



## MTS100 User Manual V1.0

Learn how to set up your new BLE beacon

## 1. Product Introduction

MTS100 is a high-precision temperature sensor recorder using BLE5.0. It collects the ambient temperature, broadcast via Bluetooth, and realize 24-hour monitoring through the mobile phone APP or other Bluetooth products that can transmit. The backup battery life can last up to 3 to 5 years.

MTS100 beacon can be used together with the GPS locator host (ML208G, MV401G). One GPS locator host can be used with 24 Beacons at the most. The GPS locator can upload all the data of the beacons to the server remotely at the same time. And you also can get the realtime location of the beacons via the GPS locator.

MTS100 can be used in logistics management, supply chain, warehouse, terminal and personal asset management. It can store data for 4 days (one every 5 minutes), data content: date and time + temperature + battery.

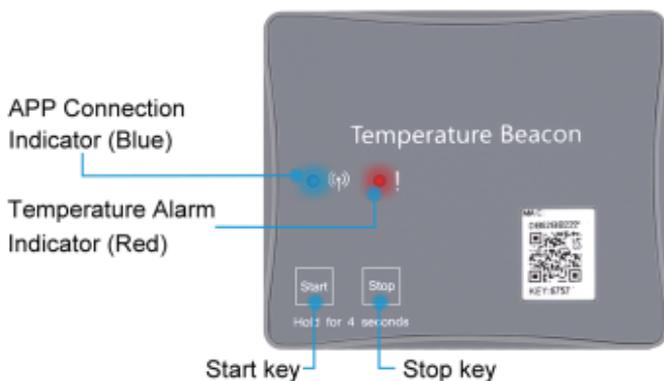
## 2. Product Introduction

- \* Large range and highly sensitive temperature sensor
- \* Waterproof & Dustproof IP67
- \* Long standby time up to 6 years
- \* Bluetooth 5.0: broadcast longest to 500m
- \* APP connection: send data to cellphone by BLE
- \* Host connection: one host can connect with 24 beacons at the most
- \* Local data cache: cache half year data in default mode
- \* Applicable: Cold Chain, Food & Medicine Keeping, Temperature IoT

### 3.Specifications

Device Information	Model	MTS100
	Machine Net Weight	27g
	Dimensions	66.5mm(L) * 56mm(W) * 6.7mm(H)
	Color	Gray
	LED / Button	Blue LED / Power on; Red LED / Power off
Working Parameters	Battery	Lithium manganese battery, 1350mAh
	Battery Voltage	3 VDC
	Current	17uA(average) ; 4uA(standby) ; 1.1uA(power off)
	Blue Tooth	Bluetooth 5.0
	Broadcast Power	8db
	Broadcast Frequency	5s
	Transmit Length	500m in open environment
	Sensor Accuracy	$\pm 0.5^{\circ}\text{C}(0^{\circ}\text{C}\sim 65^{\circ}\text{C})$ ; $\pm 1^{\circ}\text{C}(-20^{\circ}\text{C}\sim 0^{\circ}\text{C})$ ;
	Working Temperature	$-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$
	Storage Temperature	$-30^{\circ}\text{C} \sim 80^{\circ}\text{C}$

### 4. Product Structure



## 5. Package Content

Temperature Beacon	x 1
User Guide	x 1
Packing Box	x 1

## 6. Operating Instructions

### 1. How to switch on?

Long press the "start" menu 3 seconds to turn on the device, under this state, the device is searchable and connectable. Blue led indicator will flash 5 times, from fast flash to slow flash and it will stop flashing after 1min, this means the switch on action is completed.

### 2. How to shutdown?

Long press the "stop" menu 3 seconds, the red led indicator will flash 3 times then the device will shutdown.

### 3. Others:

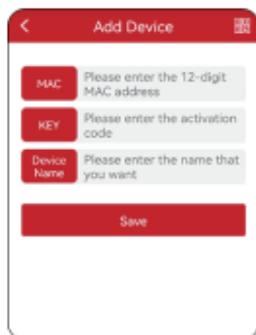
- \* Under power-on state, if you Press the "start" button, the blue light will turn on, it means the device is working properly;
- \* The blue light will light up one time when the device connected successfully with APP, and the red light will light up one time when the device is disconnected from the APP.
- \* The red indicator will flash fast when the temperature alarm was triggered

**NOTE**    :When the battery voltage is lower than 2.5V, the device will not work properly!

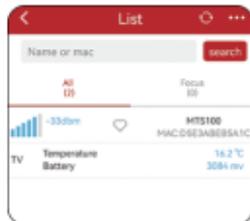
## 7. Operating Instructions



01.01. Click “Add Device” to start adding



02. Find and enter the corresponding MAC and KEY on the back label of the MST100 device, and name the setting by yourself



03. The device is added

**NOTE** ⚠️⚠️⚠️ : The device is connected to the mobile phone through Bluetooth, and various parameters of the device can be configured in the smartphone APP. Historical data can be queried in the APP.

## 8. SMS Commands For Host With Beacon

Command Type	Command Format	Explanation	Example
BLE	BLE,3,119,3000,60#	Enable both BLE scanning and advertising,the scanning interval is 119s,the advertising interval is 3000 s and the data will be updated per 60s	
	BLE,0#	Disable BLE	
WHITELIST	NLIST,,ENABLE#	When BLE Enable but NLIST DISABLE,the host device can scan all devices around it;  When BLE Enable ant NLIST enable,the host device will just scan the bundled devices;	
	NLIST,Num,MAC#	Num:1-40,MAC:the MAC address of	NLIST,Num,C7:7E:23:FE:B0:B3#
	NLIST,Num?	Num: 1-40	NLIST,1?
	NLIST,Num#	Num: 1-40	NLIST,1#

## 9. Any Questions?

**E-mail:** [support@micosodus.com](mailto:support@micosodus.com)

**Skype:** MiCODUS

## 10. Download the APP

Search "MiCODUS" in iOS APP store or Google Play Store, or just scan the QR code as below to download MiCODUS APP:

