

# 1. Product Introduction

## 1.1 Introduction

Thank you for purchasing the IPT series wireless temperature probe by Elitech. Please read this manual carefully before use to avoid improper operation that could harm you or your device.

The IPT-01S series wireless temperature probe is specifically designed for routine diagnostics and maintenance of HVAC systems. It provides users with accurate, real-time temperature data to improve on-site work efficiency. Equipped with a high-precision thermocouple sensor, it quickly measures the surface temperature of pipes. Its 180° rotatable, high-brightness OLED display screen allows data to be viewed from multiple angles, making monitoring more intuitive and convenient. The device features an extended 100-meter Bluetooth connection, enabling remote monitoring and real-time data viewing via an app. It can also integrate with the MS series manifold gauges for enhanced multi-device operational efficiency. Additionally, the device supports data recording, enabling users to view reports and analyze data through the app. With OTA (Over-The-Air) updates, the device remains up-to-date and optimized for long-term use.

## 1.2 Overview



- |   |  |
|---|--|
| ① | Temperature Probe                                    |
| ② | Control Button<br>(functions described in Section 5) |
| ③ | OLED Screen  |
| ④ | Indicator Light                                      |
| ⑤ | Charging Port  |

## 1.3 Safety Notes

- 1.This product contains a built-in battery. Do not expose it to high-temperature environments or place it in fire, as this may cause an explosion.
- 2.Avoid using this product during thunderstorms to prevent lightning strikes that may endanger life or damage the product.

3. Follow all safety precautions for refrigeration systems.
4. If the product is damaged, contact us immediately. Do not attempt to disassemble the product, as this may cause further damage or, in severe cases, lead to battery fire or explosion.

## 1.4 Environmental Protection

1. Manage charging times appropriately to avoid overcharging, reduce unnecessary energy consumption, and extend battery life.
2. At the end of the product's service life, dispose of it in accordance with local regulations. Do not discard it randomly to prevent environmental pollution.
3. Recycle old batteries by bringing them to designated collection points for used batteries.

## 1.5 Button Functions



1. Long press: Turn the power on/off
2. Short press: Turn Bluetooth on/off

## 1.6 Indicator Light Alerts


Bluetooth On, Not Connected	Red light flashes rapidly
Bluetooth On, Connected	Green light flashes
Bluetooth Off	No light
Battery Below 10%	Red light flashes slowly
Charging While Off, Not Fully Charged	Red breathing light
Charging While Off, Fully Charged	Green breathing light

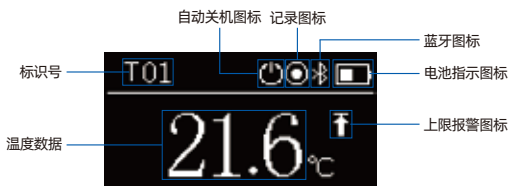
## 1.7 Specifications

Feature	Parameter
Measurement Range	-40~150°C
Accuracy	±0.5°C (-10~100°C)
Resolution	0.1°C
Units	°C、°F、K
Sensor Type	Type-T Thermocouple Sensor
Bluetooth Transmission Distance	100 meters (in unobstructed environment)

Offline Data Storage	3000 data points
Auto Power Off	OFF, 15 min, 30 min, 60 min (default 15 min)
Display Screen	OLED screen
Screen Rotation Angle	180° rotatable
Power Supply	450mAh 3.7V rechargeable lithium battery Battery Life: 60 hours (with dimmed display)
Host	Dimensions: 110 x 75 x 135mm Weight: Approximately 120g
Environmental Requirements	Operating Temperature: -10~50°C/14~122°F Storage Temperature: -20~60°C/-4~140°F
Waterproof Rating	IP54
Pipe Measurement Range	6-38mm

## 2. Operating Steps

1. Press the power button  to turn on the device and enter the temperature measurement interface.
2. Set the basic parameters via the app (see Section 3.3 for details).
3. Secure the clamp onto the pipeline of the system being measured.
4. View the temperature reading of the pipeline.




