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› ANENG Multimeter and Clamp Meter User Manual

ANENG SZ301 Multimeter and PN129 Clamp Meter

ANENG Multimeter and Clamp Meter User Manual

Model: SZ301 Multimeter and PN129 Clamp Meter

INTRODUCTION

This user manual provides comprehensive instructions for the safe and effective operation of your ANENG SZ301 Multimeter and ANENG PN129 Clamp Meter. These versatile tools are designed for measuring AC/DC voltage, current, resistance, continuity, diodes, NCV, amperage, ohms, frequency, and capacitance, making them essential for electrical troubleshooting and maintenance.



Image: The complete ANENG SZ301 Multimeter and PN129 Clamp Meter kit, including test leads and accessories.

PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- 1 x SZ301 Multimeter
- 1 x PN129 Clamp Meter
- 2 x AAA Batteries (for SZ301)
- 2 x AA Batteries (for PN129)
- 1 x Multimeter Kit (4 connection sockets, 2 PVC cables, 2 copper needles, 2 U-shaped inserts, 2 meter pens, 2 alligator clips, 2 puncture needles)
- 1 x Multimeter Test Lead Set
- 1 x Instruction Manual
- 1 x Storage Bag

SAFETY INFORMATION

Always adhere to basic safety precautions when using electrical testing equipment to reduce the risk of fire, electric shock, or personal injury. Read all instructions before use.

- Do not exceed the maximum input values for any measurement function.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Before measuring current, ensure the circuit is de-energized and the meter is properly connected in series.
- Inspect test leads for damage before each use. Do not use if insulation is compromised.
- Do not operate the meter if it appears damaged or is not functioning properly.
- Always disconnect the test leads from the circuit before changing functions or ranges.

SETUP

Battery Installation

The SZ301 Multimeter requires 2 AAA batteries, and the PN129 Clamp Meter requires 2 AA batteries. To install:

1. Locate the battery compartment cover on the back of each device.
2. Use a screwdriver to open the cover.
3. Insert the batteries, observing the correct polarity (+ and -).
4. Replace the battery compartment cover and secure it with the screw.

Connecting Test Leads (SZ301 Multimeter)

For most measurements with the SZ301 Multimeter, connect the red test lead to the VΩmA+ input jack and the black test lead to the COM (common) input jack.

PenHolder Card Slot



Image: The ANENG SZ301 Multimeter featuring a convenient pen holder and card slot for test leads, allowing for easy storage and access.

OPERATING INSTRUCTIONS

ANENG SZ301 Multimeter Functions

The SZ301 Multimeter is a rotary type multimeter with various measurement ranges. Turn the rotary dial to select the desired function.

Rotary Multimeter



Image: Close-up of the ANENG SZ301 Multimeter's rotary dial, showing various measurement functions and ranges.

- **Measuring AC/DC Voltage:** Turn the dial to the 'V~' for AC voltage or 'V=' for DC voltage. Connect the test leads in parallel to the circuit or component.
- **Measuring Resistance (Ω):** Turn the dial to the ' Ω ' range. Ensure the circuit is de-energized before connecting the test leads across the component.
- **Measuring Continuity:** Turn the dial to the continuity symbol (speaker icon). If the resistance is below a certain threshold, the meter will beep, indicating continuity.
- **Measuring Diodes:** Turn the dial to the diode symbol. Connect the red lead to the anode and the black lead to the cathode. The display will show the forward voltage drop.
- **Measuring Capacitance (F):** Turn the dial to the 'F' range. Ensure the capacitor is discharged before connecting the test leads.
- **Measuring Frequency (Hz):** Turn the dial to the 'Hz' range. Connect the test leads to the signal source.
- **Measuring Current (A):** For currents up to 10A, turn the dial to the '10A' range. For smaller currents, use the 'mA' or ' μ A' ranges. **Important:** Connect the meter in series with the circuit.

