

Fluke 113-AMZN

Fluke 113 True-RMS Utility Multimeter User Manual

Model: 113-AMZN

1. INTRODUCTION

The Fluke 113 True-RMS Utility Multimeter is a compact, professional-grade digital multimeter designed for general purpose electrical testing. It provides accurate True-RMS measurements for both linear and non-linear loads, making it ideal for a wide range of applications. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your Fluke 113 multimeter.



Figure 1: Front view of the Fluke 113 True-RMS Utility Multimeter, showing the display, rotary dial, and input jacks. The display shows a reading of 600.0 VAC.

2. SAFETY INFORMATION

Always adhere to all safety precautions to prevent personal injury and damage to the meter or equipment under test. Read all safety information before using the product.

- **Electrical Shock Hazard:** Do not apply more than the rated voltage, as marked on the meter, between terminals or between any terminal and earth ground.
- **Explosion Hazard:** Do not use the meter in explosive gas, vapor, or dusty environments.
- **Fire Hazard:** Do not use the meter if it is damaged or operating abnormally.
- **Personal Protective Equipment:** Always wear approved eye protection and electrical safety gloves when working with live circuits.
- **Category Ratings:** The Fluke 113 is safety rated for CAT III 600V and CAT IV 300V. Ensure the meter's category rating is appropriate for the measurement environment.
- **Probe Inspection:** Inspect test leads for damaged insulation or exposed metal before use. Replace damaged leads.

3. PRODUCT OVERVIEW

The Fluke 113 Multimeter features a clear digital display, a central rotary dial for function selection, and push buttons for additional features. Input jacks are located at the bottom for test lead connections.

3.1. Controls and Indicators

- **Display:** 6000-count, 3-1/2 digit display with backlight. Shows measurement readings, units, and function indicators.
- **Rotary Dial:** Selects measurement functions such as V AC, V DC, Ohms, Continuity, Diode Test, and Capacitance.
- **HOLD Button:** Freezes the current display reading.
- **MIN MAX Button:** Records minimum and maximum readings over time.
- **RANGE Button:** Toggles between auto-ranging and manual ranging.
- **Backlight Button:** Activates or deactivates the display backlight.
- **Input Jacks:**
 - **COM:** Common terminal for all measurements.
 - **VΩCAP:** Input for Voltage, Resistance, and Capacitance measurements.

4. SETUP

4.1. Battery Installation

The Fluke 113 Multimeter uses a single 9V alkaline battery. The battery is typically pre-installed. If replacement is needed, refer to the Maintenance section.

4.2. Initial Inspection

Before first use, inspect the meter and test leads for any signs of damage. Ensure the battery compartment is securely closed.

5. OPERATING INSTRUCTIONS

Follow these steps for various measurements. Always ensure the meter is set to the correct function before connecting to a circuit.

5.1. Measuring AC/DC Voltage

1. Turn the rotary dial to the **V~** (AC Voltage) or **V—** (DC Voltage) position.
2. Insert the black test lead into the **COM** jack.
3. Insert the red test lead into the **VΩCAP** jack.
4. Connect the test probes across the circuit or component to be measured.
5. Read the voltage value on the display.

5.2. Measuring Resistance (Ohms)

1. Turn the rotary dial to the **Ω** (Ohms) position.
2. Insert the black test lead into the **COM** jack.
3. Insert the red test lead into the **VΩCAP** jack.
4. Ensure the circuit is de-energized before connecting the probes across the component.
5. Read the resistance value on the display.

5.3. Measuring Capacitance

1. Turn the rotary dial to the **Ω** (Ohms) position, then press the **RANGE** button repeatedly until the capacitance symbol (**⊥**) appears on the display.
2. Insert the black test lead into the **COM** jack.
3. Insert the red test lead into the **VΩCAP** jack.
4. Ensure the capacitor is fully discharged before connecting the probes.
5. Connect the test probes across the capacitor.
6. Read the capacitance value on the display.

5.4. Diode Test and Continuity

1. Turn the rotary dial to the **Ω** (Ohms) position, then press the **RANGE** button repeatedly until the diode symbol (**→|—**) or continuity symbol (**🔊**) appears.
2. Insert the black test lead into the **COM** jack.
3. Insert the red test lead into the **VΩCAP** jack.
4. For Diode Test: Connect the probes across the diode. The display shows the forward voltage drop.
5. For Continuity: Connect the probes across the circuit. The meter beeps if continuity is detected (resistance less than 25 Ohms).

6. MAINTENANCE

6.1. Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Clean the input jacks with cotton

swabs and alcohol.

