

Schneider Electric IMD-IM400

Schneider VIGILOHM IM400 Insulation Monitoring Device

Model: IMD-IM400

1. INTRODUCTION

This manual provides essential information for the safe and effective use of the Schneider VIGILOHM IM400 Insulation Monitoring Device (IMD-IM400). The VIGILOHM IM400 is designed to continuously monitor the insulation resistance of ungrounded AC IT systems, providing early detection of insulation faults to enhance operational safety and system reliability.

Please read this manual thoroughly before installation, operation, or maintenance of the device. Retain this manual for future reference.

2. SAFETY INFORMATION

WARNING: Risk of Electric Shock and Arc Flash Hazard.

- Installation, operation, and maintenance must be performed by qualified, authorized personnel only.
- Adhere to all local and national electrical codes and regulations.
- Ensure the power supply to the system is completely disconnected and locked out before performing any installation or maintenance.
- Do not operate the device if it appears damaged.
- Never attempt to open or repair the device. Refer all servicing to authorized Schneider Electric service personnel.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

3. PRODUCT OVERVIEW

The Schneider VIGILOHM IM400 is a compact and robust insulation monitoring device. It continuously measures the insulation resistance between the active conductors and earth in ungrounded AC IT systems, providing real-time data and alarm indications if the resistance falls below a configurable threshold.

3.1. Key Features

- Continuous insulation resistance monitoring.
- Suitable for AC IT systems with voltages between 110 V and 440 V.
- Integrated display for real-time insulation values.
- User-friendly interface with navigation buttons.
- Compact design for easy integration into control panels.

3.2. Device Components and Front Panel

The IMD-IM400 features a clear digital display and intuitive controls for monitoring and configuration.



Figure 1: Front view of the Schneider VIGILOHM IM400 Insulation Monitoring Device. The device features a large digital display showing "INSULATION R= 560kΩ", a date "29.10.2012", and time "14:50". To the right of the display are three control buttons: "MENU", "ESC", and an unlabeled button below ESC. Above these buttons are status indicators, including a green LED which appears illuminated, and symbols for ground and a warning triangle. The top left corner of the device is labeled "Vigilohm Ω". The bottom right corner features the "Schneider Electric" logo. The left side of the device shows the model number "IMD-IM400" and a serial number "QZ-2009-W13-1-0001".

- **Digital Display:** Shows real-time insulation resistance (R), date, and time.
- **MENU Button:** Used to access and navigate through the device's configuration menus.
- **ESC Button:** Used to exit menus or cancel operations.
- **Status Indicators:** LEDs and symbols indicating operational status, alarms, and ground connection. A green LED typically indicates normal operation.
- **Vigilohm Ω Label:** Indicates the product family and its function.

4. SETUP AND INSTALLATION

The VIGILOHM IM400 must be installed by qualified electrical personnel in accordance with all applicable national and local electrical codes.

4.1. Mounting

The device is designed for DIN rail mounting within an electrical enclosure. Ensure adequate ventilation and maintain specified clearances around the device for proper operation and heat dissipation.

- Select a suitable location within the control panel, away from excessive heat, moisture, and vibration.
- Snap the device onto a standard DIN rail.

4.2. Wiring

All wiring must be performed with the system de-energized and locked out. Refer to the detailed wiring diagrams provided with the product packaging for specific connection points. General wiring principles include:

- Connect the device to the IT system conductors (L1, L2, L3 if applicable, and Neutral if present) and to the protective earth (PE) conductor.
- Ensure all connections are secure and properly torqued.
- Verify correct voltage range (110-440 V AC) for the connected system.

5. OPERATING INSTRUCTIONS

Once installed and powered, the VIGILOHM IM400 begins continuous monitoring of the insulation resistance.

5.1. Initial Power-Up

Upon applying power, the device will perform a self-test. The display will illuminate, and after a brief initialization period, it will show the current insulation resistance value.

