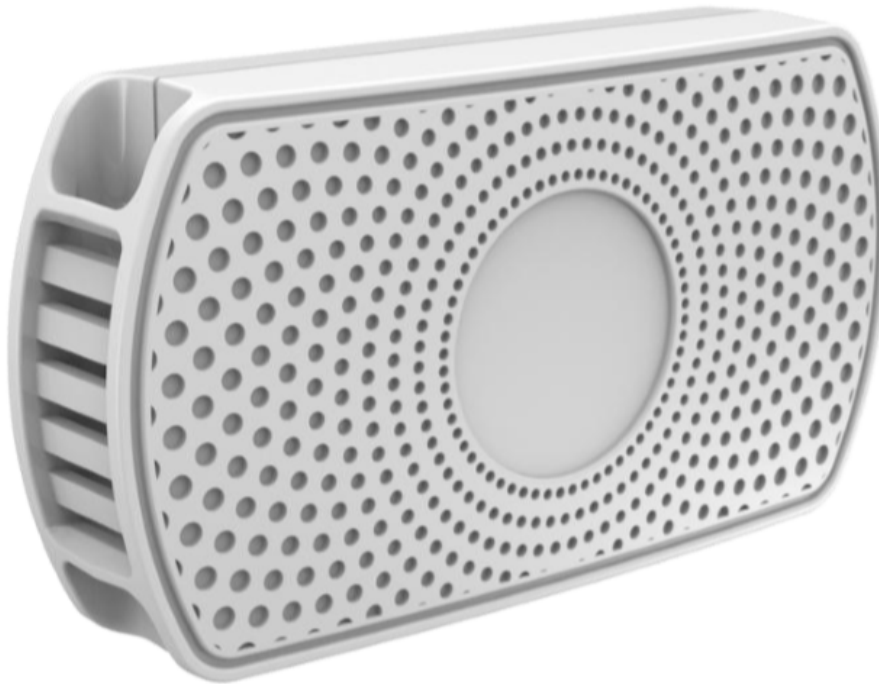# AST401/AST402 Bluetooth Temperature and Humidity Sensor User Guide

Applicable Model: T399L\T711L

Change History

File Name	AST401/AST402 Bluetooth Temperature and Humidity Sensor User Guide		
Project	T399L\T711L	Creation Date	2021-05-08
		Update Date	2022-05-24
Subproject	Accessory User Guide	Total Pages	7
Version	V1.1	Confidential	External Documentation

Contents

1 Copyright and Disclaimer

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2 Product Overview

The AST401/AST402 is a portable temperature and humidity sensor featuring IP66 water resistance rating. The device is equipped with internal BLE 4.2 for wireless transmission, avoiding complex connections of communication cables, pipelines and power cables. In this way, users can quickly install the device according to actual conditions. This reduces installation time and increases working efficiency. This device is equipped with a built-in battery to supply power, which can work for more than three years. It can be used for industrial monitoring, civil monitoring, machinery manufacturing monitoring and environmental measurement, such as the laboratory, cleanroom, collection room, home, greenhouse, weather station, national defense science and technology research, posts and telecommunications, tobacco, chemical engineering, environmental protection, archives preservation and cultural relics protection, computer room, warehouse, medicine warehouse, medical health, hotel, food warehouse, grain etc.

The highlights of the device are as follows:

- IP66 water resistance rating
- Temperature acquisition accuracy < ±0.5°C. Humidity acquisition accuracy: 0.05% RH.
- Built-in battery with 3–5 years of battery life
- At most 4 temperature and humidity sensors simultaneously supported by the T399L-GFB5

3 Main Device and Accessories

AST401: internal Bluetooth temperature and humidity sensor

AST402: external Bluetooth temperature and humidity sensor. A cable one meter in length.

AST401   AST402

4 Product Specifications

4.1 Receiver Specifications

Item	Specifications
Water resistance rating	IP66
Outer case	ABS plastic
Dimension	70.6 mm x 38 mm x 17.8 mm
Weight	AST401: 37.5g AST402: 62g
Battery	2 FR03 lithium iron batteries
Voltage	3 V
Average power consumption	35 uA
Quiescent current	< 3 uA
Peak current	< 8 mA
Battery capacity	1250 mAh
Temperature measuring range	-20°C to 55°C
Temperature measuring accuracy	0.05°C
Humidity measuring range	0%–100% RH
Humidity measuring accuracy	0.05%
Measurement error	±5% RH
Sampling period	1 times per second
Transmission distance	10 meters

5 Operation Instructions

To turn on the AST401/AST402, press and hold down the power button for three seconds. Then the blue LED indicator is on for two seconds.

To turn off the AST401/AST402, press and hold down the power button for three seconds. Then the blue LED indicator blinks for five times.

When the device is working, the blue LED indicator is off by default.

5.1 Setting the Bluetooth Temperature and Humidity Sensor

1. Connect the T399L to the computer through the USB cable, start Meitrack Manager, and then set the Bluetooth temperature and humidity sensor.

Alarm when signal lost for(secs): If the Bluetooth temperature and humidity sensor fails to be detected within the specified period, an alert is generated.

Trigger output when: Output 1 or output 2 is controlled when Bluetooth signals are lost, the temperature is too high or low, or the humidity is too high or low.

Control output: Output 1 or output 2 is controlled.

Report Data: Upload Bluetooth data or not.

