Walfront WALFRONTvb4q21ime5

Walfront Smart Energy Meter User Manual

Model: WALFRONTvb4q21ime5

Introduction

The Walfront Smart Energy Meter is designed for monitoring electricity consumption in single-phase systems. It provides real-time data on voltage, current, power factor, active power, and frequency. This device is compatible with Tuya and Smart Life applications, allowing users to monitor energy usage, set automation rules, and view historical data from their mobile devices. It is particularly useful for tracking energy generated by solar photovoltaic systems and consumed from the city grid.

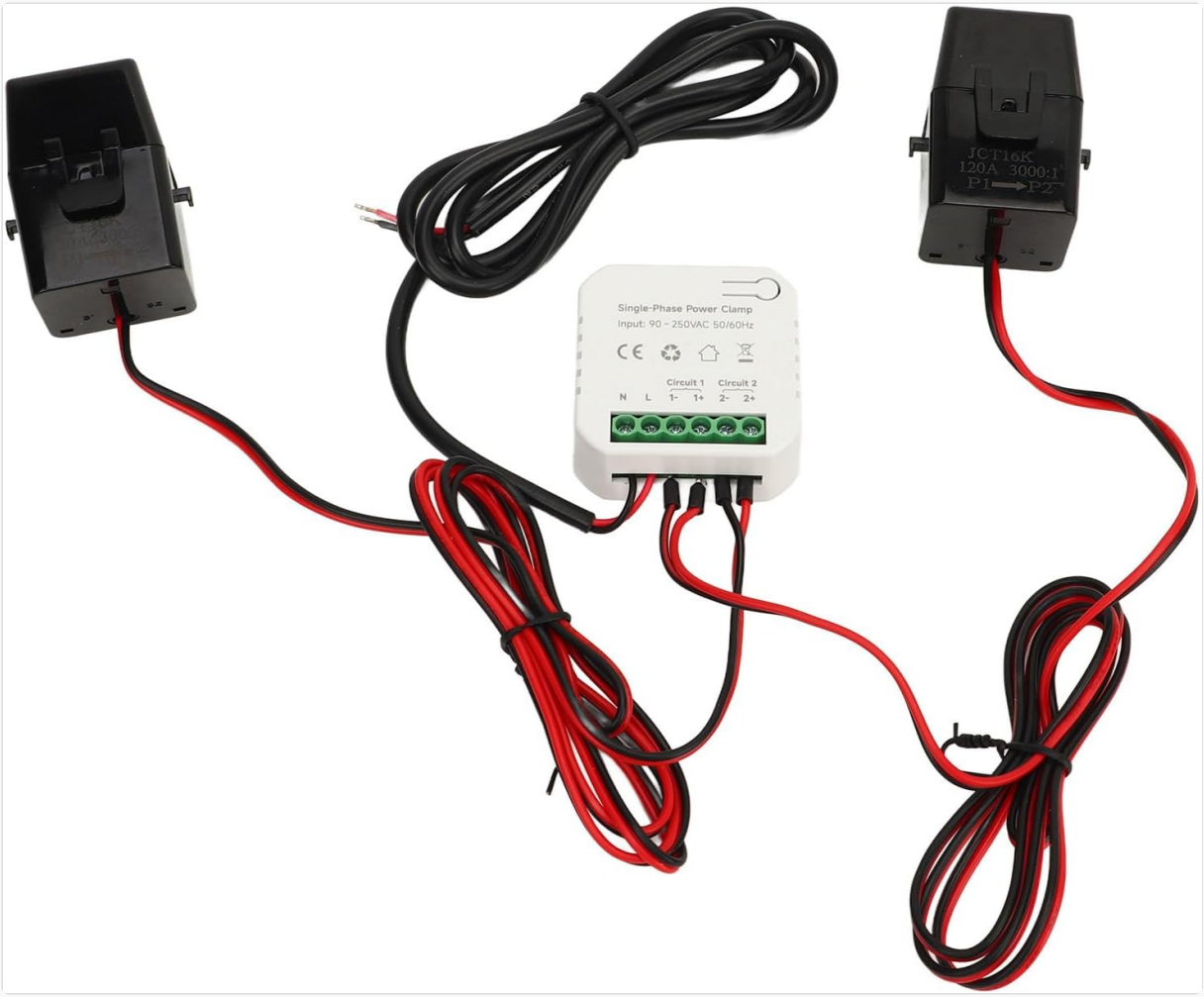

Image: The Walfront Smart Energy Meter unit connected to two 120A current transformer (CT) clamps, ready for installation.

Specifications

Feature	Specification
Input Voltage	AC 90~250V 50/60Hz
Current Clamps	2 x 120A CT clamps
Measuring Current Range	0.2A~80A (per clamp)
Measurement Accuracy	≤100W (within ±2W); >100W (within ±2%)
Wi-Fi Standard	802.11B/G/N20/N40 at 2.4GHz
BLE	Bluetooth 4.2 low energy
Operating Temperature	-20~55℃
Humidity Range	≤90% No condensation
Mounting Method	35MM DIN rail
Report Period	Every 15 seconds

Package Contents

- 1 x Smart Energy Meter
- 2 x 120A Current Transformer (CT) Clamps
- 1 x User Manual (this document)

Setup

1. Wiring Installation

Follow the wiring diagram carefully to ensure correct and safe installation. It is recommended that installation be performed by a qualified electrician.

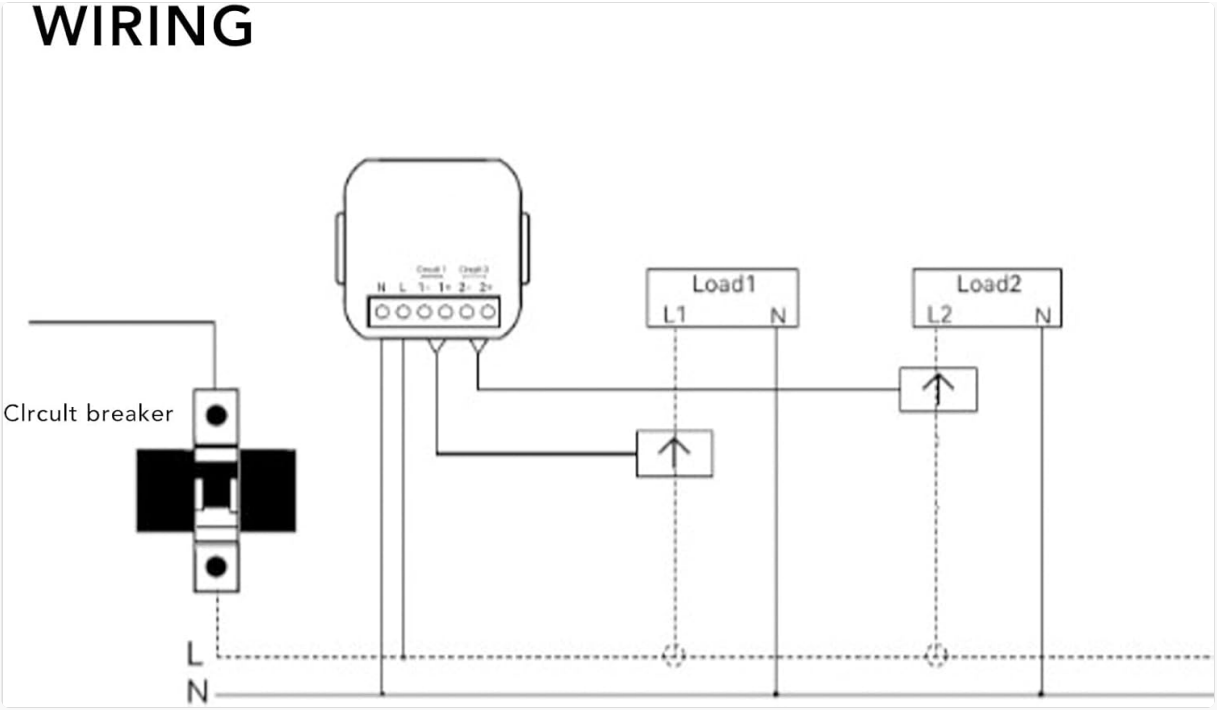

Image: Detailed wiring diagram showing connections to the circuit breaker, loads, and the smart energy meter with CT clamps.

