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## Garosa DDS529MR

# Garosa DDS529MR Single Phase Electric Energy Meter User Manual

Model: DDS529MR

## INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of the Garosa DDS529MR Single Phase Electric Energy Meter. This device is designed for measuring active energy in single-phase AC power systems. It features an LCD digital display with backlight, RS485 communication, and displays power, voltage, current, power factor, frequency, and rotation.

## SAFETY INFORMATION

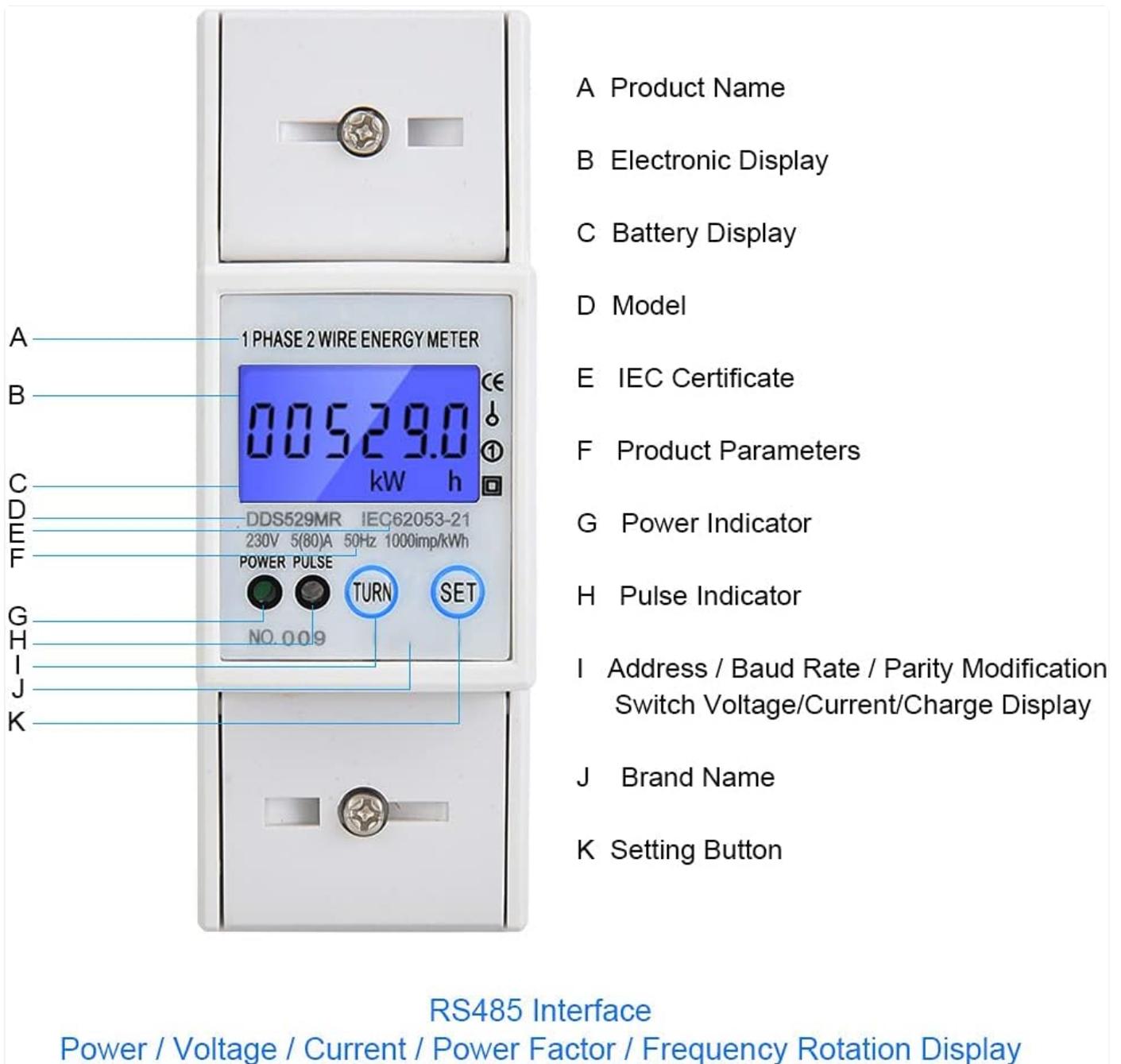
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- Installation and maintenance should only be performed by qualified personnel.
- Ensure the power supply is disconnected before any installation or wiring work.
- Do not operate the meter in environments with excessive moisture, dust, or corrosive gases.
- Verify all connections are secure and correct according to the wiring diagram to prevent damage or electric shock.
- The meter is designed for indoor use only.

