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## ACAGALA 3P4W Photovoltaic Meter

# User Manual

## TUYA WiFi 3P4W PHOTOVOLTAIC METER

Brand: ACAGALA | Model: 3P4W Photovoltaic Meter

### 1. Product Overview

The ACAGALA Tuya WiFi 3P4W Photovoltaic Meter is an intelligent reclosing protector designed for three-phase, four-wire systems. It features an LCD display for real-time data, automatic reclosing functionality, and comprehensive multi-protections against various electrical anomalies. This device integrates with the Tuya APP for remote monitoring and control, offering enhanced safety and convenience for photovoltaic installations.

#### Key Features:

- **Premium Material:** Housing made of flame-resistant material with built-in intelligent Tuya chips, ensuring wear resistance, interference resistance, high strength, and durability.
- **Digital LCD Display:** Displays three real-time data points simultaneously for accurate and easy reading.
- **Automatic Reclosing Protection:** Automatically cuts off power during overvoltage or overcurrent events and recloses once the fault is cleared.
- **Multi-protections:** Includes protection against overvoltage, undervoltage, current limit, phase-break, zero-loss, phase sequence, voltage unbalance, and current unbalance.
- **Mobile App Control:** Remote threshold setting and switching via the Tuya mobile application.

### 2. Installation and Setup

Proper installation is crucial for the safe and effective operation of your Photovoltaic Meter. Please follow these instructions carefully. It is recommended that installation be performed by a qualified electrician.

#### 2.1 DIN Rail Snap Installation

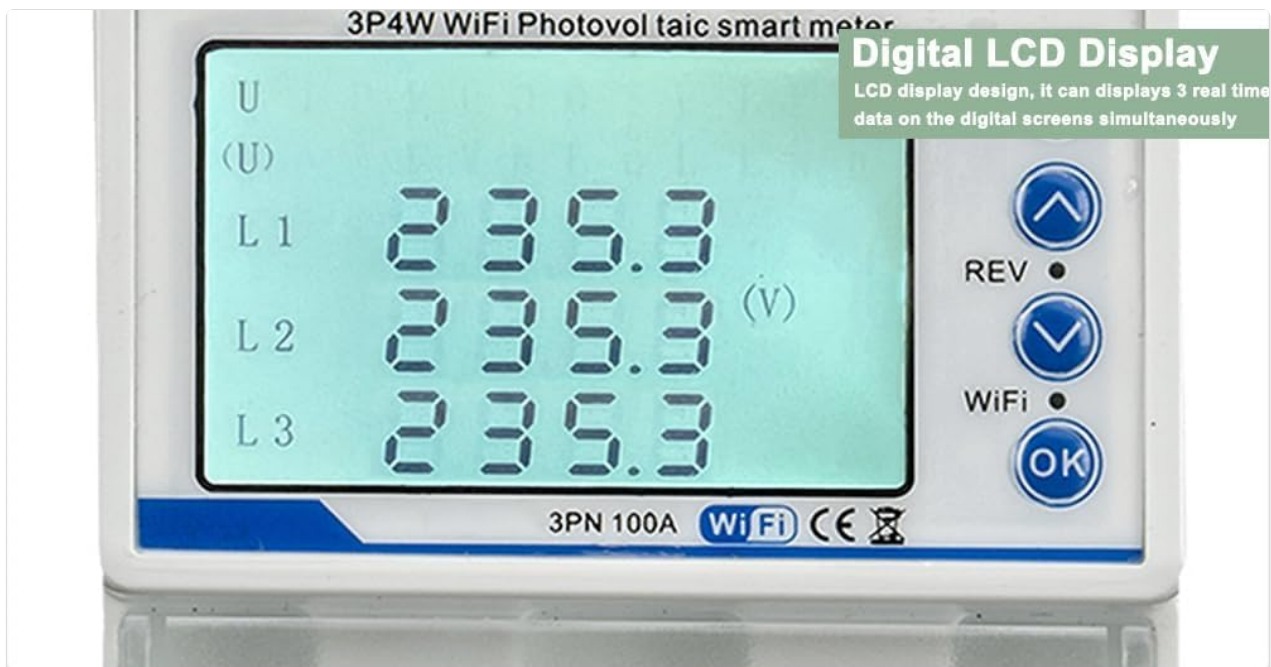
# DIN RAIL TYPE SNAP INSTALLATION

**no screws required, buckle fixation**



The meter is designed for easy DIN rail mounting. No screws are required for fixation; simply snap it onto a standard DIN rail using the integrated buckle mechanism on the back. Ensure the rail is securely mounted within your electrical panel.