1. Ensure the main power supply is turned off before beginning any wiring.
2. Mount the Smart Energy Meter on a 35MM DIN rail.
3. Connect the Neutral (N) and Live (L) wires from your power source to the corresponding N and L terminals on the meter.
4. Install the two 120A CT clamps around the live wires of the circuits you wish to monitor (Circuit 1 and Circuit 2). Ensure the arrow on the CT clamp points in the direction of current flow (towards the load).
5. Connect the wires from CT Clamp 1 to the "Circuit 1" terminals (1- and 1+) on the meter.
6. Connect the wires from CT Clamp 2 to the "Circuit 2" terminals (2- and 2+) on the meter.
7. Double-check all connections for security and correctness before restoring power.

2. App Installation and Connection

The Smart Energy Meter operates with the Tuya Smart APP or Smart Life APP. Download the appropriate app from your mobile device's app store (Google Play Store for Android or Apple App Store for iOS).

1. Download and install the "Tuya Smart" or "Smart Life" app on your smartphone.
2. Register or log in to your account.
3. Ensure your mobile device is connected to a 2.4GHz Wi-Fi network.
4. Power on the Smart Energy Meter. The Wi-Fi indicator on the device should start blinking, indicating it's in pairing mode. If not, refer to the device's reset instructions (usually pressing and holding a button for 5 seconds).
5. In the app, tap the "+" icon to add a new device.
6. Select "Electrical" or "Energy Meter" from the device list.
7. Follow the on-screen instructions to connect the meter to your Wi-Fi network. This typically involves confirming the blinking indicator and entering your Wi-Fi password.
8. Once connected, the device will appear in your app, and you can begin monitoring.

Operation

1. Monitoring Energy Consumption

The app allows you to monitor real-time energy data and view consumption for individual circuits.

