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YHNNH SZ308

YHNNH SZ308 Digital Multimeter Instruction Manual

1. Introduction

The YHNNH SZ308 is a versatile digital multimeter designed for accurate measurement of various electrical parameters. It features a 1999-count display and supports full-function measurements including AC/DC voltage, DC current, resistance, hFE triode, diode, and continuity (buzzer). Its automatic/manual ranging capability and high-definition LCD with backlight make it suitable for both professional and DIY electrical tasks. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your SZ308 digital multimeter.

2. Safety Information

Always observe the following safety precautions when using the multimeter to prevent electric shock, injury, or damage to the meter or equipment under test.

- Do not exceed the maximum input values specified for each range.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Before changing functions, disconnect the test leads from the circuit under test.
- Ensure the battery cover is securely closed before operation.
- Do not operate the meter if it appears damaged or if the insulation on the test leads is compromised.
- Use the correct terminals, function, and range for your measurements.
- Replace the battery when the low battery indicator appears to ensure accurate readings.

3. Product Overview

The YHNNH SZ308 digital multimeter features a clear LCD display, a rotary function switch, and input jacks for test leads. It is designed for ease of use and durability.

Figure 3.1: YHNNH SZ308 Digital Multimeter with included accessories.

The device dimensions are approximately 121.8mm (4.79 inches) in length, 66.5mm (2.61 inches) in width, and 33.5mm (1.32 inches) in thickness, making it compact and portable.

Figure 3.2: Physical dimensions of the SZ308 Multimeter.

4. Setup

4.1 Battery Installation

The SZ308 multimeter requires a 9V 6F22 battery (not included). To install or replace the battery:

1. Ensure the multimeter is turned OFF and disconnect all test leads.
2. Locate the battery compartment on the back of the device.
3. Use a screwdriver to open the battery cover.
4. Insert a new 9V 6F22 battery, observing the correct polarity.
5. Replace the battery cover and secure it with the screw.

4.2 Test Lead Connection

Connect the test leads to the appropriate input jacks on the multimeter:

- Insert the black test lead into the "COM" (Common) jack.
- For most voltage, resistance, diode, continuity, and hFE measurements, insert the red test lead into the

"VΩmA" jack.

- For current measurements up to 10A, insert the red test lead into the "10A MAX" jack.

5. Operating Instructions

The SZ308 multimeter features an automatic/manual range selection. In automatic mode, the meter intelligently selects the appropriate range. For precise control, manual mode can be used.

5.1 Function Selection

Turn the rotary switch to the desired measurement function. The display will show the corresponding unit or symbol.

5.2 Measuring DC Voltage (V=)

To measure DC voltage (e.g., batteries, DC power supplies):

1. Set the rotary switch to the "V=" range.
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. The range is 200mV to 1000V DC.

5.3 Measuring AC Voltage (V~)

To measure AC voltage (e.g., household outlets):

1. Set the rotary switch to the "V~" range.
2. Connect the test leads across the AC voltage source.
3. Read the voltage value on the display. The range is 0V to 750V AC.

5.4 Measuring DC Current (A=)

To measure DC current (e.g., current draw of a component):

1. Set the rotary switch to the "A=" range (2mA-10A).
2. Connect the multimeter in series with the circuit. Ensure the red lead is in the "10A MAX" jack for currents up to 10A, or "VΩmA" for lower currents.
3. Read the current value on the display.

5.5 Measuring Resistance (Ω)

To measure resistance:

1. Set the rotary switch to the "Ω" range.
2. Connect the test leads across the component to be measured. Ensure the component is de-energized.
3. Read the resistance value on the display. The range is 0Ω to 2000kΩ.

5.6 Diode Test

To test diodes:

1. Set the rotary switch to the diode symbol (►|).
2. Connect the red test lead to the anode and the black test lead to the cathode of the diode.
3. A forward voltage drop will be displayed. Reverse the leads; the display should show 'OL' (Open Loop)

for a good diode.

5.7 Continuity Test (Buzzer)

To check for circuit continuity:

1. Set the rotary switch to the continuity symbol (•))).
2. Connect the test leads across the circuit or component.
3. If the resistance is below approximately 50Ω, the buzzer will sound, indicating continuity.

