Focket ZT100

Focket ZT100 Digital Multimeter User Manual

Model: ZT100

Portable Mini Multimeter for AC/DC Voltage, Current, Resistance, Capacitance, and Frequency Testing

1. Introduction

The Focket ZT100 Digital Multimeter is a compact, auto-ranging instrument designed for precise electrical measurements. It features a clear LCD display with backlight, making it suitable for various testing environments. This multimeter is capable of measuring AC/DC voltage, AC/DC current, resistance, frequency, and capacitance, as well as performing diode and continuity tests. Its portable design and user-friendly interface make it an essential tool for electricians, hobbyists, and DIY enthusiasts.

2. Safety Information

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

- Do not exceed the maximum input values specified for each measurement range.
- Ensure the test leads are properly connected and in good condition before each use.
- Do not use the multimeter if it appears damaged or if the test leads are frayed.
- Always disconnect power to the circuit before measuring resistance, capacitance, or continuity.
- Be cautious when working with voltages above 30V AC RMS, 42V peak, or 60V DC, as these pose a shock hazard.
- Replace batteries when the low battery indicator appears to ensure accurate readings.
- Use only the specified fuses (if applicable) and ensure they are correctly installed.
- Keep the device dry and clean. Do not operate in wet or damp conditions.

Caution:
To prevent damage or injury, install quick-acting fuses with amp/volt ratings shown in manual. Always ensure the multimeter is set to the correct function and range before making measurements.

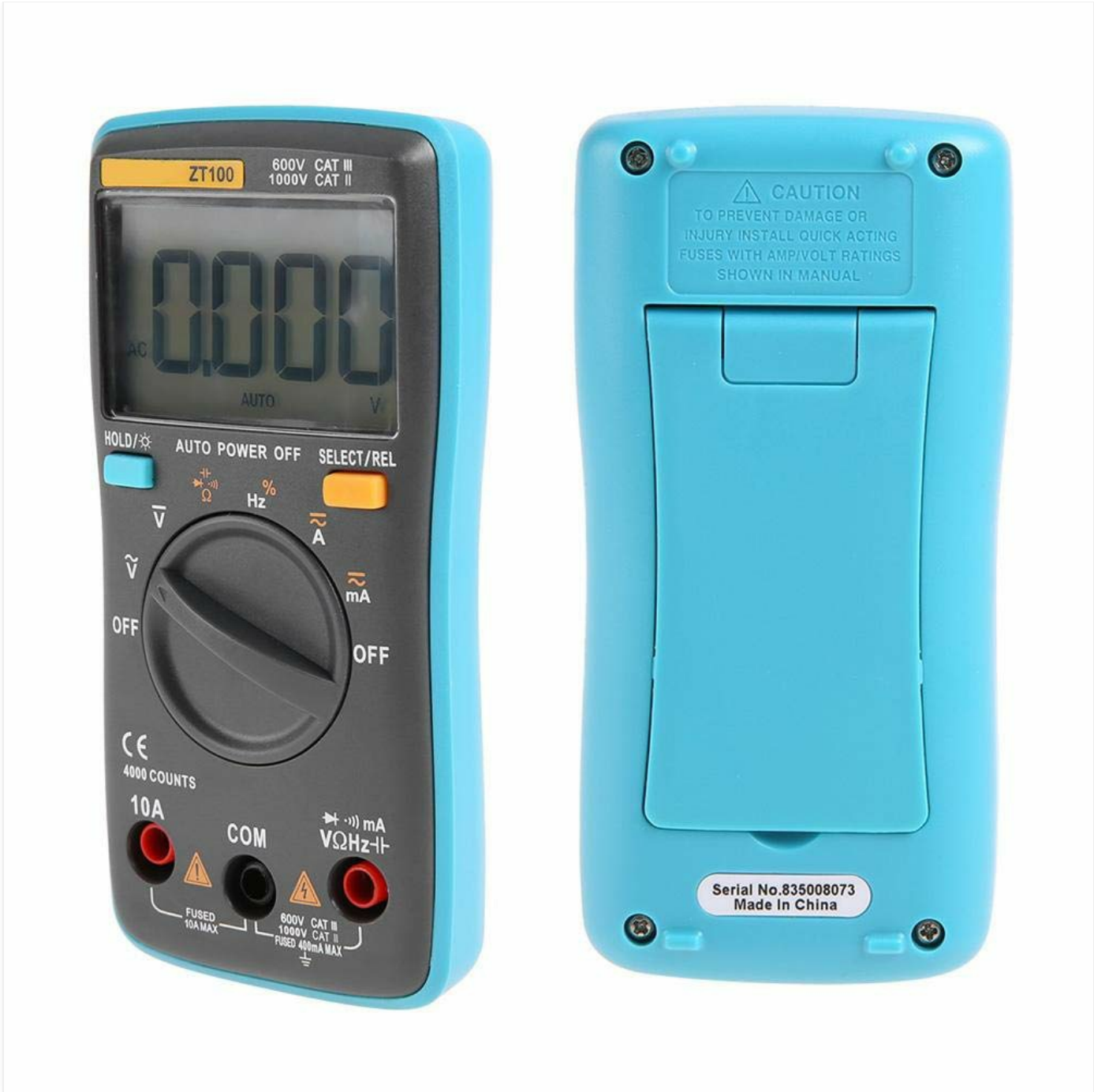

Image: Front and back view of the Focket ZT100 Digital Multimeter, showing the display, rotary dial, input jacks, and the battery compartment cover with a caution label.

