

Walfont 701069623536

Walfont NCV 6000 Digital Multimeter User Manual

Model: 701069623536

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1. INTRODUCTION

This Walfont NCV 6000 Digital Multimeter is a versatile and reliable measuring tool designed for various electrical tasks. It provides accurate measurements for DC/AC voltage, current, resistance, capacitance, frequency, and temperature. Its user-friendly design makes it suitable for electricians, hobbyists, and professionals engaged in automotive, household, and industrial electrical troubleshooting.

Key features include a large backlit LCD screen for clear readings in low-light conditions, a low battery indicator, and an automatic shutdown function to conserve power. The Non-Contact Voltage (NCV) function enhances safety by allowing detection of live wires without direct contact.

2. SAFETY INFORMATION

Always adhere to safety precautions when using electrical testing equipment. Failure to do so may result in injury or damage to the device.

- Read and understand all instructions before use.
- Do not apply voltage or current that exceeds the maximum specified limits for the meter.
- Exercise extreme 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 making connections or breaking connections.
- Ensure the test leads are in good condition and free from damage.
- Do not operate the meter if it appears damaged or if the case is open.
- Use the correct function and range for each measurement.
- The meter meets safety standards EN61010-1, -2-030, EN61010-2-033, CAT.III 1000 V, CAT.IV 600 V.

3. SETUP

3.1 Unpacking and Inspection

Carefully remove the multimeter and its accessories from the packaging. Inspect all items for any signs of damage. If any damage is found, contact customer support immediately.



Image: Walfront NCV 6000 Digital Multimeter with included test leads and thermocouple. The multimeter is orange and black, featuring a large LCD display and a rotary dial for function selection. The test leads are red and black, and the thermocouple is a white braided wire with red and black connectors.

3.2 Battery Installation

The multimeter requires 4 x 1.5V AAA batteries (not included). To install the batteries:

1. Locate the battery compartment cover on the back of the multimeter.
2. Use a screwdriver to open the battery compartment.
3. Insert the 4 AAA batteries, ensuring correct polarity (+ and -).
4. Replace the battery compartment cover and secure it with the screw.

3.3 Connecting Test Leads

Connect the red test lead to the "VΩmA" input jack and the black test lead to the "COM" input jack for most measurements. For high current measurements (up to 20A), connect the red test lead to the "20A" input jack.

4. OPERATING INSTRUCTIONS

This section provides general operating instructions for common measurements. Always refer to the specific function details for accurate usage.

4.1 Power On/Off

Press the power button to turn the multimeter ON. The device features an automatic shutdown function to save power after a period of inactivity.

4.2 Measuring DC/AC Voltage

1. Turn the rotary dial to the desired DCV (DC Voltage) or ACV (AC Voltage) range.
2. Connect the red test lead to the positive side of the circuit and the black test lead to the negative side (for DC) or across the points where voltage is to be measured (for AC).
3. Read the voltage value on the LCD screen.

4.3 Measuring Current (DC/AC)

1. **Important:** Disconnect power to the circuit before measuring current.
2. Turn the rotary dial to the desired DCA (DC Current) or ACA (AC Current) range.
3. Break the circuit and connect the multimeter in series with the circuit. For currents up to 600mA, use the "VΩmA" jack. For currents up to 20A, use the "20A" jack.
4. Apply power to the circuit and read the current value on the LCD screen.

4.4 Measuring Resistance

1. **Important:** Ensure the circuit is de-energized before measuring resistance.
2. Turn the rotary dial to the "Ω" (Resistance) range.
3. Connect the test leads across the component to be measured.
4. Read the resistance value on the LCD screen.

4.5 Non-Contact Voltage (NCV) Detection

The NCV function allows for safe detection of AC voltage without direct contact with live wires.

1. Turn the rotary dial to the NCV function.
2. Bring the tip of the multimeter close to the wire or electrical outlet.
3. The meter will indicate the presence of AC voltage through an audible beep and/or visual indicator on the screen.

Your browser does not support the video tag.

Video: Demonstrates AC voltage testing using a non-contact voltage detector. The video shows the device being used near electrical wires, indicating the presence of voltage with a red light and a numerical reading on the screen. This video is provided by AIMOMeter-UK.

Your browser does not support the video tag.

Video: Shows the NCV function for live wire detection. The device is moved near a power source, and its display changes to indicate a live wire, accompanied by an audible alert. This video is provided by AIMOMeter-UK.

4.6 Other Functions

The multimeter also supports:

- **Capacitance Measurement:** Turn the dial to the capacitance range and connect the leads across the capacitor (ensure it's discharged).
- **Frequency Measurement:** Select the frequency function and connect the leads to the signal source.
- **Temperature Measurement:** Use the included thermocouple and select the temperature function.
- **Diode Test:** Select the diode function and connect leads across the diode.
- **Transistor (HFE) Test:** Use the dedicated HFE socket for transistor testing.
- **Continuity Test:** Select the continuity function. An audible beep indicates continuity.

5. MAINTENANCE

5.1 Cleaning

Wipe the meter with a dry, soft cloth. Do not use abrasives or solvents. Keep the display clean for optimal readability.

5.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate measurements. Follow the battery installation steps in Section 3.2.

5.3 Storage

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

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity, replace batteries.
Inaccurate readings.	Incorrect function/range selected; damaged test leads; low battery.	Select appropriate function/range; inspect and replace test leads if damaged; replace batteries.
"OL" displayed on screen.	Overload or out of range measurement.	Select a higher range or ensure the measured value is within the meter's capabilities.
No NCV detection.	No AC voltage present; NCV function not selected.	Verify power is present; ensure NCV function is active.

7. SPECIFICATIONS

Parameter	Value
Display	6000 Counts
True RMS	Yes
AC Voltage Bandwidth	1 kHz

Parameter	Value
DC Voltage Range	600mV/6V/60V/600V/1000V (±0.5%+3)
AC Voltage Range	6V/60V/600V/750V (±0.8%+3)
DC Current Range	60uA/6mA/60mA/600mA (±0.8%+3), 20A (±1.0%+3)
AC Current Range	6mA/60mA/600mA (±1.0%+3), 20A (±1.5%+3)
Resistance Range	600Ω/6kΩ/20kΩ/600kΩ/6MΩ (±0.8%+3), 60MΩ (±1.2%+3)
Capacitance Range	6nF/60nF/600nF/6uF/60uF/600uF/6mF (±4.0%+3), 100mF (±5.0%+3)
Frequency Range	60/600/6K/60K/600K/6M/10MHz (±1.0%+3)
Duty Cycle	5% ~ 95% (±2.0%+3)
Temperature Range	-20°C ~ 1000°C (±1.0%+3)
Transistor (HFE)	0 ~ 1000 (±1.0%+3)
Continuity	Yes (High, Medium, Low LED signal intensity display)
Diode Test	Yes
Live Wire Detection	Yes (High, Medium, Low LED signal intensity display)
Low Battery Indicator	Yes
Automatic Shutdown	Yes
Backlight	Yes
Power Supply	4 x 1.5V AAA batteries (not included)
Weight	510g
Dimensions	19 x 8.9 x 5 cm
Safety Rating	EN61010-1, -2-030, EN61010-2-033, CAT.III 1000 V, CAT.IV 600 V

8. WARRANTY & SUPPORT

For warranty information and customer support, please refer to the documentation included with your purchase or contact Walfront customer service directly. Keep your purchase receipt as proof of purchase for warranty claims. Typical return policy duration is 30 days for refund/replacement, as per Amazon's standard policy for this product.

