POOL ACTUATOR TRANSFORMER

INSTALLATION AND OPERATION MANUAL

Follow this QR code for installation and operation manual

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THANK YOU FOR PURCHASING OUR POOL ACTUATOR TRANSFORMER.

THIS MANUAL CONTAINS IMPORTANT INFORMATION THAT WILL HELP YOU IN OPERATING AND MAINTAINING THIS PRODUCT.

PLEASE READ THE MANUAL CAREFULLY BEFORE INSTALLATION & OPERATION AND RETAIN IT FOR FUTURE REFERENCE.

1. ⚠ IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

1) READ AND FOLLOW ALL INSTRUCTIONS.

2) Installation shall comply with the applicable requirements of the current National Electrical Code® (NEC®) or Canadian Electrical Code (CEC), as appropriate.

3) WARNING – To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

4) WARNING – Installation and maintenance work must be performed by a licensed electrician.

5) WARNING – Before installation or maintenance, be sure to turn off the power switch on the left side of the transformer.

6) WARNING – To reduce the risk of electric shock, replace the damaged cord immediately.

7) Can be used to connect 1 to 3 valve actuators.

8) CAUTION: To ensure continued protection against shock hazard, use only identical replacement parts when servicing.

9) The transformer is not submersible.

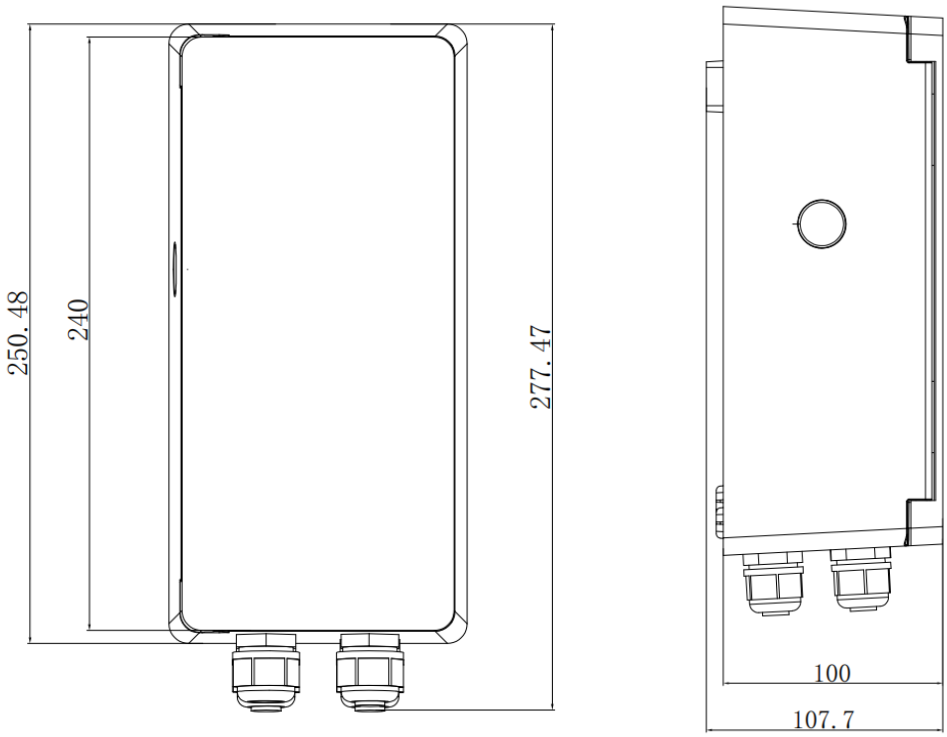
10) Do not remove the insulator covering the terminals.

11) SAVE THESE INSTRUCTIONS.

2. TECHNICAL SPECIFICATIONS

Model	INPUT	120VAC, 60Hz
PAT01	Load Capacity	1 to 3 sets of 24 VAC, 60 Hz, 0.75 A valve actuators
	System	Wireless Type: 2.4GHz APP: Moov Pool Ai app IOS: 14.0 or higher Android: 7.0 or higher

3. OVERALL DIMENSION (mm)



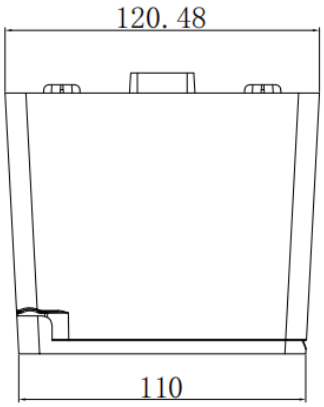


Figure 1 - Pool Actuator Transformer Dimensions

4. PRODUCT ILLUSTRATION

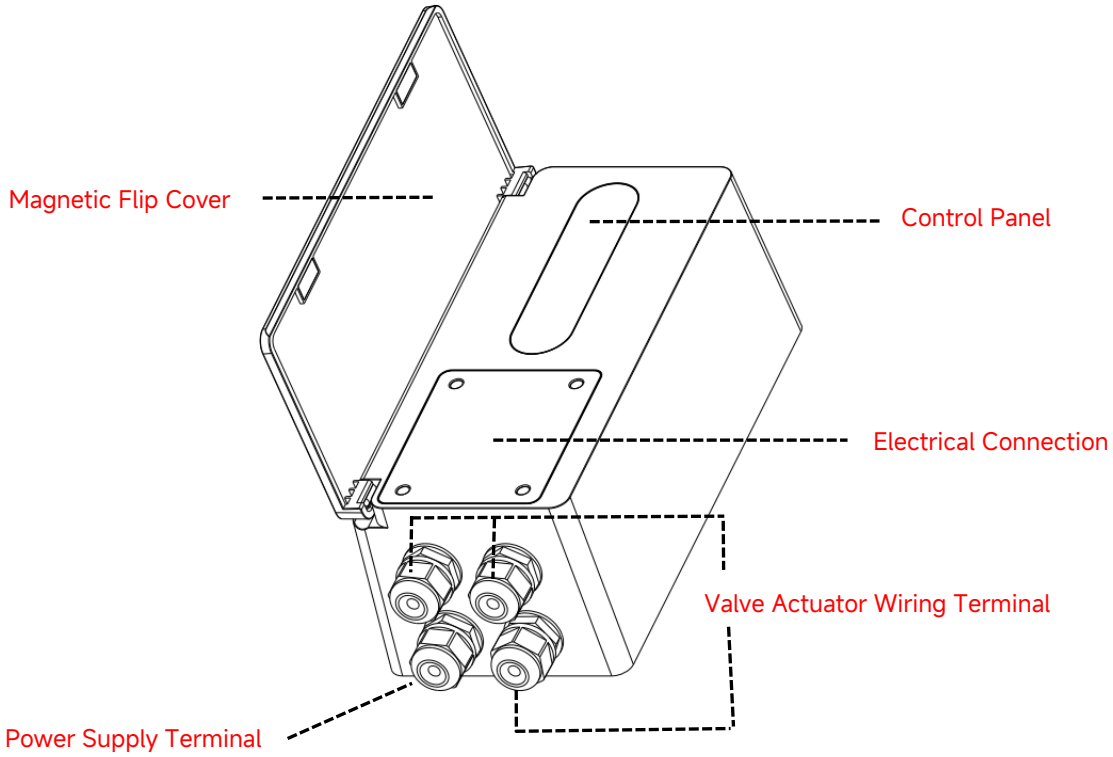


Figure 2 - Product Illustration

5. LIGHT CHART

	Name	Color	Indicator Status	Device Status
Light Chart	Wi-Fi Indicator	White	Blinks slowly	Connecting
			Steady On	Connected
			Off	No connection/Disconnected
	Load Indicator 1	White	Blinks slowly	Valve actuator operation failure
			Steady On	Auto On 1
			Off	Not in Auto On 1
	Load Indicator 2	White	Blinks slowly	Valve actuator operation failure
			Steady On	Auto On 2
			Off	Not in Auto On 2

6. INSTALLATION

6.1. Mounting the Pool Actuator Transformer

1) Select an appropriate wall-mounting location based on the length of the power cord and the positions of the connected valve actuators.

