IoT Residual Current Circuit Breaker IOTB2 User Manual

CMIIT ID:24J331M01919



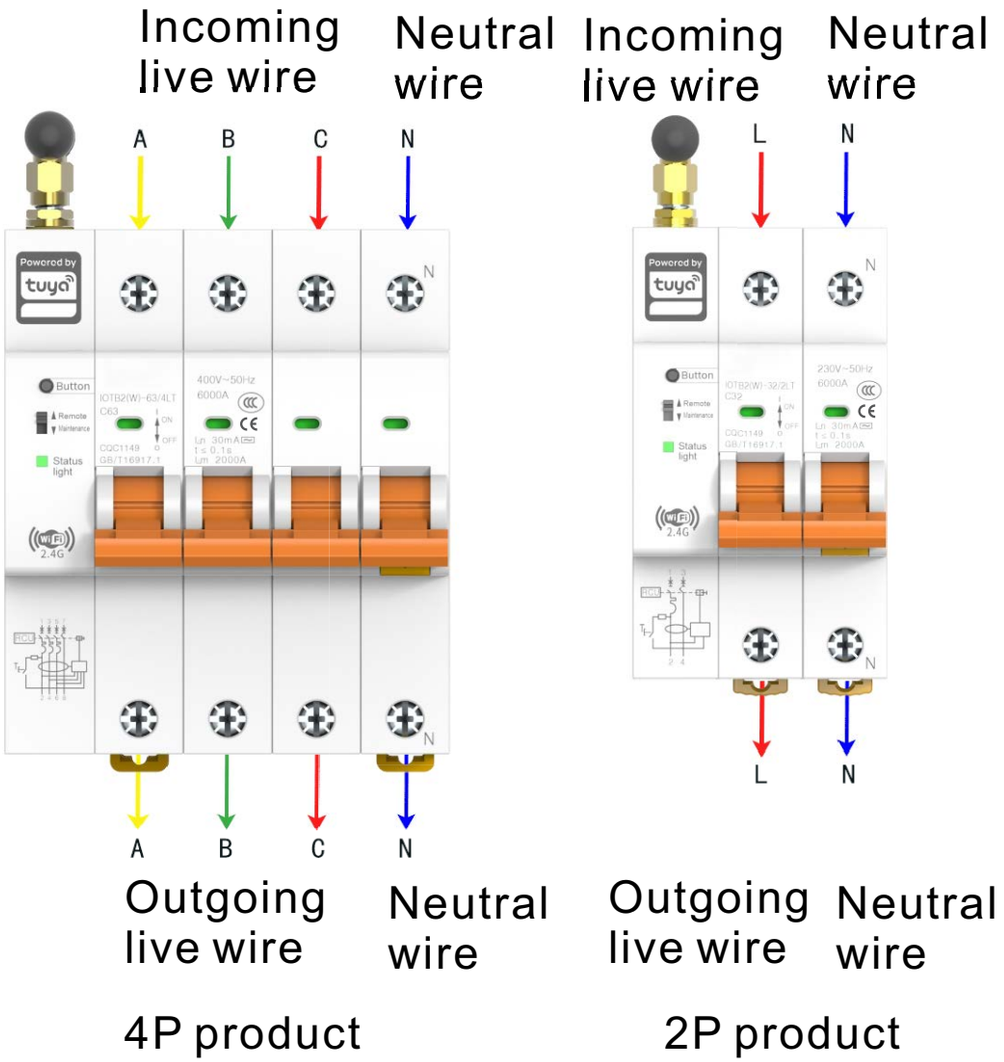
works with Tuya



Tuya voice control support: Amazon Alexa, Google Assistant, Baidu Xiaodu, and Xiaozhi Butler.

