DEWIN LABDMDLFZ-3710-050064-07U0C

DEWIN Three-Phase WiFi Smart Energy Meter 100A 380VAC User Manual

Model: LABDMDLFZ-3710-050064-07U0C

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your DEWIN Three-Phase WiFi Smart Energy Meter. This device is designed for monitoring electrical parameters and offers various protection functions, controllable via the Tuya Smart APP.



Image 1.1: DEWIN Three-Phase WiFi Smart Energy Meter highlighting key features like overvoltage, undervoltage, overcurrent, delay, time control, leakage, high temperature protection, two-way measurement, and unlimited distance control.

2. Safety Information

Please read and understand all safety warnings and instructions before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Hazard:** This product has no isolation function. Always turn off the main power supply before performing any maintenance or installation procedures.
- **Wiring:** The neutral line (N line) of this product is directly connected and does not have a disconnection function. Ensure all equipment is wired strictly according to the markings on the device and installed correctly by a qualified electrician.
- **Circuit Breaker:** This device provides protection functions but cannot replace a standard circuit breaker. Always install an appropriate circuit breaker upstream of this device for primary circuit protection.
- **Secure Connections:** Tighten all clamping screws firmly to prevent damage to the equipment due to poor contact or loose connections.

- **Current Transformer:** Ensure the current transformer is correctly installed and connected. One neutral wire and all three live wires must pass through the current transformer simultaneously for accurate leakage detection.

3. Product Overview

The DEWIN Three-Phase WiFi Smart Energy Meter is a versatile device designed for comprehensive electrical monitoring and protection in three-phase systems. It features a color LCD display for real-time data and can be controlled remotely via the Tuya Smart APP.

Key Features:

- **WiFi Connectivity:** Remote control and monitoring via Tuya Smart APP.
- **Real-time Data Display:** Shows power, current, voltage, losses, frequency, and cumulative power.
- **Color LCD Screen:** Clear and easy-to-read measurement results.
- **Multiple Protections:** Overvoltage, undervoltage, overcurrent, leakage, voltage imbalance, current imbalance, phase loss, and phase load protection.
- **Timing Control:** Schedule device operations.
- **DIN Rail Installation:** Standard 35mm DIN rail mounting for easy integration.

4. Specifications

The following table outlines the technical specifications of the DEWIN Three-Phase WiFi Smart Energy Meter:

Parameter	Value
Connection Platform	Tuya Smart APP
Material	PC Flame Retardant Material
Rated Voltage	AC380V
Maximum Current	100A
Working Voltage	AC 80-400V
Power Display Range	0-9999.9 kWh
Rated Frequency	50/60 Hz
Overvoltage Protection	AC 120-300V (Adjustable)
Undervoltage Protection	80V-210V (Adjustable)
Overcurrent Protection	1.0A-100A
Reconnection Time (Delay)	1-9999 seconds (Default: 3 seconds)
Overcurrent/Leakage Protection Time	1-30 off (Default: 5)
Display Mode	Color Screen
WiFi Frequency	2.4 GHz
Installation Method	DIN Rail 35mm
Ambient Temperature Range	-30 ℃ ~ 70 ℃

Parameter	Value
Product Dimensions	9 x 7.5 x 7.5 cm
Product Weight	430 g



Connection Platform:	Tuya Smart APP	Undervoltage Protection:	80V-210V (adjustable)
Material:	PC flame retardant material	Overcurrent Protection:	PC flame retardant material
Rated voltage:	AC220V	Rated voltage:	1.0A-100A (precision 0.1A)
Maximum current:	100A	Reconnection time (delay time):	1-9999 seconds (default 3 seconds)
Working voltage:	AC80-300V	Overcurrent, leakage Protection time:	AC80-300V
Power display:	0-99999.9Kwh	Display mode:	1-30 off (default: 5)
Rated frequency:	50/60Hz	WiFi frequency:	2.4GHZ
Overvoltage Protection:	120-300VAC (adjustable)	Installation method:	DIN rail 35mm

Image 4.1: Product dimensions and a summary of technical parameters.

