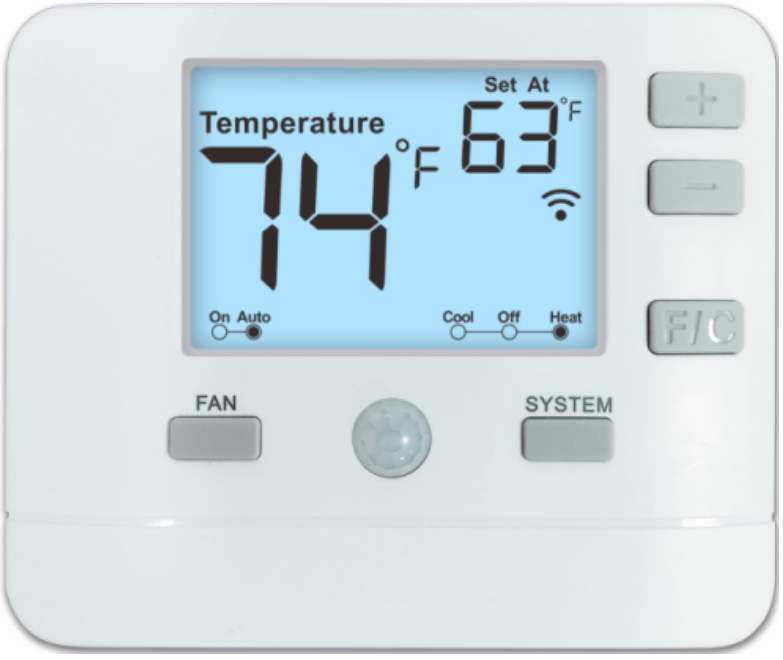
PT731RFW

Instruction Manual

THEMOSTAT QUICK REFERENCE

Thermostat



Receiver

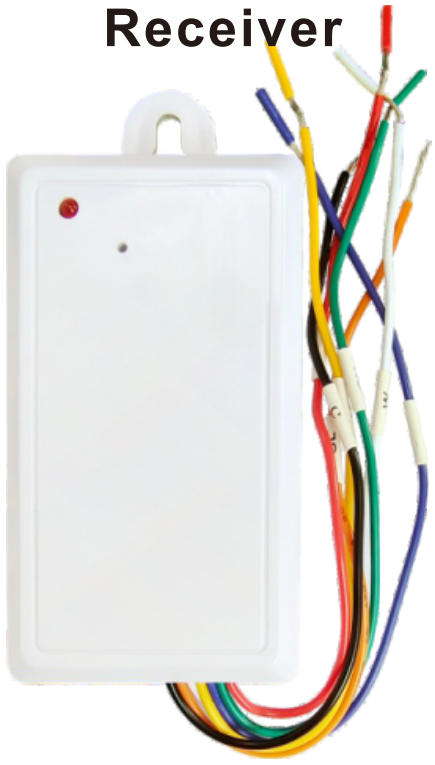


Table of Contents

THEMOSTAT QUICK REFERENCE

Thermostat Applications Guide

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (With Aux. or Emergency Heat)	Yes
Multi-Stage Systems	Yes
Heat Only Systems	Yes
Heat Only Systems - Floor or Wall Furnace	Yes
Cool Only Systems	Yes
Millivolt Conventional Systems	No
Two Transformer Systems	No

