

TOQ7e series

Instruction manual



UNINTERRUPTIBLE MILLISECOND SWITCHING DUAL AUTOMATIC
DUAL POWER AUTOMATIC TRANSFER SWITCH
TRANSFER SWITCH

Thank you for purchasing our product. Before use, please read this instruction manual carefully for correct use. Please be sure to take good care of this instruction manual.

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Preface

Dear user:

Thank you for using our products, we believe this product will give your work and life benefits and convenience, welcome your valuable suggestions and comments in the use course, we will continue to provide you with enthusiastic and attentive service. Or if you have any questions, please contact the manufacturer directly with our vendors.

This manual is for reference only. If the product or version upgrades to change without notice. Paid product to prevail. Thank you for your cooperation and support.

Control device: built in controller

Product structure: no power off, guide rail type, high current, small volume, two-stage type, simple structure, ATS integration

Features: fast switching speed, low failure rate, convenient maintenance and reliable performance

Wiring mode: front plate wiring

Conversion mode: power grid to power grid, power grid to generator, photovoltaic to urban power, automatic switching and self recovery

Product frame: 125

Product current: 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125A

Product classification: direct load type

Pole No.: 2, 3, 4

Standard: IEC/EN60947-6-1 GB/T14048.11

ATSE: PC class

Switching time: 0.008s/8ms

1. General

The dual power automatic switch is a newly developed miniature household power switch, which is mainly used to test whether the main power supply or standby power supply is normal. When the normal power supply is abnormal, the standby power supply starts to work immediately, which ensures the continuity, reliability and safety of power supply. This product is specially designed for household rail installation and is specially used for PZ30 distribution box.

The dual power automatic switch is suitable for emergency power supply systems with 50 or 60Hz and rated 400V AC. ATS has the characteristics of solid structure, reliable conversion, convenient installation and maintenance and long service life. It is widely used in various occasions where power failure cannot be sustained, and can be operated by electricity or manually. ATS is composed of TSE and controller.

According to IEC/EN60947-6-1、GB/T14048.11, Part 6-1: multifunctional equipment and switchgear is formulated. It can be seen that ATS is the most qualified low-voltage switchgear and control device.

2. Normal operation time and installation conditions

2.1 Ambient air temperature

The maximum temperature shall not exceed 40°C, the minimum temperature shall not be lower than -5°C, and the average temperature within 24 hours shall not be higher than 35°C.

2.2 Altitude

The altitude of the installation site should not be higher than 2000m.

2.3 Atmospheric conditions

When the maximum temperature reaches 40°C, the relative humidity of the installation site should not exceed 50%; when the temperature is the minimum temperature -5°C, the relative humidity is higher, for example, the temperature is 25°C, and the relative humidity is 90%.

2. Normal operation time and installation conditions

Due to the temperature change, special measures should be taken to deal with the occasional condensation on the surface of the product.

2.4 Pollution grade

The pollution grade of ATS conforms to grade 3 specified in IEC/EN60947-6-1、GB/T14048.11.

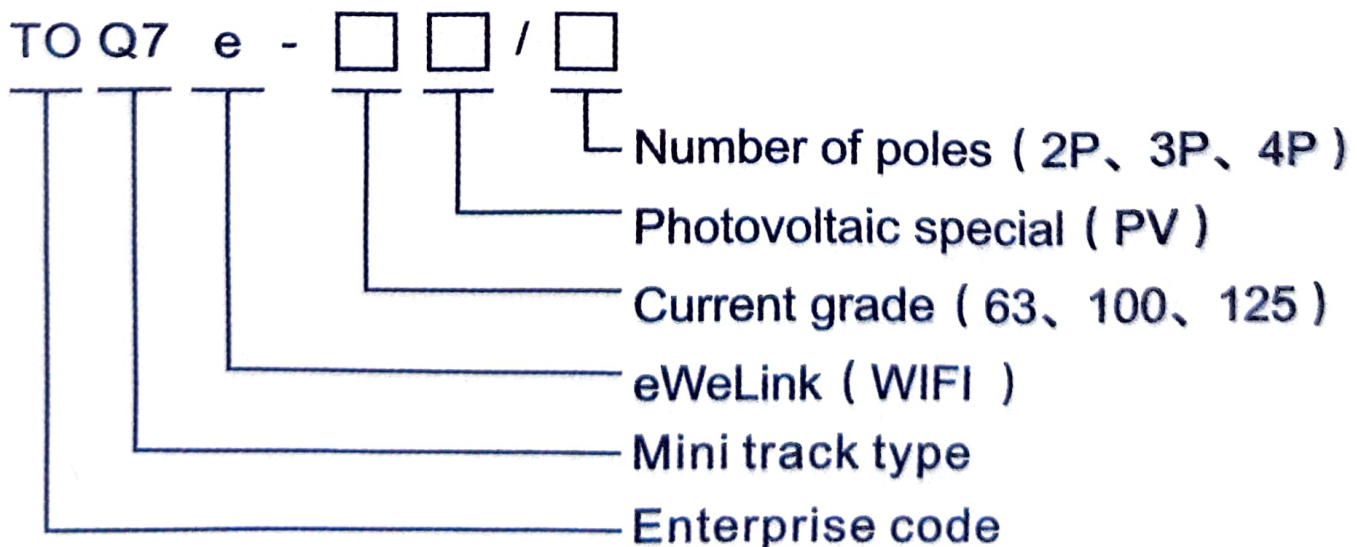
2.5 Installation category

The installation type of ATS conforms to the category specified in IEC/EN60947-6-1、GB/T14048.11.

2.6 Installation conditions

ATS can be installed vertically in control cabinet or distribution cabinet. Make sure the installation distance meets the requirements in Figure 1.

3. Model and meaning



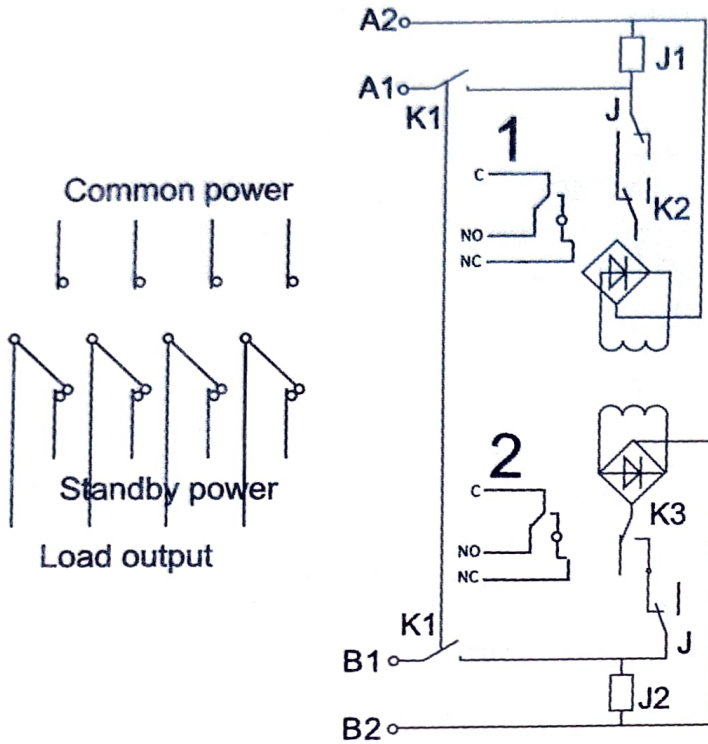
4. Main technical parameters

Specification	125A		
Rated current I_e (A)	16, 20, 25	32,40,50,63	80,100,125
Insulation voltage U_i	AC690V,50/60Hz		
Rated voltage U_e	AC400V,50/60Hz		
Classification	PC class: can be manufactured and withstood without short circuit current		
Utilization category	AC-33iB		AC-31B
Pole No.	2P	3P	4P
Weight(kg)	0.69	0.8	0.92
Electrical	Life:2000 times; Manual operation: 5000 times		
Rated short circuit current I_q	50kA		
Short circuit protection device (fuse)	RT16-00-63A		
Rated impulse withstand voltage	8kV		
Control circuit	Rated control voltage U_s :AC110V or 220V 50/60Hz Normal working conditions:85-110% U_s		
Auxiliary circuit	2 relays, each with two sets of contact converter contact capacity:AC110V or 220V 50/60Hz $I_e=5y$		
Conversion time of contactor	<50ms		
Operation conversion time	<50ms		
Return conversion time	<50ms		
Power off time	<50ms		

5.125 type wiring diagram

Internal wiring diagram

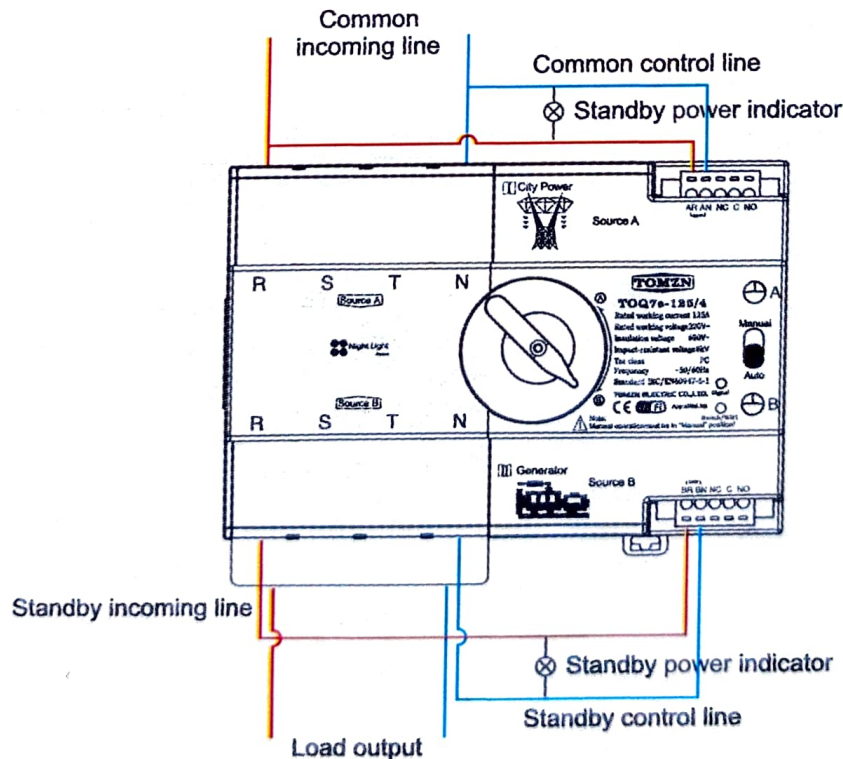
Fig.1



- K1: manual/automatic selector switch
- K2, K3: internal valve position switch
- J1: common 220V A power relay
- J2: standby 220V B power relay
- 1: passive signal output of A power supply
- 2: passive signal output of B power supply

