

## WiFi Equipment Distribution Network

### APP download

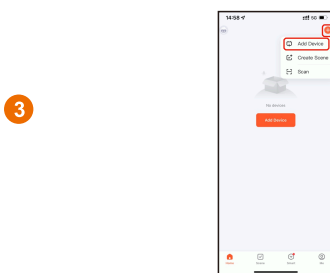


Scan the QR code below or the Tuya Smart App can be downloaded from the Android APP Market or App Store.

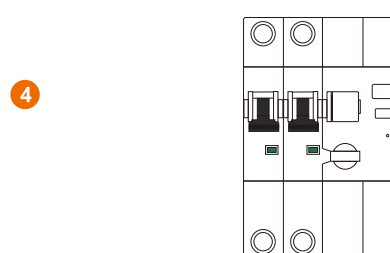


Use your mobile number to log in with one click.

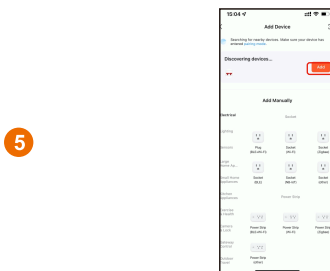
### Bind and Unbind The Device



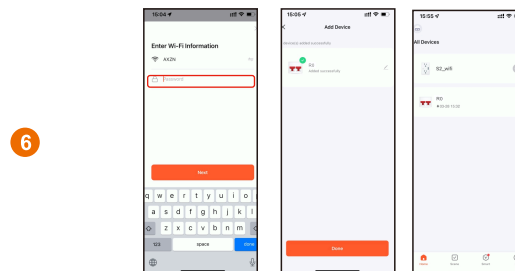
Click the "+" button in the upper right corner of the APP to enter the interface of adding devices.



After the device is powered on for 10 seconds, wait for the green light of the signal status indicator to flash for 2S, and then open the APP to bind the device.



After the mobile phone is connected to WiFi signal (5G network needs to be switched to 2G or 4G).

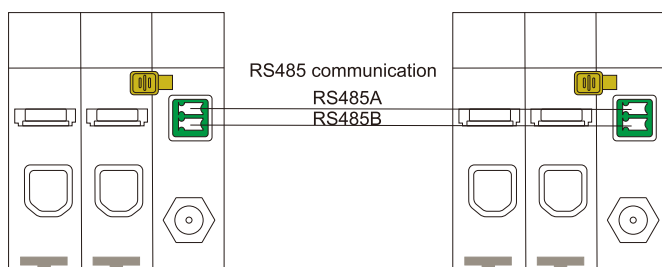


Enter the WiFi password and click next until the connection is successful.

## Matters Needing Attention

- 1.Ensure that the device is powered on when binding.
- 2.Ensure that the system enters the distribution network state during binding.
- 3.Ensure that the network signal is 2.4GHz when binding.