3. Package Contents

Upon opening the package, please verify that all items listed below are present and in good condition:

- 1 x Focket ZT100 Digital Display Multimeter
- 2 x Multimeter Test Pens (Red and Black Test Leads)
- 1 x Storage Bag
- 1 x Temperature Probe (Note: May vary by package)
- 1 x User Manual (This document)

Note: Batteries (2 x AAA) are not included and must be purchased separately.

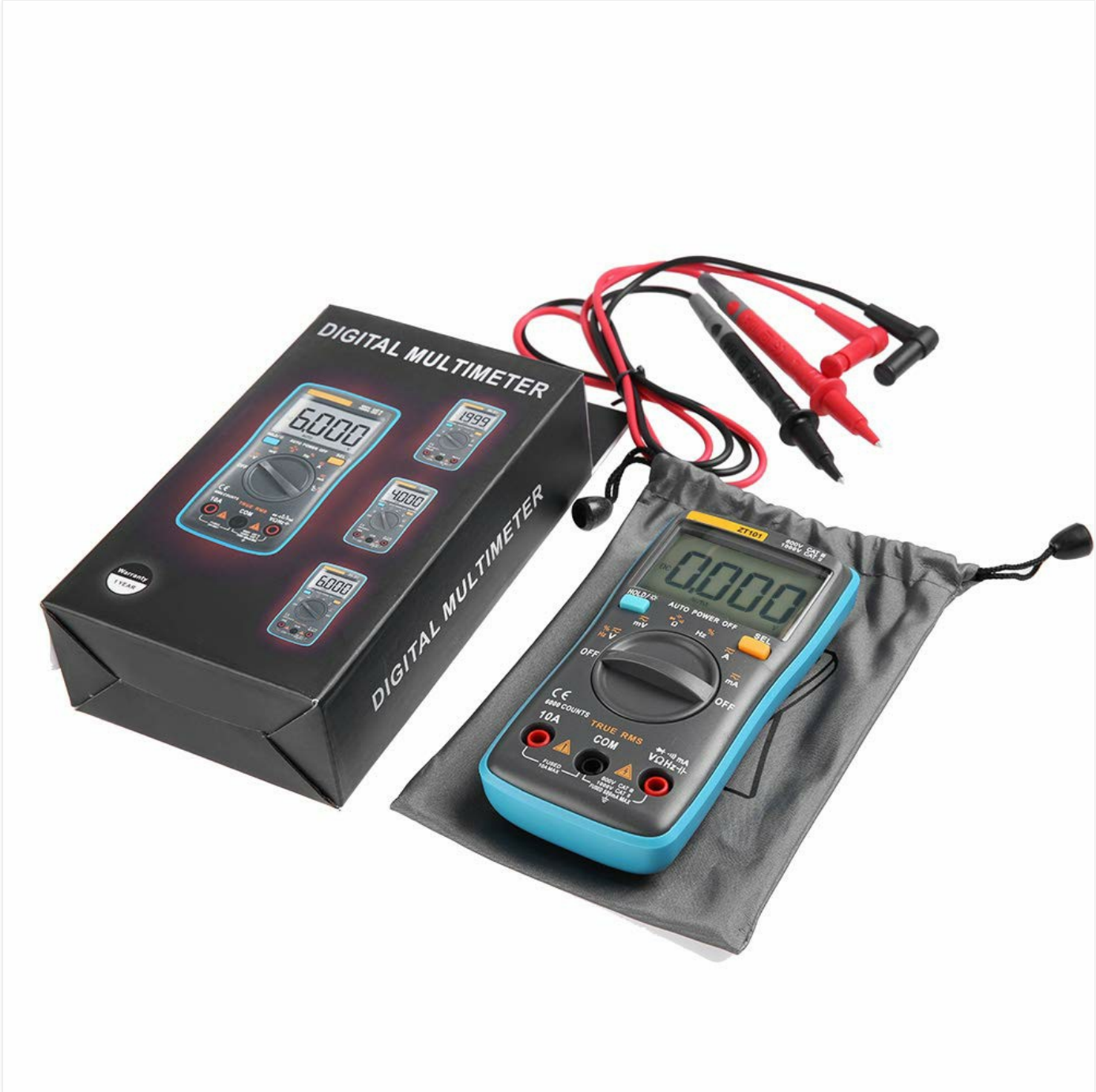

Image: The Focket ZT100 Digital Multimeter, its packaging box, red and black test leads, and a grey storage bag, laid out on a surface.

