

This sensor should be installed by a qualified HVAC technician.

After installation, allow 10 minutes for the temperature readings to stabilize.

NOTE: This document is intended for use with software version **5.4** or newer when using this sensor with a Trane® or American Standard® connected thermostat (824/850/1050).

INSTALLATION – adding a ZSENS930 to a new or existing Z-Wave network

STEP 1 – Find the right location

Suggested criteria for finding the right sensor location when used to control a home or as a thermostat sensor:

1. Do not place near a supply register.
2. Do not place near windows or on an exterior wall.
3. Do not place behind doors or where air flow can be blocked by furniture.
4. Do not place where it may be subject to unnecessary or extreme temperature changes; unintended influences may cause adverse environment sensing.
5. The optimum zone for correct placement of the sensor is at least 5 feet above the floor and at least 2 feet below the ceiling.

STEP 2 – Remove the Back Plate

Insert a small screwdriver beneath the tab at the bottom of the Back Plate and lift to unsnap it from the front. **WRITE DOWN** the Serial Number from the Back Plate of the sensor.

STEP 3 – Insert the supplied batteries

Two 1.5 Volt AAA batteries are supplied in the box.

Please see Table 1, on Page-2 to continue with adding a wireless sensor to the 824, 850 and 1050 thermostats.

STEP 4 – Put the Z-Wave bridge in Add mode

Press the **+** or Add button on the bridge.

STEP 5 – Add the sensor

Stand where the sensor is to be installed and press and release the button labeled "INSTALL" on the interior of the sensor

STEP 6 – Connection Status.

The status LED next to the button on the interior of the sensor will blink rapidly for 3 seconds when it has been added to your Z-Wave network.

STEP 7 – Mount the back plate at the right location

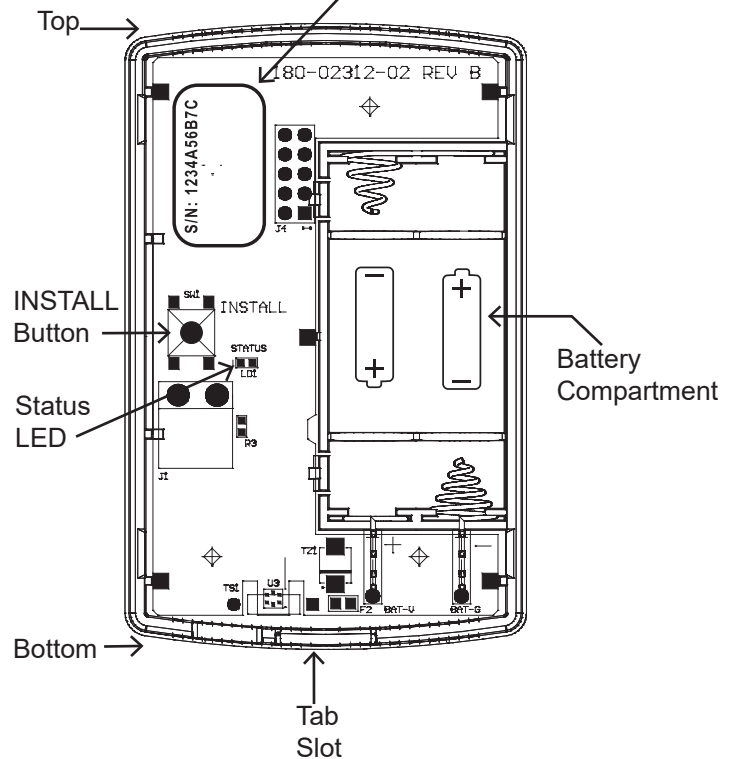
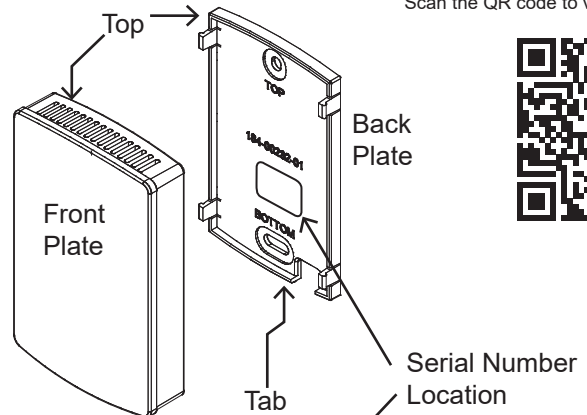
Anchors and screws are provided to mount the Back Plate.

