

Typical Applications

- Structural Health Monitoring (Airlanes, Bridges, Buildings, Cranes, Platforms, Machinery, etc.)

Benefits

- **Long lifetime** (minimum expected life without battery replacement 3 years)
- **Small size and light weight**
- **High Accuracy**
- **Wireless communication:** no wiring needed for deploying the system
- **(Optional) High rate data transmission triggered by strain spikes:**
 - A balance between power consumption and performance.
 - Perfect for recording the waveform of a sudden strain change
 - The triggering threshold is adjustable from 16 μ Strain to 512 μ Strain; the sampling rate can be changed from 10ms to 200ms
- **Easy mounting**
 - Self-adhesive, no drilling is required (e.g. steel)
 - Flange-mount, drilling is required (e.g. concrete)
- **Quick installation:** 1-2 minutes
- **Complementary sensing:** temperature, battery voltage, etc.

Specifics

- **Dimensions:**
 - Wireless transmitter: 50mm (1.96") x 50mm (1.96") x 50mm (1.34")
 - Strain Gauge sensor: 110mm (4.30") x 33mm (1.30") x 9mm (0.35")



- **Weight:** about 147 g (5.19 oz.)
 - Wireless transmitter: 120 g (4.23 oz.)
 - Cable (1ft): 10 g (0.35oz.)
 - Strain sensing element: 17 g (0.6 oz.)
- **Resolution:** 4- μ Strain
- **Operating temperature:** -40 to +65°C (-40 °F to +150°F)
- **Long communication range:** 1.0km free space

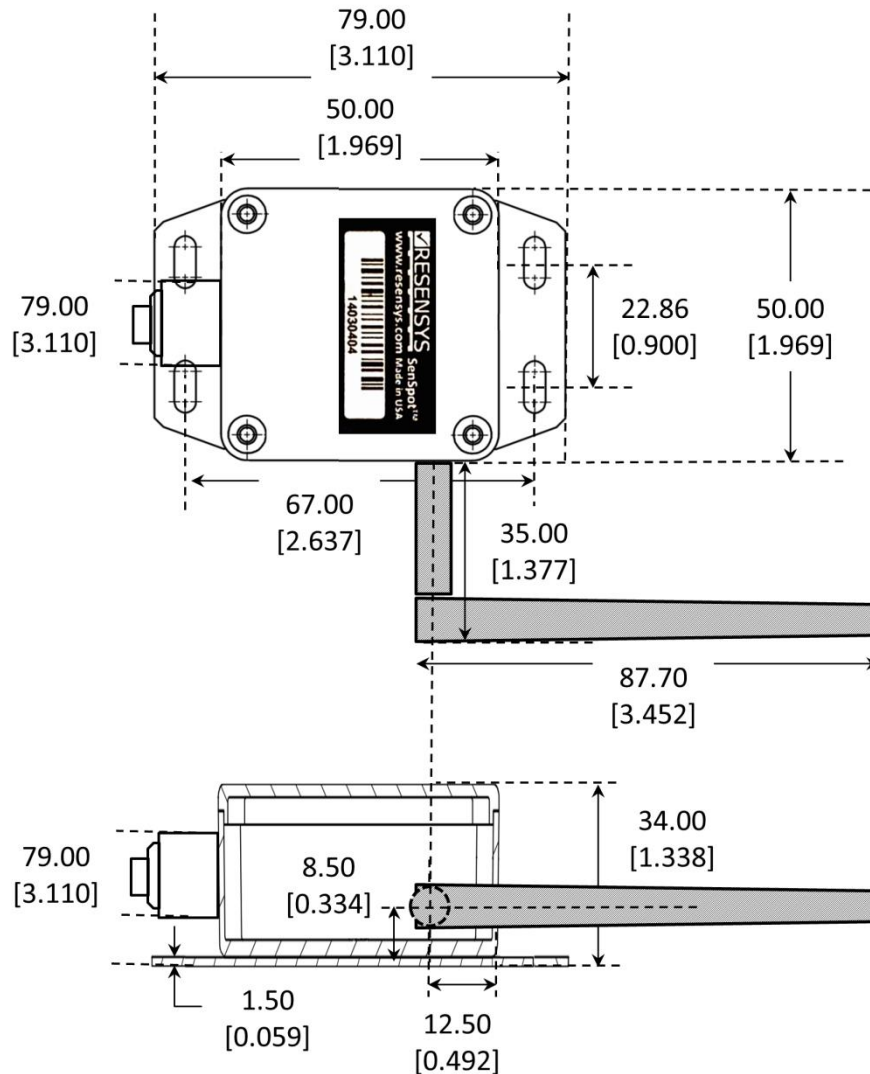
Description

SenSpot™ provides an easy to install, scalable solution for distributed structural integrity monitoring. When the change in the strain goes over the threshold, SenSpot™ event-detecting strain gauge can be triggered and sample at a high rate so that the detailed information of the change can be recorded. Like other SenSpot™, it uses Resensys's proprietary sensing, scheduling and ultra-low power synchronization technology. SenSpot™ is designed to operate maintenance-free for more than a decade. After installation, SenSpot™ does not need calibration, battery replacement, or any other maintenance during its entire service life. Due to small size and lightweight, adhesive-mount

SenSpot™ sensors can be applied easily to as many critical spots on a structure as needed, with minimal installation effort.