5.2. Reading the Display

- The primary display shows the insulation resistance value, typically in k Ω (kilo-ohms) or M Ω (mega-ohms).
- The date and time are also displayed, indicating the device's internal clock.
- A bar graph or similar indicator may provide a visual representation of the insulation level relative to set thresholds.

5.3. Navigating Menus

The MENU and ESC buttons are used to navigate the device's settings and view additional information.

- Press **MENU** to enter the main menu.
- Use the unlabeled button (below ESC) to scroll through menu options.
- Press **MENU** again to select an option or confirm a setting.
- Press **ESC** to go back to the previous menu level or return to the main display.

Refer to the detailed programming guide (usually provided separately or accessible via the device menu) for specific parameter settings such as alarm thresholds, date/time adjustment, and communication settings.

5.4. Interpreting Status Indicators

- **Green LED:** Indicates normal operation and healthy insulation resistance.

- **Yellow/Amber LED (Warning Symbol):** Indicates a pre-alarm condition, where insulation resistance is approaching the critical threshold.
- **Red LED (Alarm Symbol):** Indicates a critical alarm condition, where insulation resistance has fallen below the set threshold, requiring immediate attention.
- **Ground Symbol:** May indicate the status of the protective earth connection or a ground fault.

6. MAINTENANCE

The VIGILOHM IM400 is designed for minimal maintenance. Regular visual inspections are recommended.

6.1. Routine Checks

- Periodically inspect the device for any visible damage, loose connections, or signs of overheating.
- Ensure the display is clear and readable.
- Verify that the green status LED is illuminated during normal operation.

6.2. Cleaning

Clean the exterior of the device with a soft, dry, or slightly damp cloth. Do not use abrasive cleaners, solvents, or excessive moisture, as these can damage the device.

6.3. Service and Repair

The VIGILOHM IM400 contains no user-serviceable parts. Any internal inspection or repair must be performed exclusively by authorized Schneider Electric service personnel. Unauthorized opening of the device will void the warranty.

7. TROUBLESHOOTING

This section provides guidance for common issues. For problems not listed here, or if the issue persists, contact Schneider Electric technical support.

Problem	Possible Cause	Solution
Device display is blank.	No power supply; incorrect wiring; device fault.	Check power connections and circuit breaker. Verify wiring according to diagram. If problem persists, contact support.
Warning/Alarm LED is illuminated.	Insulation resistance below threshold; system fault.	Investigate the IT system for insulation faults. Consult a qualified electrician to identify and rectify the fault.
Incorrect insulation resistance reading.	Improper calibration (unlikely for new device); external interference; device fault.	Ensure proper grounding. Check for strong electromagnetic interference. If readings are consistently inaccurate, contact support.
Buttons are unresponsive.	Temporary software glitch; hardware malfunction.	Try cycling power to the device (briefly disconnect and reconnect). If unresponsive, contact support.

Always ensure safety precautions are followed before attempting any troubleshooting steps involving electrical connections.

8. TECHNICAL SPECIFICATIONS

The following table outlines the key technical specifications for the Schneider VIGILOHM IM400 (IMD-IM400).

Parameter	Value
Manufacturer	Schneider Electric
Model Number	IMD-IM400
Product Dimensions (L x W x H)	21 x 17.5 x 14 cm
Product Weight	868 grams
Input Voltage Range	110 - 440 V AC
Measurement System	Metric
Included Components	VIGILOHM IM400 device
Batteries Required	No
ASIN	B01BRSESFQ

9. WARRANTY AND SUPPORT

The Schneider VIGILOHM IM400 (IMD-IM400) comes with a Worldwide Schneider Warranty. For specific terms and conditions of your warranty, please refer to the warranty documentation included with your product or visit the official Schneider Electric website.

For technical support, service, or inquiries regarding spare parts, please contact Schneider Electric customer service or your local authorized distributor. Contact information can typically be found on the Schneider Electric official website (www.se.com).

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