VOLTCRAFT K102

VOLTCRAFT K102 Digital Thermometer Instruction Manual

INTRODUCTION

Welcome to the VOLTCRAFT K102 Digital Thermometer instruction manual. This device is designed for precise temperature measurements using K-type thermocouples. Please read this manual thoroughly before operation to ensure safe and correct usage and to understand all features of your new thermometer.

SAFETY INFORMATION

General Safety

- Read all instructions before use.
- Do not expose the device to extreme temperatures, direct sunlight, or high humidity.
- Avoid strong impacts or vibrations.
- Do not attempt to open or modify the device. Repairs should only be performed by qualified personnel.
- Keep out of reach of children.

Battery Safety

- Use only the specified battery type (9V).
- Ensure correct polarity when inserting batteries.
- Remove batteries if the device will not be used for an extended period.
- Dispose of used batteries according to local regulations.

PACKAGE CONTENTS

Verify that all items are present in the package:

- VOLTCRAFT K102 Digital Thermometer
- Instruction Manual

Note: K-type thermocouples and a 9V battery are typically sold separately and are not included with the device.

DEVICE OVERVIEW

The VOLTCRAFT K102 features a clear digital display and intuitive button controls for various functions. It supports two K-type thermocouple inputs (T1 and T2).
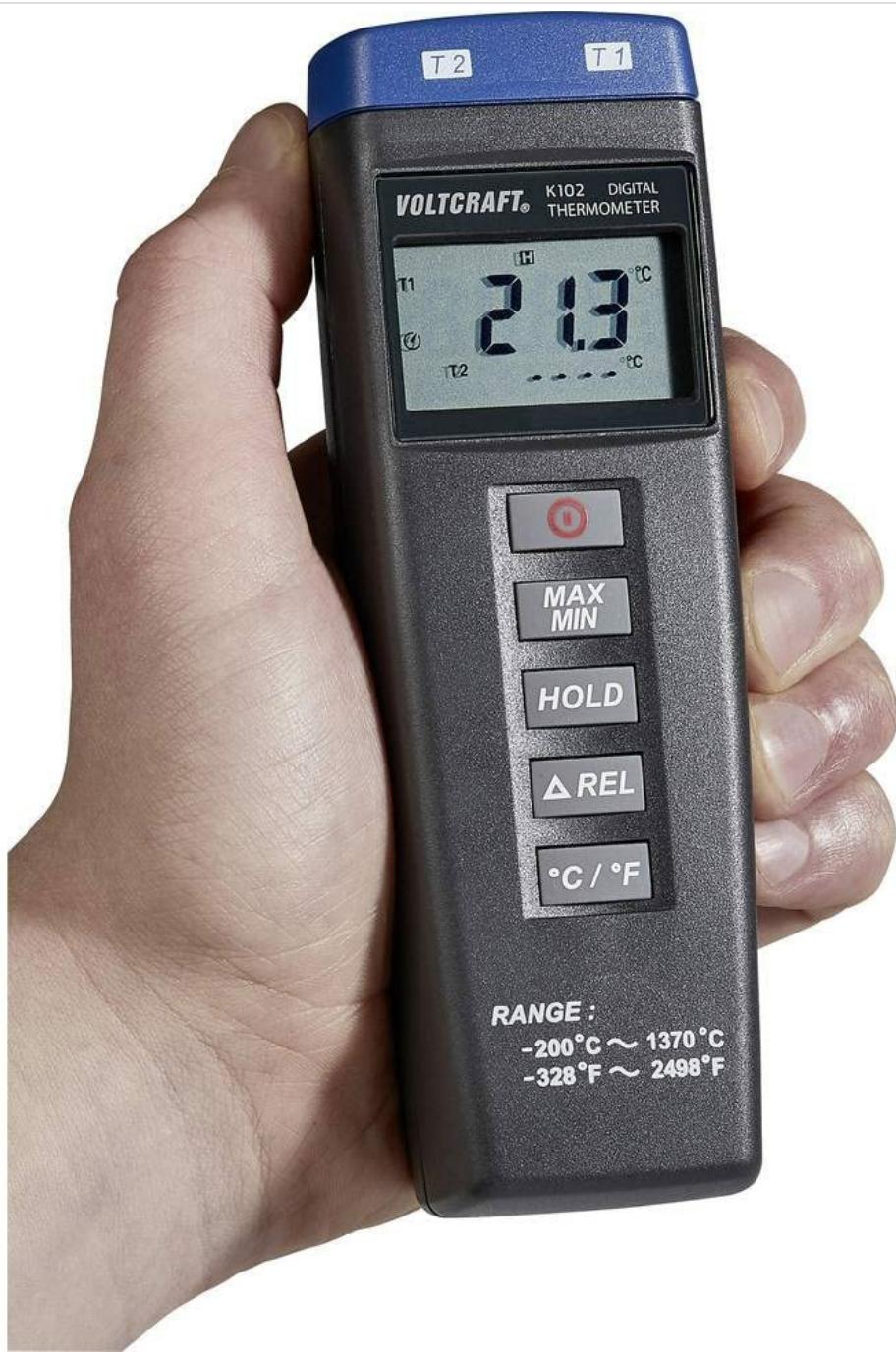
Front Panel

Image: Front view of the VOLTCRAFT K102 Digital Thermometer, displaying the screen, power button, MAX/MIN, HOLD, REL, and °C/°F buttons. The top shows T1 and T2 inputs.

