Senseit™

The Internet of Things

WATER ROPE

Wireless Water Rope Sensor

General Description

The Wireless Water Rope Sensor detects the presence of water anywhere along the surface of the rope. Sensor comes with 10 feet of water rope. Additional 10 ft. sections are available and can be connected up to 100 feet.

- 10 ft. lead and 10 ft. water detection rope.
- Immediately detects water anywhere along rope.
- Expandable up to 100 ft. of detection rope.

Free iSenseit basic online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email.

Principle of Operation

The Senseit Wireless Water Rope Sensor detects conductive liquids anywhere along the length of the detection rope by using two wires covered with conducting polymer. When water or conductive liquid contacts the rope, the sensor will immediately turn on the RF radio and transmit the data to the wireless gateway and iSenseit Online Sensor Monitoring and Notification System, allowing the user to immediately receive an alert by SMS text, email or voice call. The sensor rope dries quickly allowing the sensor to reset for next use. Detection rope can be expanded up to 100 feet by simply clicking additional 10 foot sections of detection rope together. Additional sections of water detection rope are available on the Senseit website.

Example Applications

- Data center and server room water monitoring.
- Document retention center monitoring.
- Basement water monitoring.
- Plumbing leak detection.
- Boat bilge monitoring.
- Storage monitoring.

Senseit Sensor Core Specifications

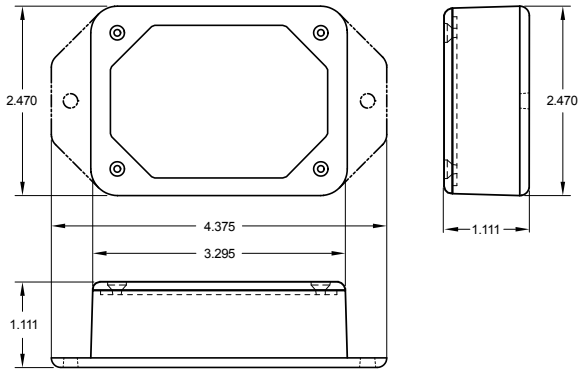
- Wireless Range: 250 - 300 ft. (non-line-of-sight /
- Communication: RF 900, 920, 868 and 433 MHz
- Power: Replaceable batteries (optimized for long battery life) - Line-power (AA version) options available
- Battery Life (at 1 hour heartbeat setting): **

  AA battery > 4-8 years
  Coin Cell > 2-3 years.

* Actual range may vary depending on environment.
** Battery life is determined by sensor reporting frequency and other variables.

Sensor Types & Options

Wireless Water Rope Sensor (AA)



T	
Supply Voltage	.0 - 3.6 VDC (3.0 - 3.6 VDC Using Power Supply) *
Current Consumption	0.7 µA (sleep mode after measurement) 2 mA 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Batteries)	-18°C to 55°C (0°F to 130°F) using alkalin -40°C to 85°C (-40°F to 185°F) using lithium **
Optimal Battery Temperature Range (AA)	+10°C to +50°C (+50°F to +122°F)
Weight	9.0 oz.
Wireless Range	250 - 300 ft. (Indoors / Range may vary according to environmental variables.
FC CE Industry Canada	900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1. 920 MHz product; ARIB STD-T108 R210-103733. 868 and 433 MHz product tested and found to comply with: CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05).

* Hardware cannot withstand negative voltage. Please take care when connecting a power device.

** At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.

W	
Material	PE + alloy lead
Weight	30g/meter
Pull Force Limit	60kg
Fire Resistance	Second pressure plenum cable
Cable Diameter	5.5mm
Core Resistance	3ohm/100 meters
Maximum Exposed Temperature	75°C (167°F)
Cable length	10 ft. (120 in.) included (expandable to 100 ft.)

Power Options

Two replaceable 1.5V AA sized batteries are included with the stanadard model. A line-power version with battery backup is also available - allowing it to be powered by a standard 3.0 - 3.6V power supply and use the internal batteries if there is a power interruption.

Power options must be selected at time of purchase as the internal hardware of the sensor must be changed to support the selected power requirements.

