ZLPLSUPEX ME435

ZLPLSUPEX ME435 Three Phase Power Data Logger User Manual

Model: ME435

Introduction

The ZLPLSUPEX ME435 is a sophisticated Three Phase Power Data Logger and Digital Energy Meter designed for accurate measurement and analysis of electrical parameters. It is equipped with NRC150 Rogowski coils, allowing for a wide measurement range of 10A-3000A with an inner diameter of 150mm. This device offers an accuracy class of IEC 62053-22 Class 0.5, making it suitable for professional industrial and scientific applications requiring precise energy measurement and power quality recording.

Figure 1: Overview of the ME435 Three Phase Power Data Logger with its Rogowski coils.

What's in the Box

Upon opening the package, please verify that all components are present and undamaged:

- ME435 Handheld Power Meter Unit
- 3 x NRC150 Rogowski Coils (Measurement Range: 10A-3000A, Inner Diameter 150mm)
- Test Leads
- User Manual (this document)

Figure 2: Complete ME435 kit showing the main unit, three Rogowski coils, and a set of test leads.

Setup

Follow these steps for the initial setup of your ME435 Power Data Logger:

1. **Charge the Device:** Before first use, ensure the ME435 unit is fully charged. Connect the appropriate power adapter (not supplied with the product, but typically required for charging) to the charging port.
2. **Connect Rogowski Coils:** Identify the three Rogowski coils. Each coil has a connector that plugs into the corresponding input ports on the top of the ME435 unit. The ports are typically labeled for phase connections (e.g., UA, UB, UC).

Figure 3: Rogowski coils connected to the top input ports of the ME435 unit.

3. **Connect Voltage Test Leads:** Connect the provided test leads to the voltage input terminals on the ME435. Ensure correct polarity and phase connection for accurate voltage measurement.

Figure 4: Side view of the ME435 unit displaying the various input jacks for measurement connections.

4. **Power On:** Press and hold the power button (usually labeled "POWER") to turn on the device. The display will illuminate, showing the main menu or default measurement screen.

Operating Instructions

The ME435 is designed for intuitive operation. Here are basic steps for common measurements:

Navigating the Menu

Use the directional arrow buttons (up, down, left, right) to navigate through menu options and adjust settings. The central button typically acts as an "Enter" or "Select" key.

Figure 5: Front view of the ME435 displaying the measurement screen and the control panel with navigation buttons.

Performing Measurements

1. **Select Measurement Mode:** From the main screen, use the arrow keys to select the desired measurement mode (e.g., Voltage, Current, Power, Energy, Harmonics).
2. **Connect to Circuit:**
    - For current measurement, open the Rogowski coils and clamp them around the respective phase conductors. Ensure the coils are fully closed and properly positioned.
    - For voltage measurement, connect the test leads to the circuit points where voltage needs to be measured.
3. **View Readings:** Once connected, the ME435 will display real-time readings on its screen. The screen typically shows values for voltage (UA, UB, UC, UN), current, power (active, reactive, apparent), energy, and harmonic distortion (THD).

Figure 6: Detail of the Rogowski coil connectors, highlighting their secure connection points.

4. **Data Logging:** The ME435 can log data over time. Refer to the on-screen menu for options to start, stop, and configure data logging intervals. Logged data can typically be downloaded to a computer via a USB connection.

Maintenance

Proper maintenance ensures the longevity and accuracy of your ME435 Power Data Logger:

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Storage:** Store the ME435 in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** If the device has a rechargeable battery, avoid fully discharging it frequently. Charge it regularly, even if not in use, to maintain battery health.
- **Coil Inspection:** Periodically inspect the Rogowski coils and their connectors for any signs of wear, damage, or fraying.

Troubleshooting

If you encounter issues with your ME435, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Low battery or power button not pressed correctly.	Charge the device fully. Press and hold the power button for several seconds.
Inaccurate readings.	Improper coil placement, damaged coils/leads, or incorrect settings.	Ensure coils are fully closed around conductors. Check for visible damage to coils and leads. Verify measurement settings.
Data logging not working.	Insufficient memory, incorrect logging configuration, or device error.	Check available memory. Review logging settings. Restart the device.
Screen is blank or frozen.	Software glitch or critical error.	Perform a hard reset (if applicable, consult the full product manual for specific instructions). If problem persists, contact support.

Specifications

Feature	Detail
Model	ME435
Measurement Type	Three Phase Power Data Logger, Digital Energy Meter
Current Sensors	3 x NRC150 Rogowski Coils
Current Measurement Range	10A-3000A (with NRC150 coils)
Coil Inner Diameter	150mm
Accuracy Class	IEC 62053-22 Class 0.5
Product Dimensions	5.51 x 3.15 x 1.57 inches
Product Weight	6.61 Pounds
Manufacturer	ZLPLSUPEX
ASIN	B0DSBW3W57
Date First Available	January 6, 2025

Note: Specifications are subject to change without prior notice.

Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact ZLPLSUPEX customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Manufacturer: ZLPLSUPEX

Product Serial Number (example, check device label): 3118401001

Figure 7: Back of the ME435 unit, displaying the product label with model and serial number.