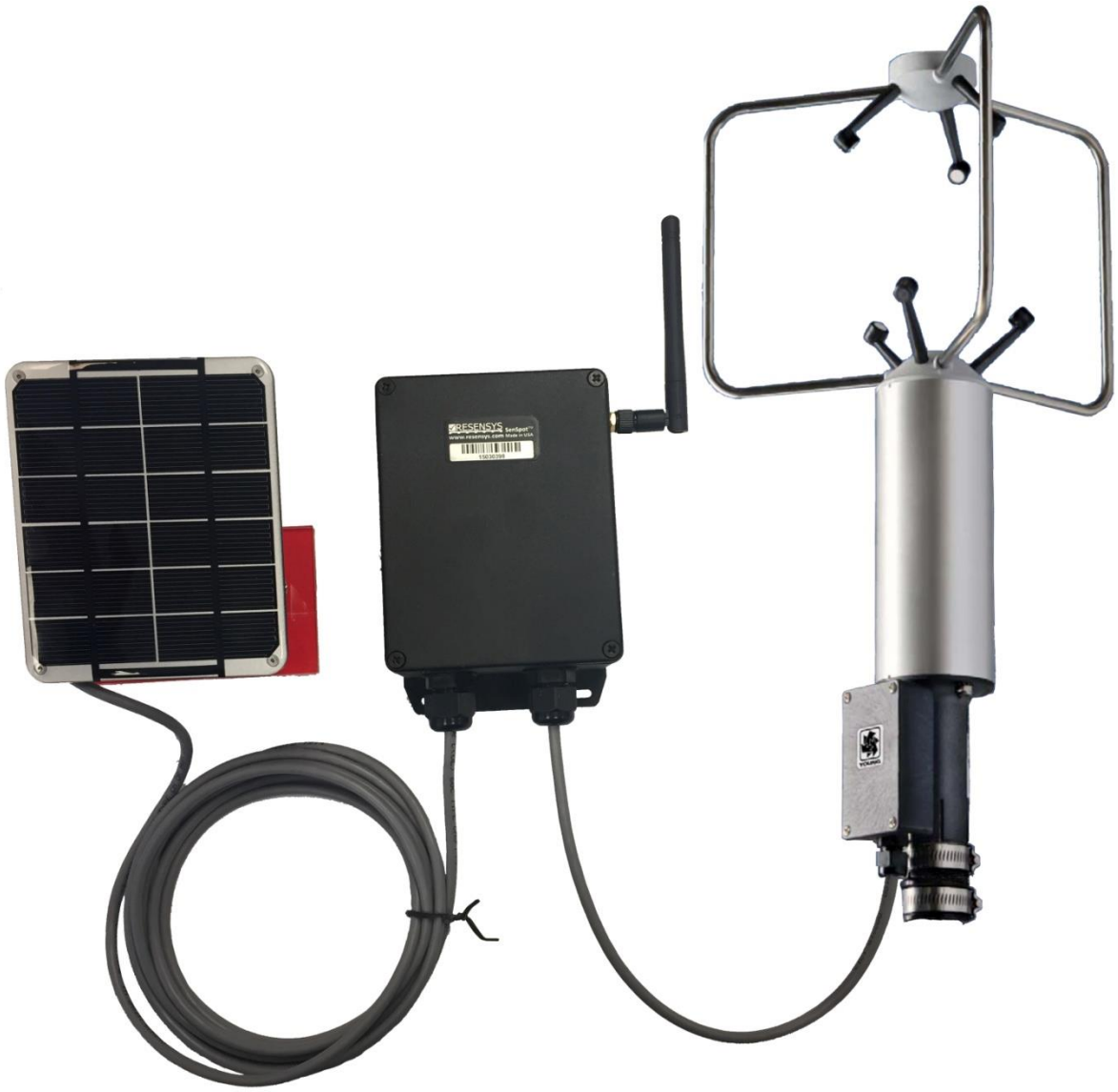
SenSpot™ 3D Wireless Anemometer

Ultra-Low Power Precision Sensing & Wireless Communication



Typical Applications

- Weather awareness
- Aviation industry
- Agronomy
- Hydrometeorology
- Military meteorology
- Maritime meteorology

- 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: 120 g (4.2 oz)
  - 3D anemometer: 1.7kg (3.8lb)
  - Solar panel: 100 g (3.5oz)
- **Easy mounting :**Flange mount or adhesive tape
- **Ingress Protection:** IP65, 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)
- **Wind speed**
  - Range: 0 to 40m/s (0 to 90mph)
  - Resolution: 0.01m/s
  - Threshold: 0.01m/s
  - Accuracy: ±1% rms ±0.05m/s (0 to 30m/s)
    ±3% rms (30 to 40m/s)
- **Wind direction**
  - Azimuth range: 0 to 359.9°
  - Elevation range: ±60.0°
  - Resolution: 0.1°
  - Accuracy: ±2° (1 to 30m/s)
    ±5° (30 to 40m/s)
- **Speed of Sound**
  - Range: 300 to 360m/s
  - Resolution: 0.01 m/s
  - Accuracy: ±0.1% rms ± 0.05m/s(0 to 30m/s wind speed)
- **Sonic Temperature**
  - Range: -40 to +50°C
  - Resolution: 0.01°C
  - Accuracy: ±2°C (0 to 30m/s wind speed)
- **Anemometer Dimension:**
  - Overall height 56cm (22")
  - Support arm radius : 17cm (6.7")
  - Mounting: 34mm (1.34") diameter (standard 1" pipe)

Description

SenSpot™ wireless 3D anemometer provides an easy way to install a scalable solution for collecting meteorological data such as wind speed, its azimuth and elevation angles, sound speed and sonic temperature. 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 IP65 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 ultrasonic 3D anemometer model 81000 from R.M YOUNG that is one of the industry leaders in meteorological instrumentation.

This product uses Resensys's proprietary Active RF Technology, just the same as other products of Resensys. Resensys ART 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™.
For more detailed information about the 3D anemometer, please see the product datasheet which can be found from
http://www.youngusa.com/Manuals/81000-90(I).pdf

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