

WVCLTVJA KWS-AC305

WVCLTVJA KWS-AC305 Wattmeter Power Meter User Manual

1. INTRODUCTION

The WVCLTVJA KWS-AC305 is a versatile AC electricity meter designed for precise measurement and monitoring of electrical parameters in AC circuits. This device functions as a wattmeter, power meter, dual voltmeter, and ammeter, providing comprehensive data on voltage, current, active power, power factor, and accumulated electric energy. It is ideal for various applications requiring accurate electrical monitoring.

2. PRODUCT FEATURES

- **Multi-functional Measurement:** Measures AC voltage, AC current, active power, power factor, and electric energy.
- **Wide Voltage Range:** AC 0-500V measurement capability.
- **High Current Capacity:** Supports current measurement up to 100A with an external Current Transformer (CT).
- **Power Measurement:** Measures active power up to 50KW.
- **Energy Accumulation:** Tracks electric energy consumption from 0 to 99999Kwh.
- **Clear LED Display:** Provides easy-to-read measurements.
- **Compact Design:** Small form factor for easy integration.

3. PACKAGE CONTENTS

Please verify that all items are present and in good condition upon opening the package:

- 1 x KWS-AC305 Wattmeter Power Meter Unit
- 1 x Current Transformer (CT) for 100A measurement
- 1 x Set of Wiring Cables (approximately 150mm and 170mm in length)



Image: The KWS-AC305 Wattmeter Power Meter unit, showing its dimensions (65.2mm length, 37.9mm width, 22mm height). Also pictured are the included wiring cables (150mm) and the 100A Current Transformer (CT) with its dimensions (32.6mm outer diameter, 14.8mm inner diameter) and 170mm cable.

4. SETUP AND WIRING INSTRUCTIONS

Proper wiring is essential for accurate and safe operation. Refer to the wiring diagram below for connection details.



Image: A schematic diagram illustrating the wiring method for the KWS-AC305. It shows the connection of the L (Firewire) and N (Zero line) to the meter, the load connection, and the placement of the Current Transformer (CT) around the LI (Load Firewire).

- 1. Power Input Connection:** Connect the AC power supply's "Firewire" (L) to the L terminal of the meter and the "Zero line" (N) to the N terminal of the meter. The power supply voltage should be within AC 50-300V.
- 2. Load Connection:** Connect the electrical load to the designated output terminals of the meter. Ensure the load's "Firewire" (LI) passes through the Current Transformer (CT).
- 3. Current Transformer (CT) Installation:**
 - Pass the "Firewire" (LI) of the circuit you wish to measure through the center hole of the Current Transformer (CT).
 - Connect the two wires from the CT to the corresponding CT input terminals on the meter. Ensure correct polarity if indicated, though for most AC CTs, orientation might not be critical for current measurement, but it can affect power factor readings.
- 4. Verification:** Double-check all connections to ensure they are secure and correctly wired before applying power. Incorrect wiring can damage the device or lead to inaccurate readings.

Important Notes:

- The meter's power supply voltage (AC 50-300V) is separate from its voltage measurement range (AC 0-500V).
- The current measurement is performed indirectly via the external Current Transformer (CT). Do not connect the main circuit directly to the meter's current terminals without the CT.

5. OPERATING INSTRUCTIONS

Once the meter is correctly wired and powered on, it will automatically display the measured parameters.

- 1. Power On:** Apply AC power to the meter's L and N terminals. The LED display will illuminate and show the current measurements.
- 2. Reading Measurements:** The meter continuously displays various parameters. The specific display mode or cycling of parameters may be controlled by the 'M' button (if present).
 - **Voltage (V):** Displays the AC voltage of the monitored circuit (0-500V).
 - **Current (A):** Displays the AC current flowing through the circuit, measured via the CT (0-100A).
 - **Power (KW):** Displays the active power consumed by the load (0-50KW).
 - **Power Factor (PF):** Displays the power factor of the circuit (0.00-1.00PF).
 - **Electric Energy (Kwh):** Displays the accumulated electric energy consumption (0-99999Kwh). This value typically accumulates over time and is non-volatile.
- 3. 'M' Button Function (if applicable):** The 'M' button on the front panel (visible in product images) is typically used for:
 - Cycling through different display modes or parameters.
 - Resetting the accumulated electric energy (Kwh) reading. Consult the specific product variant for exact functionality, usually by a long press.

6. MAINTENANCE

To ensure the longevity and accurate performance of your KWS-AC305 Wattmeter Power Meter, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the display and casing. Do not use abrasive cleaners or solvents, as they may damage the plastic.
- **Environment:** Operate and store the meter in a dry environment, away from direct sunlight, extreme temperatures, and high humidity.
- **Connections:** Periodically check all wiring connections to ensure they remain secure. Loose connections can lead to inaccurate readings or potential hazards.
- **Avoid Impact:** Protect the device from physical shocks or drops, which can damage internal components or the display.

7. TROUBLESHOOTING

If you encounter issues with your KWS-AC305 Wattmeter Power Meter, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No display / Meter not powering on	No power supply or incorrect power connection.	Check if AC 50-300V power is supplied to the L and N terminals. Ensure connections are secure.
Voltage reading is incorrect or zero	Incorrect wiring of L and N terminals.	Verify that the L and N terminals are correctly connected to the AC power source.
Current reading is incorrect or zero	Current Transformer (CT) not installed correctly or not connected.	Ensure the load's "Firewire" passes through the CT. Verify the CT's wires are securely connected to the meter.
Power or Energy readings are incorrect	Incorrect voltage or current readings, or CT polarity issue.	Troubleshoot voltage and current readings first. Ensure CT is correctly oriented if power factor is also affected.
Display flickering or unstable readings	Unstable power supply or electrical interference.	Ensure a stable AC power supply. Avoid installing near strong electromagnetic fields.

8. SPECIFICATIONS

Model	KWS-AC305
Brand	WVCLTVJA
Power Supply Voltage	AC 50-300V
Measuring Voltage Range	AC 0-500V
Current Range	0-100A (with external CT)
Power Measurement Range	0-50KW
Power Factor Range	0.00-1.00PF
Electric Energy Range	0-999999Kwh

Display Type	LED
Product Dimensions (Meter Unit)	Approx. 65.2mm x 37.9mm x 22mm (L x W x H)
Current Transformer (CT) Inner Diameter	Approx. 14.8mm
Item Weight	Approx. 1.76 ounces (50g)

9. WARRANTY AND SUPPORT

Information regarding product warranty and customer support was not provided in the product details. Please refer to your purchase documentation or contact the retailer/manufacturer directly for details on warranty coverage and technical assistance.

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