NGDOLAOV PZEM-008

NGDOLAOV PZEM-008 DIN Rail Digital Energy Meter Instruction Manual

1. Introduction

The NGDOLAOV PZEM-008 is a compact, DIN rail-mounted digital energy meter designed for measuring AC voltage, current, active power, and accumulated energy (kilowatt-hours). This device provides real-time monitoring of electrical parameters in single-phase AC circuits, making it suitable for various industrial and home applications. This manual provides detailed instructions for its installation, operation, and maintenance.

2. Product Overview

The PZEM-008 features a clear LCD display that simultaneously shows four key electrical parameters. Its design allows for easy integration into standard electrical panels.



The image displays the NGDOLAOV PZEM-008 DIN Rail Digital Energy Meter. It features a multi-color LCD screen showing real-time measurements for voltage (V), current (A), active power (W), and accumulated energy (kWh). The device is designed for DIN rail mounting, indicated by its form factor. A separate wiring harness with red and black wires connected to a white connector is visible, suggesting external current transformer or power input connections. The bottom of the unit shows 'NL' for line/neutral connections and 'CLR' for the reset button.

Key Components:

- **LCD Display:** Shows Voltage (V), Current (A), Active Power (W), and Energy (kWh).
- **CLR Button:** Used for backlight control and energy data reset.
- **NL Terminals:** Input terminals for Line (L) and Neutral (N) AC power connection.
- **Current Transformer (CT) Input:** For current measurement (may be integrated or require external connection via harness).

3. Specifications

Parameter	Value

Parameter	Value
Voltage Measuring Range	AC 50-300V
Current Measuring Range	0-100A
Active Power Measuring Range	0-30kW
Energy Measuring Range	0-1999kWh
Accuracy	±1%
Frequency	45-65Hz
Rated Voltage (Nominal)	220V
Maximum Operating Current	100A
Mounting	35mm DIN Rail
Display Type	LCD, Numbers only
Operating Temperature	-10°C to 60°C
Dimensions	78mm x 34mm
Data Storage	Power data and backlight status saved upon power off

4. Installation

Installation should be performed by qualified personnel in accordance with local electrical codes and safety regulations. Ensure power is disconnected before installation.

4.1 Mounting

1. Locate a suitable 35mm DIN rail within your electrical panel or enclosure.
2. Align the meter's mounting clips with the DIN rail.
3. Press firmly until the meter clicks securely onto the rail.

4.2 Wiring Connections

Refer to the markings on the device for correct wiring. The PZEM-008 is designed for single-phase AC circuits.

1. **Power Input (NL):** Connect the AC Line (Live) wire to the 'L' terminal and the AC Neutral wire to the 'N' terminal on the bottom of the meter. Ensure these connections are secure.
2. **Current Measurement:** The device typically uses an internal current path or an external current transformer (CT) for current measurement. If an external CT is provided (often with a separate wiring harness), connect its wires to the designated CT input terminals. Ensure the CT is installed correctly around the live wire of the circuit you wish to monitor, observing polarity if indicated.
3. Double-check all connections for tightness and correct polarity before restoring power.

Warning: Incorrect wiring can damage the device and pose electrical hazards. Always ensure power is off during installation.

5. Operation

5.1 Power On

Once correctly installed and wired, restore power to the circuit. The meter's LCD display will illuminate and begin showing real-time measurements.

5.2 Reading the Display

The multi-color LCD displays the following parameters:

- **Voltage (V):** Top line, typically in blue. Measuring range AC 50-300V.
- **Current (A):** Second line, typically in green. Measuring range 0-100A.
- **Active Power (W):** Third line, typically in yellow. Measuring range 0-30kW.
- **Energy (kWh):** Bottom line, typically in red. Measuring range 0-1999kWh.

5.3 Backlight Control

To toggle the display backlight on or off, short press the 'CLR' button located on the bottom of the meter.

5.4 Reset Energy Data (kWh)

The accumulated energy (kWh) data can be reset:

1. Press and hold the 'CLR' button for more than 3 seconds. The energy data on the display will start to flash.
2. While the data is flashing, release the button and then short press the 'CLR' button again. This action will clear the accumulated energy data to zero.
3. If you do not short press the button after the data starts flashing, the flashing will stop after 3 seconds, and the energy data will not be reset.

5.5 Data Storage

The PZEM-008 is equipped with a data storage function. In the event of a power outage, the accumulated energy data and the last backlight status will be saved and restored when power is reconnected.

6. Maintenance

The NGDOLAOV PZEM-008 is designed for minimal maintenance. Follow these guidelines to ensure optimal performance and longevity:

- **Cleaning:** Use a soft, dry cloth to clean the display and exterior. Do not use abrasive cleaners, solvents, or immerse the device in water.
- **Environment:** Ensure the operating environment remains within the specified temperature range (-10°C to 60°C) and avoid excessive humidity or direct exposure to water.
- **Inspections:** Periodically check wiring connections for tightness and signs of wear or damage.
- **Avoid Impact:** Protect the device from physical shocks or impacts.

7. Troubleshooting

If you encounter issues with your PZEM-008 meter, consider the following:

- **No Display/Power:**
  - Check if the main power supply to the circuit is active.
  - Verify that the 'L' and 'N' terminals are correctly and securely wired.

- **Incorrect Readings (Current/Power):**
  - Ensure the current transformer (if external) is correctly installed around the live wire and its connections are secure.
  - Verify that the load is within the meter's specified current and power ranges.
- **Energy (kWh) Not Resetting:**
  - Follow the reset procedure precisely: press and hold 'CLR' for >3 seconds until flashing, then release and short press 'CLR' again.
- **Display Flickering/Unstable:**
  - Check for stable power supply.
  - Ensure all wiring connections are tight and free from interference.

If problems persist after attempting these troubleshooting steps, contact customer support for further assistance.

8. Warranty and Support

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

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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