01Product Introduction

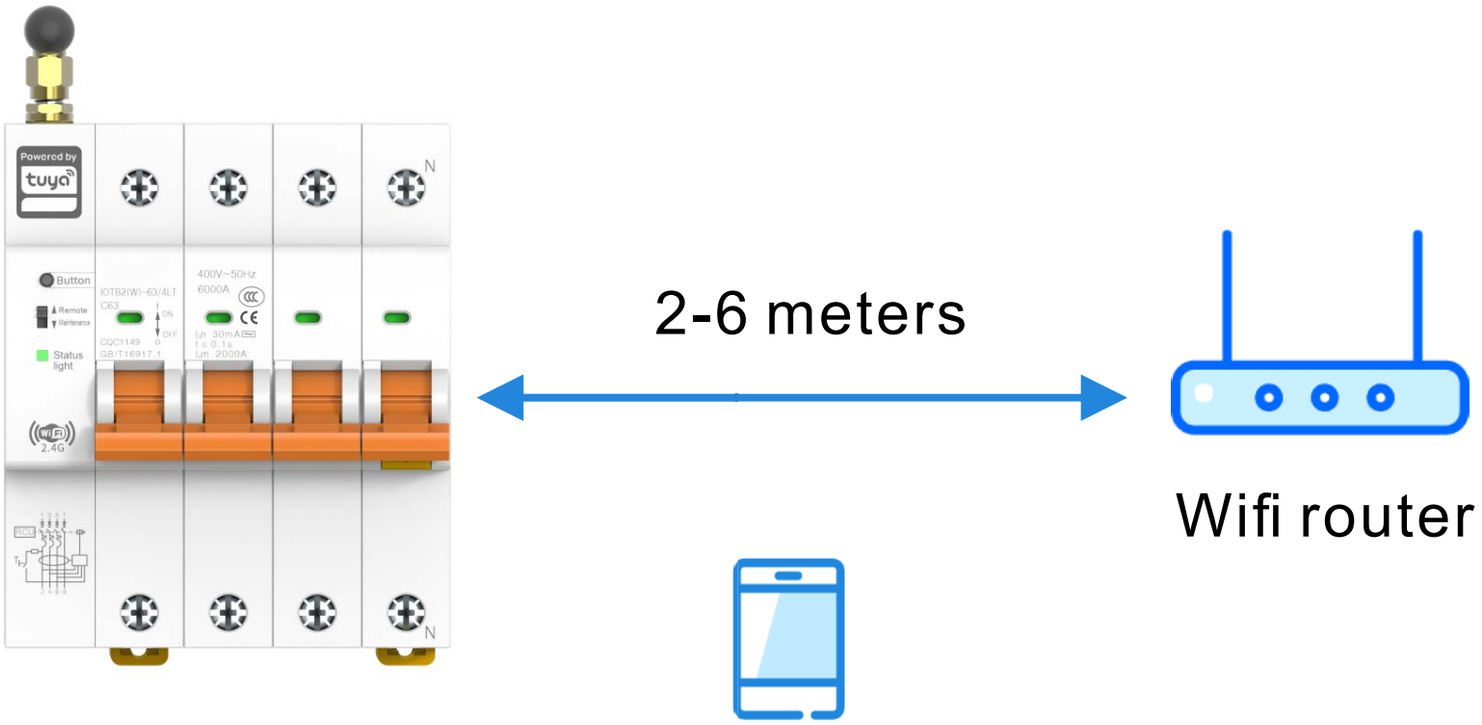
The IoT residual current circuit breaker IOTB2 is an intelligent electrical control device designed to provide users with a safe and convenient power management solution. It uses IoT technology to connect seamlessly with smart home systems, allowing users to remotely monitor and control household electrical equipment. This product has been integrated into the Tuya system and can be operated through the Tuya App. It can also interconnect and communicate with other products.



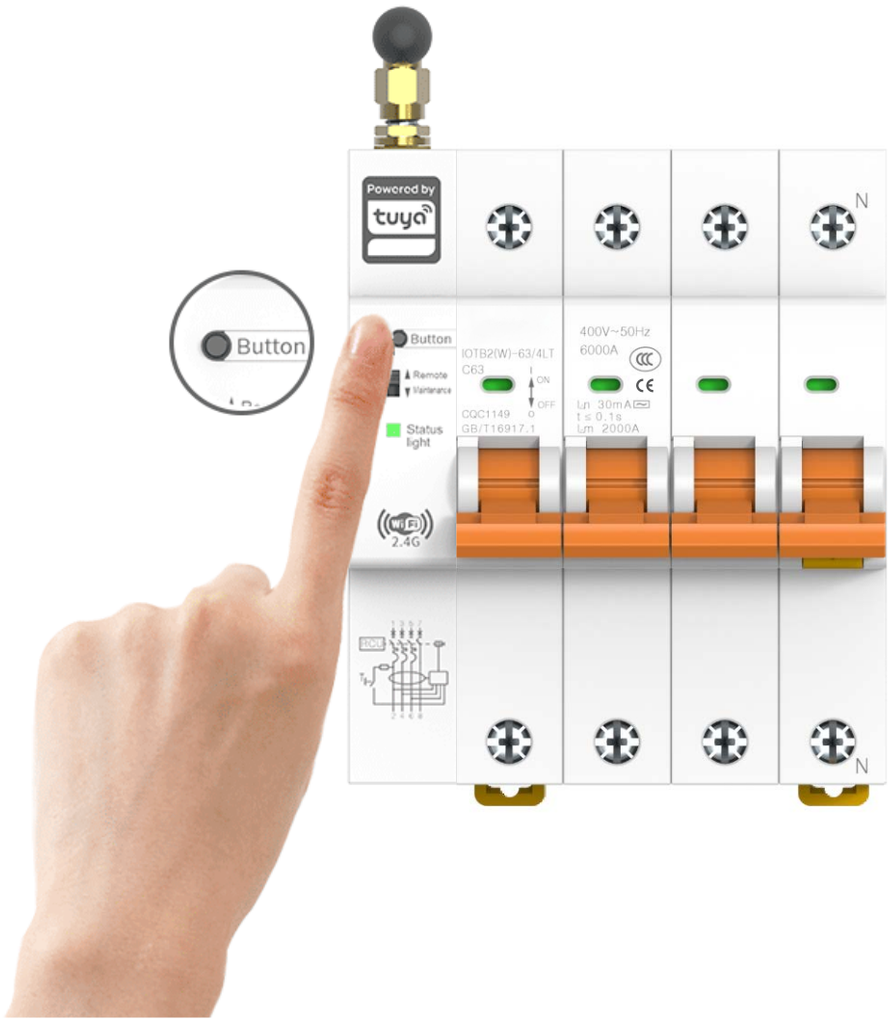
Note: This product requires professional electricians to install the live and neutral wire terminals, and it is necessary to carefully read the installation instructions. Do not install IOT circuit breaker products by yourself.

