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Southwire DMMW3

Southwire Woods DMMW3 Pocket Multimeter Instruction Manual

Model: DMMW3

1. INTRODUCTION

This manual provides essential instructions for the safe and effective use of your Southwire Woods DMMW3 Pocket Multimeter. The DMMW3 is a compact, 10-function digital multimeter designed for various electrical measurements in home repair and general electrical tasks. It features a CAT III 300V UL rating, ensuring safety for specific electrical environments.

Please read this manual thoroughly before operating the device and retain it for future reference.

2. SAFETY INFORMATION

Always adhere to the following safety precautions to prevent personal injury and damage to the multimeter or equipment under test.

- Do not exceed the maximum input limits for any function. The DMMW3 is rated CAT III 300V.
- Ensure the function switch is in the correct position for the measurement being performed.
- Never use the multimeter if it appears damaged or if the test leads are compromised.
- Exercise extreme caution when working with live circuits. High voltages can be dangerous.
- Always disconnect power to the circuit before making resistance, continuity, diode, or capacitance measurements.
- Replace the battery when the low battery indicator appears to ensure accurate readings.
- Do not operate the multimeter in explosive gas, vapor, or dusty environments.

3. PRODUCT OVERVIEW

The Southwire Woods DMMW3 is a compact digital multimeter featuring a 4000-count display. It includes test leads and operates on a CR2032 battery.

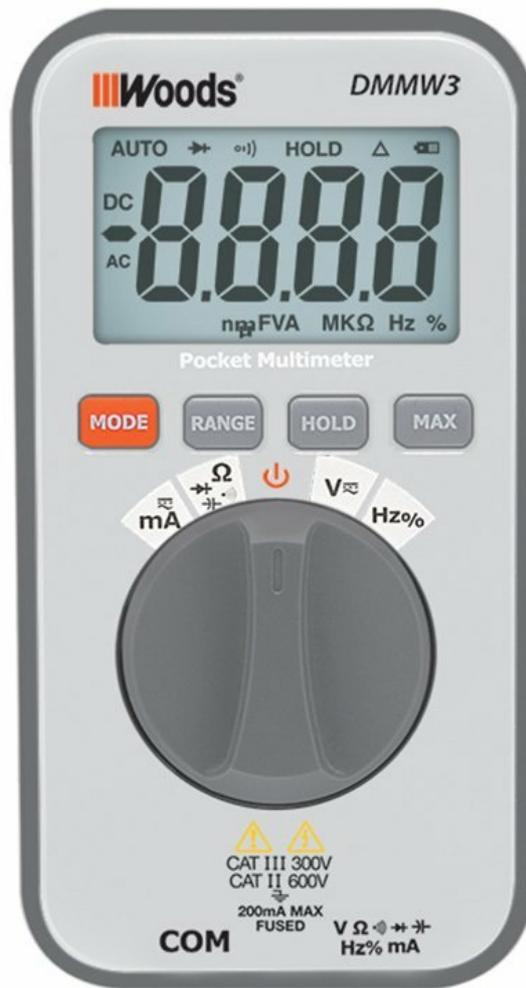


Figure 1: Southwire Woods DMMW3 Pocket Multimeter. This image shows the compact design of the multimeter, including its display and input jacks for test leads.

3.1 Key Features

- 10 Test Functions: AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency, Duty Cycle, Diode Test, Continuity.
- Auto-Ranging for most functions.
- Range-Hold button for freezing readings.
- 4000-count digital display.
- Compact pocket-sized design.
- CAT III 300V UL rated.

4. SETUP

4.1 Battery Installation

The DMMW3 requires one CR2032 lithium-manganese dioxide battery for operation. The battery is typically included but may need to be installed before first use.

1. Locate the battery compartment on the back of the multimeter.
2. Use a small screwdriver to open the battery compartment cover.
3. Insert the CR2032 battery, ensuring the correct polarity (+/-) as indicated inside the compartment.
4. Securely close the battery compartment cover.

4.2 Connecting Test Leads

Insert the red test lead into the positive (+) input jack and the black test lead into the common (COM) input jack. Ensure a secure connection.

5. OPERATING INSTRUCTIONS

Turn the rotary switch to the desired function. The multimeter is auto-ranging for most functions, simplifying operation.

