**WHAT IS A LEVEL SENSOR**

**Level** [**sensors**](https://en.wikipedia.org/wiki/Sensors) detect the [level](https://en.wikipedia.org/wiki/Liquid_level) of liquids and other [fluids](https://en.wikipedia.org/wiki/Fluids) and fluidized solids, including [slurries](https://en.wikipedia.org/wiki/Slurry), [granular](https://en.wikipedia.org/wiki/Granular) materials, and [powders](https://en.wikipedia.org/wiki/Wiktionary) that exhibit an upper [free surface](https://en.wikipedia.org/wiki/Free_surface). Substances that flow become essentially [horizontal](https://en.wikipedia.org/wiki/Horizontal_plane) in their containers (or other physical boundaries) because of [gravity](https://en.wikipedia.org/wiki/Gravity) whereas most bulk solids pile at an angle of repose to a peak. The substance to be measured can be inside a container or can be in its natural form (e.g., a river or a lake). The level measurement can be either continuous or point values. Continuous level sensors measure level within a specified range and determine the exact amount of substance in a certain place, while point-level sensors only indicate whether the substance is above or below the sensing point. Generally the latter detect levels that are excessively high or low.

Wide spectrum of sensors is available in the market and commonly, they are classified based on the specific application of the sensor. Sensor used for measuring humidity is termed as [humidity sensor](http://www.engineersgarage.com/articles/humidity-sensor), the one used for measurement of pressure is called [pressure sensor](http://www.engineersgarage.com/articles/pressure-sensors-types-working), sensor used for measurement of displacement is called [position sensor](http://www.engineersgarage.com/articles/position-sensors) and so on though all of them may be using the similar sensing principle. In a similar fashion, the sensor used for **measurement of fluid levels** is called a level sensor.

Quite obvious from its name, level sensors are used to measure the level of the free-flowing substances. Such substances include liquids like water, oil, slurries, etc as well as solids in granular/powder form (solids which can flow). These substances tend to get settled in the container tanks due to gravity and maintain their level in rest state. Level sensors measure their level against a pre-set reference.

**What is a Water Sensor?**

A water sensor is a device used in the detection of the water level for various applications. Water sensors are of several types that include ultrasonic sensors, pressure transducers, bubblers, and float sensors.

Water temperature probes

https://www.vernier.com/products/sensors/temperature-sensors/tmp-bta/

1. Stainless Steel

* Temperature range: –40 to 135°C (–40 to 275°F)
* Maximum temperature that the sensor can tolerate without damage: 150°C
* Typical Resolution:
  + 0.17°C (–40 to 0°C)
  + 0.03°C (0 to 40°C)
  + 0.1°C (40 to 100°C)
  + 0.25°C (100 to 135°C)
* Temperature sensor: 20 kΩ NTC Thermistor
* Accuracy: ±0.2°C at 0°C, ±0.5°C at 100°C
* Response time (time for 90% change in reading):
  + 10 seconds (in water, with stirring)
  + 400 seconds (in still air)
  + 90 seconds (in moving air)
* Probe dimensions:
  + Probe length (handle plus body): 15.5 cm
  + Stainless steel body: length 10.5 cm, diameter 4.0 mm
  + Probe handle: length 5.0 cm, diameter 1.25 cm

<http://www.amazon.in/Arduino-compatible-DS18b20-Temperature-REES52/dp/B018G6DPWE?tag=googinhydr18418-21&tag=googinkenshoo-21&ascsubtag=b025d2c0-50c4-4164-ae2a-23095e690ba8>

<https://www.indiamart.com/quantum-controls-automations/thermocouple-instruments.html>

<http://radix.co.in/>

<https://www.youtube.com/watch?v=qReeCzS3ybY>

<http://radix.co.in/products/bearing-temperature-rtd-single-circuit-dual-circuit-rbt200-rbt201>