02 Add Device and Network Pairing Process

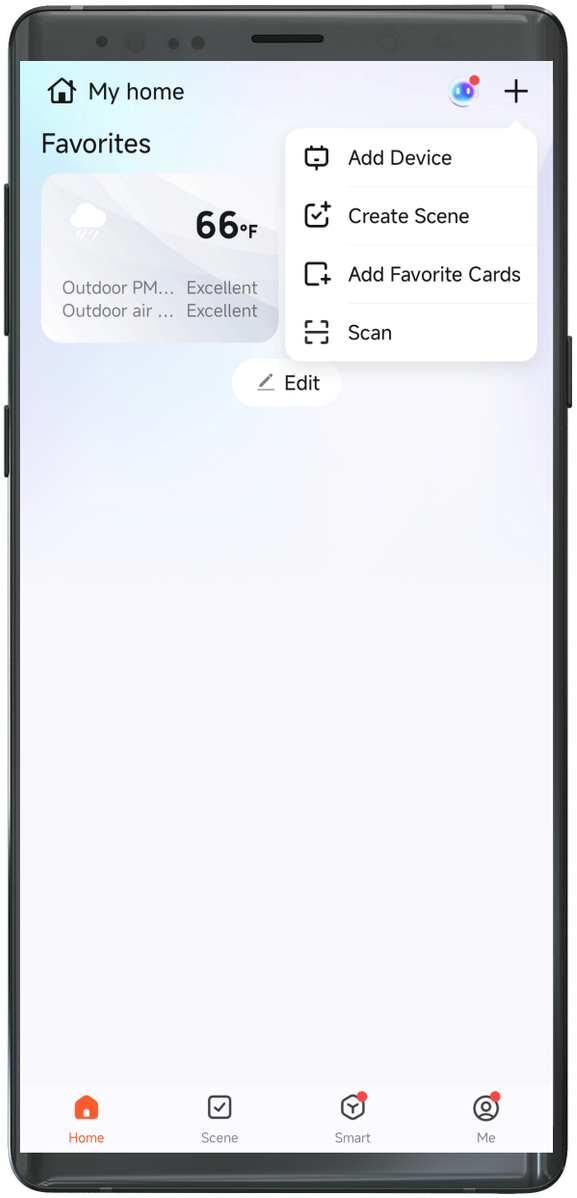
1. Use a wireless Wi-Fi (2.4GHz) network. It is recommended that the circuit breaker and the connected router be 2-6 meters apart, and that there be no metal obstacles between the circuit breaker and the router.

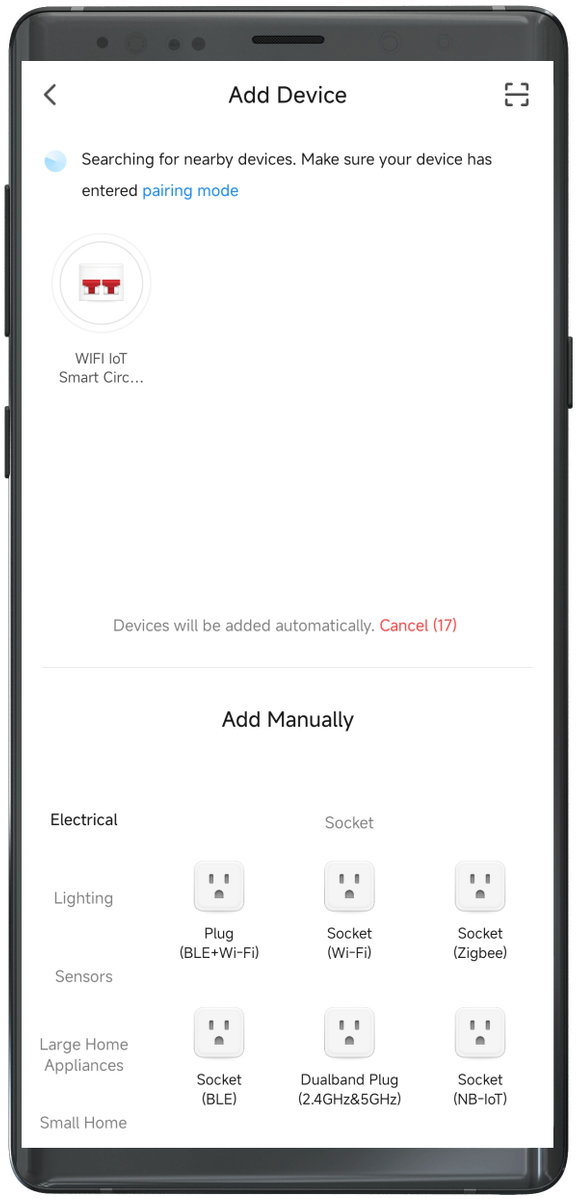


2. After powering on the device for 10 seconds, press and hold the button for 7 seconds until the green light stays on, then release it. When the green light flashes quickly, the device has entered ng mode.pairi

