

Walfront D52-2066

Walfront D52-2066 Single Phase Energy Meter Instruction Manual

Model: D52-2066

PRODUCT OVERVIEW

The Walfront D52-2066 is a single-phase energy meter designed for monitoring electricity usage in both household and industrial settings. It features a full viewing angle colorful LCD screen that simultaneously displays six key electrical parameters: AC voltage, AC current, active power, power factor, frequency, and electric energy (kWh). This compact and lightweight device is suitable for DIN rail installation, making it a practical solution for various applications including chemical industry, power plants, automation equipment, and electromechanical systems. Its design allows for easy monitoring of total electricity consumption.

Parameter	Value
Item Type	Watt-Hour Meter
Model	D52-2066
Material	ABS
Measurement Accuracy	1%±2 Words
AC Voltage Measuring Range	AC 40.0-300.0V
AC Current Measuring Range	AC 0-100.0A
Current Display Resolution	0.01A
Power Frequency	45.0Hz-65.0Hz
Power Factor	0.00-1.00PF
Measurement Speed	About 2 times per second
Installation Method	Rail Type
Package Dimensions	3.39 x 2.91 x 2.32 inches
Item Weight	4.94 ounces

Note: The measuring voltage range of this instrument is 40-300V and is only suitable for pure AC 45-65Hz mains power.



Visual representation of the D52-2066 meter's dimensions: approximately 80mm (3.15in) height, 54mm (2.13in) width, and 48mm (1.89in) depth.

SETUP AND INSTALLATION

The D52-2066 energy meter is designed for easy installation on a DIN rail. Follow the instructions below for proper wiring.

Wiring Instructions:

1. **Connect Measured Voltage:** Connect the AC voltage to be measured to terminals 1 and 2 located on the bottom left of the meter.
2. **Built-in Transformer Wiring (Figure 2):**

For using the built-in transformer, pass the wire of the measurement circuit through the circular hole on the top of the meter and out from the bottom. The penetration direction can be chosen arbitrarily by the user. The 3

and 4 terminals are not used in this configuration.

