EFUZCOCI GD166A

EFUZCOCI GD166A Digital Clamp Meter Multimeter User Manual

Model: GD166A

1. Introduction

Thank you for choosing the EFUZCOCI GD166A Digital Clamp Meter. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your device. Please read this manual thoroughly before use and keep it for future reference.

2. Safety Information

WARNING: To avoid electric shock or personal injury, read all safety information before using this product.

- Always adhere to local and national safety codes.
- Do not exceed the maximum input values specified for each function.
- Inspect the test leads for damage before each use. Do not use if insulation is damaged.
- Do not use the meter if it appears damaged or if it is not operating properly.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Remove test leads from the meter before opening the battery cover.
- Ensure the clamp jaw is fully closed when measuring current.

3. Product Overview

The EFUZCOCI GD166A is a smart, auto-ranging digital clamp meter designed for measuring AC/DC voltage, AC current, resistance, capacitance, frequency, temperature, diode, continuity, NCV (Non-Contact Voltage), and inrush current. It features a clear display and robust construction for reliable performance.

Front view of the EFUZCOCI GD166A Digital Clamp Meter, highlighting the display, function buttons, and clamp jaw.

Key Features:

- Auto Range Functionality
- True RMS Measurement
- Measures AC/DC Voltage, AC Current, Resistance, Capacitance, Frequency
- Diode Test and Continuity Buzzer
- Temperature Measurement (with included probe)
- NCV (Non-Contact Voltage) Detection
- Inrush Current Measurement
- 6000 Counts Display

4. Package Contents

Verify that all items listed below are present and undamaged upon unpacking your EFUZCOCI GD166A Digital Clamp Meter.

Illustration of the EFUZCOCI GD166A Digital Clamp Meter along with its standard accessories: a gift box, carrying bag, user manual, temperature probe, and a pair of original test leads.

- 1x EFUZCOCI GD166A Digital Clamp Meter
- 1x Pair of Test Leads
- 1x Thermocouple Probe
- 1x Cloth Bag
- 1x User Manual
- 1x Box (Packaging)

5. Setup

5.1 Battery Installation

1. Ensure the meter is powered off and test leads are disconnected.
2. Locate the battery compartment cover on the back of the meter.
3. Use a screwdriver to open the battery cover.
4. Insert 3x 1.5V AAA batteries, observing correct polarity (+/-).
5. Replace the battery cover and secure it with the screw.

5.2 Connecting Test Leads

1. For most voltage, resistance, capacitance, frequency, diode, and continuity measurements, insert the red test lead into the 'INPUT' jack and the black test lead into the 'COM' (common) jack.
2. Ensure the leads are fully inserted and securely connected.

Diagram illustrating the correct method for connecting the red and black test leads into the input jacks of the clamp meter, ensuring secure placement.

6. Operating Instructions

6.1 Power On/Off

Press the **Power button** ( ) to turn the meter on or off. The meter will automatically power off after a period of inactivity to conserve battery life.

6.2 Function Selection

The GD166A features an auto-ranging function for most measurements. Press the**FUNC/AUTO** button to cycle through different measurement modes (e.g., AC Voltage, DC Voltage, Resistance, Diode, Continuity) within a single range setting.

6.3 AC/DC Voltage Measurement

1. Connect the red test lead to the 'INPUT' jack and the black test lead to the 'COM' jack.
2. Turn on the meter. It will typically default to auto-ranging voltage measurement.
3. If necessary, press **FUNC/AUTO** to select AC or DC voltage mode.
4. Carefully touch the test probes to the circuit points where you want to measure voltage.
5. Read the voltage value on the display.

6.4 AC Current Measurement (Clamp Function)

1. Ensure test leads are disconnected from the meter for clamp current measurements.
2. Press the clamp trigger to open the clamp jaw.
3. Enclose only one conductor (wire) of the circuit within the clamp jaw. Do not clamp around multiple wires, as this will result in an inaccurate reading.
4. Release the trigger to close the clamp jaw securely around the conductor.
5. Read the AC current value on the display.