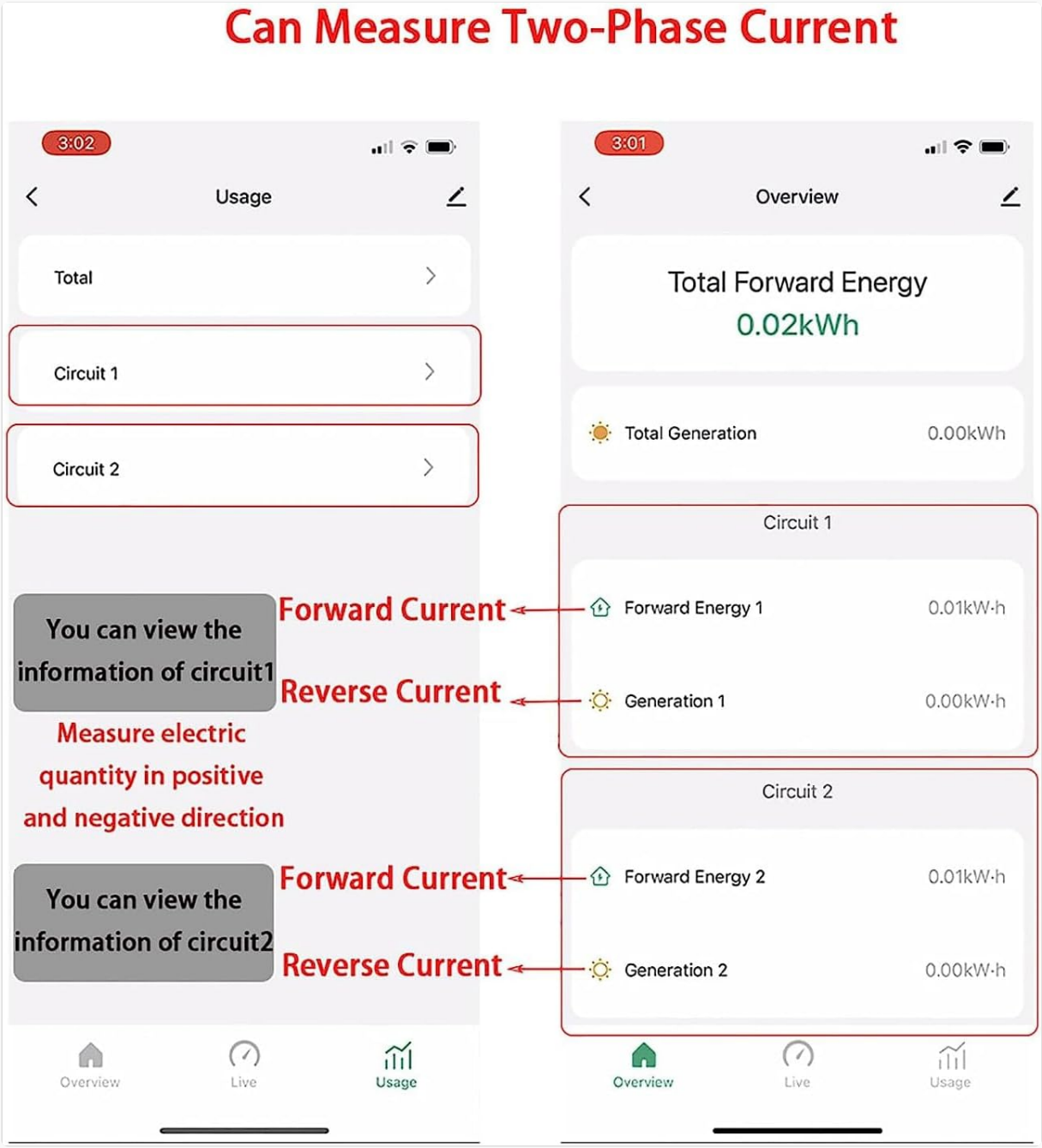

Image: Screenshots of the app displaying "Usage" and "Overview" screens, showing total energy, forward current, and reverse current for Circuit 1 and Circuit 2.

- Open the Tuya Smart or Smart Life app and select your Smart Energy Meter device.
- The main screen will display real-time voltage, current, and power readings.
- Navigate to the "Usage" or "Overview" section to view detailed consumption data for Circuit 1 and Circuit 2.
- The app can display both "Forward Current" (energy consumed from the grid) and "Reverse Current" (energy generated, e.g., from solar panels).

2. Automation Functions

You can set up automation rules within the app to control other smart devices or receive notifications based on energy parameters.