2) Hold the box in place and use the three holes (FIG.3) to mark position on the mounting surface.

3) The transformer should be installed horizontally and fixed in the hole on the support with screws to prevent unnecessary vibration.

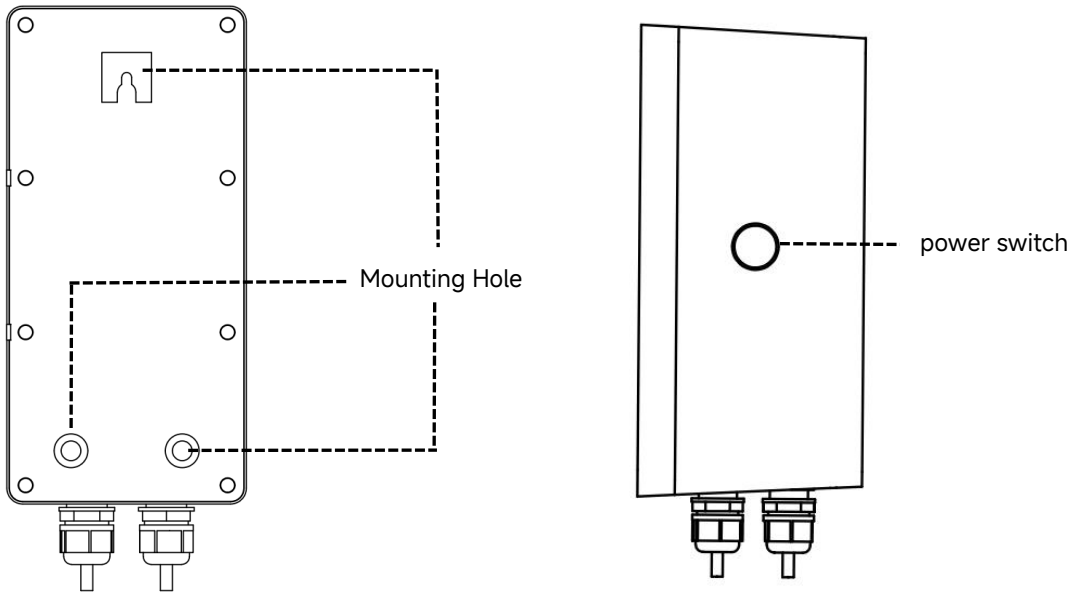


Figure 3 - Mounting Holes

6.2. Connecting the Wires

1) Remove the four screws securing the wiring compartment cover. Press the area indicated by the label to release and open the cover. Loosen the waterproof cable gland nut and remove the rubber plug.
2) Route the actuator power cable through the waterproof cable gland nut and rubber plug, then insert the power connector into the terminal strip (FIG.4).
3) Install the rubber plug, and screw the nut back on. Put the wiring cover back on and tighten the four screws.

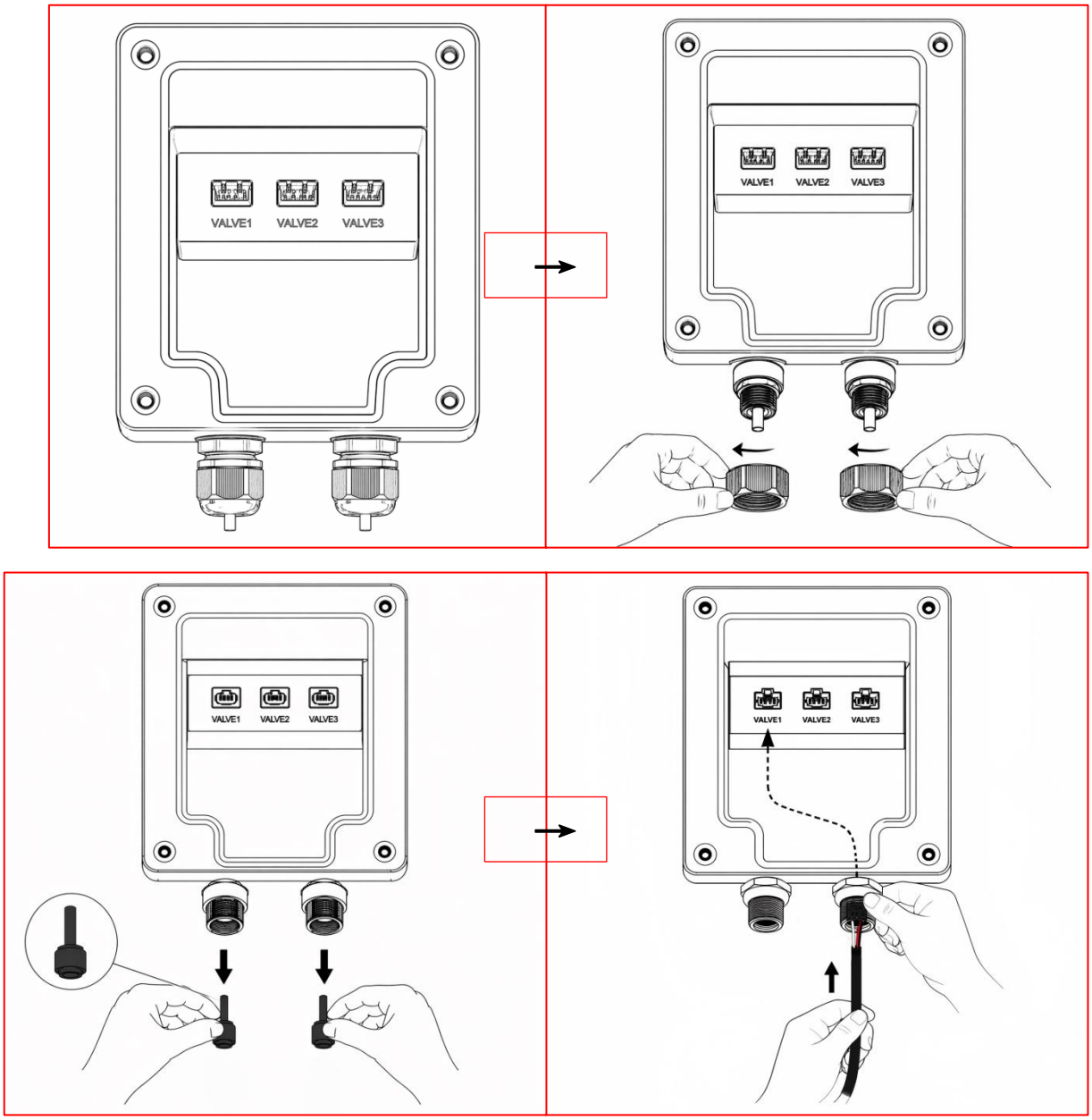


Figure 4 - Wiring steps

NOTE

1) Before installation, please confirm the Wi-Fi signal is strong enough.

2)Wi-Fi range can be affected by obstructions, metal objects, distance and weather. Mount unit should be as close to the router as possible.