Power Type

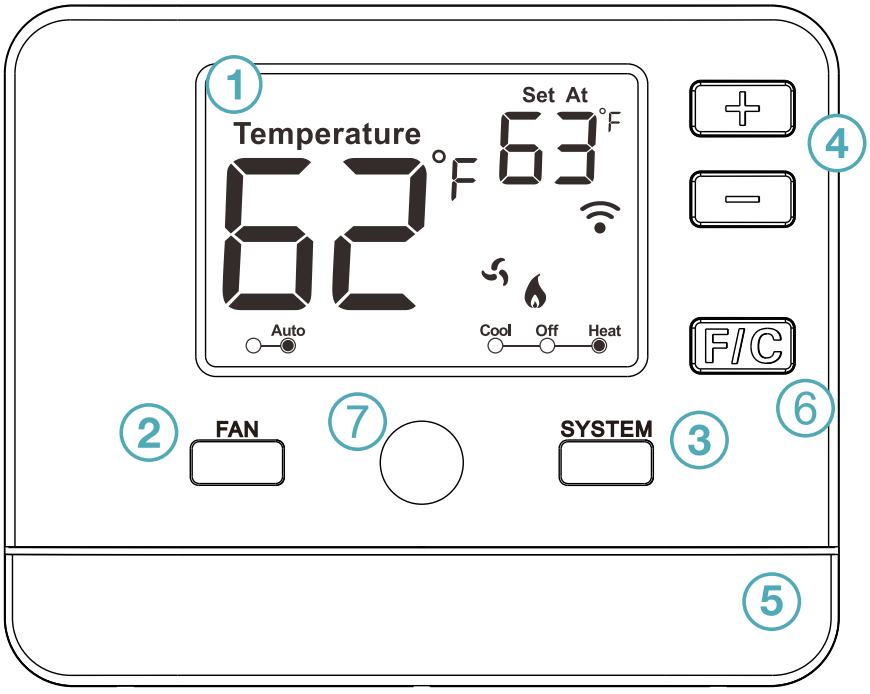
Hardwire (Common Wire) --24VAC

Specifications

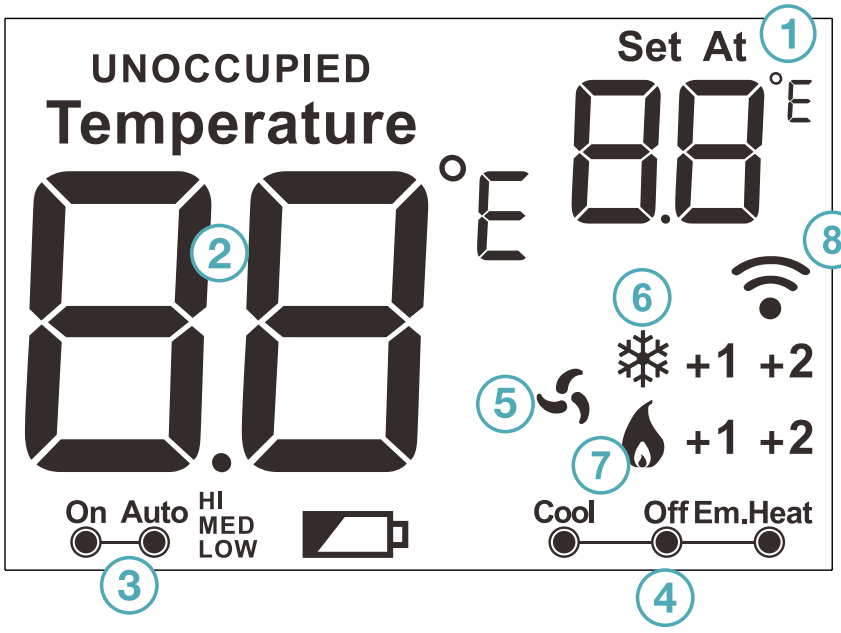
The display range of temperature - - - - 32℉ to 99℉ (0℃ to 40℃)
The control range of temperature - - - - 41℉ to 90℉ (5℃ to 32℃)
Humidity display range - - - - - - - - 0%-99%
Load rating - - - - - - - - - - - - - - - 1 amp per terminal, 1.5 amp maximum all terminals combined
Display accuracy - - - - - - - - - - - - - ± 1°F
Swing (cycle rate or differential) - - - - - Heating is adjustable from 0.2°F to 2.0°F
Cooling is adjustable from 0.2°F to 2.0°F
Power source - - - - - - - - - - - - - - 18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire (common wire)
Operating ambient - - - - - - - - - - - - 32° to +105° (0° to +41°C)
Operating humidity - - - - - - - - - - - - 90% non-condensing maximum
Dimensions of thermostat - - - - - - - - 4.7”Wx3.8”Hx1.1”D
Dimensions of Receiver - - - - - - - - 3.9”Wx1.8”Hx1.0”D
Wireless operating frequency - - - - 915MHZ
WIFI - Supporting 802.11 B/G/N Standards

THEMOSTAT QUICK REFERENCE

Getting to know your thermostat



1 LCD Display
2 Fan Switch
3 System Switch
4 Set-Point Buttons
5 Easy to open the face door
6 Temperature unit switching button
7 (PIR)Human body sensor detection window



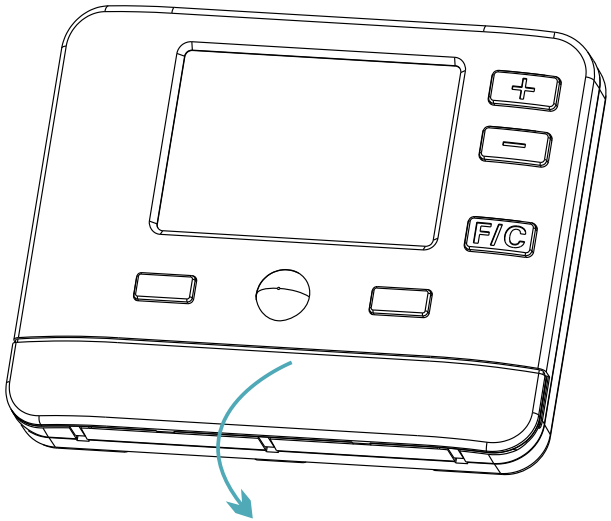
1 Displays the uset selected set-point temperature
2 Indicates the current room temperature
3 Fan mode indication
4 System mode indication
5 Fan run indication
6 cool run indication
7 heat run indication
8 WIFI indication

INSTALLATION TIPS

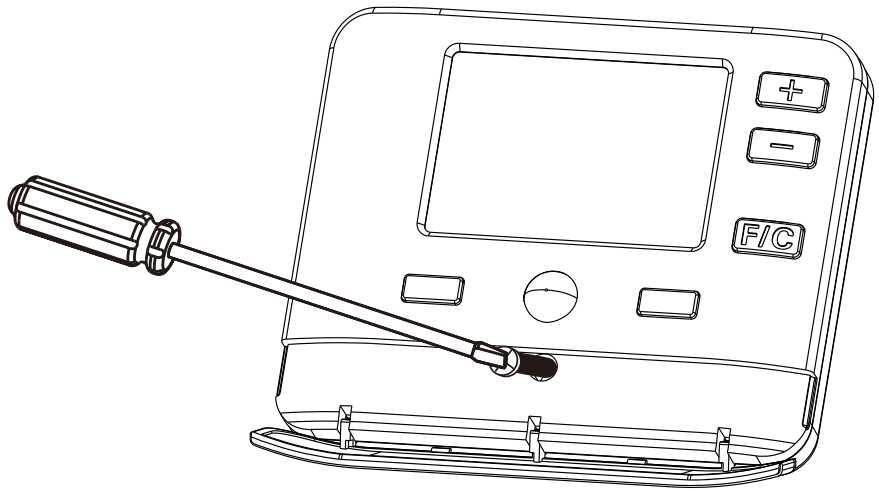
IMPORTANT SAFETY INFORMATION WARNING

- Always turn off power at the main power source by unscrewing fuse or switching circuit breaker to the off position before installing, removing cleaning, or servicing thermostat.
- Read all of the information in this manual before installing or programming this thermostat.
- This is a 24V AC low voltage thermostat. Do not install on voltages higher than 30V AC
- All wiring must conform to local and national building and electrica codes and or dinances.
- Do not short (jumper) across terminals on the gas valve or at the system control to test installation.This will damage the thermostat and void the warranty.

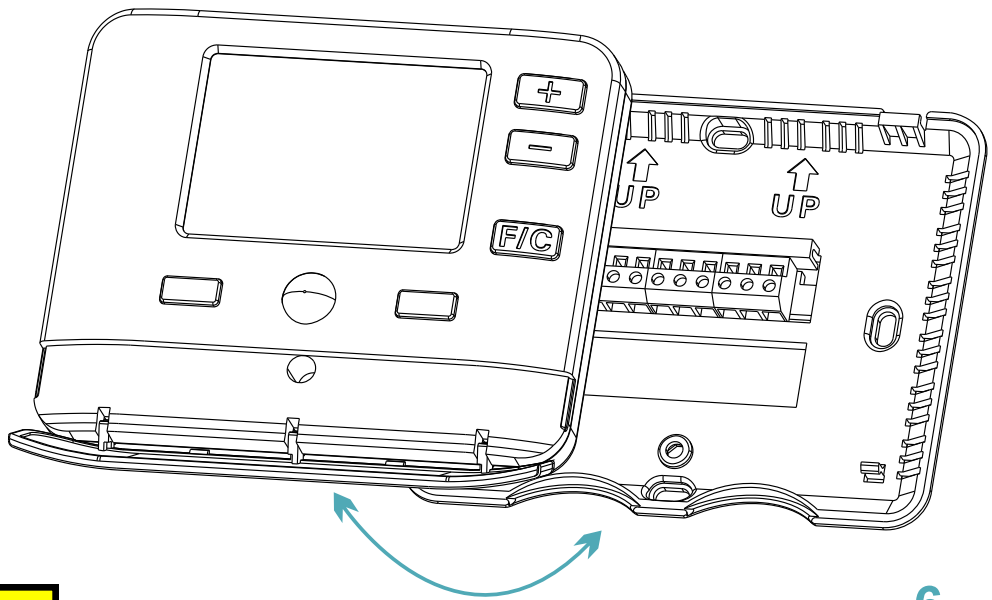
Installation tips



1. Open the front door

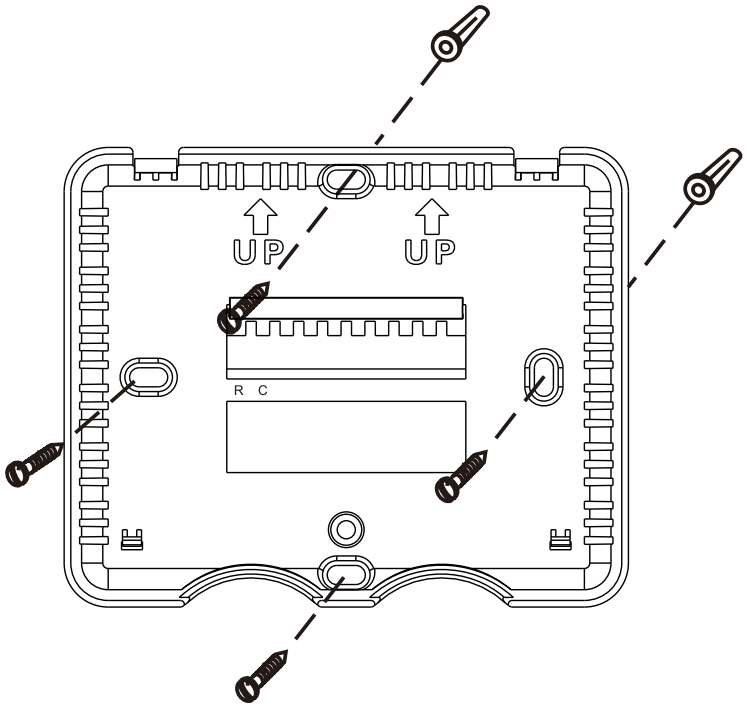


2. Remove the screw with a screwdriver



3. Separate the front casing
   from the back casing

Installation tips



1 Horizontal Mount:
For a horizontal mount , put screws on the left and right.

2 Vertical Mount:
For a vertical mount, put screws on the top and bottom.

Drill 3/16-in. holes for drywall
Drill 3/16-in. holes for plaster

Caution:
Electrical Hazard

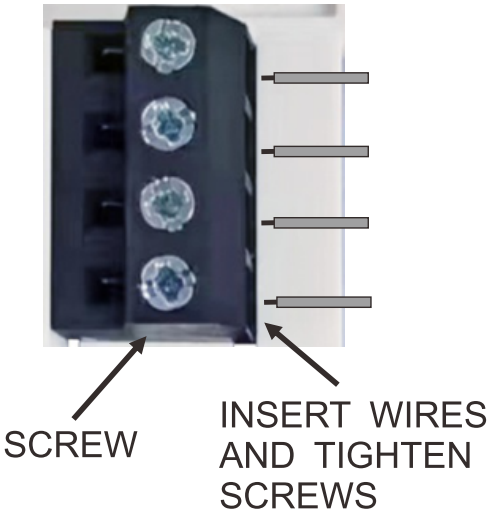
Disconnect power before installing this product. Failure to do so can cause electric shock or equipment damage.

Mercury Notice:

This product is mercury-free. However,if this product is replacing a control which contains mercury, it needs to be disposed of properly. Contact your local waste management authority for instructions regarding recycling and proper disposal of the control.

INSTALLATION TIPS

Wiring Tips



Wire Specifications

Use 18- to 22-gauge thermostat wire. Shielded wire is not required.

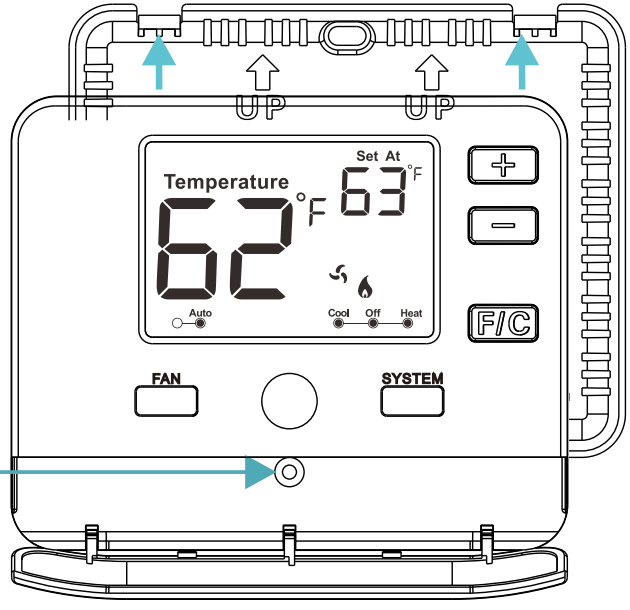
Installation Tip

Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation issues.

Max Torque = 6in/lbs.