STEP 8 – Mount the Sensor **FINAL INSTALLATION STEP**

Once successfully added, snap the sensor onto the mounted Back Plate.

It will take 10 minutes after installation for the temperature and humidity values to stabilize due to handling.

Scan the QR code to view help videos



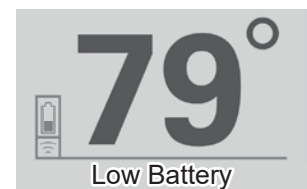
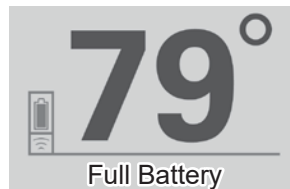
SERIAL# _____

LOCATION _____ Or zone name if applicable

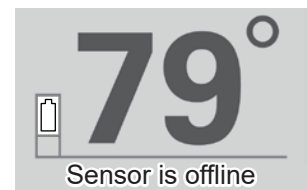
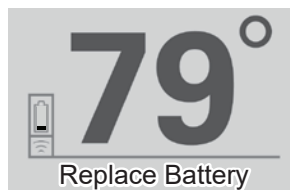
Home owner should retain a copy of this document for their records.

ZONE NOTES:

LOCATION:	LOCATION / :
SERIAL#	SERIAL#
LOCATION:	LOCATION:
SERIAL#	SERIAL#
LOCATION:	LOCATION:
SERIAL#	SERIAL#
LOCATION:	LOCATION:
SERIAL#	SERIAL#



Sensor with lowest battery level is shown on home screen.



NOTE : Please see this link for video tutorials:
<http://www.fieldtechhelp.com/NEWURLNEEDED.html>
 A QR Code at the top of this document is also available for your convenience.

Table 1. ADDING A ZSENS930
FIRST, FOLLOW STEPS ONE THROUGH THREE IN THE INSTALLATION TABLE.


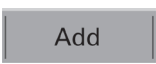
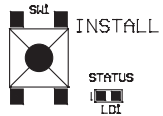
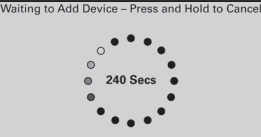
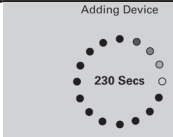
	STEP 4.1	STEP 4.2	STEP 4.3	STEP 4.4
	Access the "Service Menu"	Put the stat in "Add" mode	Add the Z-Wave sensor	On screen response
Action	Select "Indoor Sensor Setup"	Select "Wireless Sensor" and then on the next screen select "Add"	Stand where the sensor is to be installed and press and release the button labeled "INSTALL" on the interior of the sensor.	Text at top of the screen should change: From: "Waiting to Add Device – Press and Hold to Cancel" To: "Adding Device"
Button			 The STATUS LED will blink rapidly for 3 seconds	 To  After the sensor is added, "Temperature Sensor added as Device [X]: Sensor added successfully." should appear.

Table 2. ASSIGNING A ZSENS930
FIRST, FOLLOW STEPS 1 THROUGH 3 IN THE INSTALLATION TABLE ON PAGE 1 AND ALL THE STEPS IN TABLE 1.

	STEP 5.1																
Select an available sensor	Select the newly added sensor on the right side of the Sensor Assignment screen under the label "Available Sensors". NOTE: The selected sensor will be highlighted in blue.																
Screen 1	<table border="1"> <thead> <tr> <th>Zone Name</th> <th>Sensor Assigned State</th> <th>Available Sensors</th> </tr> </thead> <tbody> <tr> <td>NativeZone - 1</td> <td></td> <td>Wireless Sensor 1806R2AAWX - Online</td> </tr> <tr> <td>1 SensorName</td> <td>ComfortLink II (Onboard Sensor)</td> <td></td> </tr> </tbody> </table> <table border="1"> <tr> <td>Refresh</td> <td>Wireless Sensor</td> <td>Done</td> <td>Assign</td> </tr> </table>	Zone Name	Sensor Assigned State	Available Sensors	NativeZone - 1		Wireless Sensor 1806R2AAWX - Online	1 SensorName	ComfortLink II (Onboard Sensor)		Refresh	Wireless Sensor	Done	Assign			
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NativeZone - 1		Wireless Sensor 1806R2AAWX - Online															
1 SensorName	ComfortLink II (Onboard Sensor)																
Refresh	Wireless Sensor	Done	Assign														
Assign the sensor	Once the sensor is selected "Assign" will illuminate on the Navigation Bar. Select "Assign". Repeat until all needed sensors are assigned.																
Sensor is now assigned.	The list of assigned and averaged sensors on the left is now updated and the previously unassigned sensor is now included. (Screen 2)																
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Refresh	Wireless Sensor	Done	Assign														
	Select "Done" to save and exit the Indoor Sensor Setup screen.																

