

ANENG ST182

ANENG ST182 Digital Clamp Meter User Manual

Model: ST182 | Brand: ANENG

INTRODUCTION

This user manual provides detailed instructions for the safe and effective operation of the ANENG ST182 Digital Clamp Meter. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent potential hazards.

The ANENG ST182 is a portable, professional clamp meter that measures AC/DC voltage, AC current, resistance, capacitance, frequency, and temperature. It also features diode testing, NCV (Non-Contact Voltage) detection, and live/zero line identification. Its compact size and automatic ranging make it a convenient tool for various electrical measurements.

SAFETY INFORMATION

Always adhere to the following safety precautions to avoid personal injury or damage to the meter:

- Do not exceed the maximum input values for any measurement range.
- Do not use the meter if it appears damaged or if the test leads are damaged.
- Exercise extreme caution when working with voltages above 36V DC or 25V AC RMS, as these can pose a shock hazard.
- Ensure the meter is in the correct function and range before making measurements.
- Always disconnect the test leads from the circuit before changing functions or ranges.
- Do not operate the meter in explosive gas, vapor, or dusty environments.
- Replace batteries immediately when the low battery indicator appears to ensure accurate readings.

PRODUCT OVERVIEW

Components and Display

The ANENG ST182 Digital Clamp Meter features a compact design with an easy-to-read LCD display and intuitive controls.



Figure 1: Labeled diagram of the ANENG ST182 Clamp Meter, showing key components such as the jaw, turntable, LCD display, function buttons, and input jacks.

Screen Backlight

In a dark environment, you can also see the screen value

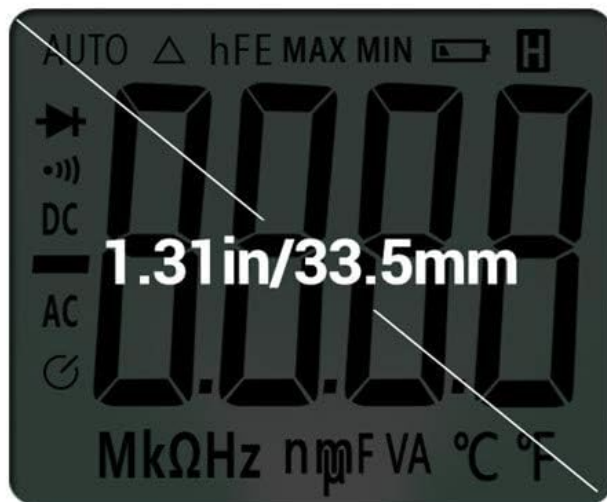


Figure 2: The LCD display of the ANENG ST182, demonstrating its backlight feature for visibility in low-light conditions. The display shows a 4000 count resolution.

Key components include:

- **Jaw:** For non-contact AC current measurement. Jaw opening: 36mm.
- **Turntable:** Rotary switch to select measurement functions.
- **LCD Display:** Digital readout for measurements, with backlight for improved visibility.
- **Function Buttons:** H/* (Hold/Backlight), REL (Relative), SET (Function/Range selection).
- **Input Jacks:** COM (Common) and INPUT (Positive) for test leads.
- **NCV Sensor:** For non-contact voltage detection.

Before first use, or when the low battery indicator appears, install or replace the batteries:

1. Ensure the meter is turned OFF.
2. Locate the battery compartment on the back of the meter.
3. Open the battery cover.
4. Insert two AAA batteries, observing correct polarity.
5. Close the battery cover securely.

Connect the test leads for measurements requiring them:

- Insert the black test lead into the COM (Common) jack.
- Insert the red test lead into the INPUT (Positive) jack.