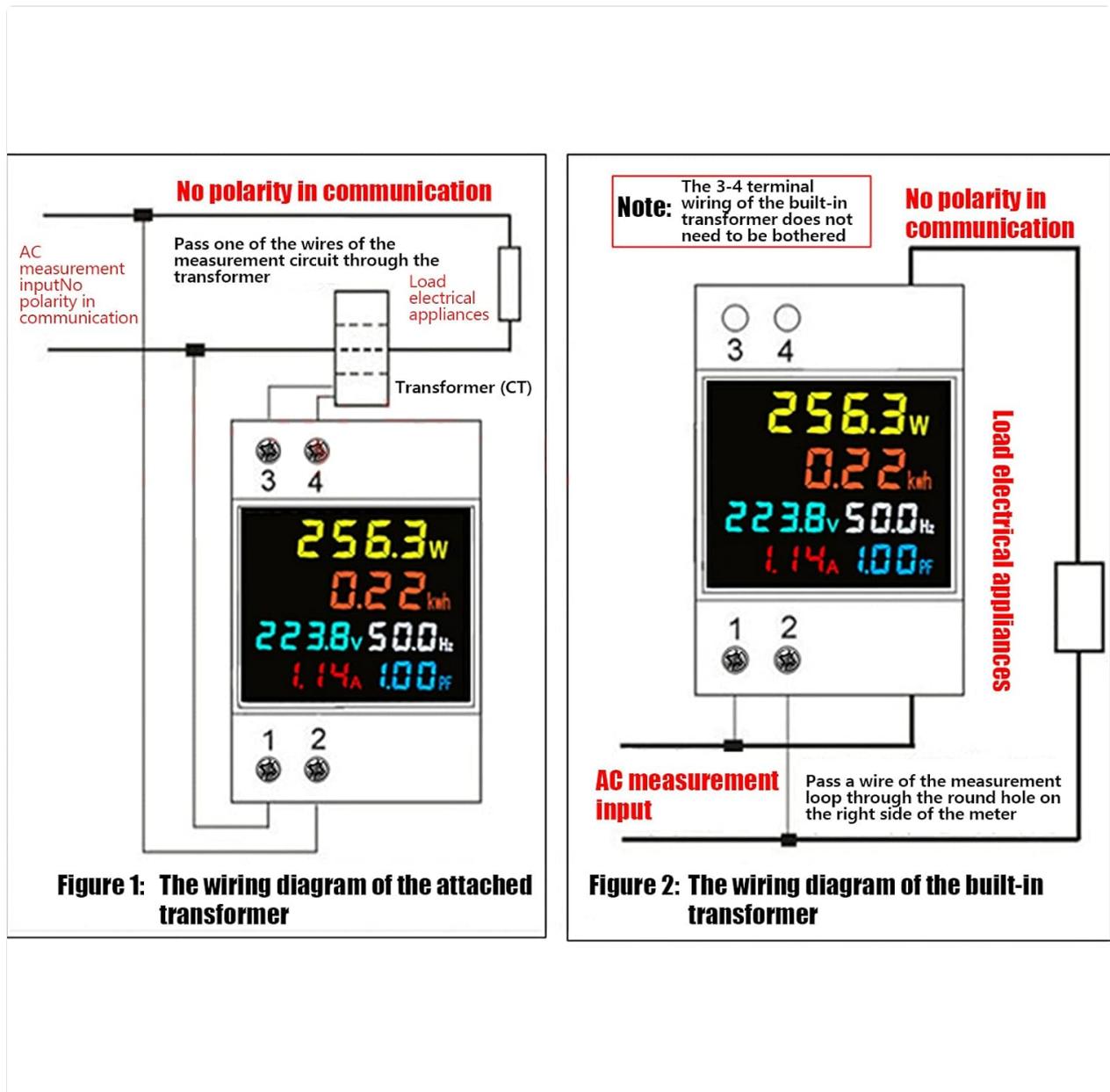


Figure 2: Wiring diagram for the built-in transformer. This diagram shows how to pass the load wire through the meter's internal current transformer. The AC measurement input connects to terminals 1 and 2. The load electrical appliances are connected in series with the wire passing through the meter's sensing hole.

3. External Transformer Wiring (Figure 1):

If using an external current transformer (CT), connect the two wires from the secondary end of the external CT to terminals 3 and 4 on the upper left of the meter. Then, pass the wire of the measurement circuit through the external CT. The load wire passing through the transformer is not polarized; simply pass it through one at a time.