Controller wiring diagram

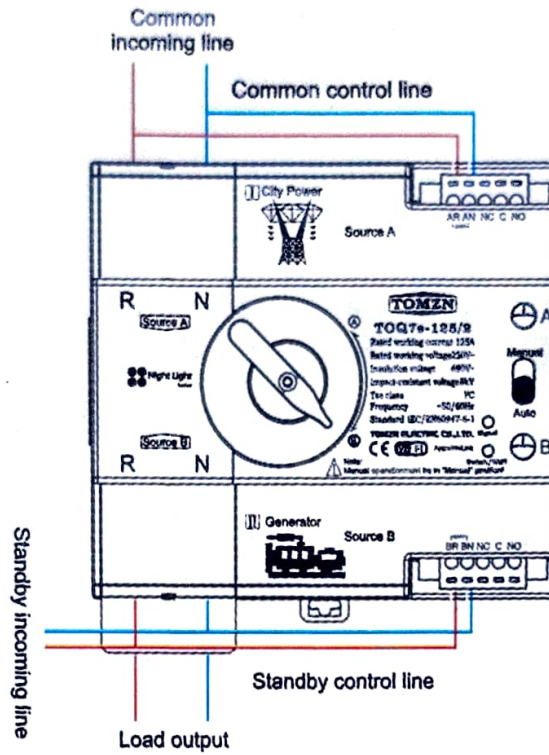
Fig.2



5.125 type wiring diagram

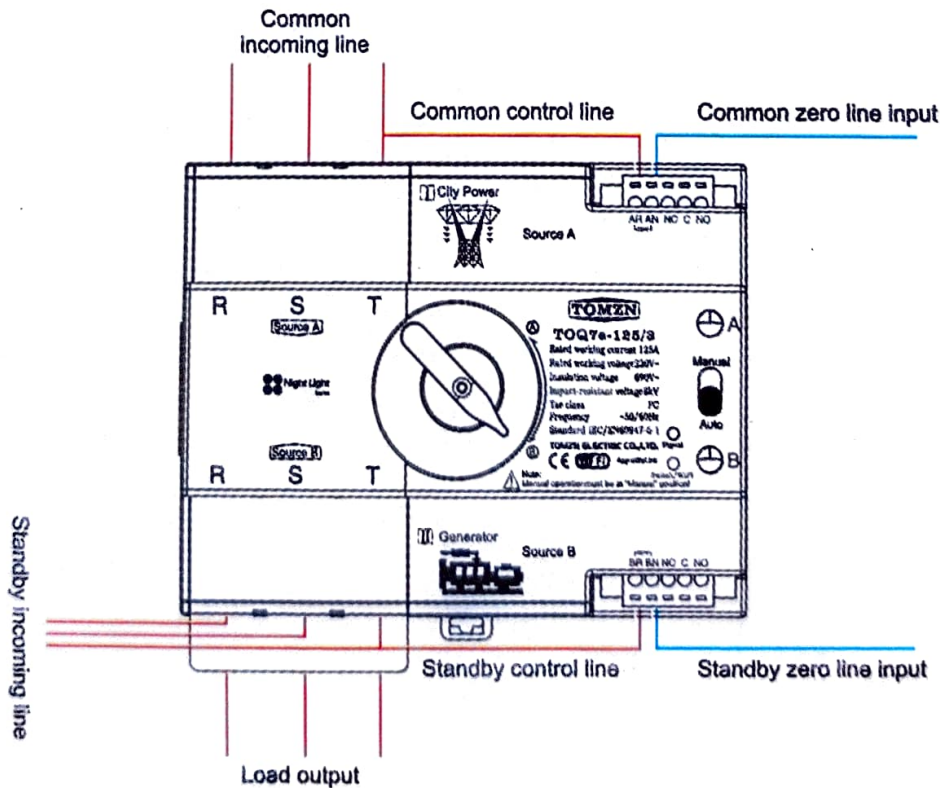
■ 125/2P wiring diagram

Fig.3



■ 125/3P wiring diagram

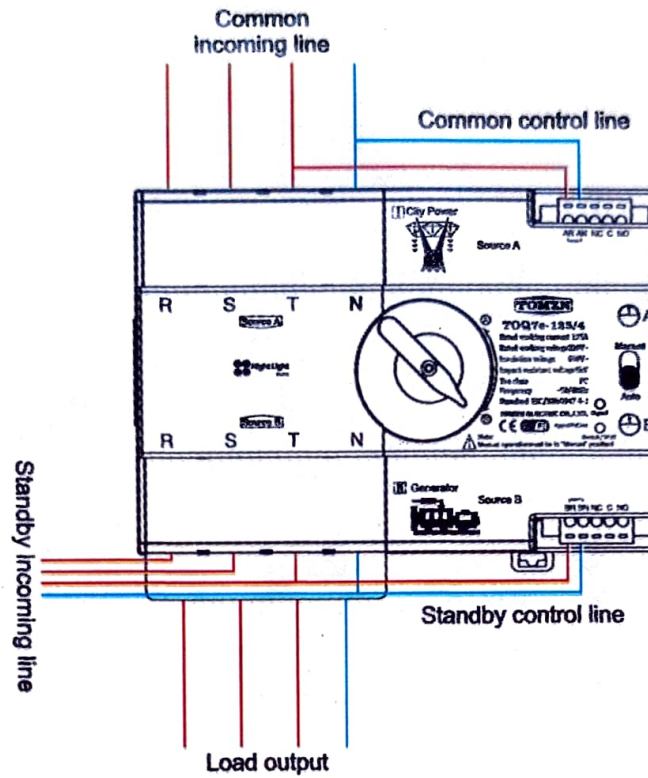
Fig.4



5.125 type wiring diagram

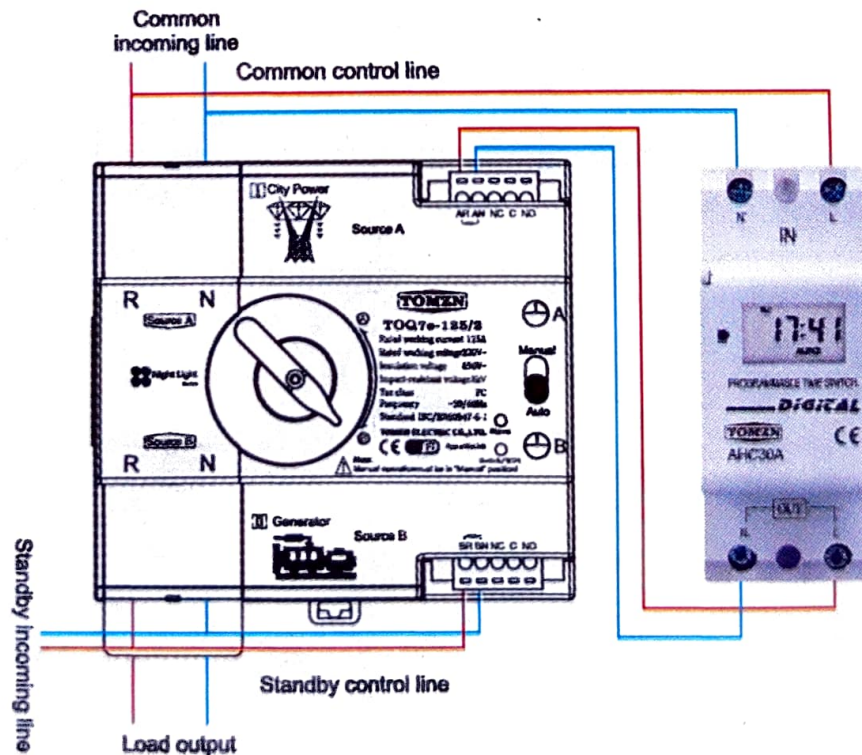
125/4P wiring diagram

Fig.5



125/2P wiring diagram

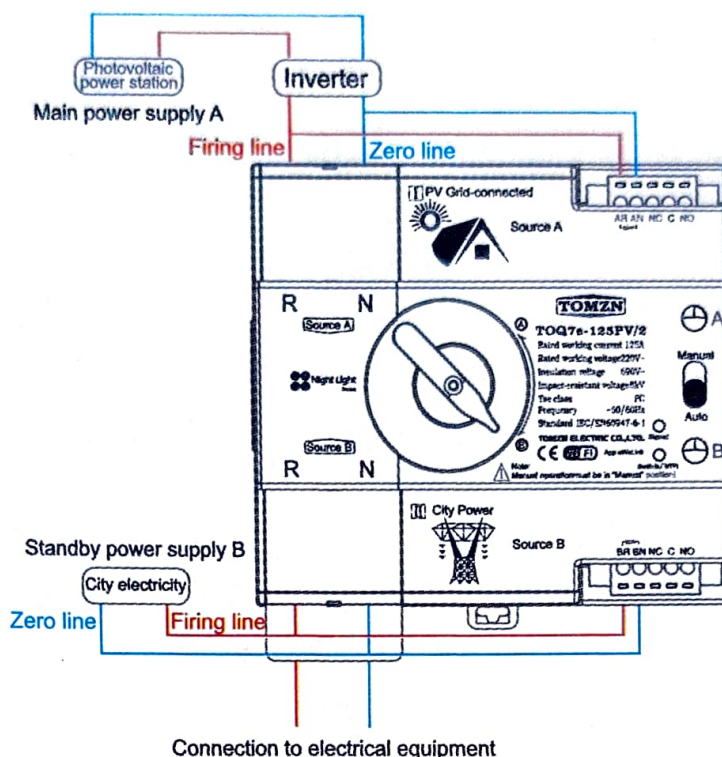
Fig.6



5.125 type wiring diagram

Special connection mode photovoltaic inverter

Fig.7



6. Overall and installation dimension of 125 (mm)

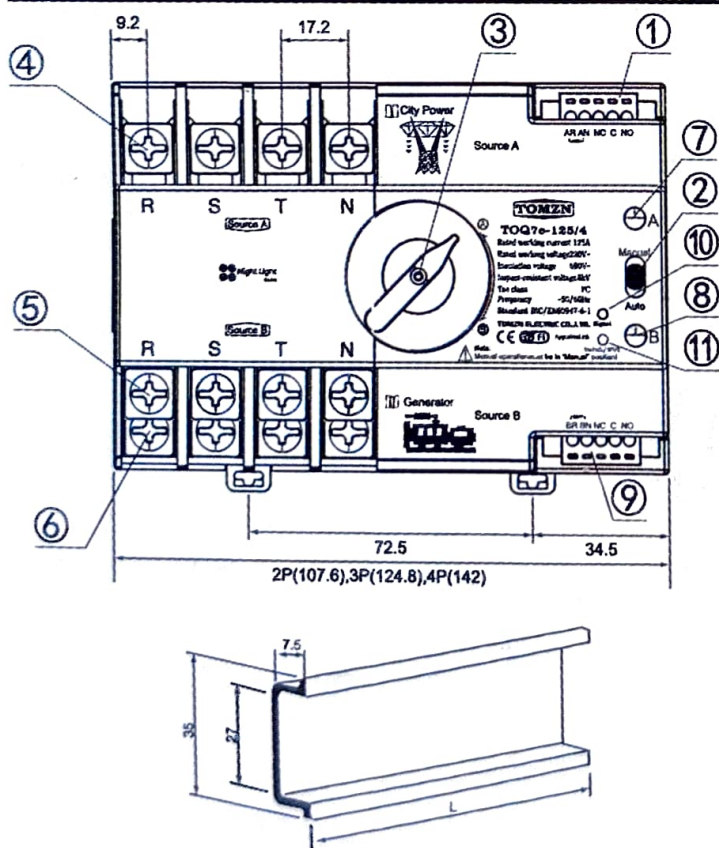


Fig.8

Safe distance: S1: $\geq 30\text{mm}$ S2: $\geq 203\text{mm}$

- ① Main power terminal and passive signal(AC220V)
- ② Manual/automatic switch
- ③ Manual handle
- ④ Main terminal of common power side
- ⑤ Main terminal of standby power side
- ⑥ Main terminal of load connection side
- ⑦ A power indicator
- ⑧ B power indicator
- ⑨ Standby power terminal and passivesignal(AC220V)
- ⑩ The working status of the Wi-Fi module
- ⑪ Manual switch and WIFI connection button

7. Installation and wiring

- 7.1 Ensure that professionals read this manual before installation and wiring.
- 7.2 Please check the integrity of ATS before installation, then open and close ATS with the operating handle, check the flexibility of transmission device and detect the load generation and disconnection conditions of common and standby power supplies at each stage.
- 7.3 See the figure for the correct installation steps. The trademark is in front of the product. If the installation cannot be carried out according to the correct procedures due to wiring and other reasons, please contact us. The safe distances S_1 , S_2 should not be lower than the labels in Fig. 8. (See figure below for details)
- 7.4 Detection control voltage: 50/60Hz, AC220V. The coil in the control circuit cannot be too long. The cross-sectional area of copper wire should not be greater than 2.0mm^2 .
- 7.5 According to the installation requirements of power distribution the safety of staff and equipment.

