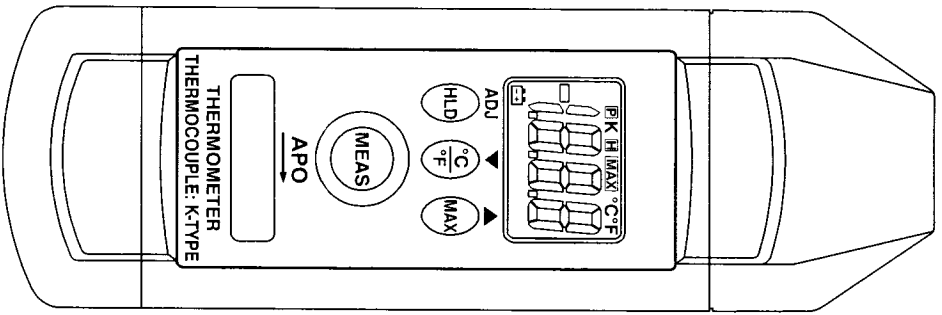


# OPERATOR'S MANUAL TECPEL 800 CE DIGITAL THERMOMETER



## 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.

## SPECIFICATIONS

### ELECTRICAL

**Temperature Scale:** Celsius or Fahrenheit set-selectable.

**Measurement Range:** -100°C to 850°C, -148°F to 1562°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 83°F to 122°F).

**Accuracy:** Accuracy is specified for operating temperatures over the range of 18°C to 28°C(64°F to 83°F), for 1 year, not including thermocouple error.

±(0.3% rdg + 1°C) on °C ranges  
±(0.3% rdg + 2°F) on °F ranges

**Resolution:** 1°C/1°F, 0.1°C/0.1°F (Auto)

### Resolution

0.1°C Range -59.9°C to 199.9°C

1°C -100°C to -60°C  
200°C to 850°C

0.1°F -59.9°F to 199.9°F

1°F -148°F to -60°F  
200°F to 1562°F

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

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

## GENERAL

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

**Low battery indication:** The "E" is displayed when the battery voltage drops below the operating level.

**Measurement rate:** 1.5 times per second, nominal.

**Operating Environment:** 0°C to 50°C at < 70% R.H.

**Storage Temperature:** -20°C to 60°C, 0 to 80% R.H. with battery removed from meter.

**Accuracy:** Stated accuracy at 23°C±5°C, <75% R.H.

**Standby consuming current:** <10µA.

**Auto power off:** 15 minutes.

**Battery Life:** 140 hours (continuity) typical.

**Battery:** 3 pos 1.5V (AAA size) UM-4 R03.

**Dimensions:** 148mm(H) x 48mm(W) x 24mm(D).

**Weight:** approx. 2.56 oz. (73.4g) including batteries.

## OPERATING INSTRUCTIONS

### MEAS (MEASURE) Button

Press "MEAS" button to turn on the meter for measuring temperature. Press "MEAS" button again turns meter off.

### DATA HOLD Mode

Press the "HLD" key to enter the Data Hold mode, the "H" annunciator is displayed. When DATA HOLD mode is selected, the thermometer holds the present readings and stops all further measurements.

Press the "HLD" key again cancels DATA HOLD mode, causing thermometer to resume taking measurements.

### °C/°F Selecting the Temperature Scale

Readings displayed in either degrees Celsius(°C) or degrees Fahrenheit(°F).

When the thermometer is turned on, it is set to the temperature scale that was in use when the thermometer was last turned off. To change the temperature scale, press the "°C/°F" Key.

### MAX HOLD Mode

Press the "MAX" key to enter the MAX HOLD mode. The thermometer then records and updates the maximum absolute values and the "MAX" annunciator appears on the display.

Press the "MAX" key again to exit the MAX HOLD recording mode.

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

### ADJ Function

Thermocouple offset adjustment. Press "ADJ" button for more than 2 seconds to enter ADJ Function which can adjust the offset of thermocouple in the ambient temperature. Insert the bead wire into a known temperature (T) until the display equal to known temperature (T).  
ex: room temperature at 25°C  
Ice point at 0°C  
Boiled water at 100°C

Press "▲" or "▼" to add or subtract the value. It can be adjusted 0±3°C.  
Press "ADJ" button again to confirm and exit ADJ function.

### APO (Auto power off) Function

To remove rubber cover on front and slide the switch to right to enable "APO" function.

To slide the switch to left to disable "APO" function. It will turn off automatically after approximately 15 minutes to lengthen battery life.

## OPERATOR MAINTENANCE

### WARNING

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

## MAINTENANCE

### Battery Replacement

1. Power is supplied by three 1.5V (AAA size) batteries.
2. The "E" appears on the LCD display when replacement is needed. To replace the batteries, remove the screw from the back of the meter and lift off the battery cover.
3. Remove the batteries from battery contacts.
4. When not use for long time remove battery.
5. Don't keep in place with high Temp. or high humidity.

### Cleaning

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