AC Current Test

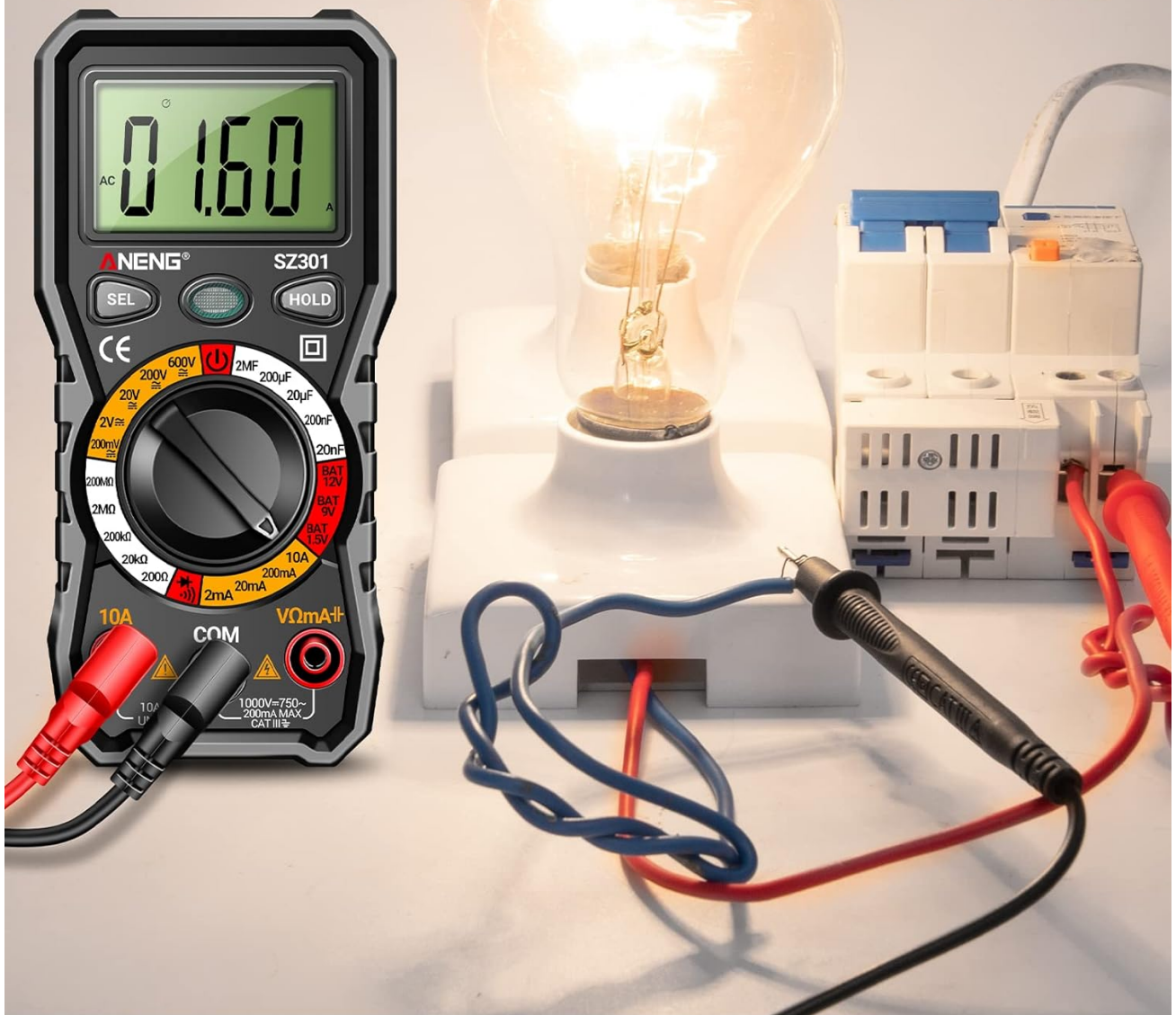


Image: The ANENG SZ301 Multimeter performing an AC current test on an electrical circuit, demonstrating its application in live measurements.



Image: The ANENG SZ301 Multimeter being used to test electrical components, showcasing its ergonomic design and clear display during operation.

ANENG PN129 Clamp Meter Functions

The PN129 Clamp Meter features a U-shaped jaw for non-contact current measurement and a clear display for readings.



Image: The ANENG PN129 Clamp Meter highlighting its U-shaped jaw design, which allows for easy clamping around wires for current measurement without disconnection.

- **Measuring AC/DC Current (U-shaped Jaw):** Power on the PN129. Open the U-shaped jaw and clamp it around a single conductor. The display will show the current reading. This method allows for quick measurements in tight spaces without disconnecting wires.
- **Non-Contact Voltage (NCV) Detection:** Press and hold the 'SELECT' button to activate the NCV function. Bring the clamp head near a wire or circuit. The tester will emit a beep and the NCV indicator will light up when detecting an electromagnetic field, enhancing user safety.
- **Backlight and Work Light:** The PN129 features a backlit screen for clear visibility in low-light conditions. It also includes a built-in work light to illuminate the measurement area.

Backlit screen



Image: The ANENG PN129 Clamp Meter displaying its clear, backlit screen, which ensures readability in various lighting conditions.

Multi-function

Nickel Plated Nib



AC current



U-shaped pliers head



AC/DC Current
600A AC DC

DC current



NCV Induction



Image: A visual representation of the ANENG PN129 Clamp Meter's multi-function capabilities, including AC/DC current measurement and NCV induction.



Backlight Work Light

Help you work well in dim areas

Image: The ANENG PN129 Clamp Meter demonstrating its integrated backlight and work light, designed to assist users in dimly lit environments.

MAINTENANCE

Cleaning

Wipe the meter's casing with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is dry before storage or use.

Battery Replacement

Replace batteries when the low battery indicator appears on the display to ensure accurate readings. Refer to the 'Battery Installation' section for instructions.

Storage

When not in use for extended periods, remove the batteries to prevent leakage. Store the meters and accessories in the provided storage bag in a cool, dry place, away from direct sunlight and extreme temperatures.

TROUBLESHOOTING

- **No Display / Power On Issue:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Inaccurate Readings:** Ensure test leads are properly connected. Verify the correct function and range are selected. Check battery level.
- **NCV Not Working (PN129):** Ensure the NCV function is activated by pressing and holding the SELECT button. Confirm the presence of an AC electromagnetic field.
- **Continuity Test Not Beeping:** Ensure the circuit is de-energized. Check if the resistance is too high for the continuity threshold.

SPECIFICATIONS

Feature	Specification
Brand	ANENG
Power Source	Battery Powered (AAA for SZ301, AA for PN129)
Style	SZ301 Multimeter with PN129 Clamp Meter
Color	Black
Upper Temperature Rating	120 Degrees Celsius
Display Count (PN129)	4000 Counts
Current Measurement (PN129)	Up to 100A (U-shaped jaw)

WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact ANENG customer service through their official website or the retailer where the product was purchased. Keep your purchase receipt as proof of purchase.