KAIWEETS KC602, KET20

KAIWEETS KC602 Smart Digital Clamp Meter & KET20 Silicone Multimeter Test Leads User Manual

Comprehensive guide for safe and effective operation.

1. Introduction

This manual provides detailed instructions for the safe and proper use of your KAIWEETS KC602 Smart Digital Clamp Meter and KAIWEETS KET20 Silicone Multimeter Test Leads. Please read this manual thoroughly before operation to ensure optimal performance and safety.

Figure 1.1: KAIWEETS KC602 Smart Digital Clamp Meter and KET20 Silicone Multimeter Test Leads, including the clamp meter, test leads, temperature probe, and carrying case.

2. Safety Information

Always adhere to safety precautions when using electrical testing equipment. Failure to do so may result in injury or damage to the device.

- Ensure the device is off before connecting or disconnecting test leads.
- Do not exceed the maximum input values specified for each measurement function.
- Verify the test leads are in good condition, free from cracks or damage, before each use.
- Use appropriate Personal Protective Equipment (PPE), such as insulated gloves and safety glasses.
- The KET20 test leads are rated CAT III 1000V and CAT IV 600V. Always select the correct measurement category for your application.
- Do not operate the meter if it appears damaged or is not functioning properly.

3. Product Overview

3.1 KAIWEETS KC602 Smart Digital Clamp Meter Features

- **Upgraded Intelligent Mode:** Automatically identifies AC/DC voltage/current, resistance, and continuity measurement signals for simplified operation.
- **Multi-functionality:** Measures AC/DC current/voltage, resistance, continuity, capacitance, diode, NCV (Non-Contact Voltage), Live Wire detection, and temperature.
- **Advanced Design:** Includes MAX/MIN data hold, flashlight, and auto-off features. D-shaped jaws are designed for portability and holding test leads.
- **High Safety Performance:** CAT IV 600V and CAT III 1000V safety ratings.

