# MOKO Smart WIFI Plug
MK117 Series

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Product Introduction

MK117 series is a WIFI smart plug with power and energy monitoring, the measuring accuracy can reach ±0.5%. The plug can connect to your server through a WIFI network, so as to realize smart control, power and energy monitoring and other functions.

MK117 supports connection to standard MQTT broker(such as EMQTT, Mosquito) and other servers that support MQTT protocol. It can also work with AWS IOT and Ali IOT, can be quickly integrated to your existing IOT system, and all data will be upload directly to your server, which is convenient for your further applications development.

MK117   WiFi / MQTT → Router   Internet → Your cloud server → Client
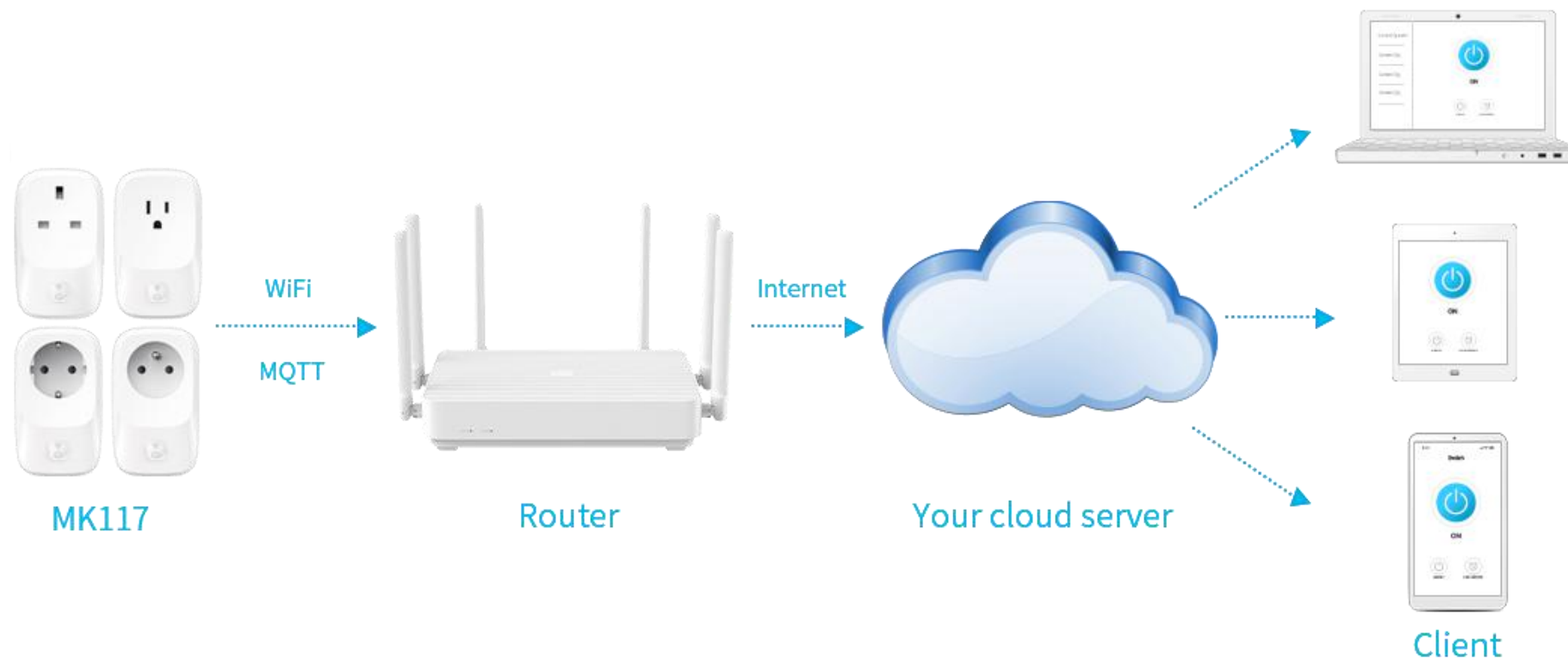
Product Model

MK117 series contains several product models, the model list is as below:

Series Model	WIFI Band	MCU	Product Model	Description
MK117	2.4Ghz	ESP32	MK117- B	US type, max current is 15A
			MK117- G	UK type, max current is 13A
			MK117- F	EU type, max current is 16A
			MK117- E	FR type, max current is 16A
MK117D	2.4GHz & 5.0GHz	RTL8720	MK117D- B	US type, max current is 15A
			MK117D- G	UK type, max current is 13A
			MK117D- F	EU type, max current is 16A
			MK117D- E	FR type, max current is 16A

Features

1. Support wide range of voltage input

Supports 100V-240V, 50/60Hz voltage input

2. Multiple plug types

Support multiple plug types, can be used in many countries

3. Mature and reliable hardware design

➢ Low ripple and low noise AC-DC power supply circuit design

➢ 16A industrial grade relay

➢ Professional power metering chip RN8209C and high accuracy

   sampling resistors

➢ Built-in EEPROM is used to record energy consumption locally

➢ Compatible with different versions, customers have more choices

   according to the function and cost

4. FCC&CE certified (pending)

Product quality and safety are guaranteed

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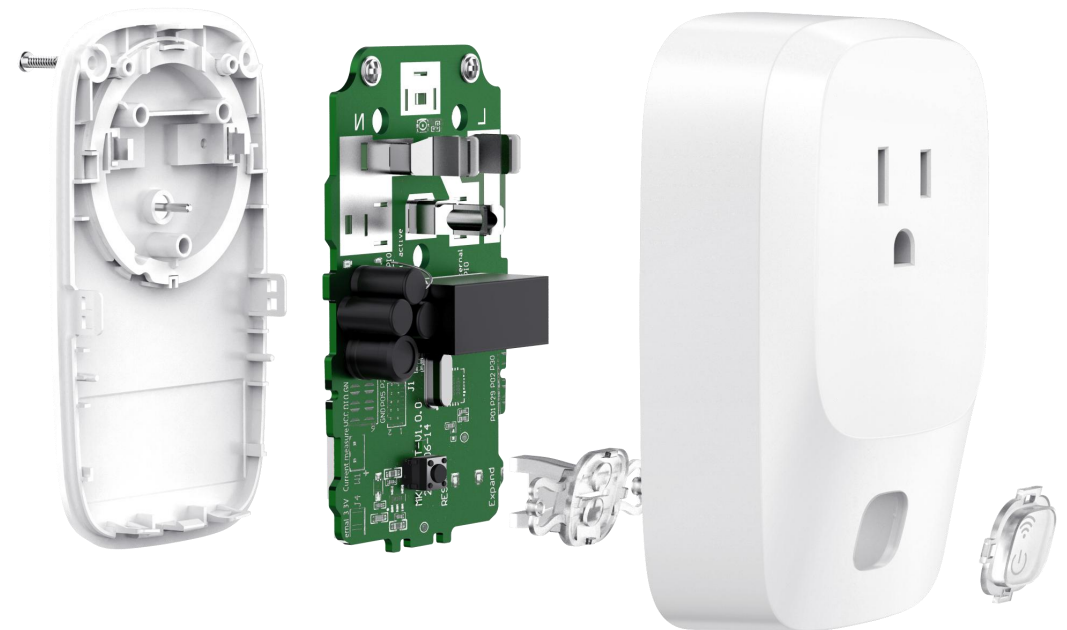
Features

5. ±0.5% measuring accuracy

➢ Real-time voltage, current, active power and power factor measurement
➢ Locally store the energy data, including the daily/monthly/totally energy consumption

6. Connection to customer's server

➢ All data is directly uploaded to your server, convenient for your further application development
➢ Ensure the data security and privacy

7. Multiple protection mechanism

Overload/voltage/current protection, when the measured value exceeds the safe range, it will automatically turn off

8. Load work status detection

When it detects that the load starts/stops working, immediately reporting a notification to the server

9. Network status and switch status are indicated separately

➢ The network indicator is used to indicate the device WIFI status
➢ The switch indicator is used to indicate the device switch status, and the indicator color changes according to the active power of the connected load, users can intuitively and quickly capture the change of load power

Applications

Electricity Usage

Eneygy(KWh)

