

LOMEDRETME SZ01 / SZ02

LOMEDRETME Aneng SZ01 / SZ02 Digital Multimeter Instruction Manual

Model: SZ01, SZ02

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective operation, maintenance, and troubleshooting of your LOMEDRETME Aneng SZ01 or SZ02 Digital Multimeter. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent potential hazards.

2. SAFETY INFORMATION

Always adhere to the following safety precautions when using the multimeter:

- Do not exceed the maximum input values specified for each measurement range.
- Ensure the test leads are properly connected and the function switch is set to the correct range before making any measurements.
- Never use the multimeter if it appears damaged or if the test leads are compromised.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always disconnect power to the circuit and discharge all high-voltage capacitors before measuring resistance, continuity, diodes, or capacitance.
- Replace the battery immediately when the low battery indicator appears to ensure accurate readings.
- Do not operate the multimeter in explosive gas, vapor, or dusty environments.
- Refer to the fuse specifications when replacing fuses to prevent damage to the meter or personal injury.

3. PRODUCT OVERVIEW

The Aneng SZ01/SZ02 is a compact, intelligent digital multimeter designed for electricians and maintenance

professionals. It features an anti-burning design for enhanced safety and a clear digital display for easy reading of measurements.



Figure 1: Front view of the Aneng SZ02 Digital Multimeter, showing the display, function buttons, and input jacks. The display indicates various measurement modes and readings.

3.1 Display and Controls

The multimeter features a large LCD display that shows measurement values, units, and various indicators such as battery status, hold function, and auto-range. Key controls include:

- **Function Switch:** Rotary switch to select measurement modes (e.g., Voltage, Current, Resistance).
- **SEL Button:** Used to switch between different measurement types within a single function (e.g., AC/DC voltage, Diode/Continuity).
- **HOLD Button:** Freezes the current display reading.
- **Backlight Button:** Activates or deactivates the display backlight.
- **NCV Button:** Initiates Non-Contact Voltage detection.
- **Input Jacks:** Terminals for connecting test leads (COM, VΩmA, 10A).

4. SETUP

4.1 Battery Installation

1. Ensure the multimeter is powered off.
2. Locate the battery compartment cover on the back of the device.
3. Unscrew the retaining screw(s) and remove the cover.
4. Insert the required batteries (typically AAA or 9V, refer to the battery compartment label) observing the correct polarity (+/-).
5. Replace the battery compartment cover and secure it with the screw(s).

4.2 Connecting Test Leads

Connect the test leads to the appropriate input jacks:

- Insert the **black** test lead into the **COM** (Common) jack.
- For most voltage, resistance, continuity, diode, capacitance, and frequency measurements, insert the **red** test lead into the **VΩmA** jack.
- For current measurements exceeding 200mA (up to 10A), insert the **red** test lead into the **10A** jack.

Warning: Incorrect lead connection can damage the meter or the circuit under test.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

Press the power button (usually marked with ⏻) to turn the multimeter on or off. The device may also have an auto-power-off feature to conserve battery life.

5.2 Measuring DC Voltage ($V_{\text{---}}$)

1. Set the function switch to the $V_{\text{---}}$ position.
2. Connect the red test lead to the positive (+) side of the circuit and the black test lead to the negative (-) side.
3. Read the voltage value on the display.

5.3 Measuring AC Voltage (V_{\sim})

1. Set the function switch to the V_{\sim} position.
2. Connect the test leads across the AC voltage source.
3. Read the voltage value on the display.

5.4 Measuring Resistance (Ω)

1. Ensure the circuit is de-energized and all capacitors are discharged.
2. Set the function switch to the Ω position.
3. Connect the test leads across the component to be measured.
4. Read the resistance value on the display.

5.5 Continuity Test (⏚)

1. Ensure the circuit is de-energized.
2. Set the function switch to the ⏚ position (often shared with Diode or Resistance). Press SEL if needed.
3. Connect the test leads across the component or wire.
4. A continuous beep indicates a low-resistance path (continuity).

5.6 Non-Contact Voltage (NCV) Detection

1. Press the **NCV** button.
2. Move the top end of the multimeter near a live AC voltage source.
3. The meter will emit an audible beep and/or flash an indicator light when AC voltage is detected.

Caution: NCV detection is for indication only and should not be used for precise voltage measurement or safety verification.

6. MAINTENANCE

6.1 Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the device is completely dry before use.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 4.1. Remove batteries if the meter is not used for an extended period.

6.3 Fuse Replacement

If the current measurement function stops working, the fuse may need replacement. Refer to the back panel or battery compartment for fuse specifications. Only replace with a fuse of the identical type and rating.

1. Ensure the multimeter is powered off and test leads are disconnected.
2. Open the back casing (may require unscrewing multiple screws).
3. Carefully remove the old fuse and insert the new one.
4. Reassemble the casing securely.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display or dim display	Low or dead battery; Power switch off	Replace battery; Turn on power switch
Incorrect readings	Incorrect function selected; Poor test lead connection; Low battery	Select correct function; Reconnect leads securely; Replace battery
Current measurement not working	Blown fuse; Incorrect lead connection (e.g., red lead in VΩmA jack for high current)	Replace fuse (see Section 6.3); Connect red lead to 10A jack for high current
Continuity test not beeping	Open circuit; Incorrect function selected	Check circuit for breaks; Ensure continuity mode is selected (press SEL if needed)

8. SPECIFICATIONS

The following are general specifications for the Aneng SZ01/SZ02 series digital multimeters. Specific ranges

and accuracies may vary slightly between models.

- **Display:** Digital LCD, typically 9999 counts
- **DC Voltage:** Up to 1000V
- **AC Voltage:** Up to 750V
- **DC Current:** Up to 10A
- **AC Current:** Up to 10A
- **Resistance:** Up to 99.99M Ω
- **Capacitance:** Up to 99.99mF
- **Frequency:** Up to 9.999MHz
- **Temperature:** -20°C to 1000°C (-4°F to 1832°F) (probe dependent)
- **Diode Test:** Yes
- **Continuity:** Yes, with buzzer
- **NCV:** Yes
- **Power:** Batteries (e.g., 2x AAA or 9V, not included)
- **Safety Rating:** CAT III 600V, CAT II 1000V (typical)

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your retailer. Keep your purchase receipt as proof of purchase.

Manufacturer: LOMEDRETME

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