After this step follow **Step 7 and 8** from **Page-1** if not already complete

NOTE: By default all sensors in the Assigned list are averaged together evenly. Up to four sensors may be used to define the temperature of the conditioned space.

Table 3. UNASSIGNING A ZSENS930

	STEP 1																
Select an assigned sensor	Select the sensor to be removed from the assigned sensor list. Use the serial number to verify the device is the correct sensor. NOTE: The selected sensor will be highlighted in blue.																
Screen 3	<table border="1"> <thead> <tr> <th>Zone Name</th> <th>Sensor Assigned State</th> <th>Available Sensors</th> </tr> </thead> <tbody> <tr> <td>NativeZone - 1</td> <td></td> <td></td> </tr> <tr> <td>1 SensorName</td> <td>ComfortLink II (Onboard Sensor)</td> <td></td> </tr> <tr> <td>2 SensorName</td> <td>Wireless Sensor 1806R2AAWX - Online</td> <td></td> </tr> </tbody> </table> <table border="1"> <tr> <td>Refresh</td> <td>Wireless Sensor</td> <td>Done</td> <td>Unassign</td> </tr> </table>	Zone Name	Sensor Assigned State	Available Sensors	NativeZone - 1			1 SensorName	ComfortLink II (Onboard Sensor)		2 SensorName	Wireless Sensor 1806R2AAWX - Online		Refresh	Wireless Sensor	Done	Unassign
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2 SensorName	Wireless Sensor 1806R2AAWX - Online																
Refresh	Wireless Sensor	Done	Unassign														
Unassign the sensor	Once an assigned sensor is selected "Assign" will change to "Unassign" on the Navigation Bar. Select "Unassign".																
Sensor is now unassigned.	The list of assigned and averaged sensors is now updated and the previously assigned sensor is moved to the "Available Sensors" list. (Screen 4) NOTE: The order of sensors does not matter. By default the temperature values from all sensors are averaged together evenly to determine the temperature of the conditioned space.																
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Refresh	Wireless Sensor	Done	Assign														
	Select "Done" to save and exit the Indoor Sensor Setup screen.																

NOTE: The thermostat will **not** allow you to exit this screen without at least one sensor assigned to the system.

REMOVING A ZSENS930**Table 4.**

NOTE: This will work for both "Offline" and "Online" sensors and only ZSENS930 sensors may be removed this way. The Summary Table will also work.