Install a thermostat

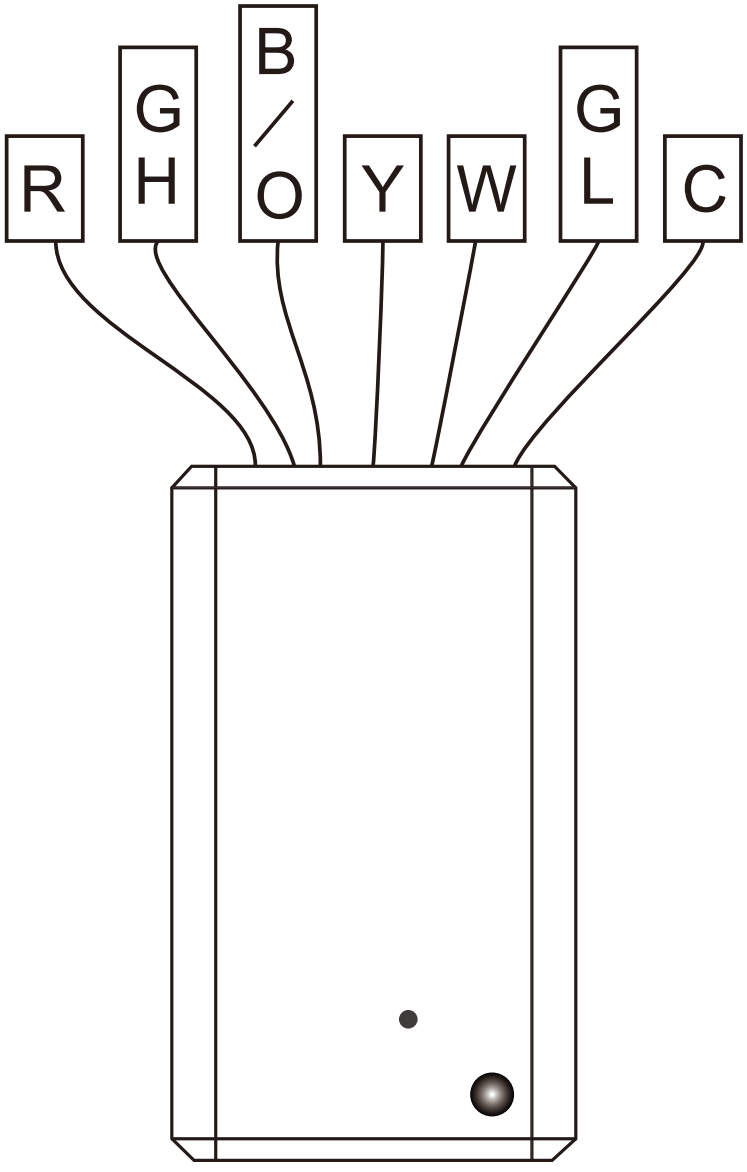
1.Install the thermostat on to the wiring board



2.Tighten the screws

To remove the terminal board, you must unscrew this screw.

INSTALLATION TIPS



Note:

The base module may be mountedusing adhesive tape, such asdouble-sided tape or hook and loopstrips.
The base module must behardwired
(C &R terminalsconnected to 24V power).
Usesecondary source of securement toprevent module from dropping intocondenser drain pan.

Connecting to a PTAC:

When connecting the Base Moduleto a PTAC, refer to the PTACmanufacturer instructions to enableremote thermostat operation.

Wiring Note:

The base module ispackaged with labeledthermostat wire. Wireappropriately into thePTAC board terminals.

WIRING DIAGRAMS

Terminal	Wiring port function
R	Transformer power-24VAC
C	Transformer common port(24VAC)
O/B	Reversing Valve/Configerable Terminal
GH	Fan control port --- High speed
GL	Fan control port --- low speed

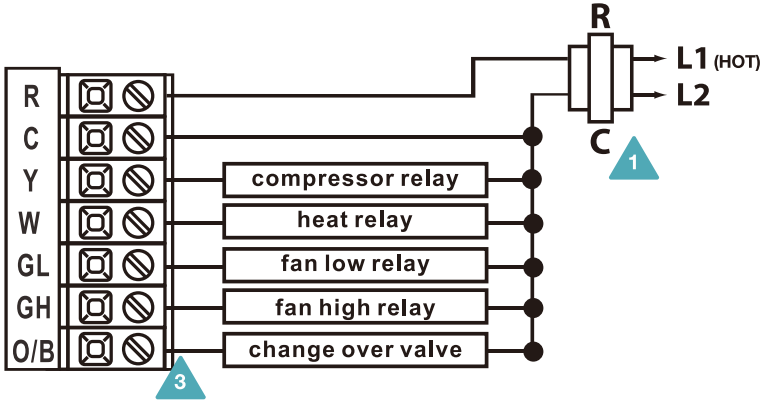
		Level 1 heating	Level 2 heating	Level 1 cooling		
Heat Pump OFF	1H1C	W		Y		
Heat Pump ON	1H1C	Y		Y		
	2H1C	Y	W	Y		

WIRING DIAGRAMS

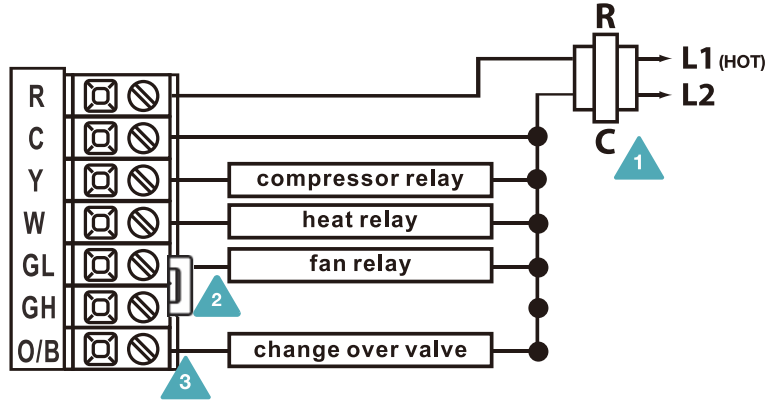
1. Power supply
2. Jumper(not supplied) to connect GL and GH terminals.
3. Thermostat must be set to O and B to match the changeover valve, O is the cool changeover valve, B is the heat changeover valve.
4. The Aux Heat Relay is energized as the second stage of heat

