



# User Manual

Smart Radiator Controller

Model No.: PTV30

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## 4. Users' option

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## Attentions:

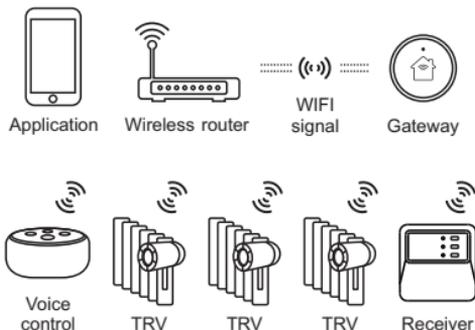
1. This product can fit on standard Angle valve with connector M30X1.5mm, and it might request adaptor for some specific model Angle valves (may consult the installer or supplier).
2. This product does not have the heating function, if room temperature can not reach set temperature, please raise the heat medium temperature, or check the heating system.
3. Before using this product, please read this manual carefully.
4. The product passed the CE certification.

# 1. Overview

## 1.1 Application system

Smart radiator controller (PTV30) with built-in high precision temperature and humidity sensor, can real-timely sense indoor temperature; And with a micro motor, it controls Angle valve's opening, by regulating heat medium's flow to achieve a constant indoor temperature.

PTV30 have RF communication function with additional smart gateway PTG10 (sold separately) and installed with our APP. you can control home temperature anytime and anywhere via smart phone.



## 1.2 Features

- **Touch buttons:** Use four touch keys and operate friendly.

- **LCD display:** LCD display screen to display time, temperature and humidity, and other information.
- **Programmable:** Equipment factory with 3 section of the program, and you can modify or personalize programming.
- **Remote operation:** Connect to smart gateway (PTG10), temperature can be controlled anytime and anywhere through the phone APP.

### 1.3 Control button and screen display



AUTO	Auto mode		Clock set	88.8 <sup>°C</sup>	Temperature
MAN	Manual mode	PROG	Program set	88%	Humidity
HOL	Holiday mode		RF connection	88:88 <sup>AM</sup>	Time
	Child lock		Frost protection	1234567	Days
	Copy		Batteries power		

## 2. System installation

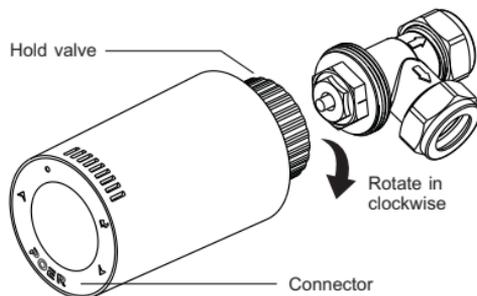


**Important attention:** Before installation, please ensure that Radiator Controller PTV30 is turned off.

### 2.1 Installation of smart radiator controller

#### 2.1.1 Installation of smart radiator controller

❶ Hold PTV30 valve body in hands, joint connector with angle valve threads, rotates in clockwise, and realize connection with angle valve.



❷ Rotate PTV30 valve body until screen display to the right angle that you are satisfied, then fasten the connector.



**Note:** For more accurate temperature, it is recommended that you install the radiator controller PTV30 horizontally.

### 2.1.2 Boot of device

Press simultaneously  and  until **07** display on the screen, the boot is finished.



## 2.2 Disassembly of smart Radiator Controller

**2.2.1 Shutdown of device: Before disassembly, please turn off the device!**

Press simultaneously  and  until **0F F** display on the screen, after **0F F** flashes for 3 seconds, the radiator controller starts shutdown. When radiator controller's valve opens to 100%, shutdown is completed.

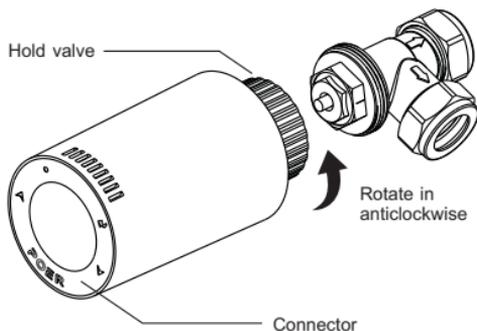


### 2.2.2 Disassembly of smart radiator controller

Hold radiator controller PTV30, rotate connector in anticlockwise until divide PTV30 from angle valve.



