

ANENG SZ301, BT189

ANENG SZ301 Digital Multimeter and BT189 Battery Tester User Manual

Model: SZ301 (Multimeter), BT189 (Battery Tester)

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of your ANENG SZ301 Digital Multimeter and ANENG BT189 Battery Tester. These tools are designed for household and professional use, enabling accurate measurements of electrical parameters and battery health. Please read this manual thoroughly before operation.



Figure 1.1: The ANENG SZ301 Digital Multimeter (left) and ANENG BT189 Battery Tester (right) shown with test leads and various battery types. This image illustrates the complete product package.

2. SAFETY INFORMATION

Always adhere to the following safety precautions to prevent personal injury or damage to the device:

- Ensure the multimeter's function switch is set to the correct range before making any measurements.
- Do not exceed the maximum input values for any range.
- Exercise extreme caution when working with live circuits. High voltage can cause electric shock.
- The ANENG SZ301 Multimeter features anti-burn with double fuses and overload protection. However, always operate within specified limits.
- Use only insulated test probes provided with the device.
- Inspect test leads for damage before each use. Replace if insulation is compromised.
- Do not operate the device if it appears damaged or is not functioning correctly.
- Keep the device away from water and moisture.

3. PRODUCT OVERVIEW

3.1 ANENG SZ301 Digital Multimeter

The SZ301 is a compact digital multimeter capable of measuring AC/DC voltage, current, resistance, continuity, and diodes. It features a clear LCD display and a rotary switch for function selection.



Figure 3.1: A close-up view of the ANENG SZ301 Digital Multimeter's rotary dial, showing various measurement functions and ranges.

3.2 ANENG BT189 Battery Tester

The BT189 is a universal battery tester designed to check the health of various battery types, including AAA, AA, C, D, 9V, 6F22, 1.5V/3V button cells, and 1.5V/3.7V lithium batteries. It features a digital LCD display that indicates battery voltage levels.



Figure 3.2: The ANENG BT189 Battery Tester showing a digital LCD display with an AA battery inserted, indicating its voltage level.

4. SETUP

4.1 Multimeter Battery Installation (SZ301)

The ANENG SZ301 Multimeter comes equipped with two AA batteries pre-installed. If battery replacement is needed, refer to the Maintenance section.

4.2 Connecting Test Leads (SZ301)

1. Insert the black test lead into the 'COM' (Common) jack.
2. For voltage, resistance, continuity, and diode measurements, insert the red test lead into the 'VΩmA' jack.
3. For current measurements up to 200mA, use the 'VΩmA' jack. For current measurements up to 10A, insert the red test lead into the '10A' jack.

4.3 Battery Tester Operation (BT189)

The ANENG BT189 Battery Tester does not require internal batteries for operation. It draws power directly from the battery being tested.



Figure 4.1: The ANENG BT189 Battery Tester highlighting that it does not require its own batteries for operation.

5. OPERATING INSTRUCTIONS

5.1 ANENG SZ301 Digital Multimeter

To operate the multimeter:

1. **Power On/Off:** Rotate the central dial from the 'OFF' position to the desired measurement function. To power off, rotate the dial back to 'OFF'.
2. **Function Selection:** Use the rotary dial to select the measurement type (e.g., V~ for AC Voltage, V- for DC Voltage, A~ for AC Current, A- for DC Current, Ω for Resistance, Diode, Continuity).
3. **Range Selection:** The multimeter typically auto-ranges. If manual ranging is available, use the 'SEL' button to cycle through ranges.
4. **Data Hold:** Press the 'HOLD' button to freeze the current reading on the display. Press again to release.

5.1.1 Measuring AC Voltage

Set the rotary dial to the 'V~' range. Connect the test leads in parallel to the circuit or component you wish to measure. The display will show the AC voltage reading.

AC Voltage Test



Figure 5.1: The ANENG SZ301 Digital Multimeter connected to a wall outlet to measure AC voltage, displaying a reading of 022.3V.

5.1.2 Measuring AC Current

Set the rotary dial to the 'A~' range. Ensure the red test lead is in the appropriate current jack (VΩmA for mA, 10A for A). Connect the multimeter in series with the circuit. The display will show the AC current reading.

