

# Bluetooth LE Temperature Humidity Sensor Datasheet

## V1.0

<b>Model</b>	<b>Description</b>
JW1407HT	Temperature, humidity, waterdrop shape, IP67 waterproof, strong case with 4 screws. 2 years battery life by default working parameters, White/Black shell color, includes 1pc CR2477 / CR2450 coin battery, can pass CE & RoHS & FCC-ID certification.
JW1407HTS	Based on JW1407HT, adding flash memory (64Mbit) to storage measured data.

The Bluetooth LE Temperature Humidity Sensor JW1407HT(S) is a low energy Bluetooth® 4.2 digital broadcasting device, it collects high accurate sensor values and advertises to Android phone, tablet, iPhone, iPad, Linux device, Bluetooth LE gateway. It could be used for house, office, warehouse, cold-chain vehicle, refrigerator, etc.

## FEATURES

- Open data protocol
- 2 years battery lifetime at default settings
- Support changing working parameters:  
Transmitting Power, Advertising Interval, Measuring Interval.

## CERTIFICATIONS

- RoHS
- CE
- FCC-ID



## SPECIFICATION

JW1407HT Bluetooth LE Temperature Sensor

### Compatibility

- Supported iOS 7.0+ and Android 5.0+ system;
- Compatible with all Bluetooth® 4.2 (BLE) devices;

### Replaceable battery and Battery Level

- Replaceable coin battery;
- Easy to get the real-time battery level notification;

### Soft Reboot

- Not supported;

### OTA and J-Link

- Upgrade via Over-The-Air not supported;
- Reserved J-Link port on the board for programming;

### Configurable Parameters

- Transmitting Power, Advertising Interval, Measuring Interval.

- App Name 'T-Sensor';

### Transmission Power Levels

- 8 adjustable levels.
- Transmission power range: -12, -8, -4, 0, +4dBm.

### Measuring ability:

See below table.

### Security

- No password;
- AES HW encryption

### Wearable

- Key chain.

### Connection Mode

- Advertising, connectable;
- Connected, can not be scanned, can configure working parameters.

## Humidity Specification

Items	Conditions	Value	Unit
Accuracy tolerance	Typical	$\pm 3$	%RH
	Max	See below figure	
Repeatability	Low	0.25	%RH
	Mid	0.15	%RH
	High	0.10	%RH
Resolution	Typical	0.01	%RH
Hysteresis	@25°C	$\pm 1$	%RH
Specified range	Measure range	0~100	%RH
Response time	$\tau_{63\%}$	8	Seconds
Long-term drift	Typical	<0.25	%RH/Year