## PRODUCT OVERVIEW

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The DDS529MR energy meter is a compact device for accurate energy measurement. Key features include a clear LCD display, RS485 communication for data integration, and a standard DIN rail mounting for easy installation.



**Figure 1:** Front view of the DDS529MR energy meter with labeled components.

- A:** Product Name
- B:** Electronic Display (LCD)
- C:** Battery Display (if applicable)
- D:** Model Number
- E:** IEC Certificate Mark
- F:** Product Parameters (e.g., 230V, 5(80)A, 50Hz, 1000imp/kWh)
- G:** Power Indicator LED
- H:** Pulse Indicator LED
- I:** Address / Baud Rate / Parity Modification, Switch Voltage/Current/Charge Display (via TURN/SET buttons)
- J:** Brand Name
- K:** Setting Button (SET)

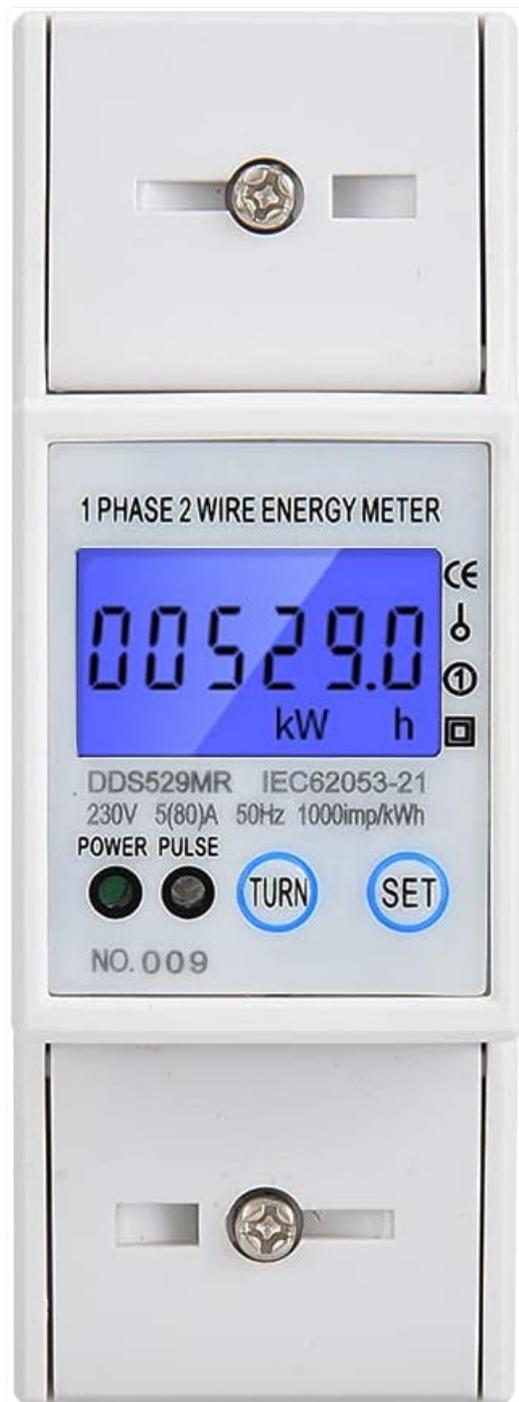


Figure 2: Close-up view of the LCD digital display with backlight.