## **2.2 Easy Wiring**



The device features large wiring ports to facilitate quicker and easier connection of electrical wires. Refer to the wiring diagram provided in the product packaging or consult a qualified electrician for correct three-phase, four-wire connection. Ensure all connections are secure and properly insulated.

### 2.3 Initial Power-Up

Once physically installed and wired, apply power to the circuit. The LCD display should illuminate, indicating the device is receiving power. The meter will begin displaying real-time voltage readings for each phase (L1, L2, L3).

### 2.4 WiFi Connection and APP Setup



## Mobilephone APP Control

After downloading the mobile phone APP, you can set the threshold or switch remotely through your cellphone at any time when you are out of the house, enjoy the convenience of the mobile phone APP

To utilize the smart features, download the Tuya Smart or Smart Life app from your mobile device's app store. Follow the in-app instructions to add the device. Typically, this involves putting the meter into pairing mode (often by pressing and holding the WiFi button or a combination of buttons until the WiFi indicator blinks) and then connecting it to your home's 2.4GHz WiFi network through the app. Once connected, you can monitor data and control settings remotely.

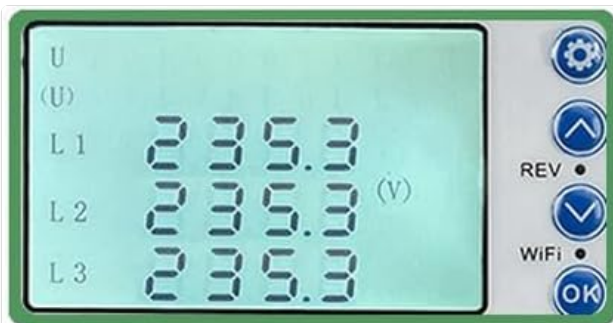
### 3. Operating Instructions

#### 3.1 LCD Display Overview



The LCD display provides real-time information. It typically shows voltage readings for L1, L2, and L3 phases. Other indicators include WiFi status, reverse energy flow (REV), and operational status. The display allows for quick visual checks of your electrical system's health.

### 3.2 Physical Button Operation



## Physical button design

threshold values can be customized as needed,  
sensitive operation and comfortable hand feeling



The meter features physical buttons for direct interaction. These include Up, Down, Settings, and OK buttons. These buttons allow you to navigate through display menus, view different parameters, and adjust certain threshold values directly on the device. Refer to the detailed manual (if provided separately) for specific button functions and menu navigation.

### 3.3 Mobile App Control (Tuya APP)

Once connected to the Tuya APP, you gain comprehensive control and monitoring capabilities:

- **Remote Monitoring:** View real-time voltage, current, power, and energy consumption data from anywhere.
- **Threshold Setting:** Customize protection thresholds for overvoltage, undervoltage, overcurrent, etc., directly from the app.
- **Remote Switching:** Remotely turn the power supply on or off through the protector.
- **Historical Data:** Access historical data and generate reports for energy usage analysis.
- **Notifications:** Receive alerts for protection events or abnormal conditions.

## 4. Multi-Protections and Automatic Reclosing



**Multi-protections**  
With overvoltage, undervoltage, current limit, phase-break, zerolost, phase sequence, voltage unbalance, current unbalance protections, etc

3P4W WiFi Photovoltaic smart meter

U	(V)
L 1	235.0
L 2	235.0
L 3	235.0

3PN 100A WiFi CE

The meter is equipped with advanced protection features to safeguard your electrical system and connected appliances. When an abnormal condition is detected, the protector will automatically trip and cut off the power supply.

