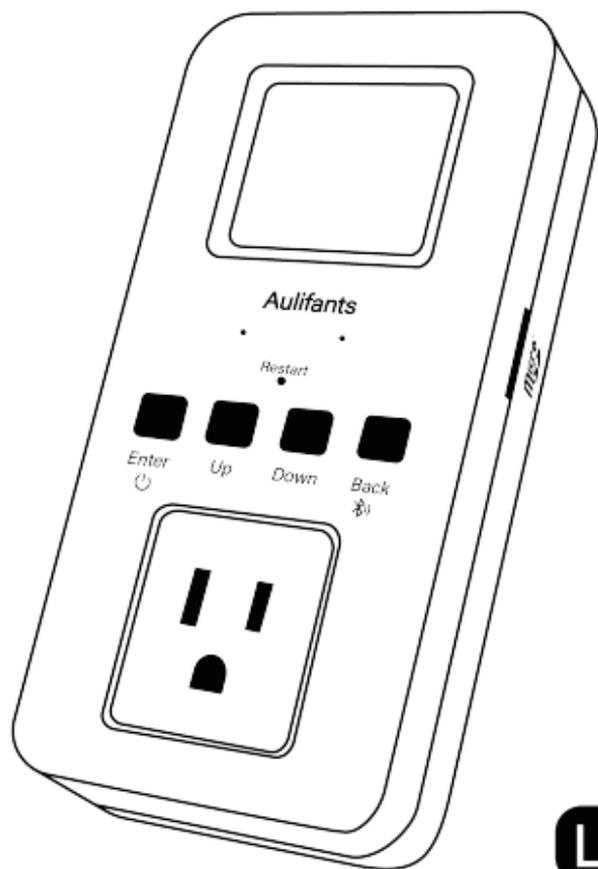


AULIFANTS

DESIGNED BY AULIFANTS



LP405

SMART METER SOCKET

Read safety warnings before use

- Do not use this product in high-humidity or high-temperature environments.
- Avoid overloading the socket to prevent damage and safety hazards.
- Do not disassemble the equipment.
- If the product malfunctions or operates abnormally, stop use immediately and contact authorized service center.

Specification

Model: LP405

Rated Voltage: AC 110–240V

Max. Current: <25A

Frequency: 50/60Hz

Accuracy Class: 1.0

Pulse Constant: 1600 imp/kWh

Network: Wi-Fi

Overload Protection:

- Default: <25A
- Configurable Range: Adjustable

Over/Under Voltage Protection:

- Default: Disabled
- Configurable: Adjustable

Specification

Operating Humidity: <95% RH (non-condensing)

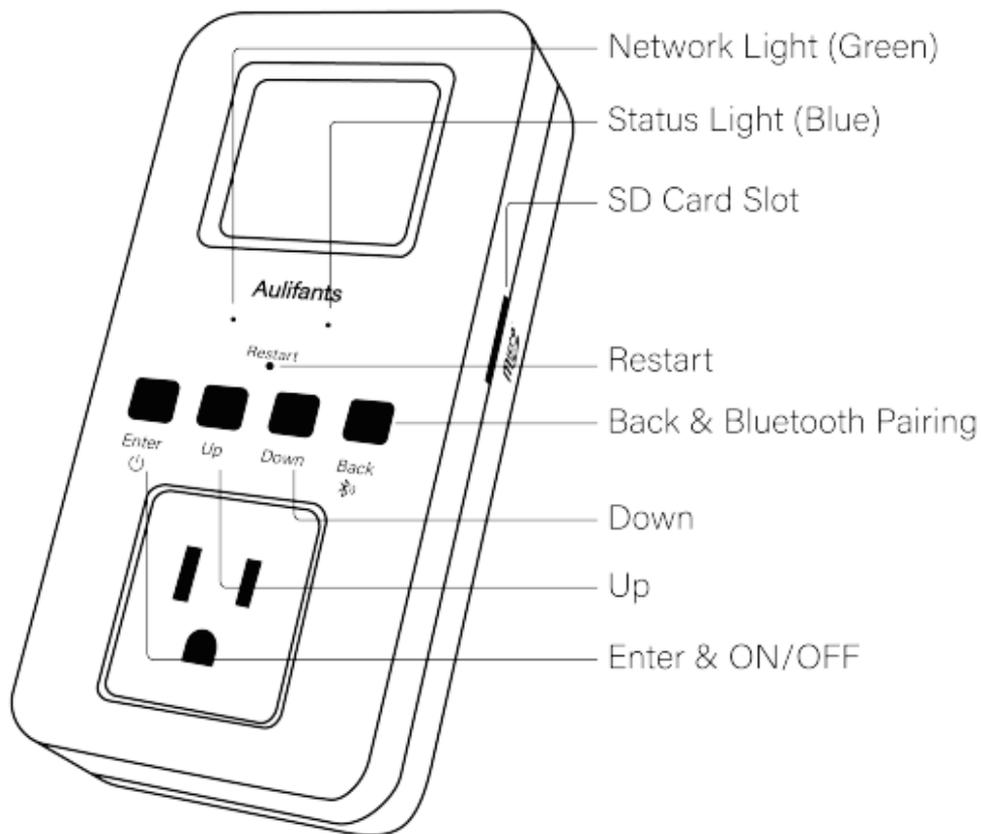
Operating Temperature:

- -10°C to 50°C (14°F to 122°F)

Dimensions: 137 × 75 × 36 mm (L×W×H)

Power Consumption: <2W

Functional Reference Diagram



Functional Reference Diagram

Smart Electrical Meter Sockets are suitable for AC 50/60Hz, with a rated voltage of 120-240V and a maximum rated current of 25A.

Network Light (Green):

- Quick Blinking: Device is in Bluetooth pairing mode.
- Steady Green: Device is connected to the internet (online).
- Off: Device is disconnected from the internet (offline).

Status Light (Blue):

- Steady Breathing: Device is operating normally.
- Rapid Blinking: Indicates activation of protection features: Overload, Over-Voltage, or Under-Voltage.

Restart

- Press the Restart button to reboot the device.

Functional Reference Diagram

Enter & ON/OFF Button

- Short Press: Confirm selection / Enter.
- Press and Hold (3 seconds): Turn device ON or OFF.

Up Button

- Previous / Up.

Down Button

- Next / Down.

Back & Bluetooth Pairing Button

- Short Press: Back / Cancel.
- Press and Hold (3 seconds): Enter Bluetooth pairing mode.

SD Card Slot

- Insert a Micro SD card here to store device data.

Operating Instructions

Wi-Fi Setup Guide

Follow these steps to connect your smart socket to Wi-Fi

1. Prepare Your Mobile Device

- Download **Tuya** or **Smart Life** app from App Store, or scan the QR code provided.



- Register account and log in
- Critical:

Enable phone Bluetooth

Connect phone to **2.4GHz Wi-Fi network** (same network for setup)

Operating Instructions

2. Activate Pairing Mode

- Power on device
- Press & hold [BACK] button for 3+ seconds

Success: Green Network LED blinks rapidly

3. Add Device in App

(Using Tuya app example)

- Tap "+" > **"Add Device"** (upper right corner)
- Confirm **"Socket"** under Electrical category
- When device appears, tap **"Add"**

4. Enter Network Credentials

- Input **2.4GHz Wi-Fi password** when prompted
- Tap **"Next"**
- Wait for **"Added Successfully"** confirmation

Operating Instructions

5. Finalize Connection

- Tap "**Done**" to complete setup
- Device now appears in your device list

6. Critical Notes

Non-Negotiable Requirements

- Wi-Fi: 2.4GHz network only, 5GHz incompatible
- Phone: Must be connected to target 2.4GHz Wi-Fi, Cannot configure via cellular
- Distance: < 5m from router during setup, Signal stability

Post-Setup Freedom

- After configuration:

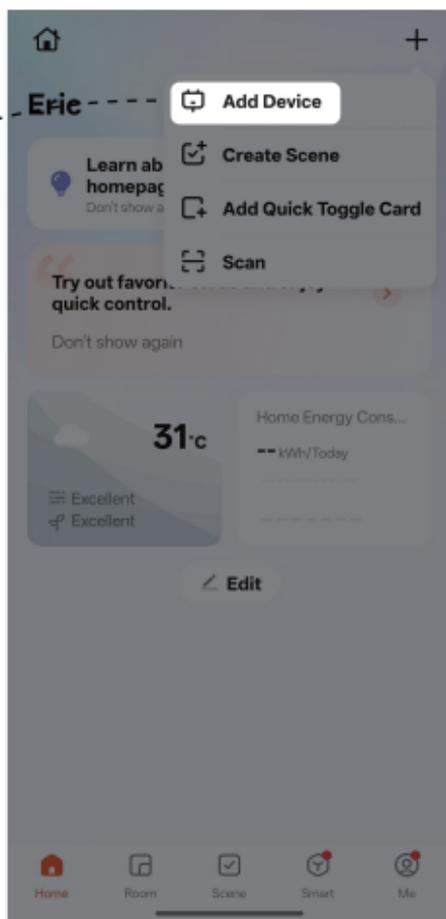
Phone can switch to 5GHz/cellular data

Device maintains 2.4GHz connection

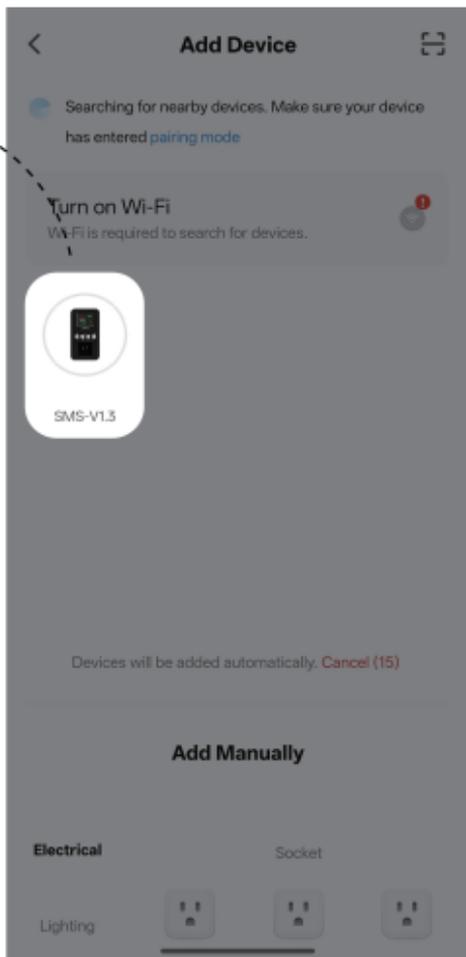
Operating Instructions

- Bluetooth direct connection:

Possible but not recommended (limited range)