	STEP 1	STEP 2	STEP 3	STEP 4																																					
	Unassign the sensor	Select the "Offline" sensor.	Remove the sensor	Screen change																																					
Action	Follow steps 1 through 3 in Table 3 for the sensor(s) that are to be removed. They must be unassigned to be removed.	Once the sensor is in the "Available Sensors" list, select the "Wireless" button and then select the sensor to be removed. Use the serial number to verify the device is the correct sensor. NOTE: The selected sensor will be highlighted in blue.	Tap the "Remove" button NOTE: If the sensor is "Online" you will need to press the "INSTALL" button on the inside of the sensor while "Waiting to Remove Device".	Select "Done". The sensor is no longer included in the "Available Sensors" list. (Screen 6) NOTE: To return a sensor to the list you will have to go through the steps of Table 1.																																					
Screen 5	<table border="1"> <thead> <tr> <th>Zone Name</th> <th>Sensor Assigned State</th> <th>Available Sensors</th> </tr> </thead> <tbody> <tr> <td>NativeZone - 1</td> <td></td> <td>ComfortLink II (Remote Sensor)</td> </tr> <tr> <td>1 SensorName</td> <td>ComfortLink II (Onboard Sensor)</td> <td>Non-Communicating Sensor Location : Relay Panel</td> </tr> <tr> <td></td> <td></td> <td>Wireless Sensor 1644R2ABPX - Offline</td> </tr> <tr> <td>Refresh</td> <td>Wireless Sensor</td> <td>Done</td> </tr> <tr> <td></td> <td></td> <td>Assign</td> </tr> </tbody> </table>		Zone Name	Sensor Assigned State	Available Sensors	NativeZone - 1		ComfortLink II (Remote Sensor)	1 SensorName	ComfortLink II (Onboard Sensor)	Non-Communicating Sensor Location : Relay Panel			Wireless Sensor 1644R2ABPX - Offline	Refresh	Wireless Sensor	Done			Assign	Screen 6	<table border="1"> <thead> <tr> <th>Zone Name</th> <th>Sensor Assigned State</th> <th>Available Sensors</th> </tr> </thead> <tbody> <tr> <td>NativeZone - 1</td> <td></td> <td>ComfortLink II (Remote Sensor)</td> </tr> <tr> <td>1 SensorName</td> <td>ComfortLink II (Onboard Sensor)</td> <td>Non-Communicating Sensor Location : Relay Panel</td> </tr> <tr> <td></td> <td></td> <td>Wireless Sensor 1644R2ABPX - Offline</td> </tr> <tr> <td>Refresh</td> <td>Wireless Sensor</td> <td>Done</td> </tr> <tr> <td></td> <td></td> <td>Assign</td> </tr> </tbody> </table>		Zone Name	Sensor Assigned State	Available Sensors	NativeZone - 1		ComfortLink II (Remote Sensor)	1 SensorName	ComfortLink II (Onboard Sensor)	Non-Communicating Sensor Location : Relay Panel			Wireless Sensor 1644R2ABPX - Offline	Refresh	Wireless Sensor	Done			Assign
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NOTE: This sensor can be added to any Z-Wave network. It can also be added to a Trane or American Standard connected thermostat with a built in Z-Wave bridge then assigned as an indoor temperature sensor (IDT) from the Service Menu.

SUMMARY OF SENSOR OPERATION	TROUBLESHOOTING		
INSTALL BUTTON – Function Overview	SYMPTOM	CAUSE	CURE
<ul style="list-style-type: none"> Press once to add or remove the sensor from a Z-Wave Network. Press and hold, approximately 10 seconds, until the STATUS LED starts blinking to restore factory defaults. Press three times rapidly to send a "BATTERY_REPORT" and "WAKE_UP_NOTIFICATION" (if installed on a network). The sensor will stay awake for 30 seconds. 	Sensor fails to add to the network. (slow blinking of the Status LED & no pairing action seen on the bridge)	Out of range	Add a Z-Wave repeating device (e.g. light module/dimmer) at a location between the bridge and sensor. First add the repeater to the network following that device's instructions. Then try to add the sensor to the network again at the desired sensing location.
STATUS LED – Function following a button press: The LED will give an indication for 30 seconds following a button press. In that time the following will be seen: <ul style="list-style-type: none"> Continuous On: Device is enrolled on a Z-Wave Network. Slow Blinking: Device is not enrolled on a Z-Wave Network. Fast Blinking: Successfully added to or removed from a Z-Wave network. 		Improperly removed from network previously.	Remove the sensor from the network, follow the steps in Table 3. Then add it back to the network.
ADD – Adding the sensor to an existing Z-Wave network 1. Set your home's Z-Wave Bridge into ADD Mode. 2. Press and release the INSTALL button on the sensor. 3. The Status LED will blink rapidly for 3 seconds when it has been added to your Z-Wave network. Your bridge will also indicate that the sensor was successfully added.	Sensor drops connection intermittently	Edge of range	Add a Z-Wave repeating device (e.g. light module/dimmer) at a location between the bridge and sensor.
REMOVE – Removing the sensor from a Z-Wave network 1. Set your home's Z-Wave Bridge into REMOVE Mode. 2. Press and release the INSTALL button on the sensor. 3. The Status LED will blink rapidly for 3 seconds when it has been removed from your Z-Wave network. Your bridge will also indicate that the sensor was successfully removed.	Button press ignored	Button press too fast or too slow	Firm 1/2 second button press.
	Sensor goes from "Online" to "Offline" and "Missing Sensor" alarm TSO.001.00 is shown	Sensor is enabled but offline (not reporting).	Change the batteries in the sensor. Remove the offline sensor following the steps from Table 3 then reinstall or add a new sensor. Add a signal repeater.
	"Low Battery" alarm TSO.004.00	Sensor is reporting a low battery.	Change the batteries in the sensor.
FACTORY RESET	SPECIFICATIONS		
Factory Reset should be used only when the primary controller is missing or otherwise inoperable. Press and hold, approximately 10 seconds, until the Status LED starts blinking.	SIZE (INCHES): 3.25 X 2.0 x 0.60	POWER: 2 X AAA Alkaline Batteries	
** FOR INDOOR USE ONLY **	WEIGHT: 0.25 LBS	RF:	Z-WAVE ZM5202, US 908.4 MHz / 916 MHz