5. Setup

5.1 Installation

The DEWIN Smart Energy Meter is designed for universal 35mm DIN rail installation. This ensures a small size, light weight, and high reliability for various applications.

1. Mount the device securely onto a standard 35mm DIN rail within your electrical panel.
2. Ensure adequate clearance around the device for ventilation and wiring.



Image 5.1: The smart energy meter installed on a 35mm DIN rail.

5.2 Wiring

Important: All wiring should be performed by a qualified electrician with the main power supply turned OFF to prevent electric shock.

1. Connect the L1, L2, L3 (live wires) and N (neutral wire) to the corresponding terminals on the meter as indicated by the wiring diagram.
2. Connect the current transformer (CT) to the meter. Press the yellow button to insert the connector, then connect the CT wires.
3. Ensure that one neutral wire and all three live wires (L1, L2, L3) pass through the current transformer at the same time for accurate leakage current detection. If the transformer is not connected, the leakage value cannot be detected.

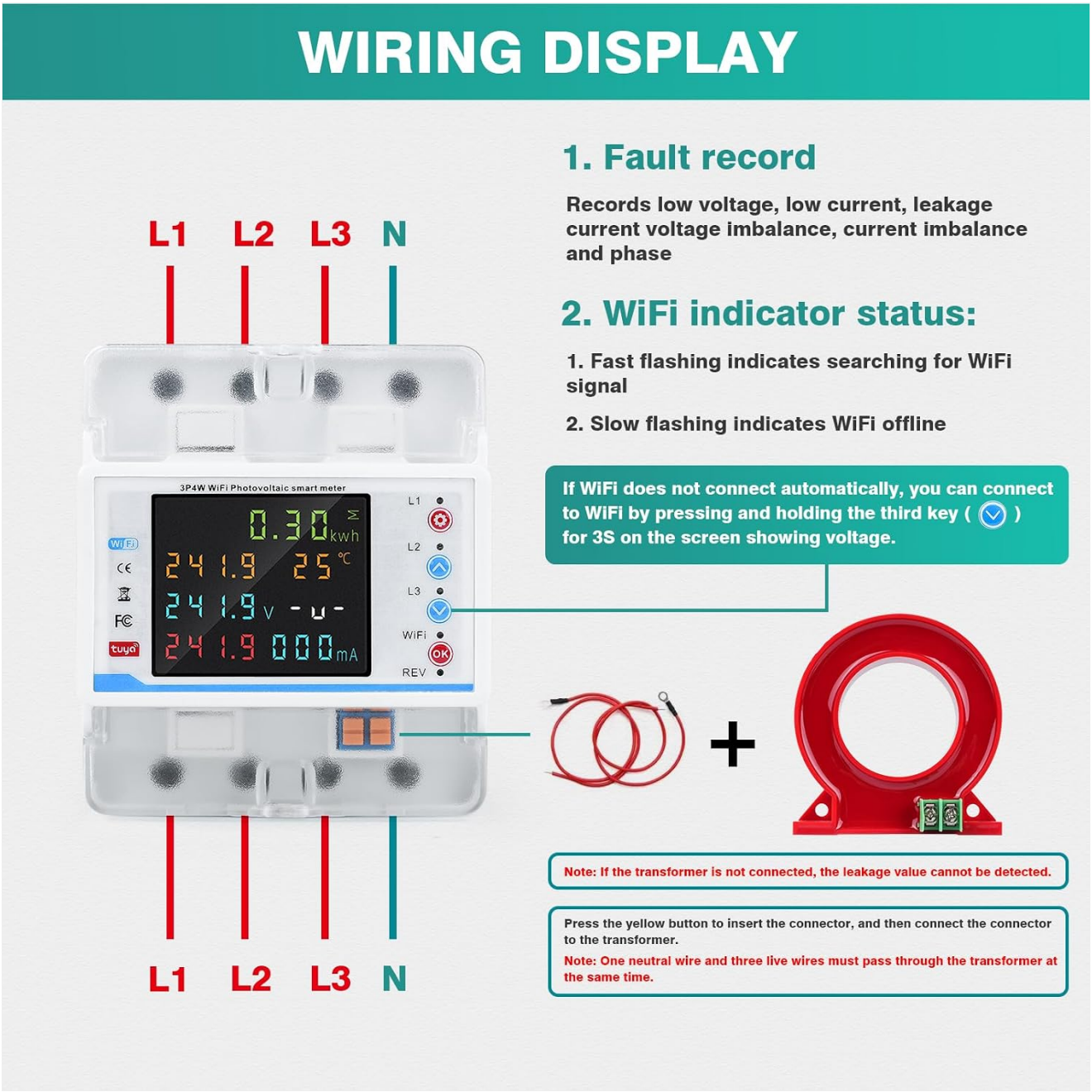


Image 5.2: Detailed wiring diagram showing connections for L1, L2, L3, N, and the current transformer.

5.3 APP Connection (Tuya Smart)

To utilize the smart features, connect the device to the Tuya Smart APP:

1. Download the Tuya Smart APP from your smartphone's app store.
2. Register or log in to your Tuya Smart account.
3. Ensure your device is powered on and within range of a 2.4 GHz WiFi network.
4. The WiFi indicator on the meter will flash rapidly when searching for a WiFi signal. A slow flash indicates WiFi is offline.
5. If the device does not connect automatically, press and hold the 'OK' button (third key) on the meter for 3 seconds while the screen displays voltage. Follow the in-app instructions to complete the pairing process.

6. Operating Instructions

6.1 Display Modes

The color LCD screen cycles through various display screens, showing different electrical parameters. You can typically navigate these screens using the buttons on the device.



Image 6.1: Examples of different display screens showing various electrical parameters and the alarm setting interface.

6.2 Alarm Settings

The device supports customizable alarm thresholds for various protection functions. Once a threshold is set, the protection function will automatically activate if the measured value exceeds or falls below the set limit.

- Access the alarm settings menu via the device interface or the Tuya Smart APP.
- Adjust parameters for overvoltage, undervoltage, overcurrent, and leakage protection as needed.
