

## BATTERY REPLACEMENT

When the LOW BATTERY icon is displayed, the battery should be replaced immediately with a CR2032 lithium cell. The battery is located under the twist cover at the rear of the thermometer.

**Please note:** It is important for the MTC to turn off before replacing the battery, otherwise the thermometer may malfunction.

Dispose of used battery properly and keep away from children.

## SPECIFICATIONS

<b>Range*</b>	-83 to 1999°F (-64 to 1400°C)
<b>Accuracy</b>	±1% of reading or 1.8°F (1°C) whichever is greater
<b>Resolution</b>	0.1°
<b>Auto-Off</b>	After 15 seconds in HOLD mode, or 4 minutes in normal display mode.
<b>Units</b>	°C/°F switchable
<b>Probe</b>	Accepts type K probes with mini connector. Probe not included.
<b>Battery</b>	1x CR2032 Lithium Cell, included, 100 hours continuous use
<b>Operating Range</b>	32 to 122°F (0 to 50°C)
<b>Water Resistance</b>	IP65
<b>Dimensions</b>	3 H x 1.7 W x 0.8 D inches (78 H x 43 W x 20 D mm)
<b>Weight</b>	1.42 oz (40.15 g)

\*The temperature range is for thermometer only. The user should choose the proper probe types for different applications. Please make sure the item to be measured will not exceed the temperature range of the probe to avoid permanent damage of the thermocouple probe.



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## CERTIFICATE OF CONFORMANCE

The manufacturer of this instrument has implemented a quality assurance system under ISO 9001:2000 certified quality system and fully follow ISO GUM (Guide to the Expression of Uncertainty in Measurement) to evaluate the uncertainty of temperature and resistance standards, guarantee performance as below:

Calibration Temperature	Max Error
0°C	±1.0°C
200°C	±2.0°C
1000°C	±10.0°C

Note: Assume the operation ambient temperature under  $23 \pm 3^\circ\text{C}$

Furthermore, we certify that this thermometer has been inspected and found to comply with published specifications. This device has been calibrated by temperature standards that are traceable to NIST (U.S. National Institute of Standards and Technology) or NML National Measurement Laboratory) of Taiwan, and the calibration procedure corresponds with generally accepted regulations and standards. The uncertainties of the reference standards used are:  $\pm 0.5^\circ\text{C}$  accuracy and  $\pm 0.05^\circ\text{C}$  stability.

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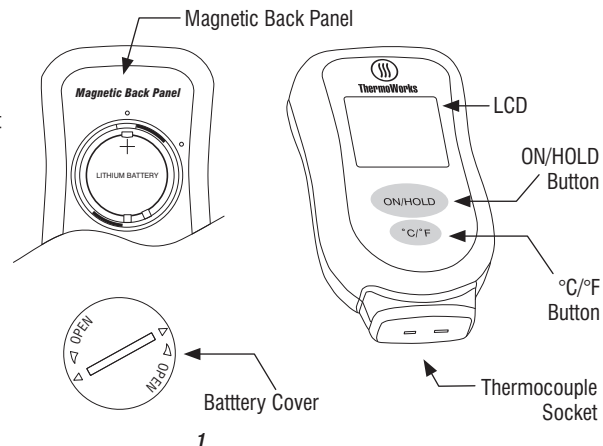
## MTC Mini Handheld Thermocouple Thermometer Operating Instructions

Congratulations on the purchase of your MTC. We hope that you can make use of this product for a long time and that it helps you with your work. The information included in this booklet is important and useful in understanding the functionality of the MTC.

Powered by a replaceable lithium battery, the thermometer is a handy, temperature measurement device for a wide range of measurements and control applications.

## OVERVIEW

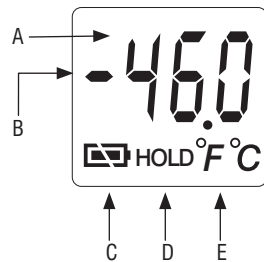
1. LCD
2. ON/HOLD Button
3. °C/°F Button
4. Thermocouple Socket
5. Battery Cover
6. Internal Magnet



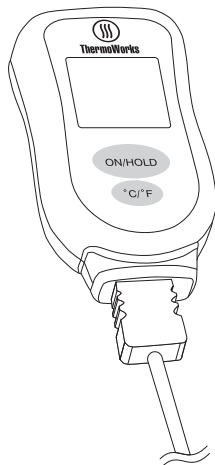
## OPERATING INSTRUCTIONS

1. Information is displayed on the LCD through the following symbols:

- A. Temperature reading
- B. Minus sign (negative temperature)
- C. Battery status
- D. HOLD (automatic shutdown after 15 sec.)
- E. Selected temperature scale (°F or °C)



- 2. Insert a probe connector in to the thermocouple socket
- 3. To turn the thermometer on, press the ON/HOLD button for approximately one second.
- 3. To select the desired temperature scale (°F or °C) press the ON/HOLD button until the LCD displays HOLD. Press the °C/°F button to change temperature scales. Press ON/HOLD again to release the hold.  
*°C/°F can only be changed only when HOLD is displayed.*
- 4. For best results allow up to 30 minutes for meter to stabilize to ambient temperatures.



- 5. Position the tip of the thermocouple where you wish to measure the temperature. Wait until the temperature has stabilized. Read the temperature from the display.
- 6. To retain the temperature in the display, press the ON/HOLD button. The last measured value is displayed.

*To save battery power the thermometer deactivates itself automatically after about 15 seconds in the HOLD position, or after about 4 minutes in normal display mode.*

## CAUTION

To protect the thermometer please observe the following:

- 1. Keep the thermometer away from electrostatic discharge.
- 2. Avoid “thermal shock” caused by large or abrupt ambient temperature changes. Allow 30 minutes for the thermometer to stabilize before use when exposed to quick ambient shifts.
- 3. Do not leave the thermometer on or near objects of high temperature.
- 4. To avoid electric shock and thermometer damage, do not measure live circuits where voltage exceeds 24V AC RMS or 60V DC with the thermocouple probe.
- 5. Readings may be affected if the thermometer is operated within a radio frequency electromagnetic field strength of approximately 3 volts per meter, but its performance will not be permanently affected.
- 6. Keep out of reach of all children.

## STORAGE & CLEANING

Clean the thermometer with a damp cloth. Do not use any solvents, (such as acetone) as they will corrode the plastic. Isopropyl alcohol may be used to clean. Do not submerge any part of the thermometer. The thermometer should be stored at room temperature between 59 to 86°F (15 to 30°C).

## LCD ERROR MESSAGES

The thermometer incorporates visual diagnostic messages as follows:

**Er2** Er2 is displayed when the thermometer is exposed to rapid changes in the ambient temperature.

**Er3** Er3 is displayed when the ambient temperature drops below 32°F (0°C) or exceeds 122°F (50°C). The thermometer should be allowed a minimum 30 minutes to stabilize to the ambient temperature.

**Er** Er5–9 is displayed for all other error messages. Clear the error by resetting the thermometer. To reset, turn the thermometer off, remove the battery and wait for a minimum of one minute. Reinsert the battery and turn it on. If the error message remains please contact ThermoWorks for further assistance.

**Hi Lo** Hi or Lo is displayed when the temperature being measured exceeds the measurement range of the thermometer.

## BATTERIES

The thermometer incorporates visual low battery indication as follows:



**‘Battery OK’:**  
measurements  
are possible



**‘Battery Low’:** battery  
needs to be replaced;  
measurements  
are possible



**‘Battery Exhausted’:**  
measurements are  
not possible