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› EVTSCAN FS9030C Digital Clamp Multimeter User Manual

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Model: FS9030C

Brand: EVTSCAN

1. INTRODUCTION

The EVTSCAN FS9030C is a versatile digital clamp multimeter designed for accurate measurement of AC/DC current, AC/DC voltage, resistance, capacitance, frequency, and temperature. It features an ergonomic design, an LCD high-definition display, and intelligent anti-burn automatic recognition with overload protection, making it suitable for professional use, student applications, household electrical work, appliance repair, and automotive maintenance.

Package Contents:

- 1 x FS9030C Clamp Meter
- 2 x Test Leads (Red and Black)
- 1 x Temperature Probe
- 1 x Screwdriver
- 1 x Storage Bag
- 1 x User Manual (this document)



Figure 1: EVTSCAN FS9030C Digital Clamp Multimeter with included test leads, temperature probe, screwdriver, and storage bag.

2. SAFETY INFORMATION

Please read and understand all safety information before operating this meter. Failure to follow these instructions could result in electric shock, fire, or serious injury.

- Always ensure the meter is in good working condition and free from damage before use.
- Do not apply voltage or current that exceeds the maximum specified limits for the meter.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always disconnect power to the circuit under test before connecting or disconnecting test leads, especially when measuring resistance or capacitance.
- Ensure the test leads are properly seated in the input jacks.
- 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.
- Do not attempt to repair or modify the meter. Refer servicing to qualified personnel.
- Adhere to local and national safety codes.

3. PRODUCT OVERVIEW

The FS9030C clamp multimeter features an ergonomic design for comfortable handling and a clear LCD

display for easy reading. Below are images illustrating the key components and controls of the device.



Figure 2: Front view of the clamp meter, showing the display, rotary dial, and function buttons.



Figure 3: Angled view highlighting the clamp jaw and input terminals.



Figure 4: Side view of the clamp meter, showing the ergonomic grip.



Figure 5: Top-down angled view, providing a clear perspective of the rotary dial settings.



Figure 6: Rear view of the clamp meter, showing the battery compartment cover.



Figure 7: Close-up of the clamp jaw, used for non-contact current measurement.

4. SETUP

4.1 Battery Installation

The FS9030C requires three (3) 1.5V AAA batteries (not included). To install or replace batteries:

1. Ensure the meter is turned OFF.
2. Locate the battery compartment on the rear of the meter (refer to Figure 6).
3. Use the included screwdriver to loosen the screw securing the battery compartment cover.
4. Remove the cover.
5. Insert three 1.5V AAA batteries, observing the correct polarity (+ and -).
6. Replace the battery compartment cover and tighten the screw.

Note: Remove batteries if the meter will not be used for an extended period to prevent leakage.

4.2 Connecting Test Leads and Temperature Probe

For voltage, resistance, capacitance, and continuity measurements, connect the test leads:

- Insert the red test lead into the "VΩHz" input jack.
- Insert the black test lead into the "COM" (common) input jack.

For temperature measurements, connect the temperature probe:

- Insert the temperature probe's red plug into the "VΩHz" input jack.
- Insert the temperature probe's black plug into the "COM" input jack.

5. OPERATING INSTRUCTIONS

The FS9030C features a rotary dial for function selection and several buttons for additional features. The meter includes intelligent anti-burn automatic recognition and automatic overload protection.

5.1 Rotary Dial Functions

Turn the rotary dial to select the desired measurement function:

- **OFF:** Turns the meter off.
- **V~:** AC Voltage measurement.
- **V=:** DC Voltage measurement.
- **Ω/Cap/Diode/Continuity:** Resistance, Capacitance, Diode Test, and Continuity Test. Use the **SEL** button to cycle through these modes.
- **Hz/%:** Frequency and Duty Cycle measurement.
- **TEMP:** Temperature measurement (requires temperature probe).
- **LOZ:** Low Impedance Voltage measurement.
- **60A~/600A~:** AC Current measurement using the clamp jaw.
- **60A= /600A=:** DC Current measurement using the clamp jaw.

5.2 Button Functions

- ***:** Backlight button. Press to turn the display backlight on/off.
- **NCV:** Non-Contact Voltage detection. Press to activate NCV mode.
- **SEL:** Select button. Used to cycle through multiple functions available on a single rotary dial position (e.g., Ω, Capacitance, Diode, Continuity).
- **Hz%/REL:** In voltage or current modes, press to display frequency or duty cycle. In other modes, it may activate Relative mode.
- **H/T:** Data Hold button. Press to hold the current reading on the display. Press again to release.
- **MAX/MIN:** Maximum/Minimum value recording. Press to enter MAX/MIN mode. The meter will display

the maximum or minimum reading detected. Press again to cycle.

5.3 Performing Measurements

General Steps:

1. Turn the rotary dial to the desired function.
2. Connect test leads or position the clamp jaw as appropriate for the measurement.
3. Read the measurement on the LCD display.