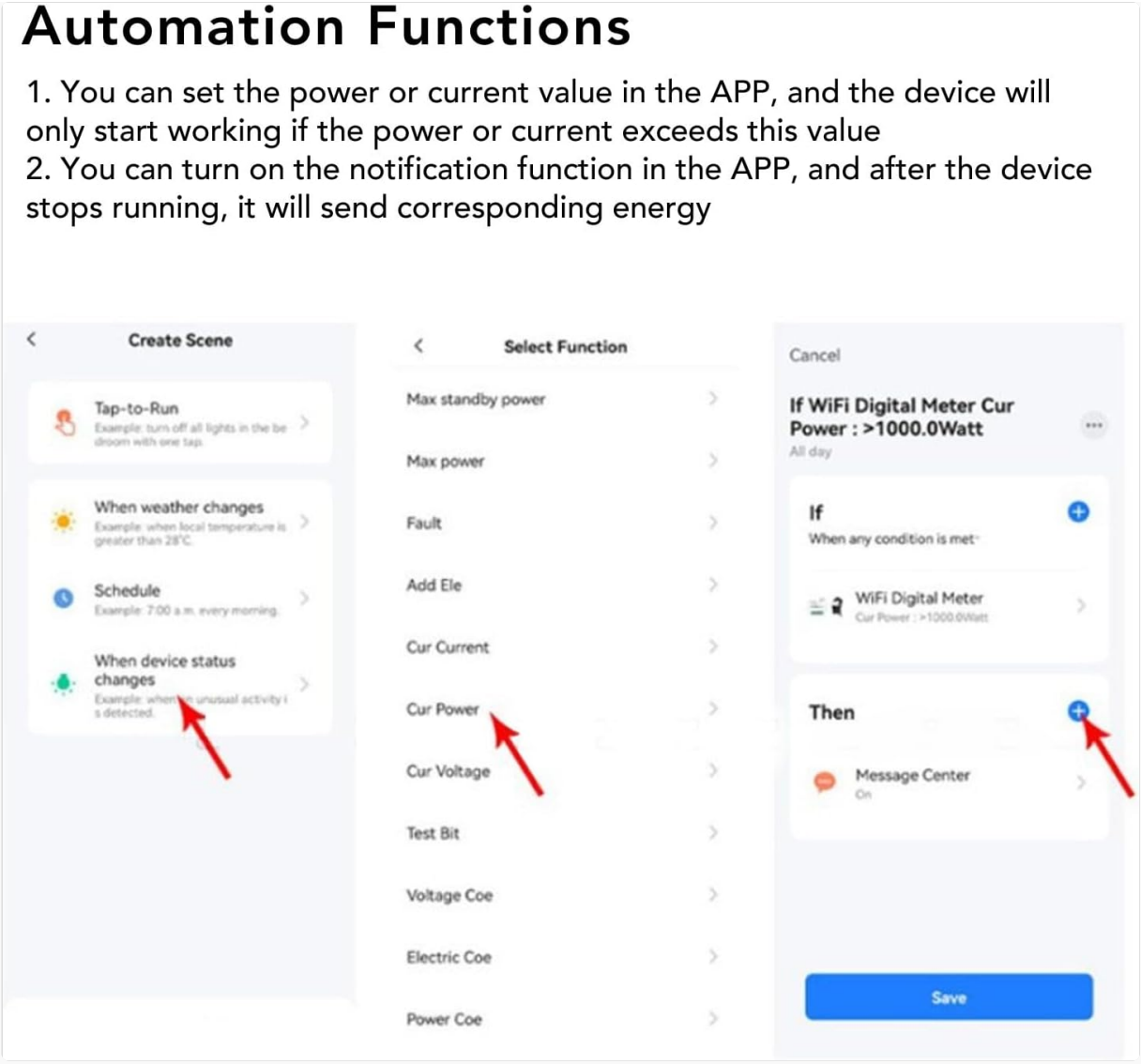

Image: Screenshots illustrating the "Automation Functions" section in the app, showing options to create scenes and set conditions based on power, current, or voltage values.

- In the app, go to the "Smart" or "Automation" section.
- Create a new "Scene" or "Automation".
- Set conditions based on the Smart Energy Meter's readings, such as:
  - If power exceeds a certain value.
  - If current exceeds a certain value.
  - If voltage is outside a specified range.
- Define actions to be performed when the condition is met, such as:
  - Send a notification to your phone.
  - Turn on/off another Tuya-compatible smart device.
- Save the automation rule.

3. Data Storage and Viewing

The app stores historical energy consumption data, allowing you to review hourly, daily, monthly, and yearly trends.

