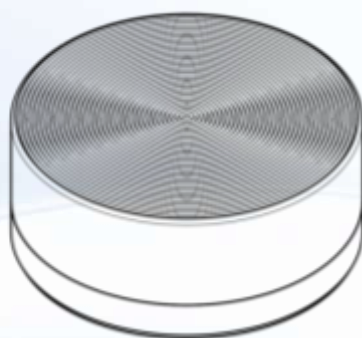


# MT100

## Temperature Monitoring Series

Operation and Installation Manual



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## 1 Overview

### 1.1 Operation Instructions of Manual

1.1.1 It is not allowed to print or disclose any content of this Manual, including pictures and audio products, under any name without the consent of Huchuang Union;

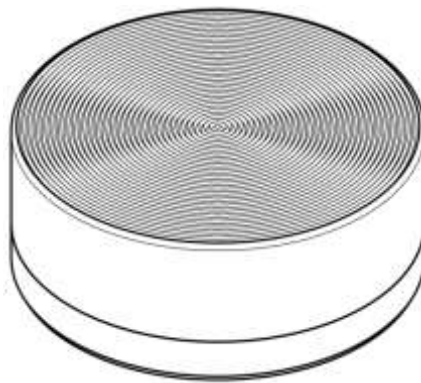
1.1.2 The equipment operator may copy some sections of this Operation Manual for internal use only, such as for instructing the user how to deal with emergencies. These sections are clearly listed in the catalogue of this manual;

1.1.3 Wuhan Huchuang Union Technology Co., Ltd. reserves the copyright of the Manual. The manual contains the information protected by copyright laws. No part of the Manual is allowed to be copied and sent to the users without the prior written permission of the copyright holder;

1.1.4 The contents of the Manual are subject to change without prior notice.

### 1.2 Overview

MT100 Temperature Monitoring Series



MT100 is mainly used to monitor the temperature of the incubator and is placed in the dish tank of the incubator tray. Upload the temperature data every 3 minutes (modifiable), reflect the temperature control stability of the incubator through the temperature change trend, and give the alarm when the

incubator temperature is abnormal.

### 1.3 Environmental Requirements

1.3.1 Only for indoor use, no high temperature, moisture, water or dust;

1.3.2 Atmospheric pressure: 70kPa~105kPa;

1.3.3 Working ambient temperature: 0°C~+50°C;

1.3.4 Storage ambient temperature: 0°C~+50°C;

1.3.5 Relative humidity in the working environment: ≤80% (non-condensing);

1.3.6 No metal objects around the equipment (Keep it away from metal wall).

### 1.4 Environmental Protection Instructions

1.4.1 MT100 device contains reusable materials, and its components can be recycled after being cleaned and sterilized.

1.4.2 During recycling and handling MT100 device, it is recommended that the company's technical personnel dismantle it and recycle it according to different waste groups;

1.4.3 According to national regulations, the compositions of the main raw materials of MT100 equipment shall be are shown in (Table 1).

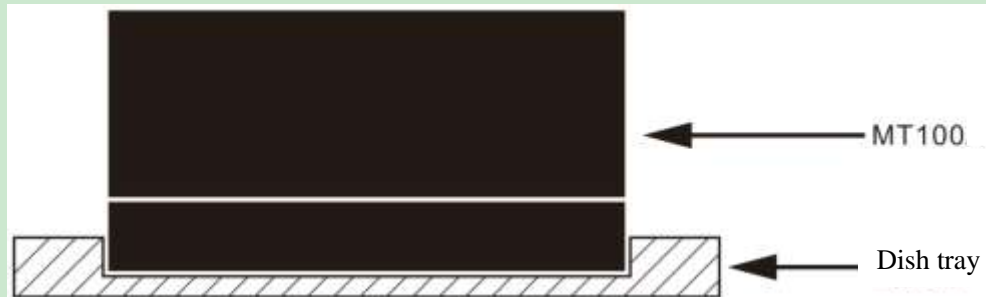
Table 2 Compositions of Main Raw Materials of MT100

Name	Composition
Casing	Steel/ polyformaldehyde
Battery	Lithium-Manganese battery
PCB	Including electrical components

