KETOTEK KT-400Y

KETOTEK KT-400Y Infrared Thermometer User Manual

Model: KT-400Y | Brand: KETOTEK

1. Introduction

The KETOTEK KT-400Y is a non-contact infrared thermometer designed for safe and accurate temperature measurement of various surfaces. It features a laser pointer for precise targeting, a clear backlit display, and the ability to switch between Celsius and Fahrenheit units. This device is suitable for a wide range of applications including cooking, automotive maintenance, industrial use, and general home tasks.

Note: This thermometer is not intended for measuring human body temperature.

Image 1.1: Important safety notice regarding body temperature measurement.

2. Important Safety Information

- **Laser Safety:** Do not look directly into the laser beam or point it at people or animals. This product uses a Class 2 laser.
- **Not for Body Temperature:** This device is designed for industrial and surface temperature measurement only. It is not a medical device and should not be used to measure human or animal body temperature.
- **Electrical Safety:** Do not use the thermometer near strong electromagnetic fields.
- **Environmental Conditions:** Avoid exposing the device to extreme temperatures, humidity, or direct sunlight.
- **Cleaning:** Use a soft, damp cloth for cleaning. Do not use abrasive cleaners or immerse the device in water.

3. Product Overview

3.1 Components

Image 3.1: Key components of the KETOTEK KT-400Y Infrared Thermometer.

1. **Laser:** Emits a red laser dot for targeting the measurement area.
2. **Thermometer Probe:** The infrared sensor for temperature detection.
3. **Trigger:** Press to activate the laser and take a temperature reading.
4. **Battery Compartment:** Located in the handle, holds 2 AAA batteries.
5. **Laser Button:** Activates/deactivates the laser pointer.
6. **Backlight Button:** Turns the display backlight on/off.
7. **°C/°F Button:** Switches between Celsius and Fahrenheit temperature units.

3.2 Display Features

Image 3.2: Detailed view of the display icons and indicators.

1. **Temperature Display:** Shows the measured temperature.
2. **Temperature Unit:** Indicates whether the reading is in Celsius (°C) or Fahrenheit (°F).
3. **Data Hold Icon (HOLD):** Appears when the last measurement is held on the screen.
4. **Scanning Icon (SCAN):** Appears when the trigger is pressed and the device is actively measuring.
5. **Laser On Icon:** Indicates the laser pointer is active.
6. **Backlight On Icon:** Indicates the display backlight is active.
7. **Low Battery Indicator:** Alerts when batteries need replacement.

4. Setup

4.1 Battery Installation

1. Locate the battery compartment on the handle of the thermometer.
2. Open the battery compartment cover.
3. Insert two (2) AAA alkaline batteries, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

The device is now ready for use. The thermometer includes 2 AAA batteries.

5. Operation

5.1 Taking a Measurement

1. Point the thermometer at the target surface. Ensure the distance-to-spot ratio (D:S) of 12:1 is considered for accurate readings. For example, at 12 inches distance, the measurement spot diameter is 1 inch.
2. Press and hold the trigger. The laser pointer will activate (if enabled) and the 'SCAN' icon will appear on the display.
3. The temperature reading will be displayed instantly.
4. Release the trigger to hold the measurement on the display. The 'HOLD' icon will appear. The device will automatically power off after approximately 10 seconds of inactivity to conserve battery life.

5.2 Switching Temperature Units (°C/°F)

With the device powered on, press the '°C/°F' button located below the display to toggle between Celsius and Fahrenheit units.

Image 5.1: Example of temperature display in Celsius and Fahrenheit.

5.3 Using the Backlight

Press the backlight button (light bulb icon) to turn the display backlight on or off. This improves readability in low-light conditions.

5.4 Laser Pointer

Press the laser button (triangle icon) to activate or deactivate the laser pointer. The laser helps in precisely identifying the measurement spot.

5.5 Emissivity

The KETOTEK KT-400Y has a fixed emissivity setting of 0.95, which is suitable for most organic materials, painted surfaces, and many common materials. For highly reflective surfaces, readings may be less accurate.