5.8 hFE Transistor Test

To measure the DC current gain (hFE) of a transistor:

1. Set the rotary switch to the "hFE" position.
2. Identify if the transistor is NPN or PNP type.
3. Insert the transistor leads (Emitter, Base, Collector) into the corresponding sockets on the multimeter's hFE test port.
4. Read the hFE value on the display.

Figure 5.1: Performing an hFE Triode test.

5.9 Square Wave Output

The multimeter can generate a square wave signal for testing purposes.

1. Set the rotary switch to the square wave symbol.
2. Connect the test leads to an oscilloscope or other suitable device to observe the square wave signal.

Figure 5.2: Overview of various measurement capabilities.

6. Maintenance

6.1 Cleaning

To clean the multimeter, wipe the case with a damp cloth and a mild detergent. Do not use abrasives or solvents. Ensure the device is powered off and test leads are disconnected before cleaning.

6.2 Battery Replacement

Replace the 9V battery when the low battery indicator appears on the display to maintain measurement accuracy. Refer to Section 4.1 for battery installation instructions.

6.3 Storage

If the multimeter is not used for an extended period, remove the battery to prevent leakage and damage. Store the device in a cool, dry place away from direct sunlight and extreme temperatures.

7. Troubleshooting

This section addresses common issues you might encounter with your SZ308 multimeter.

Problem	Possible Cause	Solution
No display or dim display	Dead or low battery	Replace the 9V battery.
Incorrect readings	Incorrect function/range selected; poor test lead connection; damaged test leads	Verify function and range; ensure leads are securely connected; inspect and replace damaged leads.
"OL" (Overload) displayed	Input value exceeds selected range; open circuit (for resistance/continuity)	Select a higher range or check for an open circuit.
Buzzer not sounding during continuity test	Resistance is above 50Ω; open circuit	Check the circuit for breaks or high resistance.

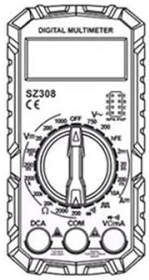
8. Specifications

The following table details the technical specifications of the YHNNH SZ308 Digital Multimeter.

SZ308

DETAILED PARAMETER

MULTIMETER DETAILED PARAMETER TABLE



Function	Range	Resolution	Precision
AC voltage	0V-750V	0.1V-1V	±(1.0%+15)
DC voltage	200mV-1000V	0.1mV-1V	±(1.0%+10)
DC current	2mA-10A	0.01mA-0.01A	±(1.5%+5)
Resistance	0Ω-2000kΩ	0.1Ω-1kΩ	±(1.2%+5)
hFE Triode	✓	Material	ABS
Diode	✓	Battery	6F22 9V Battery
Buzzer	✓	Weight	72g
Square wave	✓	Max digital display	1999 Counts
Low battery indication	✓	Pen bus length	70cm/27.5inch

THE ABOVE PARAMETERS ARE FOR REFERENCE ONLY, AND THE ACTUAL MEASUREMENT OF THE SPECIFIC EQUIPMENT SHALL PREVAIL!

Figure 8.1: Detailed Parameter Table.

Parameter	Value
Model Number	ANENG SZ308
Display Type	Digital Display (1999 Counts)
Operating Mode	Auto Range
DC Voltage Range	200mV - 1000V
AC Voltage Range	0V - 750V
DC Current Range	2mA - 10A
Resistance Range	0Ω - 2000kΩ
Operating Temperature	0 - 40°C
Dimensions	121.8 x 66.5 x 33.5 mm (4.79 x 2.61 x 1.32 inches)
Power Source	9V 6F22 Battery (not included)

Parameter	Value
Certification	CE, UL

9. Warranty Information

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. The warranty period typically begins from the date of purchase. Please retain your proof of purchase for warranty claims. For specific warranty terms and conditions, refer to the documentation provided with your product or contact the manufacturer directly.

10. Customer Support

If you have any questions, require technical assistance, or need to report an issue with your YHNNH SZ308 Digital Multimeter, please contact your retailer or the manufacturer's customer support. Contact information can typically be found on the product packaging or the manufacturer's official website.
For further assistance, you may visit the YHNNH Store on Amazon:YHNNH Store

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