MObyat SDM010

MObyat SDM010 Modularized Rail Type AC Three-Phase Digital Voltmeter Instruction Manual

1. Introduction

This instruction manual provides essential information for the safe and efficient use of the MObyat SDM010 Modularized Rail Type AC Three-Phase Digital Voltmeter. Please read this manual thoroughly before installation and operation to ensure proper functionality and to prevent damage to the device or injury.
The MObyat SDM010 is designed to accurately measure and display the AC voltage of three-phase power systems within a range of 80V to 500V. Its modular design allows for easy installation on a standard DIN rail.

2. Safety Information

WARNING: Electrical shock hazard. Installation and servicing should only be performed by qualified personnel.

- Always disconnect power before installing or servicing the device.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Do not operate the device if it appears damaged.
- This device is intended for indoor use only.
- Keep the device away from moisture, dust, and extreme temperatures.

3. Product Features

- Measures and displays three-phase AC voltage.
- Wide measurement range: AC 80V to 500V.
- High accuracy: 1%.
- Modular design for DIN rail mounting (18mm).
- Clear digital display for easy reading.
- Compact and durable construction.

4. Specifications

Parameter	Value
Model	SDM010
Measurement Voltage Range	AC 80V ~ 500V
Measurement Accuracy	1%
Measurement Rate	>200MS/time
Degree of Protection	IP 20
Electrical Life	15000 hours
Working Temperature	-5°C to +40°C (daily average ≤ 35°C)
Storage Temperature	-25°C to +70°C
Air Relative Humidity	1-80% (non-condensing)
Working Pressure	80-160Kpa
Mounting	DIN rail (18mm)
Weight	75g

5. Setup and Installation

The MObyat SDM010 is designed for easy installation on a standard 18mm DIN rail.

1. **Power Disconnection:** Before beginning installation, ensure that all power to the circuit where the voltmeter will be installed is completely disconnected. Verify with a voltage tester.
2. **Mounting:**





Figure 1: Side view of the MObyat SDM010, illustrating the DIN rail mounting clip.

Locate an appropriate position on your 18mm DIN rail. Align the voltmeter with the rail and press firmly until the spring-loaded clip engages, securing the device in place.

3. **Wiring Connections:** The device features terminals for 3-phase (L1, L2, L3) and neutral (N) connections.



Figure 2: Angled view of the MObyat SDM010, highlighting the digital display and terminal block for wiring.



Figure 3: Front-side view of the MObyat SDM010, showing product branding, specifications, and a simplified wiring diagram on the casing.

- Connect the three phase lines (L1, L2, L3) to the corresponding input terminals.

- Connect the neutral line (N) to the designated neutral terminal.
- Ensure all connections are tight and properly insulated. Refer to the wiring diagram printed on the device or consult a qualified electrician if unsure.

4. **Power Restoration:** Once all connections are secure and verified, restore power to the circuit.

6. Operating Instructions

The MObyat SDM010 operates automatically once power is supplied. It will immediately begin measuring and displaying the voltage for each of the three phases.



Figure 4: Top-down angled view of the MObyat SDM010, showing the digital display actively indicating voltage readings for V1, V2, and V3.

- The digital display will show the voltage for each phase (V1, V2, V3) in sequence or simultaneously, depending on the specific display configuration.
- Read the displayed values directly. The unit of measurement is Volts (V).

7. Maintenance

The MObyat SDM010 is designed for minimal maintenance.

- **Cleaning:** Periodically clean the exterior of the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure power is disconnected before cleaning.
- **Inspection:** Regularly inspect the wiring connections for any signs of loosening or damage. Tighten connections as necessary.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity ranges to prolong the device's lifespan.

8. Troubleshooting

Problem	Possible Cause	Solution
No display/Device not powering on	No power supply; Loose wiring; Device fault	Check power source; Verify all wiring connections are secure; If problem persists, contact support.
Incorrect voltage readings	Incorrect wiring; Faulty connection; Device fault	Re-check wiring against diagram; Ensure connections are tight; If problem persists, contact support.
Display flickering or unstable	Unstable power supply; Loose connections; Electromagnetic interference	Check power quality; Secure all connections; Ensure proper grounding and shielding if interference is suspected.



Figure 5: Angled view of the MObyat SDM010, providing a clear look at the terminal block for wiring connections.

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your retailer. Keep your purchase receipt as proof of purchase.

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Name

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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