- **Display:** Shows temperature readings for T1, T2, and differential (T1-T2).
- **Power Button (O):** Turns the device ON/OFF.
- **MAX/MIN Button:** Toggles between maximum, minimum, and current readings.
- **HOLD Button:** Freezes the current display reading.
- **REL Button:** Activates relative measurement mode.
- **°C/°F Button:** Switches between Celsius and Fahrenheit temperature units.
- **T1/T2 Inputs:** Connect K-type thermocouples.

Side Panel

Image: Side view of the VOLTCRAFT K102 Digital Thermometer, highlighting the CAL (calibration) button.

- **CAL Button:** Used for calibration adjustments. Refer to the calibration section for detailed instructions.

SETUP

Installing the Battery

1. Locate the battery compartment cover on the back of the device.

2. Slide the cover downwards to open it.

Image: Rear view of the VOLTCRAFT K102 Digital Thermometer with the battery cover removed, revealing the 9V battery slot.

3. Insert a new 9V battery, ensuring correct polarity (+/-) as indicated inside the compartment.

4. Replace the battery compartment cover by sliding it back into position until it clicks securely.

Connecting Thermocouples

The K102 supports two K-type thermocouples. Connect your K-type thermocouple probes to the T1 and/or T2 input jacks located at the top of the device. Ensure a secure connection for accurate readings.

OPERATING INSTRUCTIONS

Powering On/Off

Press the **O** button to turn the thermometer ON. Press and hold the**O** button for approximately 2 seconds to turn it OFF.

Taking Temperature Measurements

1. Ensure thermocouples are properly connected to the T1 and/or T2 inputs.
2. Turn on the device using the**O** button.
3. The display will show the current temperature readings for T1 and T2 (if both are connected).
4. Place the thermocouple probe(s) at the desired measurement point.
5. Allow a few moments for the reading to stabilize on the display.

Switching Temperature Units (°C/°F)

Press the °**C**/°**F** button to toggle between Celsius (°C) and Fahrenheit (°F) temperature scales.

MAX/MIN Function

Press the **MAX/MIN** button to cycle through the maximum, minimum, and current temperature readings recorded since the device was powered on or the function was last reset. To reset the MAX/MIN values, press and hold the **MAX/MIN** button until the display clears or resets.

HOLD Function

Press the **HOLD** button to freeze the current temperature reading on the display. This is useful for recording readings in unstable environments. Press it again to release the hold and resume live readings.

Relative Measurement (REL)

The relative measurement function allows you to set the current reading as a reference point (zero) and display subsequent measurements as a deviation from this reference. Press the **REL** button to activate this mode. The display will show '0.0' and then subsequent readings will be relative to this zero point. Press it again to exit relative mode.

Differential Temperature (T1-T2)

When two thermocouples are connected to both T1 and T2 inputs, the device can display the temperature difference between T1 and T2. This mode is typically accessed by cycling through display options using a dedicated button or automatically displayed alongside T1 and T2 readings.

MAINTENANCE

Cleaning

Wipe the device with a soft, slightly damp cloth. Do not use abrasive cleaners, solvents, or immerse the device in water. Ensure the device is completely dry before storage or further use.

Battery Replacement

When the low battery indicator appears on the display, replace the 9V battery as described in the "Installing the Battery" section under Setup.

Storage

Store the thermometer in a cool, dry place, away from direct sunlight and extreme temperatures. Remove the battery if storing for extended periods (e.g., more than one month) to prevent leakage and damage to the device.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed battery.	Check battery polarity or replace with a new 9V battery.
Inaccurate readings.	Faulty thermocouple, poor connection, or device needs calibration.	Check thermocouple connection. Test with a known good thermocouple. Refer to calibration instructions (if provided separately) or contact support.
"OL" or "---" displayed.	Temperature out of range, open circuit thermocouple, or faulty probe.	Ensure temperature is within the specified range (-200 to +1370 °C). Check thermocouple for damage or proper connection. Replace faulty probe if necessary.

SPECIFICATIONS

Model: VOLTCRAFT K102

Measurement Range: -200 °C to +1370 °C (-328 °F to +2498 °F)

Thermocouple Type: K-type

Channels: 2 (T1, T2)

Display: Digital

Power Supply: 9V battery (not included)

Dimensions (L x W x H): 16.4 x 5.4 x 3.4 cm (approx. 6.46 x 2.13 x 1.34 inches)

Weight: 180 grams (approx. 0.4 lbs)

Material: Plastic or Stainless steel

Compliance: ISO

WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official VOLTCRAFT website or contact your local distributor. It is recommended to keep your purchase receipt as proof of purchase for any warranty claims.

VOLTCRAFT Official Website: www.voltcraft.com