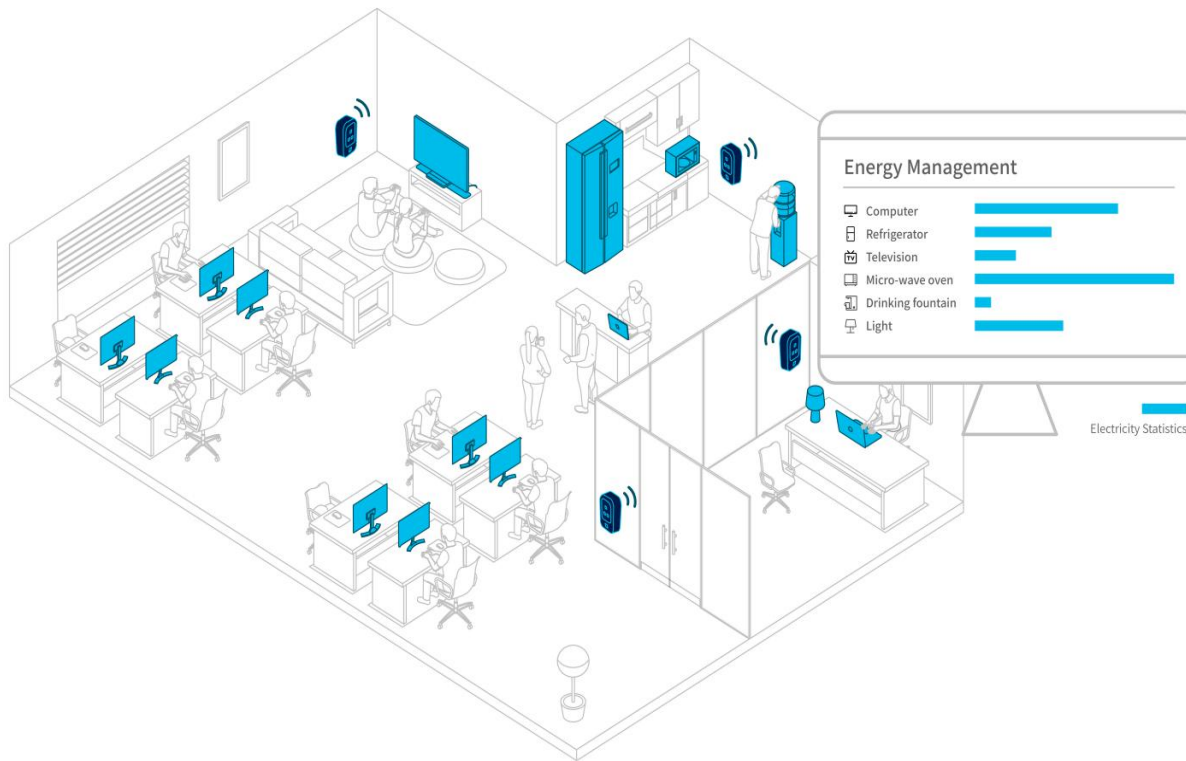Mon. Tues. Wed. Thur. Fri. Sat. Sun.