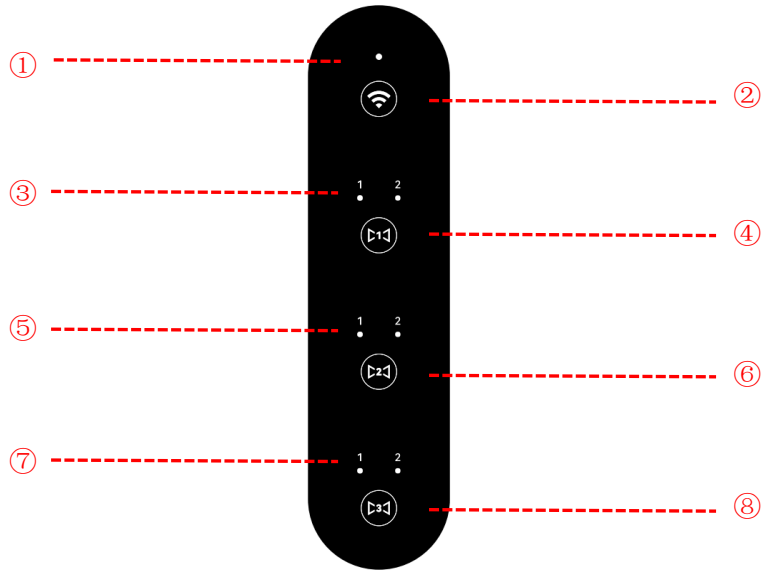
3) Install the unit in a vertical orientation.

6.3. Check before initial startup

Check whether power supply voltage and frequency conform to the nameplate.

7. SETTING AND OPERATION

7.1. Display on control panel



① Wi-Fi indicator blinks slowly : connecting steady On : connected off: disconnected / no connection	② Wi-Fi pairing switch : press and hold for 3 seconds to start pairing
③ valve actuator 1 status indicator 1 indicator 1 on: valve actuator is in auto on 1 state 2 indicator 2 on: valve actuator is in auto on 2 state off: not connected	④ valve actuator 1 state toggle : tap to toggle the actuator state between auto on 1 and auto on 2
⑤ valve actuator 2 status indicator 1 indicator 1 on: valve actuator is in auto on 1 state 2 indicator 2 on: valve actuator is in auto on 2 state Off: not connected	⑥ valve actuator 2 state toggle : tap to toggle the actuator state between auto on 1 and auto on 2

⑦ valve actuator 3 status indicator 1 indicator 1 on: valve actuator is in auto on 1 state 2 indicator 2 on: valve actuator is in auto on 2 state off: not connected	⑧ valve actuator 3 state toggle : tap to toggle the actuator state between auto on 1 and auto on 2

7.2. Operation Interface Overview

Refer to Section 6.2, connect the valve actuator power cord to the terminal on the transformer.

① **Step 1: Starting up**

- Connect the power cord and turn on the left-side power switch.

② **Step 2: Valve actuator state switching**

- Each press , the valve actuator state toggles between Auto On 1 and Auto On 2. When in Auto On 1, 1 lights up; when in Auto On 2, 2 lights up.
- If valve actuator is not connected, press , none of the indicators light up.
- ⚠ Note: To avoid interference, two switching operations of the same valve actuator must be separated by an interval of at least 3 minutes.

③ **Step 3: App connection**

- Press and hold for 3 seconds, will flash, indicating Wi-Fi connection in progress. Once the connection is successful, becomes solid on.

8. WIFI OPERATION

① Download Moov Pool AI APP

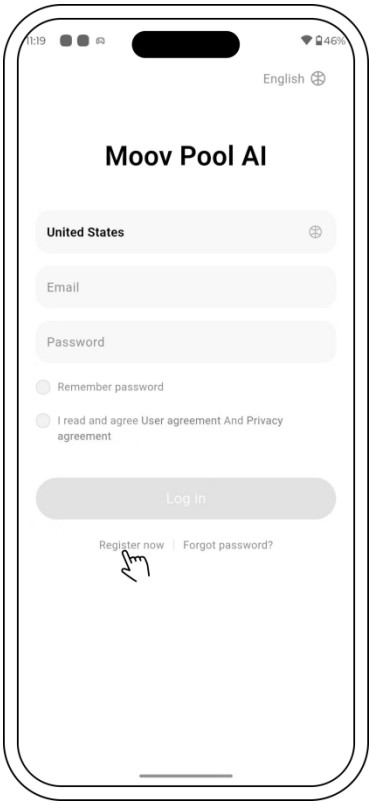
Android

ANDROID APP ON Google play

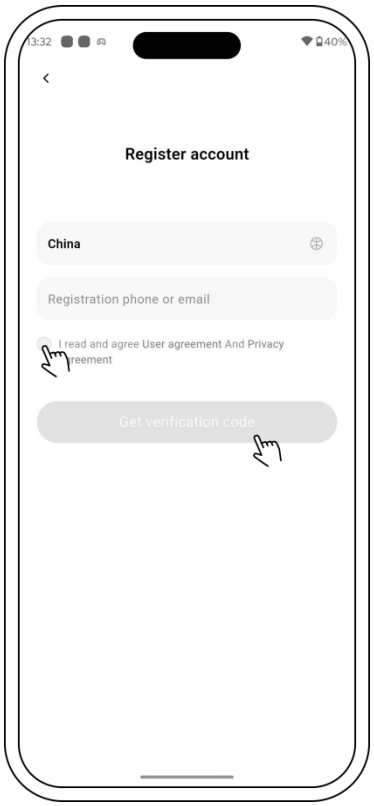
iOS

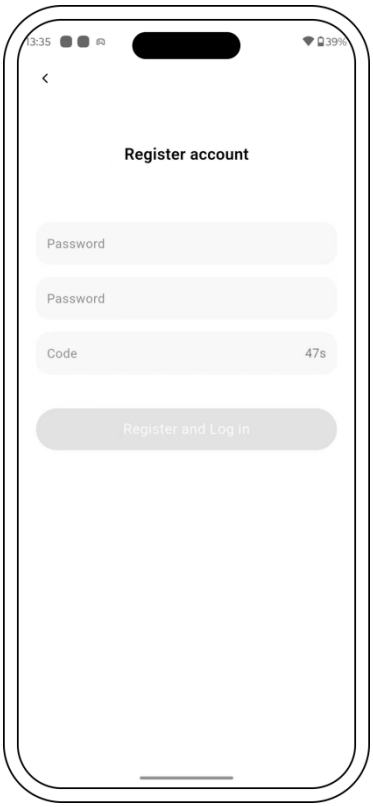
Available on the App Store

② Account Registration



Phone / Email Registration





③ App Pairing

Please make sure your pool actuator transformer is turned on before you start.

Option 1 - Automatic pairing (Recommended):

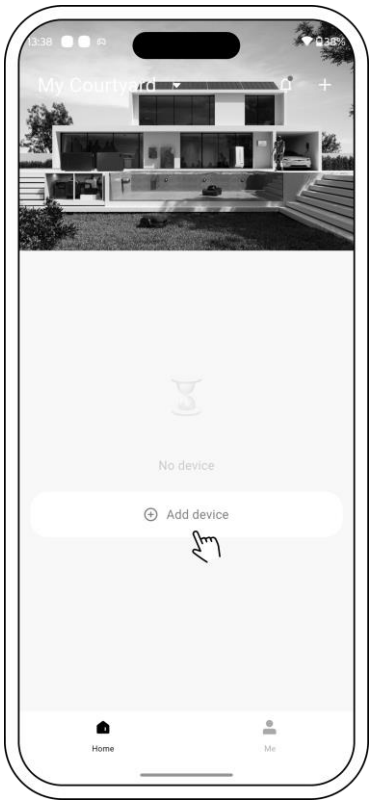
Network requirement: 2.4GHz.

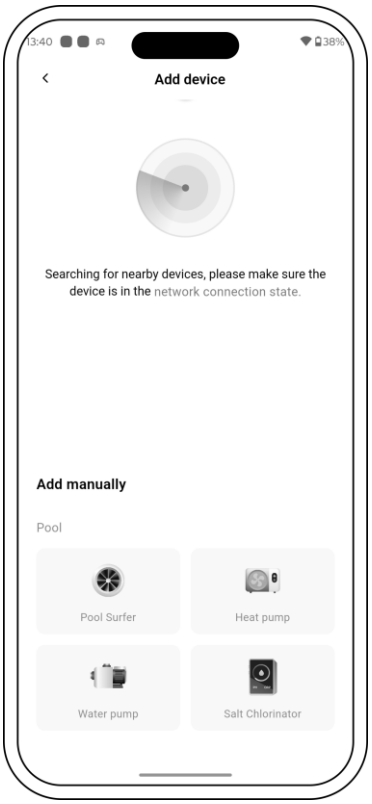
1) Please confirm that your phone is connected to Wi-Fi and the Bluetooth of your phone is ON.