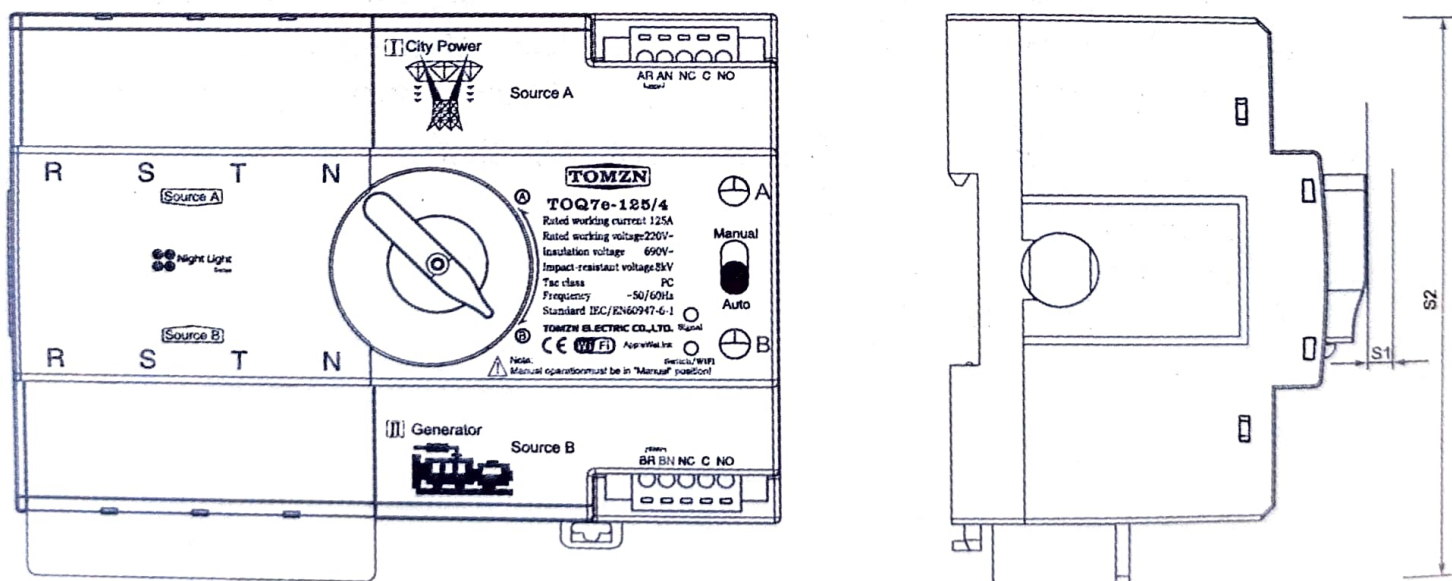


Fig.9 Correct installation direction of 125

8. Maintenance, inspection and storage

- 8.1 Maintenance and inspection shall be operated by professionals and all power supplies shall be cut off in advance.
- 8.2 In order to ensure the good performance of ATS, the first maintenance and inspection shall be carried out within 6 months after use, and shall be maintained and inspected at least once a year. In harsh installation conditions, the frequency of maintenance and inspection should be increased.
- 8.3 Maintenance and Inspection Items
- a. Please remove dust and dirt in case of failure.
 - b. Please check whether the contact parts of the electrical contacts are deformed and damaged, and remove burnt metal particles attached to and around the surface.
 - c. Rust, acidification and dust on the contact surface may lead to poor contact. Please operate manually many times and measure the contact resistance if necessary.
 - d. Due to long-term moisture and suspension, please dry ATS before use. After removing dust and dirt, use a 500V megohmmeter to measure the insulation resistance between normal supply, alternating power supply, load side bar, including live parts and metal plate. And the insulation resistance should not be less than 10M.
- 8.4 ATS shall be stored in an environment equivalent to the normal working environment, with dust-proof, moisture-proof and collision-proof measures.

9. Matters needing attention

9.1 Manual/automatic operation

ATS can guarantee the performance of power generation and power failure during circuit operation, but for manual operation, ATS cannot guarantee the above performance due to the difference of power generation and power failure speed or operator. During manual power generation and power failure, excessive silver alloy loss may occur. Therefore, when all power supplies are cut off to check and maintain the operating system and contacts, it is only necessary to pull the selector switch to the manual position. Under normal circumstances, please pull the selector switch to the automatic position. When operating manually, pull the selector switch to the manual position. After the manual operation is completed, pull the selector switch from the manual position to the automatic position.

9.2 Control circuit

ATS instantly becomes active. After the conversion is completed, the coil in the control circuit will be disconnected by the internal converter. Under the rated voltage of 80%-110%, the coil can operate normally. Low voltage will cause coil heating and even spontaneous combustion.

10. WiFi Connection and Setup Guide

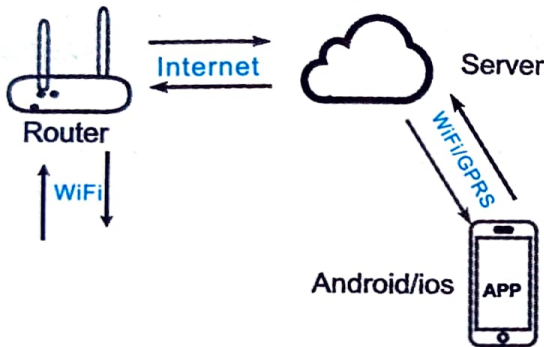


Works with everything

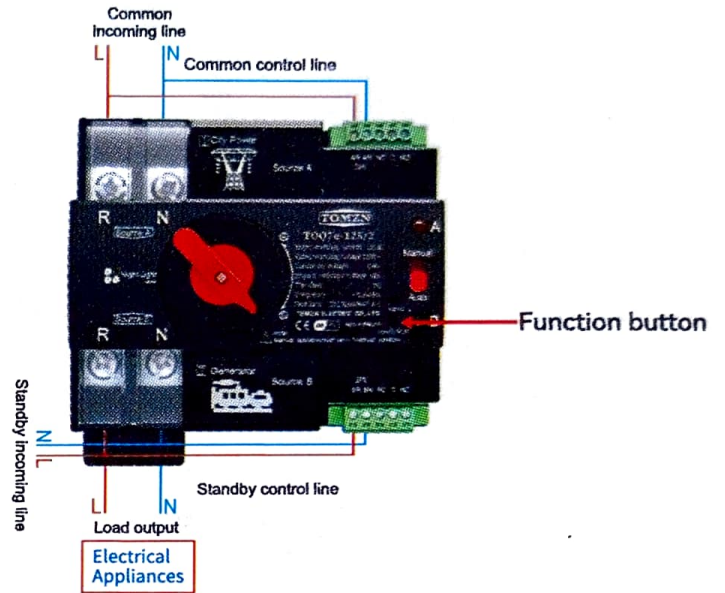
EweLink WiFi Smart Switch

Please check the following before using the device:

- Your phone has been connected to a 2.4G WiFi.
- Your phone system version needs to be Android 5.0/iOS 10.0 or higher.
- Your phone must be able to access the APP store and download the APP.
- If your router has set Mac address filtering, please enter the router settings to turn off it.



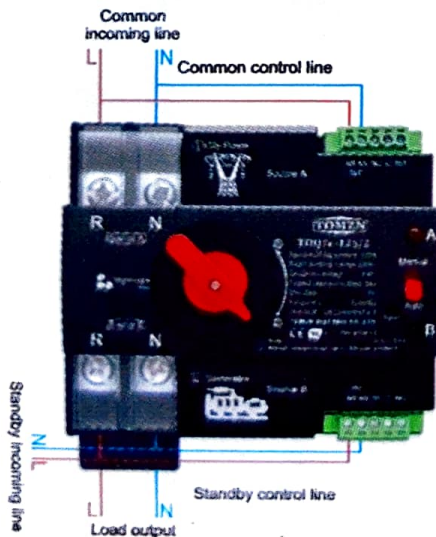
Can be connected to electric lights, sockets, fans, motors refrigerators, washing machines clothes washer water heater and other electrical appliances.



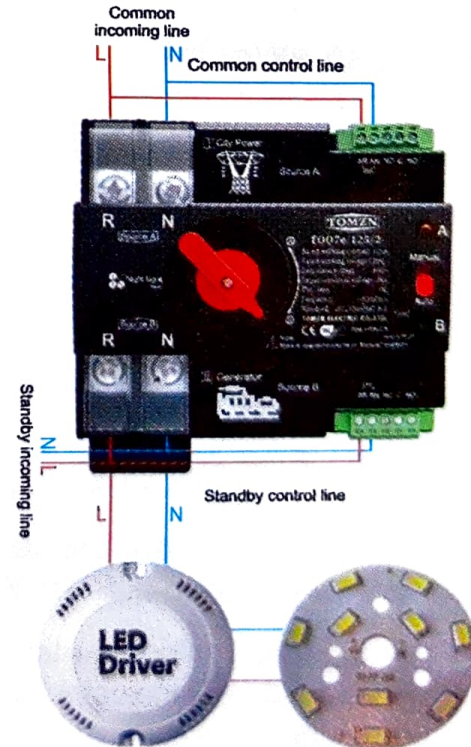
Wire correctly according to the instructions of the enclosure. This switch must Zero live wire power supply. Live installation is strictly prohibited!

Note: The switching principle of this equipment is through the control circuit fire wire So as to realize the electrical work and stop. This device must The device can work normally only if the power supply is zero live wire.

1. Appliance wiring instruction.

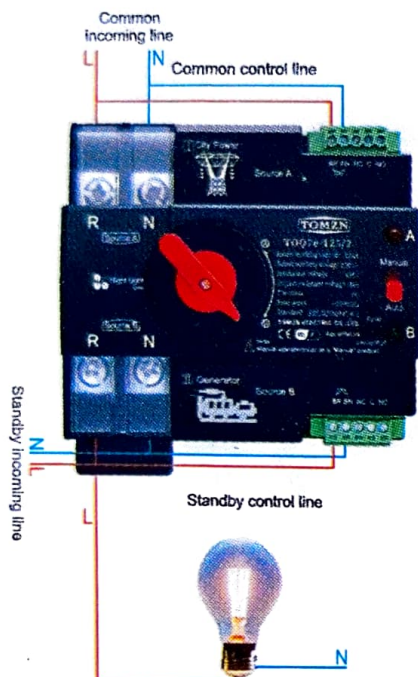


2. Ceiling lamp wiring instruction.

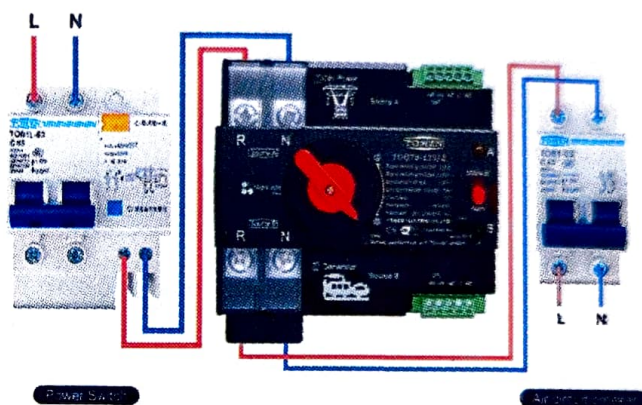


10. WiFi Connection and Setup Guide

3. One wire wiring instruction.



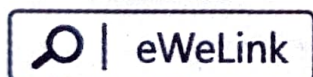
4. Correct wiring diagram with circuit breaker.



