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DEWIN DDS528L

DEWIN DDS528L Single Phase Energy Meter Instruction Manual

Model: DDS528L

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the DEWIN DDS528L Single Phase Energy Meter. This device is designed for accurate measurement of active energy in single-phase two-wire AC power systems. It features microelectronics and digital processing technology for reliable performance and clear data display.

Key Features:

- **Accurate and Reliable:** Utilizes microelectronics and digital processing for precise electric energy measurement.
- **Multi-Parameter Display:** Circularly displays voltage, current, power, and energy (KWh).
- **Stable Performance:** Internal integrated circuit manufactured with SMT technology ensures good electromagnetic interference resistance.
- **Compact Design:** Lightweight and designed for 35mm DIN rail mounting.
- **Low Power Consumption:** High precision and high overload capacity.
- **Clear LCD Display:** Backlit LCD screen for clear visibility of positive active energy measurements.

2. Safety Information

Please read and understand all safety instructions before installing or operating the DEWIN DDS528L Energy Meter. Failure to follow these instructions may result in electric shock, fire, or damage to the device.

- **Qualified Personnel:** Installation and maintenance should only be performed by qualified electricians.
- **Power Disconnection:** Always disconnect power to the circuit before installation, wiring, or maintenance.
- **Proper Wiring:** Ensure all wiring connections are secure and comply with local electrical codes and

the provided wiring diagram.

- **Operating Environment:** Do not expose the meter to excessive moisture, dust, or extreme temperatures.
- **Inspection:** Regularly inspect the meter for any signs of damage. Do not use if damaged.

3. Product Overview

The DEWIN DDS528L is a compact, DIN-rail mountable energy meter designed for easy integration into electrical panels.

Figure 3.1: Front view of the DEWIN DDS528L Single Phase Energy Meter, showing the LCD display and model information.

Figure 3.2: Dimensions of the DEWIN DDS528L Energy Meter: 78.5mm (3.1in) height, 43mm (1.7in) width, 36.5mm (1.4in) depth.

Components:

- **LCD Display:** Shows KWh, Voltage, Current, and Power.
- **Input/Output Terminals:** For connecting the live (L) and neutral (N) wires.
- **DIN Rail Clip:** For mounting on a standard 35mm DIN rail.
- **Pulse Output Indicator:** An LED that flashes to indicate energy consumption (1000imp/KWh).

4. Specifications

Parameter	Value
Model	DDS528L
Rated Voltage	110-130V AC
Rated Current	5(32)A
Frequency	60Hz

Parameter	Value
Accuracy Class	1
Pulse Constant	1000imp/KWh
Display	LCD Backlight
Installation	35mm DIN Rail
Product Dimensions (L x W x H)	3.09 x 1.44 x 2.59 inches (78.5 x 36.5 x 43 mm)
Item Weight	0.13 Kilograms (4.59 ounces)

5. Setup and Installation

The DEWIN DDS528L Energy Meter is designed for easy installation on a standard 35mm DIN rail. Follow the steps below for proper installation and wiring.

Installation Steps:

1. **Power Off:** Ensure that the main power supply to the circuit is completely disconnected before beginning installation.
2. **Mounting:** Clip the energy meter onto a 35mm DIN rail in your electrical panel.
3. **Wiring:** Refer to the wiring diagram below for correct connections. Connect the live (L) and neutral (N) wires from the power source to the input terminals of the meter. Connect the load's live (L) and neutral (N) wires to the output terminals of the meter.
4. **Secure Connections:** Ensure all wire connections are tight and secure to prevent loose contacts and potential hazards.
5. **Power On:** Once all connections are verified, restore power to the circuit. The meter's LCD display should illuminate.

