

Instruction Manual

Temp JKT

Temperature Meter Series



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Preface

This manual serves to explain the use of the Temp JKT temperature meter. This manual functions in two ways: first, as a step by step guide to help you operate the meter; second, it serves as a handy reference guide.

This manual is written to cover as many anticipated applications of the Temp JKT meter as possible. If there are doubts in the use of the Temp JKT meter, do not hesitate to contact the nearest Eutech Instruments Authorized Distributor.

Eutech Instruments/ Oakton Instruments will not accept any responsibility for damage or malfunction to the meter caused by improper use of the instrument.

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1. INTRODUCTION

1.1 *Introducing the Temp JKT*

Thank you for purchasing the Temp JKT meter. This economical microprocessor-based handheld meter works with type J, type K and type T probes for a wide temperature measurement range:

- **Type J probes** (iron-constantan) offer a wide range of -200 to 1000 °C / -328 to 1832 °F; use in reducing environments
- **Type K probes** (chromel-alumel) offer the widest range of -250 to 1372 °C / -418 to 2502 °F; use in oxidizing environments
- **Type T probes** (copper-constantan) of range of -250 to 400 °C / -418 to 752 °F; good for ambient and sub-freezing measurements

The Temp JKT meter features:

- Large LCD for clear and easy reading
- Readings in °C and °F (selectable)
- Minimum and maximum temperature display
- Minimum and maximum hold mode
- Low battery indicator
- Hold function, freezes measured reading
- User calibration - offset adjustment
- Built-in memory backup; calibration and other information remain if battery is disconnected

This instruction manual is organized for quick reference with step-by-step procedures that give you thorough review of the various features and meter operations.

Included with your meter are a rubber boot, 4 alkaline “AAA” batteries, an instruction manual and a warranty card. To order different type of thermocouple probes, please refer to Section on Accessories for more information.

2. GETTING STARTED

2.1 Description of Keypad Functions

Temp JKT meter has seven keys on its splash-proof keypad. These keys include ON / OFF, CAL, HOLD / ENTER, °C/°F, MAX/▲ or MIN/▼ key and J-K-T keys.

ON/OFF: Powers meter on and shuts the unit off. Meter directly enters measurement mode when you turn it on.

CAL: Allows temperature calibration of the meter.

HOLD/ENTER: Freezes the measured reading; confirm calibration value.

MAX/▲ (UP) or MIN/▼ (DOWN): Momentarily displays meter's maximum and minimum temperature; enter maximum or minimum hold mode; scroll up and down in calibration mode.

°C/°F: Switches between °C and °F in measurement mode.

J-K-T: Switches between J, K and T thermocouple measurement mode.

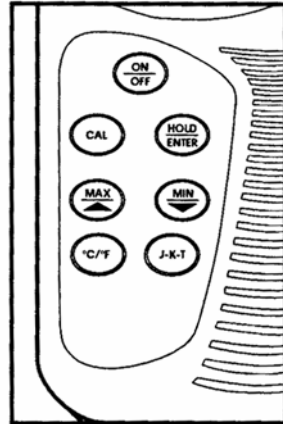


Figure 1:

2.2 Description of LCD Annunciators

The EcoScan Temp JKT meter has a large custom LCD that consists of 4-digit segments and operation annunciators for °C and °F. Other indicators include "MIN", "MAX", "HO" (when the HOLD function is activated), "LO" (low battery condition) and "J"/"K"/"T".



Figure 2: Full segment LCD

2.3 Inserting & Removing the Rubber Boot

1. To remove meter from rubber boot, push out from the bottom edges of meter until it is completely out of boot. Ensure that the connector of temperature sensor is not connected.
2. To insert meter into rubber boot, slide in from the top of meter before pushing the bottom edges of meter down to set it into position. Lift up the stand at the back of meter for bench top applications if necessary.



Figure 3: Inserting meter into the rubber boot

2.4 Inserting New Batteries

The battery compartment is found at the back of instrument. To open the battery compartment, push in the direction of arrow and lift up the cover. Note the polarity of battery before inserting into position. After replacement, place cover back and press down until it locks tight.