Parameter	Description	Length (Bytes)	R/W	Default Value	Valid Values
1	Time between Battery Reports (hours)	1	R/W	0	0 = Do not send periodically; Range: 1–127 hours
2	Send BASIC SET ON above this temperature (See #20)	1	R/W	121	121 = Disabled; Range: 15 – 120° F
3	Send BASIC SET ON below this temperature (See #20)	1	R/W	121	121 = Disabled; Range: 15 – 120° F
4	Send BASIC SET OFF above this temperature (See #20)	1	R/W	121	121 = Disabled; Range: 15 – 120° F
5	Send BASIC SET OFF below this temperature (See #20)	1	R/W	121	121 = Disabled; Range: 15 – 120° F
6	Send multiple attempts for all BASIC SET commands	1	R/W	0	0 = Disabled; 1-5 = Number of extra attempts sent every minute after first send
7	Temperature Units	1	R/W	1	0 = Celsius; 1 = Fahrenheit
8	Association Group1 – Temperature delta auto send threshold	1	R/W	10	Range: 1 – 200; Parameter is in tenths of degrees.
9	Association Group1 – Periodic temperature send interval	1	R/W	0	0 = Disabled; Range: 1-120 minutes
10	Association Group2 – Temperature delta auto send threshold	1	R/W	10	0 = Disabled; Range: 1 – 50; Parameter is in tenths of degrees.
11	Association Group2 – Periodic temperature send interval	1	R/W	0	0 = Disabled; Range: 1-120 minutes
12	Send BASIC SET ON above this humidity (See #20)	1	R/W	0	0 = Disabled; Range: 1–100%
13	Send BASIC SET ON below this humidity (See #20)	1	R/W	0	0 = Disabled; Range: 1-100%
14	Send BASIC SET OFF above this humidity (See #20)	1	R/W	0	0 = Disabled; Range: 1-100%
15	Send BASIC SET OFF below this humidity (See #20)	1	R/W	0	0 = Disabled; Range: 1-100%
16	Association Group1 – Humidity delta auto send threshold	1	R/W	5	Range: 1-50%
17	Association Group1 – Periodic humidity send interval	1	R/W	0	0 = Disabled; Range: 1-120 minutes
18	Association Group3 – Humidity delta auto send threshold	1	R/W	5	0 = Disabled; Range: 1-30%
19	Association Group3 – Periodic humidity send interval	1	R/W	0	0 = Disabled Range: 1-120 minutes
20	BASIC SET options for temperature and humidity	1	R/W	1	Configuration Register Combinations: 1 = Enable Registers 2, 5, 12, 15 2 = Enable Registers 2, 5, 13, 14 3 = Enable Registers 3, 4, 12, 15 4 = Enable Registers 3, 4, 13, 14
21	Temperature Offset	1	R/W	0	Range: -7 to 7° F
22	Humidity Offset	1	R/W	0	Range: -7% to 7%
23	Humidity Filter Time Constant	1	R/W	30	Range: 0 - 60 minutes 0 = Disabled

* Configurable through third party Z-Wave systems.

ASSOCIATION GROUP INFORMATION TABLE				
GROUP	PROFILE	COMMAND CLASSES	GROUP NAME	MAX DEVICES
1	Lifeline	Battery Report, Multilevel Sensor Report, Device Reset Locally Notification	Lifeline	1
2	Sensor	Multilevel Sensor Report	Temperature Reports	5
3	Sensor	Multilevel Sensor Report	Humidity Reports	5
4	Sensor	Basic Set	Temperature Driven Basic Sets	5
5	Sensor	Basic Set	Humidity Driven Basic Sets	5
6	Sensor	Battery Report	Battery Reports	5

FCC/IC NOTICES

FCC ID: W1B7ZW020 - This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Increase the separation between the equipment and receiver
- Consult the dealer or an experienced radio/TV technician for help

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC ID: 9374A-W020 - This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

About Trane and American Standard Heating and Air Conditioning Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com

The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

