

# DOUBLE WAYS THERMOCOUPLE METER



**Users Manual**

## ■.Introduction

Thank you for purchasing the double ways thermocouple meter from us. Please take a few minutes to browse through this user manual before you begin to operate the meter to ensure that you are fully familiarized with how best to operate the meter as accurately and safely as possible.

This meter can match any standard type K or J sensor.

### 1.1 Precautions safety measures

To get the best service from this meter, please read this user's manual carefully and observe the detailed safety precautions strictly.

#### 1.1.1 During use

1. Temperature jacks: standard small thermocouple jacks, the center spacing is 7.9mm (between the two prongs) .
2. When the battery voltage is under proper operation requirement, the  symbol will show on the LCD and the battery need to be replaced with new.
3. To keep the instrument clean, wipe the case with a dry

cloth and detergent, do not use abrasives or solvents.

### **1.1.2 Maintaining the product**

- Do not measure at a high temperature, high humidity places.
- When not using the instrument for a long time, please remove the battery and avoid storing in high temperature and high humidity.

## **■. Features**

1. Display: 4 digits LCD Display
2. Resolution:  $0.1^{\circ}\text{C}/0.1^{\circ}\text{F}$  (below  $1000^{\circ}\text{C}$ )  
 $1^{\circ}\text{C}/1^{\circ}\text{F}$  (above  $1000^{\circ}\text{C}$ )
3. Range:  
K-type:  $-200^{\circ}\text{C} \sim 1300^{\circ}\text{C} (-328^{\circ}\text{F} \sim 2372^{\circ}\text{F})$   
J-type:  $-200^{\circ}\text{C} \sim 1200^{\circ}\text{C} (-328^{\circ}\text{F} \sim 2192^{\circ}\text{F})$
4. Accuracy:  
 $(-200 \sim -100^{\circ}\text{C}) \pm(0.2\%\text{reading}+1^{\circ}\text{C})$   
 $(-100 \sim 1300^{\circ}\text{C}) \pm(0.1\%\text{ reading}+0.7^{\circ}\text{C})$   
 $(-328 \sim -148^{\circ}\text{F}) \pm(0.2\%\text{ reading}+2^{\circ}\text{F})$

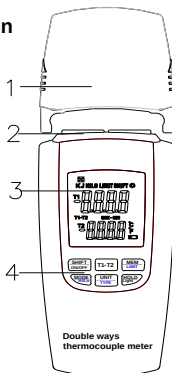
$(-148 \sim 2372^{\circ}\text{F}) \pm(0.1\% \text{ reading} + 1.4^{\circ}\text{F})$

5. Sample rate: 1 time /sec
6. Auto power off: about 20 minutes
7. Low battery indicator
8. Operating environment:  
-10°C ~ 50 °C (14°F ~ 122°F), 0 ~ 80%RH
9. Storage environment:  
-20°C ~ 60°C (-4°F ~ 140°F), 0 ~ 80%RH
10. Dimension and Weight:  
121(L)x60(W)x30(H)mm, about 180g
11. Accessories:  
DC1.5V (AAA)      x 3pcs  
K-type thermocouple wire    x 2pcs  
String      x 1pcs  
Plastic box      x 1pcs  
Users manual      x 1pcs

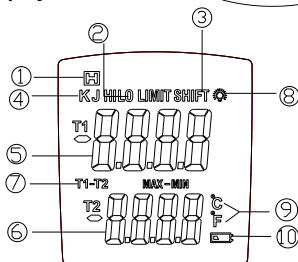
## ■. Names of parts

### ● Instrument Familiarization

1. Sensor cover
2. Temperature  
input jack
3. LCD display
4. Function key



### ● LCD Display



The meaning of the symbols represented by the

following:

1. Indicating it is now in the data-holding state
2. Indication to the high or low temperature setting
3. Indication to the second function key
4. Type of thermocouple
5. Display zone
6. Display zone
7. T1-T2/ Maximum / Minimize
8. Indication to back light
9. Temperature units
10. Indication to low voltage of the batteries

## ■. Operation Instruction

\*NOTE: After abrupt ambient temperature changes, allow instrument temperature to stabilize for 20 minutes before using for measurement.

1. Put the instrument with enough battery power in the hand, press the **SHIFT**  
**ON/OFF** key to turn the power on and enter into the measuring mode.

2. If the instrument is connected to the thermocouple, it will display the thermocouple temperature of the port T1 or T2. otherwise, it will display OL.

3. You can Press the function key to change temperature unit, select T1-T2/MAX/MIN/HOLD mode and K/J type, set Hi/Lo alarm, and store data. (refer to “function keys”)

4. Press the  $\frac{\text{HOLD}}{\text{Light}}$  key >2sec. to turn the back light on or off.

5. press the  $\frac{\text{SHIFT}}{\text{ON/OFF}}$  key >2sec. to turn the power OFF.