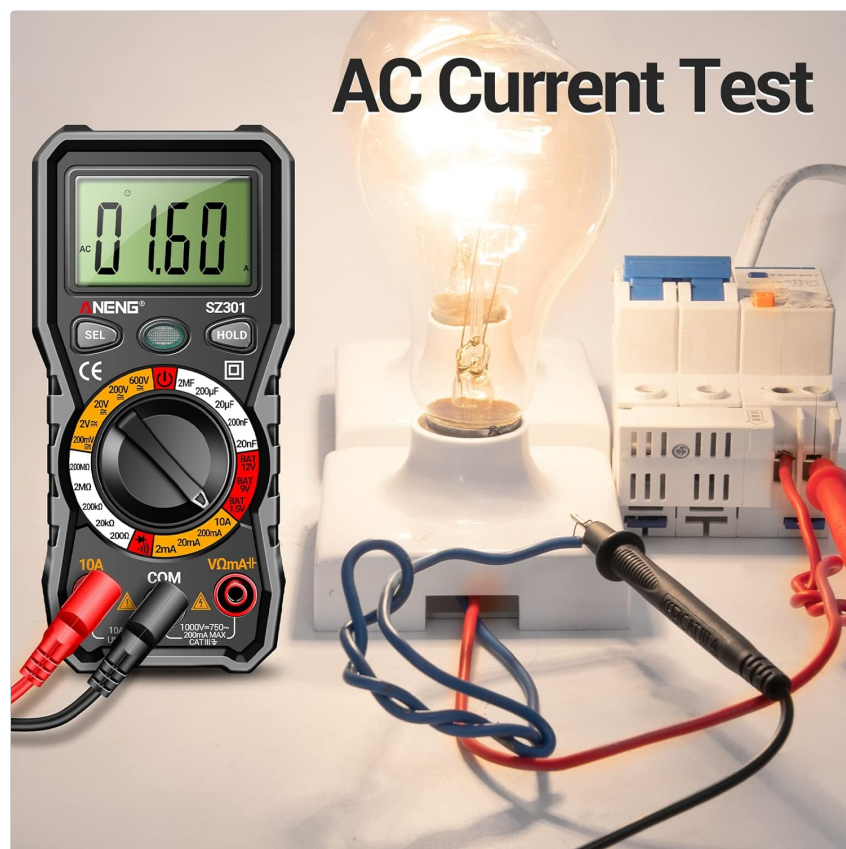


Figure 5.2: The ANENG SZ301 Digital Multimeter integrated into a circuit to measure AC current, showing a reading of 0.160A.

5.1.3 Measuring DC Voltage/Current, Resistance, Continuity, and Diodes

Follow similar steps as above, selecting the corresponding function on the rotary dial and connecting the test leads appropriately for the measurement type.



Figure 5.3: The ANENG SZ301 Digital Multimeter in use, likely measuring DC voltage or continuity within an automotive system.

5.2 ANENG BT189 Battery Tester

To test a battery:

1. Identify the correct slot or contact points for your battery type (e.g., AA, AAA, C, D, 9V, button cells).
2. Insert the battery into the tester, ensuring correct polarity (+ and -).
3. The LCD display will immediately show the battery's voltage.
4. Interpret the reading: A higher voltage indicates a healthier battery. The tester provides a visual indication (e.g., 'GOOD', 'WEAK', 'POOR') based on voltage levels.

5.2.1 Testing 9V Batteries

For 9V batteries, align the terminals with the designated 9V test area on the tester.



BT189 Battery tester

For 9V Batteries

AA,AAA,N,D,C,1450010440, 16340,CR2032batteries



9V battery test area

Figure 5.4: The ANENG BT189 Battery Tester demonstrating how to test a 9V battery by inserting it into the dedicated slot.

6. MAINTENANCE

6.1 Cleaning

Wipe the devices with a dry, soft cloth. Do not use abrasive cleaners or solvents. Ensure the devices are powered off before cleaning.

6.2 Storage

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

6.3 Multimeter Battery Replacement (SZ301)

When the battery indicator appears on the multimeter's display, replace the AA batteries. Open the battery compartment cover on the back of the device, replace the old batteries with new ones of the same type, observing polarity, and securely close the cover.

7. TROUBLESHOOTING

- **No Display on Multimeter:** Check if the batteries are correctly installed and have sufficient charge. Replace if necessary. Ensure the rotary dial is not in the 'OFF' position.
- **Incorrect Readings on Multimeter:** Verify the test leads are properly connected and not damaged. Ensure the correct function and range are selected for the measurement.
- **No Reading on Battery Tester:** Ensure the battery is inserted with correct polarity and makes good contact with the terminals. Check if the battery itself is completely depleted.
- **Fuses Blown (Multimeter):** If the current measurement function stops working, the internal fuse may have blown due to overcurrent. Refer to a qualified technician for fuse replacement.