4. Product Overview

Familiarize yourself with the components of your ZT100 Digital Multimeter:

1. **LCD Display:** Shows measurement readings, units, and function indicators. Features a backlight for low-light conditions.
2. **Function Rotary Switch:** Used to select the desired measurement function (e.g., Voltage, Current, Resistance, Capacitance, Frequency, Diode, Continuity, OFF).
3. **Input Jacks:**
    - **COM Jack (Black):** Common terminal for all measurements. Connect the black test lead here.
    - **VΩHz Jack (Red):** Input for Voltage, Resistance, Frequency, Diode, and Capacitance measurements. Connect the red test lead here.
    - **mA Jack (Red):** Input for milliampere current measurements. Connect the red test lead here for mA.

- **10A Jack (Red):** Input for 10 Ampere current measurements. Connect the red test lead here for 10A.

4. **HOLD / Backlight Button:** Press to hold the current reading on the display. Press and hold to activate/deactivate the backlight.
5. **AUTO POWER OFF / NCV Button:** Press to toggle auto power off. Press and hold for Non-Contact Voltage (NCV) detection.
6. **SELECT / REL Button:** Used to switch between different measurement modes within a function (e.g., AC/DC voltage, diode/continuity) or to activate relative mode.
7. **Kickstand:** Located on the back, allows the multimeter to stand upright for easier viewing.

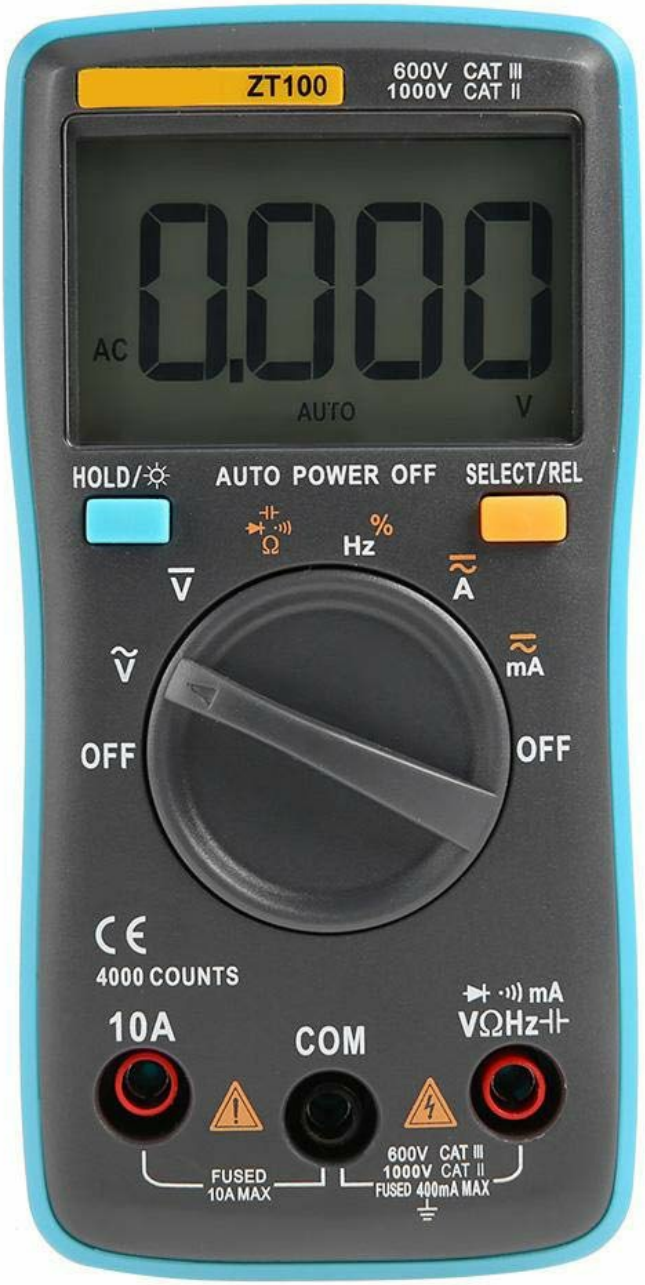

Image: A clear front view of the Focket ZT100 Digital Multimeter, highlighting its LCD screen, central rotary switch, and the three input terminals at the bottom.