Current Measurement (AC/DC):

- Turn the rotary dial to **60A~** or **600A~** for AC current, or **60A=** or **600A=** for DC current.
- Open the clamp jaw by pressing the trigger.
- 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 (the magnetic fields will cancel each other out).
- Close the clamp jaw securely.
- Read the current value on the display.

Voltage Measurement (AC/DC):

- Connect the red test lead to "VΩHz" and the black test lead to "COM".
- Turn the rotary dial to **V~** for AC voltage or **V=** for DC voltage.
- Touch the test probes to the points in the circuit where you want to measure voltage (in parallel with the load).
- Read the voltage value on the display.

Resistance Measurement:

- Connect the red test lead to "VΩHz" and the black test lead to "COM".
- Turn the rotary dial to the **Ω** position. If necessary, press **SEL** to select resistance mode.
- Ensure the circuit or component under test is de-energized before measuring resistance.
- Touch the test probes across the component.
- Read the resistance value on the display.

Continuity Test:

- Connect the red test lead to "VΩHz" and the black test lead to "COM".
- Turn the rotary dial to the **Ω** position. Press **SEL** until the continuity symbol (a speaker icon) appears.
- Touch the test probes to the two points you want to check for continuity.
- If there is continuity (low resistance), the meter will emit an audible beep.

Capacitance Measurement:

- Connect the red test lead to "VΩHz" and the black test lead to "COM".
- Turn the rotary dial to the **Ω** position. Press **SEL** until the capacitance symbol (a capacitor icon) appears.
- Ensure the capacitor is fully discharged before testing to prevent damage to the meter.
- Touch the test probes across the capacitor terminals.
- Read the capacitance value on the display.

Temperature Measurement:

- Connect the temperature probe as described in Section 4.2.
- Turn the rotary dial to **TEMP**.

- Place the tip of the temperature probe on or near the object whose temperature you wish to measure.
- Read the temperature value on the display.

Non-Contact Voltage (NCV) Detection:

- Press the **NCV** button.
- Move the top of the clamp meter near a live AC voltage source.
- The meter will indicate the presence of AC voltage through an audible beep and/or visual indicator on the display.

6. MAINTENANCE

6.1 Cleaning

To clean the meter, wipe the case with a damp cloth and a mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 4.1. Always use three new 1.5V AAA batteries.

6.3 Storage

If the meter is not used for an extended period, remove the batteries to prevent leakage and store the meter in a dry, cool environment, preferably in its storage bag.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your FS9030C Digital Clamp Multimeter.

- **Meter does not turn on:**
 - Check if the batteries are correctly installed and have sufficient charge. Replace if necessary.
 - Ensure the rotary dial is not in the "OFF" position.
- **Inaccurate readings:**
 - Check battery level; low batteries can affect accuracy.
 - Ensure test leads are fully inserted and making good contact.
 - Verify the correct function is selected on the rotary dial.
 - For current measurements, ensure only one conductor is within the clamp jaw.
 - For resistance/capacitance, ensure the circuit is de-energized.
- **No continuity beep:**
 - Ensure the meter is in continuity mode (speaker icon displayed).
 - Check if the circuit has high resistance or is open.
- **Display shows "OL" (Overload):**
 - The measured value exceeds the selected range. Select a higher range if available, or verify the circuit is within the meter's capabilities.

If the problem persists, contact customer support or refer to the warranty information.

8. SPECIFICATIONS

The following table details the technical specifications and measurement ranges for the EVTSCAN FS9030C Digital Clamp Multimeter.

8.1 Measurement Specifications

Function	Range	Resolution	Accuracy
AC Current	60A	0.01A	± (2.5% reading + 8 digit)
	600A	0.1A	
DC Current	60A	0.01A	± (2.5% reading + 8 digit)
	600A	0.1A	
DC Voltage	600mV	0.1mV	± (0.5% reading + 5 digit)
	6V	0.001V	
	60V	0.01V	
	600V	0.1V	
AC Voltage	6V	0.001V	± (0.8% reading + 5 digit)
	60V	0.01V	
	600V	0.1V	
Resistance	600Ω	0.1Ω	± (0.8% reading + 3 digit)
	6kΩ	0.001kΩ	
	60kΩ	0.01kΩ	
	600kΩ	0.1kΩ	
	6MΩ	0.001MΩ	
	60MΩ	0.01MΩ	
Capacitance	6.000nF	0.001nF	± (4.0% reading + 3 digit)
	60.00nF	0.01nF	
	600.0nF	0.1nF	
	6.000uF	1nF	
	60.00uF	10nF	
	600.0uF	100nF	
	6.000mF	1uF	
	60.00mF	10uF	

8.2 General Specifications

- **Model:** FS9030C
- **Material:** ABS
- **Battery:** 3 x 1.5V AAA (Not Included)
- **Display:** LCD, 6000 counts maximum
- **Safety Rating:** CAT III 600V
- **Item Weight:** Approximately 1.01 pounds
- **Manufacturer:** EVTSCAN

9. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation included with your purchase or visit the official EVTSCAN store. Specific warranty terms may vary by region and retailer.

EVTSCAN Store: [Visit the EVTSCAN Store on Amazon](#)