

## ANENG A3012

# ANENG ST181 Clamp Meter and A3012 Circuit Tester User Manual

Model: ST181 & A3012

## 1. INTRODUCTION

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This manual provides instructions for the safe and effective operation of the ANENG ST181 Digital Clamp Multimeter and the ANENG A3012 Non-Contact Voltage Outlet Tester. These devices are designed for electrical testing and troubleshooting in various applications.



Figure 1: Complete package contents including the ST181 Clamp Meter, A3012 Circuit Tester, test leads, and accessories.

## 2. SAFETY INFORMATION

Always adhere to local and national safety codes. Use personal protective equipment. Read and understand all instructions before use.

- The ANENG ST181 and A3012 are compliant with IEC rated CAT II 1000V and CAT IV 600V, and are CE certified.
- Do not use the device if it appears damaged or operates abnormally.
- Avoid contact with live circuits when replacing batteries or opening the casing.
- Ensure test leads are in good condition and properly connected.
- Do not exceed the maximum input values for any function.

## 3. PRODUCT OVERVIEW

### 3.1 ANENG ST181 Digital Clamp Multimeter

The ST181 is a digital clamp multimeter designed for measuring various electrical parameters without interrupting the circuit for current measurements.



Figure 2: Overview of the ANENG ST181 Clamp Meter's measurement capabilities, including AC/DC voltage, AC current, resistance, capacitance, diode, NCV, frequency, and continuity.

### Key Features:

- Measures AC/DC Voltage, AC Current, Resistance, Capacitance, Continuity, Diode, and Frequency.
- Non-Contact Voltage (NCV) detection for identifying live wires.
- HD Backlit Display for clear readings in various lighting conditions.
- Clamp jaw design allows measurement of wires up to 36mm (1.42 inches) in diameter.

# HD BACKLIT DISPLAY



Figure 3: The ST181 features an HD backlit display for improved visibility of measurements.



# 36MM JAW DESIGN

The maximum diameter can be opened to 36mm  
1.42in, non-contact type, suitable for various wires



Figure 4: The clamp jaw opens up to 36mm (1.42 inches) for non-contact current measurement on various wire sizes.

## 3.2 ANENG A3012 Circuit Tester

The A3012 functions as a voltage test pen and a socket circuit tester, providing diagnostic capabilities for electrical outlets.

# 2 in 1

## Voltage Tester Socket phaser



Figure 5: The ANENG A3012 combines the functions of a voltage tester and a socket phase/wiring detector.

### Key Features:

- Voltage Test Pen functionality.
- Socket Circuit Tester with LED indicators for wiring status (e.g., Open Ground, Open Neutral, Live/Neutral Reverse).
- Leakage Tester (RCD test) to check for proper circuit breaker function.
- Non-Contact AC Voltage detection.
- Breakpoint Lookup for identifying breaks in live wires.

## 4. SETUP

### 4.1 Battery Installation

The A3012 Circuit Tester requires AAA batteries for operation. Locate the battery compartment, insert the batteries according to polarity markings, and secure the cover.

### 4.2 Test Lead Connection (for ST181)

For voltage, resistance, capacitance, diode, and continuity measurements, connect the red test lead to the 'INPUT' terminal and the black test lead to the 'COM' terminal on the ST181 Clamp Meter.

## 5. OPERATING INSTRUCTIONS

### 5.1 Using the ANENG ST181 Clamp Meter

#### 5.1.1 Measuring AC Current

1. Set the function dial to the 'A~' (AC Current) position.
2. Open the clamp jaw and encircle a single conductor (not a bundle of wires).
3. Read the current value on the display. The device can measure up to 400A.



Figure 6: The ST181 Clamp Meter is capable of measuring AC current up to 400A by clamping around a single conductor.

#### 5.1.2 Measuring AC/DC Voltage, Resistance, Capacitance, Diode, Continuity, Frequency

1. Connect test leads as described in Section 4.2.
2. Set the function dial to the desired measurement mode (e.g., V~ for AC Voltage, V- for DC Voltage,  $\Omega$  for Resistance).



3. Apply the test probes to the circuit or component under test.
4. Read the measurement on the display.

### 5.1.3 Non-Contact Voltage (NCV) Detection

1. Set the function dial to the 'NCV' position.
2. Bring the top of the clamp meter near a live conductor.
3. The device will indicate the presence of AC voltage through audible beeps and/or visual indicators.

## 5.2 Using the ANENG A3012 Circuit Tester

### 5.2.1 Socket Wiring Test

1. Plug the A3012 directly into a standard wall socket.
2. Observe the LED indicators on the device. These lights will illuminate in specific patterns to indicate the wiring status of the socket (e.g., correct, open ground, open neutral, live/neutral reverse).



