

Homely M890G

Homely M890G Digital Multimeter User Manual

Model: M890G

1. INTRODUCTION

Thank you for choosing the Homely M890G Digital Multimeter. This device is a portable, battery-powered digital multimeter designed for measuring AC/DC voltage, AC/DC current, resistance, capacitance, frequency, temperature, diode, and transistor hFE. It features a clear digital display, data hold function, and auto power-off for convenience and efficiency. Please read this manual thoroughly before use to ensure safe and proper operation.

2. SAFETY INFORMATION

WARNING: To avoid electric shock or personal injury, and to avoid damage to the meter or to the equipment under test, observe the following safety rules:

- Always ensure the meter is in the correct function and range before making measurements.
- Do not apply more than the rated voltage, as marked on the meter, between the terminals or between any terminal and earth ground.
- Use extreme caution when working with voltages above 60V DC or 30V AC RMS. Such voltages pose a shock hazard.
- Disconnect the test leads from the circuit before changing functions or ranges.
- Do not use the meter if it appears damaged or if the insulation on the test leads is compromised.
- Remove the test leads from the meter before opening the battery cover or fuse cover.
- Replace the battery as soon as the low battery indicator appears to ensure accurate readings.
- Do not operate the meter in explosive gas, vapor, or dust environments.

3. PACKAGE CONTENTS

Verify that all items listed below are present and undamaged:

- Homely M890G Digital Multimeter
- Test Leads (one red, one black)

- K-Type Thermocouple Temperature Probe
- User Manual



Figure 3.1: Contents of the Homely M890G Digital Multimeter package, including the multimeter, red and black test leads, a K-type thermocouple, and the instruction manual.

4. PRODUCT OVERVIEW

The Homely M890G Digital Multimeter features a robust design with a clear LCD display and a rotary switch for function selection.

4.1 Front Panel Layout



Figure 4.1: Detailed front view of the M890G multimeter, highlighting the LCD display, function rotary switch, and input terminals. The display shows '00.0' and test leads are connected.

- **LCD Display:** Shows measurement readings, units, and function indicators.
- **Rotary Switch:** Used to select the desired measurement function (e.g., V~, V=, A~, A=, Ω , $^{\circ}\text{C}$, Hz, F, Diode, hFE).
- **Function Buttons:** (e.g., HOLD, RANGE, REL, Hz/DUTY, SELECT) for additional features.
- **Input Jacks:**
 - **COM:** Common terminal for the black test lead.
 - **V Ω Hz:** Input for voltage, resistance, frequency, capacitance, diode, and continuity measurements (red test lead).
 - **mA:** Input for milliampere current measurements (red test lead).
 - **20A MAX:** Input for high current measurements up to 20A (red test lead).

4.2 Rear Features



Figure 4.2: Views of the M890G multimeter from the side and rear, illustrating the integrated kickstand for hands-free operation and the battery compartment cover.

- **Kickstand:** Allows the meter to stand upright for easier viewing.
- **Battery Compartment:** Located on the rear, secured by screws, for battery replacement.

5. SETUP

5.1 Battery Installation

The M890G multimeter requires a 9V battery (not always included). To install or replace the battery:

1. Ensure the multimeter is turned off and test leads are disconnected.
2. Locate the battery compartment cover on the back of the meter.
3. Unscrew the retaining screw(s) and carefully remove the cover.
4. Connect a new 9V battery to the battery clip, observing correct polarity.
5. Place the battery into the compartment and replace the cover, securing it with the screw(s).

5.2 Connecting Test Leads

Always connect the black test lead to the **COM** jack. Connect the red test lead to the appropriate input jack based on the measurement type:

- For Voltage, Resistance, Capacitance, Frequency, Diode, and Continuity measurements, connect the red lead to the **VΩHz** jack.
- For current measurements up to 500mA, connect the red lead to the **mA** jack.
- For current measurements up to 20A, connect the red lead to the **20A MAX** jack.

6. OPERATING INSTRUCTIONS

Before taking any measurement, ensure the test leads are correctly connected and the rotary switch is set to the desired function and range.

6.1 Power On/Off

Turn the rotary switch from the OFF position to any desired function to power on the meter. To power off, turn the rotary switch back to the OFF position. The meter features an auto power-off function to conserve battery life after a period of inactivity.

6.2 Measuring DC Voltage (V=)

1. Connect the black test lead to **COM** and the red test lead to **VΩHz**.
2. Set the rotary switch to the desired DC Voltage (V=) range. If the voltage is unknown, start with the highest range and decrease as needed.
3. Connect the test leads in parallel to the circuit or component under test.
4. Read the voltage value on the LCD display.

6.3 Measuring AC Voltage (V~)

1. Connect the black test lead to **COM** and the red test lead to **VΩHz**.
2. Set the rotary switch to the desired AC Voltage (V~) range.
3. Connect the test leads in parallel to the AC source or component.
4. Read the voltage value on the LCD display.

6.4 Measuring Resistance (Ω)

1. Ensure the circuit is de-energized before measuring resistance.
2. Connect the black test lead to **COM** and the red test lead to **VΩHz**.
3. Set the rotary switch to the desired Resistance (Ω) range.
4. Connect the test leads across the component whose resistance is to be measured.
5. Read the resistance value on the LCD display.

6.5 Measuring DC Current (A=)

CAUTION: Never connect the meter in parallel to a voltage source when measuring current. This can blow the fuse or damage the meter.

1. De-energize the circuit.
2. Connect the black test lead to **COM**. Connect the red test lead to **mA** for currents up to 500mA, or to **20A MAX** for currents up to 20A.
3. Set the rotary switch to the appropriate DC Current (A=) range.