If you still need more operations, please see the description of function keys.

## ■. Function keys

1.  $\frac{\text{SHIFT}}{\text{ON/OFF}}$  key

**ON/OFF** power, ON/OFF key: Press the key to turn the power ON and press the key once more >2sec. to turn the power OFF.

**SHIFT** second function key: Press the key to enable the

second function of the key, and a **SHIFT** icon will display on the LCD.

The function of key:

**SHIFT** disable: **MEM**、**MODE**、**UNIT**

**SHIFT** enable: **LIMIT**、**Hi/Lo**、**TYPE**

## 2. T1-T2 key

Press the key to enforce T1-T2 function and the T1-T2 icon will display on the LCD. On second display, display Temperature difference between T1 and T2

## 3. $\frac{\text{MEM}}{\text{LIMIT}}$ key

**MEM** function: Press the key to store the present reading of T1 and T2. Five groups of data can be stored at most.

In the mode of MEM, press the key **T1-T2** or **UNIT** to view the recorded data up and down, and press the key **MODE** or **HOLD** to select T1 or T2.

When it is full of five data, OU icon will display on the LCD. If need to store more data, you should clear all data which have been stored before (in normal mode, press the **MEM** key >2 sec., then a CLER icon will display on the LCD).

**LIMIT** To enforce Hi/Lo alarm function.

When **SHIFT** is enabled, press the **LIMIT** key to turn the Hi/Lo alarm ON or OFF.

Limit function applicable for only one terminal

#### 4. **HOLD** **Light** key

Press the key, a  icon will display on the LCD and the readout held in. Press the key once more to cancel the hold function.

Press the key >2sec. the back light will be turned on, and the  icon will display on the LCD. Press the key once more >2sec. the light will be turned off, and the icon will disappeared.

## 5. UNITkey TYPE

**UNIT** The temperature unit selection

Press the key to select alternate the two temperature units of °C and °F

**TYPE** Select thermocouple type function

When **SHIFT** is enabled, press the key to select alternate the two thermocouple type of K-type and J-type.

## 6. MODE Hi/Lo key

**MODE** The maximum/minimum readout alternate.

In max mode: Display maximum Temperature only.

In min mode: Display minimum Temperature only.

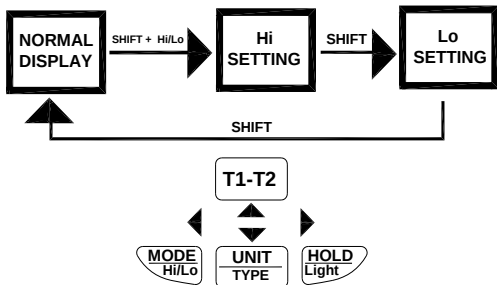
**Hi/Lo** The alarm Hi/Lo temperature setting

When the main display temperature is higher than Hi temperature setting or lower than Lo temperature setting, the alarm will continue send out.

When **SHIFT** is enabled, press the **Hi/Lo** key to enter

the Hi/Lo temperature setting:

- A. Use **SHIFT** key to select Hi or Lo setting.
- B. Use **MODE** or **HOLD** key to move position.
- C. Use **TI-T2** or **UNIT** key to set temperature.
- D. Use **SHIFT** key to complete the setting.



The Hi/Lo temperature setting

| TYPE | Hi             | Lo             |
|------|----------------|----------------|
| K    | 1300°C(2372°F) | -200°C(-328°F) |
| J    | 1200°C(2192°F) | -200°C(-328°F) |

## 7. AUTO POWER OFF SETTING

The automatic shutdown function is set to the automatic shutdown state by default after powering on.

If no key operation is performed, the default automatic shutdown time is 20 minutes.

To cancel the automatic shutdown, keep pressing the **HOLD** key and **ON/OFF** key when powering on until the screen displays **AP ON**, then press the **T1-T2** key, select **AP OF**, and press the **ON/OFF** key to confirm, and the automatic shutdown can be canceled.

**AP ON** -----Automatic shutdown is enabled;

**AP OF**-----Automatic shutdown is canceled;

## ■.Maintenance

### 1. CLEANING INSTRUCTIONS

The meter may be wiped down with a wet sponge or cloth using a mild water based detergent or anti-bacterial soap and rinsed under a gentle stream of cold water.

**NOTE:**

This unit is not designed for complete submersion or washing in water.

## **2. BATTERY REPLACEMENT**

Use the following procedure:

When the battery voltage drop below proper operation range the  symbol will appear on the LCD display and the battery need to be replaced.

Press the battery cover and towards arrowhead direction to open the battery cover.

Replace the battery with three new 1.5V batteries (AAA).

Replace the battery cover.



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