## 485 Dry Contact Equipment Distribution Network



## Fault Description

- **Undervoltage Fault:** the equipment automatically detects the input voltage. When the input voltage is lower than the set value (50-160V), it is undervoltage. If the undervoltage protection function is enabled: the equipment trips and gives an alarm; No action if the undervoltage protection function is not opened.
- **Overvoltage Fault:** the equipment automatically detects the input voltage. When the input voltage is higher than the set value (270-400V), it is overvoltage. If the overvoltage protection function is enabled: the equipment trips and gives an alarm; No action if overvoltage protection function is not opened.
- **Overcurrent Protection:** the equipment detects the real-time current through the transformer. When the detected current reaches the set value (1-80A), it is over-current. If the overcurrent protection function is enabled: the equipment trips and gives an alarm;  
Overcurrent Protection Does Not Open: no action when reaching the user's set value, but the switch automatically trips when reaching the rated current value of the traditional switch.
- **Overload Protection:** the equipment calculates the power through the obtained current and voltage. When the detected power reaches the set value (100-14490W), it is overload. If the overload protection function is enabled: the equipment trips and gives an alarm;  
Overload Protection Does Not Open: there is no action when the current reaches the user's set value, but the switch trips automatically when the current reaches the rated current value of the traditional switch.
- **Over-Temperature Protection:** the equipment automatically detects the equipment temperature. When the equipment temperature reaches the set value (30-85°C), it is over-temperature. If the over-temperature protection function is enabled: the equipment trips and gives an alarm; There is no action if the over-temperature protection is not opened.
- **Short-Circuit Protection:** the equipment will trip automatically due to short circuit, and the switch will report information.
- **Power Consumption Protection:** the user sets the limit of power consumption to start successfully, and the user set value (0-6553kW·h) decreases by 1 for every 1kW·h consumed until the value decreases to 0. If the power consumption protection function is turned on, the equipment will trip and alarm; If the protection is not turned on when the power is exhausted, there will be no action. When the value reaches 0, the limited electric energy will be automatically released.
- **Leakage Protection:** leakage current is detected by leakage protector equipment through zero-sequence transformer.  
When leakage current reaches 30mA, it is leakage. If the leakage protection function is enabled: the equipment trips and gives an alarm; No action if leakage protection is not opened.

## Common Problem

Distribution network problems	
Code scanning and distribution failure after power-on	Network distribution fails after power on If the device is not bound within 10 minutes after the installation is powered on, the device needs to be powered off and restarted
Abnormal use of equipment	
The green light flashes after the equipment is installed	The toggle switch should be broadcast to the left running position at the right upgrading position
The equipment cannot be closed remotely	1. Check whether the APP has enabled remote locking 2. Whether it is possible to switch on and off manually, and then operate on APP 3. Whether the safety lock is pulled out

## Product Overview

EKL5-63SM series smart breaker is a building electrical terminal power distribution device developed by ETEK ELECTRIC for smart and safe electricity consumption and energy consumption management system.

The product is an smart breaker for the Internet of Things, which uses electronic technology to control the normal operation of the traditional circuit breaker and smart display of equipment status information, including voltage, current, power, power consumption and various fault states (over and under voltage, leakage, overload, over-temperature, etc.). This product is an independent device. You can view some information about the device and set related parameters, which makes the operation more user-friendly. The product can display product information and remote control in the mobile APP terminal after networking.

EKL5-63SM series smart breaker has a wide range of uses, can be used in a variety of Smart construction power, industrial power management system and energy efficiency management system.