### 3. Smart Features

The IPT-01 series supports Bluetooth wireless connection, enabling features like remote data monitoring, data recording and exporting, firmware upgrades, and temperature alarm notifications via a mobile app.

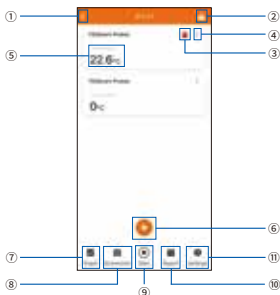
#### 3.1 App Download

- 1.For iOS users: Search for "Elitech Tools" in the App Store.
  - 2.For Android users: Search for "Elitech Tools" on Google Play.
  - 3.Scan the QR code to download the app.
- Compatibility: iOS: Version 11.0 or later, Android: Version 5.0 or later




- 1.Turn on the device and short-press the  button. The Bluetooth icon will flash.
- 2.Open the "Elitech Tools" app, tap "Search Nearby Devices", and connect to the device to view data on the interface.

#### 3.3 App Operations



1. Return to Device Connection Interface


2. Lock Icon

When multiple temperature probes are connected, tap to  lock the list.

3. Alarm Icon

The icon  appears when the temperature exceeds the set alarm value.

4. Smart Probe Configuration

Tap  → Configure Identification Number → Enter a number (range: T1 to T99).

5. Temperature Display Area

View the current temperature readings.

6. Add Temperature Probe Devices


Tap  to add up to 6 temperature probes.

7. Switch View (List/Graph)

Tap  to switch between list and graph views.

8. Screenshot Function

Tap  to save the current page to a report.

9. Start/Stop Data Recording (Note: This records data on the app, not the device) Tap  to start recording.

10. Export Data Report

Tap  to export recorded data.

11. Parameter Settings

① Unit Settings:

Tap Settings → Temperature Unit → Select Unit (°C, °F, or K).



② Alarm Settings:

Tap Settings → Alarm Settings → Toggle Alarm On/Off → Set Upper/Lower Limits → Save.

### ③Data Recording:

#### Start Recording:

Tap Settings → Recording Function → Data Recording → Start Recording → Confirm.

(Note: Starting recording clears previous data. To save previous data, export it before confirming)



#### Stop Recording:

Tap Settings → Recording Function → Data Recording → Stop Recording → Confirm.

#### Recording Interval:

Tap Settings → Recording Function → Recording Interval → Select Interval → Confirm.

#### Recording Interval and Duration:

Interval	Maximum Duration
1S	50Min
10S	8H20Min
30S	25H
1Min	50H
5Min	250H
10Min	500H
15Min	750H
30Min	1500H
60Min	3000H

Read Device Data:

Tap Settings → Recording Function → Read Device Data → Once completed, tap Reports to view data.



Clear Device Data:

Tap Settings → Recording Function → Clear Device Data → Confirm.

④Auto Power Off Settings:

Tap Settings → Auto Power Off Settings → Select Device → Confirm → Set Power-Off Time.



⑤Firmware Upgrade:

Tap Settings → Firmware Upgrade → Select Device → Upgrade.



(Note: Do not leave the current interface during an upgrade to avoid failure.)

#### ⑥ Device Details:

Tap Settings → Device Details → Select Device → View Device Information.

#### ⑦ Device Calibration:


Tap Settings → Device Calibration → Select Device → Confirm → The product will enter the ice-water calibration interface.

## 4. Product Connection

### 4.1 IPT-01S and MS-100 Connection


1. Turn on the IPT-01S temperature clamp and Bluetooth. Check the product identification number in the top-left corner (Note: the identification number is T01), as shown in the figure below.



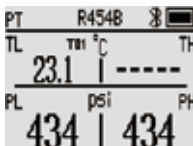
2. Turn on the MS-100 manifold gauge, turn on Bluetooth, and long-press  to enter settings.