**Note:** When disassemble PTV30, please avoid being scald by attention to the connector's temperature.

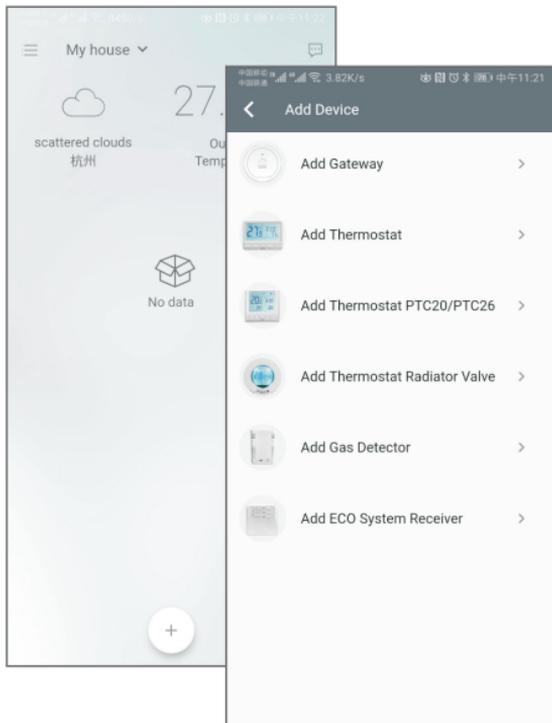


## 2.3 RF signal pairing between smart radiator controller and gateway

Smart radiator controller PTV30 can be connected with smart gateway through mobile phone's APP; APP makes its setting and controlling more simple and convenient.

### 2.3.1 Automatic pairing by mobile phone APP

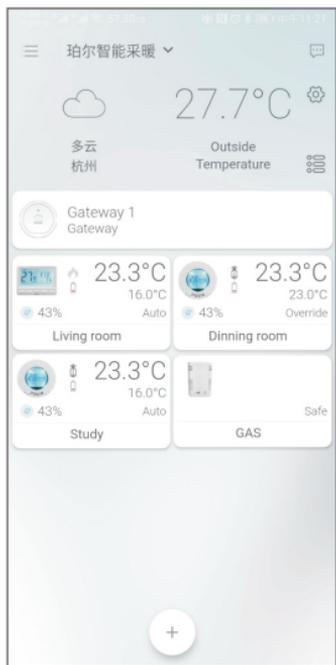
① Open the App. which already connected with gateway PTG10 (how to add a gateway on App. please refer to gateway's manual for details), choose Add Radiator Controller from the interface.



② Scan bar code on the PTV30 valve body for getting MAC idof device. If scanning failed, may type the MAC id manually.



- ③ After successfully get MAC id, choose Add to start pairing radiator controller PTV30 with gateway, after adding successfully, radiator controller's screen displays  icon, and the "HOME"page of APP displays newly added device.



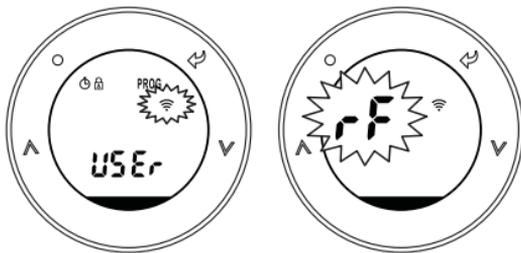
### 2.3.2 Manually pairing smart radiator controller with gateway

① **Preparation:** Make sure gateway PTG10 was plug in the socket correctly and has been added on APP (how to add a gateway on App. please refer to gateway's manual for details).

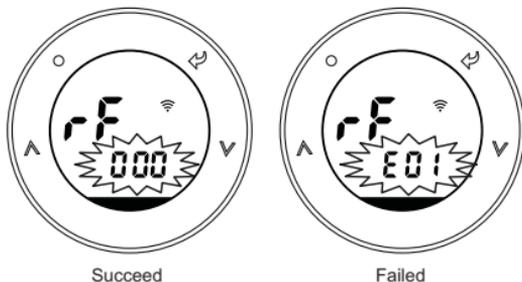
② Start gateway's pairing mode by hold pressing until its LED is blinking slowly.

