

# UT320A

## Mini Single Input Thermometer

### User Manual

## I. Introduction

UT320A single input thermometer accepts Type K and J thermocouples.

### Features:

- Wide measurement range
- High measurement accuracy
- Selectable thermocouple K/J.

Warning: For safety and accuracy, please read this manual before use.

## II. Open Box Inspection

Open the package box and take out the device. Please check whether the following items are deficient or damaged and contact your supplier immediately if they are.

- |                      |       |
|----------------------|-------|
| 1. UT-T01            | 1 pcs |
| 2. Battery: 1.5V AAA | 3 pcs |
| 3. Plastic holder    | 1 set |
| 4. User manual       | 1     |

## III. Safety Instructions

If the device is used in a manner that is not specified in this manual, the protection provided by the device might be impaired.

- 1) If low power symbol  appears, please replace the battery.
- 2) Do not use the device and send it to maintenance if malfunction occurs.
- 3) Do not use the device if explosive gas, steam or dust surrounding.

- 4) Do not input overrange voltage (30V) between thermocouples or between thermocouple and the ground.
- 5) Replace parts with the specified ones.
- 6) Do not use the device when the rear cover is open.
- 7) Do not charge the battery.
- 8) Do not throw the battery to fire or it may explode.
- 9) Identify the polarity of the battery.

## IV. Structure

- 1) Thermocouple jacks
- 2) NTC inductive hole
- 3) Front cover
- 4) Panel
- 5) Display screen
- 6) Buttons

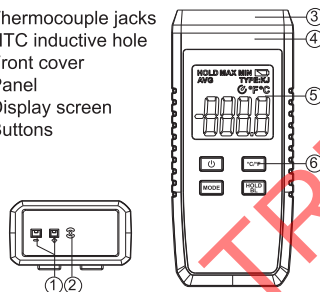


Figure 1

## V. Symbols

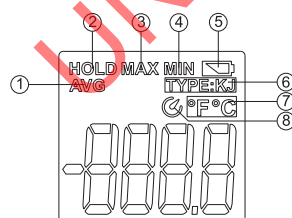


Figure 2

- 1) Average value
- 2) Data hold
- 3) Maximum temperature
- 4) Minimum temperature
- 5) Low power
- 6) Thermocouple type
- 7) Temperature unit
- 8) Auto power off

## VI. Buttons and setup

-  : short press: power ON/OFF; long press: switch ON/OFF auto shutdown function.
-  : short press: switch temperature unit.
-  : short press: switch between MAX/MIN/AVG modes. Long press: switch thermocouple type
-  : short press: switch ON/OFF data hold function; long press: switch ON/OFF backlight

## VII. Operation instructions

- 1) Thermocouple plug
- 2) Contact point
- 3) Object being measured
- 4) Thermometer

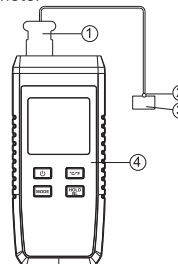


Figure 3

## 1. Connection

- A. Insert thermocouple into input jacks
- B. Short press  to turn on the device.
- C. Setup the thermocouple type (according to the type being used)

Note: If the thermocouple is not connected to input jacks, or in open circuit, "----" appears on the screen. If over range occurs, "OL" appears.

## 2. Temperature display

Short press  to select temperature unit.

A. Place the thermocouple probe on object to be measured.

B. Temperature is displayed on the screen.

Note: It takes several minutes to steady the readings if thermocouples are just inserted or replaced. The purpose is to ensure the accuracy of cold junction compensation

## 3. Data hold

- A. Short press  to hold the data displayed. HOLD symbol appears.
- B. Short press  again to switch off data hold function. HOLD symbol disappears.

## 4. Backlight ON/OFF

- A. Long press  to turn on backlight.
- B. Long press  again to turn off backlight.

## 5. MAX/MIN/AVG value

Short press  to cycle switch between MAX, MIN, AVG or regular measurement. Corresponding symbol appears for different modes. E.g MAX appears when measuring maximum value.

