

## Megger 1004-739

# Megger MIT420/2 Insulation Tester User Manual

Model: **1004-739**

Brand: **Megger**

## 1. INTRODUCTION

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This manual provides comprehensive instructions for the safe and effective operation, maintenance, and troubleshooting of the Megger MIT420/2 Insulation Tester. The MIT420/2 is a robust and versatile instrument designed for insulation and continuity testing in various electrical applications, offering multiple test voltages and advanced diagnostic features.



The image displays the Megger MIT420/2 Insulation Tester, a grey and black handheld device with a digital display showing '503 > 200 GΩ'. It features a rotary dial for selecting test voltages (50V, 100V, 250V, 500V, 1kV) and functions like MΩ, V, and OFF.

Included accessories are red and black test leads with alligator clips and probe tips, a red CD labeled 'INDUSTRIAL TESTERS', a warranty card, a certificate of calibration, and a set of AA batteries, all neatly arranged within a black hard-shell carrying case.

## 2. SAFETY INFORMATION

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Always adhere to local and national safety regulations when using the Megger MIT420/2. This instrument is rated CAT IV 600V, indicating its suitability for measurements at the source of the low-voltage installation, such as electricity meters and primary overcurrent protection devices.

- Do not use the tester if it appears damaged or if the test leads are compromised.
- Ensure the circuit under test is de-energized before connecting or disconnecting test leads, unless performing live voltage measurements.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and safety glasses.
- Never exceed the maximum input ratings of the instrument.
- Avoid testing in wet or damp conditions.

## 3. PRODUCT OVERVIEW

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### Key Features:

- Insulation Resistance Testing: 50V, 100V, 250V, 500V, 1000V test voltages.
- Continuity Testing.
- Voltage Measurement: Up to 600V CAT IV.
- Polarization Index (PI) and Dielectric Absorption Ratio (DAR) calculations.
- Variable test voltage selection.
- Data storage and recall capabilities.

### Components:

- **Digital Display:** Shows measurement readings, settings, and status indicators.
- **Rotary Switch:** Selects primary test functions (MΩ, V, OFF).
- **Function Buttons:** For specific settings, data logging, and advanced features.
- **Test Lead Inputs:** Connect red and black test leads.
- **Battery Compartment:** Located at the rear of the unit.

## 4. SETUP

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### 4.1 Battery Installation

1. Locate the battery compartment cover on the rear of the MIT420/2.
2. Unscrew or unlatch the cover and remove it.
3. Insert 5 AA batteries, ensuring correct polarity as indicated inside the compartment.
4. Replace the battery compartment cover and secure it.

### 4.2 Connecting Test Leads

1. Insert the red test lead into the positive (+) input jack.
2. Insert the black test lead into the negative (-) input jack.
3. Ensure a secure connection for accurate measurements.

## 5. OPERATING INSTRUCTIONS

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### 5.1 Power On/Off

Rotate the central dial to any function (e.g., MΩ or V) to power on the unit. To power off, rotate the dial to the 'OFF' position.

### 5.2 Insulation Resistance (MΩ) Test

1. Rotate the dial to the 'MΩ' position.
2. Use the voltage selection buttons to choose the desired test voltage (50V, 100V, 250V, 500V, or 1kV).
3. Connect the test leads to the circuit or component under test.
4. Press the 'TEST' button to initiate the insulation test. The display will show the resistance value.
5. Release the 'TEST' button to stop the test.

### 5.3 Voltage Measurement (V)

1. Rotate the dial to the 'V' position.
2. Connect the test leads across the points where voltage is to be measured.
3. The display will show the measured AC or DC voltage.

### 5.4 PI and DAR Tests

These diagnostic tests are performed in the MΩ mode. Refer to the detailed instructions in the full user manual (often provided on the included CD or Megger's website) for specific steps on initiating and interpreting Polarization Index (PI) and Dielectric Absorption Ratio (DAR) tests.

## 6. MAINTENANCE

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### 6.1 Cleaning

Wipe the instrument's casing with a damp cloth. Do not use abrasive cleaners or solvents. Ensure the unit is dry before storage or next use.

### 6.2 Battery Replacement

Replace batteries when the low battery indicator appears on the display. Follow the steps in Section 4.1. Dispose of old batteries according to local regulations.

### 6.3 Storage

Store the MIT420/2 in its carrying case in a cool, dry place away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.

### 6.4 Calibration

The Megger MIT420/2 is supplied with a Certificate of Calibration. Regular calibration by an authorized service center is recommended to ensure continued accuracy and compliance with industry standards. Refer to the certificate for recommended calibration intervals.

## 7. TROUBLESHOOTING

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### Common Issues:

- **No Power:** Check battery installation and ensure batteries are fresh.

- **Inaccurate Readings:** Verify test lead connections, ensure proper function selection, and check for external interference.
- **Display Errors:** Consult the full user manual for specific error codes and their resolutions.
- **Test Button Not Responding:** Ensure the rotary switch is in a valid test position and the unit is not in a locked state.

If issues persist, contact Megger customer support or an authorized service center.