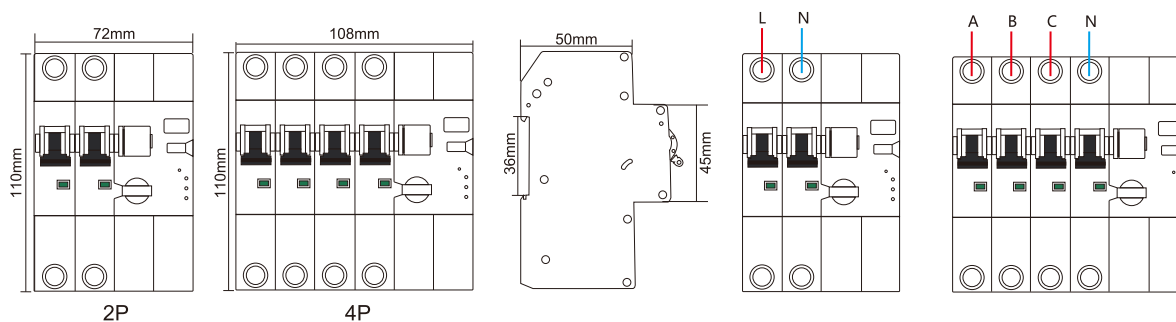
## Main Function

- **Leakage Function:** Leakage protection (autonomous protection, fixed protection value: 30mA, 100mA, 300mA customized). Leakage monitoring (Leakage protection value can be set, alarm or trip can be set), two kinds of functions can be selected.
- **Remote Control:** Remote opening and closing, timing tasks.
- **Local Control:** Local opening and closing, mode selection.
- **Centralized Management:** Multi-terminal remote control equipment, batch remote management equipment, so that electricity scheduling more timely (cloud platform collection and processing of electricity data, PC multi-node management, mobile terminal convenient control, real-time view, receive alarm information, mobile terminal: convenient control, real-time view, receive alarm information).
- **Automatic Protection:** Complete the self-check of leakage protection function automatically at a regular time, self-compound over-under-voltage (loss) protection, set automatic inspection, fault elimination will automatically recover, does not affect the normal power supply.
- **Independent Setting:** Under the rated value, according to the wire diameter selection, can automatically limit the power use, independently set the power distribution parameters (such as current limit, power limit, limit line temperature, etc.), and remotely set the power protection early warning value.
- **Normal Record:** Record the normal state of electricity consumption, which is used to prevent "stealing electricity" or detect the working status of equipment on the road.
- **Fault Prompt Function:** Smart monitoring of equipment running status, timely protection of equipment and reminder of users when equipment is abnormal.
- **Real-Time Monitoring:** 24-hour power line inspection, real-time view of voltage, current, electrical power, electricity consumption, temperature and other data, with terminal visualization power consumption through tool software, electricity consumption is more assured.
- **Networking Module Function:** Built-in networking module (including WiFi, 4G, etc.), through networking transmission, display equipment status, fault information, power statistics and such stuffs on the APP side, and can be controlled remotely.
- **Docking Smart System:** Docking all kinds of Smart control systems and various sensors to achieve Smart linkage.
- **Big Data:** Count the energy consumption of total lines and single lines, and generate charts through big data analysis and mining as the basis for scientific planning of electricity consumption.

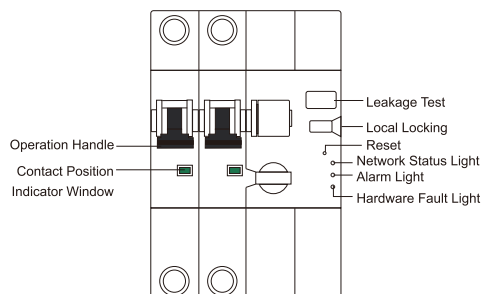
## Main Technical Parameters

Product Model	EKL5-63SM
Pole	2P,4P
Breaking Current	$I_{cs}=I_{cu}\leq 6000A$
Control Mode	Hand and automatic integrated control
Leakage Protection	Leakage break time $\leq 0.1s$
Power Limiting	Circuit broken after exceeding the limit power by 5s
Rated Voltage	240V,415V
Rated Current	16,25,32,40,63A
Rated Sensitivity Currents $I_{\Delta n}$	30,100,300mA
Ambient Temperature	-40°C~+70°C
Relative Humidity	$\leq 95\%$
Short-circuit Protection	$\leq 0.04s$ Power off time
Communication Methods	4G, WiFi, 485
Trip Type	B, C
Parameters Settings	Leakage detection, Over-under-voltage protection, Rated current, Voltage, Power, Temperature, Etc
RS485 Interface Baud Rate	9600bps
Power Consumption	<2W
Installation Method	Din rail mounting
Metrology Accuracy	Voltage and current accuracy 1%, Energy accuracy 2%
Execution Standards	IEC61009-1

## Product Size and Wiring Method



## Product Buttons and Lighting Descriptions



Operation Handle	Manually toggle up and down to control the circuit breaker to open and close, up is closed, down is opened	
Contact Position Indicator Window	Red is closed, green is open	
Network Status Light	Flashing 300ms off, 300ms on	Connected to the network
	Flashing 300ms off, 300ms on	Remote upgrade
	Flashing 100ms off, 1900ms on	Connection to the server successfully
Alarm Light	100ms on, 400ms off	Mechanism locked
	100ms on, 900ms off	Manual opening
	Extinguish	No alarm
	500ms flashing	With alarm
Hardware Fault Light	Solid light	Press the key to reboot into boot
	Extinguish	Trouble-free
	100ms on, 400ms off	Mechanism failure
	100ms on, 100ms off	Metering fault