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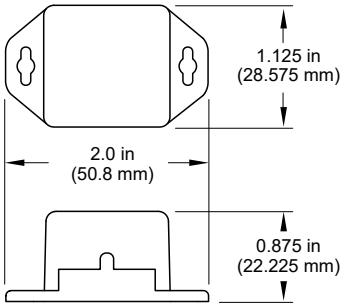
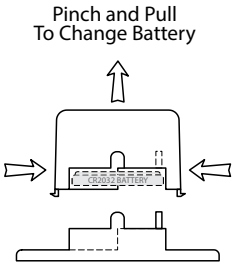
Wireless Water Rope Sensor (Coin Cell)





T	
Supply Voltage	2.0 - 3.6 VDC *
Current Consumption	0.7 µA (sleep mode after measurement) 2 mA 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Batteries)	-7°C to +60°C (20°F to +140°F)**
Optimal Battery Temperature Range (AA)	+10°C to +50°C (+50°F to +122°F)
Weight	6.0 oz.
Wireless Range	250 - 300 ft. (Indoors / Range may vary according to environmental variables.
FC CE Industry Canada	900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1. 920 MHz product; ARIB STD-T108 R210-103733. 868 and 433 MHz product tested and found to comply with: CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05).

* Hardware cannot withstand negative voltage. Please take care when connecting a power device.

** At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.

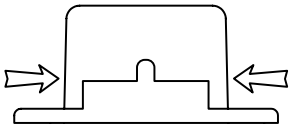
W	
Material	PE + alloy lead
Weight	30g/meter
Pull Force Limit	60kg
Fire Resistance	Second pressure plenum cable
Cable Diameter	5.5mm
Core Resistance	3ohm/100 meters
Maximum Exposed Temperature	75°C (167°F)
Cable length	10 ft. (120 in.) included (expandable to 100 ft.)

Power Options

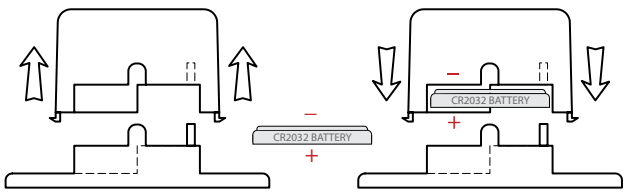
Sensors are powered by a replaceable 3.0 V coin cell battery. Optional AA battery powered sensors are available. The AA version of these sensors are larger in size (3" [L] x 2.1" [W] x 1.2" [H]) and include two long-life AA batteries.

It is recommended that unless you are using the AA battery solution, you set heartbeat to no faster than one hour to preserve battery life.

PinchPower™ Enclosure



Pinch
(press in on the sides)



Pull
(sensor away from base)

Press
(sensor back into base)

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Options

Commercial Grade Sensors

Senseit commercial grade sensors are designed for applications in ordinary environments (normal room temperature, humidity and atmospheric pressure). Do not use these sensors under the following conditions as these factors can deteriorate the product characteristics and cause failures and burn-out.

- gas, etc.).
- V
- Dusty conditions.
- Under low or high pressure.
- Wet or excessively humid locations.
- Places with salt water, oils chemical liquids or organic solvents.
- Where there are excessively strong vibrations.
- Other places where similar hazardous conditions exist.

Use these products within the speci ed temperature range. Higher temperature may cause deterioration of the characteristics or the material quality.

Industrial Grade Sensors - Type 1, 2, 4, 4X, 12 and 13 NEMA Rated Enclosure

Senseit's Industrial sensors are enclosed in reliable, weatherproof NEMA rated enclosures. Our NEMA rated enclosures are constructed for both indoor or outdoor use and protect the sensor circuitry against the ingress of solid foreign objects like dust as well as the damaging effects of water (rain, sleet, snow, splashing water, and hose directed water).

- Safe from falling dirt.
- Protects against wind-blown dust.
- Protects against rain, sleet, snow, splashing water, and hose directed water
- Increased level of corrosion resistance
- Will remain undamaged by ice formation on the enclosure