Note: The switch must be powered up by N and L wires.

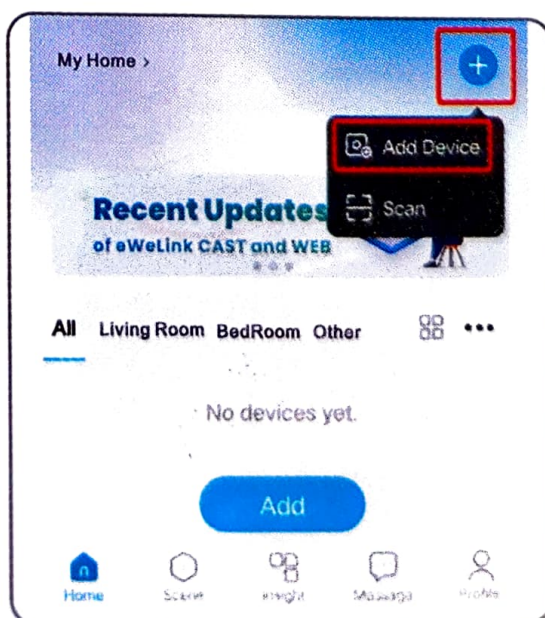
Add Device to eWeLink APP

- 1 Download eWeLink.





- 2 Turn on the Wi-Fi on your phone, Connect your phone to 2.4GHz WiFi.
- 3 Long press pairing button for more than 5 seconds until red LED indicator blinks twice quickly and keeps on once to enter pairing mode.

- 4 Open eWeLink APP, tap **+** at the bottom of the screen, select "WiFi Pairing", click "Next", it will automatically scan device.



10. WiFi Connection and Setup Guide

← Add Device  

Please set the device into pairing mode



Choose a 2.4GHz WiFi for device pairing and enter the right password

If your 2.4GHz WiFi and 5GHz WiFi share the same WiFi SSID, you're recommended to change your router settings or try compatible pairing mode.



WiFi-5GHz

WiFi-2.4GHz

[Only supports 2.4GHz WiFi >](#)

 TOMZN-12345678 

Your phone may be connected to 5GHz WiFi. To successfully pair your device, please switch to 2.4GHz WiFi.

 88888888 

Next

More pairing options

← Add Device

Please set the device in pairing mode based on the user manual. [Tap to view](#)

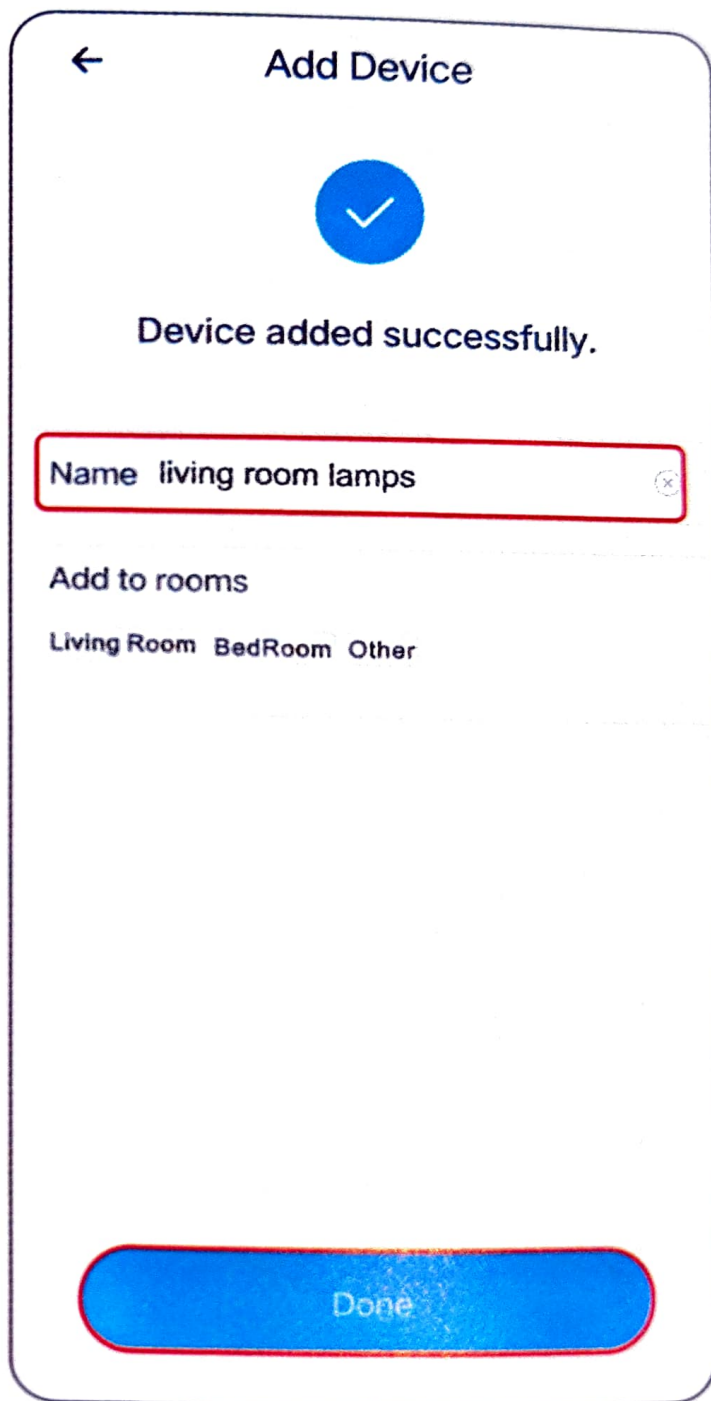
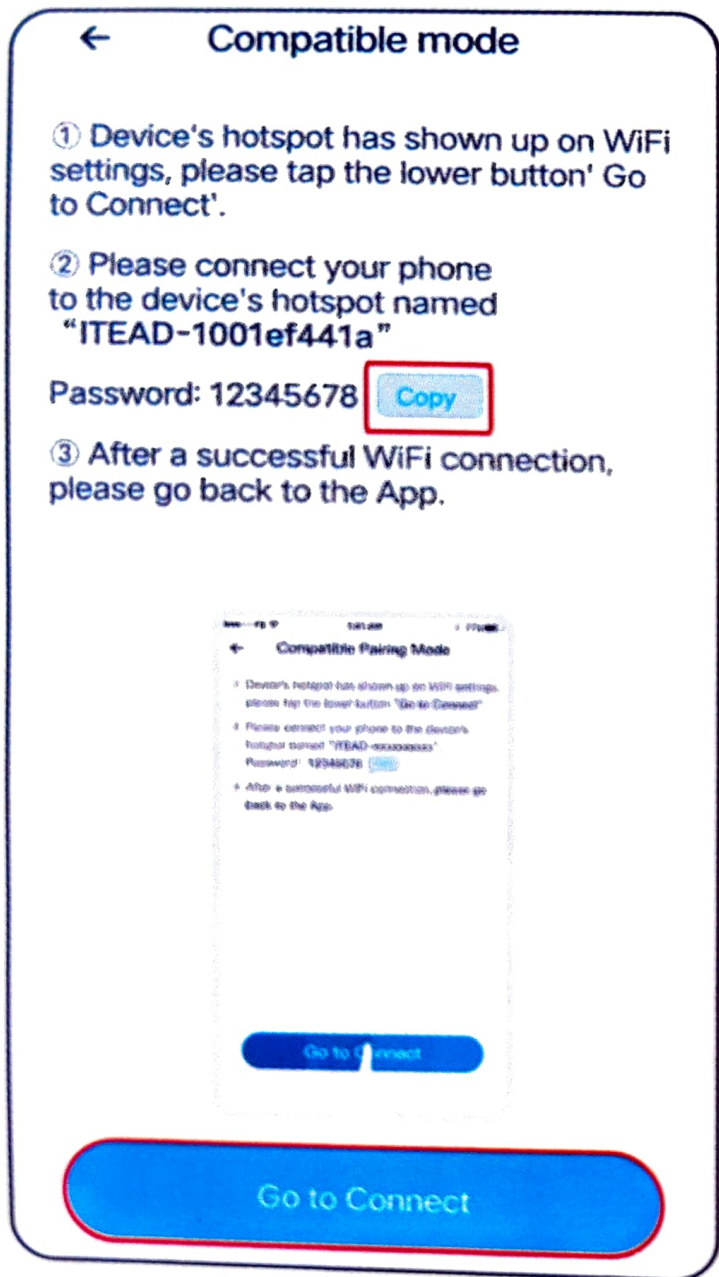


Searching for devices...