HEAT PUMP OFF

Typical1H/1C System:2 SpeedFan



Typical1H/1C System:1 SpeedFan

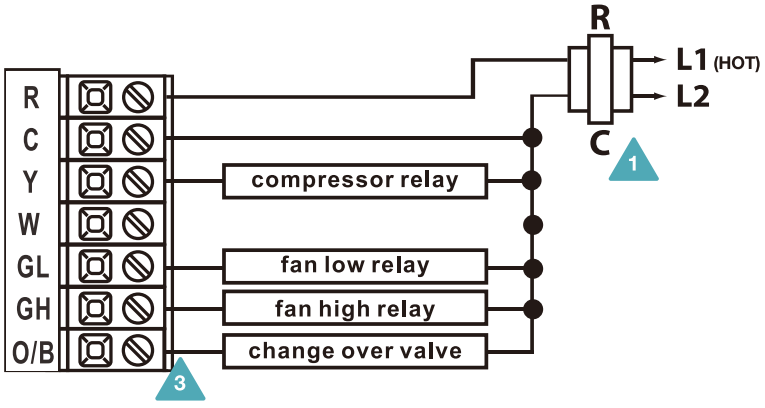


Note:

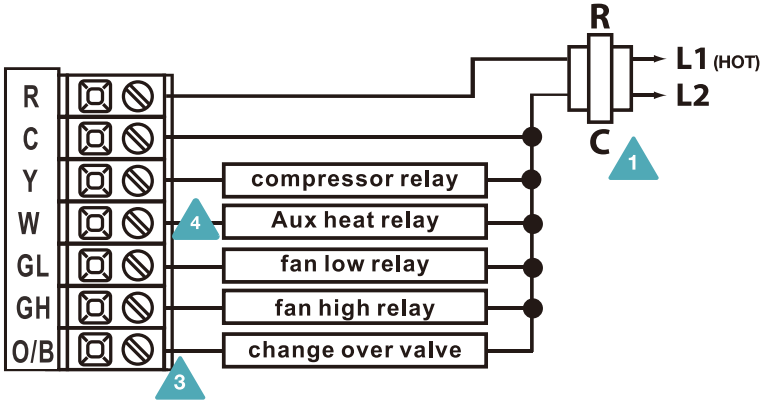
Most PTAC systems support two speed fan operation.In a single speed fan PTAC system or conventional single speed fansystem, a jumper should be installed between GL and GH on the thermostat.

HEAT PUMP ON

Typical 1H/1C Heat Pump System:2 SpeedFan



Typical 2H/1C Heat Pump System:2 SpeedFan



TECHNICIAN SETUP

Restore factory Settings

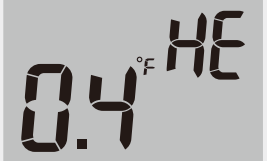
Press and hold the"-" button,turn on the power,and release the factory Settings after the display is normal

Technician Setup Menu

1.Hold down the + and - buttons together for 3 seconds to access the technician sets the mode .
2.Use the + or - to adjust the,
3.Press FAN to go to the next item,
4.Wait approximately 30 seconds or Press SYSTEM to return to normal operation.

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Pair	Thermostat and receiver pair code		Press and hold the "+" key for 3 seconds to pair See:Thermostat paired	
Room Temperature Calibration	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° degrees and you would like it to read 72° then select +2.		You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	

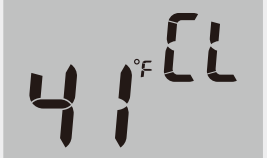
TECHNICIAN SETUP

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Cooling Swing	The swing setting often called "cycle rate", "differential" or "anticipation"is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will causefewer cycles.		The cooling swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the cooling on at approximately 0.5° above the setpoint and turn the cooling off at approximately 0.5° below the setpoint.	
Heating Swing	The swing setting often called "cycle rate","differential"or " anticipation"is adjustable.A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.		The heating swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the heating on at approximately 0.5° above the setpoint and turn the heating off at approximately 0.5° above the setpoint.	
Fan Operation	Gas is selected so that the thermostat does not turn on the fan while heating ELEC was chosen to enable the thermostat to be controlled to turn on the fan while heating		Use the - or + key to select ELEC or GAS	

TECHNICIAN SETUP

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Compressor Short Cycle Delay	The compressor short cycle delay protects the compressor from short cycling. This feature will not allow the compressor to be turned on for 5 minutes after it was last turned off		Selecting"ON"will not allow the compressor to be turned on for 5 minutes after the last time the compressor was switched off. Select"OFF"to remove this delay.	
Change Over Valve Selection	Select 0 for a changeover valve that energizes in cooling. Select b for achange over valve that energizes in heating		0 for cooling changeover valve b for heating changeover valve	
Heat Pump	When turned on the thermostat will operatea heat pump.Y will be the first stage of heat &cool, W will be the second stage of heat.		OFF configures the thermostat for non heat pump systems.ON configures the thermostat for heatpump systems.	

TECHNICIAN SETUP

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Heating Temperature Setpoint Limit	This feature allows you to set a maximum heat setpoint value.The setpoint temperature cannot be raised above this valve.		Use the - or + key to select Range :41°F-90°F 5℃-32℃	
Cooling Temperature Setpoint Limit	This feature allows you to set a minimum cool setpoint value. The setpoint temperature cannot be raised above this valve.		Use the - or + key to select Range :41°F-90°F 5℃-32℃	
(PIR) energy saving mode	Select OFF: Turn off this feature Select ON: Once a room is declared vacant by PIR human sensors, The PTAC opportunity undergoes three stages of energy saving adjustment. Three stage parameters are set on the APP		Use the - or + key to select ON or OFF	