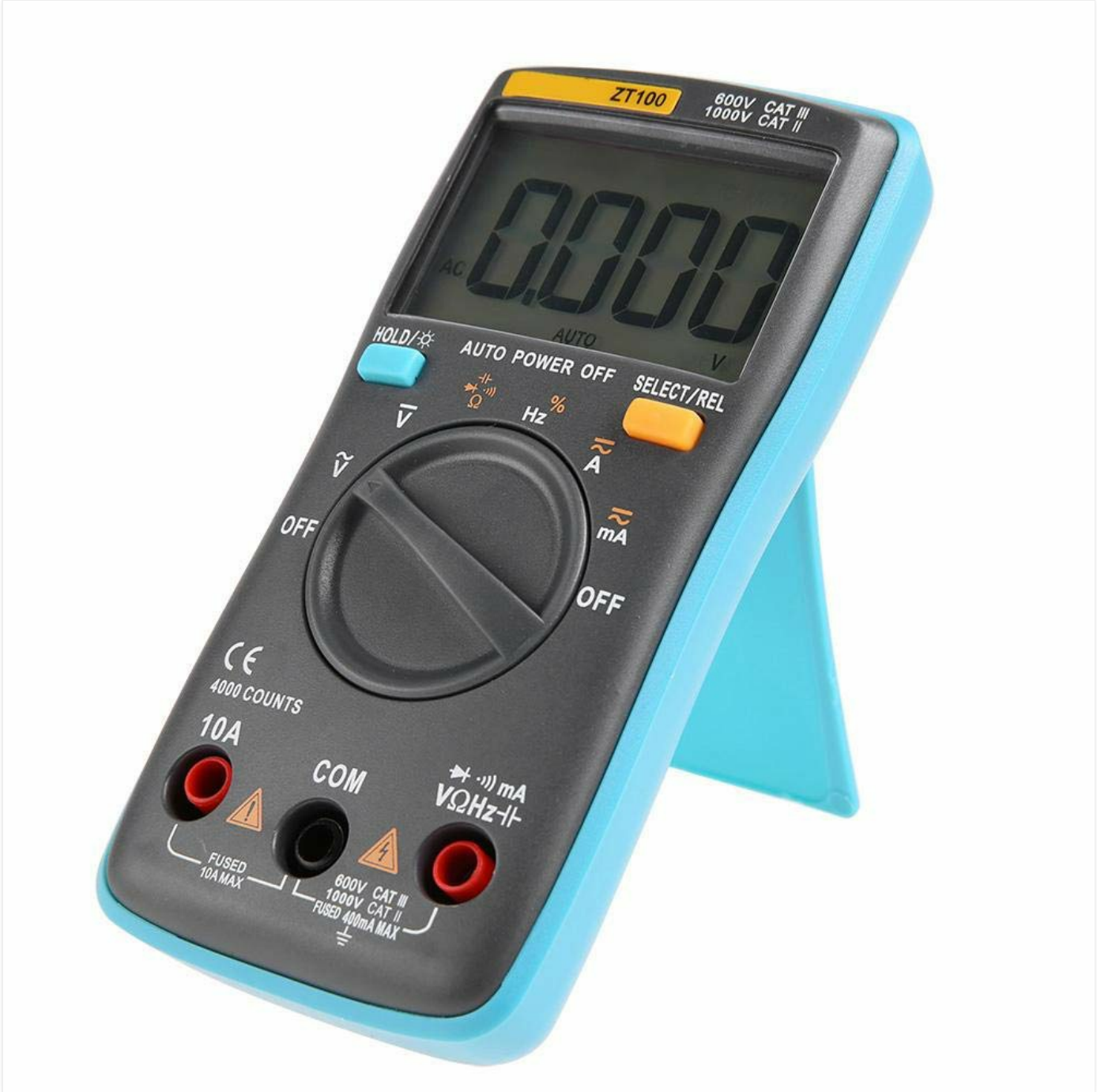

Image: The Focket ZT100 Digital Multimeter standing upright on its integrated kickstand, providing a clear view of the display and control layout.

5. Setup

5.1 Battery Installation

The ZT100 Multimeter requires two AAA batteries (not included) for operation.

1. Ensure the multimeter is turned OFF.
2. Locate the battery compartment on the back of the multimeter.
3. Use a screwdriver to open the battery compartment cover.
4. Insert two AAA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
5. Replace the battery compartment cover and secure it with the screw.