③ Smart radiator controller PTV30 send pairing command with gateway:

(3-1) Long press  button to enter menu page, press   button to make choice. When  flashes, press  button to enter code page. Display flashing  in temperature area and press  button to send pairing command with gateway.



(3-2) After pairing successfully, the time area displays flashing **000** ; otherwise, the time area displays a flashing **E01** means pairing failed.

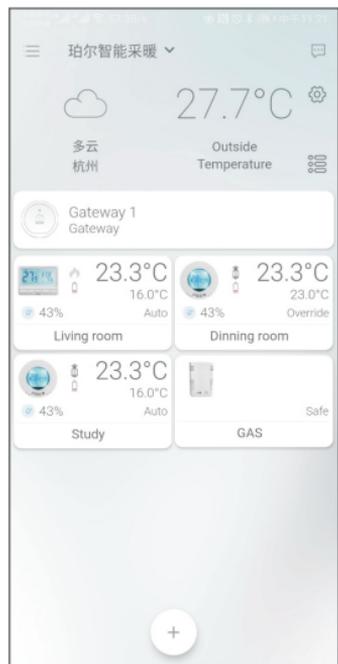


(3-3) If pairing failed, please check: If the gateway PTG10 is under pairing mode; if the distance between radiator controller PTV30 and gateway PTG10 is less than 5 meters; Then keep pressing  button to continue sending pairing command to gateway PTG10 until pairing succeed.

(3-4) Gateway is still under pairing mode even one radiator controller's pairing succeed, if you had more devices need to be paired, you may continue to pair them with gateway manually. (1 gateway could RF communicate with 10 devices at one time).

(3-5) Exit pairing mode by long pressing  icon until gateway LED recovers the state before pairing.

(3-6) After pairing successfully, radiator controller's screen displays  icon, and the "HOME" page of APP displays newly added device.



## 3. Smart radiator controller's function and operation

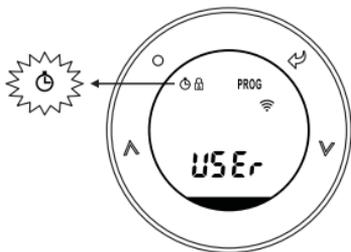
### 3.1 Setting and controlling PTV30 with APP

With mobile phone APP, it can be easily set and control PTV30. Please explore the specific operation on the mobile phone APP.

### 3.2 Setting and controlling PTV30 with button

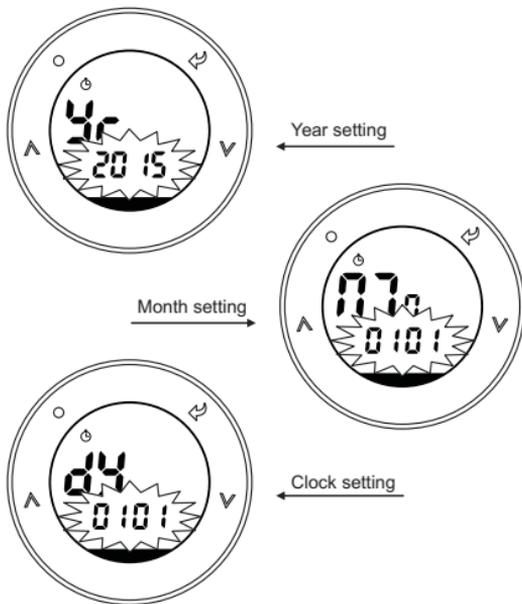
#### 3.2.1 Clock setting

① Enter time setting page: Long press  button, enter menu page, press  button until  flashes. And press  to enter time setting page.



② Year setting: when displays a flashing , press  button to choose the right year, press  button to confirm the setting and enter month-setting page.

Following same operation to complete date and time setting accordingly. You can return last setting page by pressing  button. Return main menu page after completing setting.



