WIRELESS TEMPERATURE /HUMIDITY SENSOR, i4H-TH-3

The i4H-TH-3 is a battery operated wireless temperature/humidity sensor specially designed for the i4H-LS-20 Security System. With its small size and wireless operation, the sensor can be put anywhere to monitor the temperature and humidity in a room, a chamber or even a freezer, and you can check the reading on your smart phone, tablet or computer through the cloud at any time.

A. Enrolling Code

1. Loosen the screw of the i4H-TH-3, and then open the case and place a CR-2/ 3V Lithium battery in right polarity.
2. Keep pressing the Clear/Enroll Button on i4H-LS-20 for over 3 seconds and then release it, the i4H-LS-20 would keep beeping and all LEDs blink. This means the system is ready for enrolling device.
3. Within 30 seconds press the Test button of the i4H-TH-3 for two seconds. If you hear 3 short beeps soon later then enrolling successes, otherwise you will hear one long beep after 30 seconds that means enrolling fails, you have to repeat enrolling action.
Note: Avoid activating any other sensors during the 30 seconds Device Enroll period.
Remarks: In case you have to change the i4H-TH-3 attribute, please do it on the cloud web directly, or refer to HyperSecureLink software user guide to change it by computer.   Remarks: The sensor can be set as an **Alarm Device** or a **Control Device**. (Refer to the blocks in below)

> **Now the Base Unit has learnt one type of the two sensors (Temperature or Humidity sensor), next step is to enroll another type sensor.**

> **Each time when you press the TEST button on the sensor it will send current temperature or humidity reading alternatively.**

B. Mounting

The sensor can be fixed on the wall by using the mounting bracket or hung by using the belt that comes with the sensor.
If you measure the temperature of water, the sensor should be placed in a watertight plastic bag.

Note: - Do not mount the sensor on a metallic frame, otherwise the RF transmission range will be shrunk due to radio signal attenuation.
- If the sensor is put in a closed freezer, there may be a large reduction in radio range. The user should move the Base Unit closer to the sensor or using a signal repeater.

C. Testing

Each time when you press the TEST button on the sensor it will send the current temperature (LED flashes once) or humidity reading (LED flashes twice) alternatively.

D. Temperature/Humidity Limit Setting

You can set high and/or low limit for Temperature/Humidity on the cloud either for alarm report, or to activate switch for control.
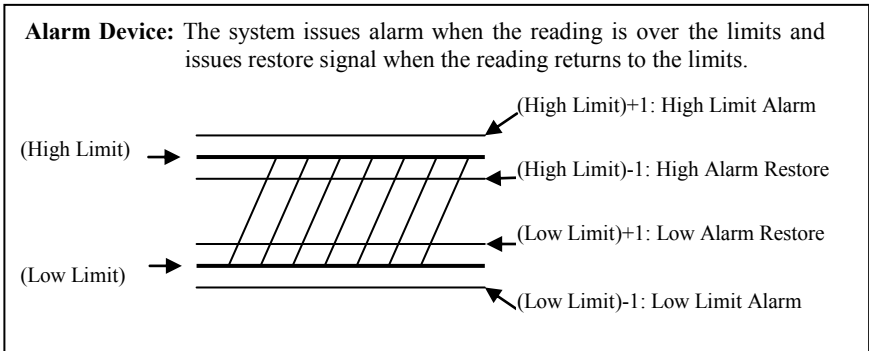
> **If both high/low limits are set, the high temperature limit should be greater then the low temperature limit at least for 1℃ and the high humidity limit should be greater than the low humidity limit at least for 5%.**

Note: If the sensor works in the temperature over +65℃ or below -25℃ for a long time, the sensor and battery life will be reduced and the performance may be degraded.

E. Operation and Display

To save battery power, the sensor sends reading automatically only when the temperature/humidity change is over 1℃/3%. If there is no any change for a long time, the sensor will send the reading hourly to refresh.

If there is any new reading transmitted from the sensor, the cloud would update immediately.

Alarm Device: The system issues alarm when the reading is over the limits and issues restore signal when the reading returns to the limits.

(High Limit)+1: High Limit Alarm
(High Limit)
(High Limit)-1: High Alarm Restore
(Low Limit)+1: Low Alarm Restore
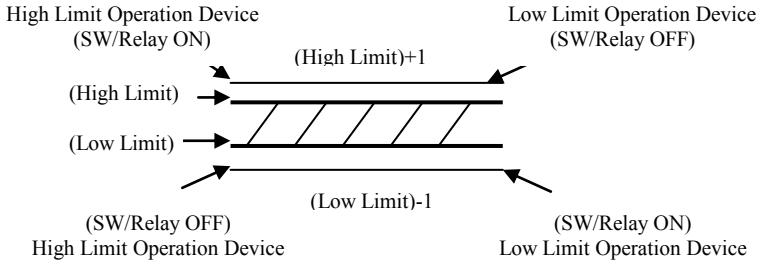(Low Limit)
(Low Limit)-1: Low Limit Alarm

Control Device: The reading from this device will not issue any alarm even over the limits.

Depends on the setting of High/Low limit, it can control the operation of the switches or the Relay output.

High Limit Operation: Turn on at high limit reading and turn off at low limit reading, to control all kinds of freezer or dehydrator.

Low Limit Operation: Turn on at low limit reading and turn off at high limit reading, to control all kinds of heater or humidifier.

High Limit Operation Device
(SW/Relay ON)

Low Limit Operation Device
(SW/Relay OFF)

(High Limit)+1

(High Limit)

(Low Limit)

(Low Limit)-1

(SW/Relay OFF)
High Limit Operation Device

(SW/Relay ON)
Low Limit Operation Device

SPECIFICATIONS

Supervision: sends temperature/ humidity reading at 30-minute interval alternatively.

Power Source: one CR-2 Lithium battery.

Reading Update Speed: 30-seconds/ Reading max.

Temperature Low/High Limit: -40℃/103℃.

Temperature Accuracy:　0℃ to 50℃　+/- 1℃　max.

　　　　　　　　　　　-40℃ to 85℃　+/- 2℃　max.

　　　　　　　　　　　 85℃ to 103℃　+/- 3℃　max. (Not suitable for long time work.)

Humidity High /Low Limit:　0% to 100%

Humidity Accuracy:　20% to 80%　+/- 4% max.

　　　　　　　　　 0% to 100%　+/- 5% max.

Estimated Battery Life: 1.2 years (Temperature/Humidity variation 10 times/day)

Low Battery Detection: 2.6V+/- 0.1V.

Size: 107x25x21 mm w/o bracket, 109x28.5x23 mm with bracket.

Weight: about 35 g w/o battery, 46 g with battery

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SMART HOME