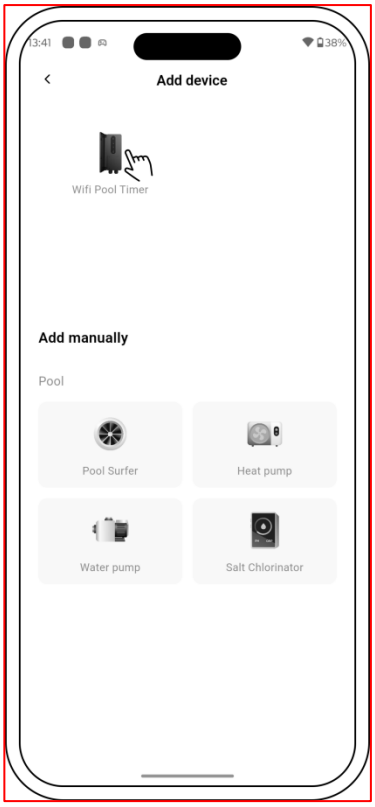
2) Press for 3 seconds until hearing “Beep” and then release. will flash.

3) Click“Add Device”, and wait for a few seconds to search the nearby device.

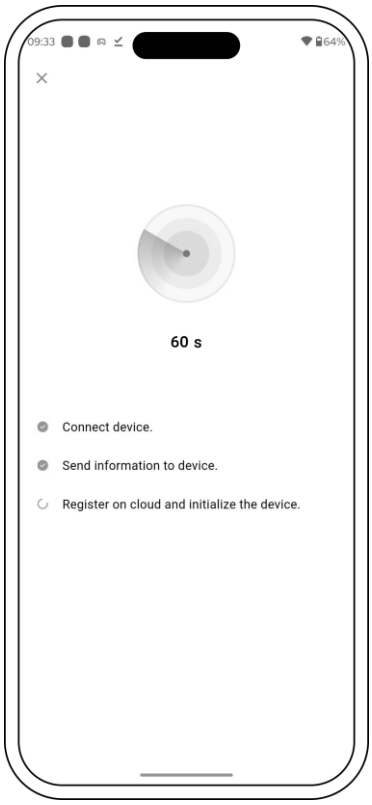
4) Click on the transformer icon and follow the instructions to pair device.






Add device
Wifi Pool Timer
Add manually
Pool
Pool Surfer
Heat pump
Water pump
Salt Chlorinator

Add device
Fairland
Please choose home Wi-Fi (2.4GHz).
Next


60 s
Connect device.
Send information to device.
Register on cloud and initialize the device.

My Courtyard
Wifi Pool Timer-0961
Home
Me

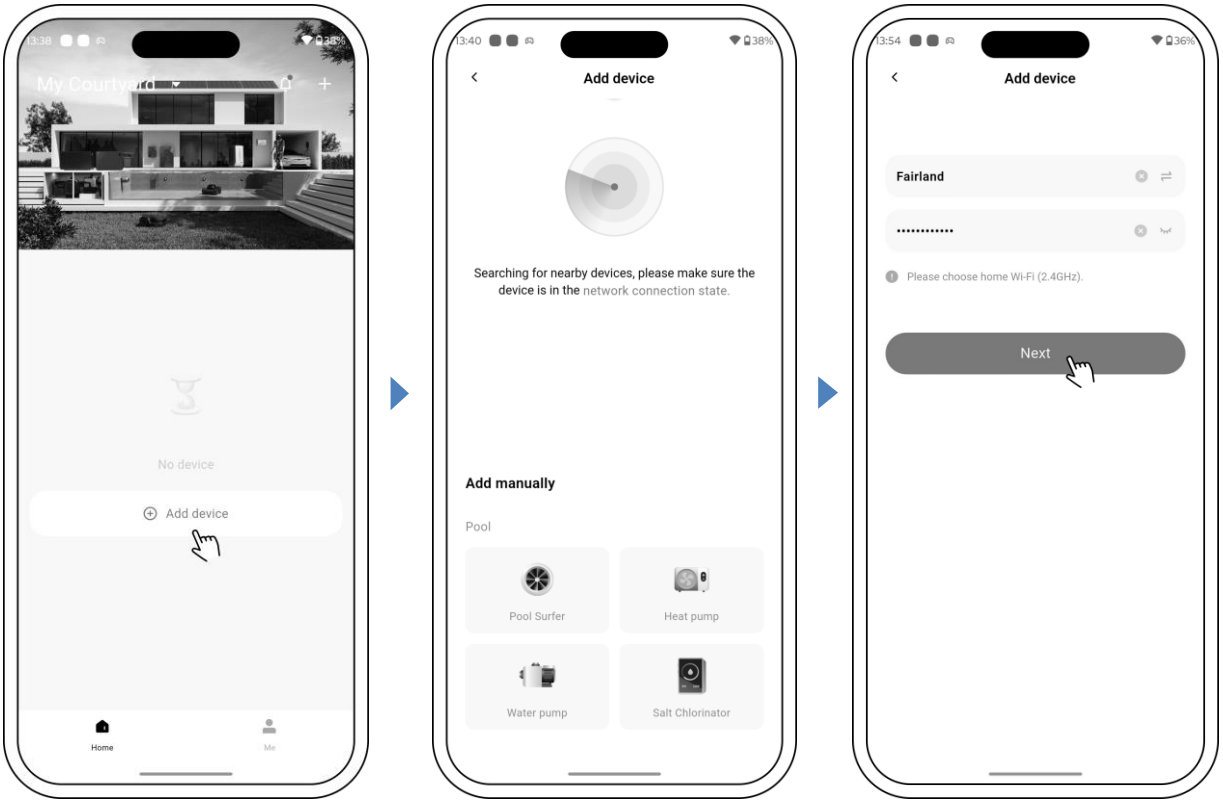
Option 2 - Bluetooth pairing :

Network requirement: 2.4GHz.

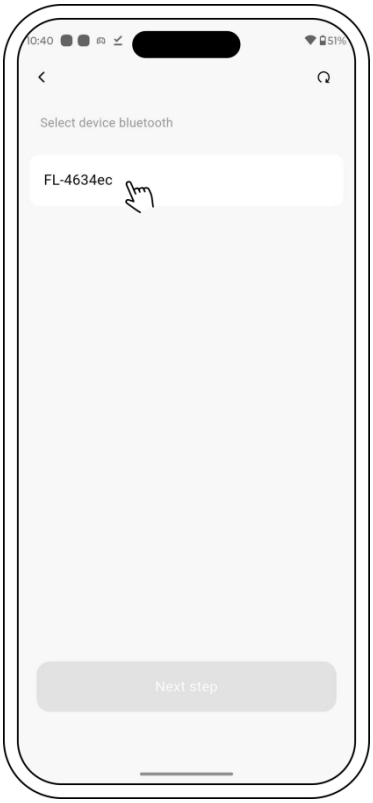
1) Please confirm that your phone is connected to Wi-Fi and the Bluetooth of your phone is ON.

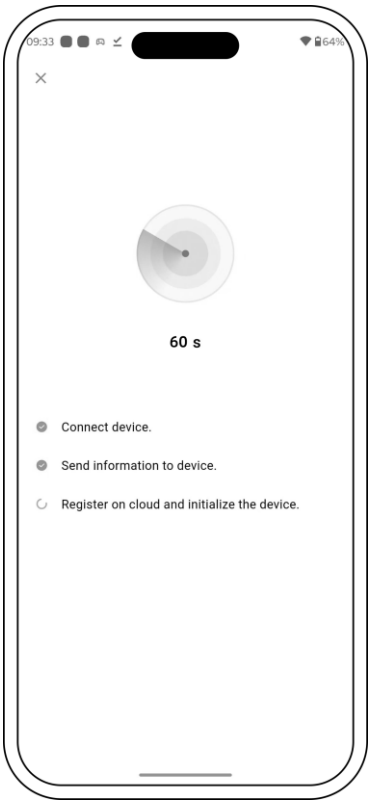
2) Press for 3 seconds until hearing “Beep” and then release. will flash.

