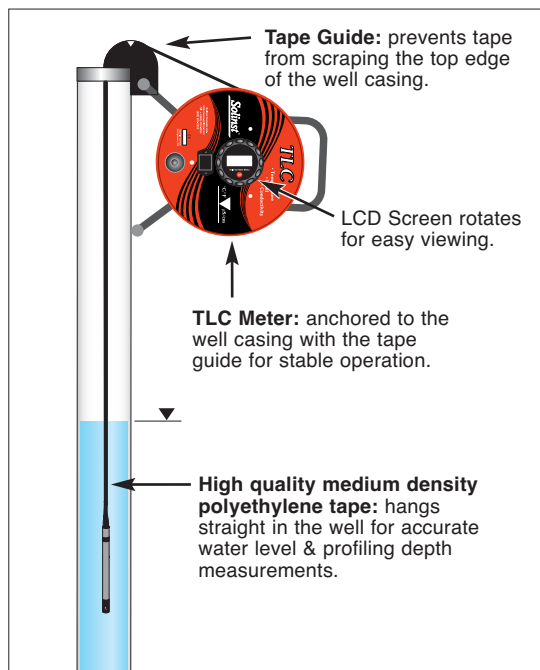
Calibration is simple, using 1413 μS and 80,000 μS solutions for single or two point conductivity calibration.

Applications

- Profiling conductivity and temperature in wells and open water
- Salinity studies
- Saltwater intrusion investigations
- Testing for water quality impairments from road salt
- Tracer tests
- General indication of chemical contamination level
- Early warning of changes in water quality at:
 - Landfills
 - Industrial Sites

Level and Depth Measurements

When the zero point of the probe enters water, an electric circuit is completed, briefly activating a buzzer and blanking out the screen for about 1 second. The depth to water is then read off the tape. When the TLC Meter is withdrawn from the water, a short buzz gives a warning that the probe is now out of water.



A Tape Guide/Datum allows the depth measurement 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.

Temperature Measurements

The TLC Meter operates in a range from -15°C to $+50^{\circ}\text{C}$ (23°F to 122°F). You may choose to have the readings displayed on the LCD screen in $^{\circ}\text{C}$ or $^{\circ}\text{F}$. Accuracy is $\pm 0.3^{\circ}\text{C}$ in Celsius, or $\pm 0.5^{\circ}\text{F}$ in Fahrenheit. Conductivity measurements are temperature sensitive. The 'smart' TLC probe automatically adjusts the measured conductivity values to display as specific conductance. This provides standardized repeatably comparable measurements.

When the probe is turned on, the LCD screen displays both conductivity and temperature. A short wait of 20 seconds per degree Celsius of temperature change is required for the measurements to stabilize at each desired depth, before recording the three measurements.

Display Menu

The display menu is simple to operate. When the unit is turned on, it will begin to display electrical conductivity and temperature readings, in or out of water. If the ON button is held down for 2 seconds and released, the display moves to the next menu item and so on, through 4 windows.

The second window allows the user to turn the TLC Meter off, however, the meter also automatically turns off after 8 minutes to extend battery life. The following window brings up the calibration option. The fourth window allows the user to choose Fahrenheit or Celsius for the temperature display.

The menu then cycles back to display the current readings. Press the ON button two times quickly in any given screen to achieve the displayed action.

