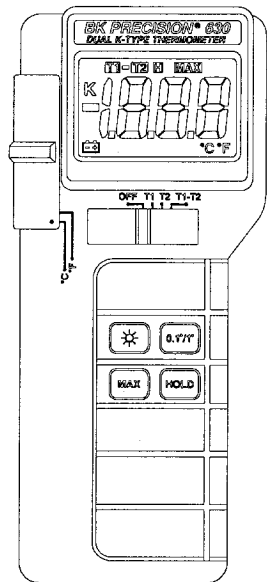


# OPERATING INSTRUCTIONS

**BK PRECISION® 630** 

## DIGITAL THERMOMETER



### HOLD Mode

Press "HOLD" button to toggle in and out of Hold mode. In the Hold mode, the "H" annunciator is displayed. (The Hold mode may be exited when changing function.)

### ☼ Display Back-Light

Pressing the "☼" key to toggle turn on or turn off the Back-Light.

### MAX Mode

Pressing the Max key to enter the MAX mode. The thermometer then records and updates the maximum absolute values and the MAX annunciator appears on the display. Pressing the MAX key again to exit the MAX recording mode.

In the MAX mode, press HOLD key to stop the recording, press HOLD again to resume recording.

### T1, T2, T1-T2 Temperature Measurement

1. The function switch indicates which input is selected for display; T1 thermocouple, T2 thermocouple or the difference between the two thermocouples (T1-T2).
2. Connect a type k thermocouple to the jack on the instrument. Place the probe or thermocouple tip on or in the material to be measured and take the temperature reading directly from the display.

## INTRODUCTION

This instrument is a portable 3½ digit, compact-sized digital thermometer designed to use external K-type thermocouple as temperature sensor. Temperature indication follows Reference Temperature/Voltage Tables (N.I.S.T. Monograph 175 Revised to ITS-90) for K-type thermocouples.

## SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the thermometer.

### WARNING

To avoid electrical shock, do not use this instrument when voltages at the measurement surface exceed 24V AC or DC.

### WARNING

To avoid damage or burns, do not make temperature measurement in microwave ovens.

### CAUTION

Repeated sharp flexing can break the thermocouple leads. To prolong lead life, avoid sharp bends in the leads, especially near the connector.

The  $\Delta$  symbol on the instrument indicates that the operator must refer to an explanation in this manual.

## OPERATOR MAINTENANCE

### WARNING

To avoid possible electrical shock, disconnect the thermocouple connectors from the thermometer before removing the cover.

### Battery Replacement

Power is supplied by a 9 volt "transistor" battery. (NEDA 1604, IEC 6F22). The "B" appears on the LCD display when replacement is needed. To replace the battery, remove the two screws from the back of the meter and lift off the battery cover. Remove the battery from battery contacts.

### Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.

## LIMITED ONE YEAR WARRANTY

**BK PRECISION** warrants to the original purchaser that its product, and the component parts thereof, will be free from defects in workmanship and materials for a period of one year from the date of purchase.

**BK PRECISION** will, without charge, repair or replace, at its option, defective product or component parts upon delivery to an authorized **BK PRECISION** service contractor or to the factory service department, accompanied by proof of the purchase date in the form of a sales receipt.

## SPECIFICATIONS

### ELECTRICAL

**Temperature Scale:** Celsius or Fahrenheit user-selectable

**Measurement Range:** -50°C to 1300°C, (-58°F to 2000°F)

**Resolution:** 1°C or 1°F, 0.1°C or 0.1°F

**Accuracy:** Accuracy is specified for operating temperatures over the range of 18°C to 28°C (64°F to 82°F), for 1 year, not including thermocouple error.

±(0.3% rdg + 1°C) -50°C to 1000°C

±(0.5% rdg + 1°C) 1000°C to 1300°C

±(0.3% rdg + 2°F) -58°F to 2000°F

**Temperature Coefficient:** 0.1 times the applicable accuracy specification per °C from 0°C to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F).

**Input Protection:** 24V dc or 24V ac rms maximum input voltage on any combination of input pins.

**Reading Rate:** 2.5 times per second.

**Input Connector:** Accepts standard miniature thermocouple connectors (flat blades spaced 7.9mm, center to center).

### ENVIRONMENTAL

**Ambient Operating Ranges:**

0°C to 50°C (32°F to 104°F) <70% R.H.

**Storage Temperature:**

-20°C to 60°C (-4°F to 140°F) <80% R.H.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. It is void if the serial number is altered, defaced or removed.

**BK PRECISION** shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may have other rights which vary from state-to-state.

For your convenience, we suggest you contact your **BK PRECISION** distributor, who may be authorized to make repairs or can refer you to the nearest service contractor.

If warranty cannot be obtained locally, please send the unit to **BK PRECISION** Service Department, 1031 Segovia Circle Placentia, CA 92870, properly packaged to avoid damage in shipment.

**BK PRECISION** Test Instruments only warrants products sold in the U.S.A. and its overseas territories. In other countries each distributor warrants the **BK PRECISION** products which it sells.

## GENERAL

**Display:** 3½ digit liquid crystal display (LCD) with maximum reading of 1999.

**Battery:** Standard 9V battery (NEDA 1604, IEC 6F22 006P).

**Battery Life:** 200 hours typical with carbon zinc battery.

**Dimensions:** 156mm(H) x 65.5mm(W) x 35mm(D).

**Weight:** 177g (including probe and batteries).

**Supplied Probe:** 4 foot type "K" thermocouple bead probe (teflon tape insulated). Maximum insulation temperature 260°C (500°F). Probe accuracy ±2.2°C or ±0.75% of reading (whichever is greater) from 0°C to 800°C.

## OPERATING INSTRUCTIONS

### Selecting the Temperature Scale

Readings are displayed in either degrees Celsius(°C) or degrees Fahrenheit(°F). Set the "°C °F" switch to change the temperature scale.

### Selecting the Display Resolution

The thermometer allows two choices of resolution:

High resolution: 0.1°C or 0.1°F

Low resolution: 1.0°C or 1.0°F

To select the alternate display resolution, press the corresponding "0.1°/1°" key.

## CUSTOMER SUPPORT 1-800-462-9832

Precision offers courteous, professional technical support before and after the sale of their test instruments. The following services are typical of those available from our toll-free telephone number:

- Technical advice on the use of your instrument.
- Technical advice on special applications of your instrument.
- Technical advice on selecting the best instrument for a given task.
- Instrument for information on optional accessories for your instrument.
- Information on instrument repair and recalibration services.
- Replacement parts ordering.
- Information on other **BK PRECISION** instruments.
- Requests for a new **BK PRECISION** catalog.
- The name of your nearest **BK PRECISION** distributor.

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