3. Short-press  to select the PROBE L.


4. Short-press  to select T01, then long-press  to exit the settings.

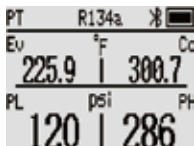
5. After successful configuration, the Bluetooth icon will change to .


6. Wait for the product to connect. Once connected, the low-temperature zone on the manifold gauge will display the temperature of the temperature clamp along with the probe number, as shown in the figure below.

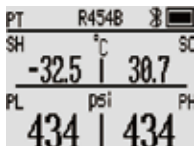




7.Short-press the button  once to switch to the saturation temperature interface, as shown in the figure below.



8.Short-press the button  twice to switch to the superheated and subcooled degree interface, as shown in the figure below.



Note:

- 1.The connection steps for the high-temperature probe are the same as above.
- 2.When both high and low-temperature probes are connected, do not configure them with the same identification number.

## 4.2 IPT-01S and MS-2000/MS-4000 Connection

## 5 Ice Water Calibration

### 5.1 Preparing Ice Water

#### **Materials needed:**

a cup of ice cubes, a cup of water at approximately 25°C (room temperature), stirring stick, temperature probe, and a smartphone.

#### **Preparation steps:**

Take an insulated container, fill it with ice cubes, and add room temperature water (around 25°C) in a 1:1 ratio. Stir the ice-water mixture thoroughly and wait for about 2 minutes until the temperature stabilizes at exactly 0.0°C before starting the calibration (Note: If possible, you can use an accurate thermometer to verify the water temperature).

### 5.1 Preparing Ice Water

1. Turn on the product, enable Bluetooth, and connect to the app. In the app, go to "Settings" click on "Device Calibration" and the product will enter the calibration interface (the product will display "CAL" in the top left corner).

2. Immerse the temperature clip probe into the ice-water mixture, continuously stir with the stirring stick (or shake the temperature probe directly). Once the temperature reading on the product screen stabilizes (within the range of -5°C to 5°C), press the power button. The screen will display "OK," indicating successful calibration, and the app will automatically return to the main interface.

Note: The probe sensor must be placed in the water and should not come into contact with the ice cubes or the container walls.

Note: The probe sensor must be fully submerged in the water, with the immersion depth not exceeding the position of the orange probe clip.

## 6. Instrument Maintenance

### 6.1 Battery Maintenance

- 1.Regular Charging: Avoid deep discharge of the battery. Charge the device regularly to ensure it is always ready for use. Try to avoid leaving the device unused for extended periods, as this could cause the battery to deplete.
- 2.Avoid Battery Swelling: Regularly inspect the battery for any signs of swelling or leakage. If swelling or leakage is found, immediately replace the battery.

### 6.2 Product Cleaning

- 1.External Cleaning: Use a soft, clean cloth to wipe the surface of the device. Avoid using corrosive cleaning agents. Keep the probe surface clean to prevent dust or dirt from affecting temperature measurements.
- 2.Sensor Cleaning: If the probe sensor is covered with oil or dust, gently clean it with a non-woven fabric or a soft brush to ensure the sensor surface maintains good contact.

### 6.3 Storage and Protection

- 1.Avoid Extreme Environments: When not in use for a long period, store the device in a dry, cool place. Avoid exposure to high temperatures, humidity, or strong magnetic fields.
- 2.Shock and Drop Protection: Avoid subjecting the device to severe vibration or dropping to maintain its integrity.

### 6.4 Troubleshooting

Problem	Possible Cause	Solution
Battery indicator flashing	Low battery power	Replace with a new battery
Device turns off automatically	1. Auto power-off function is enabled 2. Battery is depleted	1. Turn off the auto power-off function 2. Charge the device immediately
Device will not power on	Battery is depleted	Charge the device immediately
Temperature display shows -OL- or -OH-	Temperature exceeds allowable range	Ensure the device is within the allowable range