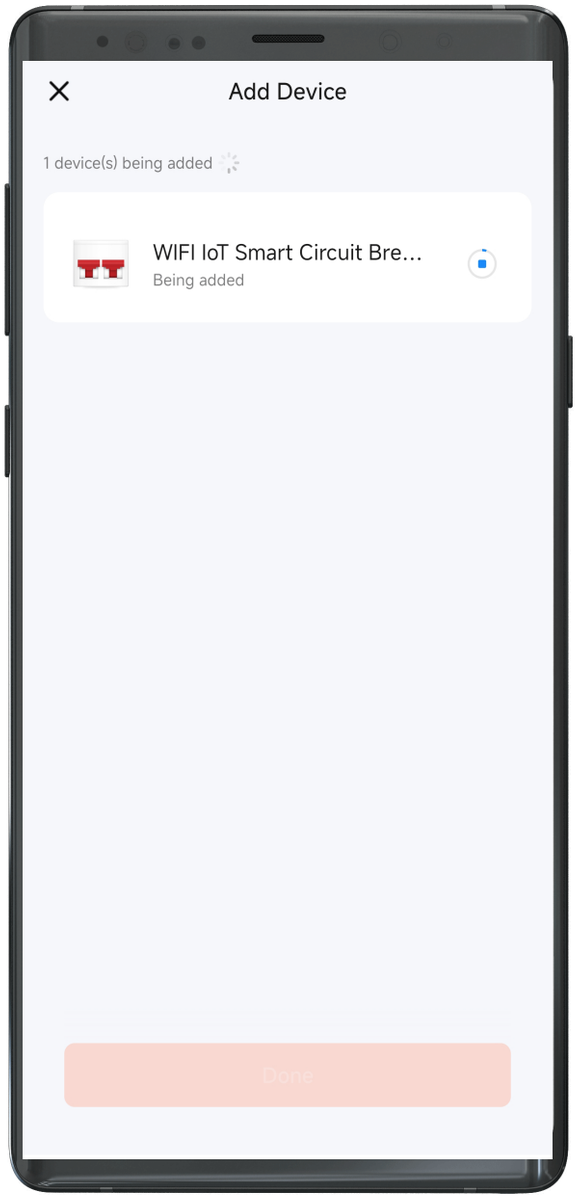


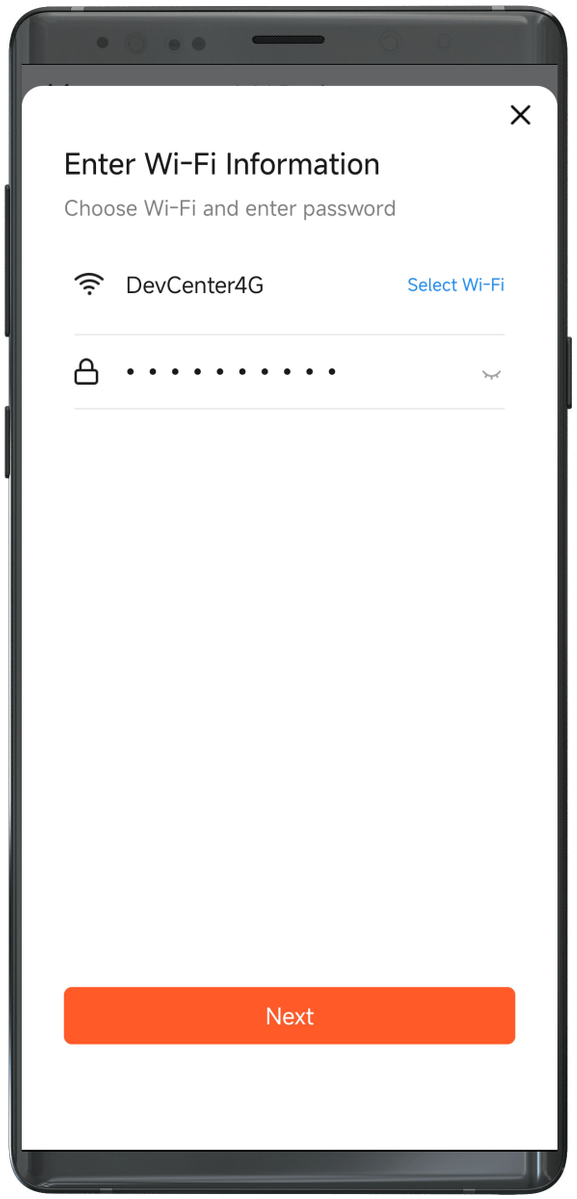
3. After logging in to the Tuya App, tap the + button in the upper-right corner of the App to enter the add-device page, and wait for the device to be connected automatically.