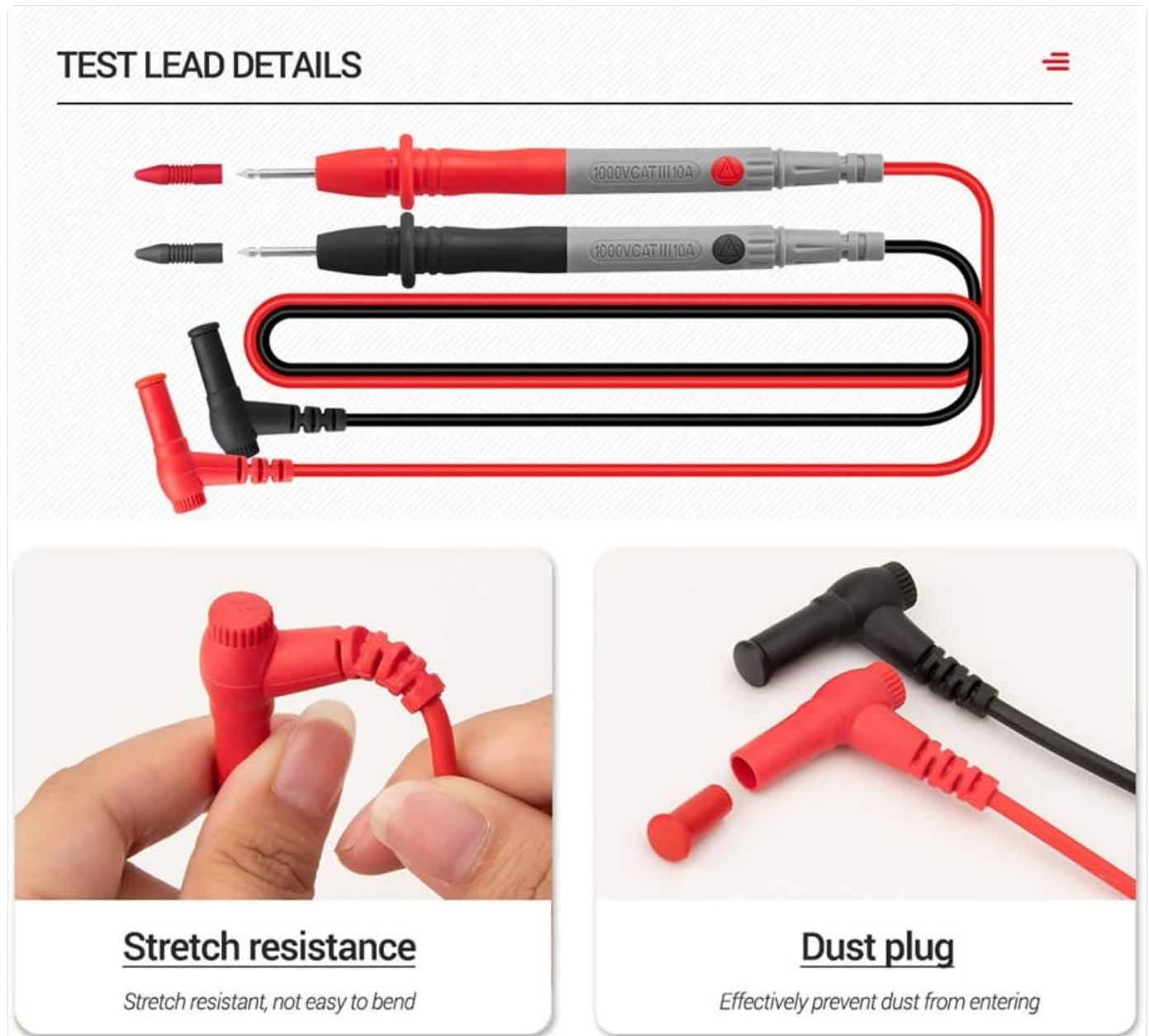


Figure 3: Close-up of the included test leads, highlighting their stretch resistance and dust plugs for durability and protection.

Turn the turntable to the desired function to begin measurement.

AC Current Measurement

To measure AC current, use the clamp jaw:

1. Set the turntable to the 'A~' (AC Current) position.
2. Open the clamp jaw and enclose a single conductor (not a bundle of wires) through which the current flows.
3. Read the AC current value on the LCD display.



Figure 4: Demonstration of measuring AC current using the clamp meter. The large jaw opening allows for non-contact measurement without interrupting the circuit.

Voltage Measurement (AC/DC)

To measure AC or DC voltage:

1. Set the turntable to the 'V~' (AC Voltage) or 'V=' (DC Voltage) 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 LCD display.

Resistance Measurement

To measure resistance:

1. Set the turntable to the ' Ω ' (Resistance) position.
2. Ensure the circuit is de-energized before connecting the test leads across the component.
3. Read the resistance value on the LCD display.

Capacitance Measurement

To measure capacitance:

1. Set the turntable to the 'Capacitance' position (often shared with resistance or diode).
2. Discharge the capacitor before connecting the test leads.
3. Read the capacitance value on the LCD display.

Frequency Measurement

To measure frequency:

1. Set the turntable to the 'Hz' (Frequency) position.
2. Connect the test leads to the circuit.
3. Read the frequency value on the LCD display.

Temperature Measurement

To measure temperature:

1. Set the turntable to the 'TEMP' (Temperature) position.
2. Connect the temperature probe (if included) to the input jacks.
3. Place the probe at the desired measurement point.
4. Read the temperature value on the LCD display.