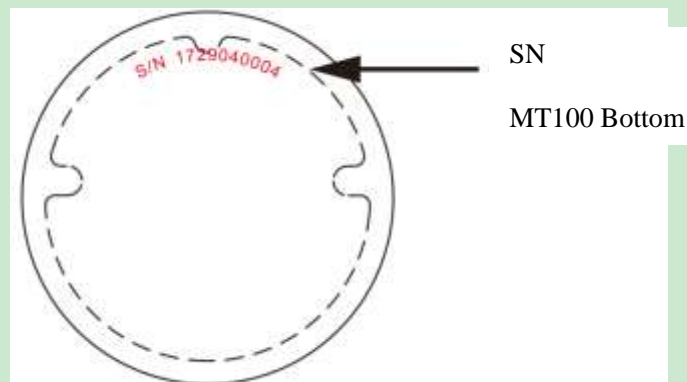
## 2 Structure Features and Equipment Parameters

## 2.1 Structure Features

a) MT100;



b) Equipment SN;



## 2.2 Equipment Parameters

Table 2 Equipment Parameters

Item	Parameter
Overall dimensions (unit: mm)	38.5mm × 38.5mm × 15mm (W×D×H)
Weight	120g
Data upload frequency	3 min/time (modifiable)
Endurance	More than 6 months when the data is uploaded every 3 minutes

Storage temperature	0℃～50℃
Operating temperature	0℃～50℃
Resolution	0.01℃
Temperature measurement error	±0.5℃ (0℃ ~ +15.0℃) ±0.3℃ (+15.0℃ ~ +35.8℃) ±0.2℃ (+35.8℃ ~ +37.0℃) ±0.1℃ (+37.0℃ ~ +39.0℃) ±0.2℃ (+39.0℃ ~ +41.0℃) ±0.3℃ (+41.0℃ ~ +45.0℃) ±0.5℃ (+45.0℃ ~ +50.0℃)
Power supply mode	Powered by button battery (CR2477, unable to be charged)
Battery replacement	Support
Waterproof and dustproof grades	IP65
Transmission method	Wireless
Transmission distance	MT100≤3 m

### 3 Basic Operation Instructions

#### 3.1 Overview

MT100 serves as the wireless transmitter, and each room shall be equipped with an MT500 or MT1100 receiver.

Note: An MT500 can receive multiple MT100 data, but less than 100; due to the limited transmission range of MT100 which shall be no more than 3 m, it is necessary to pay attention to the distance limit during its installation.

#### 3.2 Operation Instructions

After MT100 and MT500 devices are installed normally, users can download the "Laboratory Monitoring System" APP to view the temperature data tested; or view the temperature data through the computer web version.

## 4 Installation Instructions

### 4.1 Installation Method

1. Unscrew the top cover of the equipment, and remove the insulating strip on the top of the button battery;
2. Tighten the top cover of the equipment, sterilize it, and put it into the incubator to be tested;



### 4.2 Installation Precautions

Installation Precautions	
1	Note that SN is located on the antenna. If the wireless signal of the device is weak and data is often lost, try to place the antenna outward, namely, keep the side with engraved SN outward to prevent the surrounding metal objects from affecting the



	signal of the device;
2	The temperature sensing area is located in the center of the equipment base, and this part should fit the test area during installation;
3	Press Reset button to reset the whole system; because the device is an ultra-low power consumption device, it is usually in sleep state; if you want to use the serial port or wireless function to modify parameters, do so within the first 30 seconds of resetting the device; otherwise, the operation will fail;
4	Pay attention to the position of the antenna. When tightening the top cover, try not to clamp the antenna in the metal below, otherwise the signal will be affected;
5	Before using the equipment, remove the insulating strip on the top of the button battery to power on the equipment so that the equipment works normally; retain the side insulating strips;
6	When installing the device, pay attention to the distance from the receiver; MT100 transmission distance is about 3 m;
7	Pay attention to the location of the equipment. If the bin is relatively large, try to place the equipment close to the outside and keep it from metal objects as far as possible for fear that the transmission of signals is affected.

## 5 Notices for Use of Equipment

- Due to the limited transmission distance of MT100 which shall be no more than 3 m, it is necessary to pay attention to the distance from MT500 or MT1100 during its installation;
- MT100 is equipped with polymeric battery and shall be not allowed to contact the high temperature

environment to prevent battery damage;

- Pay attention to the location of the equipment and try to place the equipment away from metal wall or metal objects as far as possible for fear that the transmission of signals is affected;
- MT100 is not waterproof, so the equipment shall not directly contact with liquid water;

## **6 FCC Warning**

### **15.19 Labeling requirements.**

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.

### **15.21 Information to user.**

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

### **15.105 Information to the user.**

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.



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