SNAKOL SK216

SNAKOL SK216 Pen Type Digital Multimeter Instruction Manual

Model: SK216 | Brand: SNAKOL

Your comprehensive guide to operating and maintaining your SNAKOL SK216 Pen Type Digital Multimeter.

1. Introduction

The SNAKOL SK216 is a versatile 2-in-1 pen-type digital multimeter designed for electrical equipment testing and maintenance. It features True RMS measurement capabilities for AC voltage, resistance, diodes, and continuity. Additionally, it includes functions such as Non-Contact Voltage (NCV) detection, live/null wire identification, and a clear LCD backlit screen for easy readings in various lighting conditions. Its compact and portable design makes it an essential tool for both professional electricians and home users.

2. Safety Information

Always observe safety precautions when using electrical testing equipment. Failure to do so may result in injury or damage to the device. Read all instructions carefully before use.

- Do not exceed the maximum input values specified for each measurement function.
- Ensure the test leads are in good condition and properly connected before making any measurements.
- Do not use the device if it appears damaged or is not operating correctly.
- Exercise extreme caution when working with live circuits.
- Always disconnect power to the circuit before measuring resistance, continuity, or diodes.
- Keep hands and fingers behind the probe barriers during measurements.
- Replace batteries promptly when the low-battery indicator appears to ensure accurate readings.

3. Package Contents

Verify that all items are present in your package:

- 1 x SNAKOL SK216 Pen-type Multimeter
- 1 x Probe (removable multimeter lead)
- 1 x User Manual (this document)
- 2 x 1.5V AAA Batteries

Image: Contents of the SNAKOL SK216 package, including the multimeter, probe, and batteries.

4. Setup

4.1 Battery Installation

The SNAKOL SK216 requires two 1.5V AAA batteries. These are included in the package.

1. Locate the battery compartment cover on the back of the multimeter.
2. Slide or unclip the cover to open the compartment.
3. Insert two AAA batteries, ensuring correct polarity (+ and -).

4. Close the battery compartment cover securely.

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Video: Demonstrates the battery installation process for the SNAKOL SK216 multimeter.