3) Click “Add Device”, and follow the instructions to pair device.



10:40
51%
Bluetooth
Refer to the following steps:
switch_box_device_network_step1_1
switch_box_device_network_step1_2
Confirm that the indicator is flashing.
Next step


10:40
51%
Select device bluetooth
FL-4634ec
Next step


09:33
64%
60 s
Connect device.
Send information to device.
Register on cloud and initialize the device.

My Courtyard
Wifi Pool Timer-0961
Home
Me

④ Operation

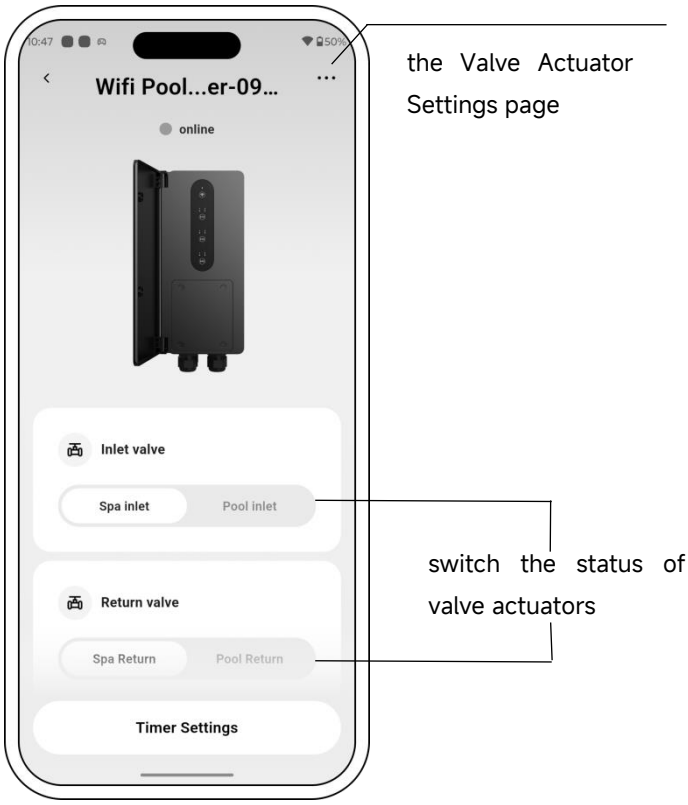
Option 1 - Valve Actuator & Status Naming

1) After successful pairing, the device will automatically report the number of currently connected valve actuators.

2) Set the names of the valve actuator and its states, or you can choose to skip and use the system default names. You can switch the status of valve actuators on the home page. To change the naming, tap the "· · ·" in the upper right corner, go to the Valve Actuator Settings page, make your changes, and save.

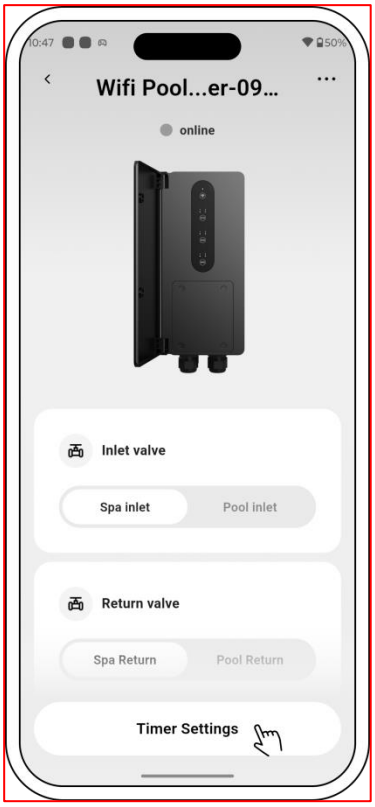
set the names of the valve actuator

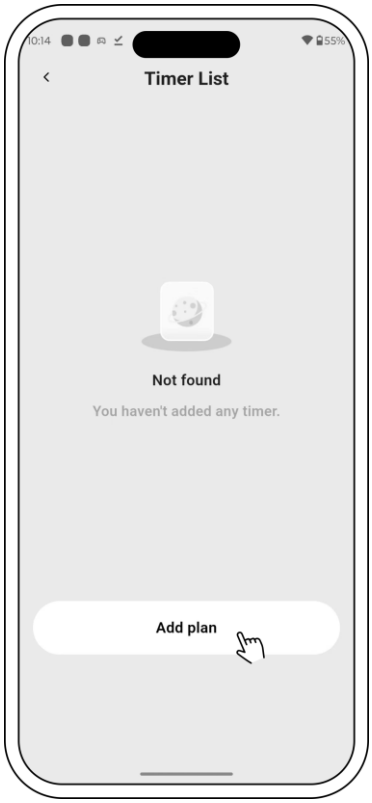
set the names of the valve actuator states

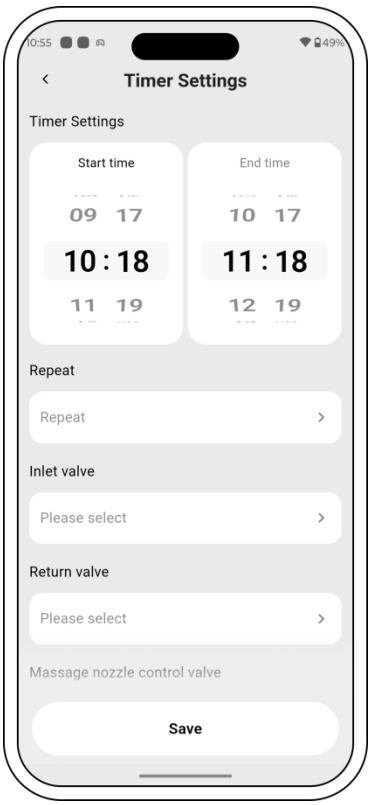


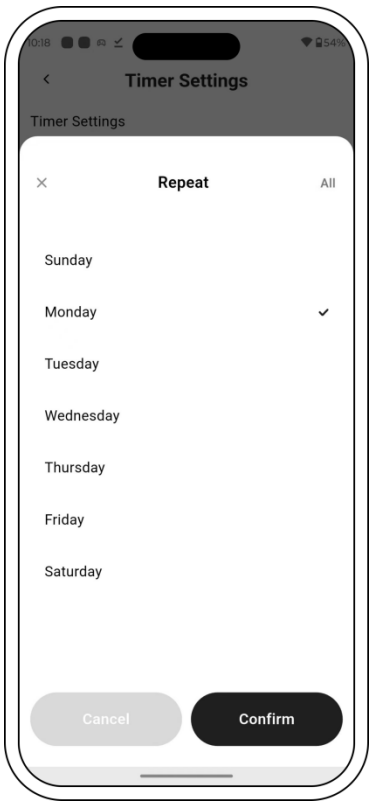
Option 2 - Timer Mode

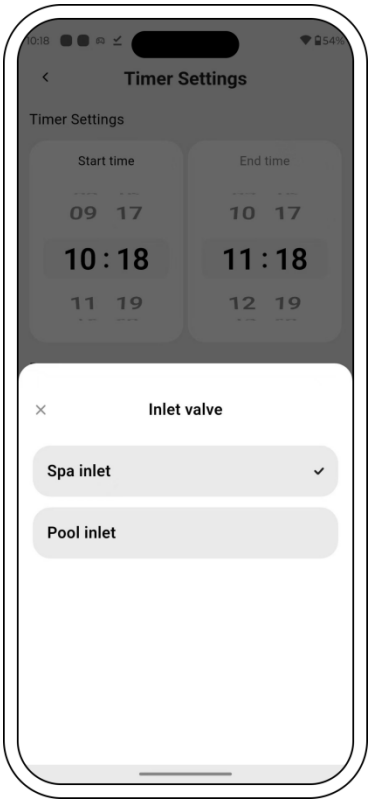
1) On the home page, click "Timer Settings" to enter the timer interface. Click "Add Plan" to add a schedule, set the start and end time, repeat days, and valve actuator status.
2) Once the setup is complete, the current schedule will be displayed on the timer home page. You can enable or disable the schedule with one click, or swipe left to delete it.
3) When the schedule ends, the valve actuator will automatically back to its state before the schedule started.
4) If the currently active scheduled task is interrupted, a pop-up message saying "Current scheduled task has been interrupted." will appear on the device home screen in the app and will automatically disappear after 3 seconds.

