

Amprobe ACD-10 PLUS

Amprobe ACD-10 Plus 600A Clamp Multimeter

User Manual

INTRODUCTION

The Amprobe ACD-10 Plus 600A Clamp Multimeter is a versatile and reliable tool designed for electrical professionals and enthusiasts. It offers a range of measurement capabilities including AC and DC voltage, resistance, continuity, capacitance, and frequency, along with 600A AC current measurement via its clamp jaws. Its compact design with thin jaws allows access to tight measurement areas, accommodating conductors up to 25 mm.

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your ACD-10 Plus Clamp Multimeter. Please read it thoroughly before using the device.

SAFETY INFORMATION

WARNING: To avoid possible electric shock, fire, or personal injury, read all safety information before you use the product. Improper use of this instrument can cause damage, shock, or injury.

- Always adhere to local and national safety codes.
- Do not use the meter if it is damaged or operating abnormally.
- Do not apply more than the rated voltage, as marked on the meter, between the terminals or between any terminal and earth ground.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always use the proper terminals, function, and range for your measurements.
- Ensure the test leads are in good condition, with no damaged insulation.
- Remove test leads from the meter before opening the battery cover.
- Do not operate the meter around explosive gas, vapor, or dust.

PRODUCT OVERVIEW

The Amprobe ACD-10 Plus is designed for ease of use and durability. Below are key components of the device:



Figure 1: Front view of the Amprobe ACD-10 Plus Clamp Multimeter, showing the display, function dial, and clamp jaws.



Figure 2: Side view of the Amprobe ACD-10 Plus Clamp Multimeter, highlighting the thin jaw design for accessing confined spaces.

Key Components:

- **Clamp Jaws:** For non-contact AC current measurement. Accommodates conductors up to 25 mm.
- **Function Dial:** Selects measurement modes (Voltage, Resistance, Continuity, Capacitance, Frequency, Current).
- **LCD Display:** Shows measurement readings and indicators.
- **Input Terminals:** For connecting test leads for voltage, resistance, capacitance, and frequency measurements.
- **Data Hold Button:** Freezes the current reading on the display.
- **Range Button:** Manually selects measurement range (if auto-ranging is not desired).

SETUP

Battery Installation

The Amprobe ACD-10 Plus requires two AA batteries, which are included. To install or replace batteries:

1. Ensure the meter is turned off and disconnect any test leads from the input terminals.
2. Locate the battery compartment cover on the back of the meter.
3. Use a screwdriver to loosen the screw(s) securing the battery cover.
4. Remove the cover and insert the two AA batteries, observing the correct polarity (+/-) as indicated inside the compartment.
5. Replace the battery cover and tighten the screw(s) securely.

The meter is now ready for operation.

OPERATING INSTRUCTIONS

Before taking any measurements, ensure the meter is in good working condition and the test leads are properly connected (if applicable).

1. AC Current Measurement (Clamp Jaws)

1. Turn the function dial to the "A~" position.
2. Press the jaw trigger to open the clamp jaws.
3. Enclose only one conductor within the clamp jaws. For accurate readings, ensure the conductor is centered.
4. Release the trigger to close the jaws around the conductor.
5. Read the AC current value on the LCD display. The meter can measure up to 600A AC.

Note: The clamp jaws measure AC current only. Do not attempt to measure DC current with the clamp jaws.

2. AC/DC Voltage Measurement

1. Insert the black test lead into the "COM" input terminal and the red test lead into the "VΩHzCAP" input terminal.
2. Turn the function dial to the "V~" for AC voltage or "V-" for DC voltage.
3. Connect the test probes across the circuit or component to be measured.
4. Read the voltage value on the LCD display. The meter measures AC & DC voltage up to 600V.