## SPECIFICATIONS

Parameter	Value
Model	DDS529MR
Accuracy Level	1
Display Type	LCD with Backlight
Measuring Energy Range	0.0-99999.0 kWh
Power Supply	AC

Parameter	Value
Output Voltage	230V AC
Rated Voltage	230V AC
Phase Number	Single Phase
Pulse Frequency	1000 imp/kWh
Rated Current	5A
Maximum Current	80A
Dimensions	Approx. 100 x 35 x 65mm (3.9 x 1.4 x 2.6in)
Installation	35mm DIN Rail
Communication	RS485 (MODBUS-RTU)
Item Weight	210 g



Figure 3: Dimensions of the DDS529MR energy meter.

## SETUP AND INSTALLATION

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### Mounting

The DDS529MR energy meter is designed for standard 35mm DIN rail installation. Ensure the DIN rail is securely mounted in a suitable enclosure or panel.

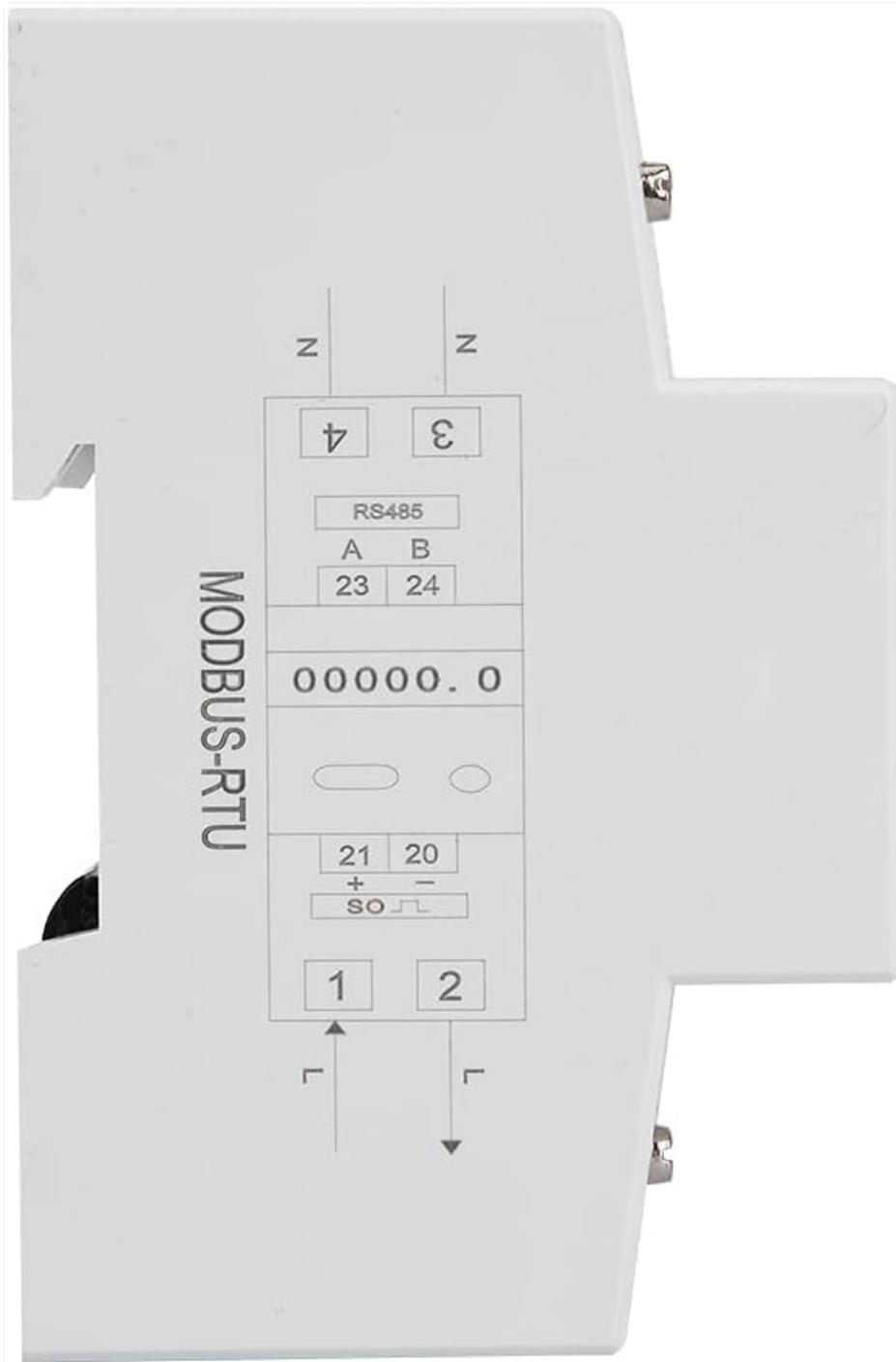
1. Align the meter's DIN rail clip with the DIN rail.
2. Press the meter firmly onto the rail until it clicks into place.
3. Verify the meter is securely fastened and does not wobble.