### Protection Types:

- **Overvoltage Protection:** Disconnects power if voltage exceeds a set limit.
- **Undervoltage Protection:** Disconnects power if voltage drops below a set limit.
- **Current Limit Protection:** Prevents damage from excessive current draw.
- **Phase-Break Protection:** Detects and reacts to the loss of one or more phases.
- **Zero-Loss Protection:** Ensures the neutral connection is maintained.
- **Phase Sequence Protection:** Verifies correct phase rotation.
- **Voltage Unbalance Protection:** Monitors and protects against significant voltage differences between phases.
- **Current Unbalance Protection:** Monitors and protects against significant current differences between phases.

**Automatic Reclosing:** After a protection event, if the fault condition is no longer present, the device will automatically reclose and restore power. This feature minimizes downtime and manual intervention. The reclosing delay and attempts can often be configured via the mobile app.

## 5. Specifications

Parameter	Value
Product Name	Automatic Reclosing Protector
Material	Plastics (flame-resistant)
Display	LCD display
Voltage Range	80-380V
Rated Current	100A
Rated Frequency	50Hz
Connection Way	WiFi + Tuya APP
Operating Temperature	-20°C to 60°C
Item Dimensions	89 * 75 * 75mm (3.50 * 2.95 * 2.95in)
Item Weight	450g (0.99lb)
Package Dimensions	85 * 100 * 85mm (3.35 * 3.94 * 3.35in)
Package Weight	470g (1.04lb)



Detailed dimensions of the ACAGALA 3P4W Photovoltaic Meter.

## 6. Maintenance

The ACAGALA Tuya WiFi 3P4W Photovoltaic Meter is designed for low maintenance. However, regular checks

can ensure its longevity and optimal performance:

- **Cleaning:** Periodically wipe the exterior of the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off before cleaning.
- **Connection Check:** Annually, or if issues arise, have a qualified electrician check all wiring connections to ensure they remain tight and free from corrosion.
- **Firmware Updates:** Check the Tuya APP regularly for any available firmware updates for the device. Updates can improve performance, add features, or address security vulnerabilities.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature range (-20°C to 60°C) and is free from excessive dust or moisture.

## 7. Troubleshooting

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If you encounter issues with your ACAGALA Photovoltaic Meter, refer to the following common troubleshooting steps:

- **Device Not Powering On:**
  - Verify that the main power supply to the circuit is active.
  - Check all wiring connections for proper installation and tightness.
  - Ensure the voltage is within the specified operating range (80-380V).
- **WiFi Disconnection:**
  - Ensure your WiFi router is operational and broadcasting a 2.4GHz network.
  - Check the distance between the meter and the router; signal strength may be an issue.
  - Restart the meter by cycling its power.
  - Attempt to re-pair the device with the Tuya APP.
- **Automatic Tripping/Reclosing Issues:**
  - Check the LCD display or Tuya APP for the specific protection event (e.g., overvoltage, overcurrent).
  - Verify that the electrical load is not exceeding the rated current (100A).
  - Ensure input voltage is stable and within acceptable limits.
  - If tripping persists without apparent fault, consult a qualified electrician.
- **Inaccurate Readings:**
  - Confirm all wiring connections are correct and secure, especially current transformer (CT) connections if applicable (though not explicitly mentioned for this model, it's common for meters).
  - Ensure the device is operating within its specified parameters.

For issues not covered here, or if troubleshooting steps do not resolve the problem, please contact ACAGALA customer support or a certified electrician.

## 8. Warranty and Support

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ACAGALA products are manufactured to high-quality standards. For information regarding warranty coverage, technical support, or service, please refer to the warranty card included with your product or visit the official ACAGALA website. Please have your product model number (3P4W Photovoltaic Meter) and purchase details ready when contacting support.

**Contact Information:**

- **Manufacturer:** ACAGALA
- **Model:** 3P4W Photovoltaic Meter
- **ASIN:** B0CS6QDDDK
- For the most up-to-date support contact details, please visit the official ACAGALA support page.