

## MST03 Asset Temperature Logger



### Product Overview

MST03 is a movable asset temperature logger designed by Minew mainly for application scenarios including logistics, cold chain, healthcare, warehouse, food, museums, etc., to realize asset temperature measurement and location tracking during asset transportation or storage. Built with a low-power Bluetooth chip and sensors, it can not only achieve temperature measurement all day but also receive temperature alerts by configuring the normal-temp or low-temp alert range. Additionally, the asset temperature logger can store up to 60000 series temperature data, and users can export the data report supported PNG or CSV format, which can be regarded as a data proof during the logistic transportation.

### Key Features

Real-time Temperature Measurement

Temperature Alert Record

Asset Location Application

6000 Temp Data Storage

IP67 Waterproof & Dustproof

2 Years Service Life

PNG & CSV Temp Report

Batch Devices Management

### Product Specifications

#### Basic Parameters

Color	White (customizable)
Size(L * W * H)	48.8*29.6*4.9 mm
Weight	6.8 g
Resistance	IP 67
Battery	Coin battery, 210 mAh, unreplaceable
Service Life	2 years (default setting)

Temperature Measurement	Temperature sensor Or thermistor
Options	
Flash	Yes
Button	Yes
LED	1*Red & 1*blue
OTA	Yes
Configuration App	MSensor (iOS & Android system supported)
Deployment Recommended	Double-side adhesive, Ziplock bags (Optional)
Device Operating Temperature	-30 °C ~ 60 °C
Device Password	minewtech1234567 (default)
Others	Accelerometer optional

### Technical Parameters

Chip	nRF52 series
Bluetooth Version	Bluetooth® LE 5.0
Transmit Power	-40 ~ +4 dBm, default 0 dBm
Broadcast Interval	100 ms ~ 5 s, default 5 s
Broadcast Range	Normal-temp environment: 85 m (open area) Low-temp environment: 35 ~ 85 m (open area)
App Connection Distance	Normal-temp environment: 10 m Low-temp environment: 5 - 10 m
Temp Measurement Period	Period: 5 s ~ 24 h, default 10 s
Sensor Measurement Accuracy	-30 °C ~ 40 °C: $\pm 0.1$ °C~ $0.3$ °C (Temperature Sensor) / $\pm 0.5$ °C (Thermistor)
Temp Measurement Delay	Default 5 mins
Temp Measurement Range	Low-temp version: -30 °C ~ 60 °C (default) Normal-temp version: -10 °C ~ 60 °C (optional)
Temp Alert Range	High-temp Range: 0 °C ~ 50 °C, default: 5 °C ~ 40 °C Low-temp Range: -30 °C ~ -1 °C, default: -25 °C ~ -5 °C
Temp Data Storage	Up to 60000 series
Temp Report Types	PNG, CSV

Note: Please contact our sales team for more device information.

## Device Operations

**Power-on:** Press the button for 3 seconds until the blue light on.

**Power-off:** Only can be turned off through the MSensor App, and the red light will shine 5 times.

**Battery level:** View the battery condition through the MSensor App.

### **Device Operating Condition**

After device activation, pressing the button until the blue light on indicates the device is working normally.

### **Temperature Alert**

When detecting an abnormal temperature, the red light of the device will shine for 15 seconds. And the temperature alerts can be viewed through the MSensor App.

### **Parameter Configurations**

Users can realize parameter configurations, including broadcast, sensors, etc., through the MSensor App.

### **Temperature Report**

The PNG or CSV report can be exported by the MSensor App.

Note: Please contact our sales team for more operation information.

## **Precautions**

1. It is recommended not to use higher broadcast power and a smaller broadcast interval to ensure service life.
2. The device is shipped off by default, users can configure the broadcast and sensor parameters through the MSensor.
3. Do not connect the device often through MSensor App to ensure service life.
4. Do not use the product beyond the normal working temperature or under the extreme temperature for a long time to cause product damage. It is recommended that the product be stored at room temperature (20 °C ~ 35 °C).
5. With the increased frequency of use, the sensor's measurement accuracy will be affected.
6. Please do not tear the product shell to affect its waterproof ability or even cause product damage.
7. Please do not install the product again and again after using double-sided tape deployment to affect the adhesion of the double-sided tape.
8. Although the product has a certain waterproof performance, because of the special nature of the product material, it is not recommended to use the device in the underwater environment directly or for a long time to cause product damage.
9. If using the device for food or fresh food tracking, it is recommended to contact our sales team to further communicate the deployment method.
10. When the product is used, please pay attention to avoiding direct sunlight for a long time to avoid the aging of the shell.

## **Certifications**



Note: CE and FCC ID can be provided upon request. If other certifications are needed, please contact us.

FCC warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

## Packaging information

Items	Inner carton(battery included)	External box(battery included)
Pictures		
Quantities	70 pcs	700 pcs
Gross weight (with accessories )	549 g	5.6 kg
Sizes	30.5 × 11 × 7.2 cm	32 × 23.5 × 40 cm

## Quality Assurance

The factory has already obtained the certification of ISO9001 Quality System. Each product has been strictly tested (tests include transmission power, sensitivity, power consumption, stability, aging, etc.).

Warranty Period: 12 months from the date of shipping (Battery and other accessories excluded).

## Declarations

### Statement of Rights:

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### Disclaimer:

Minew team reserves the right to the final explanation of the document and product differences. And it is not responsible for liability of property or personal injury with the wrong operation if users develop related products without checking the technical specifications of this manual.

## Contact Information

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