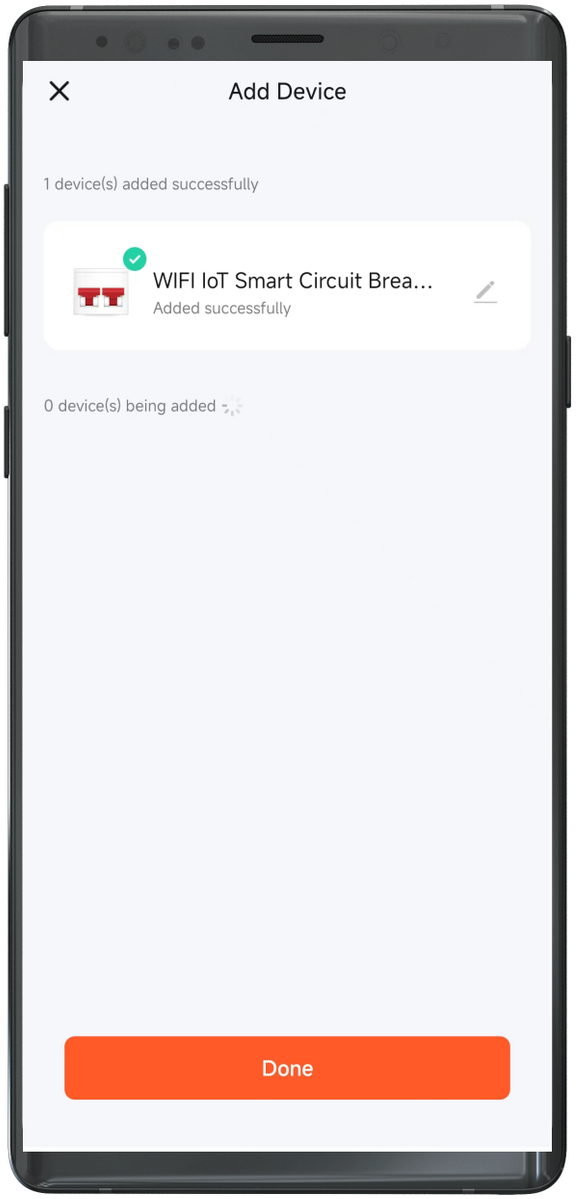


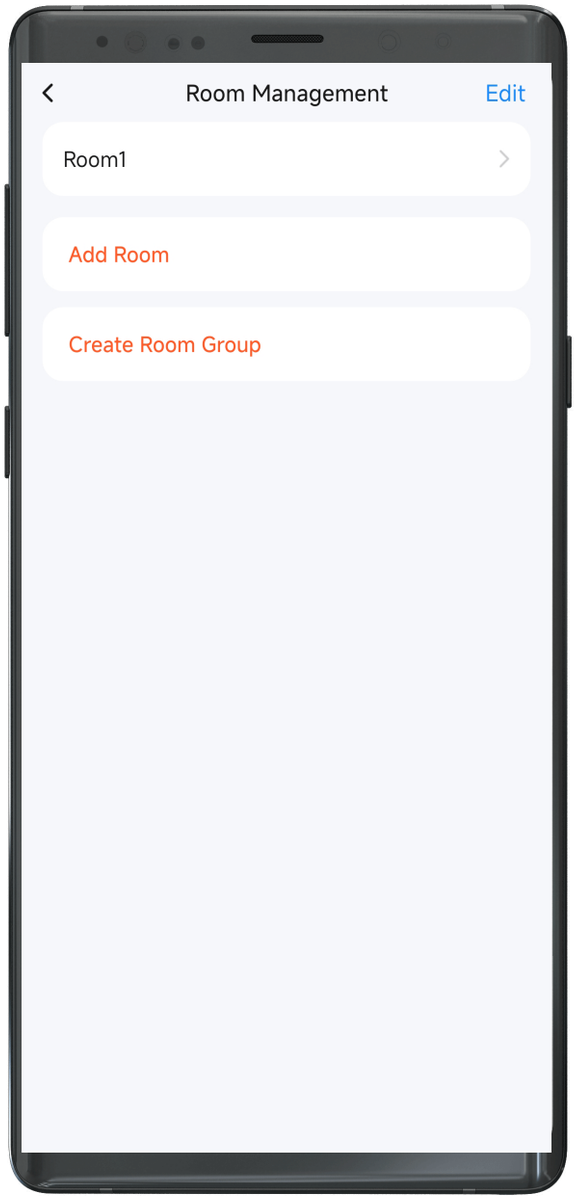
4. Select Wi-Fi, choose the 2.4GHz Wi-Fi network name connected to the phone, enter the Wi-Fi password, and tap Next. Wait for the circuit breaker pairing process to complete, then follow the prompts to proceed to the next step.