Diode Test

To perform a diode test:

1. Set the turntable to the 'Diode' position.
2. Connect the red test lead to the anode and the black test lead to the cathode of the diode.
3. The display will show the forward voltage drop. Reverse the leads to check for open circuit.

NCV (Non-Contact Voltage) Test

To detect AC voltage without contact:

1. Set the turntable to the 'NCV' position.
2. Bring the NCV sensor (top part of the meter) close to the conductor.
3. If AC voltage is detected, the meter will beep and the NCV indicator light will flash.

Live/Zero Line Identification

To identify live and zero lines:

1. Set the turntable to the 'NCV' position.
2. Insert one test lead into the hole to detect the line.
3. For a live line, the screen will display "----" and emit a beep, and the LED will flash. For a neutral line, the screen will show "EF" and there will be no beep.

FireWire detection

Adjust the gear to NCV, and then insert the test lead into the hole to detect Live



Neutral line detection

The screen shows "EF" and there is no beep



FireWire detection

As shown in the figure, the screen "EF" displays "----" and emits a beep, and the LED flashes red

Figure 5: Illustration of Live/Zero Line detection. The left image shows neutral line detection with "EF" on screen and no beep. The right image shows live wire detection with "----" on screen, a beep, and flashing LED.

Data Hold and Backlight

- **Data Hold (H/* button, single press):** Press to freeze the current reading on the display. Press again to release.
- **Backlight (H/* button, long press):** Press and hold to turn the display backlight on or off.

MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your clamp meter:

- **Cleaning:** Wipe the meter with a damp cloth and mild detergent. Do not use abrasives or solvents.
- **Battery Replacement:** Replace batteries when the low battery indicator appears. Remove batteries if the meter will not be used for an extended period.
- **Storage:** Store the meter in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Calibration:** For professional use, periodic calibration by a qualified technician is recommended to maintain accuracy.

TROUBLESHOOTING

If you encounter issues with your ANENG ST182, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No display or dim display	Low or dead batteries	Replace batteries.
Incorrect readings	Incorrect function/range selected; Damaged test leads; Environmental interference	Verify function/range; Check test leads for damage; Move away from strong electromagnetic fields.
Meter does not turn on	Batteries incorrectly installed; Power switch issue	Reinstall batteries correctly; Ensure power switch is fully engaged.
NCV not detecting voltage	Not close enough to source; Source is DC voltage	Bring sensor closer to AC voltage source.

SPECIFICATIONS

Detailed technical specifications for the ANENG ST182 Digital Clamp Meter:

Parameter	Value
Product Material	ABS
Line Material	Copper + PVC
Color	Black and Red
Power Supply	2 * AAA battery (not included)
Automatic Shutdown	After 15 minutes of inactivity
Display	LCD display

Parameter	Value
Maximum Count	4000 counts
Jaw Opening	36mm / 1.42in
DC Voltage Range	400mV $\pm(1.5\%+5)$, 4V~600V $\pm(1.0\%+3)$
AC Voltage Range	4V~600V $\pm(1.5\%+3)$
AC Current Range	40A~400A $\pm(2.5\%+3)$
Frequency Range	10Hz-4MHz
Resistance Range	400 Ω ~40M Ω
Capacitance Range	1nF~4mF
Temperature Range	0~750°C / 32~1382°F
Diode Test	Yes
Fire/Zero Line Identification	Yes
NCV Test	Yes
On/Off Buzzer	Yes
Backlight	Yes
Data Retention	Yes
Product Size	Approx. 184 x 64.5 x 32 mm (7.24 x 2.54 x 1.26 in)
Product Weight	Approx. 129g (4.55oz)



Figure 6: Physical dimensions of the ANENG ST182 Clamp Meter, illustrating its compact and portable design.

PACKAGE CONTENTS

The package for the ANENG ST182 Digital Clamp Meter typically includes the following items:

- 1 * ANENG ST182 Clamp Meter
- 2 * Test Leads (Red and Black)
- 1 * Storage Bag
- 1 * User Manual (English)

ST182

4000 COUNT



Figure 7: The complete package contents, including the clamp meter, test leads, storage bag, and user manual.

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the contact details provided by your retailer or visit the official ANENG website. Keep your purchase receipt as proof of purchase for any warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual**Why is my ANENG ST182 Digital Clamp Meter not measuring AC current (A~)?**

If your ANENG ST182 is not measuring AC current (A~), it is likely due to how the clamp is being applied to the wires. Please check the following: Clamp a single conductor: You must enclose...

[Read full answer](#)