10. WiFi Connection and Setup Guide

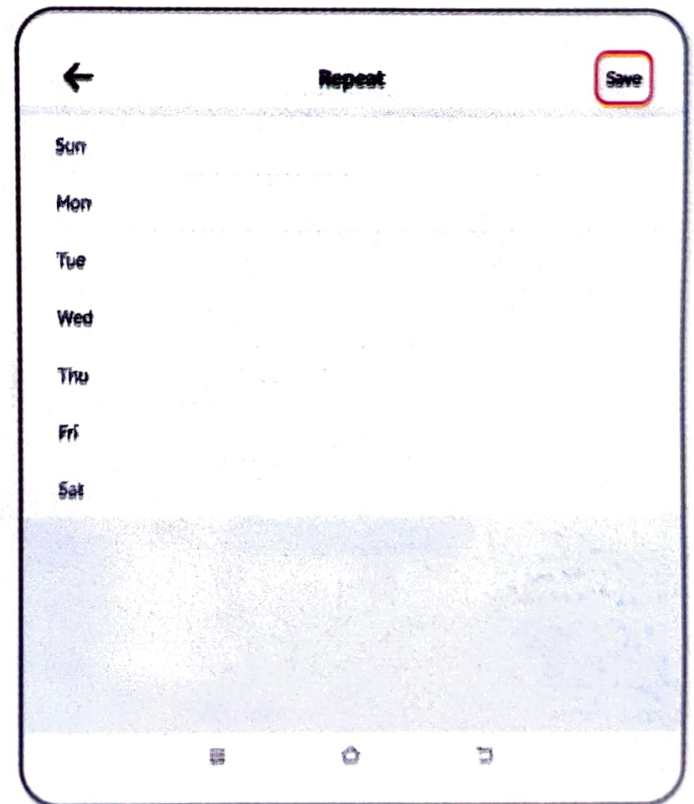
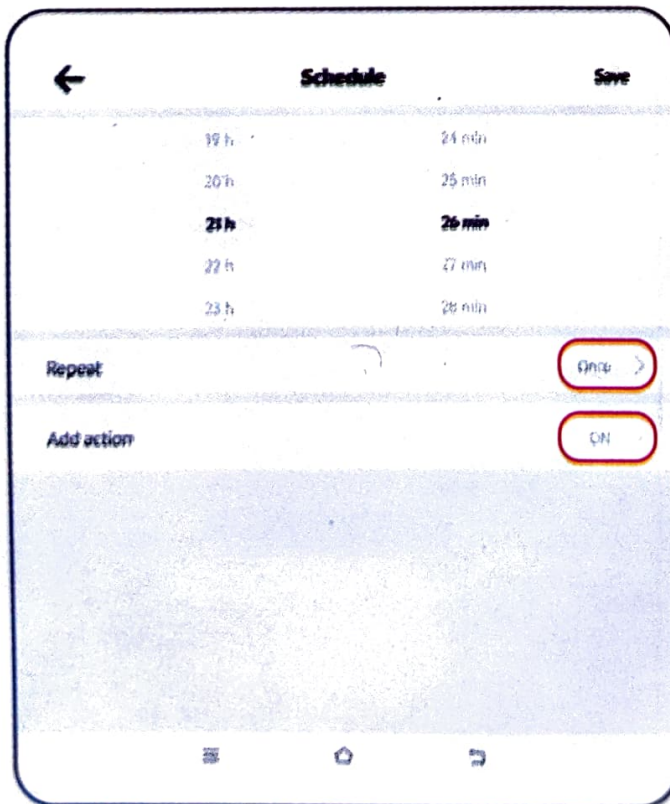
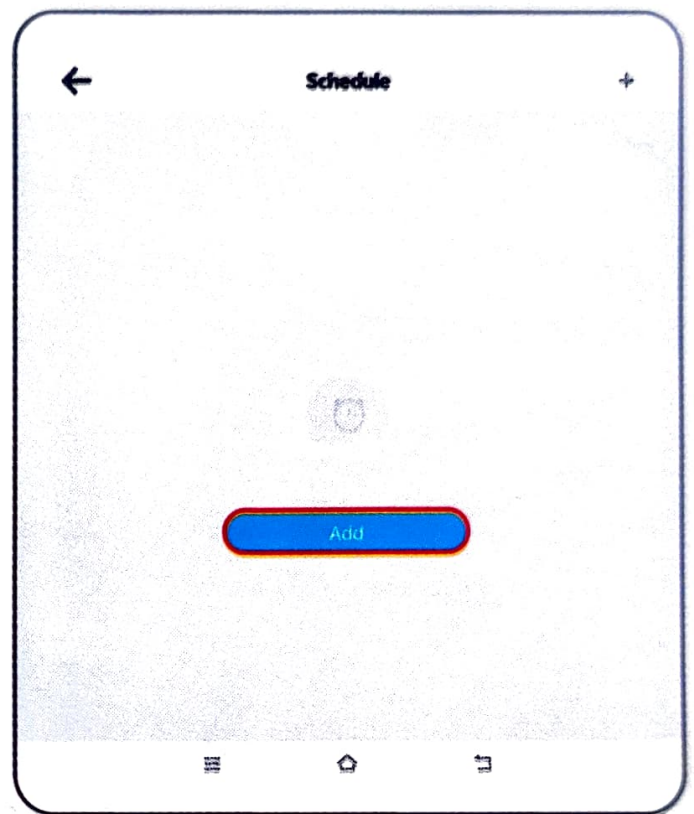
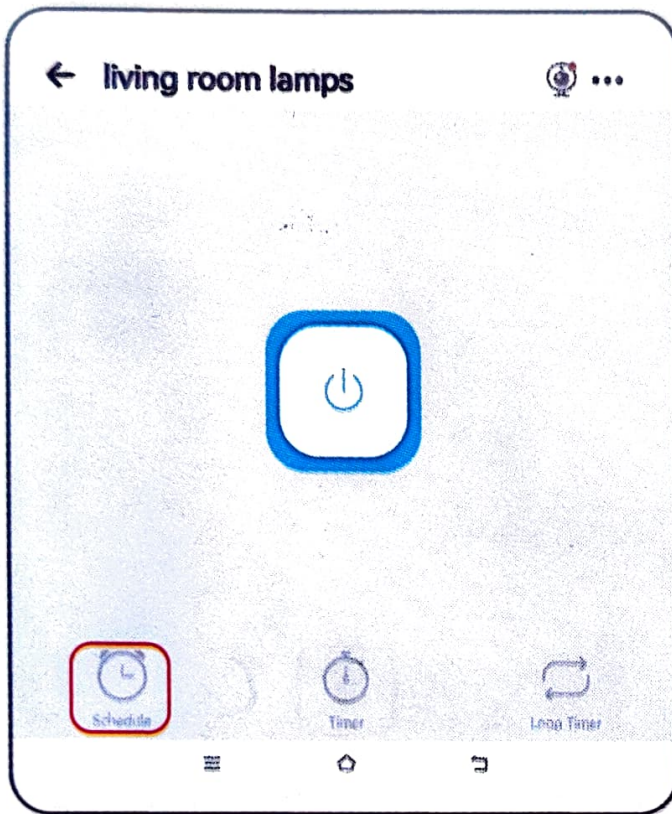
5 Click discovered device and then select the WiFi, confirm that the relevant information is correct, click "Save", and wait for the device to be connected.

6 After device is successfully added, you can change device name and click "Complete".

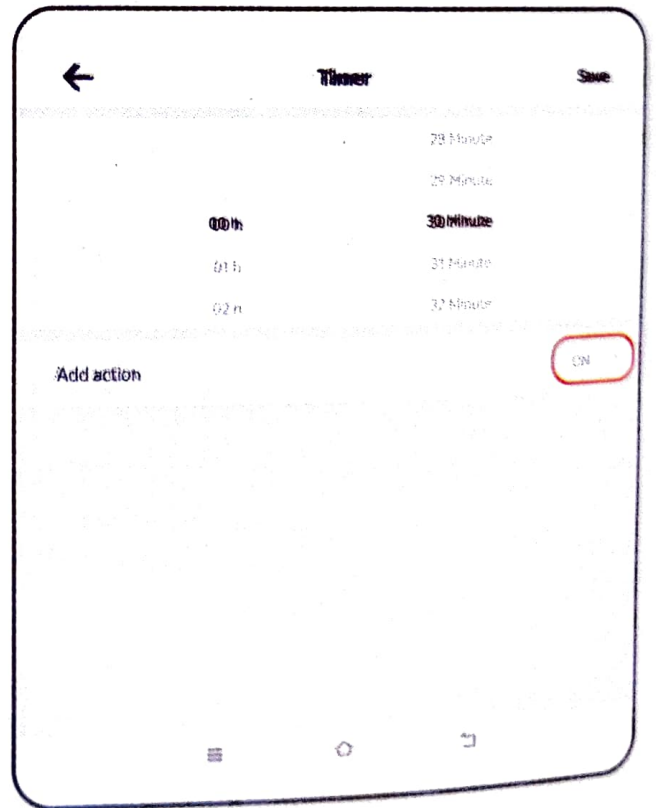
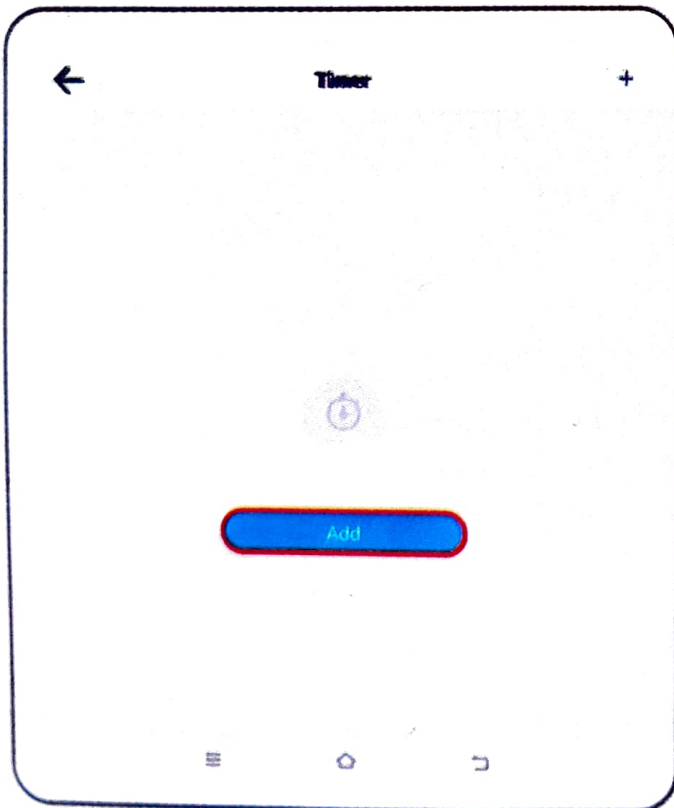
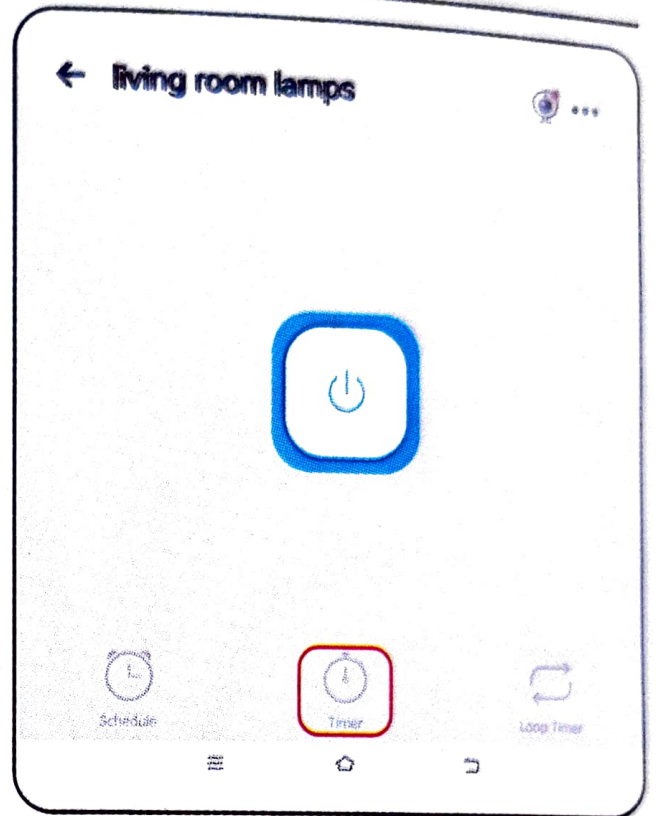
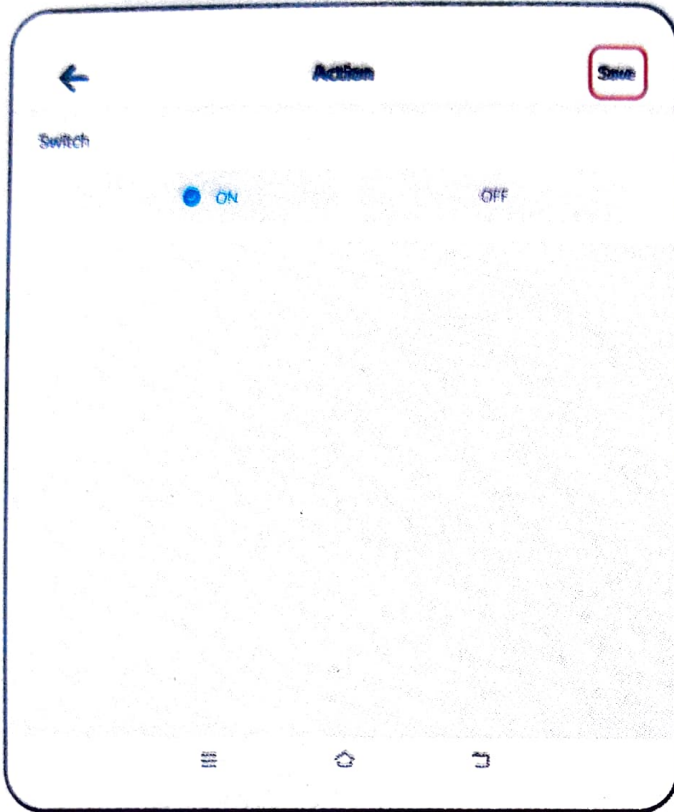


*The name of scanned device will be changed, please refer to the actual situation;
*WiFi information in the manual is for display and don't have any practical effect. Please refer to the actual WiFi.