6.2. Battery Replacement

When the battery symbol appears on the display, replace the 9V battery. To replace:

1. Turn the meter off and disconnect all test leads.
2. Remove the screw from the battery compartment cover on the back of the meter.
3. Lift off the cover.
4. Remove the old battery and replace it with a new 9V alkaline battery.
5. Replace the cover and secure with the screw.

6.3. Storage

Store the meter in a cool, dry place. If storing for extended periods, remove the battery to prevent leakage.

7. TROUBLESHOOTING

If the meter does not operate correctly, check the following:

- **No Display:** Check battery charge. Replace if low.
- **Incorrect Readings:** Ensure the rotary dial is set to the correct function and range. Check test lead connections.
- **"OL" on Display:** Indicates an overload or out-of-range measurement. Select a higher range or ensure the circuit is within the meter's capabilities.
- **Meter Does Not Respond:** Turn the meter off and then on again. If the issue persists, remove the battery for a few minutes and reinsert.

8. SPECIFICATIONS

Parameter	Value
AC/DC Voltage	600V
Resistance	60 kΩ
Capacitance	9,999 μF
Display Count	6000
Safety Rating	CAT III 600V, CAT IV 300V
Battery Type	9V Alkaline
Battery Life	Approx. 300 hours (without backlight)
Dimensions	10.5 x 6.5 x 3 inches (Package)
Weight	1.7 Pounds (Package)

9. CALIBRATION AND WARRANTY

Your Fluke 113 Multimeter is shipped with a NIST-Traceable Calibration Certificate with Data, ensuring it meets manufacturer's specifications and is ready for immediate use in most quality system standards.

