SenSpot™ Wireless Level/Height Meter

Ultra-Low Power Precision Sensing & Wireless Communication

Typical Applications

- Water level monitoring
- Distance measuring
- Hydrometeorology
- Extend wireless communication range by relaying data between SenSpot™ and SeniMax™ when the RF link is weak (as repeater)

Benefits

- **Long lifetime**
- **Wireless transmission:** No wiring is required for data collection
- **Lightweight**
  - Wireless transceiver: 450 g (1 lb)
  - Ultrasonic distance meter: 0.8kg (1.8lb)
  - Solar panel: 100 g (3.5oz)
- **Easy mounting:** Flange mount or adhesive tape
- **Ingress Protection:** IP67, weatherproof and protected against rain, snow, and UV exposure
- **Maintenance free:** No battery replacement, calibration or post-installation maintenance is required

Specifications

- **Working temperature:** -40°C to +65°C (-40°F to +150°F)
- **Wireless communication range:** 1.0km (0.62mi) free space
- **Customizable cable length:** 0.3m (1ft) to 4m (12ft)
- **Optimal Range:** 6.1m (20ft.)

- **Max Range:** 9.1m (30ft.)
- **Accuracy:** Better than 0.5% of target distance in stable, homogeneous air environment
- **Repeatability:** 0.2% of target distance in stable environment
- **Resolution:**
  - 1mm (0.039 in)
- **Dead band:** Typ. <25.4cm (10 in)
- **Transceiver Box Dimension:** 140mm (5.50 in) x 105mm (4.12 in) x 62mm (2.44 in)
- **Ultrasonic Probe Dimension:**
  - Height 11cm (4.33 in)
  - Radius : 2.5cm (1 in)
  - Mounting: 15cm (5.90 in) x 10cm (3.94 in) corner brace

Description

SenSpot™ wireless ultrasonic level/height meter provides an easy way to install a scalable solution for measuring distance (e.g. water level or height, object detection and dimensions). It comes with high capacity lithium-ion battery and solar panel and its mount. As a result, it does not require battery replacement and once installed, it is almost maintenance free. The whole product has IP67 protection (completely weatherproof) thus, it is an excellent choice for meteorological instrumentation applications that require the sensors to be installed some outdoor and often hard to access places.

It uses an ultrasonic sensor for measuring the distance.

This product uses Resensys's proprietary Active RF Technology, just the same as other products of Resensys. Resensys SenSpot™ technology offers a high-performance method for large-scale sensing, wireless synchronization and ultra-energy efficient wireless communication.

It can also serve as SenSpot™ repeater at the same time to extend the wireless communication range between SenSpot™ and SeniMax™.

Installation

Wireless transceiver box comes with mounting flanges. It can be installed either with screws and anchors through the flange holes or with VHB adhesive tape (for steel and smooth surfaces).