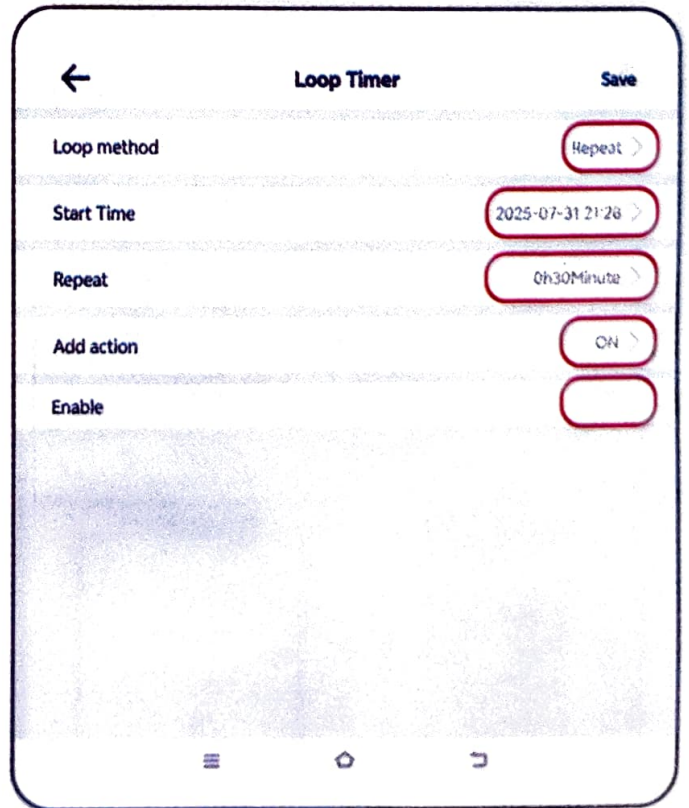
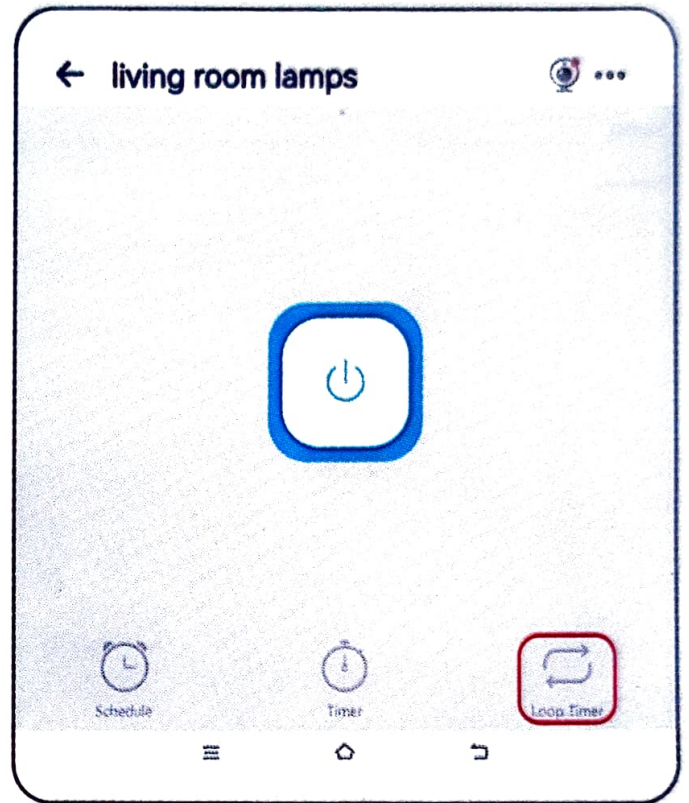
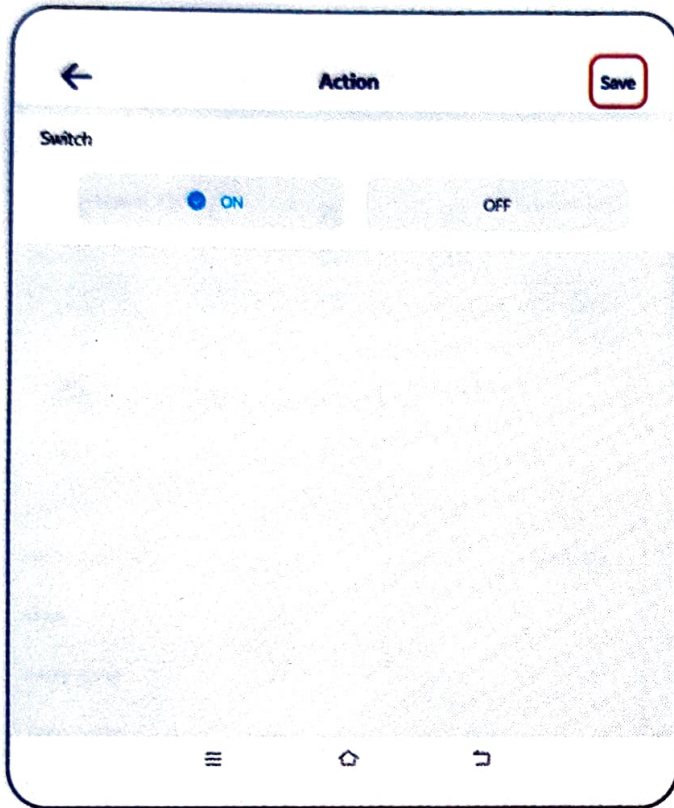
10. WiFi Connection and Setup Guide



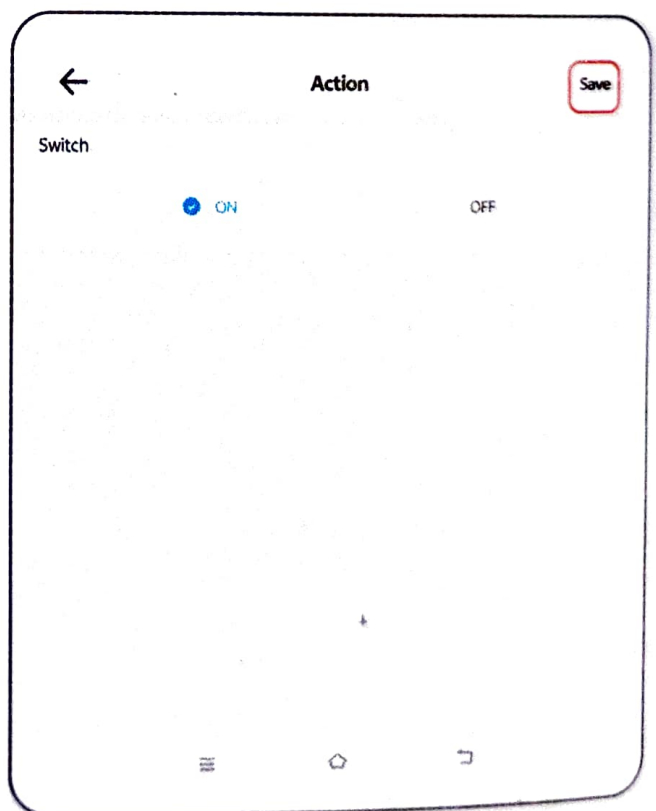
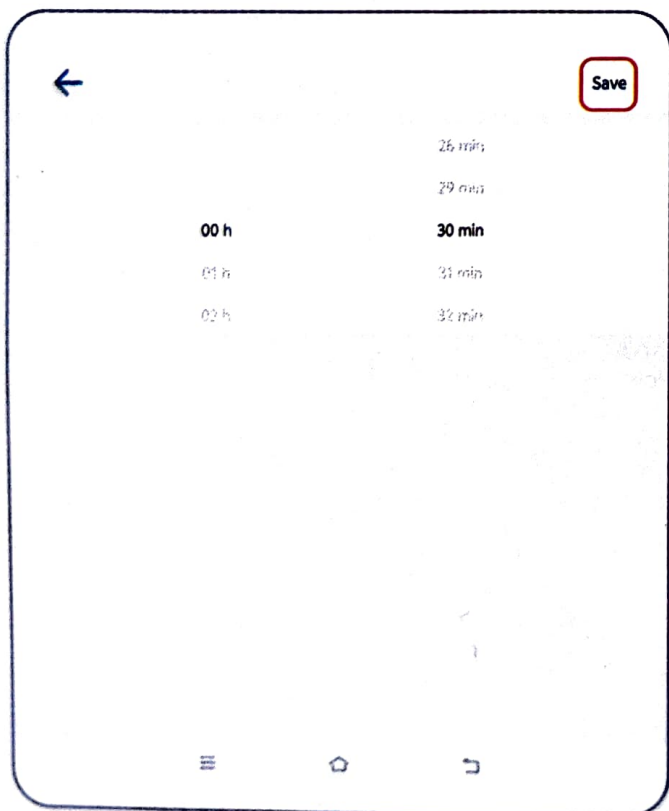
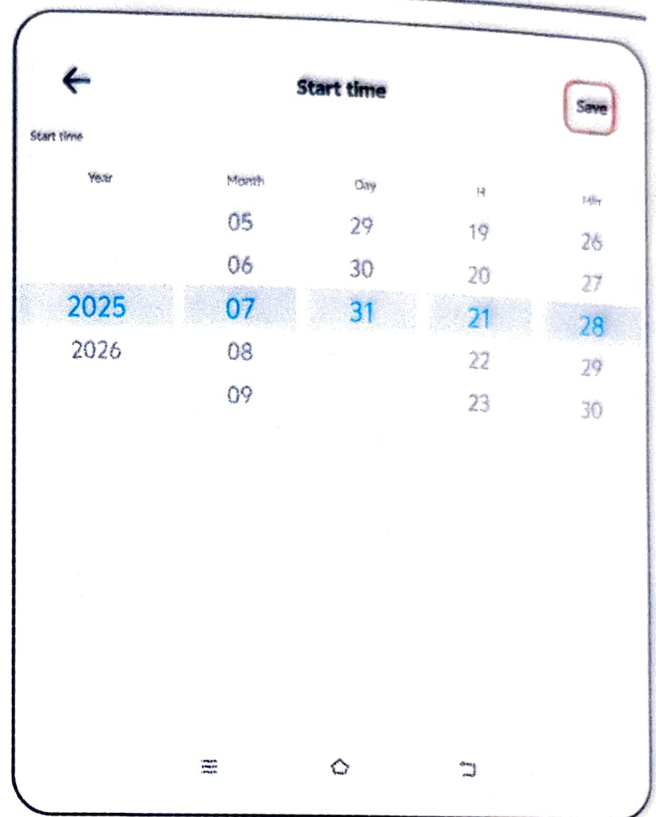
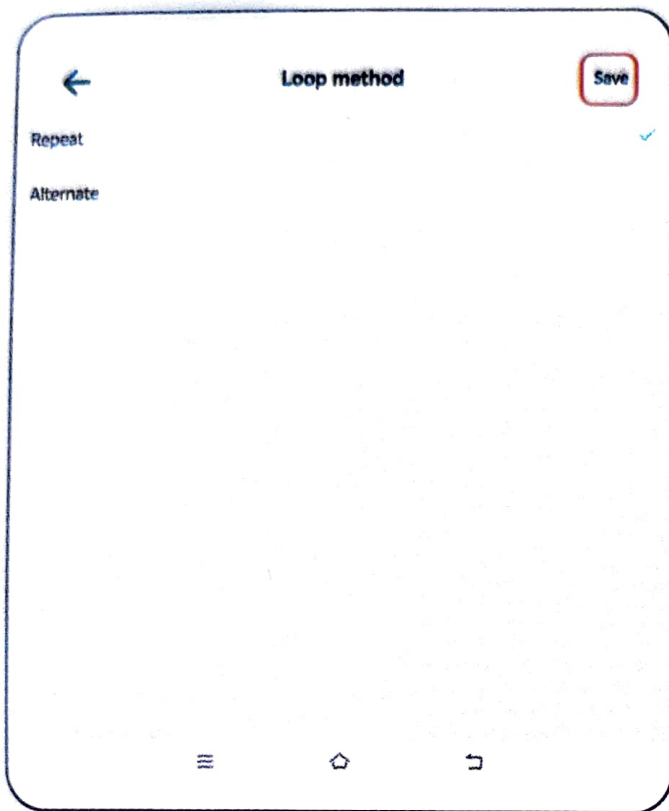
10. WiFi Connection and Setup Guide