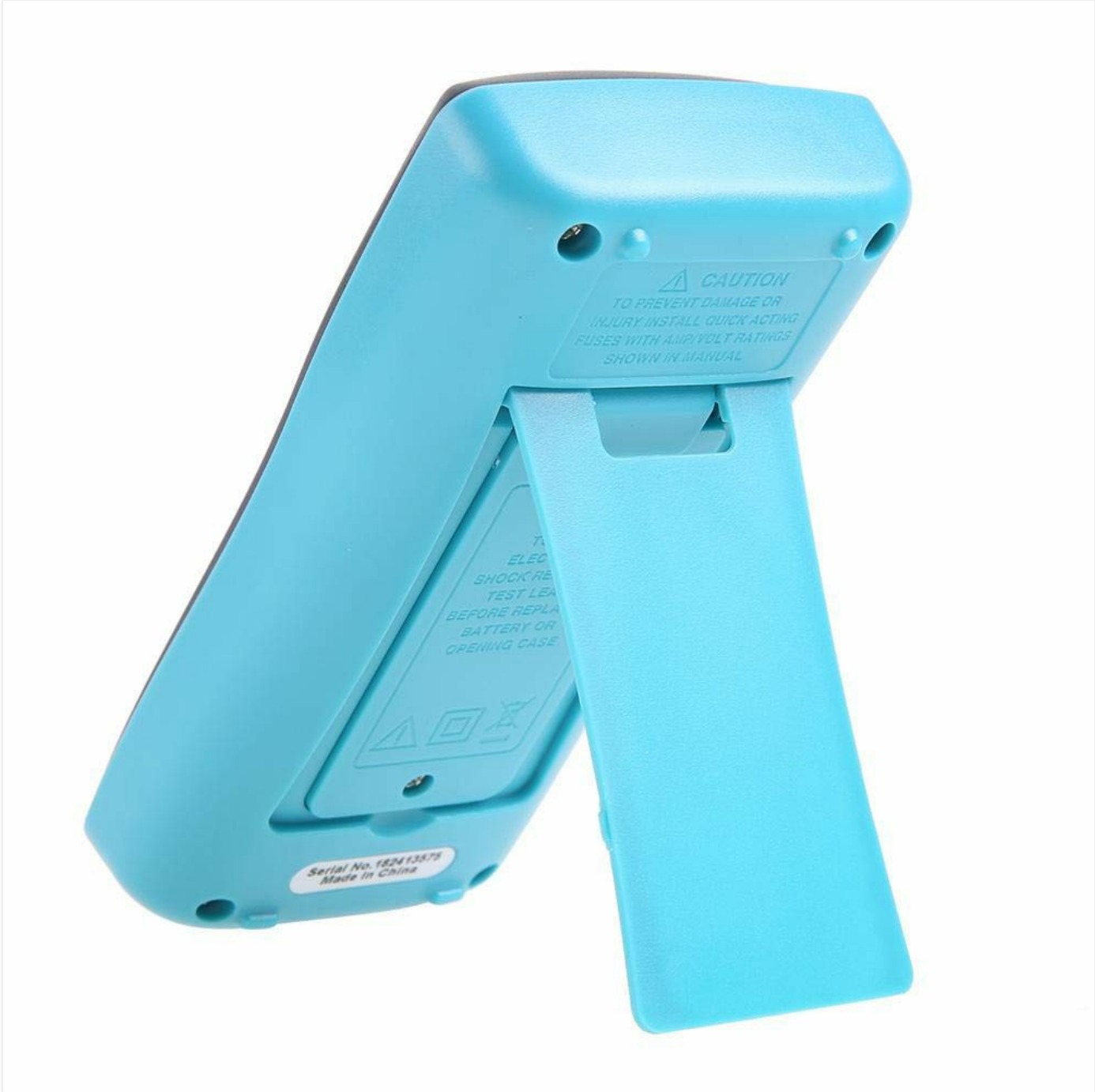

Image: The back of the Focket ZT100 Digital Multimeter with its blue kickstand extended, revealing the battery compartment cover and a caution label.

5.2 Connecting Test Leads

Proper connection of test leads is crucial for accurate and safe measurements.

- Always insert the black test lead into the **COM** (Common) jack.
- For most measurements (Voltage, Resistance, Capacitance, Frequency, Diode, Continuity), insert the red test lead into the **VΩHz** jack.
- For current measurements up to 400mA, insert the red test lead into the **mA** jack.
- For current measurements up to 10A, insert the red test lead into the **10A** jack.