3. Resistance Measurement

1. Insert the black test lead into the "COM" input terminal and the red test lead into the "VΩHzCAP" input terminal.
2. Turn the function dial to the "Ω" position.
3. Ensure the circuit or component under test is de-energized.
4. Connect the test probes across the component.
5. Read the resistance value on the LCD display. The meter measures resistance up to 40MΩ.

4. Continuity Test

1. Insert the black test lead into the "COM" input terminal and the red test lead into the "VΩHzCAP" input terminal.
2. Turn the function dial to the "Ω" position and press the "SELECT" button (if available) to cycle to continuity mode (indicated by a buzzer symbol).
3. Ensure the circuit or component under test is de-energized.
4. Connect the test probes across the component.
5. If continuity exists (low resistance), the meter will emit an audible buzzer sound.

5. Capacitance Measurement

1. Insert the black test lead into the "COM" input terminal and the red test lead into the "VΩHzCAP" input terminal.
2. Turn the function dial to the "CAP" position.
3. Ensure the capacitor is fully discharged before testing.
4. Connect the test probes across the capacitor terminals.
5. Read the capacitance value on the LCD display.

6. Frequency Measurement

Frequency can be measured using either the clamp jaws or test leads.

Using Test Leads:

1. Insert the black test lead into the "COM" input terminal and the red test lead into the "VΩHzCAP" input terminal.
2. Turn the function dial to the "Hz" position.
3. Connect the test probes across the circuit where frequency is to be measured.
4. Read the frequency value on the LCD display.

Using Clamp Jaws (for current frequency):

1. Turn the function dial to the "A~" position and press the "SELECT" button (if available) to cycle to frequency mode (indicated by "Hz" on the display).
2. Enclose a single conductor within the clamp jaws as you would for current measurement.
3. Read the frequency value on the LCD display.

MAINTENANCE

Cleaning

Wipe the meter with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep the display clean and dry.

Battery Replacement

Refer to the "Battery Installation" section under Setup for instructions on replacing the AA batteries when the low battery indicator appears on the display.

Calibration

For optimal accuracy, periodic calibration by qualified personnel is recommended. Refer to Amprobe's official service guidelines for calibration intervals.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No display or faint display	Dead or low batteries	Replace batteries (refer to Setup section).
Incorrect readings	Incorrect function selected, poor test lead connection, or out of range measurement.	Verify function dial setting, ensure secure test lead connection, or check if the measurement exceeds the meter's range.
No continuity buzzer sound	Continuity mode not selected, or open circuit.	Ensure continuity mode is active. Check the circuit for breaks.

Problem	Possible Cause	Solution
Clamp jaws not closing properly	Obstruction in jaws or mechanical issue.	Inspect jaws for debris. If persistent, contact Amprobe support.

SPECIFICATIONS

Feature	Specification
Model	ACD-10 PLUS
AC Current Range	Up to 600A
AC/DC Voltage Range	Up to 600V
Resistance Range	Up to 40 MΩ
Capacitance Measurement	Yes
Frequency Measurement	Yes (via jaws or test leads)
Continuity Buzzer	Yes
Jaw Opening	25 mm (0.98 inches)
Auto Ranging	Yes
Auto Power Off	Yes
Overload Protection	Yes
Power Source	2 x AA batteries (included)
Product Dimensions	10 x 6 x 2.9 inches
Item Weight	1.01 pounds

WARRANTY

Amprobe products are designed for reliability and durability. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Amprobe website. Typically, Amprobe offers a limited warranty against defects in materials and workmanship for a specified period from the date of purchase. Keep your purchase receipt as proof of purchase for warranty claims.

SUPPORT

If you require technical assistance, service, or have questions regarding your Amprobe ACD-10 Plus 600A Clamp Multimeter, please contact Amprobe customer support.

- **Online Resources:** Visit the official [Amprobe Store on Amazon](#) or the main Amprobe website for FAQs, product documentation, and support contact information.
- **Contact Information:** Refer to the contact details provided in your product packaging or on the official Amprobe website for phone and email support.

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