RWRAPS D52-2066

RWRAPS D52-2066 Multi-Function Digital Meter User Manual

AC Voltage, Current, Power Factor, Active KWH Electric Energy, Frequency Meter

1. Introduction

The RWRAPS D52-2066 is a versatile digital meter designed for precise measurement and display of various electrical parameters. This device is ideal for monitoring AC voltage, AC current, active power, power factor, frequency, and cumulative electric energy (KWH). Its high stability, standard size, and easy installation make it suitable for a wide range of applications, including residential, commercial, and industrial settings.

This manual provides essential information for the safe and effective operation, installation, and maintenance of your D52-2066 meter. Please read it thoroughly before use.

2. Key Features

- **Multi-Parameter Display:** Simultaneously displays AC Voltage, AC Current, Active Power, Power Factor, Frequency, and Electric Energy (KWH).
- **High Precision:** Measurement accuracy of 1% ±2 words ensures reliable readings.
- **Data Storage Function:** Electric energy data is automatically stored and memorized upon power off, resuming accumulation when power is reconnected.
- **Clear LCD Display:** Colorful HD LCD display with backlight for excellent visibility in various lighting conditions.
- **Easy Reset:** Features a reset button for clearing electric energy data for new measurements.
- **Durable Construction:** Made with ABS flame-resistant material for enhanced safety.

3. Product Overview and Dimensions



Figure 3.1: Front view of the D52-2066 meter, displaying voltage, current, power, frequency, and energy readings.



Figure 3.2: Dimensions of the D52-2066 meter (Height: 80mm, Width: 64mm, Depth: 45mm).



Figure 3.3: Icons indicating the various electrical parameters measured by the D52-2066 meter.

4. Setup and Installation

The D52-2066 meter is designed for easy installation. For the external CT (Current Transformer) version, follow the wiring diagram carefully to ensure correct and safe operation.

4.1 Wiring Diagram (External CT Version)



Figure 4.1: External CT Wiring Diagram (GraphH1)

Installation Steps:

1. **Power Off:** Ensure all power to the circuit is disconnected before beginning installation.
2. **Connect AC Voltage Input:** Connect the AC input voltage lines to terminals 1 and 2 of the meter.
3. **Install Current Transformer (CT):** Pass the wire of the load circuit (the circuit you wish to measure current for) through the hole of the external current transformer.
4. **Connect CT to Meter:** Connect the two wires from the current transformer to terminals 3 and 4 of the meter.
5. **Verify Connections:** Double-check all wiring connections for correctness and security.
6. **Restore Power:** Once all connections are secure, restore power to the circuit. The meter should power

on and display readings.

Safety Warning: Installation should only be performed by qualified personnel. Always ensure power is off before making any connections to prevent electric shock or damage to the device.

5. Operating Instructions

Once properly installed and powered on, the D52-2066 meter will automatically display the measured electrical parameters on its LCD screen.

5.1 Reading the Display

The colorful LCD display shows the following parameters:

- **Active Power (W):** Instantaneous power consumption in Watts.
- **Electric Energy (KWH):** Cumulative energy consumption in Kilowatt-hours.
- **AC Voltage (V):** Current AC voltage in Volts.
- **Frequency (Hz):** Power line frequency in Hertz.
- **AC Current (A):** Instantaneous AC current in Amperes.
- **Power Factor (PF):** Power factor, indicating efficiency of power usage.

5.2 Resetting Electric Energy Data

To reset the accumulated electric energy (KWH) data, locate the blue 'RESET' button on the front panel of the meter. Press and hold this button for approximately 5 seconds until the KWH reading resets to zero. This function is useful for measuring energy consumption over specific periods or for multiple measurement needs.

6. Maintenance

The RWRAPS D52-2066 meter is designed for long-term, reliable operation with minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the meter's surface. Do not use abrasive cleaners, solvents, or immerse the device in water.
- **Environment:** Ensure the meter is installed in a dry environment, away from direct sunlight, excessive heat, dust, and corrosive gases.
- **Connections:** Periodically check wiring connections to ensure they remain secure.
- **No User-Serviceable Parts:** Do not attempt to open or repair the meter. Refer all servicing to qualified personnel.

7. Troubleshooting

If you encounter issues with your D52-2066 meter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Meter does not power on / Display is blank.	No power supply to terminals 1 and 2, or incorrect wiring.	Check power connections to terminals 1 and 2. Ensure power is supplied and wiring is correct according to the diagram.

Problem	Possible Cause	Solution
Current (A) reading is zero or incorrect.	CT not connected, CT wires reversed, or load wire not passing through CT.	Verify CT connections to terminals 3 and 4. Ensure the load wire passes correctly through the CT. Check for proper orientation if applicable.
Power (W) or Energy (KWH) reading is zero or incorrect.	Incorrect voltage or current readings, or no load connected.	Ensure voltage and current readings are correct. Verify that a load is connected and drawing power.
Display is dim or flickering.	Unstable power supply or environmental factors.	Ensure stable power supply. Operate within specified environmental conditions.

If the problem persists after attempting these solutions, please contact customer support.