5.1 Measuring AC/DC Voltage (V~ / V-)

1. Set the rotary switch to the V~ (AC Voltage) or V- (DC Voltage) position.
2. Connect the test leads in parallel to the circuit or component you wish to measure.
3. Read the voltage value on the display.

5.2 Measuring Resistance (Ω)

1. **Ensure power is OFF to the circuit.**
2. Set the rotary switch to the Ω (Resistance) position.
3. Connect the test leads across the component.
4. Read the resistance value on the display.

5.3 Continuity Test ()))

1. **Ensure power is OFF to the circuit.**
2. Set the rotary switch to the continuity position (often shared with resistance or diode).
3. Connect the test leads across the circuit or component.
4. A continuous beep indicates a low resistance path (continuity).

5.4 Diode Test ($\rightarrow|$)

1. **Ensure power is OFF to the circuit.**
2. Set the rotary switch to the diode test position (often shared with resistance or continuity).
3. Connect the red lead to the anode and the black lead to the cathode of the diode.
4. A forward voltage drop will be displayed. Reverse the leads; an open circuit (OL) should be displayed for a good diode.

5.5 Measuring Capacitance (F)

1. **Ensure power is OFF to the circuit and discharge the capacitor before testing.**
2. Set the rotary switch to the F (Capacitance) position.
3. Connect the test leads across the capacitor.
4. Read the capacitance value on the display.

5.6 Measuring Frequency (Hz) and Duty Cycle (%)

1. Set the rotary switch to the Hz/% position.
2. Connect the test leads in parallel to the signal source.
3. The display will show the frequency. Use the function button (if available) to toggle to duty cycle measurement.

5.7 Measuring AC/DC Current (A~ / A-)

Note: The input data does not specify current ranges or dedicated current input jacks beyond the main positive/common. For a pocket DMM, current measurement might be limited or require specific lead placement. Always refer to the device's markings.

1. **Ensure power is OFF to the circuit.**
2. Set the rotary switch to the A~ (AC Current) or A- (DC Current) position.
3. Break the circuit and connect the multimeter in series with the load.
4. Apply power to the circuit.
5. Read the current value on the display.
6. **Always disconnect power and remove the multimeter from the circuit before restoring normal operation.**

6. MAINTENANCE

6.1 Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep the input terminals free of dirt and moisture.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the CR2032 battery promptly to ensure accurate measurements. Follow the steps outlined in Section 4.1.

6.3 Storage

If the multimeter is not used for an extended period, remove the battery to prevent leakage. Store the device in a cool, dry place, away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

- **No display or faint display:**
 - Check battery installation and polarity.
 - Replace the CR2032 battery.
- **"OL" (Overload) displayed:**
 - **The measured value exceeds the selected range (if not auto-ranging) or the meter's maximum capability.**
 - **Ensure the correct function is selected for the measurement.**
 - **For resistance/continuity/diode, ensure the circuit is de-energized.**
- **Inaccurate readings:**
 - **Ensure test leads are properly connected and not damaged.**
 - **Check battery level; replace if low.**

- **Verify the correct function and range are selected.**
- **Ensure proper connection to the circuit under test.**

8. SPECIFICATIONS

Parameter	Value
Model Number	DMMW3
Manufacturer	Southwire
Style	Pocket
Power Source	CR2032 1 (Lithium-Manganese Dioxide)
Safety Rating	CAT III 300V, UL Compliant
Display	4000 Count Digital Display
Voltage Accuracy	+/- 1% to 1.5% (1mV to 600V)
Resistance Accuracy	+/- 1% to 3.5%
Current Accuracy	+/- 2%
Capacitance Accuracy	+/- 5%
Frequency Accuracy	+/- 1.2%
Included Components	Meter, Test Leads, CR2032 Battery
Country of Origin	China
Package Dimensions	22.86 x 12.7 x 7.62 cm (8.87 x 1.58 x 5.12 inches)
Package Weight	0.2 kg (0.44 lbs)
UPC	032886958465

9. WARRANTY AND SUPPORT

For warranty information and technical support, please contact Southwire customer service. Refer to the product packaging or the official Southwire website for the most current contact details.

Manufacturer: Southwire