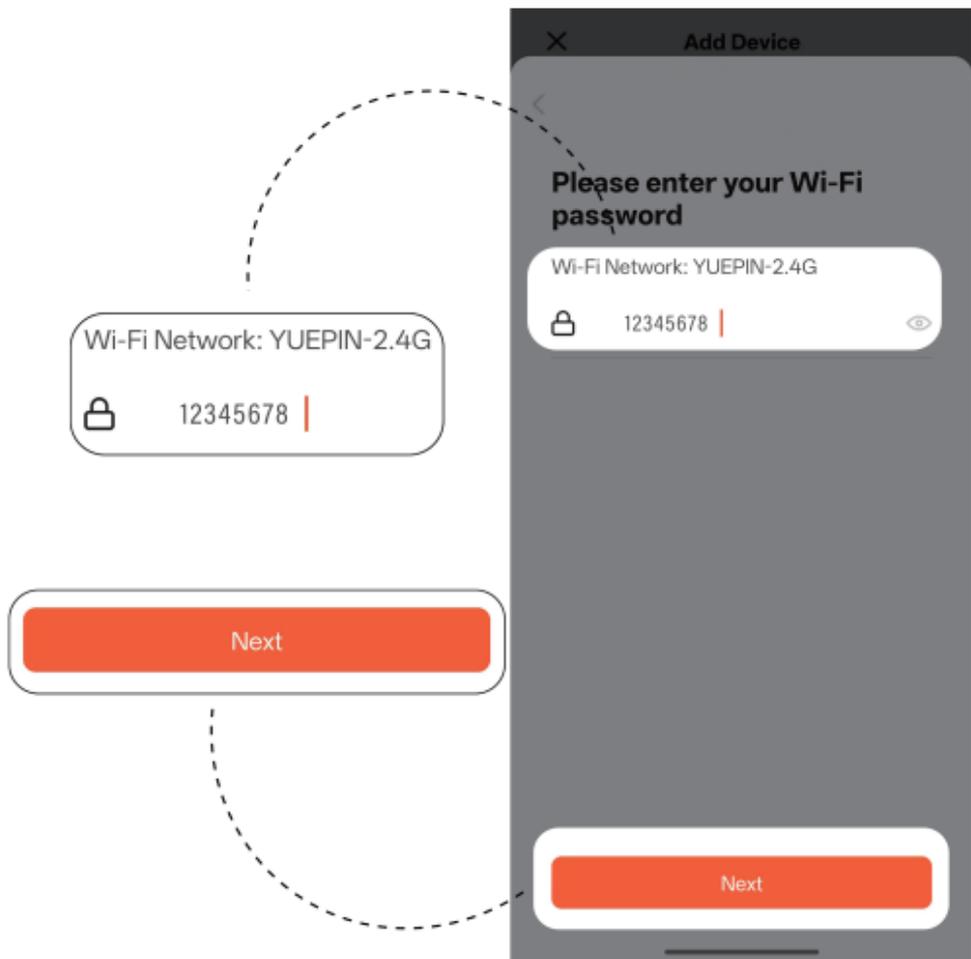
Operating Instructions



Operating Instructions



Operating Instructions



Operating Instructions



About Micro SD Card

1. Data Logging Architecture

- File Naming Convention:

dd/mm/yy-D.csv: Data log (Voltage/Current/Power/Energy/Cost metrics)

dd/mm/yy-E.csv: Event log (ON/OFF state changes)

- File Generation Logic:

Data Log: Daily automatic, 1 record/minute

Event Log: ON/OFF event detected, Per occurrence

2. Data Structure

- Data Log (dd/mm/yy-D.csv)

*Time, Voltage (V), Current (A), Active Power (W), Power Factor (PF),
Accumulated Usage (kWh), Accumulated Cost (\$), Working Time (h:min)*

- Event Log (dd/mm/yy-E.csv)

Event time, State (ON/OFF)

About Micro SD Card

3. Critical Requirements

- Card Specifications:

Type: Micro SDHC Class 6+

Capacity: 512MB (Recommended)

Format: FAT32

Max. Storage Duration: 9.5 years (with 512MB card at typical 150KB/day write rate)

- Safety Protocols

Power OFF device before inserting/removing card!

Avoid high-temperature/humidity environments

4. Compatibility

- Opens with: Microsoft Excel

Device Menu Interface Reference

12 / Sep 17:54		ON
AU	256.13	kWh
AB	589.38	USD

Displayed upon device power-up

• Date & Time

Automatically syncs with smartphone after connection.

• Control Status

ON: Relay closed, load powered

OFF: Relay open, load disconnected

• AU (Accumulated Usage)

Total energy consumed in kWh.

• AB (Accumulated Bill)

Cost calculated per local electricity rate.

Device Menu Interface Reference

Real Time	
Voltage	110.5 V
Current	15.34 A
Power	1650.6 W

Real Time	
Working Time	15000:36
Power Factor	0.98

Press down to navigate to this page

Parameter	Unit	Description
Voltage	V	Live circuit voltage
Current	A	Instantaneous current draw
Power	kW	Active power consumption
Working Time	hh:mm	Cumulative operation time
Power Factor	PF	Current efficiency (0.00-1.00)

Note:

Working Time

Cumulative active load duration since initial power-up

Device Menu Interface Reference

Definition:

The meter records **total operational time** when a load is detected. Timing:

- Starts at first power-on with connected load
- Accumulates only during load activity
- Retains data through power outages
- Resumes accumulation after power restoration

Reset Condition:

- Working Time resets to zero **only** upon factory reset.

