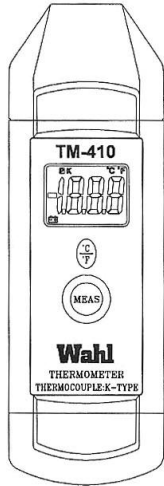


**OPERATING INSTRUCTIONS**  
**Wahl TM-410 CE**  
**DIGITAL THERMOMETER**



**OPERATING INSTRUCTIONS**

**MEAS (MEASURE) Button**

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

**°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.

**APO (Auto Power OFF)**

Press and hold down °C/°F button for more than 2 seconds to change APO mode.

When **P** displayed on the LCD means the APO function is enable and the meter will turned off after 90 seconds.

**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.

**OPERATOR MAINTENANCE**

**WARNING**

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

**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.

**SPECIFICATIONS**

**ELECTRICAL**

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

**Measurement Range:** -100°C to 1370°C, -148°F to 1999°F

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

**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.

|                  |    |                                    |
|------------------|----|------------------------------------|
| ±0.5°C           | on | 0°C to 100°C                       |
| ±(0.3%rdg + 1°C) | on | -100°C to 0°C,<br>100°C to 1370°C  |
| ±1°F             | on | 32°F to 200°F                      |
| ±(0.3%rdg + 2°F) | on | -148°F to 32°F,<br>200°F to 1999°F |

**Thermocouple:**

|       | <b>Range</b>                      |
|-------|-----------------------------------|
| 0.1°C | -59.9°C to 199.9°C                |
| 0.1°F | -59.9°F to 199.9°F                |
| 1°C   | -100°C to 60°C<br>200°C to 1370°C |
| 1°F   | -148°F to 60°F<br>200°F to 1999°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)

**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)

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

**Reading Rate:** 1.5 times per second.

**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% relative humidity

**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:** 90 seconds.

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

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

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

**Weight:** Approx. 2.56 oz. (73.4g) including battery.