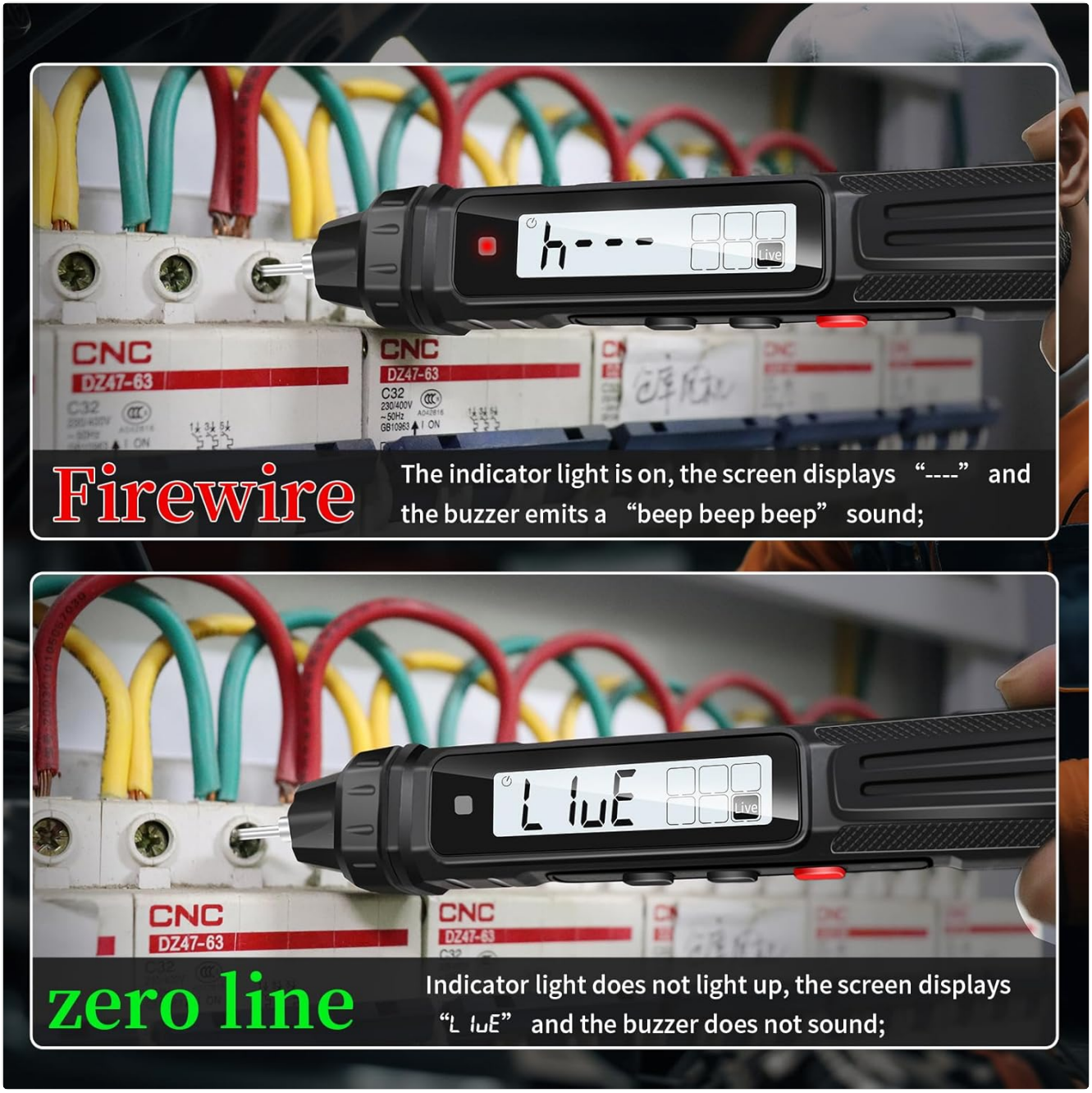

Image: Close-up of the SNAKOL SK216 multimeter with the battery compartment open, showing two AAA batteries inserted.

4.2 Connecting the Probe

The included probe can be connected to the multimeter for various measurements.

1. Identify the input jack on the top of the multimeter.
2. Insert the plug end of the probe cable firmly into the input jack.
3. The probe tip can be removed or attached as needed for different measurement scenarios.

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Video: Demonstrates how to connect the removable multimeter leads and probes to the device.

5. Operating Instructions

The SNAKOL SK216 features automatic ranging and function switching for ease of use. Press the power button to turn the device on or off. The device will typically start in auto-ranging mode.

5.1 Function Switching and Auto-Range

The multimeter automatically detects the measurement type (AC/DC voltage, resistance, continuity) when powered on. You can cycle through different measurement modes by pressing the function button (often labeled 'FUNC' or similar, or indicated by a specific icon).

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Video: Shows the function switching and auto-ranging capabilities of the multimeter.

Image: Illustrates the one-touch measurement capabilities for resistance, AC voltage, DC voltage, and continuity (on-off test).

5.2 DC Voltage Measurement

To measure DC voltage:

1. Ensure the multimeter is powered on and in DC voltage mode (often auto-detected).

2. Connect the black probe to the negative terminal and the red probe to the positive terminal of the DC source.
3. Read the voltage value displayed on the LCD screen.

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Video: Shows the process of measuring DC voltage using the multimeter on a battery.

5.3 AC Voltage Measurement

To measure AC voltage:

1. Ensure the multimeter is powered on and in AC voltage mode (often auto-detected).
2. Carefully touch the probes to the live and neutral terminals of the AC source.
3. Read the voltage value displayed on the LCD screen.

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Video: Demonstrates measuring AC voltage on a circuit breaker.

5.4 Resistance Measurement

To measure resistance:

1. Ensure the circuit or component is de-energized before measuring resistance.
2. Select resistance mode (Ω) or allow auto-detection.
3. Connect the probes across the component to be measured.
4. Read the resistance value on the display.