Wireless Transmitter Dimensions

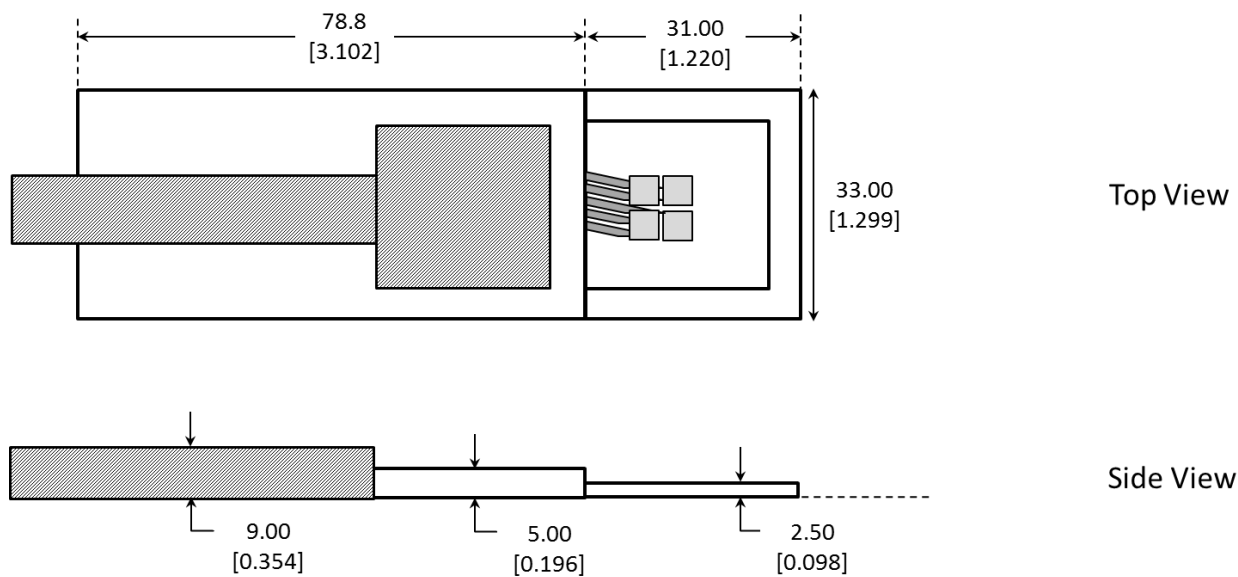
Wireless transmitter is universal and it reads the analog measurement from the sensing element and transmits the digitized data wirelessly to SeniMax. These units come in either self-adhesive or flange-mount form factors.



All dimensions are in mm [inch].

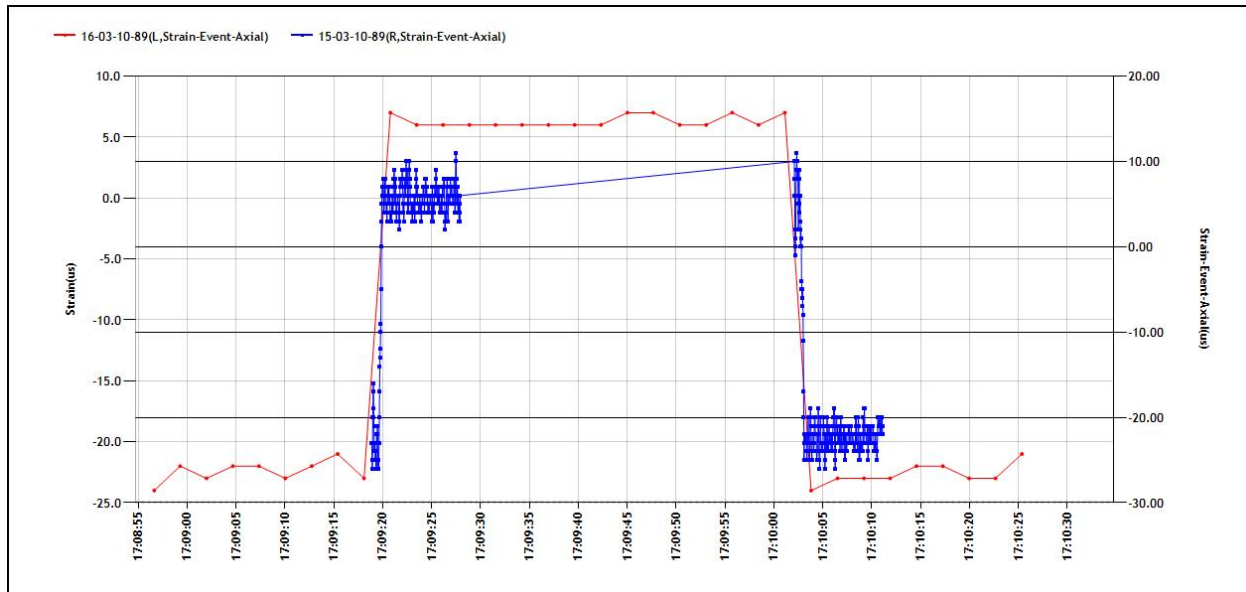
Strain Gauge Sensing Element Dimensions

The strain gauge sensing element outputs the strain analog signal on its cable after it gets the excitation signal from the wireless transmitter part. This sensor is self-adhesive and it is meant to be used on steel structures.



All dimensions are in mm [inch].

The data shown in SenScope™



The data marked in blue are event packets while the data marked in red are regular strain measurements. The event packets show more detail about the change in a period of time while the regular packets show the trend in the long term.