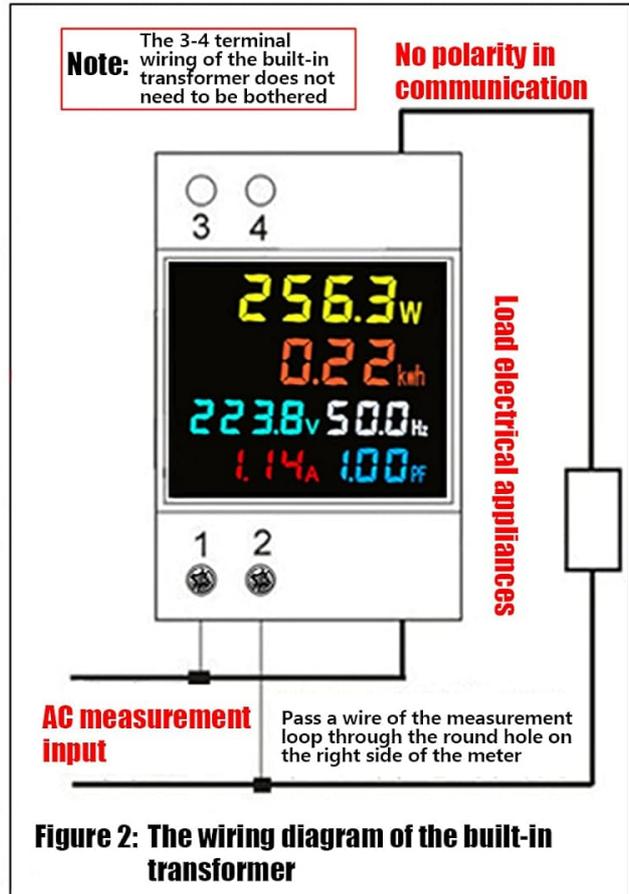
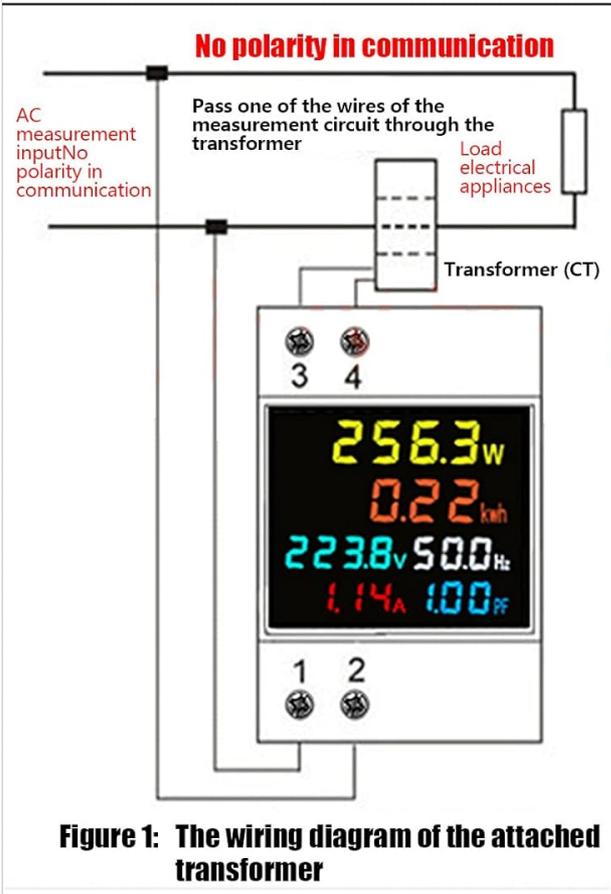
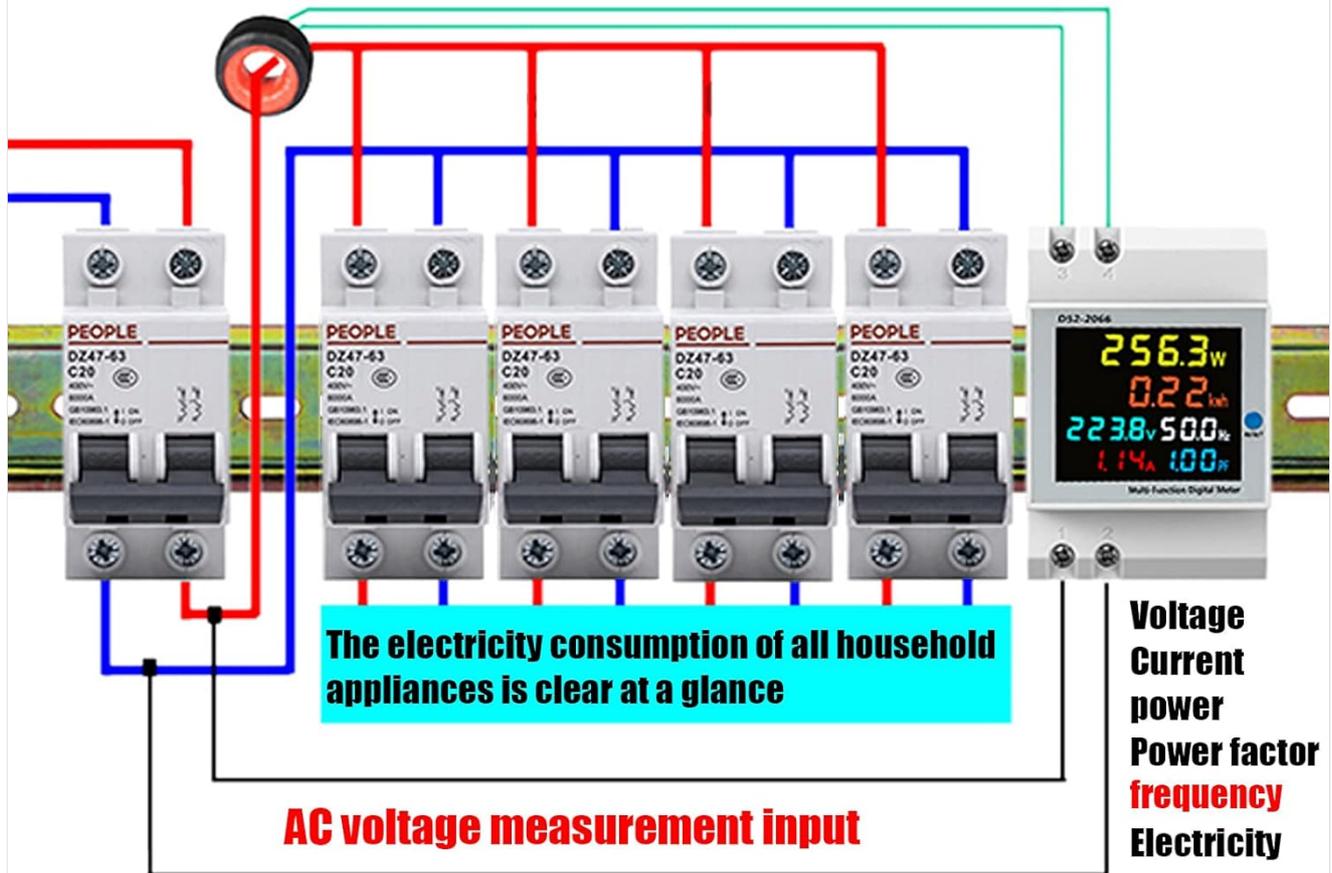