6.5 Resistance and Continuity Test

1. Connect the red test lead to 'INPUT' and black to 'COM'.
2. Turn on the meter and select the resistance (Ω) or continuity mode using **FUNC/AUTO**.
3. For resistance, connect the probes across the component.
4. For continuity, connect the probes across the circuit. A continuous beep indicates a low-resistance path (continuity).

6.6 Capacitance Measurement

1. Connect the red test lead to 'INPUT' and black to 'COM'.
2. Select the capacitance (F) mode using **FUNC/AUTO**.
3. Discharge the capacitor before testing.
4. Connect the probes across the capacitor terminals.
5. Read the capacitance value on the display.

6.7 Frequency Measurement

1. Connect the red test lead to 'INPUT' and black to 'COM'.
2. Select the frequency (Hz) mode using **FUNC/AUTO**.
3. Connect the probes to the circuit where frequency is to be measured.
4. Read the frequency value on the display.

6.8 Diode Test

1. Connect the red test lead to 'INPUT' and black to 'COM'.
2. Select the diode test mode using **FUNC/AUTO**.
3. Connect the red probe to the anode and the black probe to the cathode of the diode.
4. Read the forward voltage drop on the display. Reverse the probes to check for open circuit.

6.9 Temperature Measurement

1. Ensure the meter is off and test leads are disconnected.
2. Insert the thermocouple probe into the 'INPUT' and 'COM' jacks, observing polarity.
3. Turn on the meter and select the temperature (°C/°F) mode using**FUNC/AUTO**.
4. Place the tip of the thermocouple probe on the object or area to be measured.
5. Read the temperature value on the display.

6.10 NCV (Non-Contact Voltage) Measurement

1. Select the NCV mode using the appropriate button (often labeled NCV or part of the function cycle).
2. Bring the top front part of the clamp meter near the conductor or outlet you want to test for AC voltage.
3. The meter will indicate the presence of AC voltage through an audible beep and/or visual indicator on the display.

A hand wearing a white glove holds the EFUZCOCI GD166A Digital Clamp Meter near an electrical wall outlet, demonstrating its Non-Contact Voltage (NCV) measurement capability. The meter's display shows a reading, indicating the presence of voltage.

6.11 Inrush Current Measurement

1. Select the Inrush Current mode (often labeled 'INRUSH' or part of the function cycle).
2. Open the clamp jaw and enclose a single live conductor of the device you wish to measure.
3. Ensure the device is off. Turn on the device, and the meter will capture and display the peak inrush current.

7. Maintenance

7.1 Battery Replacement

When the battery indicator appears on the display, replace the batteries immediately to ensure accurate readings. Refer to Section 5.1 for battery installation instructions.

7.2 Cleaning

Wipe the meter's casing with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

8. Troubleshooting

If the meter does not function correctly, check the following common issues before seeking service:

Problem	Possible Cause	Solution
No display or dim display	Low batteries or incorrect battery installation	Replace batteries, check polarity.
Inaccurate readings	Damaged test leads, incorrect function selected, external interference	Check test leads, verify function, move away from strong electromagnetic fields.
No continuity beep	Open circuit, high resistance	Check connections, measure resistance to confirm.
Clamp measurement error	Multiple conductors in clamp, clamp not fully closed	Ensure only one conductor is clamped, close jaw completely.

9. Specifications

Parameter	Value
Model	GD166A
Display	6000 Counts
Power Requirement	3 x 1.5V AAA Batteries
Product Size	199 x 81 x 32 mm
Item Weight	50 Grams (approx.)
Safety Rating	CAT III 600V

Parameter	Value
Functions	AC/DC Voltage, AC Current, Resistance, Capacitance, Frequency, Temperature, Diode, Continuity, NCV, Inrush Current

10. Warranty and Support

EFUZCOCI products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.