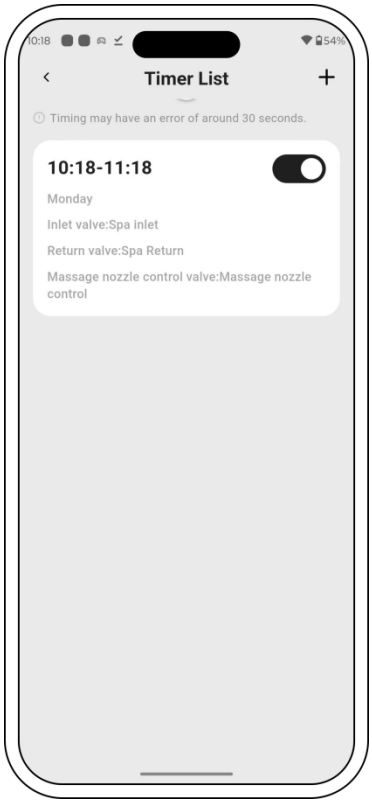

Wifi Pool...er-09...
online
Inlet valve
Spa inlet
Pool inlet
Return valve
Spa Return
Pool Return
Timer Settings


Timer List
Not found
You haven't added any timer.
Add plan


Timer Settings
Timer Settings
Start time
End time
09 17
10 : 18
11 19
10 17
11 : 18
12 19
Repeat
Repeat
Inlet valve
Please select
Return valve
Please select
Massage nozzle control valve
Save

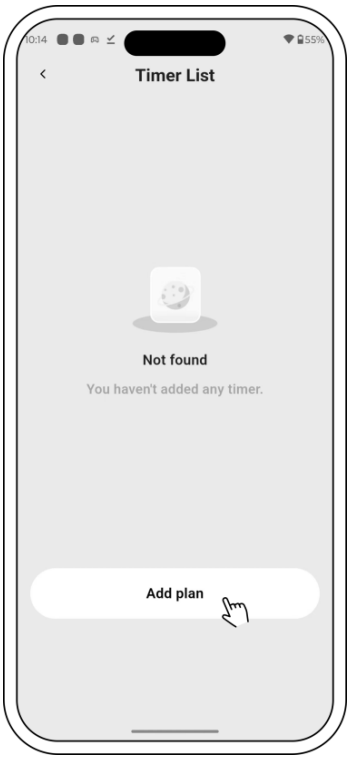

Timer Settings
Timer Settings
Repeat
All
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Cancel
Confirm

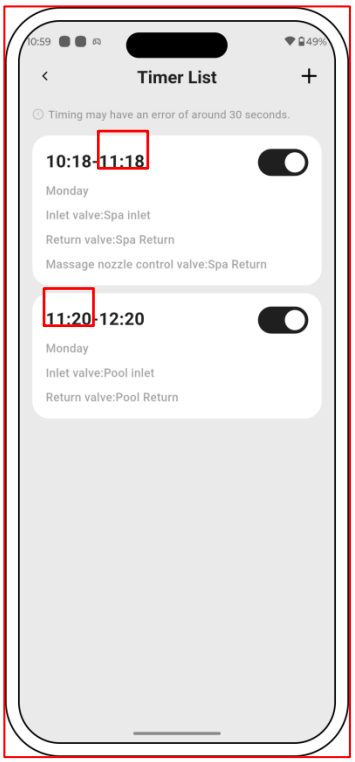




Notice for the timer setting via the APP :

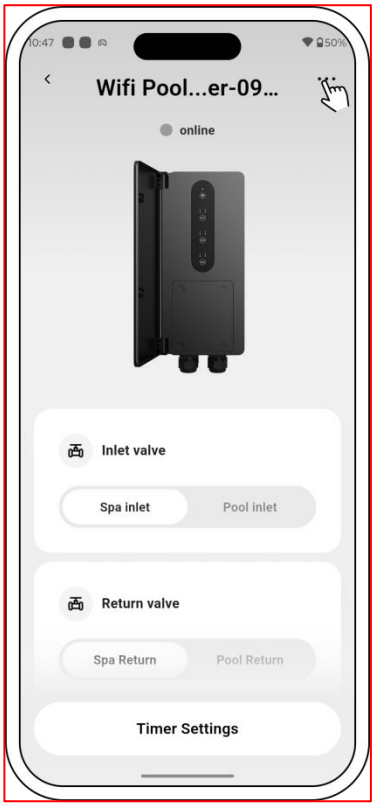
1) Time variance is ±30s;
2) To avoid overlapping timing points conflicting and invalidating due to network delay, the start time of the next timer cycle should not overlap with the end time of the previous one, and a minimum interval of 3 minutes is recommended between them.

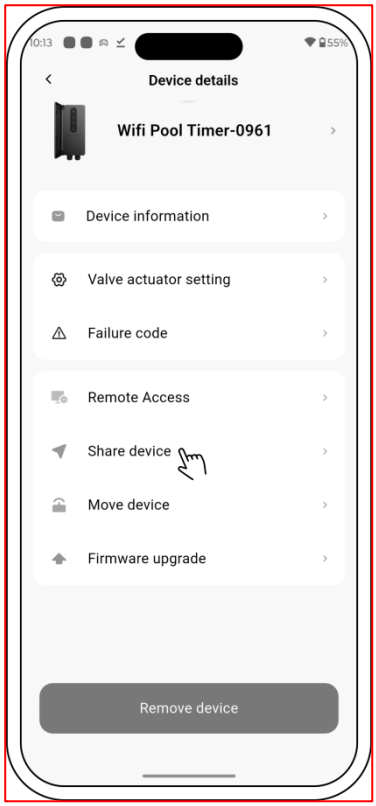


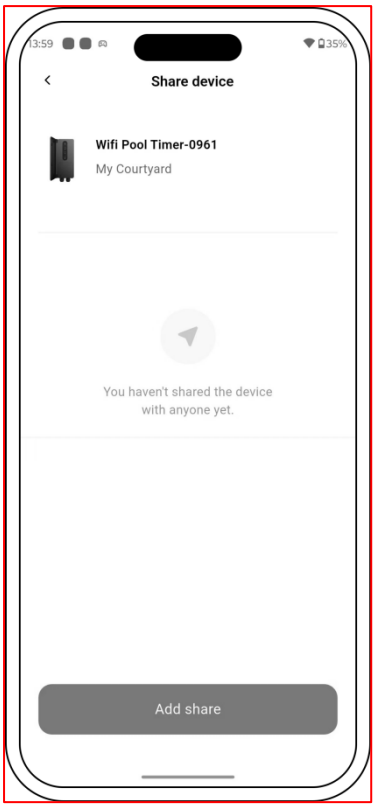


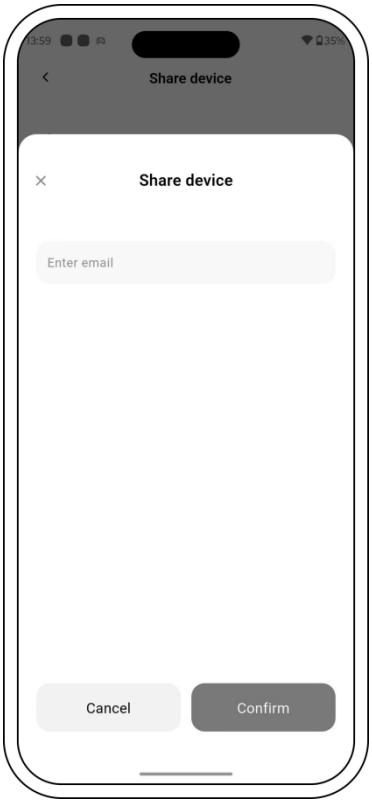
5 Sharing Devices with your family members