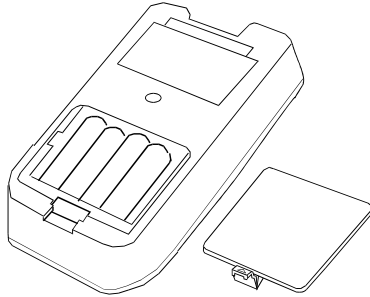


Figure 4: Battery compartment at the back of the meter

2.5 Battery Replacement

A "LO" annunciator in the LCD alerts you when battery power is running low. Replace with the same type as recommended by the manufacturer.



Figure 5: Low battery indicator

Caution: Power off the meter when changing battery.

2.6 Connecting the Temperature Sensor

Insert the 2-pin mini connector plug of the temperature sensor into the connector socket on the side of the meter.

NOTE: The negative pin is larger than the positive pin, be sure to properly align the pins. Unplug the sensor when not in use.

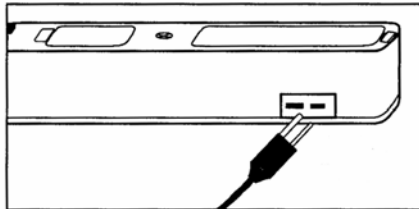


Figure 6: Connecting the temperature sensor

2.7 Switching the Meter On

1. Press **ON/OFF** key to power up your meter. All the LCD segments display momentarily as the meter performs a self-diagnostic test, per shown in section 2.2. The LCD then switches into measurement mode.
2. The LCD displays "oPEn" if the temperature sensor is faulty, or there is an open circuit. Please refer to section on Troubleshooting if in doubt.



Figure 7: "Open"

3. CALIBRATION

3.1 Temperature Calibration

The temperature sensor included with your meter is factory calibrated. Over time, the temperature calibration may drift and the probe requires re-calibration. The Temp JKT meter allows you to have a 1-point calibration as fine adjustment by changing its offset value. This is useful if you replace the probe. If you replace the probe, you should recalibrate.

1. First connect the temperature probe to the meter. Press **ON/OFF** key to power up the meter and wait for meter to enter measurement mode.
2. Dip the probe in a constant temperature bath, or in liquid whose temperature can be checked with an accurate thermometer. For best accuracy, place the probe and thermometer in a constant temperature bath.
3. Wait for readings to stabilise.
4. To enter temperature calibration mode, press and hold **CAL** key for 5 seconds before release. The LCD shows "**CA**" momentarily and a value flashes.
5. Press **MAX/▲** or **MIN/▼** key to adjust the displayed value until it matches the correct temperature. The **MAX/▲** or **MIN/▼** key will scroll to the maximum allowable value.

NOTE: The maximum adjustments allowed for the following meter series from factory default are:

- *EcoScan JKT Temperature meters = ± 10 °C*
- *EcoScan 4/5/6 Temperature meters = ± 5 °C*

6. Press **ENTER** key to confirm calibration.
7. The LCD displays “**CO**” momentarily, and the meter then reverts to measurement mode. See figure below.

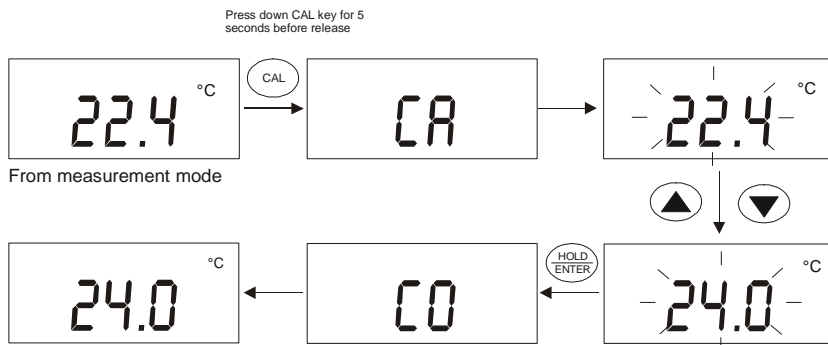


Figure 8: Temperature calibration

