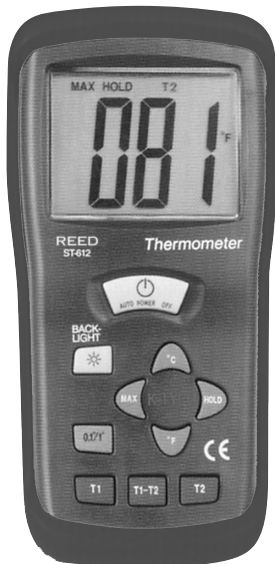


REED

Model ST-612

Dual Input Thermocouple
Thermometer



Instruction Manual

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Safety

Read the safety and operating instructions before using this thermometer.

Warning

- To avoid electrical shock do not use this instrument when voltages at the measurement surface exceed 24V AC or 60V DC.
- To avoid damage or burns do not make temperature measurements 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  symbol on the instrument indicates that the operator must refer to an explanation in this manual.

For service on this or any other REED product or information on other REED products, contact REED Instruments at info@reedinstruments.com.

Features

- Dual input thermocouple thermometer
- Designed to use K-type thermocouples
- Temperature indication follows National Bureau of Standards and IEC584 temperature/voltage tables
- Displays Maximum reading plus Data Hold
- Large 3 ½ LCD display with backlight
- User selectable °C or °F

Specifications

Electrical

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| Temperature Scale: | Celsius (°C) and Fahrenheit (°F), user selectable |
| Measurement Range: | -50 to 1300 °C, -58 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.) ±2°C -50 to 0°C ±(0.5% rdg +1°C) 0 to 1000°C ±(0.8% rdg +1°C) 1000 to 1300°C ±4°F -58 to 32°F ±(0.5% rdg +2°F) 32 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: | 60V DC or 24V rms ac maximum input voltage on any combination of input pins. |
| Sampling Rate: | 2.5 times per second. |
| Input Connector: | Accepts standard miniature thermocouple connectors (flat blades spaced 7.9mm, center to center). |

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Environmental

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| Ambient Operating Range: | 0 to 50°C (32 to 122°F) |
| Storage Temperature: | -20 to 60°C (-4 to 140°F) |
| Relative Humidity: | 0 to 80% (0 to 35°C) (32 to 95°F) 0 to 70% (35 to 50°C) (95 to 122°F) |

General

| | |
|------------------------------|---|
| Display: | 3 1/2 digit liquid crystal display (LCD) with maximum reading of 1999 |
| Battery: | Standard 9V battery (NEDA 1604, IEC 6F22) |
| Dimensions: | 162mm (H)×76mm(W)×38.5mm(D) |
| Weight: | 210g |
| Supplied Probe: | 4 foot type “K” thermocouple bead probe (Teflon tape insulated). |
| Max. insulation temperature: | 260°C (500°F) |
| Probe accuracy: | ±2.2°C or ±0.75% of reading (Whichever is greater) from 0° to 800°C |
| Included Accessories: | Battery, soft carrying case and manual |

Operating Instructions

Selecting the Temperature Scale

Readings are 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 For°C or °F key.

Single-Thermocouple Temperature Measurement

The thermometer displays the temperature of the thermocouple that is connected to the selected input. Press the T2 key to display the temperature of the thermocouple connected to the T2 input. Press the T1 key to display the temperature of the thermocouple connected to the T1 input. The input selection cursor indicates which input is selected.

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Differential Temperature Measurement

Differential temperature measurement is selected by pressing the T1-T2 key. This causes the thermometer to display the temperature difference between the two thermocouples (the temperature of thermocouple T1 minus the temperature of thermocouple T2). The selection is indicated by the input selection cursor.

Selecting the Display Resolution

The thermometer allows two choices of resolution:

High resolution: 0.1 °C or 0.1 °F; Low resolution: 1 °C or 1 °F

Additional Functions

Overload Display

The digital display will indicate 1 when the input exceeds the measurement range selected.

If measuring above 199.9°, change the resolution to 1°. Be certain to seat the thermocouple connector properly and that the leads are not broken.

Hold Mode

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


Pressing the HOLD key again cancels HOLD mode, causing the thermometer to resume taking measurements.

Backlight Mode

Press the Backlight key to turn on the LCD backlighting function. Press the Backlight key again to turn off the LCD backlighting function.

Battery Replacement

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

The battery symbol  appears on the lower right of the LCD when the 9V battery needs to be replaced.

1. Turn the meter off and disconnect the temperature probe.
2. Remove the rubber holster that surrounds the entire meter by pulling it over the top of the meter.
3. Remove the small Phillips head screw on the rear of the meter.
4. Open the battery compartment and replace the 9V battery.
5. Re-assemble the meter before operating.

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