Wireless Transceiver Dimension

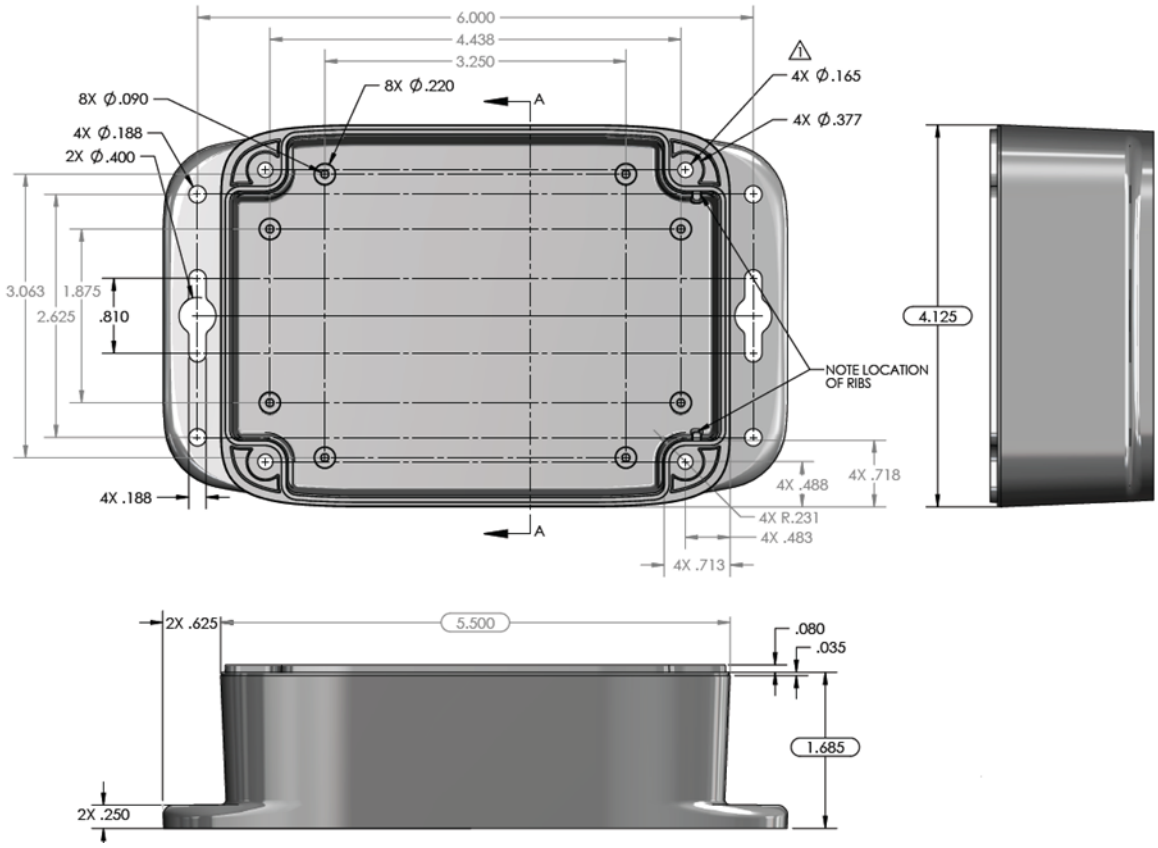

Figure 1: Wireless transceiver dimensions for wireless level meter. All measurements are in inch.

Sample data in SenScope™

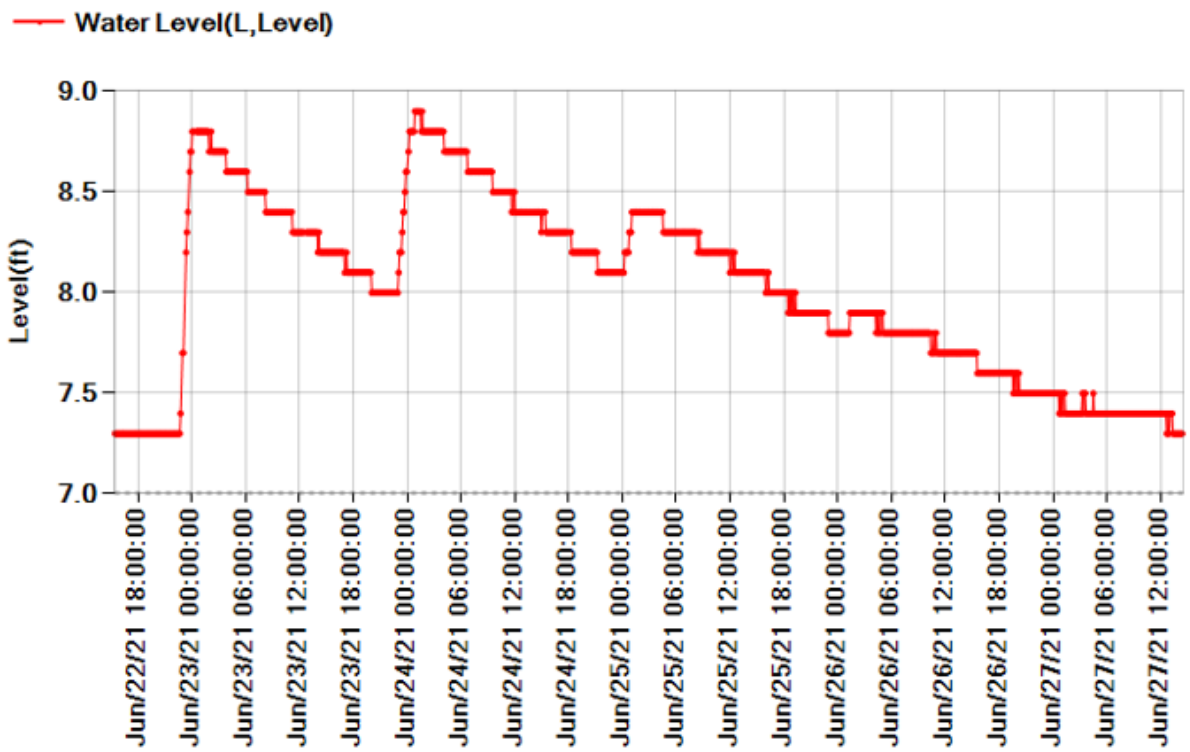

Figure 2: Water level measurements for a wireless level meter