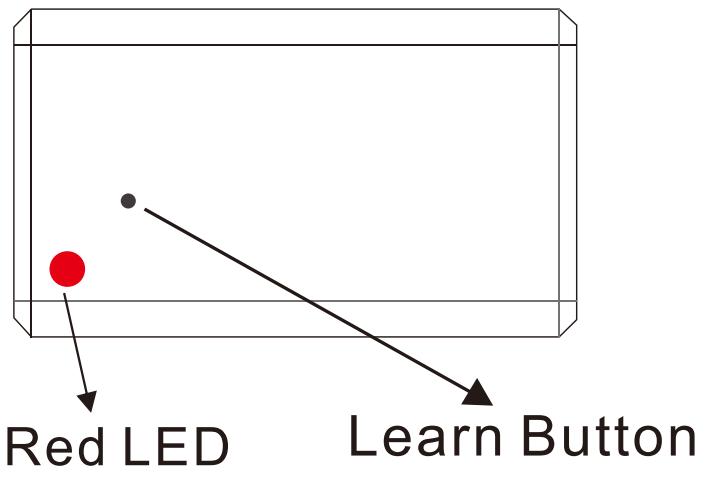
THERMOSTAT PAIRED

The thermostat and receiver come factory linked out of the box.
If however, communication is lost, follow this easy- **Two Step** process to re-establish the communication link.

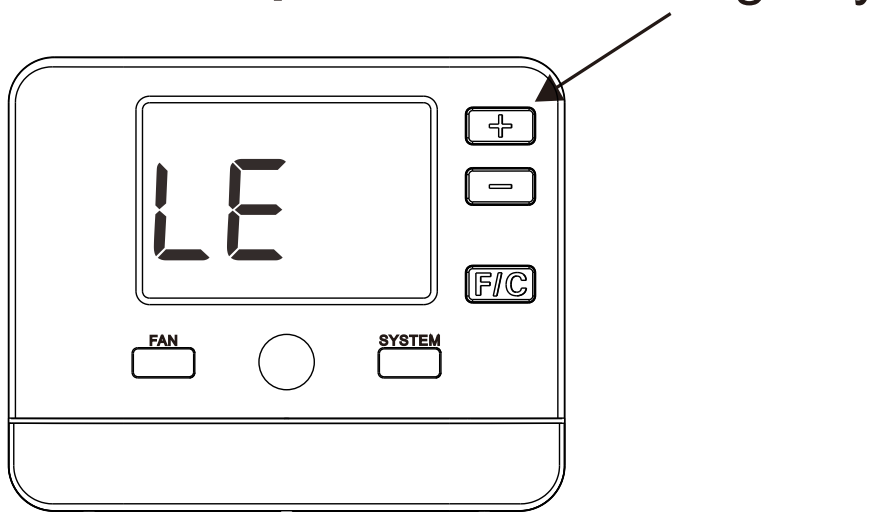
1.Receiver: Press and hold the receiver learning button for 3 seconds. The Red LED will flash when it is ready to receive the paired signal from the Thermostat. (Receiver must be 24V powered).

2.Transmitter: Turn the **SYSTEM** switch to **OFF**. Press and hold“**+**” and“**-**” to ge ther “**LE**” is displayed onthe LCD.Then press and hold "+" for 3 seconds for 3 seconds the Thermostat will transmit the code signal. When the red LED onthe receiver stops flashing,Indicates a successful pairing.

Step 1.



Step 2.



WIFI APPLICATION DESCRIP TION

Scan the QR code and download the app for Android and iOS devices, or search for **Smart Life** in the app store.

Application Notes

With the **Smart Life**app, your current thermostat can be fully managed. Simple interface, intuitive programming operation, fast response.

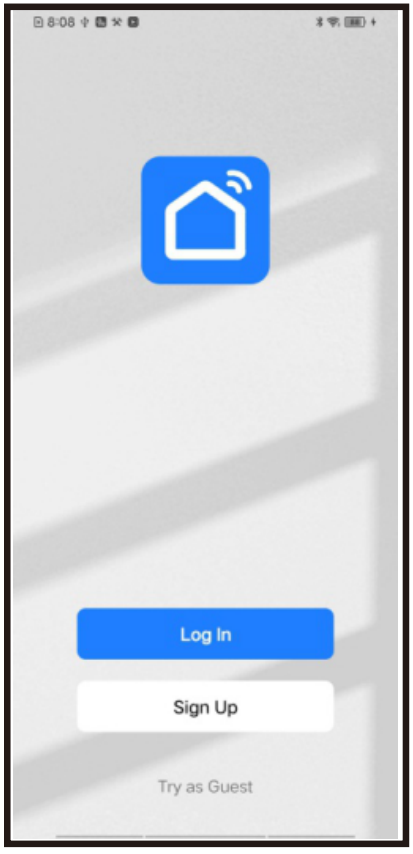
Register account

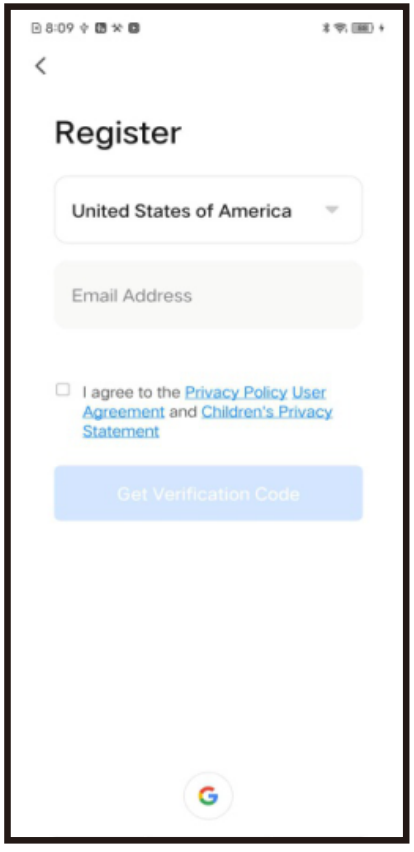
After downloading, open the **Smart Life** APP. On first use, you must register to obtain credentials for subsequent access.