8. Specifications

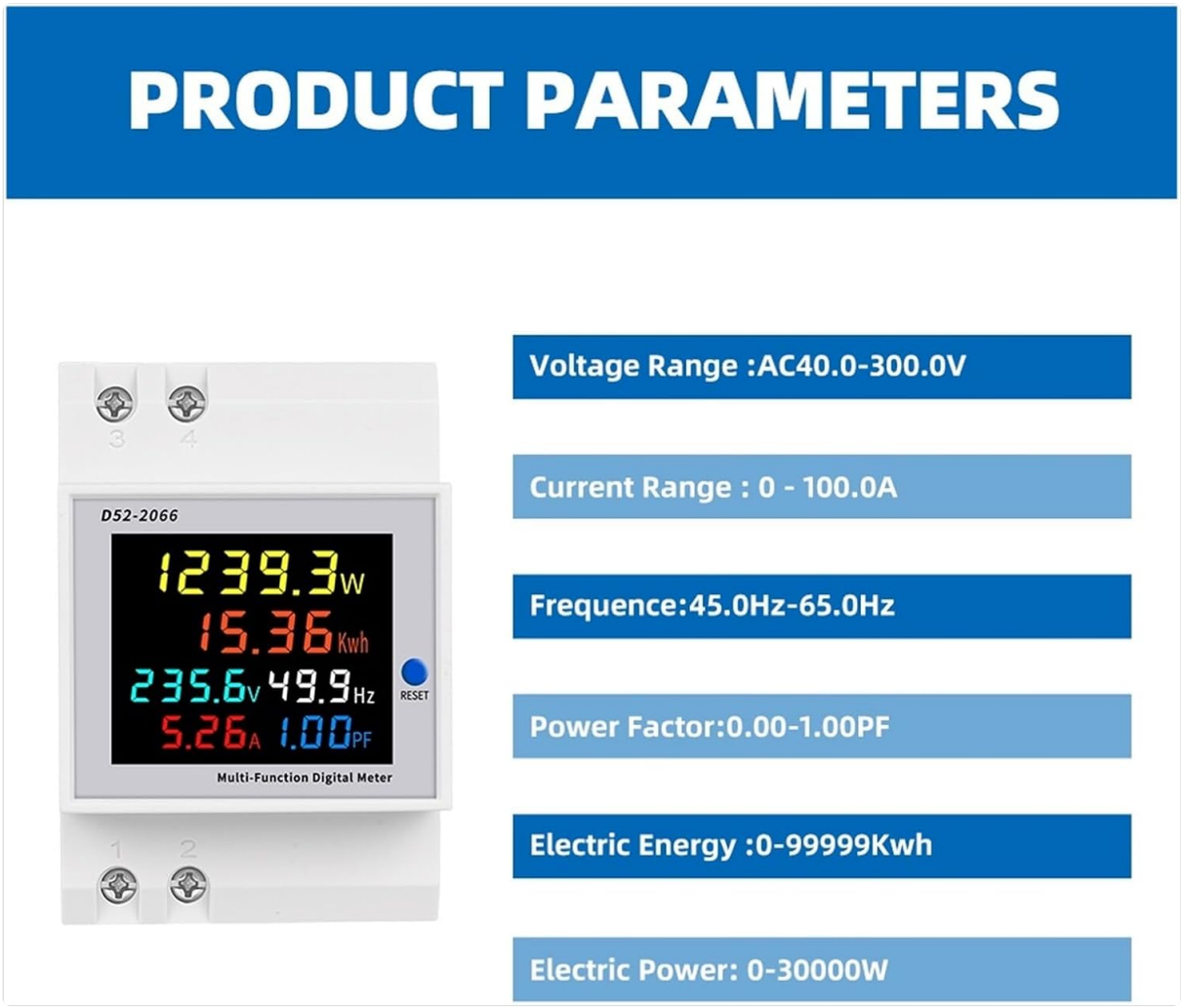


Figure 8.1: D52-2066 Product Parameters

Parameter	Specification

Parameter	Specification
Measurement Accuracy	1% ±2 words
AC Voltage Range	AC 40.0-300.0V (for general use) or AC 250.0-450.0V (for 380V systems only)
AC Current Range	AC 0-100.0A (Resolution: 0.01A)
Frequency Range	45.0Hz - 65.0Hz
Power Factor Range	0.00-1.00PF
Electric Power Range	0-450000W (Resolution: 0.1W for 0-9999.9W; 1W for >9999.9W)
Electric Energy Range	0-99999KWH (Resolution: 0.01KWH for 0-999.99KWH; 0.1KWH for 1000.0-9999.9KWH; 1KWH for >9999.9KWH)
Measurement Speed	Approximately 2 times per second
Operating Temperature	Not specified, typically -10°C to 50°C (14°F to 122°F) for similar devices.
Dimensions (Approx.)	80mm (H) x 64mm (W) x 45mm (D)
Weight (Approx.)	800 Grams / 1.76 pounds

9. Warranty and Support

For information regarding warranty coverage, technical support, or service inquiries, please contact the manufacturer, RWRAPS, or your authorized dealer. Please have your product model number (D52-2066) and purchase details ready when contacting support.

For the most up-to-date support information, please refer to the official RWRAPS website or the contact information provided with your purchase.

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