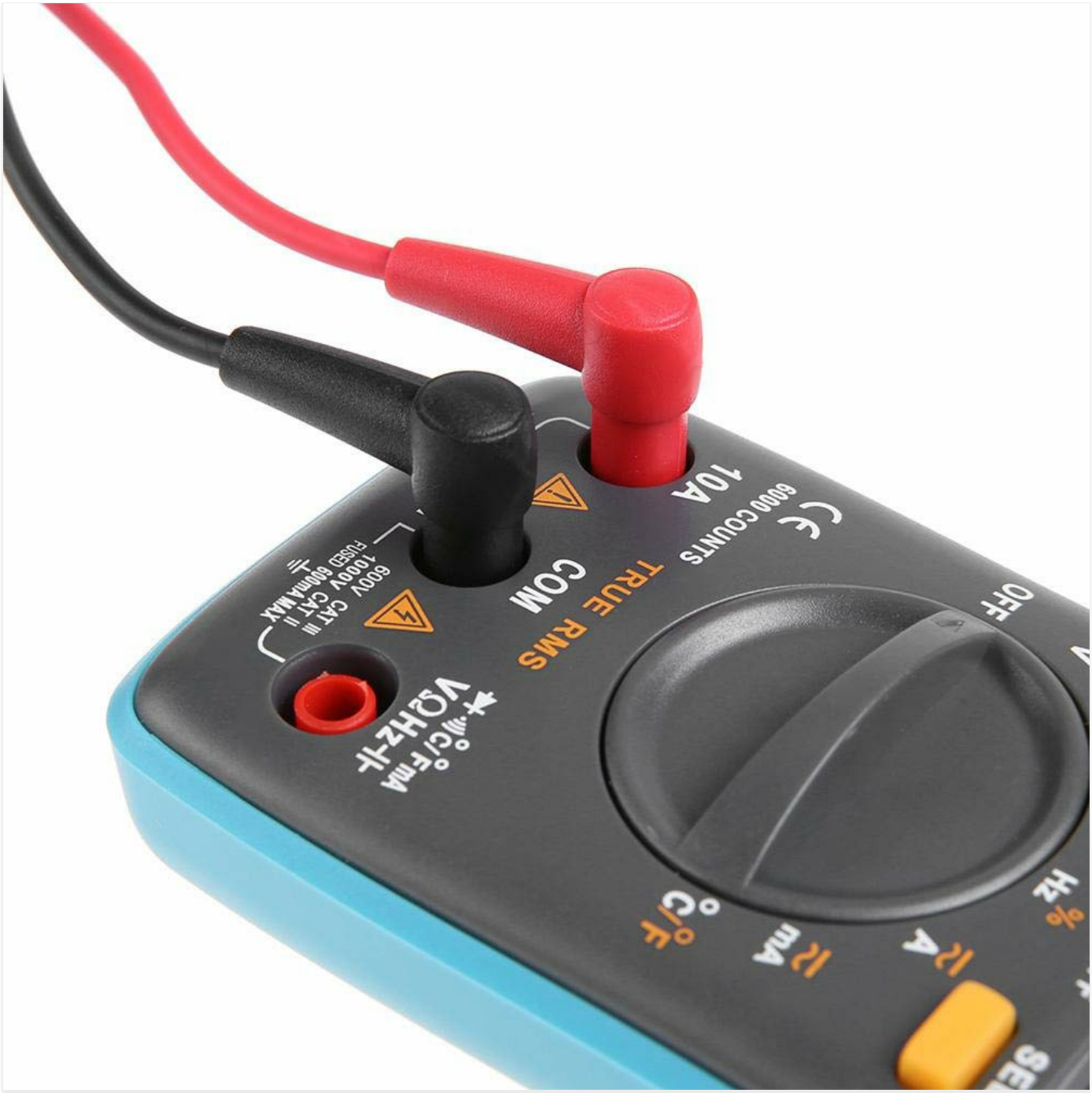

Image: A close-up view of the Focket ZT100 Digital Multimeter's input terminals, showing the black test lead connected to the COM jack and the red test lead connected to the VΩHz jack.

6. Operating Instructions

Before taking any measurement, ensure the multimeter is set to the correct function and the test leads are connected to the appropriate jacks.

6.1 Measuring DC Voltage (V=)

1. Turn the rotary switch to the "V=" position.
2. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
3. Connect the test leads in parallel to the DC voltage source you wish to measure.
4. Read the voltage value on the LCD display.

6.2 Measuring AC Voltage (V~)

1. Turn the rotary switch to the "V~" position.
2. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
3. Connect the test leads in parallel to the AC voltage source you wish to measure.
4. Read the voltage value on the LCD display.

6.3 Measuring DC Current (A= / mA=)

1. **IMPORTANT:** Disconnect power to the circuit before measuring current.
2. Turn the rotary switch to the "A=" or "mA=" position depending on the expected current.
3. Connect the black test lead to the COM jack.
4. For mA range, connect the red test lead to the mA jack. For 10A range, connect the red test lead to the 10A jack.
5. Connect the multimeter in series with the circuit you wish to measure.
6. Apply power to the circuit and read the current value on the LCD display.

6.4 Measuring AC Current (A~ / mA~)

1. **IMPORTANT:** Disconnect power to the circuit before measuring current.
2. Turn the rotary switch to the "A~" or "mA~" position.
3. Connect the black test lead to the COM jack.
4. For mA range, connect the red test lead to the mA jack. For 10A range, connect the red test lead to the 10A jack.
5. Connect the multimeter in series with the circuit you wish to measure.
6. Apply power to the circuit and read the current value on the LCD display.

6.5 Measuring Resistance (Ω)

1. **IMPORTANT:** Ensure the circuit is de-energized and all capacitors are discharged before measuring resistance.
2. Turn the rotary switch to the "Ω" position.
3. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
4. Connect the test leads across the component or circuit you wish to measure.
5. Read the resistance value on the LCD display.

6.6 Measuring Capacitance (F)

1. **IMPORTANT:** Ensure the capacitor is fully discharged before measuring.
2. Turn the rotary switch to the "F" position.
3. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
4. Connect the test leads across the capacitor terminals.
5. Read the capacitance value on the LCD display.

6.7 Measuring Frequency (Hz)

1. Turn the rotary switch to the "Hz" position.
2. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
3. Connect the test leads in parallel to the signal source.
4. Read the frequency value on the LCD display.

6.8 Diode Test (→|)

1. **IMPORTANT:** Ensure the diode is disconnected from the circuit.
2. Turn the rotary switch to the "→|" position.
3. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
4. Connect the red test lead to the anode and the black test lead to the cathode of the diode. A forward voltage drop will be displayed.
5. Reverse the leads. The display should show "OL" (Open Line) for a good diode.

