

Distance Sensor



Description

The distance sensor from *Smart Box & GeoPortal* accurately detects the distance between the sensor and the object or surface in its path and communicates this information through our portal. The sensor benefits from self-calibration algorithms to adapt to changing environmental conditions.

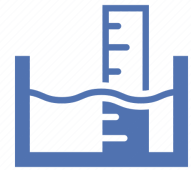
Operation

The wireless sensor sends out a high-frequency ultrasonic pulse and then measures the time it takes for the sound echo to be reflected. It uses the speed of sound and the time difference between sending and receiving the sound pulse to determine the distance to an object.

It communicates readings at set intervals and reports the data to the portal, where the information is processed to show the distance and alert users if defined conditions are met. The sensor data is stored for analysis.

Main Features

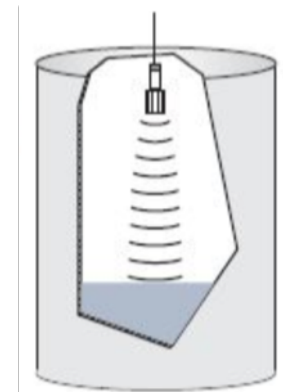
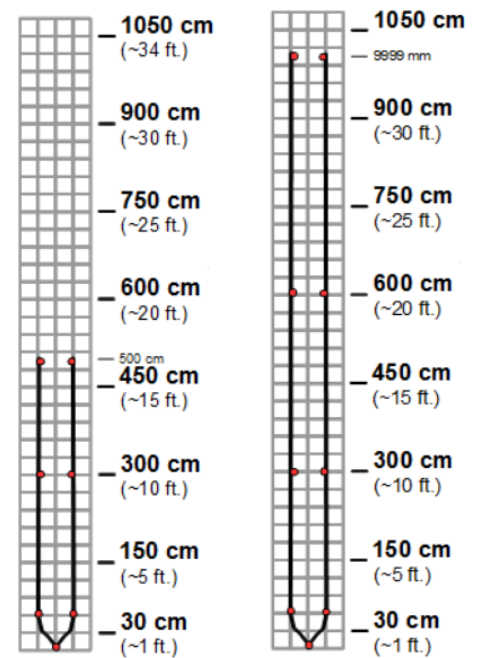
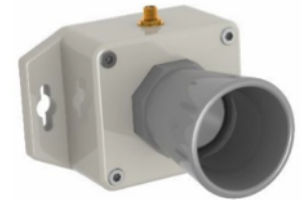
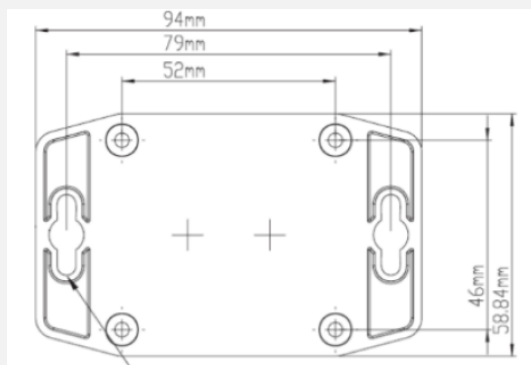
- Uses LoRaWAN technology
- Range of the wireless network: 5km
- RF communication: 915Mhz
- Battery lifespan: 5 years
- Measurement resolution: 1 cm
- Extra measurements for temperature, humidity, acceleration and atmospheric pressure
- Easy to install and maintain



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Specifications

Distance	
Weight	215 g (battery included)
Size	94 x 59 x 86 mm
Battery type	1 x 3.6V AA Lithium
Protection class	IP67
Temperature of operation	-40 – 60 °C
Humidity of operation	0-100% RH
Battery lifespan	5 years
Sampling interval	Configurable
Uplink interval	Configurable
Measurement range	30cm – 5m (10 m available)
Resolution	1 cm
Temperature	
Range	0 – 60 °C
Resolution	0.1 °C
Accuracy	± 0.2 °C
Humidity	
Range	0 – 100%
Resolution	0.1% RH
Accuracy	± 2% RH
Acceleration	
Range	± 2.0 g
Sensitivity	16 mg/digit
Sampling rate	10 Hz
Atmospheric pressure	
Range	260- 1260 hPa
Accuracy	± 1 hPa



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