Users can share the devices to be controlled by their family members. Please let your family members register "Moov Pool Ai" first, and then the administrator can operate as below:



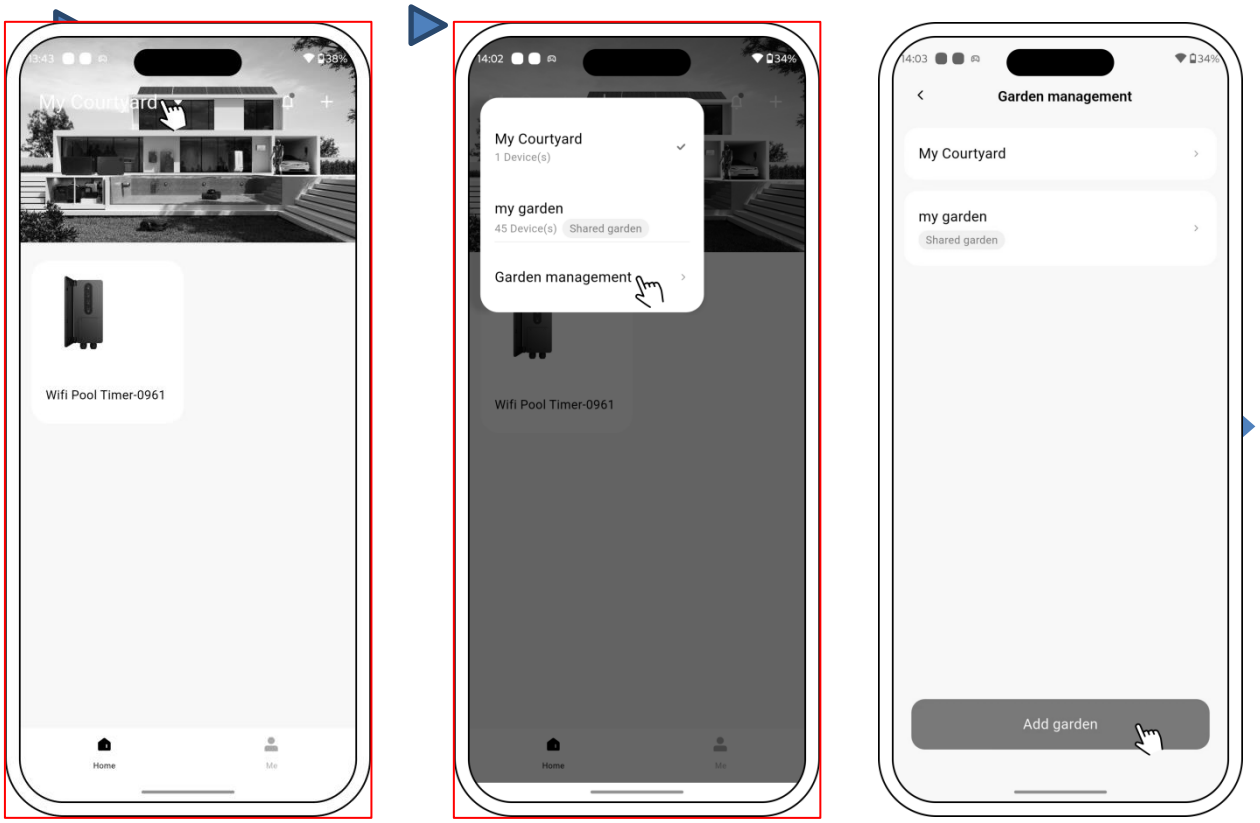






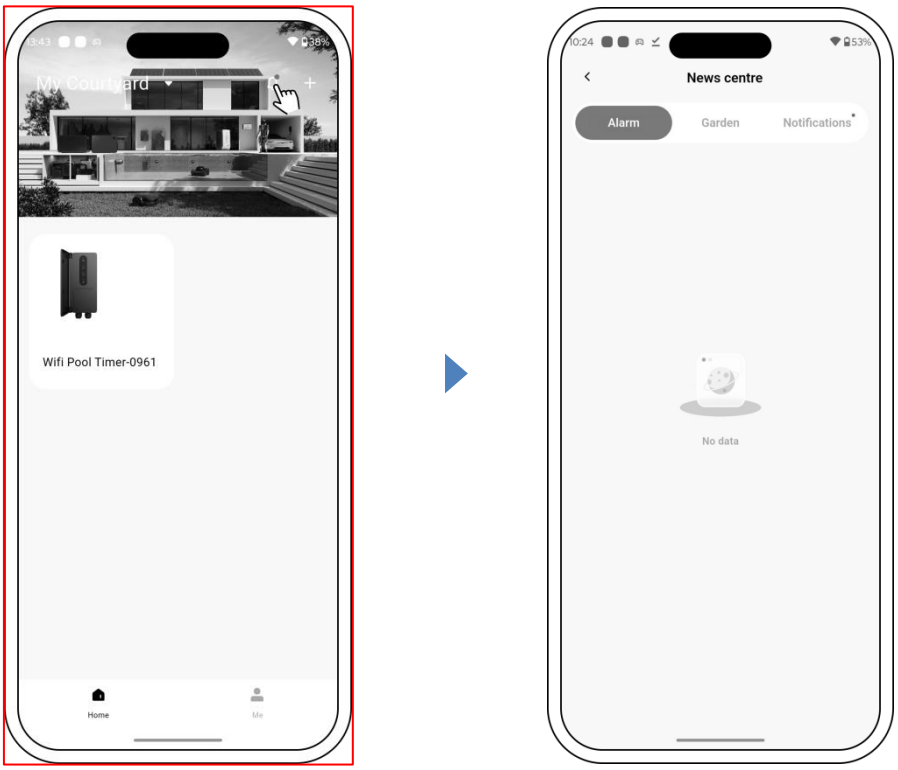
6 Garden Management

In the device list, the current courtyard is displayed. After clicking, users can view/switch to all the current courtyards, click Garden Management, and also enter the courtyard list page. As shown below:

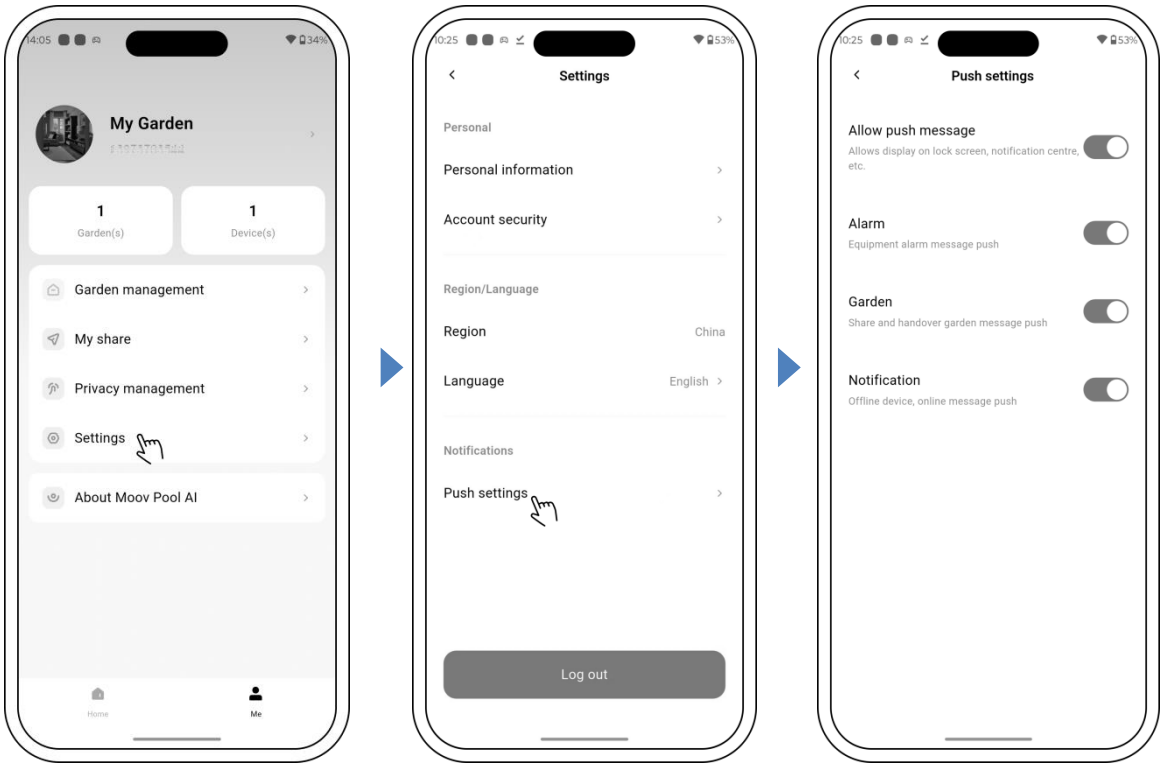


7 Message Center

A: View Messages: On the device list page, tap the message icon to enter the message center and view the corresponding messages (as shown below), including alarm, garden notifications, system notifications.



B: Push Settings: On the Settings page, click [Push Settings] to enter the Push Settings page. Users can set the push settings according to the message classification, as shown below:



Notice:
The App is subject to updates without notice.

9. TROUBLE SHOOTING

Problem	Error Code	Details	
Valve actuator 1 operation failure	**E1**	Description	If valve actuator 1 fails to switch from "Auto on1" to "Auto on2", 2 flashes; otherwise, 1 flashes. On the app side, error code E1 is displayed and a pop-up message appears: "Valve actuator 1 operation failure".
		Fault cause	Possible causes: 1.Improper wiring connection or loose connection of Valve Actuator 1. 2.Excessive mechanical resistance, valve binding. 3.Valve actuator malfunction (refer to the Valve Actuator Troubleshooting Guide).
		Solution	Please follow the steps below for basic troubleshooting: 1.Power Off Turn off the power switch. 2.Check Connections Check Actuator 1 wiring for loose, disconnected, damaged, or poor contacts. 3.Check Valve Condition Verify that the valve has no mechanical binding, obstruction, or excessive operating resistance. 4.Check Actuator Operation Restore power, operate Actuator 1, and check if it runs normally and completes the switching action. 5.Resume Operation Resolve the fault and resume normal operation. If the actuator is faulty, refer to the manufacturer's troubleshooting guide or contact support.

Valve actuator 2 operation failure	**E2**	Description	If valve actuator 2 fails to switch from "Auto on1" to "Auto on2", 2 flashes; otherwise, 1 flashes. On the app side, error code E2 is displayed and a pop-up message appears: "Valve actuator 2 operation failure".
		Fault cause	Possible causes: 1.Improper wiring connection or loose connection of Valve Actuator 2. 2.Excessive mechanical resistance, valve binding. 3.Valve actuator malfunction (refer to the Valve Actuator Troubleshooting Guide).
		Solution	Please follow the steps below for basic troubleshooting: 1.Power Off Turn off the power switch. 2.Check Connections Check Actuator 2 wiring for loose, disconnected, damaged, or poor contacts. 3.Check Valve Condition Verify that the valve has no mechanical binding, obstruction, or excessive operating resistance. 4.Check Actuator Operation Restore power, operate Actuator 2, and check if it runs normally and completes the switching action. 5.Resume Operation Resolve the fault and resume normal operation. If the actuator is faulty, refer to the manufacturer's troubleshooting guide or contact support.
Valve actuator 3 operation failure	**E3**	Description	If valve actuator 3 fails to switch from "Auto on1" to "Auto on2", 2 flashes; otherwise, 1 flashes. On the app side, error code E3 is displayed and a pop-up message appears: "Valve actuator 3 operation failure".
		Fault cause	Possible causes: 1.Improper wiring connection or loose connection of Valve Actuator 3.

			2.Excessive mechanical resistance, valve binding. 3.Valve actuator malfunction (refer to the Valve Actuator Troubleshooting Guide).
		Solution	Please follow the steps below for basic troubleshooting: 1.Power Off Turn off the power switch. 2.Check Connections Check Actuator 3 wiring for loose, disconnected, damaged, or poor contacts. 3.Check Valve Condition Verify that the valve has no mechanical binding, obstruction, or excessive operating resistance. 4.Check Actuator Operation Restore power, operate Actuator 3, and check if it runs normally and completes the switching action. 5.Resume Operation Resolve the fault and resume normal operation. If the actuator is faulty, refer to the manufacturer's troubleshooting guide or contact support.
Wi-Fi connection failure	/	Description	During use, if the device disconnects from the network, the Wi-Fi indicator will turn off, and the app will display the device as offline.
		Fault cause	Possible causes: 1.Incorrect Wi-Fi credentials. 2.Router or internet connection issue. 3.Weak Wi-Fi signal or long distance from router.
		Solution	Please follow the steps below for basic troubleshooting: 1.Check Network Status Ensure the home Wi-Fi network is working properly. 2.Check Wi-Fi Settings Verify the Wi-Fi SSID and password, and ensure the device is connected to a 2.4 GHz Wi-Fi network. 3.Check Signal Environment

			Ensure the device is installed within Wi-Fi coverage and there are no major obstructions between the controller and router. 4.Restart and Reconnect Turn off the device power switch, wait until the device is fully powered off, then restart and reconnect Wi-Fi through the app. If the network is normal but the device still cannot connect to Wi-Fi, contact technical support for further assistance.

10. WARRANTY & EXCLUSIONS

Should a defect become evident during the term of warranty, at its option, the manufacturer will repair or replace such item or part at its own cost and expense. Customers need to follow the warranty claim procedure in order to obtain the benefit of this warranty.

The guarantee will be void in cases of improper installation, improper operation, inappropriate use, tampering or using of non-original spare parts.

11. DISPOSAL

When disposing of the product, please sort the waste products as electrical or electronic product waste or hand it over to the local waste collection system.

The separate collection and recycling of waste equipment at the time of disposal will help ensure that it is recycled in a manner that protects human health and the environment. Contact your local authority for information on where you can drop off your pool actuator transformer for recycling.

FCC Warning：

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF exposure guidelines, the distance must be at least 20cm between the radiator and your body, and fully supported by the operating and installation configurations of the transmitter and its antenna(s).

IC Waring:

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.

2. This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil contient un ou des émetteurs/récepteurs exempts de licence qui sont conformes au(x) RSS exempts de licence d'Innovation, Science et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes :

1. Cet appareil ne doit pas causer d'interférences.

2. Cet appareil doit accepter toute interf é rence, y compris les interf é rences qui peuvent causer un fonctionnement non désiré de l'appareil.

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with RSS-102 - Radio Frequency (RF) Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

le dispositif de a été évalué à répondre général rf exposition exigence.pour maintenir la conformité avec les directives d'exposition du RSS-102-Radio Fréquence (RF). ce matériel doit être installé et exploité à une distance minimale de 20 cm entre le radiateur et votre corps.

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