6.9 Continuity Test (Ω))

1. **IMPORTANT:** Ensure the circuit is de-energized.
2. Turn the rotary switch to the "Ω))" position.
3. Connect the black test lead to the COM jack and the red test lead to the VΩHz jack.
4. Touch the test leads across the circuit or component.
5. If continuity exists (resistance below a certain threshold), the multimeter will emit an audible beep and display a low resistance value. "OL" indicates no continuity.

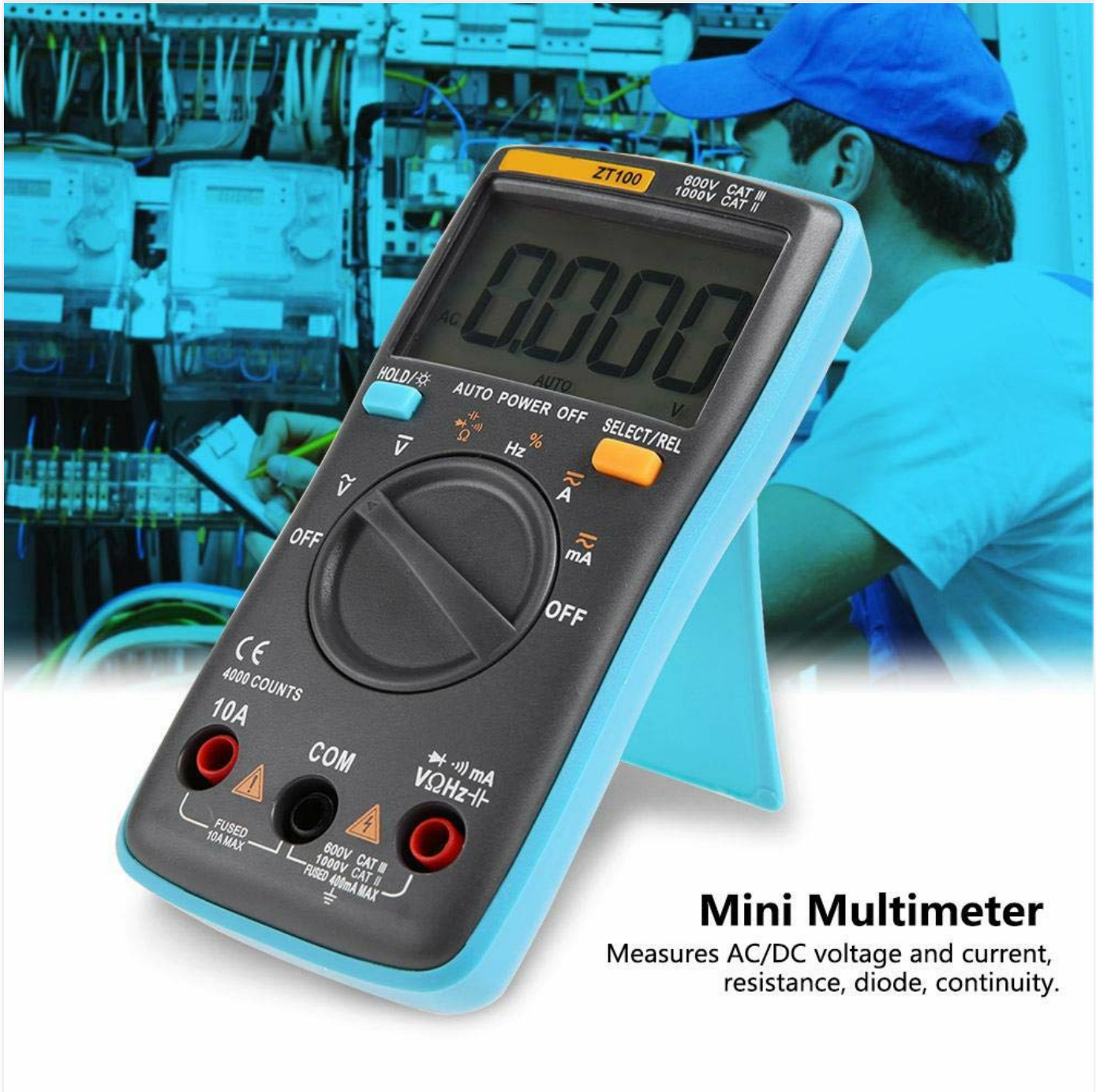

Image: The Focket ZT100 Digital Multimeter in an operational setting, standing on its kickstand, with its display showing a reading and test leads connected, suggesting active use.

7. Maintenance

7.1 Cleaning

To maintain the accuracy and longevity of your multimeter:

- Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents.
- Keep the input jacks free of dust and debris.

7.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate readings. Refer to Section 5.1 for battery installation instructions.

7.3 Storage

When not in use for extended periods, remove the batteries to prevent leakage and store the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures.