Switch

ON
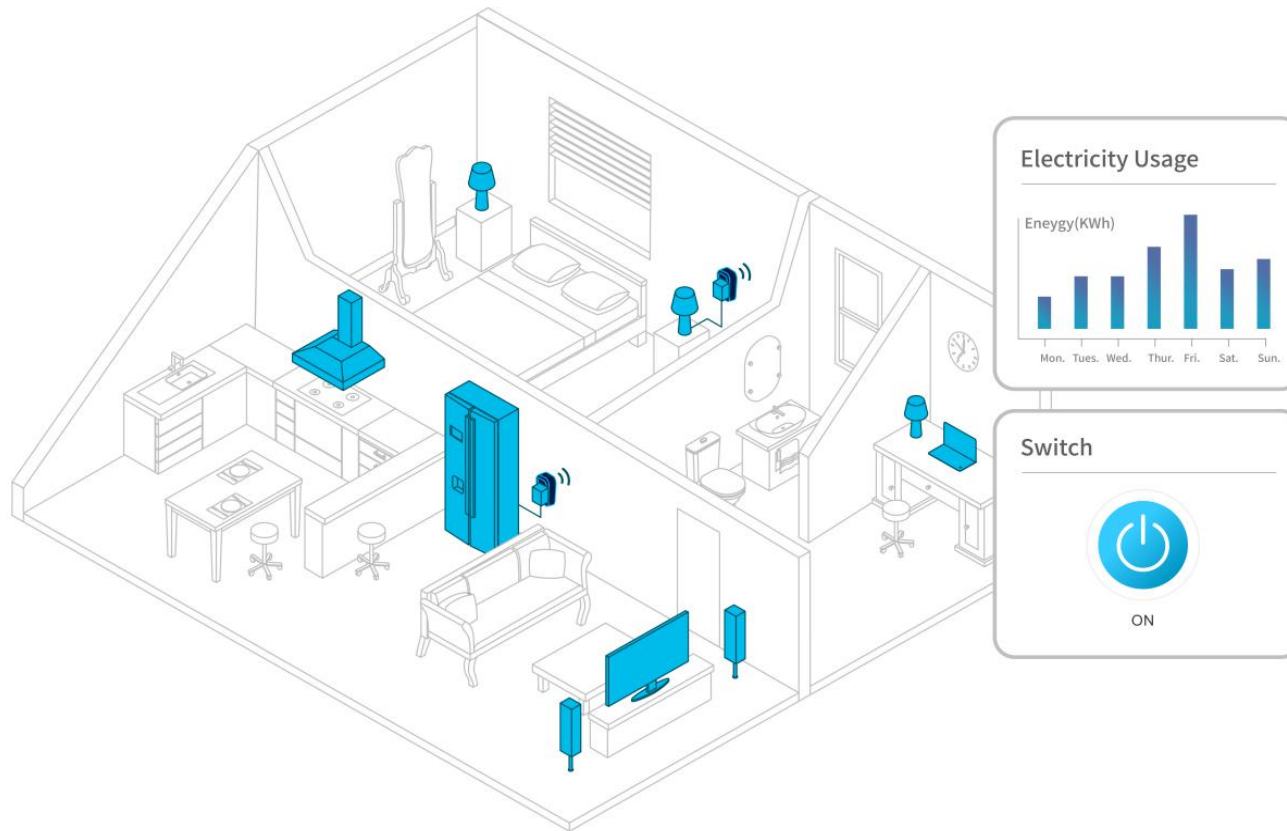
Scenario 1: Smart home appliance control
Connect the household appliances with the plug, you can remotely control the switch status through the APP/server, and view the power consumption data at any time. When you leave home and forget to turn off an electrical appliance, you can use the APP to remotely turn it off, which can help you minimize the electricity risk and save electricity bills.