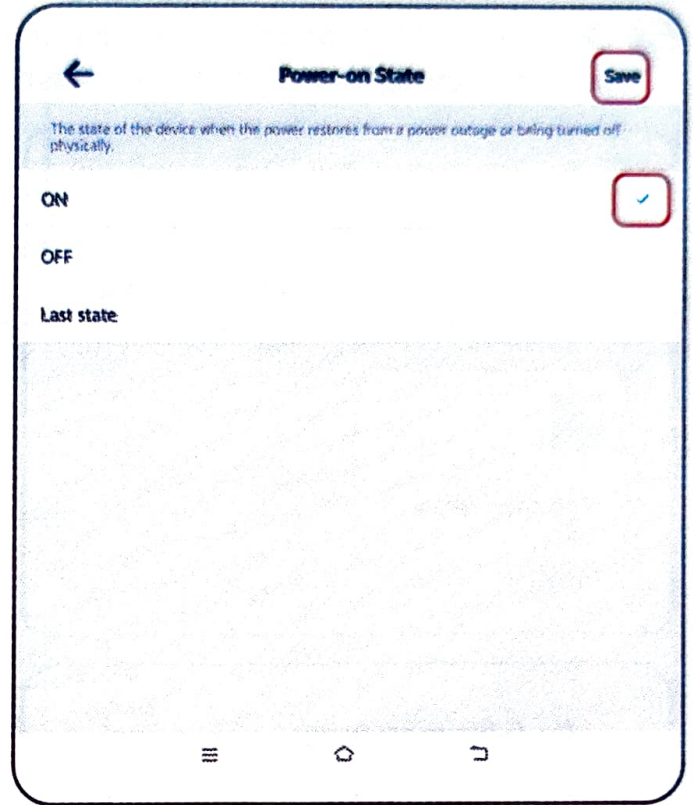
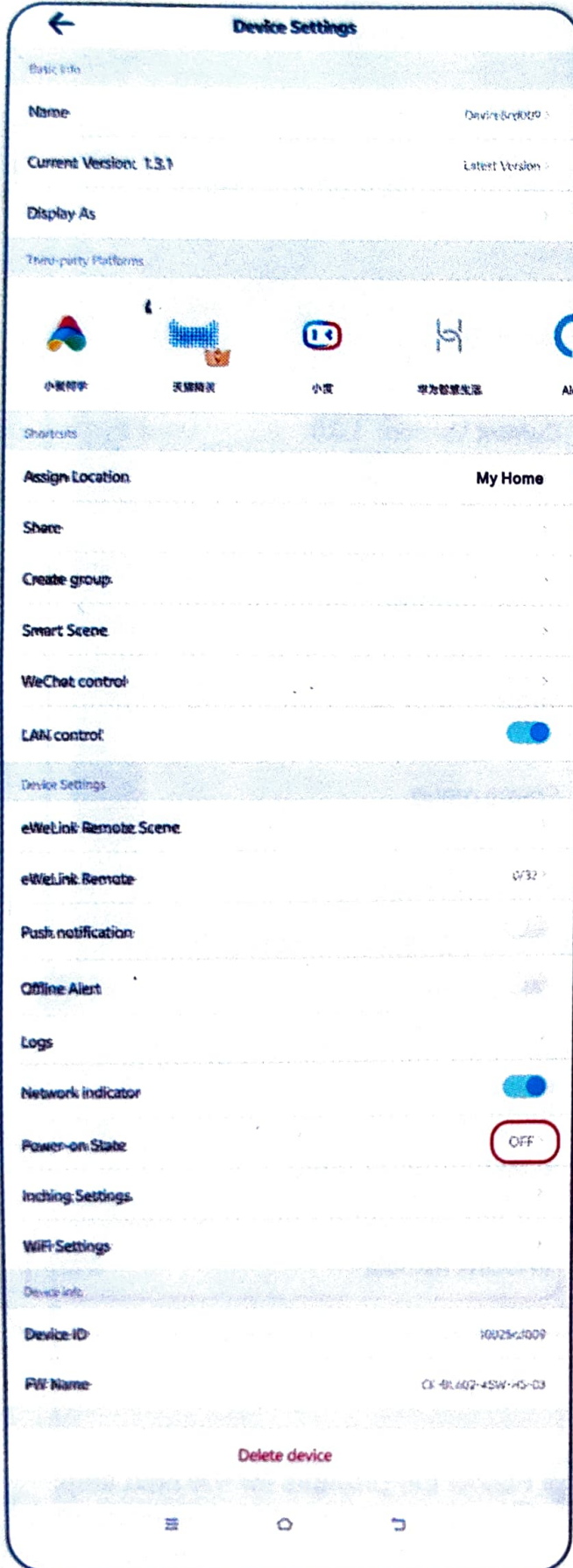
10. WiFi Connection and Setup Guide



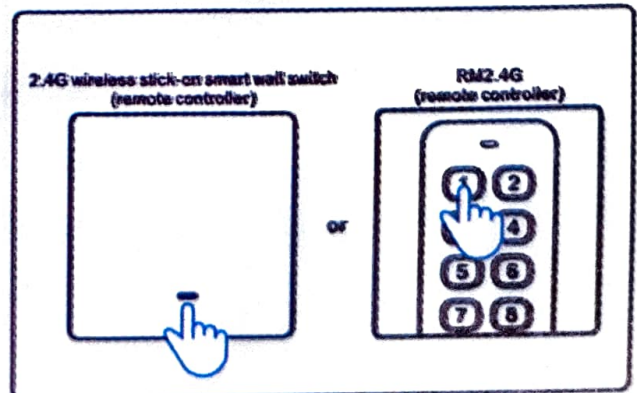
10. WiFi Connection and Setup Guide



10. WiFi Connection and Setup Guide

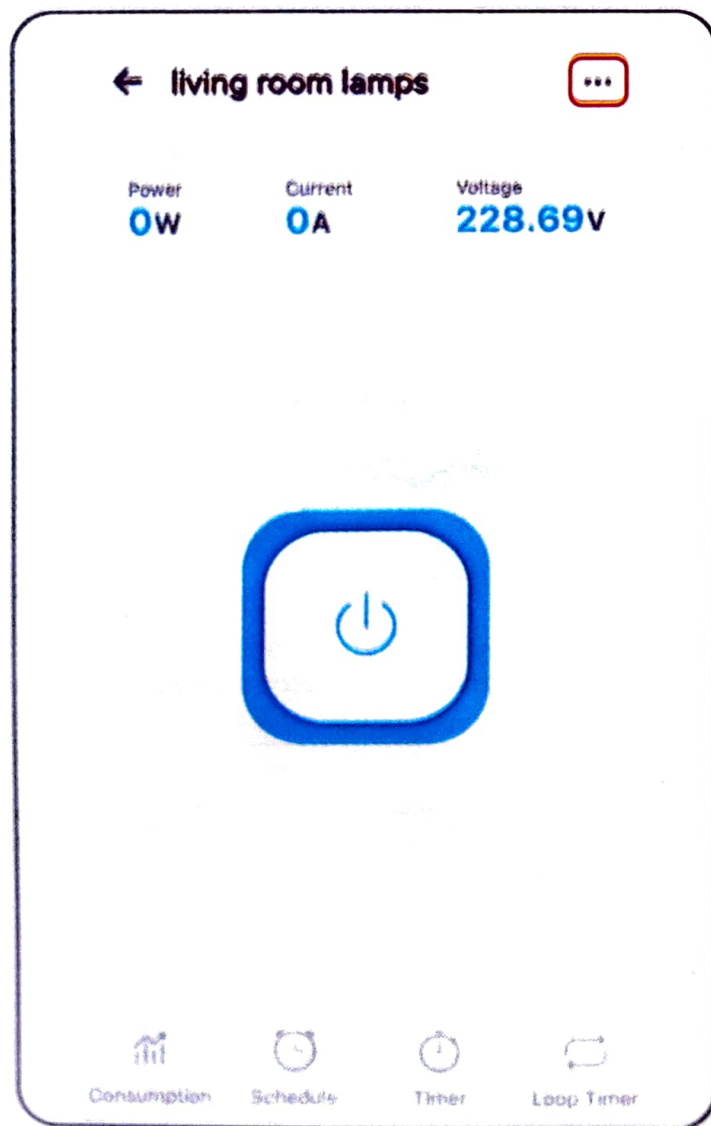
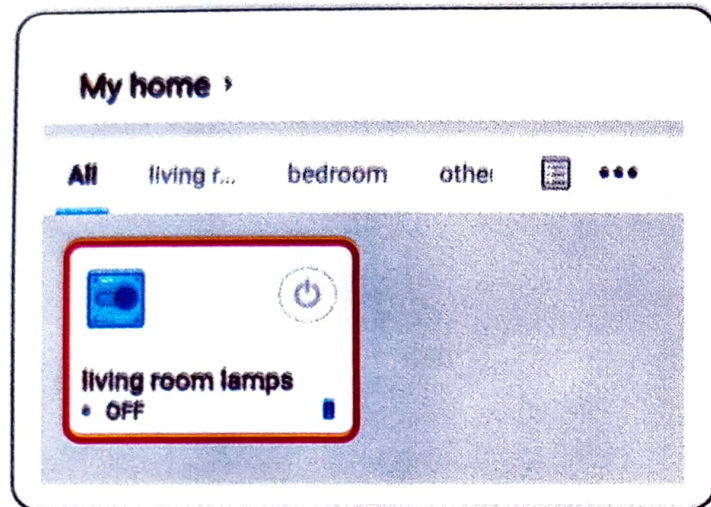


Device pairing with 2.4G Bluetooth remote control
(Power metering devices do not support the following features)

