

AST103 Bluetooth Temperature and Humidity Sensor User Guide



**Applicable Model:
MD600/MD833H/T399/TA255**

Change History

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2 Product Overview

The AST103 is a portable temperature and humidity sensor featuring IP66 water resistance rating. The device is equipped with internal BLE 5.0 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 < $\pm 0.5^{\circ}\text{C}$. 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

AST103: internal Bluetooth temperature and humidity sensor



AST103

4 Product Specifications

4.1 Receiver Specifications

Item	Specifications
Water resistance rating	IP66
Outer case	ABS plastic+silicone
Dimension	70.6 mm x 38 mm x 17.8 mm
Weight	AST101: 37.5g
Battery	2 FR03 lithium iron batteries
Voltage	3 V
Average power consumption	35 μ A
Quiescent current	< 3 μ A
Peak current	< 8 mA
Battery capacity	1000 mAh
Temperature measuring range	-20°C- 60°C
Temperature measuring accuracy	0.05°C
Humidity measuring range	0%-100% RH
Humidity measuring accuracy	0.05%
Measurement error	$\pm$ 5% RH
Sampling period	1 times per second
Transmission distance	25 meters

5 Operation Instructions

To turn on the AST103, press and hold down the power button for three seconds. Then the blue LED indicator is on for two seconds.

To turn off the AST103, 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.

Temperature and Humidity Sensor Setting

Alarm when signal lost for(secs)

Trigger Output1 When ☐ Lost ☐ Temperature too high ☐ Temperature too low ☐ Humidity too high ☐ Humidity too low

Trigger Output2 When ☐ Lost ☐ Temperature too high ☐ Temperature too low ☐ Humidity too high ☐ Humidity too low

1 2 3 4

☒ Report Data

Device Name

MAC Address

High Temperature Threshold High Humidity Threshold

Low Temperature Threshold Low Humidity Threshold

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 Output1/2 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.

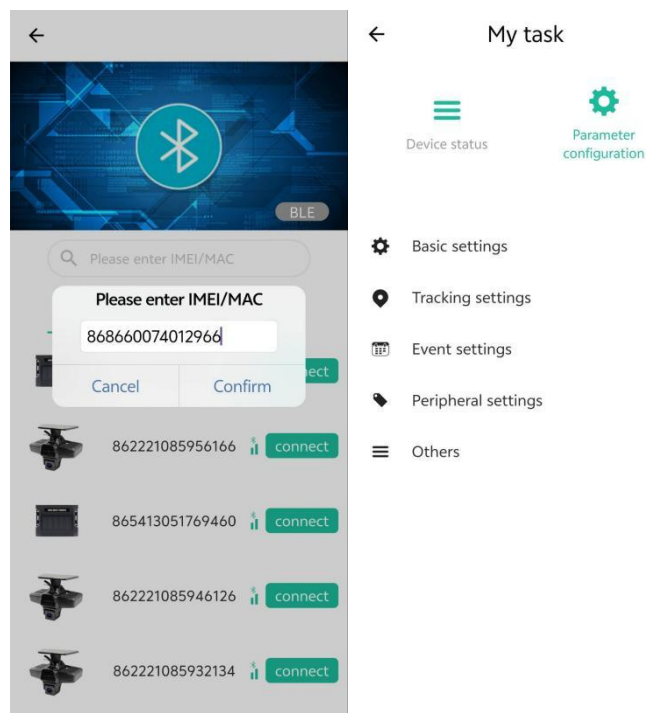
Report Data: Upload Bluetooth data or not.

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.

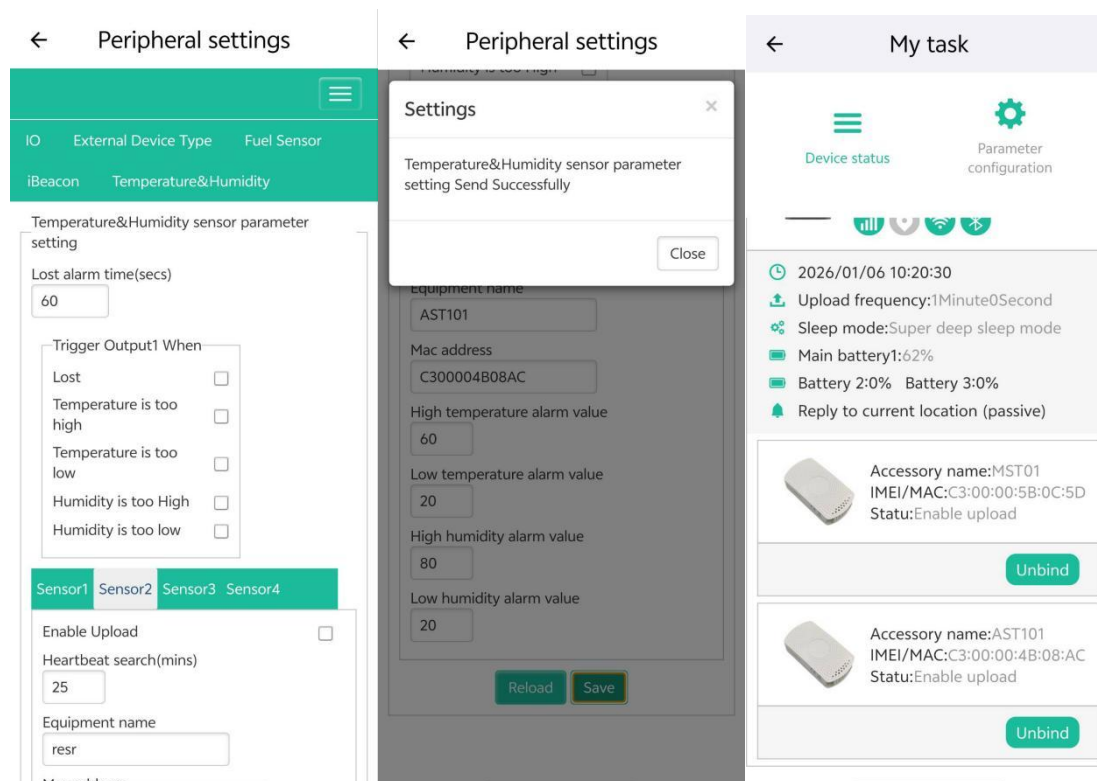
2. Connect the T399L via the Meitrack Manager APP on your mobile phone to configure the temperature and humidity sensor.

1) Open the Meitrack Manager APP and it will automatically search for the terminal. (If the terminal is not detected, connect the white wire of the terminal (INPUT2) to a 12–36V power supply to simulate the terminal's connection to ACC ignition; the terminal will automatically switch to Broadcasting mode for 1 minute. Alternatively, enter the device's IMEI number and tap Connect) to access the configuration interface, as shown in the figure below:



2) To configure the temperature and humidity sensor, select Temperature & Humidity, enter the equipment name, MAC address and alarm trigger conditions. After tapping Settings, the device will automatically connect to the

corresponding Bluetooth temperature and humidity sensor, which can be viewed in the device list. The settings are shown in the figure below:



6 Installation Instructions

6.1 Warnings

The device can be stuck 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 stucked properly.

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