4. Open the circuit where the current is to be measured and connect the meter in series with the load.
5. Re-energize the circuit and read the current value on the LCD display.

6.6 Measuring Temperature (°C)

1. Connect the K-type thermocouple to the appropriate input jacks (usually **VΩHz** and **COM**, observing polarity if indicated).
2. Set the rotary switch to the Temperature (°C) function.
3. Place the tip of the thermocouple on or near the object whose temperature is to be measured.
4. Read the temperature value on the LCD display.

6.7 Other Functions

- **Continuity Test:** Set the rotary switch to the continuity symbol. A built-in buzzer will sound if the resistance is below a certain threshold.
- **Diode Test:** Set the rotary switch to the diode symbol. Connect the red lead to the anode and black lead to the cathode of the diode. The forward voltage drop will be displayed.
- **Transistor hFE Test:** Insert the transistor into the hFE socket on the meter, ensuring correct Emitter, Base, Collector (EBC) orientation for NPN or PNP types. Set the rotary switch to hFE.
- **Capacitance (F):** Set the rotary switch to the capacitance range. Connect the leads across the capacitor (ensure it is discharged first).
- **Frequency (Hz):** Set the rotary switch to the frequency range. Connect the leads to the signal source.

7. MAINTENANCE

7.1 Cleaning

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

7.2 Battery Replacement

When the low battery indicator appears on the display, replace the 9V battery as described in Section 5.1. Failure to do so may result in inaccurate readings.

7.3 Fuse Replacement

If the meter fails to measure current, the fuse may be blown. Refer to the specifications for the correct fuse type. To replace the fuse:

1. Ensure the meter is off and all test leads are disconnected.
2. Open the battery compartment cover (and potentially an additional fuse cover, depending on the model).
3. Carefully remove the old fuse and replace it with a new one of the identical type and rating.
4. Securely close all covers.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No display or dim display	Dead or low battery	Replace the 9V battery.
Incorrect readings	Incorrect function/range selected; poor test lead connection; low battery	Verify function/range; check lead connections; replace battery.
Cannot measure current	Blown fuse; incorrect input jack	Check and replace fuse if necessary; ensure red lead is in mA or 20A MAX jack.
"OL" or "1" displayed	Overload (measurement exceeds range); open circuit	Select a higher range; check for open circuit in the component or leads.



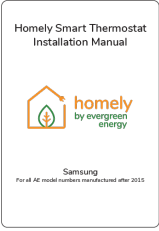

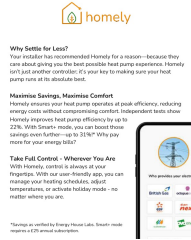
9. SPECIFICATIONS

Feature	Detail
Brand	Homely
Model Number	M890G
Display Type	Digital Display
Power Source	Battery Powered (9V)
Operating Temperature	0 - 40 °C (32 - 104 °F)
Dimensions	Approximately 176 x 88 x 38 mm
Measurement Type	Multimeter (AC/DC Volt, Amp, Ohm, Temperature, Frequency, Capacitance, Diode, hFE)
Included Components	Multimeter, Test Leads, K-Type Thermocouple

10. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Homely M890G Digital Multimeter, please refer to the documentation provided at the time of purchase or contact your retailer. Keep your purchase receipt as proof of purchase.

Related Documents - M890G

 <p>Homely System Installation Manual</p> <p>Samsung For all AE model numbers manufactured after 2015</p>	<p>Homely System Installation Manual - Samsung AE Models</p> <p>Installation manual for the Homely System, including Homely Hub and Homely Node, designed for Samsung AE model heat pumps manufactured after 2015. Covers requirements, setup, configuration, and checks.</p>
 <p>homely Installation Manual</p>	<p>Homely Installation Manual: Smart Heat Pump Control</p> <p>Comprehensive installation manual for the Homely smart heat pump control system. Learn how to install and configure Homely Hub and Node for efficient home heating.</p>
 <p>Homely Smart Thermostat Installation Manual</p> <p>homely by evergreen energy</p> <p>Samsung For all AE model numbers manufactured after 2015</p>	<p>Homely Smart Thermostat Installation Manual - Setup Guide</p> <p>Comprehensive installation manual for the Homely Smart Thermostat system, including Homely Hub and Node. Covers setup, wiring, configuration, and safety for Samsung AE models.</p>
 <p>homely Installation Manual</p>	<p>Homely Installation Guide: Smart Heat Pump Control Setup</p> <p>Official installation guide for the Homely smart device. Learn how to set up and integrate Homely with your heat pump for enhanced control and efficiency. Includes safety, compatibility, and video resources.</p>
 <p>Unlock the Full Potential of Your Heat Pump with Homely</p> <p>homely</p> <p>Why Settle for Less? Your installer has recommended Homely for a reason - because they can show you the best possible heat pump experience. Homely isn't just another controller; it's your key to making sure your heat pump runs at its absolute best.</p> <p>Maximize Savings, Maximize Comfort Homely ensures your heat pump operates at peak efficiency, reducing energy costs without compromising comfort. Independent tests show Homely improves heat pump efficiency by up to 23%. With Smart mode, you can boost those savings even further - up to 31%* Why pay more for your energy bill?</p> <p>Take Full Control - Whenever You Are With Homely, control is always at your fingertips. With our user-friendly app, you can manage your heating schedule, adjust temperatures, or activate holiday mode - no matter where you are.</p> <p>*Savings as verified by Energy Trust of Oregon. Smart mode requires a 23% annual subscription.</p>	<p>Homely: Optimize Your Heat Pump for Maximum Savings and Comfort</p> <p>Discover Homely, the smart controller designed to maximize your heat pump's efficiency, reduce energy costs, and provide full control over your home's heating from anywhere. Learn how Homely enhances comfort and saves money.</p>