Applicable function:
Remote control;
Timer switch;
Power and energy monitoring

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Energy Management

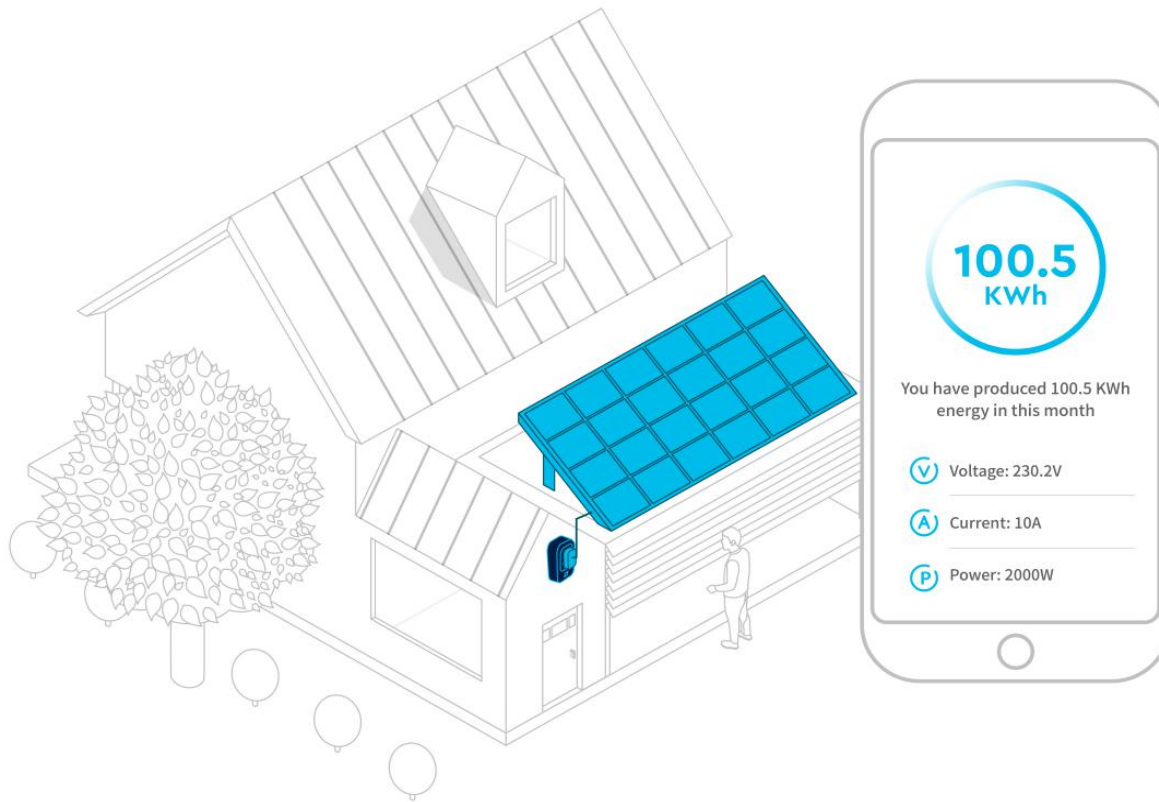|	
🖥 Computer	
🗄 Refrigerator	
📺 Television	
▭ Micro-wave oven	
🗄 Drinking fountain	
🖥 Light	

Electricity Statistics

Scenario 2: Smart office energy solution

Monitor the power consumption of some frequently used office equipment or electrical appliances. The plug can automatically power on the electrical devices on working hours and turn off on the working-off hours. It also uploads the power consumption data of the load to the server in real time, the server can generate data analysis to find out the equipment with abnormal power consumption quickly, and limit the use when the power consumption exceeds the normal range. Which provides an effective way to manage the electrical devices and save the electricity bills.

Applicable function:

Connetcion to your own server;
Remote control;
Power and energy monitoring

100.5
KWh

You have produced 100.5 KWh
energy in this month

(V) Voltage: 230.2V

(A) Current: 10A

(P) Power: 2000W

Scenario 3: Solar system metering

Deploy the plug in your photovoltaic solar system. The plug can measure the instant power, voltage and current of the electricity generated by the solar system, then uploads the real-time data to your server. The daily/month/year electricity can be calculated, you can know how much clean energy it creates and how much bills you save.

Applicable function:

Connetcion to your own server;
Negative current and power measuring

Main Specification

Wireless

WIFI

Power Supply

100V-240V AC, 50/60Hz

Material

ABS + PC

Dimensions

103mm*61mm*34.6mm

Plug Type

US/UK/EU/FR

Output

US type: rated 15A
UK type: rated 13A
EU/FR type: rated 16A

Color

White

Certification (pending)

USA: FCC
Europe: CE
The certifications are on the process,
other certifications can be customized

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Customized Service

Based on MOKO standard product

- ➢ You can develop your own mobile APP, MOKO provides Android and iOS APP SDK for you to reduce your development time
- ➢ Provides white label service, support customized label and package, also can print your company logo on the products
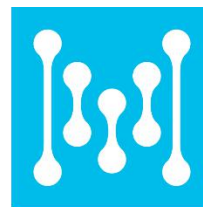
Based on MOKO standard hardware

- ➢ Flash custom firmware, MOKO provides schematic and power metering SDK for your firmware development
- ➢ Support firmware and APP modification according to customer's requirements
- ➢ Support light customization on MOKO standard hardware

New product design

If MOKO standard products don't meet your requirements, MOKO supports the design of new products for you, including:
- ➢ Hardware design
- ➢ Software development
- ➢ Mechanical design

More details about the customized services, please contact our sales team: Sales@mokosmart.com

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