

Battery-Powered Groundwater Level Sensor

Model: SSD009



The SSD009 Groundwater Level Sensor is a battery-powered monitoring device designed to measure the distance to the water surface inside a groundwater pipe. It uses acoustic echo measurement and transmits the calculated water-level data wirelessly to a cloud platform through LTE-M or NB-IoT connectivity.

The sensor generates an acoustic tone inside the monitoring pipe and receives the echo reflected from the water surface. The integrated processing system analyses the returned signal and calculates the distance to the water, providing reliable groundwater-level measurements without requiring a submerged probe.

Cloud-Connected Monitoring

The measured groundwater level is transferred from the sensor system to the integrated cellular modem. Using LTE-M or NB-IoT connectivity, the device can send measurement data to a cloud platform for remote access, historical review and long-term monitoring.



Acoustic Level Measurement

The sensor sends an acoustic signal down the groundwater pipe and measures the echo returning from the water surface.



Battery-Powered Operation

The sensor operates from a replaceable 3.0 V lithium battery, supporting installation in locations where no external power supply is available.



Mobile Application

The free mobile application is available for both iOS and Android, allowing users to view groundwater level data.



LTE-M and NB-IoT Connectivity

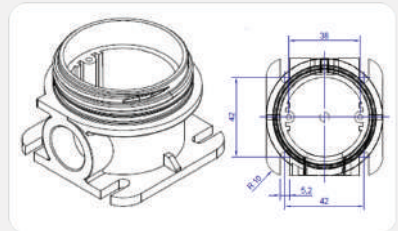
An integrated cellular modem and SIM card holder enable wireless transmission of measurement data to a cloud platform.

Groundwater Level Sensor

Product Specification

Model : SSD009

- Measured parameter: Groundwater level / distance to the water surface
- Measurement principle: Acoustic echo measurement
- Measurement method: Tone generation and reflected-echo detection
- Sensor components: Integrated speaker and microphone
- Data processing: Internal microcontroller calculates the depth inside the pipe
- Cloud connectivity: LTE-M and NB-IoT
- Cellular modem: Nordic Semiconductor nRF9160
- SIM support: Integrated SIM card holder
- Local communication: Bluetooth Low Energy
- Power supply: 3.0 V lithium battery
- Recommended battery type: CR123A lithium battery
- Battery capacity: Approximately 2800 mAh
- Measurement approach: Non-contact measurement from above the water surface



Use Cases



Groundwater Monitoring



Environmental Monitoring



Agriculture



Construction Sites



Municipal Water Management



Research and Field Studies