5.6 Applications

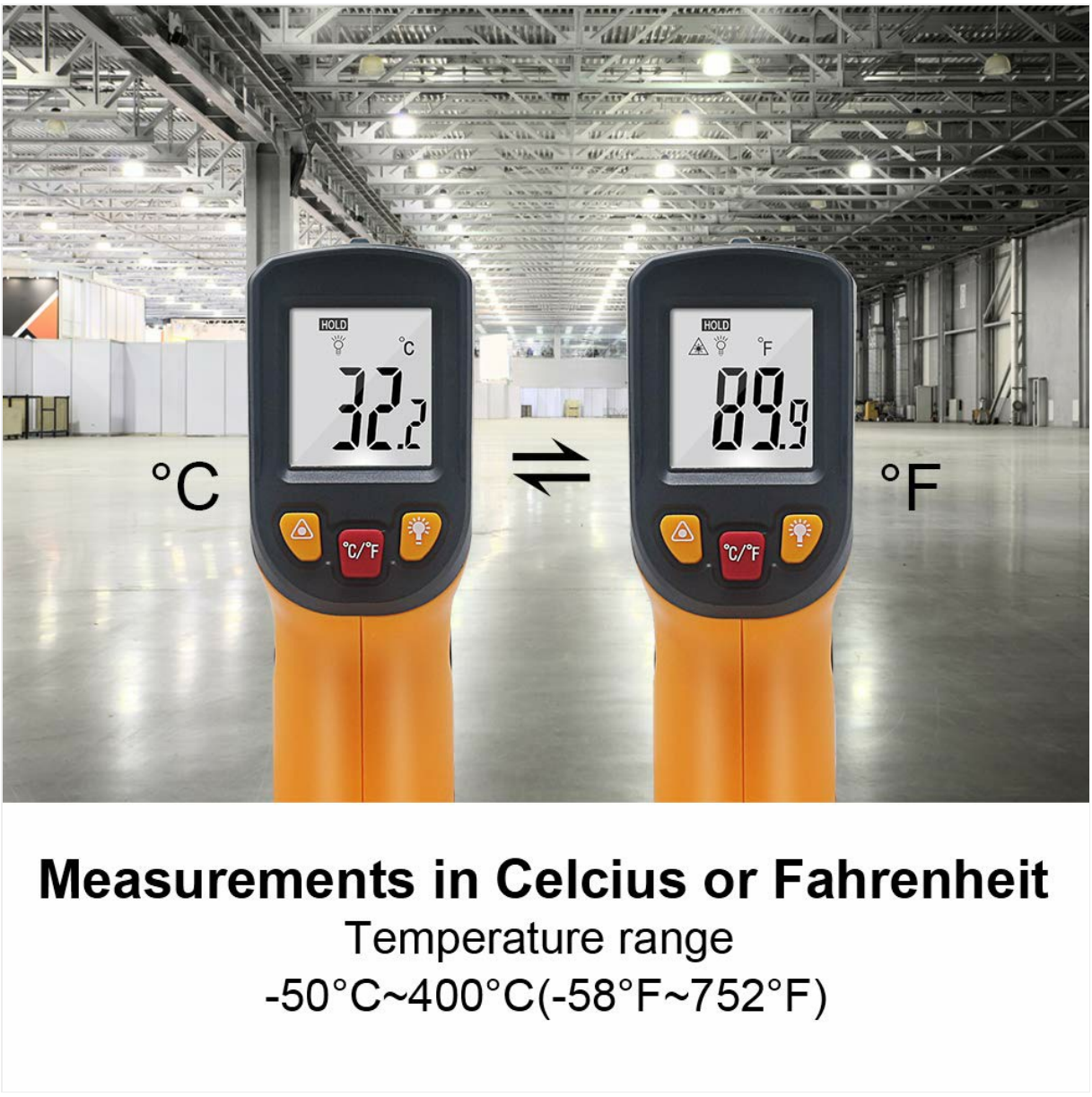

Image 5.2: Examples of practical applications for the thermometer.

This thermometer is versatile and can be used for:

- Cooking and barbecue temperature checks.

- Automotive diagnostics (engine, tires).
- HVAC system checks.
- Home insulation and energy efficiency audits.
- General industrial and household temperature monitoring.

6. Maintenance

6.1 Cleaning

- Clean the lens with a soft, clean cloth or cotton swab and rubbing alcohol. Allow the lens to dry completely before use.
- Clean the thermometer casing with a damp sponge or soft cloth and mild soap. Do not use abrasive cleaners.
- Ensure no liquid enters the device.

6.2 Storage

- Store the thermometer in a cool, dry place away from direct sunlight and extreme temperatures.
- Remove batteries if the device will not be used for an extended period to prevent leakage.

7. Troubleshooting

Problem	Possible Cause	Solution
No display/Device won't turn on	Low or dead batteries; Incorrect battery installation	Replace batteries; Check battery polarity
Inaccurate readings	Dirty lens; Distance too far; Emissivity mismatch (for specific materials); Object too small	Clean lens; Move closer to target; Ensure target fills measurement spot; Consider surface emissivity (fixed at 0.95 for this model)
Laser not working	Laser disabled; Low battery	Press the laser button; Replace batteries
Display backlight not working	Backlight disabled; Low battery	Press the backlight button; Replace batteries

8. Specifications

Image 8.1: Physical dimensions of the thermometer.

Feature	Specification
Model	KT-400Y
Temperature Range	-50°C to 600°C (-58°F to 1112°F)
Accuracy	±2% or 2°C (±3.6°F)
Distance Spot Ratio (D:S)	12:1
Emissivity	Fixed at 0.95
Response Time	500 ms
Spectral Response	8-14 µm
Power Supply	2 x AAA Batteries (included)
Automatic Power Off	Approx. 10 seconds of inactivity

Feature	Specification
Dimensions (L x W x H)	15 x 9 x 3.8 cm (5.9 x 3.5 x 1.5 inches)
Weight	166 grams (0.37 lbs)
Material	ABS Plastic
Display Type	Digital with Backlight
Special Features	High precision, Low battery indicator, Data Hold

9. Warranty and Support

KETOTEK products are manufactured to high-quality standards. For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase or visit the official KETOTEK website. Please retain your proof of purchase for warranty claims.