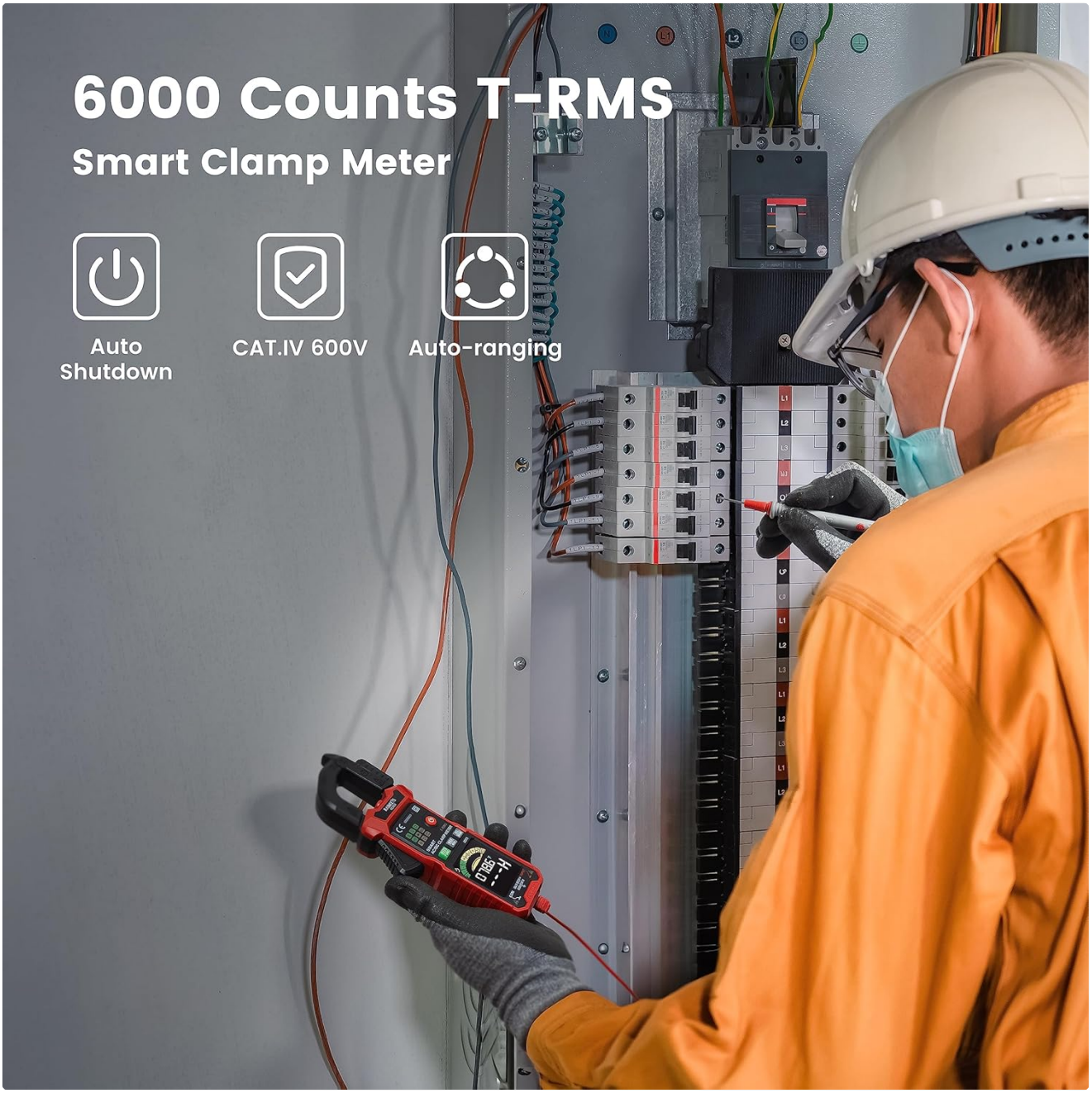

Figure 3.1: The KC602 Clamp Meter in an electrical panel, demonstrating its 6000 Counts T-RMS, Auto Shutdown, CAT.IV 600V rating, and Auto-ranging capabilities.

Figure 3.2: Close-up of the KC602 display, illustrating its ability to measure various parameters including voltage, current, resistance, frequency, temperature, NCV, and inrush current.

3.2 KAIWEETS KET20 Silicone Multimeter Test Leads Features

- **High Safety Performance:** Safely used for CAT III 1000V and CAT IV 600V rated current test of 20A.
- **2mm Ultra-Fine Gold-Plated Probe:** Precision probes for easily touching tiny solder joints and ensuring reliable electrical conductivity.
- **Temperature-Resistant Soft Silicone Material:** Offers durability, resistance to high temperatures, and remains flexible and anti-tangle even in cold environments.
- **Universal Compatibility:** 4mm banana plug, compatible with digital multimeters, clamp meters, and desktop multimeters.

Figure 3.3: Detailed view of the KET20 test leads, highlighting their CAT IV 600V / CAT III 1000V rating, 0.7mm tip, silicone material, 4mm banana plug, and 120cm length.

Figure 3.4: The KET20 test leads demonstrating their durable, high-temperature resistant, safe, convenient, and universal design attributes.

Figure 3.5: Visual representation of the silicone material's heat and corrosion resistance, and its ability to remain flexible in extreme cold, making it suitable for various environments.

Figure 3.6: Close-up of the KET20 test lead probes, emphasizing their flexible silicone, high-purity copper wire, and gold-plated tips for superior performance.

4. Setup

4.1 Battery Installation (KC602)

1. Ensure the clamp meter is powered off.
2. Locate the battery compartment on the back of the device.
3. Open the compartment cover.

4. Insert the required batteries (typically AAA, check device markings) observing correct polarity.
5. Close the battery compartment securely.

4.2 Connecting Test Leads (KET20)

1. Ensure the clamp meter is powered off.
2. Insert the red test lead's banana plug into the "VΩHz" input jack on the clamp meter.
3. Insert the black test lead's banana plug into the "COM" input jack on the clamp meter.
4. Ensure the connections are firm and secure.

5. Operating Instructions

5.1 Power On/Off

Press the power button ( ) to turn the device on. The intelligent mode will activate by default. Press and hold the power button to turn off the device.