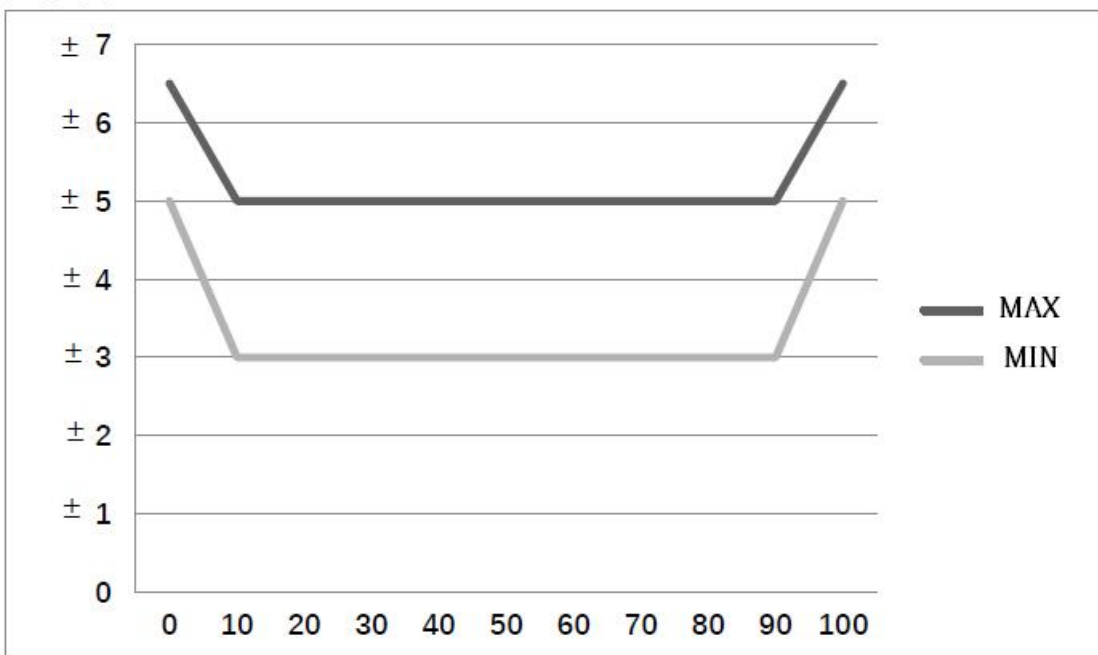


图 3 Tolerance of RH at 25°C

## Temperature Specification

Items	Conditions	Value	Unit
Accuracy tolerance	Typical 0~65°C	$\pm 0.3$	°C
Repeatability	Low	0.24	°C
	Mid	0.12	°C
	High	0.06	°C
Resolution	Typical	0.015	°C
Specified range	Measure range	-20~60	°C
Response time	$\tau_{63\%}$	>2	Seconds
Long-term drift	Max	<0.03	°C/Year

## ACTIVATE DEVICE

- Device activates once battery is installed.
- Reinstall battery to reboot;

## WORKING PARAMETERS

Item	Description	Default value
Transmitting Power	Range: -12, -8, -4, 0, +4. -12 is the most weak signal. +4 is the strongest signal. Unit is dBm.	0 dBm
Advertising Interval	Suggested parameters: 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000 milliseconds.	1000 ms
Measuring Interval	Suggested parameters: 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000 milliseconds.	5000 ms

## HOW TO CONFIGURE WORKING PARAMETERS

1, Connect device by mobile app.

2, Service UUID: 6e400001-b5a3-f393-e0a9-e50e24dcca9e. You can communicate with device via this service.

TX Characteristic UUID: 6e400003-b5a3-f393-e0a9-e50e24dcca9e, you should enable its NOTIFY feature, otherwise mobile app can not receive data from sensor device.

RX Characteristic UUID: 6e400002-b5a3-f393-e0a9-e50e24dcca9e, you can write data/command to sensor device via this characteristic.

## ELECTRONIC PARAMETERS

Item	Value	Remarks
Case Color	Black/White	Customize color if $\geq 3000$ pcs
Battery Model	1 x CR2477 / CR2450	1pc CR2477 / CR2450 coin battery, 3.0V
Operation Voltage	1.8~3.6V	DC
Transmission Current	13mA(Max.)	Test at 0dBm transmission power
Transmission Range	50 meters	Maximum
Antenna	50ohm	On board / PCB Antenna
Net Weight	17.5g	With battery
Size	49.5x30x13.5 mm	Null

## TECHNICAL SUPPORT

Item	File Name
Datasheet	Sensor_JW1407HT_BLE_Temperature_Humidity_Sensor_Datasheet_V1.0.pdf
SDK-Android	JoywayLib.Android.zip
SDK-iOS	JoywayLib.iOS.zip
App	T-Sensor.apk

\* Joyway sales team will send you these documents after the sample arrived.

## PACKING INFORMATION

Details	Qty/PP Bag	Qty/Carton
Quantity	1 pc	200 pcs
Net Weight	17.5 g	3.5 kg
Gross Weight	17.9 g	3.84 kg
Size	60x90x13.8 mm	260x150x180 mm

## DECLARATION

The contents of this datasheet are subject to change without prior notice for further improvement. Joyway team reserves the right to explain all the terms of this datasheet.

## CONTACT JOYWAY

Shenzhen Joyway Technologies Co., Ltd.

Email: [bob@joyway.cn](mailto:bob@joyway.cn)

Website: [www.joyway.cn](http://www.joyway.cn)

Last Modified at 2023-11-30

<END>