5. Select the room and set a device name/label to complete device pairing and binding.

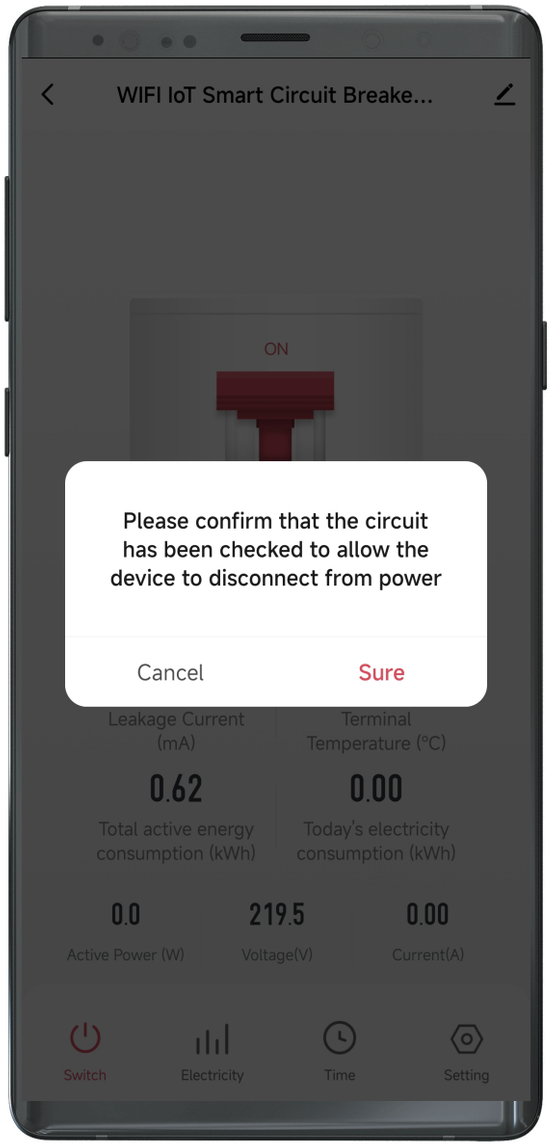


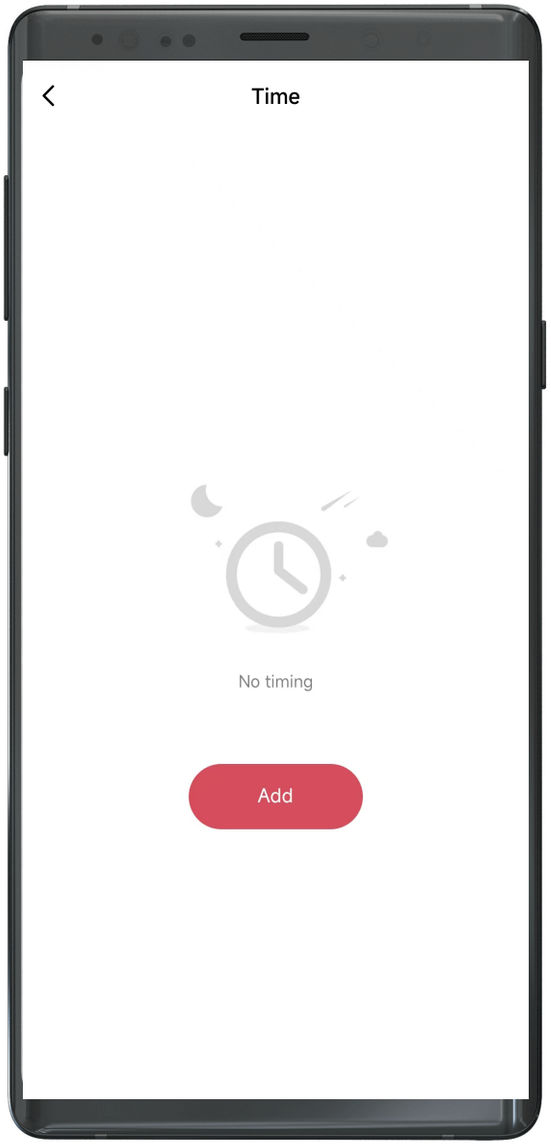


03 Device Use

After the device is added, you can perform the following operations:

1. Open/close control of the switch. It is recommended to set a password for switch operation.
2. Timer settings. Timed opening and closing can be set at any time.
3. Scene automation settings. One-tap execution or automation can control opening and closing based on multiple trigger conditions, such as device statuschanges, timers, weather changes, security mode changes, alarm triggers, and disaster warnings.

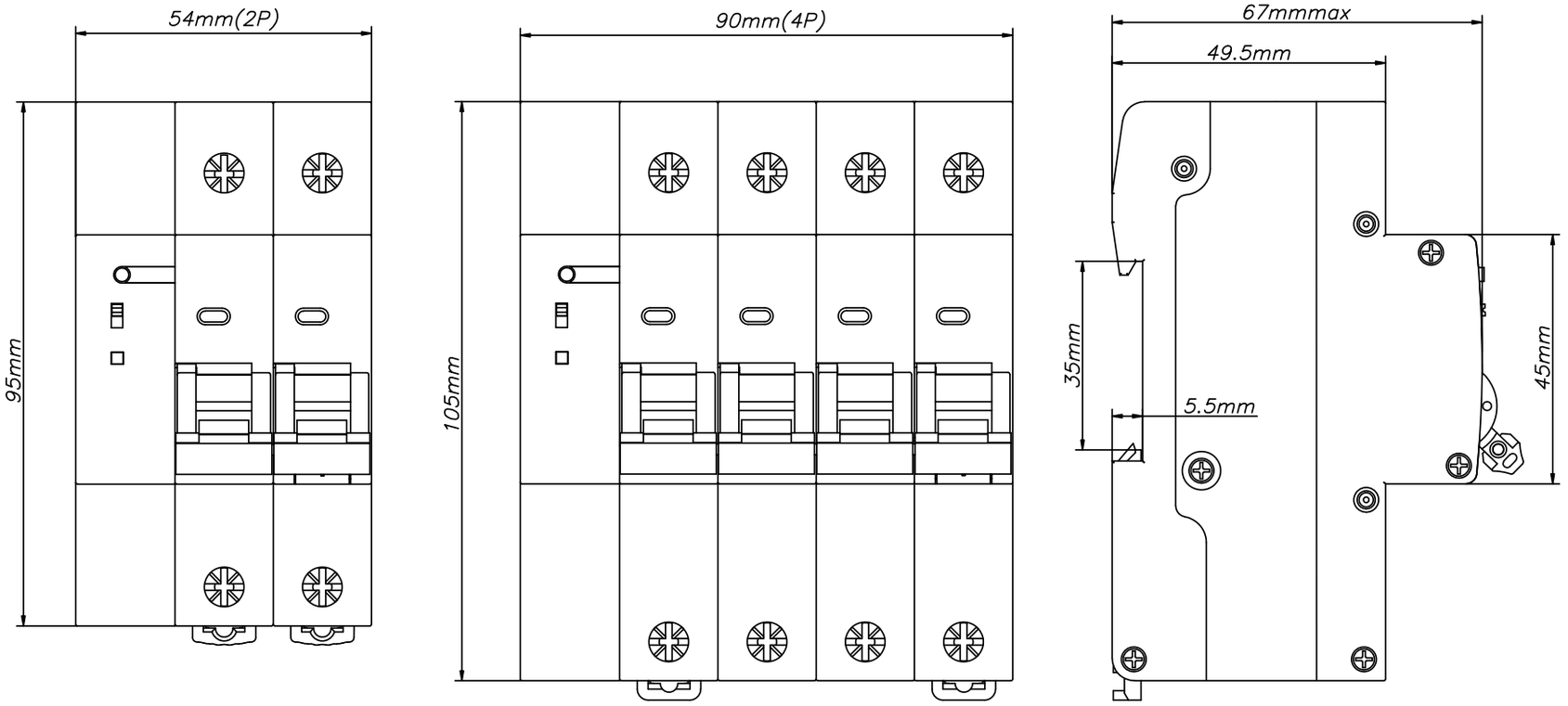




04 Technical Parameters

Execution Standard: CQC1149-2020 GB/T16917.1-2014
Rated Working Voltage and Frequency: AC220/230V 380/400V 50Hz/60Hz
Series: 2P, 4P
Interrupting Current: 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A
Instantaneous Trip Type: C type, D type
Arc-Interrupting Capacity: 6kA
Standby Power Consumption: <2W
Wireless Connection: Wi-Fi 2.4GHz
Trip Time: <= 0.1s
Short-Circuit Trip: <= 0.04s
Control Mode: Manual and Automatic Combined Control
Environmental Temperature: Ambient air temperature not lower than -20℃, not exceeding 70+℃
Protection Grade: IP20
Certifications: CQC, CCC, SRRC,CE