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Video: Illustrates how to measure resistance on a circuit board component.

5.5 Continuity Test

The continuity test checks for an unbroken path in a circuit. A buzzer will sound if resistance is below approximately 50Ω.

1. Ensure the circuit is de-energized.
2. Select continuity mode (often indicated by a speaker icon) or allow auto-detection.
3. Touch the probes to the two points you want to test for continuity.
4. A beep indicates continuity.

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Video: Demonstrates the continuity test with an audible beep.

5.6 Non-Contact Voltage (NCV) Detection

The NCV function allows for detection of AC voltage without direct contact, enhancing safety.

1. Select NCV mode (often indicated by a wave icon).
2. Bring the tip of the multimeter close to the conductor or electrical outlet.
3. An analog bar on the LCD screen, accompanied by beeps of varying rhythms, indicates the presence and strength of the electric field.

Image: Shows the multimeter performing NCV detection, with the screen displaying an analog bar and an indicator light.

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Video: Demonstrates NCV AC Voltage Test in an electrical panel.

5.7 Live/Null Wire Identification (Firewire/Zero Line)

This function helps distinguish between live (fire) and neutral (zero) wires.

1. Touch the multimeter's tip to the wire.
2. For a live wire (firewire), the indicator light will illuminate, the screen will display "----", and a "beep beep beep" sound will be emitted.
3. For a neutral wire (zero line), the indicator light will not illuminate, the screen will display "L iUE", and no sound will be emitted.

Image: Illustrates the multimeter detecting a live (firewire) and neutral (zero line) wire, showing distinct screen indicators and sounds.

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Video: Demonstrates Zero Fire Wire Identification in an electrical panel.

5.8 Breakpoint Finder

The breakpoint finder function helps locate breaks in a cable.

1. Apply the multimeter tip along the length of the cable.
2. The device will indicate the presence of voltage up to the point of the break. The signal will cease or change significantly past the break.

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Video: Shows the breakpoint finder function being used on a cable.

5.9 Data Hold Function

Press the 'HOLD' button to freeze the current reading on the display. Press it again to release the hold function.

5.10 Flashlight

The built-in flashlight can be activated to illuminate dimly lit work areas. Refer to the device's buttons for flashlight activation (often a long press on a specific button or a dedicated button).

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Video: Demonstrates the flashlight lighting feature of the multimeter.

6. Maintenance

6.1 General Care

- Keep the device clean and dry. Wipe with a soft, damp cloth if necessary. Do not use abrasive cleaners or solvents.
- Store the multimeter in a cool, dry place away from direct sunlight and extreme temperatures.
- Avoid dropping the device or subjecting it to strong impacts.

6.2 Battery Replacement

When the low-battery indicator appears on the display, replace the batteries immediately to ensure accurate measurements and proper device function. Follow the steps outlined in Section 4.1 Battery Installation.

7. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity and replace batteries if necessary.
Inaccurate readings.	Low battery, incorrect mode selection, or damaged probes.	Replace batteries, ensure correct measurement mode, inspect and replace probes if damaged.
NCV function gives false positives/negatives.	Environmental interference or proximity to other electrical fields.	Test in a different location or use direct contact measurement for verification.
Continuity buzzer does not sound.	Open circuit or resistance too high.	Verify the circuit path; the resistance might be above the continuity threshold.

8. Specifications

Feature	Detail
Model	SK216
Manufacturer	SNAKOL

Feature	Detail
Item Weight	109 g
Product Dimensions	18.49 x 2.54 x 3.05 cm
Batteries	2 AAA batteries required (included)
Measurement Accuracy	+/-1.2%
Min. Operating Voltage	2 Volts
Functions	AC/DC Voltage, Resistance, Diode, Continuity, NCV, Null/Live Wire Detection, Auto-Ranging, Backlit Display, Flashlight
Max Voltage	600V

9. Warranty and Support

SNAKOL products are designed for reliability and performance. For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official SNAKOL website. Customer services are always our top priority. If there are any concerns, please feel free to contact us for quick assistance.