WIFI APPLICATION DESCRIP TION

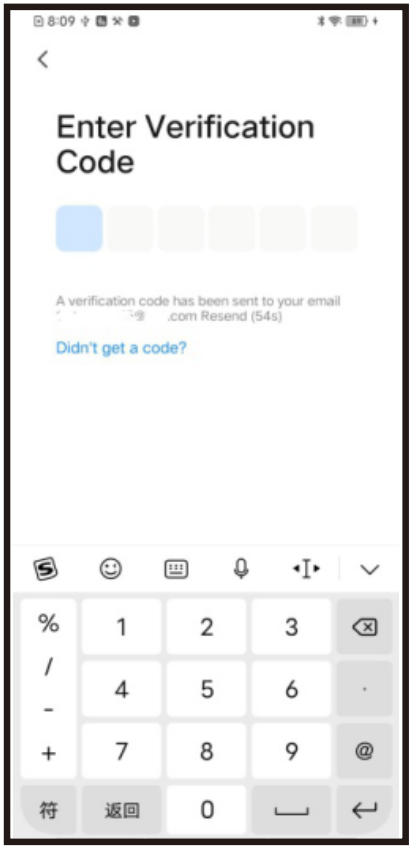
Descarga y registro de la APP

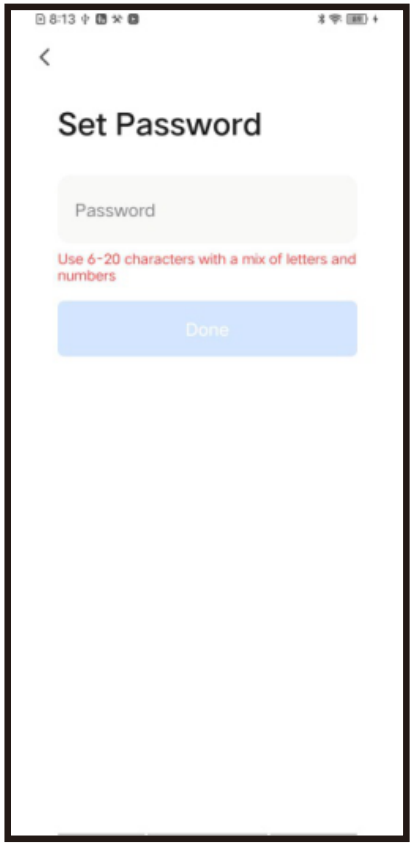
Press “**Sign Up**” to register a new account
Read the privacy policy and press “**I agree**”
Enter your email address“**Verification Code**”.If you already have Credentials, press“**Login**”Use existingaccount.





Enter the 6-digit code received via email. (Please also check your spam box)
Set a password, which must be at least 8characters long and contain at least 1 letterand 1 number





Device binding

NOTE: Since the app does not report if the Wi-Fi password is incorrect **you must ensure that you enter the correct password**. Most connection problems (provisioning failures) depend on entering the wrong password.

1. Is the device on the main page? **Pic.1**
2. Press and hold the "**SYSTEM**" button for five seconds until "**EZ**" (**Pic2**)
3. Press the "**Add Device**" button or the "+" button in the upper right corner (**Pic3**)
   Or click "Scan" to scan the QR code to display the binding steps.(**Pic4**)

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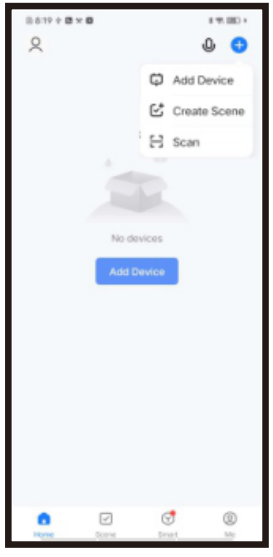
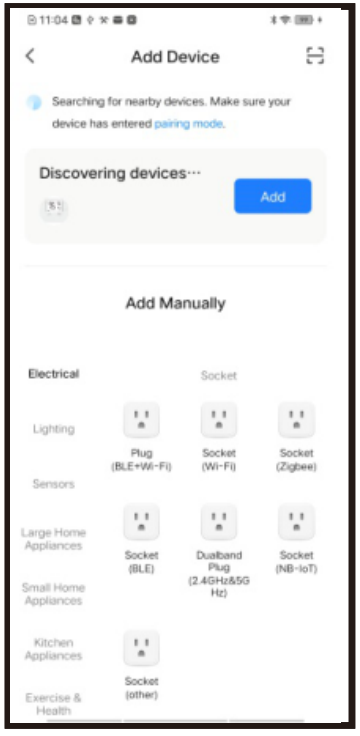


4

Device binding

5. When the device appears in the search field, press "**Add**" (**Pic 5**)
6. Select the wifi network and write the password of the same network, then press "**Next**" (**Pic 6**)
7. The device starts to configure the network (**Pic 7**)
8. Once the process is complete, click on the "pen" symbol to change the name of the thermostat, or keep the default name and press "**Done**" (**Pic** 8)