8. Troubleshooting

Problem	Possible Cause	Solution
No display or dim display	Dead or low batteries; Incorrect battery polarity.	Replace batteries; Check battery orientation.
"OL" (Overload) displayed	Measurement exceeds the selected range; Open circuit (for continuity/resistance).	Select a higher range (if manual ranging); Check circuit connection.
Inaccurate readings	Low battery; Incorrect function/range selected; Poor test lead connection; External interference.	Replace batteries; Verify function/range; Ensure secure connections; Move away from strong electromagnetic fields.
No continuity beep	Open circuit; High resistance; Multimeter not in continuity mode.	Check circuit; Ensure resistance is below threshold; Select continuity mode.

9. Specifications

Detailed technical specifications for the Focket ZT100 Digital Multimeter:

Parameter	Specification
Model	ZT100
Ranging	Auto

Parameter	Specification
Update Rate	3 times / second
Display (LCD)	4000 Counts
DC Voltage	400mV / 4V / 40V / 400V / 600V
AC Voltage	400mV / 4V / 40V / 400V / 600V
DC Current	40mA / 400mA / 10A
AC Current	40mA / 400mA / 10A
Resistance	400Ω / 4KΩ / 40KΩ / 400KΩ / 4MΩ / 40MΩ
Frequency	99.5Hz / 999.5Hz / 9.999KHz / 99.99KHz / 999.9KHz / 9.999MHz
Capacitance	4nF / 40nF / 400nF / 4uF / 40uF / 400uF / 1000uF / 4000uF
Low Battery Indicator	Yes
Power Source	2 x AAA Battery (Not Included)
Data Hold	Yes
Auto Power Off	Yes
Weight	Approx. 226g / 8.0oz
Size (L*W*H)	Approx. 13.3 * 6.8 * 2.8cm / 5.2 * 2.7 * 1.1in

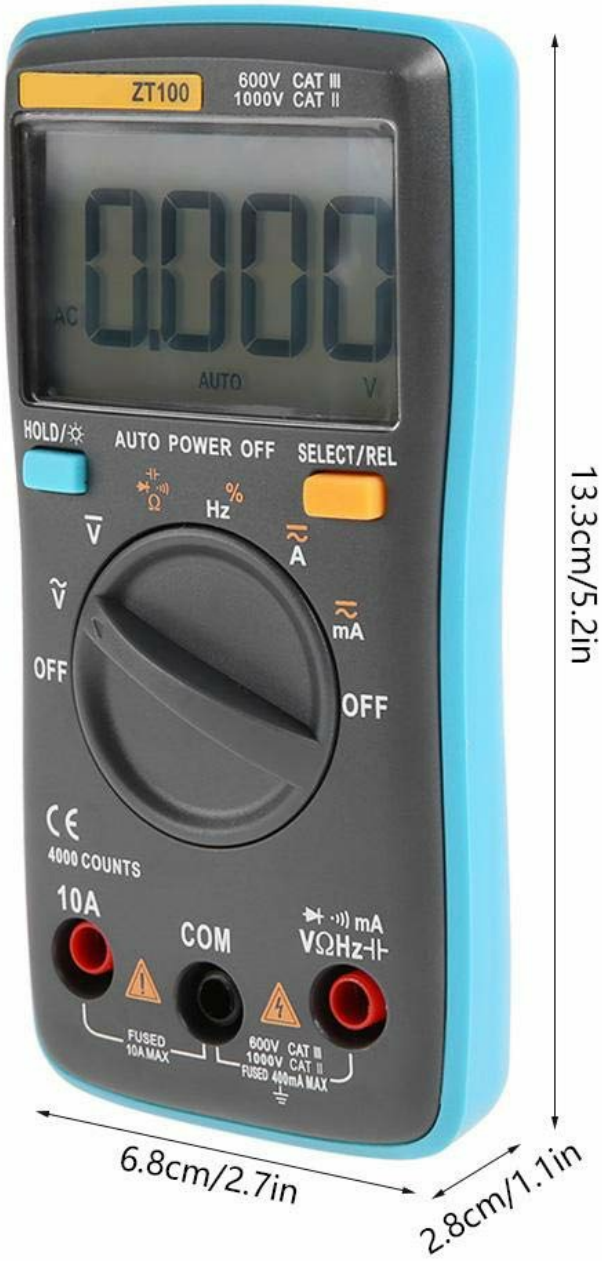

Image: The Focket ZT100 Digital Multimeter with its dimensions clearly marked in both centimeters and inches, illustrating its compact size.

10. Warranty and Support

Focket is committed to providing high-quality products. This product comes with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the product packaging or contact Focket customer support.

If you encounter any issues or have questions regarding the operation, maintenance, or specifications of your Focket ZT100 Digital Multimeter, please contact our customer support team. We are dedicated to resolving your concerns within 24 hours.

For support, please visit the official Focket store on Amazon or refer to the contact information provided with your purchase.

Focket Store Link: https://www.amazon.com/stores/Focket/page/CCD1CAD1-1508-4534-9BEF-8955B1324BA2