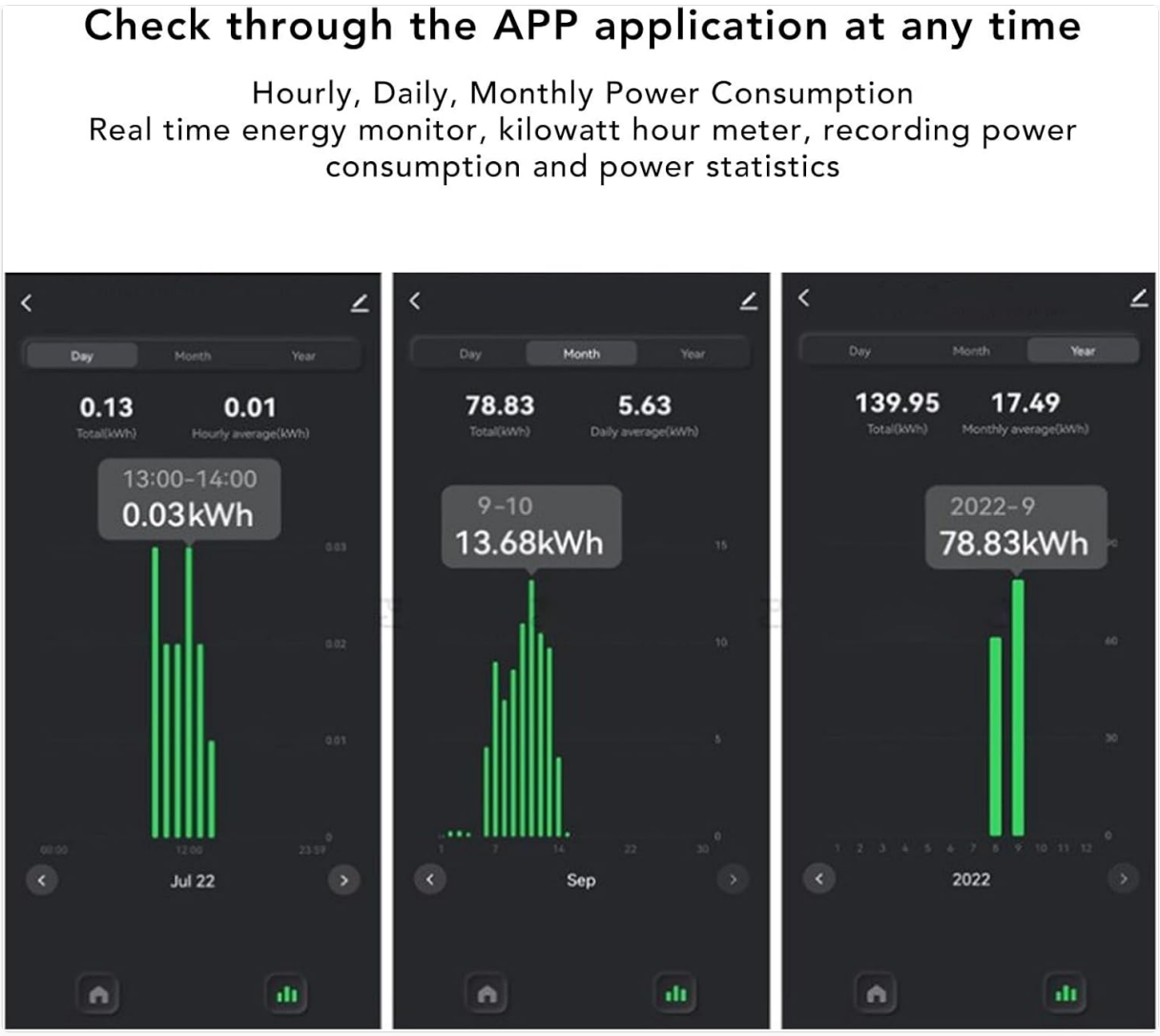

Image: Screenshots of the app displaying hourly, daily, and monthly power consumption graphs and statistics.

- Access the "Statistics" or "History" section within the device interface in the app.
- You can switch between hourly, daily, monthly, and yearly views to analyze your energy usage patterns.
- The app retains records for more than one year, providing comprehensive historical data.