Figure 1: Wiring diagram for an attached (external) transformer. This diagram illustrates connecting an external current transformer (CT) to terminals 3 and 4, with the load wire passing through the external CT. AC measurement input connects to terminals 1 and 2.

After wiring, the meter will display measurement parameters once power is supplied.



Note: The load wire passing through the transformer is not polarized! Just go through one at a time

An example of a typical wiring setup showing the energy meter connected within a circuit with multiple circuit breakers. This setup allows for clear monitoring of electricity consumption for various household appliances.

OPERATING INSTRUCTIONS

The D52-2066 meter provides real-time display of various electrical parameters on its colorful LCD screen.

Display Parameters:

The meter simultaneously displays the following six parameters:

- AC Voltage (V)
- AC Current (A)
- Active Power (W)
- Power Factor (PF)

- Frequency (Hz)
- Electric Energy (kWh)

6 in 1 Display LCD LCD Screen



AC Voltage	AC40.0-300.0V
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AC Current	AC0-100.0A
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Current Display Resolution	0.01A
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Power Frequency	45.0Hz-65.0Hz
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Power Factor	0.00-1.00PF
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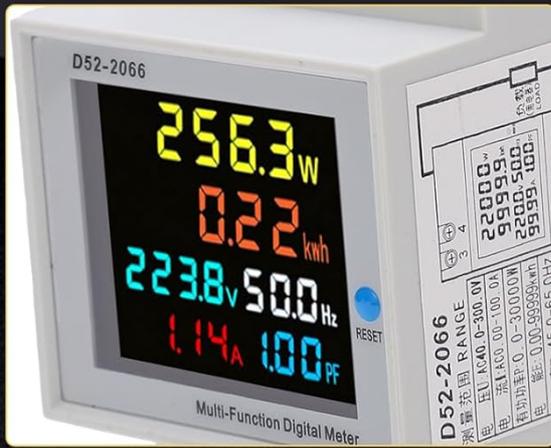
Active Power: the measurement range is 0-30000W, the display resolution between 0-9999.9W is 0.1W, and the rest is 1W

The meter's LCD display showing the six measured parameters: AC Voltage, AC Current, Active Power, Power Factor, Frequency, and Electric Energy (kWh). Each parameter is clearly labeled and displayed with its corresponding unit.

