

Schneider Electric IMT23202

Schneider Electric IMT23202 Digital Multimeter User Manual

Model: IMT23202

1. INTRODUCTION

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your Schneider Electric IMT23202 Digital Multimeter. Please read this manual thoroughly before using the device and retain it for future reference.

The IMT23202 is a high-performance digital multimeter designed for measuring DC/AC voltage, DC/AC current, resistance, diode, continuity, battery level, and temperature. It features a backlit LCD screen, data hold function, non-contact AC test, and an integrated stand for hands-free operation.

2. SAFETY INFORMATION

WARNING: To avoid electric shock or personal injury, and to prevent damage to the meter or to the equipment under test, follow these safety guidelines:

- Always adhere to local and national safety codes.
- The multimeter is rated for CAT III 300V. Do not use it for measurements exceeding this category or voltage.
- Inspect test leads for damaged insulation or exposed metal before use. Replace if damaged.
- Do not use the meter if it appears damaged or if it is not operating properly.
- Never ground yourself while taking electrical measurements.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always turn off power to the circuit and discharge all high-voltage capacitors before performing resistance, continuity, or diode tests.
- Ensure the correct function and range are selected before making a measurement.
- Replace the battery and fuses only with the specified type and rating.

3. PACKAGE CONTENTS

Verify that all items listed below are present and undamaged:

- Schneider Electric IMT23202 Digital Multimeter
- Test Leads (Red and Black)
- 9V Battery (for multimeter power)
- Temperature Probe
- User Manual





Figure 3.1: Contents of the Schneider Electric IMT23202 package, including the multimeter, red and black test leads, a 9V battery, and a temperature probe.

4. PRODUCT FEATURES

The IMT23202 Digital Multimeter offers the following key features:

- **Backlit LCD Screen:** Provides clear readings in various lighting conditions.
- **Data Hold Function:** Freezes the displayed measurement for easy recording.
- **Non-Contact AC Test (NCV):** Detects AC voltage without direct contact.
- **Live Wire Detection:** Identifies live electrical wires.
- **Integrated Stand:** Allows for hands-free operation and viewing.
- **Battery Status Indicator:** Alerts when the battery level is low.
- **Overload Protection:** Protected by 250 mA and 10 A ultra-fast fuses.

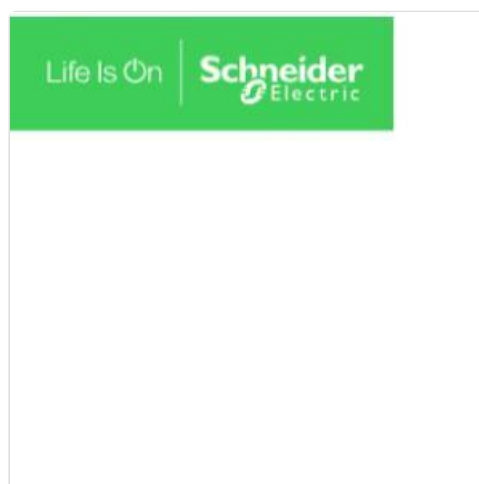


Figure 4.1: Detailed view of the multimeter's display, function selector dial, and input jacks.

5. SETUP

5.1 Battery Installation

1. Ensure the multimeter is turned OFF.
2. Carefully remove the protective rubber holster, if present.
3. Locate the battery compartment cover on the back of the multimeter.
4. Unscrew the retaining screw(s) and remove the battery cover.
5. Insert a new 9V battery, observing the correct polarity (+ and -).
6. Replace the battery cover and secure it with the screw(s).
7. Reinstall the protective rubber holster.

5.2 Connecting Test Leads

- Insert the black test lead into the "COM" (common) input jack.
- For most measurements (voltage, resistance, continuity, diode, temperature, battery test), insert the red test lead into the "VΩmA°C" input jack.
- For high current measurements (up to 10A), insert the red test lead into the "10A" input jack.

6. OPERATING INSTRUCTIONS

6.1 Power On/Off and Function Selection

- To turn on the multimeter, rotate the central dial from the "OFF" position to the desired measurement function.
- To turn off the multimeter, rotate the central dial back to the "OFF" position.

6.2 Measuring DC Voltage (V=)

1. Set the rotary dial to the desired DC Voltage range (e.g., 2V, 20V, 200V, 300V). If the voltage is unknown, start with the highest range and decrease as needed.
2. Connect the black test lead to the negative (-) side of the circuit and the red test lead to the positive (+) side.
3. Read the voltage value on the LCD screen.

6.3 Measuring AC Voltage (V~)

1. Set the rotary dial to the desired AC Voltage range (e.g., 2V, 20V, 200V, 300V).
2. Connect the test leads across the AC voltage source.
3. Read the voltage value on the LCD screen.