Device Menu Interface Reference

Function	
Summer Rates	S: May 1 E: Sep 30
Winter Rates	S: Aug 1 E: Apr 30

Seasonal Rate Configuration

Set summer/winter electricity rates with time-of-use pricing

Season Setup Screen

- Summer Period

Start(S): May 1 → End(E): Sep 30

- Winter Period

Start(S): Aug 1 → End(E): Apr 30

Dates are user-customizable for Daylight Saving Time adjustments

Device Menu Interface Reference

Summer Rates	
\$ 0.561	01:36 - 12:58
\$ 0.642	12:59 - 18:06
\$ 0.783	18:07 - 00:00

Seasonal Rate Configuration-Summer Rates

Summer Rates

Period	Rate (\$/kWh)	Time Slot
Valley	0.561	01:36 - 12:58
Standard	0.642	12:59 - 18:06
Peak	0.783	18:07 - 00:00*

Device Menu Interface Reference

Winter Rates	
\$ 0.661	01:36 - 12:58
\$ 0.743	12:59 - 18:06
\$ 0.884	18:07 - 00:00

Seasonal Rate Configuration-Winter Rates

Winter Rates

Period	Rate (\$/kWh)	Time Slot
Valley	0.661	01:36 - 12:58
Standard	0.743	12:59 - 18:06
Peak	0.884	18:07 - 00:00*

Note:

- Rates shown are example values (user-configurable)*
- Both settings must be configured via mobile app*

Device Menu Interface Reference

Winter Rates	
\$ 0.661	01:36 - 12:58
\$ 0.743	12:59 - 18:06
\$ 0.884	18:07 - 00:00

Key Features Summary

- **Two Season Modes**

Summer (May 1-Sep 30) & Winter (Aug 1-Apr 30)

- **Tri-tier Time Slots**

Valley / Standard / Peak rates per season

- **Full Customization**

Adjust dates/time slots/rates via app

- **DST-Compatible**

Automatic Daylight Saving Time compensation

Device Menu Interface Reference

Function	
Usage Limit	58 kWh
Over Load Protect	25 A

Usage Limit-(user-configurable)

- Sets maximum energy consumption (e.g, 58 kWh)
- Automatically cuts power when limit is reached
- Ideal for budget control/prepaid scenarios

Overload Protection (OCP)-(user-configurable)

- Sets current protection threshold (e.g, 25A)
- Triggers instant shutdown during:

Short circuits

Sustained overloads

Device Menu Interface Reference

Note:

• **Setting range:**

Usage Limit: 1-99999 kWh

OCP: 2-25A (1A increments)

• **Both settings must be configured via mobile app**

Device Menu Interface Reference

Function	
Under Voltage	105 v
Over Voltage	120 v

Threshold Configuration

• Under Voltage Protection

(e.g., 105V) - Cuts power when voltage drops below set value

• Over Voltage Protection

(e.g., 120V) - Cuts power when voltage exceeds set value

Both values adjustable via mobile app only

Device Menu Interface Reference

Important Notice :

Auto-Recovery Function

(App-enabled feature)

• *When triggered:*

Switch immediately opens (power off)

Device monitors voltage continuously

• *Recovery sequence:*

Normal voltage detected

60-80 second stability check

Switch automatically closes (power restored)

Safety Note:

• Enable/disable auto-recovery in app settings

• Manual restart required when auto-recovery is disabled

Device Menu Interface Reference

Function	
Display Flip	Down
Screen Auto-sleep	Disable

Screen Orientation

- **Flip Setting: Adjusts display direction**

UP: Normal orientation (default)

DOWN: 180° rotation

- ***For inverted socket installations**

Auto-Sleep Mode

- **Energy-saving screen timeout:**

Enable: Screen sleeps after 2 minutes of inactivity

Disable: Display remains always-on

- ***Wake screen by pressing any button**

Device Menu Interface Reference

Function	Device Control	App Control
Screen Flip	Y	N
Auto-Sleep	Y	Y

Device Menu Interface Reference

Function
Accumulated Usage Clear
Factory Reset

Reset Options

Accumulated Usage Clear

- *Resets total energy consumption and electricity cost to zero*
- *All historical kWh data and electricity cost will be erased*
- *Energy counting restarts immediately after confirmation*

Factory Reset

- *Restores all settings to original defaults*

****SD card data retention is independent of device reset functions!***

Warranty Service

For warranty service or support please contact Aulifants team:

Website: www.aulifants.com

Email: ericyu@aulifants.com

Address: Building 4, Hagongda Road 2, Zhuhai, China

AULIFANTS SMART LIFE
ZHUHAI YUEPIN TECHNOLOGY CO., LTD
MADE IN CHINA