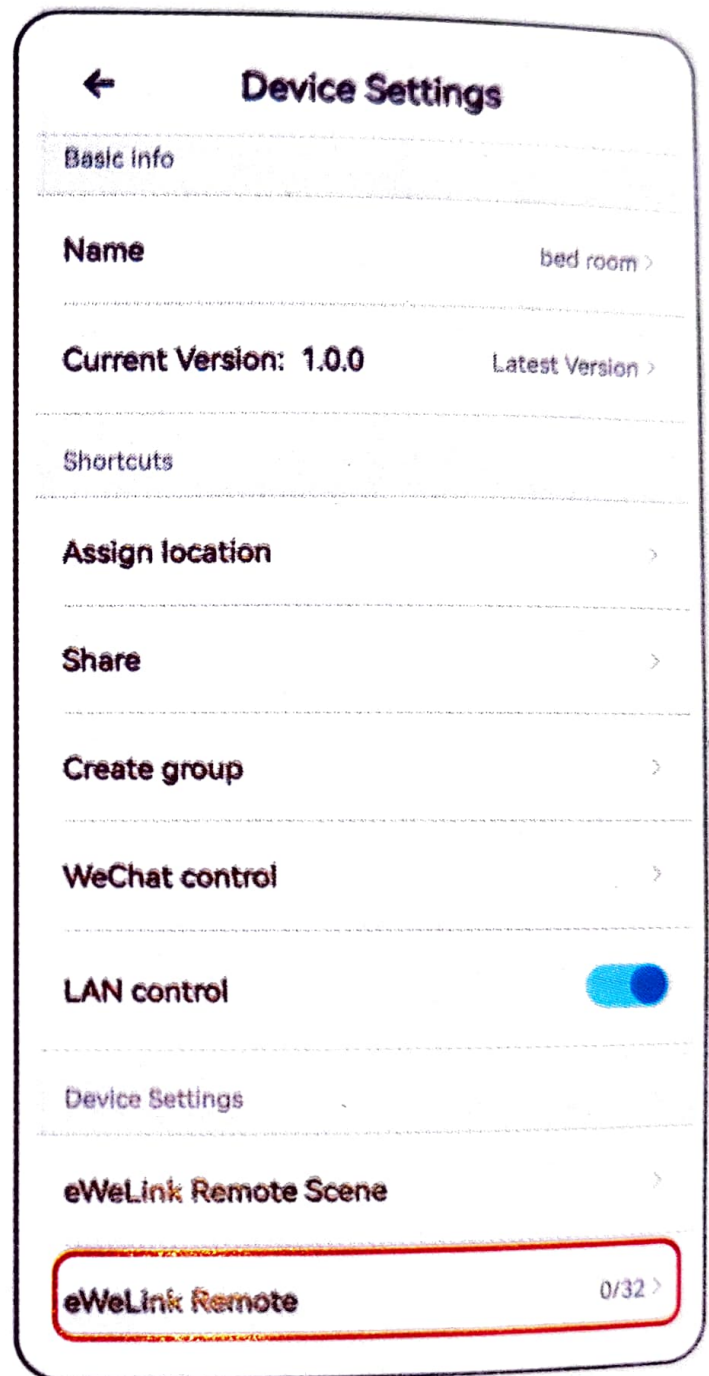


10. WiFi Connection and Setup Guide

1 Open the added device and click the settings icon in the upper right corner.

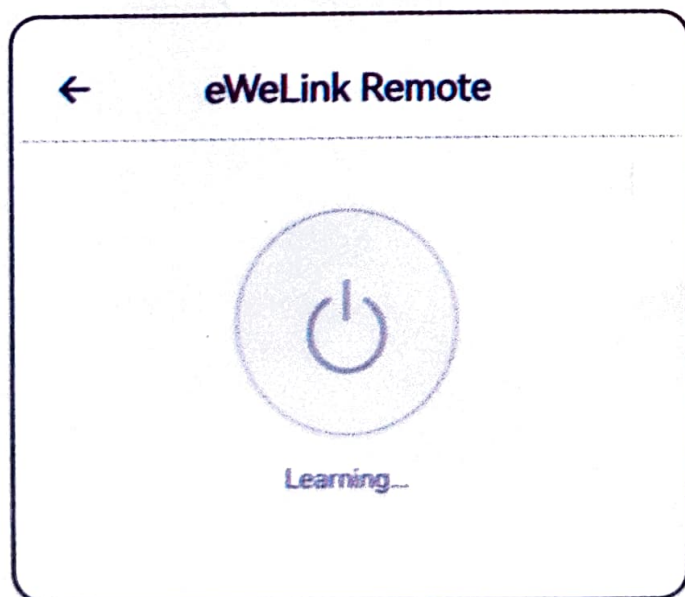
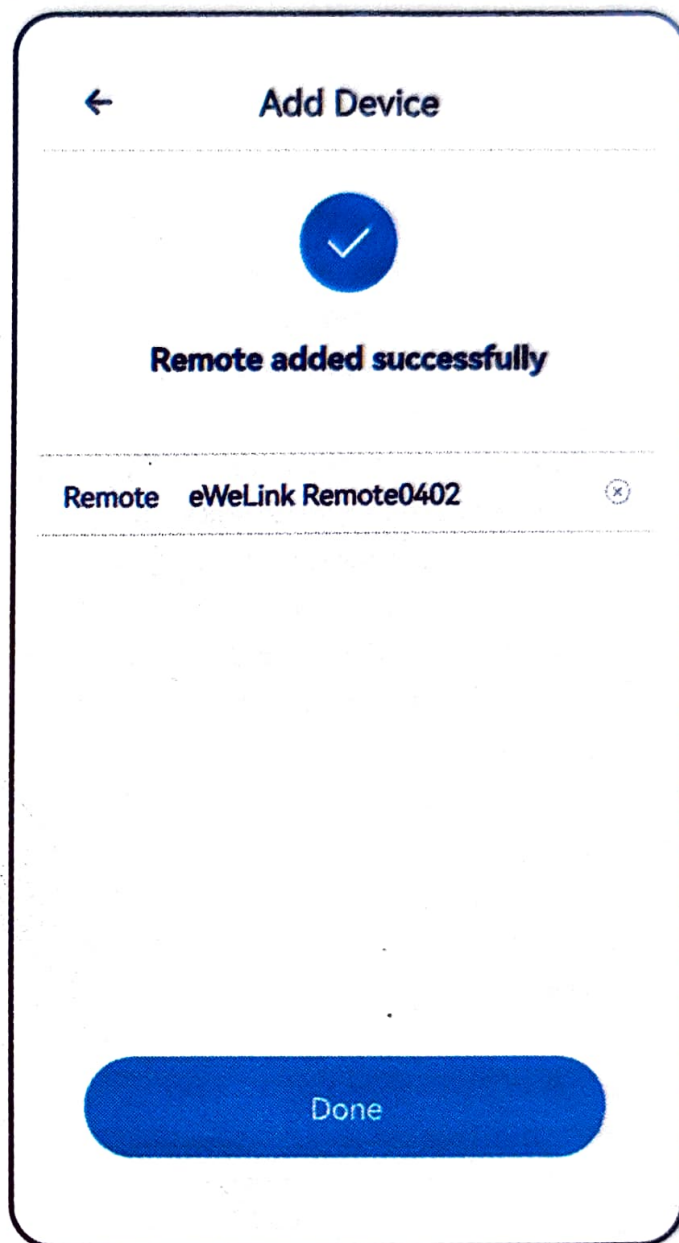
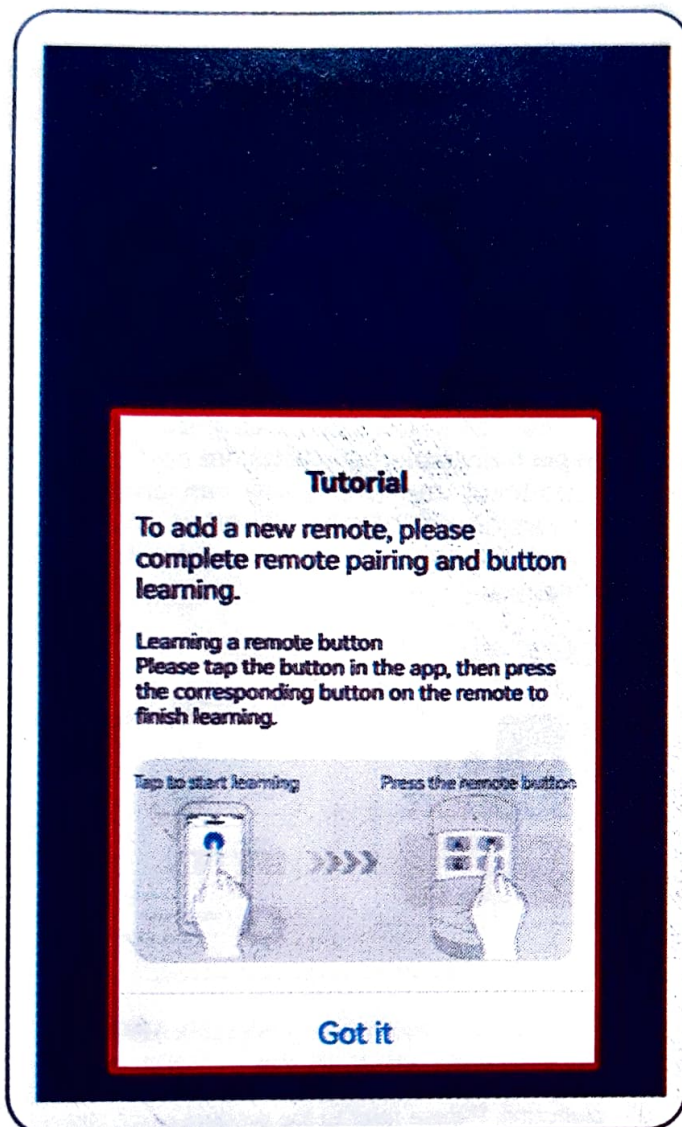


2 Select "eWeLink Remote".



3 Follow the prompts for the next step. The LED indicator "flashes once again" means the pairing is successful.

10. WiFi Connection and Setup Guide



Note: If you need to delete the RM2.4G remote control, enter the added interface and delete it.

10. WiFi Connection and Setup Guide

FAQ

Q: After the device is successfully added, why does App display that it's offline and can't be controlled?

A: After the device is added successfully, it needs 1-2 minutes to connect the network. If it is still not online after a long time, please check Wi-Fi indicator to determine device status:

Blue indicator LED blinks quickly once per second: Device isn't connected to your Wi-Fi.

① Maybe entered incorrect Wi-Fi password.
② It may be that the device is too far away from your router, the signal is too weak, or the environment has interference. Please put the device close to the router first, if there is no improvement, please cut off the power and re-add.

③ The device cannot recognize 5G Wi-Fi, please select 2.4G Wi-Fi to re-add it.

④ Make sure Mac address filtering is not enabled in your router settings. If none of the above attempts work, please use a another phone to open a personal hotspot, try to re- add it.

Blue indicator LED blinks quickly twice per second: it means that the device is connected to Wi-Fi, but not connected to the Internet.

Please confirm whether your Wi-Fi connection network is stable and normal. If it frequently blinks twice per second, it means that your network is unstable, not product malfunction. If the network is normal, please power off and restart device.

Factory reset

Press and hold the pairing button for 5 seconds until the LED indicator blinks twice. At this time, the device resets successfully and enters the Bluetooth pairing mode again.

Note: When changing to a new network, needs to restore the factory settings, and then reconnect to the new network.

eWeLink has integrated with mainstream AI platforms. To ensure users can know quickly which platforms/smart speakers are compatible with products, manufacturers can print the poster version with "Works with AI" of eWeLink logo and attach it in the package with the user manual.



ⓘ Smart products supporting eWeLink APP need get the certification of the corresponding platform before using the logo of AI voice platforms. Please refer to the product certification to make a deletion if manufacturers use the version on the package.

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