**Figure 4:** Rear view showing the DIN rail mounting mechanism.

### Wiring Diagram

Refer to the following diagram for correct wiring connections. Ensure all power is disconnected before wiring.



**Figure 5:** Wiring diagram for the DDS529MR energy meter, including power and RS485 connections.

**Terminals 1 & 2:** Live (L) and Neutral (N) input for power supply.

**Terminals 3 & 4:** Live (L) and Neutral (N) output for load.

**Terminals 21 & 20:** Pulse output (SO+ and SO-).

**Terminals A & B (RS485):** Data communication lines for RS485 (MODBUS-RTU).

Connect the main power supply to the input terminals (L and N). Connect the load to the output terminals (L and N). For RS485 communication, connect the A and B terminals to your RS485 network.

## OPERATING INSTRUCTIONS

### Power On

Once correctly wired and mounted, switch on the main power supply. The LCD display will illuminate, and the power indicator LED (G in Figure 1) will light up.

## Display Navigation

The meter features a rotating display of various parameters. Use the **TURN** button to manually cycle through the displayed values:

- Total Active Energy (kWh)
- Real-time Voltage (V)
- Real-time Current (A)
- Real-time Active Power (W)
- Power Factor (PF)
- Frequency (Hz)

The display will automatically rotate through these parameters at regular intervals. Pressing the **TURN** button allows for manual advancement to the next parameter.

## RS485 Communication

The DDS529MR supports RS485 communication using the MODBUS-RTU protocol. This allows for remote reading of energy data and other parameters. Refer to the MODBUS protocol documentation for detailed register addresses and communication settings.

The **SET** button (K in Figure 1) is typically used for configuring communication parameters such as baud rate and address, or for resetting certain values. Consult the full technical datasheet for specific programming instructions if available.

## MAINTENANCE

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- **Cleaning:** Use a soft, dry cloth to clean the meter's exterior. Do not use abrasive cleaners or solvents.
- **Inspection:** Periodically inspect the wiring connections for tightness and signs of wear or damage.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity ranges to prolong the meter's lifespan.
- **No User Serviceable Parts:** The meter contains no user-serviceable parts. Do not attempt to open or repair the device.

## TROUBLESHOOTING

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Problem	Possible Cause	Solution
Display is blank	No power supply; incorrect wiring; internal fault.	Check power connections and ensure power is on. Verify wiring according to the diagram. If problem persists, contact support.
Incorrect readings	Incorrect wiring; meter not calibrated; external interference.	Double-check all wiring. Ensure the meter is installed correctly for single-phase measurement. If readings are consistently off, contact support.
RS485 communication failure	Incorrect wiring of A/B lines; wrong baud rate/address; software configuration issue.	Verify RS485 wiring. Check baud rate, parity, and address settings on both the meter and the communication device. Consult MODBUS protocol documentation.

Problem	Possible Cause	Solution
Pulse indicator not flashing	No load connected; very low power consumption; internal fault.	Ensure a load is connected and drawing power. The pulse rate is 1000 imp/kWh, so for very low loads, flashes may be infrequent.

## WARRANTY AND SUPPORT

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Garosa products are manufactured to high-quality standards. For warranty information, please refer to the specific terms provided at the time of purchase or contact your vendor. For technical support or inquiries, please reach out to the Garosa customer service department or your local distributor.