## 8. SPECIFICATIONS

Attribute	Value
Model Number	1004-739
Product Dimensions (L x W x H)	2.48 x 4.25 x 8.98 inches
Item Weight	1.32 Pounds (600 Grams)
Batteries	5 AA batteries (included)
Power Source	Battery Powered
Color	Black
Manufacturer	COLE-PARMER


## 9. WARRANTY INFORMATION






The Megger MIT420/2 Insulation Tester typically comes with a 3-year warranty from the date of purchase. Please refer to the warranty card included with your product for specific terms, conditions, and registration details. Keep your proof of purchase for warranty claims.

## 10. SUPPORT AND CONTACT

For technical assistance, service, or further information regarding the Megger MIT420/2, please visit the official Megger website or contact their customer support department. Contact details are usually provided in the full product manual or on the manufacturer's website.

### Related Documents - 1004-739

	<p><a href="#">Megger MFT1741 Multifunction Tester: Features, Specifications, and Applications</a></p> <p>Comprehensive overview of the Megger MFT1741 Multifunction Tester, detailing its advanced features like non-trip loop impedance testing, 'Confidence Meter' analysis, and extensive RCD testing capabilities for industrial, commercial, and domestic electrical installations. Includes full specifications and ordering information.</p>
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 <p><b>Megger</b> <b>MIT400/2</b> CAT IV Insulation testers</p> <p>Comprehensive datasheet for Megger MIT400/2 series CAT IV insulation and continuity testers. Details features, specifications, applications, safety, and model comparisons for electrical and industrial testing.</p>	<p><a href="#">Megger MIT400/2 CAT IV Insulation Testers: Features, Specifications, and Applications</a></p> <p>Comprehensive datasheet for Megger MIT400/2 series CAT IV insulation and continuity testers. Details features, specifications, applications, safety, and model comparisons for electrical and industrial testing.</p>
 <p><b>Megger</b> <b>ADVANCED</b> 5 kV, 10 kV and 15 kV Insulation Resistance Testers</p> <p>Explore the robust and reliable Megger ADVANCED range of 5 kV, 10 kV, and 15 kV Insulation Resistance Testers. Discover advanced features like RE&gt;Act mode for enhanced accuracy, PI predictor for faster testing, and high voltage capabilities up to 30 TΩ. Designed for industrial applications, these testers offer superior safety (CAT IV rated) and intuitive operation for efficient electrical maintenance and testing.</p>	<p><a href="#">Megger ADVANCED Range 5 kV, 10 kV, 15 kV Insulation Resistance Testers</a></p> <p>Explore the robust and reliable Megger ADVANCED range of 5 kV, 10 kV, and 15 kV Insulation Resistance Testers. Discover advanced features like RE&gt;Act mode for enhanced accuracy, PI predictor for faster testing, and high voltage capabilities up to 30 TΩ. Designed for industrial applications, these testers offer superior safety (CAT IV rated) and intuitive operation for efficient electrical maintenance and testing.</p>
 <p><b>Advanced Test Equipment Corp.</b> <b>Megger</b> <b>MFT-X1</b> Multifunction tester</p> <p>Comprehensive overview of the Megger MFT-X1 Multifunction Tester, detailing its advanced features like True Loop™ testing, Confidence Meter™, CertSuite compatibility, and extensive electrical testing capabilities for low voltage installations.</p>	<p><a href="#">Megger MFT-X1 Multifunction Tester: Features, Specifications, and Applications</a></p> <p>Comprehensive overview of the Megger MFT-X1 Multifunction Tester, detailing its advanced features like True Loop™ testing, Confidence Meter™, CertSuite compatibility, and extensive electrical testing capabilities for low voltage installations.</p>
 <p><b>Megger</b> <b>MET1000</b> All-in-One True RMS Electrical Tester</p> <p>Explore the Megger MET1000, a robust All-in-One True RMS Electrical Tester. Features include 1000V AC/DC, 200A AC current clamp, phase rotation, inrush current, IP65, and CAT IV 600V safety. Ideal for electricians and engineers.</p>	<p><a href="#">Megger MET1000 All-in-One True RMS Electrical Tester Datasheet   Voltage, Current, Safety Ratings</a></p> <p>Explore the Megger MET1000, a robust All-in-One True RMS Electrical Tester. Features include 1000V AC/DC, 200A AC current clamp, phase rotation, inrush current, IP65, and CAT IV 600V safety. Ideal for electricians and engineers.</p>
 <p><b>Megger</b> <b>EXPERT</b> 5 kV, 10 kV and 15 kV Insulation Resistance Testers</p> <p>Explore the Megger EXPERT range of high-voltage insulation resistance testers (5 kV, 10 kV, 15 kV). Discover advanced features like RE&gt;Act mode, PI predictor, and CAT IV safety ratings, designed for rugged dependability and accurate measurements in industrial applications. Includes model details, specifications, and ordering information.</p>	<p><a href="#">Megger EXPERT Range 5 kV, 10 kV, 15 kV Insulation Resistance Testers - Product Data Sheet</a></p> <p>Explore the Megger EXPERT range of high-voltage insulation resistance testers (5 kV, 10 kV, 15 kV). Discover advanced features like RE&gt;Act mode, PI predictor, and CAT IV safety ratings, designed for rugged dependability and accurate measurements in industrial applications. Includes model details, specifications, and ordering information.</p>