6.4 Measuring DC/AC Current (A= / A~)

1. **WARNING:** Never connect the multimeter in parallel to a voltage source when measuring current. This can blow the fuse or damage the meter.
2. Turn off power to the circuit.
3. Break the circuit and connect the multimeter in series with the load.
4. For current up to 200mA, insert the red lead into the "VΩmA°C" jack. For current up to 10A, insert the red lead into the "10A" jack.
5. Set the rotary dial to the appropriate DC or AC Current range (e.g., 20mA, 200mA, 10A).
6. Restore power to the circuit and read the current value.

6.5 Measuring Resistance (Ω)

1. Turn off power to the circuit and discharge all capacitors.
2. Set the rotary dial to the desired Resistance range (e.g., 200 Ω , 2k Ω , 20k Ω , 200k Ω , 2M Ω , 20M Ω).
3. Connect the test leads across the component to be measured.
4. Read the resistance value on the LCD screen.

6.6 Diode Test ($\rightarrow| \cdot$)

1. Turn off power to the circuit.
2. Set the rotary dial to the Diode Test function.
3. Connect the red test lead to the anode and the black test lead to the cathode of the diode.
4. The display will show the forward voltage drop. Reverse the leads to check for open circuit (OL) or high resistance.

6.7 Continuity Test ($\cdot$)))

1. Turn off power to the circuit.
2. Set the rotary dial to the Continuity Test function.
3. Connect the test leads across the circuit or component.
4. If the resistance is less than approximately 100 ohms, the buzzer will sound, indicating continuity.

6.8 Battery Level Test (BATT)

1. Set the rotary dial to the Battery Test function (1.5V, 9V, or 12V).
2. Connect the red test lead to the positive (+) terminal of the battery and the black test lead to the negative (-) terminal.
3. Read the battery voltage on the LCD screen.

6.9 Temperature Measurement ($^{\circ}\text{C}$)

1. Set the rotary dial to the Temperature function ($^{\circ}\text{C}$).
2. Connect the temperature probe to the appropriate input jacks (usually V Ω mA $^{\circ}\text{C}$ and COM).
3. Place the tip of the temperature probe on or near the object whose temperature is to be measured.
4. Read the temperature value on the LCD screen.

6.10 Non-Contact AC Voltage (NCV) Test

1. Set the rotary dial to the NCV function.
2. Hold the top part of the multimeter near an AC voltage source (e.g., a live wire or outlet).
3. The meter will indicate the presence of AC voltage through an audible beep and/or visual indicator.

6.11 Data Hold Function (HOLD)

- Press the "HOLD" button to freeze the current reading on the display.
- Press the "HOLD" button again to release the reading and return to live measurement.

7. MAINTENANCE

7.1 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.

7.2 Battery Replacement

When the battery indicator appears on the display, replace the 9V battery as described in Section 5.1.

7.3 Fuse Replacement

If the current measurement function stops working, the fuse may be blown. The multimeter is protected by a 250 mA and a 10 A ultra-fast fuse. To replace a fuse:

1. Ensure the multimeter is turned OFF and test leads are disconnected.
2. Remove the protective rubber holster and the battery compartment cover (as for battery replacement).
3. Carefully remove the old fuse(s) and replace with new fuses of the exact same type and rating.
4. Secure the battery cover and reinstall the holster.

7.4 Storage

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

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed battery.	Check battery installation; replace battery.
No reading or "OL" (Overload) displayed.	Incorrect range selected; open circuit; leads not connected properly.	Select a higher range; check circuit continuity; ensure leads are firmly connected.
Current measurement not working.	Blown fuse.	Replace the appropriate fuse (250mA or 10A).
Inaccurate readings.	Low battery; dirty test leads/jacks; environmental interference.	Replace battery; clean leads/jacks; move away from strong electromagnetic fields.

9. SPECIFICATIONS

Parameter	Value
Model Number	IMT23202
Brand	Schneider Electric
Manufacturer	LifeSpace
DC Voltage Range	0.2V / 2V / 20V / 200V / 300V

Parameter	Value
AC Voltage Range	0.2V / 2V / 20V / 200V / 300V
DC/AC Current Range	20mA / 200mA / 10A
Resistance Range	200Ω / 2kΩ / 20kΩ / 200kΩ / 2MΩ / 20MΩ
Continuity Test	Yes (Buzzer sounds below 100Ω)
Diode Test	Yes
Temperature Range	0°C to 1000°C
Battery Test	1.5V (AA, AAA, button cell), 9V, 12V
Electrical Insulation	IEC 61010, Cat. III 300V
Fuse Protection	250mA and 10A ultra-fast fuses
Power Source	9V Battery
Dimensions (H x W x D)	165 x 85 x 39 mm (6.5 x 3.3 x 1.5 inches)
Weight (with battery)	290g (10.2 oz)
Color	Black and Green
Country of Origin	France

10. WARRANTY AND SUPPORT

10.1 Warranty Information

Schneider Electric provides a 1-year availability for spare parts for the IMT23202 Digital Multimeter from the date of purchase. For specific warranty terms and conditions, please refer to the warranty card included with your product or contact Schneider Electric customer service.

10.2 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact Schneider Electric customer support through their official website or the contact information provided in your product packaging.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question