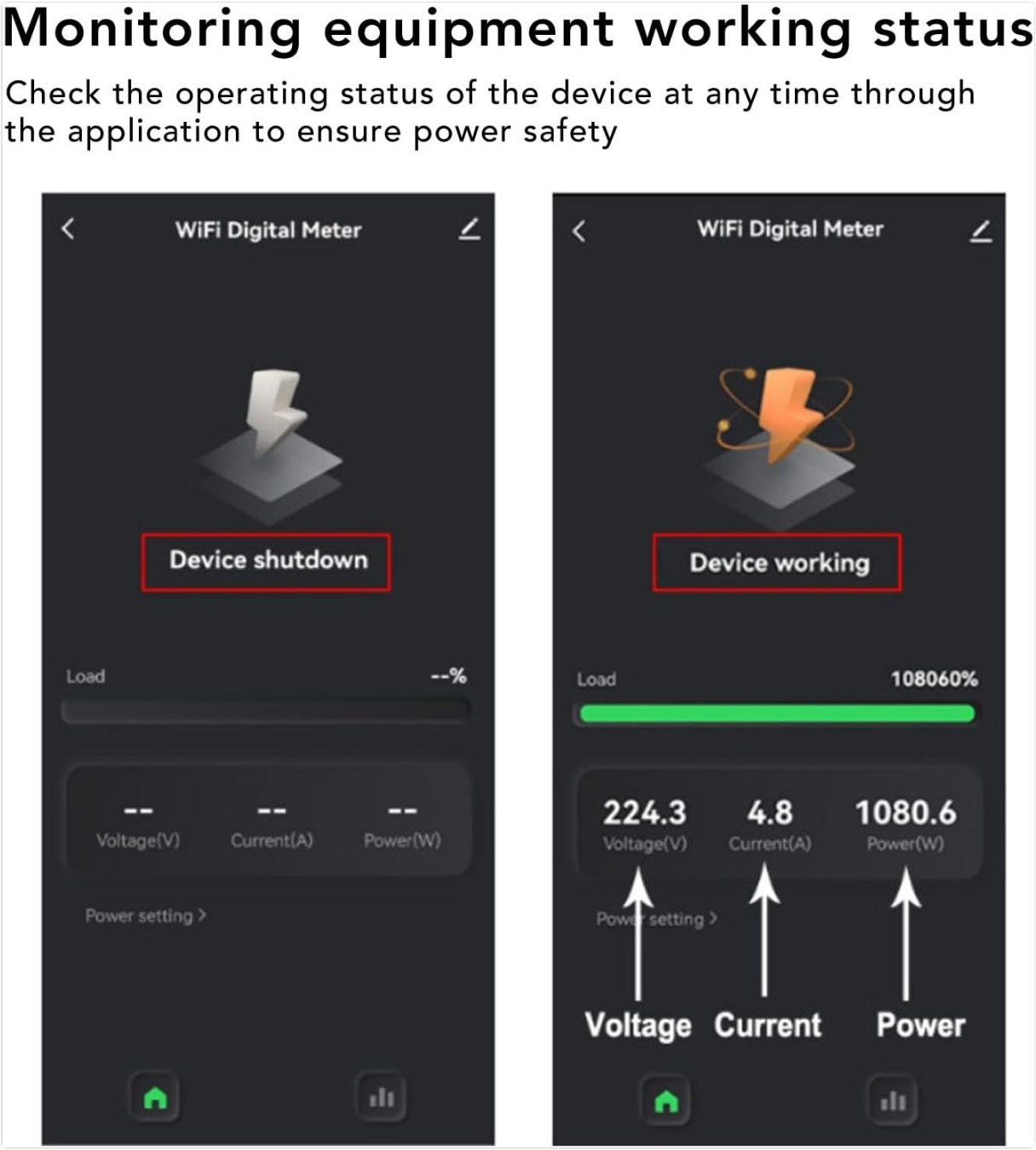

Image: Screenshots showing the app's display of device working status, including real-time voltage, current, and power readings when the device is active, and a "Device shutdown" state when inactive.

You can also check the operating status of the device at any time through the application to ensure power safety.

Maintenance

- **Cleaning:** Wipe the device with a dry, soft cloth. Do not use abrasive cleaners or solvents.
- **Environment:** Ensure the device is installed in a dry environment, free from excessive dust, moisture, and extreme temperatures.
- **Firmware Updates:** Periodically check the Tuya Smart or Smart Life app for any available firmware updates for the device to ensure optimal performance and security.
- **Connection Check:** Regularly verify the Wi-Fi connection status in the app to ensure continuous data monitoring.

Troubleshooting

Device not connecting to Wi-Fi:

- Ensure your Wi-Fi network is 2.4GHz. The device does not support 5GHz networks.
- Check if the Wi-Fi signal strength is adequate at the installation location.
- Verify that the Wi-Fi password entered in the app is correct.
- Try resetting the device (refer to app pairing instructions for reset method) and re-attempt pairing.
- Ensure your router is not blocking new device connections or has MAC address filtering enabled.

No data or incorrect readings in the app:

- Confirm that the device is powered on and connected to Wi-Fi (check the indicator light).
- Verify that the CT clamps are correctly installed around the live wires and the arrows on the clamps are pointing in the correct direction of current flow. Incorrect orientation can lead to negative or zero readings.
- Check all wiring connections to the meter terminals (N, L, Circuit 1, Circuit 2) for looseness or incorrect placement.
- Ensure the app is updated to the latest version.
- If monitoring a 240V circuit with the device powered by 120V, remember that the KWh reading in the app might need to be doubled for accurate total consumption.

Device stopped working after some time:

- Check the power supply to the device.
- Attempt a device reset.
- If the issue persists, contact customer support.

Warranty and Support

For warranty information and technical support, please refer to the contact details provided by your retailer or visit the Walfront official website. Keep your purchase receipt as proof of purchase for warranty claims.

For common questions and community support, you may also refer to the Tuya Smart or Smart Life app's help sections or online forums.