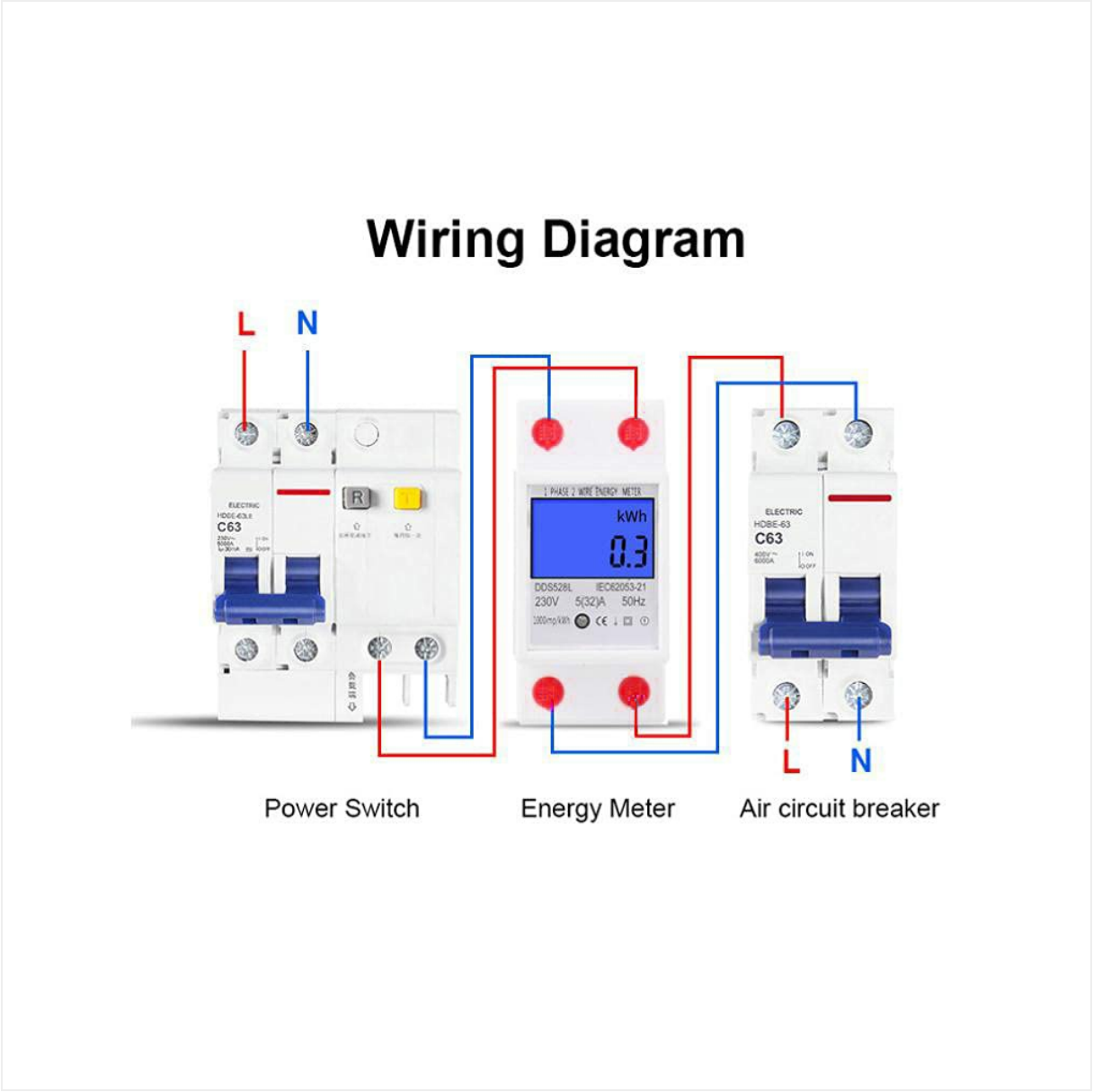

Figure 5.1: Wiring diagram for the DEWIN DDS528L Energy Meter. Connect the input (L and N) from the power source and output (L and N) to the load. The diagram shows connections with a power switch and an air circuit breaker.

6. Operating Instructions

After successful installation and power-up, the DEWIN DDS528L Energy Meter will automatically begin measuring and displaying electrical parameters.

Display Modes:

The meter features an automatic rotation display, cycling through the following parameters:

- **KWh (Kilowatt-hour):** Total active energy consumed.
- **Voltage (V):** Instantaneous voltage of the circuit.
- **Current (A):** Instantaneous current flowing through the circuit.
- **Power (P):** Instantaneous active power consumption.