## 6. Thermocouple type

Long press  to switch thermocouple types (K/J). TYPE:K or TYPE: J are type indicators.

## 7. Battery replacement

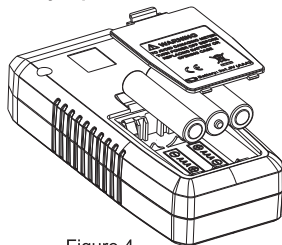


Figure 4

Please replace the battery as figure 4 shown.

## VIII. Specifications

| Range                      | Resolution    | Accuracy                                                           | Remark                 |
|----------------------------|---------------|--------------------------------------------------------------------|------------------------|
| -50~1300°C<br>(-58~2372°F) | 0.1°C (0.2°F) | ±1.8°C (-50°C~ 0°C)<br>±3.2°F (-58~32°F)                           | K-type<br>thermocouple |
|                            |               | ± [0.5%rdg+1°C] (0°C~1000°C)<br>± [0.5%rdg+1.8°F] (-32~1832°F)     |                        |
|                            |               | ± [0.8%rdg+1°C] (1000°C~1300°C)<br>± [0.8%rdg+1.8°F] (1832~2372°F) |                        |
| -50~1200°C<br>(-58~2152°F) | 0.1°C (0.2°F) | ±1.8°C (-50°C~ 0°C)<br>±3.2°F (-58~32°F)                           | K-type<br>thermocouple |
|                            |               | ± [0.5%rdg+1°C] (0°C~1000°C)<br>± [0.5%rdg+1.8°F] (-32~1832°F)     |                        |
|                            |               | ± [0.8%rdg+1°C] (1000°C~1300°C)<br>± [0.8%rdg+1.8°F] (1832~2192°F) |                        |

Table 1

Note: operating temperature: -0~40°C (32~102°F)  
(thermocouple error is excluded in specifications listed above)

## IX. Thermocouple specifications

| Model  | Range                    | Scope of application | Accuracy                               |
|--------|--------------------------|----------------------|----------------------------------------|
| UT-T01 | -40~260°C<br>(-40~500°F) | Regular solid        | ±2°C (-40~260°C)<br>±3.6°F (-40~500°F) |

|        |                           |                                |                                                     |
|--------|---------------------------|--------------------------------|-----------------------------------------------------|
| UT-T03 | -50~600°C<br>(-58~1112°F) | Liquid, gel                    | ±2°C (-50~333°C)<br>±3.6°F (-58~631°F)              |
|        |                           |                                | ±0.0075*rdg (333~600°C)<br>±0.0075*rdg (631~1112°F) |
| UT-T04 | -50~600°C<br>(-58~1112°F) | Liquid, gel<br>(food industry) | ±2°C (-50~333°C)<br>±3.6°F (-58~631°F)              |
|        |                           |                                | ±0.0075*rdg (333~600°C)<br>±0.0075*rdg (631~1112°F) |
| UT-T05 | -50~900°C<br>(-58~1652°F) | Air, gas                       | ±2°C (-50~333°C)<br>±3.6°F (-58~631°F)              |
|        |                           |                                | ±0.0075*rdg (333~900°C)<br>±0.0075*rdg (631~1652°F) |
| UT-T06 | -50~500°C<br>(-58~932°F)  | Solid surface                  | ±2°C (-50~333°C)<br>±3.6°F (-58~631°F)              |
|        |                           |                                | ±0.0075*rdg (333~500°C)<br>±0.0075*rdg (631~932°F)  |
| UT-T07 | -50~500°C<br>(-58~932°F)  | Solid surface                  | ±2°C (-50~333°C)<br>±3.6°F (-58~631°F)              |
|        |                           |                                | ±0.0075*rdg (333~500°C)<br>±0.0075*rdg (631~932°F)  |

Table 2

Note: Only K-type thermocouple UT-T01 is included in this package.  
Please contact the supplier for more models if needed.

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