Resetting Energy Measurement (kWh):

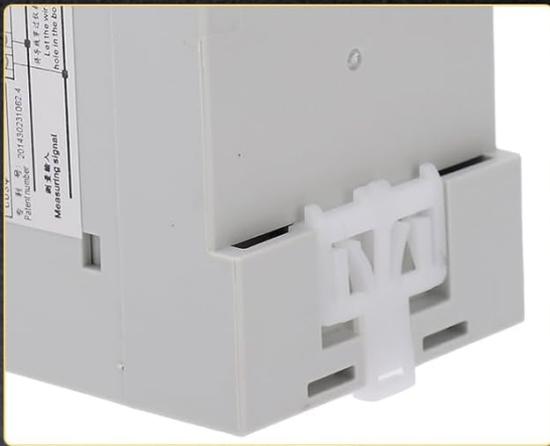
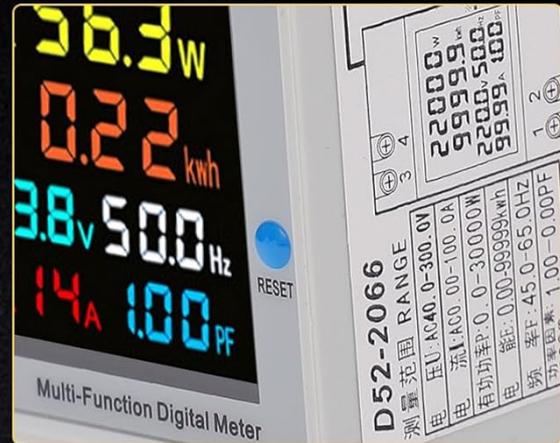
To reset the accumulated energy measurement (kWh) to zero, follow these steps:

1. Locate the "RESET" button on the right side of the instrument panel.
2. Press and hold the "RESET" button for approximately 5 seconds.
3. Continue holding until the energy display (kWh) shows "0".
4. Release the button. The electrical energy measurement will now start from zero.



1. Full View Color LCD Screen

2. Reset Button



3. Rail Mounted Installation

A close-up view of the D52-2066 meter highlighting the "RESET" button and the clear LCD screen. This button is used to clear the accumulated energy (kWh) reading.

MAINTENANCE

To ensure the longevity and accurate performance of your D52-2066 energy meter, follow these general maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the meter's exterior. Do not use abrasive cleaners or solvents, as they may damage the display or casing.
- **Environment:** Install the meter in a dry, well-ventilated area, away from direct sunlight, excessive heat, humidity, and corrosive gases.
- **Handling:** Handle the meter with care to avoid physical damage. Ensure all connections are secure and free from dust or debris.
- **Inspection:** Periodically inspect the wiring connections for any signs of wear, corrosion, or loosening.

Use of Insulation Materials

Adopting an insulated AB shell, it has good impact resistance and high and low temperature resistant function



Accurate



Durability



Security



The D52-2066 meter is constructed with insulated ABS shell materials, providing good impact resistance and high/low temperature resistance. This contributes to its accuracy, durability, and security in various operating environments.

TROUBLESHOOTING

If you encounter issues with your D52-2066 energy meter, refer to the following common troubleshooting tips:

Problem	Possible Cause	Solution
Meter not powering on/displaying	No power supply; incorrect wiring; voltage outside range.	Verify power supply to terminals 1 and 2. Check all wiring connections according to the setup diagrams. Ensure the AC voltage is within the 40V-300V range.

Problem	Possible Cause	Solution
Inaccurate readings	Incorrect CT connection (for external CT); wire not properly passed through built-in CT; interference.	For external CT, ensure secondary wires are connected to terminals 3 and 4 correctly. For built-in CT, ensure the load wire passes completely through the sensing hole. Minimize electromagnetic interference from other devices.
kWh reading not resetting	Button not held long enough.	Press and hold the "RESET" button for a full 5 seconds until the display clears to zero.
Display flickering or unstable	Unstable power supply; environmental factors.	Ensure a stable AC power source. Check for extreme temperatures or humidity.

If the problem persists after attempting these solutions, please contact Walfront customer support for further assistance.

WARRANTY AND SUPPORT

Walfront products are manufactured to high-quality standards. For information regarding warranty coverage, please refer to the documentation included with your purchase or visit the official Walfront website.

For technical support, troubleshooting assistance beyond this manual, or inquiries about replacement parts, please contact Walfront customer service. Keep your product model number (D52-2066) and purchase details ready when contacting support.

A detailed manual is included in the product package for comprehensive guidance.