5



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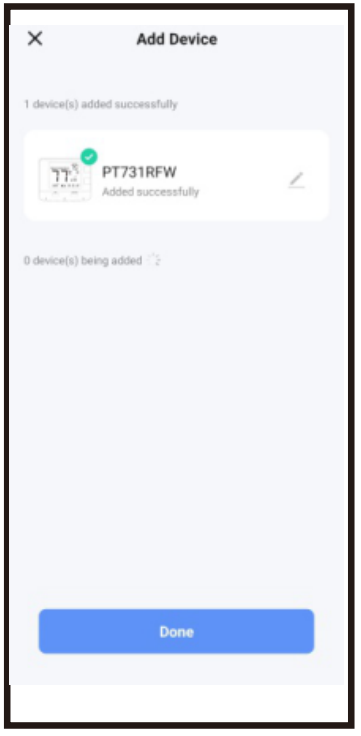
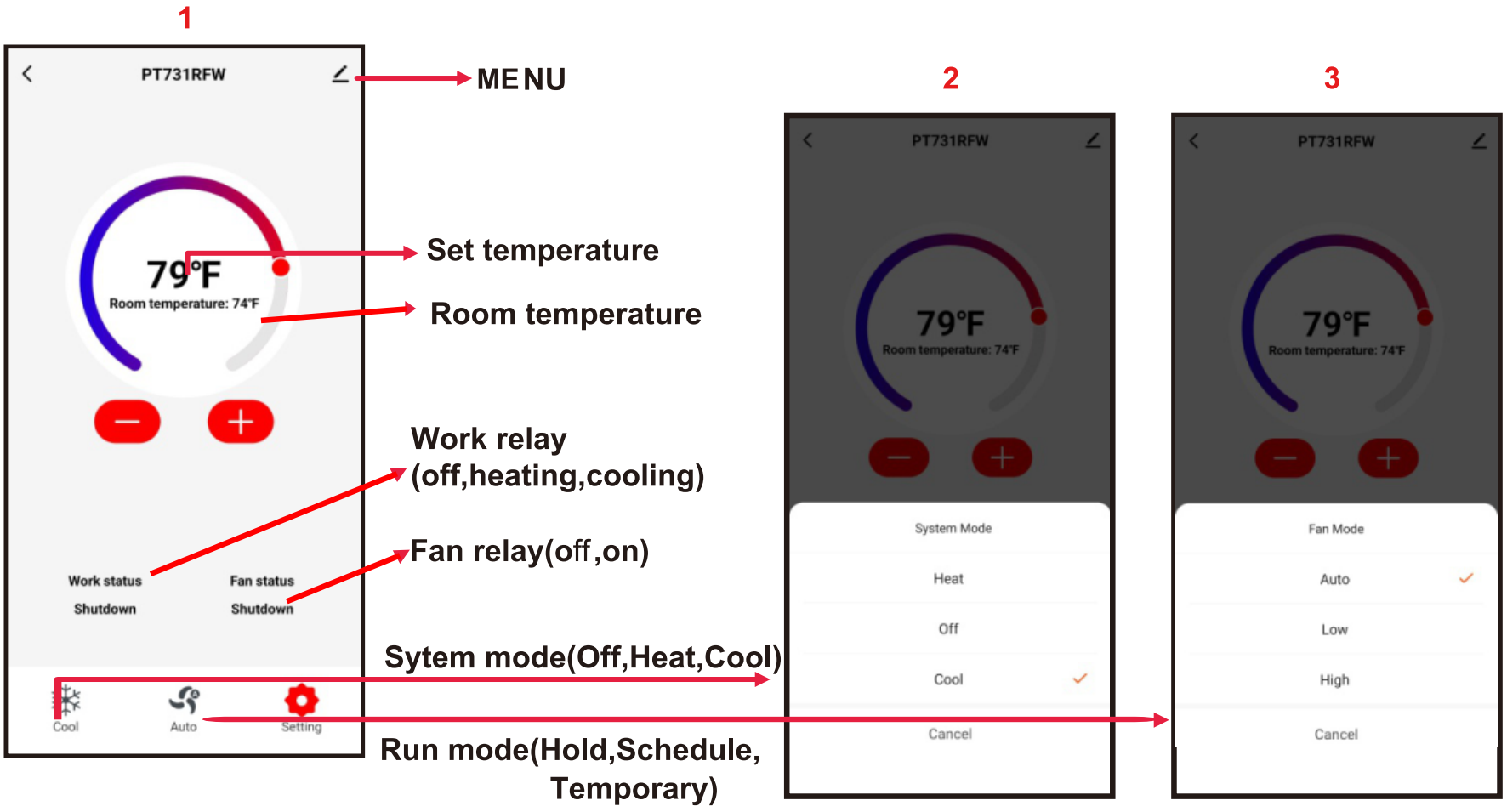
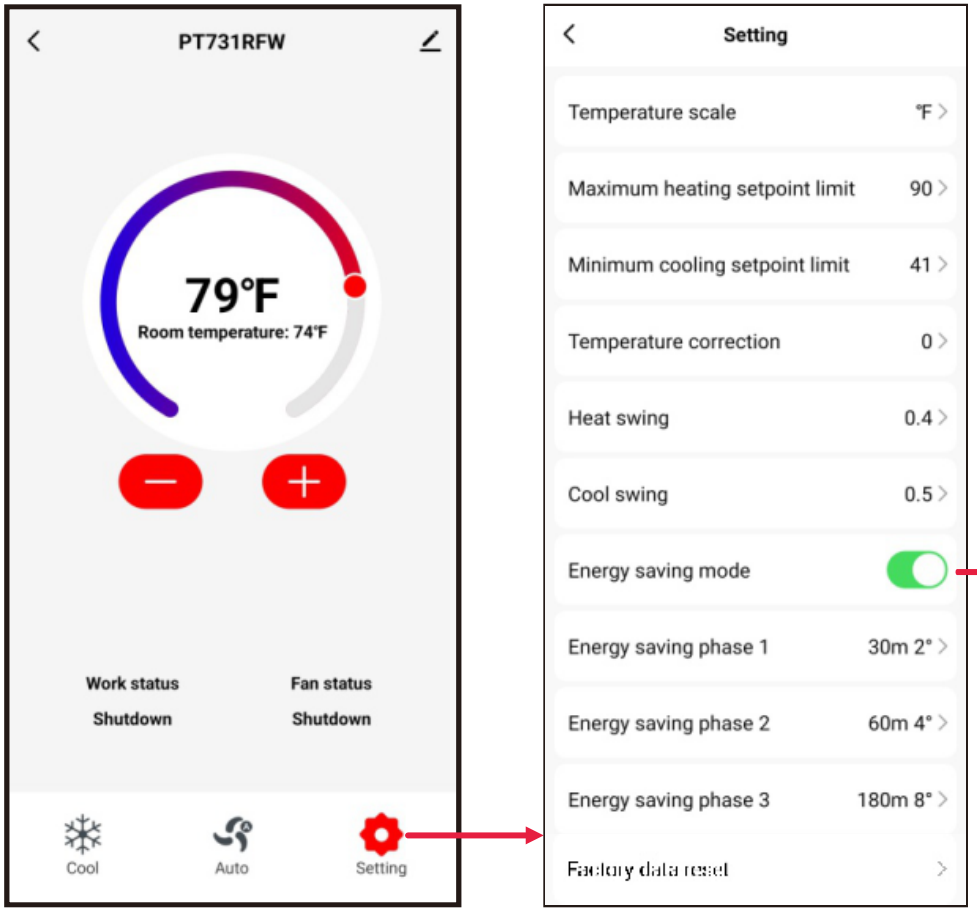


WIFI APPLICATION DESCRIP TION

Use the Smart “Smart Life”app



Device binding



PIR energy saving mode switch

Instruction Manual