Figure 7: The A3012 provides real-time feedback on socket wiring status via LED indicators and offers non-contact voltage detection.

### 5.2.2 Leakage Test (RCD Test)



1. Plug the A3012 into a socket protected by a Residual Current Device (RCD).
2. Press the 'RCD Test' button on the device.
3. A functional RCD should trip, cutting power to the socket. If the RCD does not trip, there may be a fault.



Figure 8: Performing a leakage test with the A3012 to verify the functionality of an RCD-protected circuit.

### 5.2.3 Non-Contact Voltage (NCV) Detection

1. Hold the A3012 near a wire or electrical component.
2. The device will indicate the presence of AC voltage through visual and/or audible alerts.

### 5.2.4 Breakpoint Lookup

1. Use the A3012 to scan along a live wire.
2. The device will indicate the point where the electrical signal is lost, helping to locate breaks in the wire.



Figure 9: The A3012 can assist in locating breakpoints in live electrical wires by detecting the presence or absence of electricity.

## 6. MAINTENANCE

- Clean the devices with a dry, soft cloth. Do not use abrasive cleaners or solvents.
- Replace batteries promptly when the low battery indicator appears.
- Store the devices in a cool, dry place away from direct sunlight and extreme temperatures.
- Inspect test leads for any damage before each use. Replace if frayed or broken.

## 7. TROUBLESHOOTING

- **No Display/Power:** Check battery installation and charge level. Replace batteries if necessary.
- **Inaccurate Readings:** Ensure proper function selection and correct connection of test leads. Verify the circuit is within the device's measurement range.
- **A3012 Socket Test Errors:** Re-insert the tester firmly into the socket. Ensure the socket itself is properly wired and powered.

- **NCV Not Detecting:** Ensure the NCV function is selected and the device is brought close enough to a live AC voltage source.



## 8. SPECIFICATIONS

Specification	Value
Brand	ANENG
Model Numbers	ST181 (Clamp Meter), A3012 (Circuit Tester)
Measurement Type	Multimeter (ST181)
Power Source	Battery (AAA for A3012)
Safety Rating	IEC CAT II 1000V, CAT IV 600V
Certifications	CE
ST181 Max Current	400A AC
ST181 Max Jaw Opening	36mm (1.42 inches)


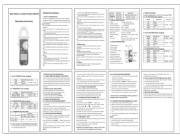

## 9. WARRANTY AND SUPPORT

ANENG provides service and technical support for its electrical testing tools. For assistance, please refer to the contact information provided with your purchase or visit the official ANENG website.

### Related Documents - A3012

	<p><a href="#">ANENG ST181 Digital Clamp-On Multimeter Operation Manual and Specifications</a></p> <p>Detailed operation manual and technical specifications for the ANENG ST181 digital clamp-on multimeter. Covers safety, features, panel description, measurement procedures for AC/DC voltage, current, resistance, capacitance, frequency, temperature, and NCV detection.</p>
	<p><a href="#">ANENG ST181 Mini Digital Clamp-On Multimeter Operating Instruction</a></p> <p>Operating instructions and specifications for the ANENG ST181 Mini Digital Clamp-On Multimeter, covering safety information, panel description, measurement functions, and technical specifications.</p>



	<p><a href="#">ANENG PN200 Mini Digital Clamp-On Multimeter: Operation Manual &amp; Specifications</a></p> <p>Comprehensive operating instructions and technical specifications for the ANENG PN200 Mini Digital Clamp-On Multimeter, covering safety, usage, and measurement details.</p>
	<p><a href="#">ANENG ST181 Mini Digital Clamp-On Multimeter Operation Manual</a></p> <p>Operation manual for the ANENG ST181 Mini Digital Clamp-On Multimeter, covering safety, panel description, specifications, and detailed instructions for various electrical measurements including voltage, current, resistance, capacitance, frequency, and temperature.</p>
	<p><a href="#">ANENG ST181 Mini Digital Clamp-On Multimeter: Operating Instructions &amp; Specifications</a></p> <p>Detailed operating instructions, safety guidelines, technical specifications, and panel description for the ANENG ST181 Mini Digital Clamp-On Multimeter.</p>
	<p><a href="#">ANENG ST181 Mini Digital Clamp-on Multimeter Operation Manual</a></p> <p>Comprehensive operation manual for the ANENG ST181 digital clamp-on multimeter, covering safety information, specifications, panel description, measurement instructions, and battery replacement.</p>