



WIRELESS HUMIDITY AND TEMPERATURE SENSORS

Installation & Operation Instructions

WH2630A & B

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GENERAL INFORMATION

The WH2630 is a battery operated spread spectrum wireless wall humidity temperature sensor.

ACI's mesh network wireless sensors utilize reliable Spread Spectrum Radio technology. They can be installed easily in minutes eliminating hundreds of feet of wire and saving installation cost while reducing installation labor risks.

The sensor Data-Link LED confirms the data transmission was received by the receiver for fast and reliable positioning of the sensor during installation. There is no need for special wireless installation equipment or tool.

The ACI wireless sensors can be used with any LON works, BACnet, Modbus, or DDC control system or panel.

Transmission distance in a typical building is 200-300 feet horizontal depending on the layout and construction of the building, and one floor above and one floor below the transceiver. Sensor distance and reliability can be increased with the addition of a RR2552B(s) repeater.

MOUNTING INSTRUCTIONS

Wireless sensors should be installed within 200 to 300 feet of the receiver. RR2552 signal repeaters can be installed as to increase transmission distance between sensors and receivers.

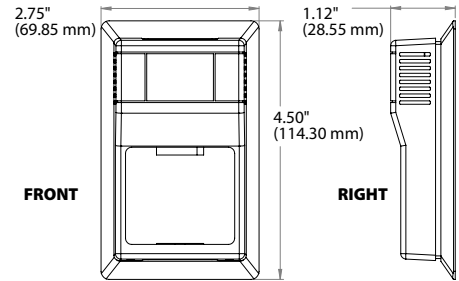
CAUTION:
Observe battery polarity when installing battery.

To select the proper sensor location, first install and power the receiver. To activate the sensor insert the battery observing the polarity.

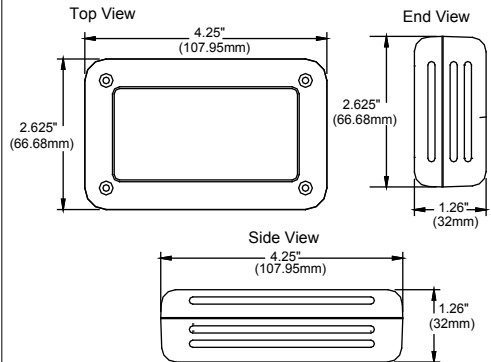
While the sensor is attempting to connect to the receiver the Data-Link LED will blink rapidly 8-10 times every 10 seconds. Once a connection has been established the Data-Link LED will blink once to indicate the data transmission has been received successfully. The Data-Link LED will continue to blink once for

FIGURE 1: ENCLOSURE DIMENSIONS

STANDARD ROOM



RUGGEDIZED ENCLOSURE



every data transmission. The data transmission rate is programmed into the sensor (normally 75 second intervals).

Once the sensor location has been determined mount the sub-base on an inside wall approximately 4.5 feet from the floor (or in the specified location) to allow exposure to the average zone temperature using two #8 screws, Velcro™ or double sided tape.

Take care when mounting. Check local code for mounting height requirements. Typical mounting heights are 48-60" (1.2-1.5 m) off the ground and at least 1.5' (0.5 m) from the adjacent wall. The sensor should be mounted in an area where air circulation is well mixed and not blocked by obstructions.

***Reference FIGURE 2**

For optimal temperature measurement:

- Do not install on external walls.
- Avoid air registers, diffusers, vents, and windows.
- Avoid confined areas such as shelves, closed cabinets, closets, and behind curtains.
- Eliminate and seal all wall and conduit penetrations. Air migration from wall cavities may alter temperature readings.
- A thermally-insulated backing should be used when fitting to solid walls (concrete, steel, etc.). ACI part: A/ROOM-FOAM-PAD
- Do not install near heat sources, eg: lamps, radiators, direct sunlight, copiers, chimney walls, walls concealing hot-water pipes.

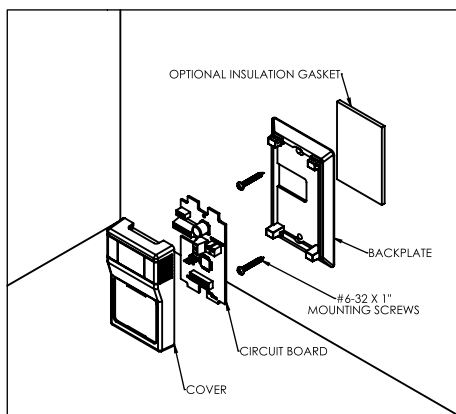
Attach the cover to the base by snapping the top of the cover on first and then the bottom. Tighten the cover down, using the (2) 1/16" Allen screws located in the bottom of the housing. A 1/16" Hex driver is needed to secure the cover to the base.

Locate and record the sensor ID numbers located on a label inside the unit prior to mounting.

Ruggedized Enclosure: Attach the cover of the sensor by installing the four screws.

The sensor has a Low Battery LED that will start to blink continuously when the battery voltage is low. A low battery signal is also sent to the receiver for remote indication that the battery should be replaced. If the battery is not replaced in approximately 2 months, the battery voltage will become so low that the Low Battery and Data-Link LEDs will not blink. Replace the battery and the Data-Link LED will start blinking while the sensor is re-establishing communications with the receiver.

FIGURE 2: MOUNTING



PRECAUTIONS

SENSORS, REPEATERS AND RECEIVERS SHOULD NOT BE INSTALLED IN THE FOLLOWING AREAS:

- **INSIDE METAL ENCLOSURE / PANEL**
 - **INSIDE OR IMMEDIATELY NEXT TO ELEVATOR SHAFT / ELEVATOR BANKS**
 - **IN FRONT OF OR IMMEDIATELY NEXT TO LARGE TREES OR LARGE BODY OF WATER**
- TRANSMISSION DISTANCE AND PERFORMANCE WILL BE DRASTICALLY REDUCED.**



CAUTION:

DO NOT USE THIS PRODUCT IN ANY SAFETY RELATED APPLICATIONS WHERE HUMAN LIFE MAY BE AFFECTED.

PRODUCT SPECIFICATIONS

Input Voltage:	Battery; 1 (Duracell DL123A), Lithium 3V 1400 mAh 45 mA maximum
Operating Temperature Range:	14 to 140° F (-10 to 60°C)
Operating Humidity Range:	5 to 65%, Non-condensing
Storage Temperature Range:	0 to 176°F (-17 to 80°C) 5 to 65% RH, Non-condensing
Accuracy:	+/- 1°F (+/- 0.555°C) 12 bit resolution
Data Protocol:	IEEE 802.15.4-2003/2006
RF Characteristics:	900 MHz, Operating Frequency 10 channels between 902 – 928 MHz Transmitter Power: 11 dBm Receiver Sensitivity: -11 dBm
Sensor Data Transmission Time:	75 seconds (default) 300 seconds (optional)
Transmission Distance:	200 – 300 ft horizontally depending on building type and construction, and typically one floor above and below the transceiver vertically
Enclosure Material Flammability Rating:	Room: ABS Plastic UL 94 HB Ruggedized Enclosure: ABS Plastic UL94-5VA

WARRANTY

The ACI Wireless Series are covered by ACI's Two (2) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's website: www.workaci.com.

W.E.E.E. DIRECTIVE

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with household waste. Do not burn.