05 Installation Dimensions



06 Installation Precautions

- Operate and install only when power is disconnected to ensure personal safety.
- This circuit breaker uses top incoming wiring and bottom outgoing wiring. Bottom incoming wiring is not supported. Wire the product correctly according to the wiring diagram in "01 Product Introduction". Read the wiring steps in this manualcarefully and wire strictly according to the wiring diagram. The neutral and live wires must not be interchanged; otherwise, the product may fail to operate normally or may be damaged.
- Network pairing should be performed while the circuit breaker is in a no-load state to avoid false operation caused by overload, short circuit, or other causes. This product uses internal power supply. Ensure that the incoming terminal voltage is stable and reliable. After first power-on, wait 10 seconds before pairing.

- The product must be paired for the first time before use. After pairing is completed, it does not need to be paired again during subsequent use.
- If the Wi-Fi router changes during use, the product must be paired again.
- To ensure signal strength, keep the product as close as possible to the Wi-Fi router during use and reduce obstruction by walls and other objects. If installed at the edge of Wi-Fi coverage, the product may go of line and lose control due to Wi-Fi signal fluctuation and drift.
- If power is suddenly lost during normal line use, the product will retain its original open/close state and enter of line control status. After power is restored, the product will automatically come back online within a few seconds without needing to be paired again.
- Install the product in an environment protected against water, moisture, and direct sunlight, such as indoors or inside a waterproof distribution box. In addition to meeting the national standard temperature range of -5 degrees C to +40 degrees C, the product can also operate reliably within the extreme ambient temperature range of -20 degrees C to +70 degrees C. When the maximum temperature is +40 degrees C, the relative humidity of the air should not exceed 50%. When the monthly average minimum temperature of the wettest month does not exceed +25 degrees C, the monthly average maximum relative humidity should not exceed 90%, and the daily average maximum relative humidity should not exceed 95%. Condensation that may form on the product surface due to temperature changes must be considered.
- The installation altitude should not exceed 2000 meters. In high-altitude areas, derating should be applied. It is recommended to reduce capacity by 10% for every 1000 meters of altitude increase. The external magnetic field at the installation location should not exceed 5 times the earth magnetic field in any direction.

07 Usage Scope and Maintenance

- The product supports Tuya App control and features miniaturization, compact design, long service life, modular structure, high breaking capacity, and intelligent control. It is suitable for circuits with AC 50Hz/60Hz, rated voltage 220V/380V, and rated current up to 80A. It is used to make and break circuits, perform timed and delayed operations, distribute electrical energy, and carry rated current.
- The product can provide protection when overload or short circuit occurs in circuits and equipment. It is also suitable for infrequent motor starting and overload/short-circuit protection. More conveniently, remote-control equipment can directly control closing and opening of the circuit breaker. It also supports function expansion, sharing with other users, and timed/delayed settings to meet personalized user requirements.
- This product is equipped with leakage detection. It is recommended to test the leakage button once a month to ensure normal operation of leakage protection.
- Check the current-carrying capacity of the connected conductors to ensure that they can carry current greater than the load current.
- Regularly check whether screws are loose. If looseness is found, retighten immediately.
- Check whether dust has accumulated on the product surface or whether insulation is damaged. If found, clean or replace the product in time.
- Do not adjust timed-action settings at will to avoid misoperation.
- At the end of product service life, do not discard it casually. It should be properly dismantled and recycled because it contains precious metals such as silver.

08 Safety Warning

- Do not use this product for illegal or criminal activities. If illegal or criminal activity occurs, all legal liability shall be borne by the user.
- Do not give operation authority to children or unrelated persons for play or operation, to avoid personal injury or property loss caused by misoperation.
- Do not use this device in the control of vehicles, machine tools, or similar equipment, to avoid accidents caused by vibration, misoperation, or other factors. This product does not provide protection against personal electric shock, line over-voltage/under-voltage, or equipment leakage. Pay attention to its applicable scope.
- Do not install or remove this product while energized to avoid electric shock, equipment short circuit, or other hazards. During line maintenance or when avoiding remote closing, ensure that the maintenance lock is enabled so that the circuit breaker remains in the open position. Wire strictly according to the front wiring diagram in this manual. The neutral and live wires must be connected to their corresponding positions; otherwise, the equipment may fail to operate normally or may be damaged.
- Do not connect low-quality electrical loads to this product for control, to avoid property loss caused by accidental burning of low-quality products. When the circuit breaker trips due to protection, do not perform remote closing before checking the line and eliminating the fault, to avoid personal injury or property loss.Because Wi-Fi router signal channels are unstable, do not use this product for important facilities such as fire control, elevator equipment, medical instruments, or emergency equipment. If the Wi-Fi signal channel is unexpectedly interrupted or blocked, the equipment may become disconnected and uncontrolled, causing personal injury or property loss.
- When using extended functions such as delay and timed cycle, timing may have a certain error. Please pay attention during use.
- If the user does not use or install the product according to the above terms, the user shall bear all consequences and legal liability.
- The hardware warranty period of this product is 1 year. Users must evaluate safety by themselves and bear usage risks. The company promises a 7-day no-reason return and exchange service.