8. SPECIFICATIONS

8.1 ANENG SZ301 Digital Multimeter

- **Model:** SZ301
- **Power Source:** Battery Powered (AA batteries)
- **Measurement Functions:** AC/DC Voltage, AC/DC Current, Resistance, Continuity, Diode
- **Safety Features:** Anti-burn with double fuses, Overload protection, Insulated probes
- **Display:** Digital LCD
- **Upper Temperature Rating:** 150 Degrees Celsius (Operating environment)



8.2 ANENG BT189 Battery Tester





- **Model:** BT189
- **Supported Battery Types:** AAA, AA, C, D, N, 9V, 6F22, 1.5V/3V Button Batteries, 1.5V/3.7V Lithium Batteries (e.g., CR2032, LR44, L736)
- **Measure Range:** 1.2V ~ 4.8V (for specific battery types, 9V for 9V batteries)
- **Display:** Digital LCD
- **Power Source:** Draws power from the battery being tested

9. WARRANTY AND SUPPORT

ANENG offers customer service and technical assistance for their products. For support, please refer to the contact information provided with your purchase or visit the official ANENG website.

Related Documents - SZ301, BT189

	<p>ANENG AN8205C Digital Multimeter Operator's Instruction Manual</p> <p>Comprehensive operator's instruction manual for the ANENG AN8205C Digital Multimeter, covering safety information, specifications, operating instructions for various measurements, and maintenance.</p>
	<p>ANENG BT189 Battery Tester: Specifications and Usage Guide</p> <p>Comprehensive guide to the ANENG BT189 battery tester, detailing its capabilities for measuring various battery types from 1.2V to 4.8V, including AA, AAA, 9V, and button cells. Learn how to use the tester and interpret results.</p>

	ANENG 683 Touch Meter User Manual: Features, Specs & Operation Guide Comprehensive user manual for the ANENG 683 digital multimeter. Covers safety, specifications, measurement functions (voltage, current, resistance, etc.), and operational guidance for electrical testing.
	ANENG Digital Multimeter Operator's Manual Operator's manual for the ANENG Digital Multimeter, covering safety precautions, front panel description, specifications, operating instructions for various measurements (DC/AC voltage, current, resistance, diode, continuity, capacitance, NCV), maintenance, and battery replacement.
	ANENG A3005 Digital Pen Multimeter User Manual and Specifications Comprehensive user manual for the ANENG A3005 digital pen multimeter, covering its features, operation, safety precautions, and technical specifications for measuring voltage, resistance, continuity, and more.
	ANENG SZ305 Digital Multimeter Operator's Instruction Manual This manual provides comprehensive safety information, operation instructions, specifications, and maintenance details for the ANENG SZ305 Digital Multimeter, a compact, hand-held, and battery-operated electronic measuring instrument.

Documents - ANENG – SZ301, BT189



[pdf] User Manual

User manual ANENG BT189ANENG BT189 Button Cell Battery Tester Universal Household LCD Display 9V N D C AA AAA Power Bank Detectors Tools BT189SZ BT189 1.2V4.8V1257 1.5V3V163401450010440 Thebatteryleveltestercaneasilymeasureavarietyofbatterytypesintherangeof1.2Vto4.8V. lang:es score:30 filesize: 457.51 K page_count: 2 document date: 2024-12-09



[pdf] User Manual

User manual ANENG BT189 Pure English versionANENG Digital Household Battery Testers Portable Display Test 9V AA AAA C D Button Cell Universal Power In BT189 1.2V4.8V1257 1.5V3V163401450010440 Thebatteryleveltestercaneasilymeasureavarietyofbatterytypesintherangeof1.2Vto4.8V. lang:es score:30 filesize: 457.51 K page_count: 2 document date: 2024-11-29



[ANENG BT189 Battery Tester: Specifications and Usage Guide](#)

Comprehensive guide to the ANENG BT189 battery tester, detailing its capabilities for measuring various battery types from 1.2V to 4.8V. lang:es score:26 filesize: 503.42 K page_count: 2 document date: 2024-11-26

[\[pdf\]](#) User Manual

User manual ANENG BT189ANENG BT189 Button Cell Battery Tester 9V N D C AA AAA Universal Household LCD Display Power Bank Detectors ToolsSe6bb9f0e

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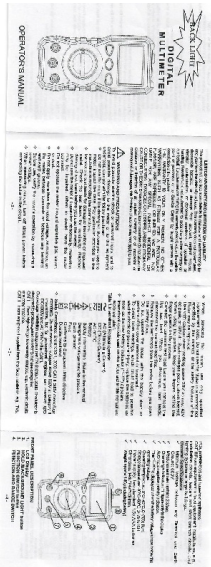
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ANENG Digital Multimeter Operator's Manual

Operator's manual for the ANENG Digital Multimeter, covering safety precautions, front panel description, specifications, operating in
lang:es score:15 filesize: 857.97 K page_count: 2 document date: 2024-11-27