

# Monnit

## Wireless Water Rope Sensor (AA)



### Technical Overview

#### 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.

#### Features

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

#### Power Options

The standard version of this sensor is powered by two replaceable 1.5V AA sized batteries (included with purchase). This sensor is also available in a line power version with battery backup, 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.

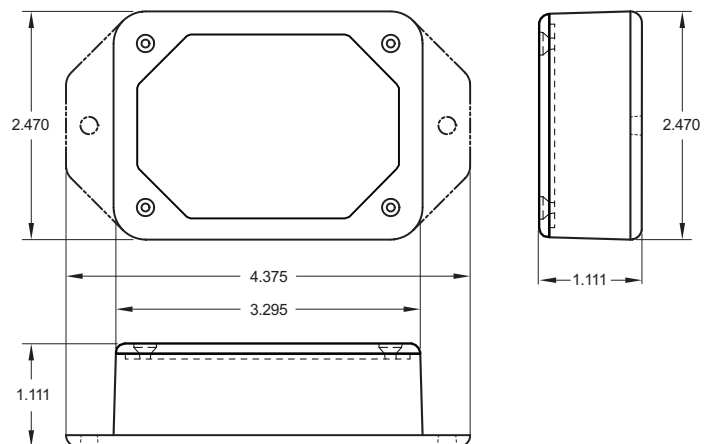
Power options must be selected at time of purchase as the internal hardware of the sensor must be changed to support the selected power requirements.

#### Monnit Sensor Core Specifications

- Power: Two replaceable 1.5 V AA batteries (Option for line power with battery backup)
- Communication: RF 900, 920, 868 and 433 MHz
- Dimensions: 4.375" x 2.470" x 1.111"
- Antenna: 4" wire antenna
- Operating Temperature: -40° to 85°C (-40° to 185°F)  
Device Range: 250 - 300 ft. non-line-of-sight\*
- Battery Life: At 1 hour heartbeat setting, standard AA batteries will last up to 4 years.\*\*

\* Actual range may vary depending on environment.


\*\* Battery life is determined by sensor reporting frequency and other variables. Other power options are also available.



#### Example Applications

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

***The Leader in Low Cost Wireless Sensors***

Water Detection Rope Specifications	
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.)
Sensor Electronics Specifications	
Supply Voltage	2.0 - 3.6 VDC (3.0 - 3.6 VDC Using Power Supply) *
Current Consumption	0.7 µA (sleep mode) 2 mA (radio idle/off mode) 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 alkaline -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 )
Certifications	 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.

### Caution/Notice:

This product is designed for application in an ordinary environment (normal room temperature, humidity and atmospheric pressure). Do not use this sensor under the following conditions as these factors can deteriorate the product characteristics and cause failures and burn-out.

- Corrosive gas or deoxidizing gas - chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxides gas, etc.).
- Volatile or flammable gas.
- 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 this product within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality of this product.