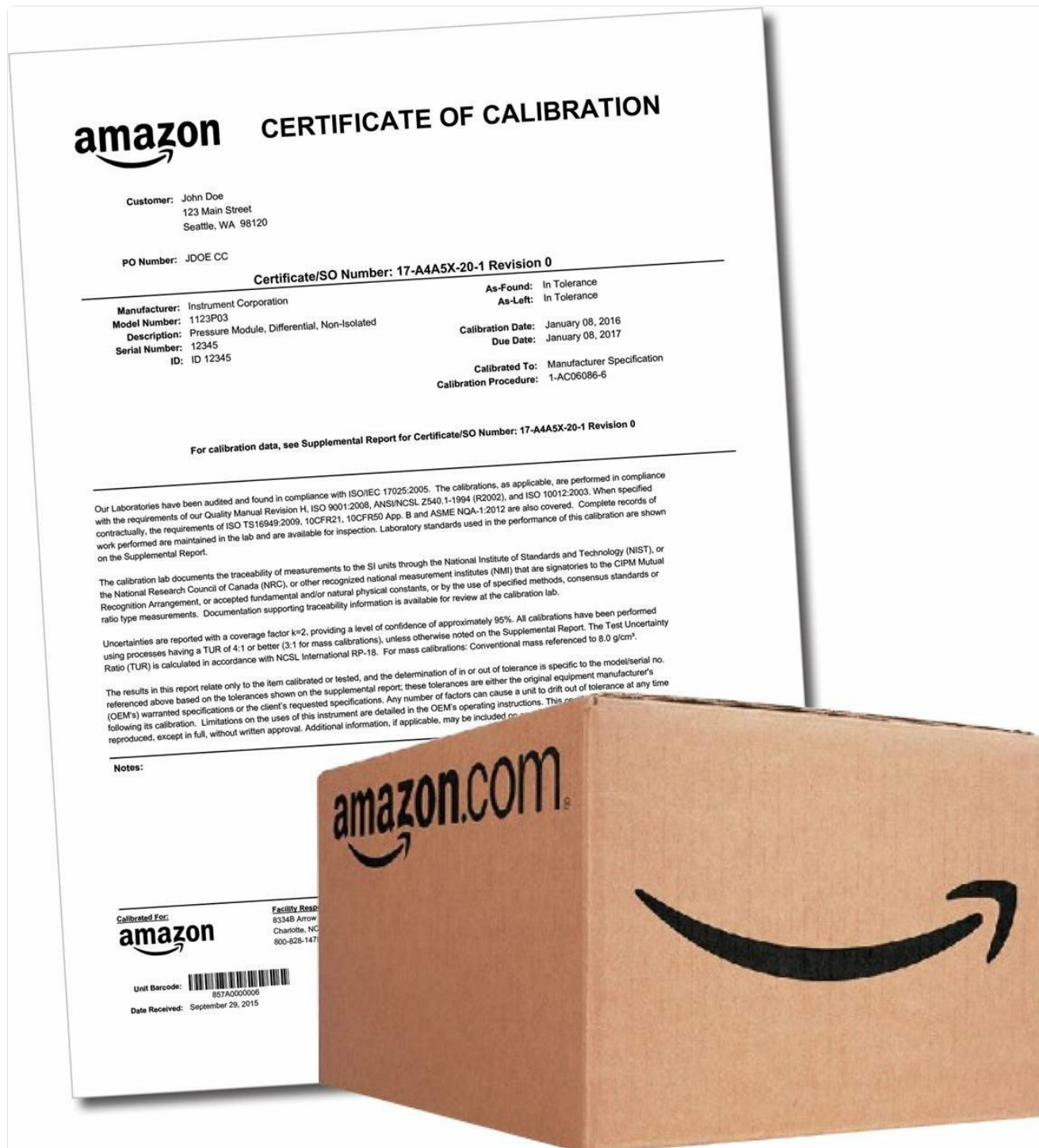


Figure 2: Example of a NIST-Traceable Calibration Certificate, indicating the product has been verified to meet specifications.

9.1. Protecting Your Purchase

To ensure you receive a genuine Fluke product with a valid warranty, it is recommended to source from local authorized distributors. Double-check that the seller is an authorized Fluke distributor.



Protect your purchase

Source from local authorized distributors.

Authorized distributors may sell **genuine Fluke** test tools and accessories online. **Double check** that the seller listed is an authorized Fluke distributor to ensure the product is genuine and comes with a valid **warranty**.




Figure 3: Information regarding purchasing from authorized distributors to ensure product authenticity and warranty validity.



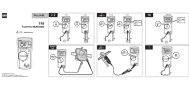
10. SUPPORT

For technical assistance, warranty claims, or service, please contact Fluke customer support. Refer to the official Fluke website for the most current contact information and support resources.

Visit the [Fluke Store on Amazon](#) for more information and products.

Related Documents - 113-AMZN

	<p>Fluke 110 True-RMS Multimeter: Technical Specifications and Features</p> <p>Detailed specifications and features of the Fluke 110 compact True-RMS multimeter, designed for precise electrical installation and troubleshooting. Includes accuracy, safety ratings, and included accessories.</p>
	<p>Fluke 116 True-rms Multimeter User Manual</p> <p>User manual for the Fluke 116 True-rms Multimeter, covering features, operation, safety information, and specifications.</p>
	<p>Fluke 323/324/325 Clamp Meter User Manual</p> <p>Comprehensive user manual for Fluke 323, 324, and 325 clamp meters, detailing features, safety precautions, specifications, and operational guidance for accurate electrical measurements.</p>

 <p>Fluke 106/107 Palm-sized Digital Multimeters</p> <p>Fluke 106 and 107 put measurements in the palm of your hand.</p> <p>Technical Data</p> <p>Fluke 106 and 107 are compact, rugged, and easy to use. They feature a large, high-contrast LCD display and a variety of measurement functions. The 106 is a true-rms multimeter, while the 107 is a standard multimeter. Both are available in a variety of configurations, including basic and advanced models.</p>	<p>Fluke 106/107 Palmsized Digital Multimeters: Technical Specifications and Features</p> <p>Detailed technical specifications, product highlights, and general information for the Fluke 106 and 107 palmsized digital multimeters. Learn about their electrical specifications, accuracy, features, and included equipment.</p>
 <p>Fluke 179 Digital Multimeter</p> <p>The Fluke 179 is a true-rms digital multimeter designed for efficient electrical and HVAC maintenance. It features a large, high-contrast LCD display and a variety of measurement functions. The 179 is available in a variety of configurations, including basic and advanced models.</p>	<p>Fluke 179 Digital Multimeter: Maintenance and Field Service Guide</p> <p>Discover the Fluke 179 True-rms Digital Multimeter, designed for efficient electrical and HVAC maintenance. Learn about its features, specifications, and recommended accessories for reliable field service.</p>
 <p>Fluke 116 True-rms Multimeter</p> <p>The Fluke 116 is a true-rms digital multimeter designed for efficient electrical testing. It features a large, high-contrast LCD display and a variety of measurement functions. The 116 is available in a variety of configurations, including basic and advanced models.</p>	<p>Fluke 116 True-rms Multimeter: Quick Reference Guide</p> <p>Quick reference guide for the Fluke 116 True-rms Multimeter, detailing its functions, measurement capabilities, and usage for electrical testing.</p>