5.2 Intelligent Mode Operation

In intelligent mode, the KC602 automatically detects and measures AC/DC voltage, resistance, and continuity. Simply connect the test leads to the circuit or component to be measured.

5.3 Function Selection

Press the **"SELECT"** button to cycle through different measurement functions (e.g., Capacitance, Diode, Temperature, NCV, Live Wire, Inrush Current) if not automatically detected by intelligent mode.

5.4 AC/DC Voltage Measurement

1. Turn on the meter. It will likely default to intelligent mode.
2. Connect the red test lead to the positive terminal and the black test lead to the negative terminal or ground of the circuit.
3. Read the voltage value on the display.

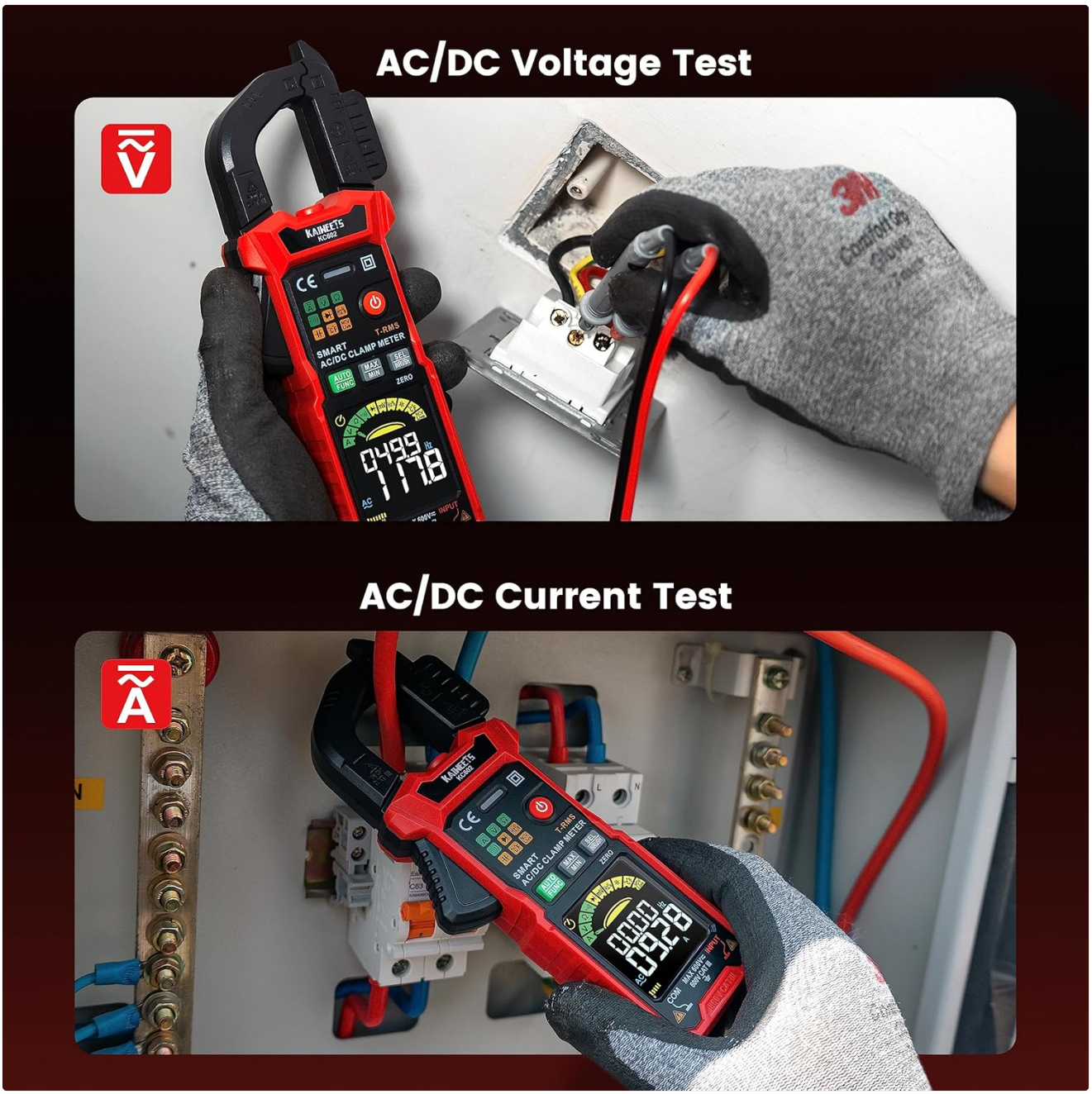

Figure 5.1: Examples of AC/DC Voltage Test (top) using test leads on an outlet and AC/DC Current Test (bottom) using the clamp function on a wire.

5.5 AC/DC Current Measurement (Clamp Function)

1. Turn on the meter and select the current measurement mode if not in intelligent mode.
2. Open the clamp jaws by pressing the trigger.
3. Enclose only one conductor (wire) within the clamp jaws. Do not clamp around multiple wires carrying current in opposite directions, as this will result in an inaccurate reading.
4. Close the clamp jaws securely.
5. Read the current value on the display.

5.6 Inrush Current Measurement

The KC602 can measure inrush current, which is the maximum instantaneous input current drawn by an electrical device when first turned on. The measurement range is 5-600A.

1. Select the Inrush Current mode using the SELECT button.
2. Clamp the meter around the single conductor of the device to be tested.

3. Turn on the device. The meter will capture and display the peak inrush current.

Figure 5.2: The KC602 performing an Inrush Current Test on a live wire, showing the measurement of transient current peaks.

5.7 NCV (Non-Contact Voltage) Detection

The NCV function allows for detection of AC voltage without direct contact. Select NCV mode and bring the top of the clamp meter near the conductor. The meter will indicate the presence of AC voltage with an audible beep and/or visual indicator.

5.8 Data Hold (HOLD)