09 Common Issues Handling

- Indicator light is off:
  Check whether the product uses top incoming wiring. This product only supports power supply connected to the upper terminals and load connected to the lower terminals.
  Check whether the power supply voltage is normal.
  Check whether the neutral wire N of this product is connected to the power neutral line as shown in the wiring diagram, and not to the protective earth line PE.
  After confirming there is no error, disconnect the upstream power supply of the circuit breaker and power it on again.
- Network pairing failed:
  Check whether the Wi-Fi router is too far from the circuit breaker. It should be as close as possible.
  Check whether the router selected in the App and the entered password are correct.
  Check whether there are multiple strong Wi-Fi routers in the environment. Temporarily turn offunnecessary routers.
  Check whether the Wi-Fi router is 5GHz or 2.4GHz. This product supports 2.4 GHz. If it is a dual-band router, switch to 2.4GHz.
  Check whether too many devices are connected to the Wi-Fi router. Some routers have a limit on the number of connected devices.
  Check whether the phone is connected to the network. Connect the phone to the local router and keep external internet access available. The phone and this product must be on the same Wi-Fi network for pairing. If pairing still fails, temporarily turn off the Wi-Fi router, prepare another phone, enable the hotspot signal of the other phone, and try pairing with the hotspot. If hotspot pairing succeeds, evaluate the Wi-Fi router status or restart the Wi-Fi router and try pairing again.Note: If pairing fails multiple times, use the search-by-name pairing method.
- Network pairing failed:
  Check whether the Wi-Fi router is operating normally.
  Check whether the upstream power supply voltage of the circuit breaker is normal.

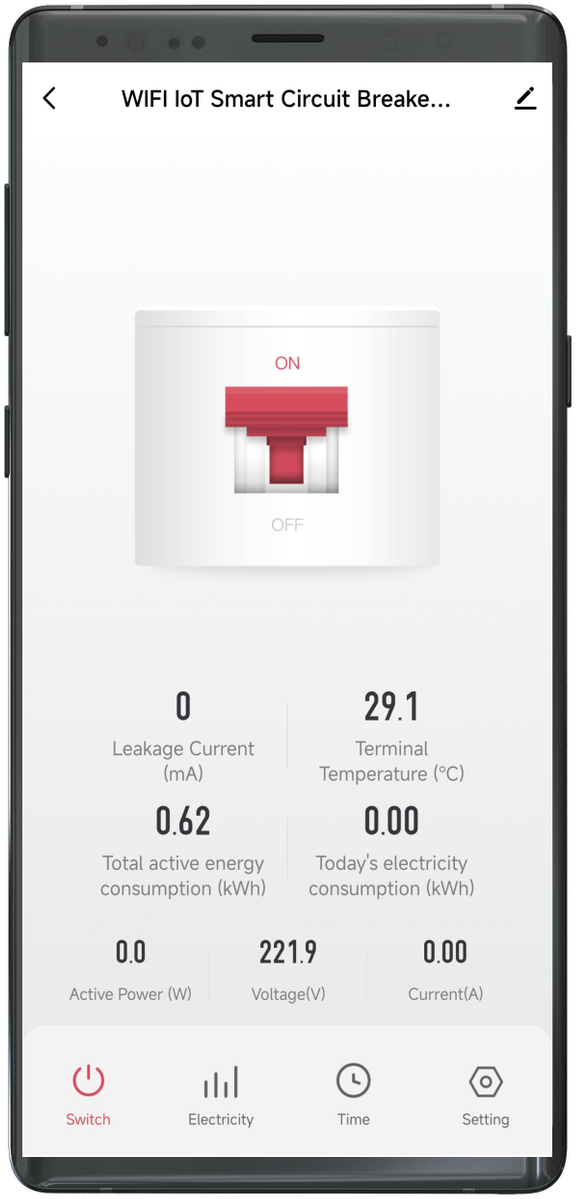
Check whether the phone is connected to the internet normally.
Check whether antivirus software or similar software that restricts access to certain Apps is installed on the phone.
Check whether there is power outage maintenance or disassembly at the product installation site.
Check whether there is a strong electromagnetic interference source around the product.
Check whether the product indicator light is on. Try powering it on again.
If no abnormality is found, exit the App and log in again after several minutes.

10 Device Alarm Functions

The alarm function of the device can be enabled. It can be configured under "Device Alarm" in More Functions in the Tuya App. The device supports, but is not limited to, the following alarm notifications:

Remote closing action alarm	Remote opening action alarm
Manual closing action alarm	Manual opening action alarm
Manual lock action alarm	Manual unlock action alarm
Remote lock action alarm	Remote unlock action alarm
Timed closing action alarm	Timed opening action alarm
MCU chip over-temperature alarm	Over-voltage opening action alarm
Over-voltage recovery closing action alarm	Undervoltage opening action alarm

Under-voltage recovery closing action alarm	Overload trip action alarm
Over-current tripping action alarm	Leakage current alarm
Leakage current tripping action alarm	Line terminal over-temperature alarm



Certificate of Conformity

Product Name: Internet of Things Leakage Circuit Breaker

Specification Model: IOTB2 Series

Inspector: Inspector 2

Inspection Date: See product or packaging

This product has passed the inspection and meets the standard technical requirements. It is approved for shipment.