MOLLIFII 117-A

MOLLIFII 117-A Digital Multimeter User Manual

Model: 117-A

1. Introduction

The MOLLIFII 117-A is a compact, True RMS (TRMS) digital multimeter designed for professional and home use. It offers accurate measurements for various electrical parameters, including AC/DC voltage, AC/DC current, resistance, and continuity. Key features include Non-Contact Voltage (NCV) detection, Data Hold, and Min/Max recording, making it a versatile tool for electrical testing and troubleshooting.

2. Safety Information

Always adhere to safety precautions when using this multimeter. Failure to do so may result in electric shock, injury, or damage to the meter or equipment under test.

- This meter is rated for **CAT III 600V**. Do not exceed these voltage limits.
- Inspect test leads for damage before each use. Replace if insulation is compromised.
- Do not use the meter if it appears damaged or is not operating correctly.
- Ensure the rotary switch is in the correct position for the measurement being performed.
- Always disconnect power to the circuit before making resistance or continuity measurements.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC, as they pose a shock hazard.

3. Package Contents

Verify that all items are present and undamaged upon opening the package:

- MOLLIFII 117-A Digital Multimeter
- (1 Pair) 4 mm Silicone Test Lead Set
- Holster
- Quick Reference Guide

4. Product Features

- Digital Multimeter with CAT III 600V safety rating
- Measures AC/DC Amps up to 10A
- True RMS (TRMS) for accurate AC measurements
- Non-Contact Voltage (NCV) Detection (Volt Alert)
- Audible Continuity Test
- Data Hold function
- MIN/MAX recording mode
- Automatic Voltage (AUTO-V) and Low Impedance (LoZ) modes
- 6,000 count display
- Temperature Range: 14°F to 122°F (-10°C to 50°C)

5. Setup

5.1 Battery Installation

The multimeter typically uses standard AA or AAA batteries (not specified, assume common type). To install or replace batteries:

1. Ensure the multimeter is turned OFF.
2. Locate the battery compartment on the rear of the meter.
3. Use a screwdriver to open the battery cover.
4. Insert new batteries, observing correct polarity (+/-).
5. Securely close the battery cover.

5.2 Connecting Test Leads

Connect the test leads to the appropriate input jacks:

- Insert the **black** test lead into the **COM** (Common) jack.
- For most voltage, resistance, and continuity measurements, insert the **red** test lead into the **VΩ** jack.
- For current measurements up to 10A, insert the **red** test lead into the **10A FUSED** jack.

Figure 1: Front view of the MOLLIFII 117-A Digital Multimeter, illustrating the display, rotary selector, function buttons, and input terminals. The display shows 'Lo V AC', indicating a low AC voltage reading. The rotary dial is set to the 'OFF' position. Input jacks are labeled 'A', 'COM', and 'VΩ'.

6. Operating Instructions

6.1 Power On/Off

Rotate the central dial from the **OFF** position to any desired measurement function to turn the meter ON. To turn OFF, rotate the dial back to the **OFF** position.

6.2 Measurement Functions

Select the desired function using the rotary dial:

- **AC Voltage (V~) / DC Voltage (V-)**: Rotate the dial to **V~** or **V-**. The meter will automatically select the range. For AC voltage, the meter uses True RMS for accurate readings.
- **Resistance (Ω)**: Rotate the dial to **Ω**. Connect test leads across the component to measure resistance.
- **Continuity (Speaker Icon)**: Rotate the dial to the **Ω** position and press the **RANGE** button (or similar function button) to cycle to continuity mode. An audible tone indicates continuity.
- **AC Current (A~) / DC Current (A-)**: Rotate the dial to **A~** or **A-**. Ensure the red test lead is in the **10A**

FUSED jack. Connect the meter in series with the circuit.

- **Non-Contact Voltage (NCV) Detection (Volt Alert)**: This feature allows detection of AC voltage without direct contact. Activate by rotating the dial to the **Volt Alert** position. Bring the top of the meter near a live conductor. The meter will indicate the presence of AC voltage visually and/or audibly.
- **AUTO-V** / **LoZ**: This setting automatically detects AC or DC voltage and presents a low input impedance to prevent ghost voltages from affecting readings.

6.3 Function Buttons

- **HOLD**: Freezes the current reading on the display. Press again to release.
- **MIN/MAX**: Records the minimum and maximum readings over time. Press to cycle through MIN, MAX, and current readings.
- **RANGE**: Manually selects the measurement range instead of auto-ranging. Press to cycle through available ranges.

7. Maintenance

7.1 Cleaning

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

7.2 Battery Replacement

When the battery indicator appears on the display, replace the batteries as described in Section 5.1.

7.3 Fuse Replacement

If the current measurement function stops working, the fuse may need replacement. Refer to the specific instructions in the full manual for fuse type and replacement procedure, as this typically involves opening the meter casing.

8. Troubleshooting

- **Meter does not power on:** Check battery installation and ensure batteries are not depleted.
- **No reading or 'OL' (Overload) displayed:** Ensure test leads are correctly connected and the rotary switch is set to the appropriate function and range. 'OL' often indicates a reading beyond the meter's range or an open circuit.
- **Inaccurate readings:** Verify test lead connections, check battery level, and ensure the correct measurement function is selected.
- **Current measurement not working:** Check the fuse for the current input jack (10A FUSED).

9. Specifications

Parameter	Value
Instrument Safety Rating	CAT III 600V
Maximum AC Voltage Measurement	600 V

Parameter	Value
Maximum DC Voltage Measurement	600 V
Maximum AC Current Measurement	10 A
Basic AC Voltage Accuracy	1.0% + 3 (DC, 45 Hz to 500 Hz), 2.0% + 3 (500 Hz to 1 kHz)
Basic DC Voltage Accuracy	+/-0.50% + 2 Digits
Basic DC Current Accuracy	1.0% + 3
Instrument Counts	6,000
Audible Continuity	Yes
Data Hold	Yes
Special Features	Non-Contact Voltage Detection
Operating Temperature Range	14°F to 122°F (-10°C to 50°C)

10. Warranty and Support

Specific warranty details are not provided in this document. For warranty information, please refer to the documentation included with your purchase or contact MOLLIFII customer support directly. For technical assistance or further inquiries, please visit the official MOLLIFII website or contact their customer service department.