MAC Address: indicates the MAC code of the Bluetooth temperature and humidity sensor.

Note: If the MAC code of the Bluetooth temperature and humidity sensor fails to be found, set it by Meitrack Manager app.

2. Start the Meitrack Manager app, detect the T399L, and set the Bluetooth temperature and humidity sensor.

1) Start the Meitrack Manager app. Trackers will be detected automatically. After a tracker is detected, select one and click **Confirm**. Then the device configuration page is displayed.

If a tracker fails to be detected, connect the white cable (input 2) of the device to the power cable (12–36 V) and the analog device to ACC ignition cable. Then the device is switched to broadcasting mode for one minute.
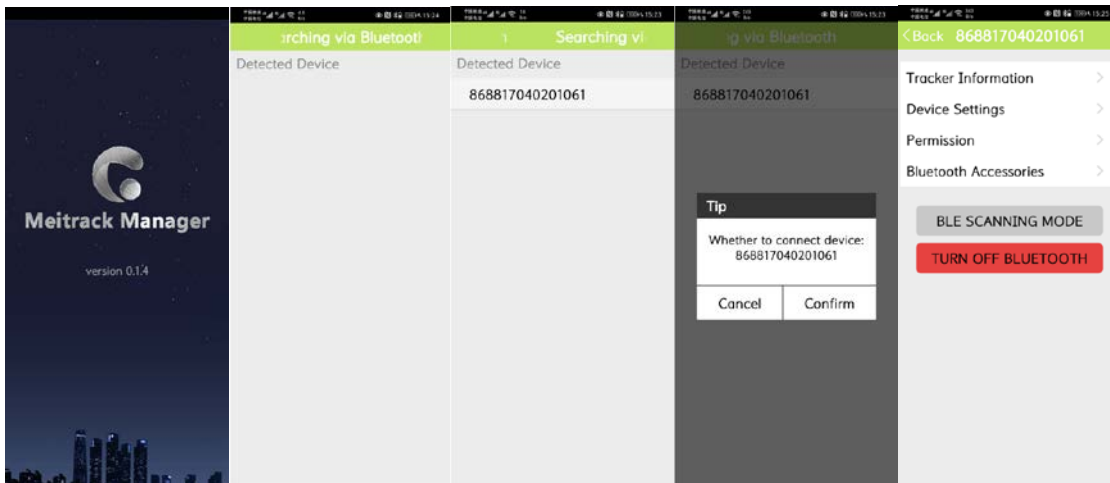
2) Set Bluetooth temperature and humidity sensor parameters.

Select **Temperature & Humidity Sensor**. The MAC code of nearby Bluetooth temperature and humidity sensors will be detected automatically. Then select one sensor and set sensor parameters as required, as shown in the following figures.
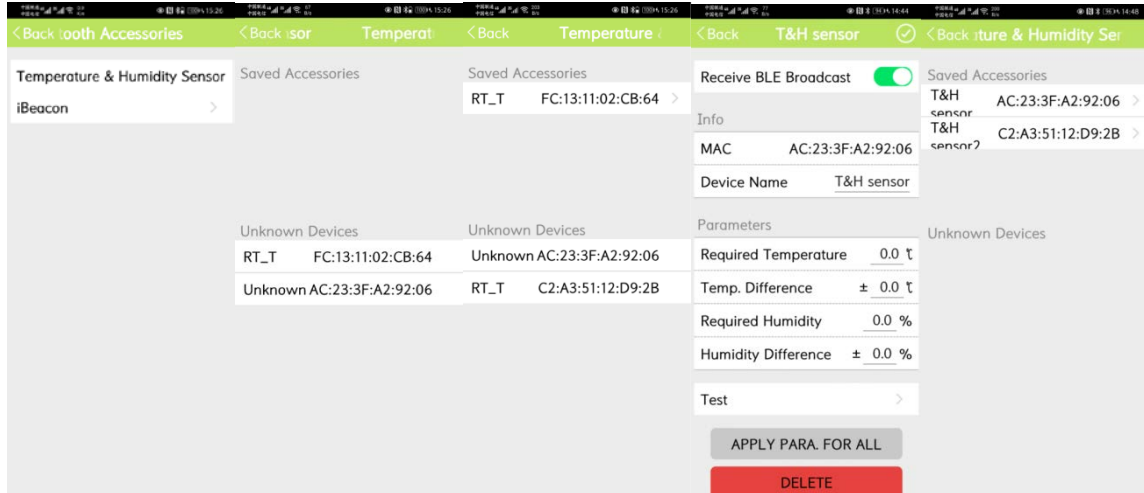
6 Installation Instructions

6.1 Warnings

The device can be sticked on the surface of the following materials: aluminum, galvanized steel, enamel steel, stainless steel, ceramics, glass/epoxy resins, acrylic acid, PBT, ABS, PC, and hard PVC.

Clean the adhesive surface. Please make sure that the adhesive surface is dry and dust-free.

Please stick the device at a temperature of 21°C to 38°C.

Note: The device is operated in a low temperature. Before sticking the device, heat the adhesive surface by using a blower, or stick it at a suitable temperature for more than half an hour and then use the device in a low temperature.

After sticking the device, press the device for 1–2 seconds and repeat it for several times to ensure that the device is sticked properly.

If you have any questions, do not hesitate to email us at info@meitrack.com.