Humidity Sensor

Technical Overview

General Description

The Humidity Sensor allows you to accurately monitor the relative humidity of the air within a room or enclosure.

Features

- Measures relative humidity with high accuracy

Smart Sensor Operation

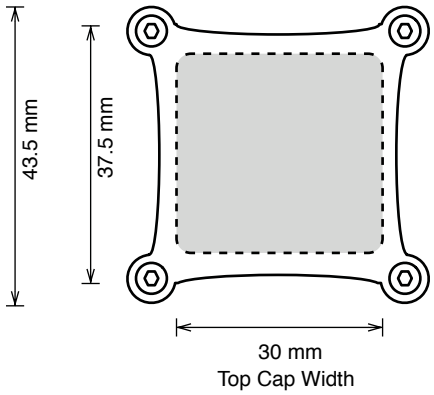
The Urbanise Humidity Sensor detects and measures the relative humidity at the device. Each 10 minutes the sensor will send all measured data to the Gateway which will then relay this data back to the Urbanise Cloud.

Urbanise Humidity Sensors use patent pending 1 Click Commissioning technology to automatically connect and relay data to the Urbanise Remote Monitoring platform. Via secure access to your Urbanise Account you can see Humidity sensor data displayed in a Dashboard for each Building or Remote Asset you are monitoring.

Through the use of patent pending Dynamic Profiles you can set thresholds for each sensor which can trigger alarms that can be sent to you via email, SMS or automatically dispatch Emergency Jobs in the Urbanise Operations and Mobile Workforce applications.

URBANISE Sensor Core Specifications

- Communication: 868 and 433 MHz
- Antenna: 100 mm wire antenna
- Operating Temperature: -7° to 60°C
- Device Range: 100m non-line-of-sight*
- Power: Replaceable 3.0 V CR2477 coin cell battery
- Battery Life: Coin cell that have life span of between 1 & 2 years**



Example Applications

- Greenhouse humidity monitoring
- Agriculture environment monitoring
- Art gallery and museum environmental monitoring
- HVAC dehumidification monitoring
- Humidity monitoring
- General weather and environmental monitoring

Sensor Dashboard Graph

Can be retrofitted into any location in less than 10 minutes, with no special equipment.

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Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC
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 Coin Cell)	-7°C to +60°C
Optimal Battery Temperature Range (Coin Cell)	+10°C to +50°C
Accuracy	± 1.8% under normal conditions (10% - 90% RH)
RH Operating Range	0 – 100% RH
RH Response Time	8 sec (tau 63%)
Certifications	868 and 433 MHz product tested and found to comply with CE Complies with IDA Standards DA107306 R-NZ

Variants	
868MHz - Certified for Europe, Middle East, Africa	Product Code: UBS-8-HU-RH-03-00
433MHz - Certified for South East Asia, Australia, New Zealand	Product Code: UBS-4-HU-RH-03-00

***Sensor Installations** - Correct Positioning

This product is designed for usage with an Urbanise Wireless M2M gateway. In ideal conditions with correct orientation of sensors and gateway antennas the following ranges can be achieved.

- **300m** Direct Line of Site - in an open space where there are no obstructions between the gateway and the sensor and it is placed on the same horizontal plane
- **100m** Non-Line of Site - in an open space where there is an obstruction between the gateway and the sensor and it is placed on the same horizontal plane

Where the sensors and gateways are placed in an enclosed space, the range can be significantly reduced, nominally to the boundary of the enclosure. In addition incorrect antenna placement, placement on different vertical planes, interruptions by walls, doors, boxes, ducts, pipes, machinery or any other large dense physical objects can reduce the range even further.

****Sensor Installations** - Correct Usage

This product is designed for application in normal indoor and outdoor environments. The sensor housing is IP65 rated an as such is designed to be water and dust resistant as well as generally resistant to direct sunlight. However in order to prolong the lifespan and working quality of the sensor please avoid the following conditions as they will degrade the functional characteristics of the device and may cause it to fail OR for the battery to prematurely discharge reducing its expected lifespan before replacement.

- Environments where there is extreme heat (+50 Deg) or cold (-5 Deg)
- Environments where there is corrosive, volatile or flammable gas
- Environments where there is salt water, oils, chemical liquids or solvents
- Environments which prevent consistent connectivity to a gateway will cause batteries to drain prematurely

Use this device within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality of this product.

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