- The protection trip switch can be turned on or off for each function.

6.3 Timing Schedule

Use the Tuya Smart APP to set timing schedules for the device, allowing for automated control of connected loads.



Image 6.2: Illustration of the timing schedule feature, demonstrating how to automate device operations at specific times.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your smart energy meter.

- **Cleaning:** Periodically clean the device's exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly inspect wiring connections to ensure they remain tight and free from corrosion.
- **Power Off for Service:** Always turn off the main power supply before performing any physical maintenance on the device.
- **Software Updates:** Keep the Tuya Smart APP updated to the latest version for improved features and security.

8. Troubleshooting

If you encounter issues with your DEWIN Smart Energy Meter, refer to the following common troubleshooting steps:

- **Device Not Powering On:** Check the main power supply and all wiring connections. Ensure the rated voltage is

within the specified range (AC 80-400V).

- **WiFi Connection Issues:**
  - Ensure your router is broadcasting a 2.4 GHz WiFi signal.
  - Check the WiFi indicator on the device: fast flashing means searching, slow flashing means offline.
  - If offline, try pressing and holding the 'OK' button on the meter for 3 seconds to initiate pairing mode.
  - Ensure the device is within range of your WiFi router.
- **Inaccurate Readings:** Verify that the current transformer is correctly installed and that all live and neutral wires pass through it as instructed in Section 5.2.
- **Protection Function Not Activating:** Check the alarm settings in the Tuya Smart APP or on the device to ensure the protection trip switch is enabled and thresholds are set correctly.
- **Display Illegibility:** Ensure the device is installed in an environment where the screen is not exposed to excessive direct sunlight or extreme temperatures that could affect visibility.

For further assistance, please refer to the comprehensive user manual included in the package or contact DEWIN customer support.

9. Warranty and Support

Warranty information for the DEWIN Three-Phase WiFi Smart Energy Meter is typically provided with your purchase documentation. Please refer to the warranty card or contact your retailer for details regarding warranty coverage and terms.

For technical support or inquiries, please contact DEWIN customer service through the channels provided in your product packaging or on the official DEWIN website.