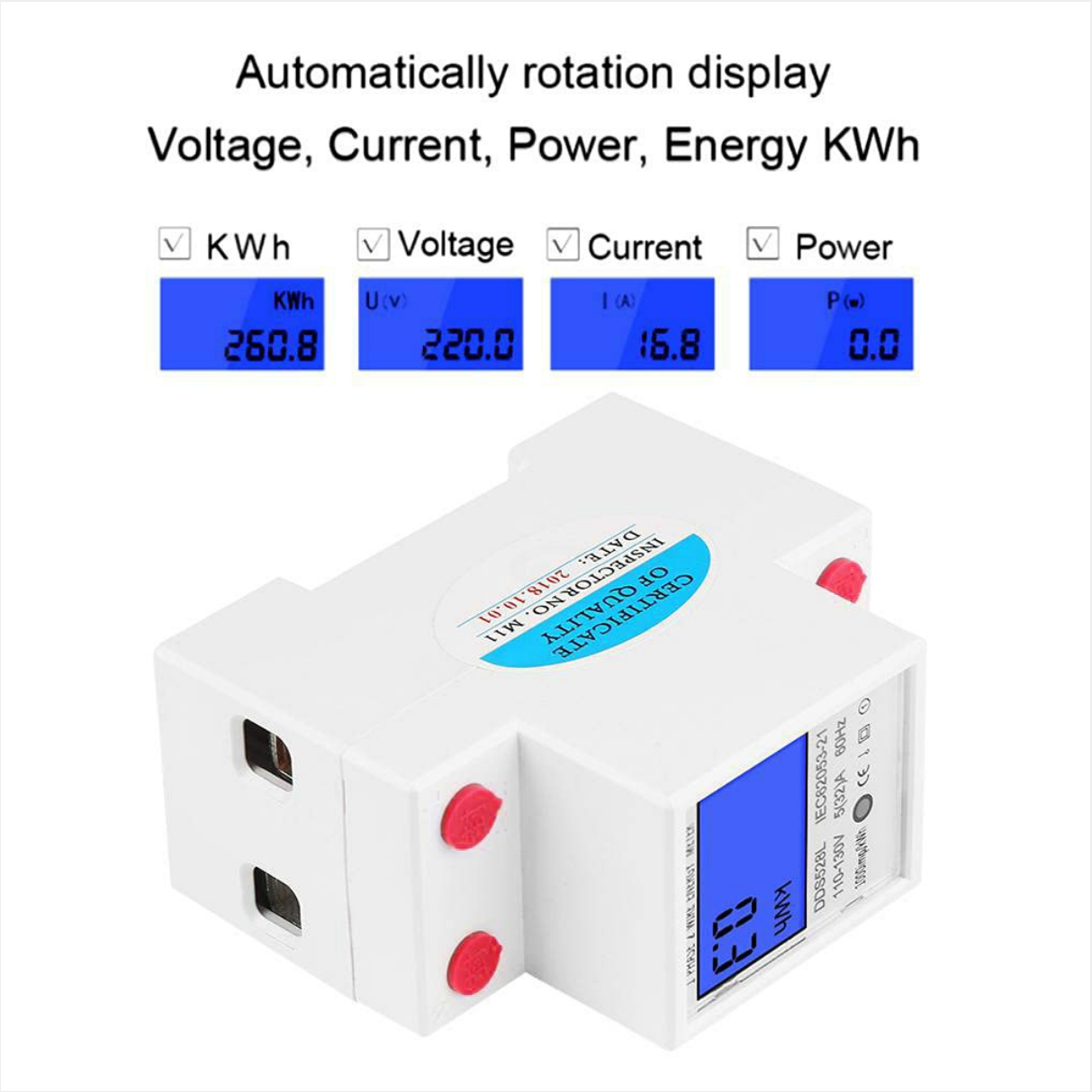

Figure 6.1: The meter's LCD display automatically cycles through KWh, Voltage, Current, and Power readings.

The pulse output indicator (LED) will flash at a rate of 1000 pulses per kilowatt-hour (1000imp/KWh), providing a visual indication of energy consumption.

7. Maintenance

The DEWIN DDS528L Energy Meter is designed for long-term, maintenance-free operation. However, periodic checks are recommended to ensure optimal performance and safety.

- **Cleaning:** Clean the meter's exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Connection Check:** Periodically check all wiring connections to ensure they remain tight and free from corrosion.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges.
- **Damage Inspection:** Inspect the meter for any physical damage, cracks, or discoloration. If damage is found, disconnect power and replace the unit.

8. Troubleshooting

If you encounter issues with your DEWIN DDS528L Energy Meter, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Meter display is off	No power supply; incorrect wiring; internal fault.	• Check if the main power supply is on. • Verify wiring connections according to the diagram (Section 5). • If power is present and wiring is correct, the unit may be faulty. Contact support.
Incorrect readings	Incorrect wiring; faulty meter.	• Double-check all wiring connections. • Compare readings with another calibrated meter if possible. • If readings are consistently inaccurate, the meter may be faulty. Contact support.
Pulse LED not flashing	No load connected; very low power consumption; LED fault.	• Ensure a load is connected and drawing power. • For very low power, the flashes may be infrequent. • If power is being consumed and the LED never flashes, contact support.

For issues not covered in this section, please contact DEWIN customer support.

9. Warranty and Support

DEWIN products are manufactured to high-quality standards. For specific warranty information, please refer to the warranty card included with your product or visit the official DEWIN website.
For technical support, troubleshooting assistance, or inquiries regarding parts and service, please contact DEWIN customer service through their official channels.

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