Press the **"HOLD"** button to freeze the current reading on the display. Press it again to release the hold function.

5.9 MAX/MIN Function

Press the **"MAX/MIN"** button to record the maximum and minimum readings during a measurement session. Press again to cycle through MAX, MIN, and current readings.

6. Maintenance

6.1 Cleaning

Wipe the meter and test leads with a damp cloth and mild detergent. Do not use abrasive cleaners or solvents. Ensure the device is completely dry before storage or next use.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate readings. Refer to section 4.1 for battery installation instructions.

6.3 Storage

Store the device and test leads in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.

7. Troubleshooting

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
Inaccurate readings.	Incorrect function selected; damaged test leads; external interference.	Verify function mode; inspect test leads for damage; move away from strong electromagnetic fields.
No continuity beep.	Circuit is open; continuity mode not selected.	Ensure circuit is closed; select continuity mode.
Display shows "OL" (Overload).	Measurement exceeds range.	Ensure the measured value is within the meter's specified range for the selected function.

8. Specifications

8.1 KAIWEETS KC602 Smart Digital Clamp Meter

- **Display:** 6000 Counts T-RMS
- **Safety Rating:** CAT IV 600V, CAT III 1000V
- **Functions:** AC/DC Voltage, AC/DC Current, Resistance, Continuity, Capacitance, Diode, NCV, Live Wire, Temperature, Inrush Current
- **Inrush Current Range:** 5-600A
- **Special Features:** Intelligent Mode, Auto Shutdown, Data Hold, MAX/MIN, Flashlight

8.2 KAIWEETS KET20 Silicone Multimeter Test Leads

- **Safety Rating:** CAT III 1000V, CAT IV 600V
- **Current Rating:** 20A
- **Probe Tip:** 2mm Ultra-Fine Gold-Plated
- **Cable Material:** Silicone
- **Cable Length:** 48 inches (approx. 120cm)

- **Connector:** Universal 4mm Banana Plug

9. Warranty and Support

For warranty information and technical support, please refer to the official KAIWEETS website or contact their customer service directly. Keep your purchase receipt for warranty claims.
KAIWEETS Official Website: www.kaiweets.com