#### 3.2.2 Program setting (Auto Mode setting)

When radiator controller PTV30 leaves factory, it has been preset program. Preset program as following:

**Program1:**

Monday to Friday							
Event	1	2	3	4	5	6	7
Time	00:00 ~ 6:30	6:30 ~ 8:30	8:30 ~ 12:00	12:00 ~ 14:00	14:00 ~ 16:30	16:30 ~ 22:30	22:30 ~ 24:00
Temperature	7°C	20°C	16°C	16°C	16°C	21°C	7°C
Saturday and Sunday							
Event	1	2	3	4	5	6	7
Time	00:00 ~ 7:00	7:00 ~ 9:00	9:00 ~ 12:00	12:00 ~ 14:00	14:00 ~ 16:30	16:30 ~ 23:00	23:00 ~ 24:00
Temperature	7°C	20°C	18°C	21°C	18°C	21°C	7°C

**Program2:**

Monday to Friday							
Event	1	2	3	4	5	6	7
Time	00:00 ~ 6:30	6:30 ~ 8:30	8:30 ~ 12:00	12:00 ~ 14:00	14:00 ~ 16:30	16:30 ~ 22:30	22:30 ~ 24:00
Temperature	10°C	21°C	16°C	21°C	16°C	21°C	10°C
Saturday and Sunday							
Event	1	2	3	4	5	6	
Time	00:00 ~ 7:00	7:00 ~ 9:00	9:00 ~ 12:00	12:00 ~ 14:00	14:00 ~ 23:00	23:00~24:00	
Temperature	10°C	21°C	18°C	21°C	18°C	10°C	

**Program3:**

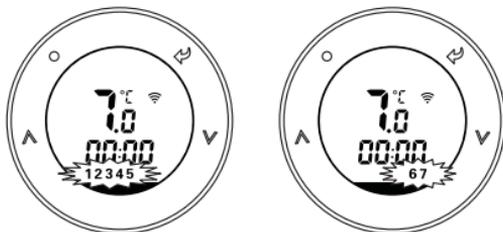
Monday to Friday							
Event	1	2	3	4	5	6	7
Time	00:00 ~ 6:00	6:00 ~ 8:30	8:30 ~ 12:00	12:00 ~ 14:00	14:00 ~ 17:30	17:30 ~ 22:30	22:30 ~ 24:00
Temperature	16°C	21°C	19°C	21°C	19°C	21°C	16°C
Saturday and Sunday							
Event	1	2	3	4	5	6	7
Time	00:00 ~ 7:00	7:00 ~ 9:00	9:00 ~ 12:00	12:00 ~ 14:00	14:00 ~ 16:30	16:30 ~ 23:00	23:00 ~ 24:00
Temperature	16°C	21°C	18°C	21°C	18°C	21°C	16°C

**❶ Personalize preset program:**

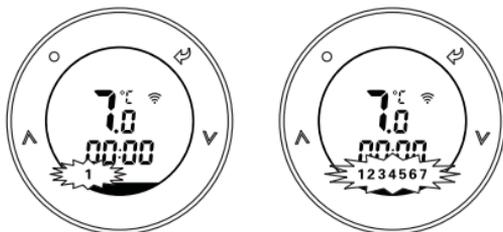
(1-1) Enter program setting page: Long press  button to enter menu page, press   button until **PROG** flashes. Press  button to enter program page, program page is shown below:



(1-2) Choose programming date: in the programming page, press  or  to choose programming date, the program supports 5+2 days /1 day/7 days' programming setting; press  button to conform programming date when it is flashing, meanwhile enter programming temperature 's setting page.



Program for 5+2 days



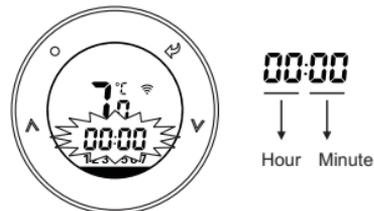
Program for 1 day

Program for 7 days

(1-3) Set programming temperature: when temperature is flashing as following fig., select by pressing  or  to choose programming temperature, confirm the temperature by press  button, meanwhile enter programming period setting page;



(1-4) Set programming period: when time is flashing as following fig., select by pressing  or , and press  button to set a period's time separately by hour and minute; next periods in a day is setting accordingly in the same way.



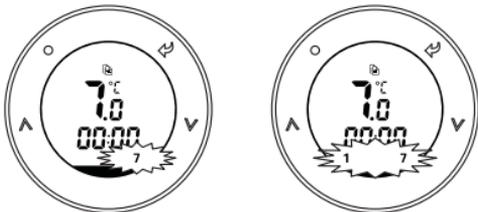
**Note:** Max 12 time periods could be supplied for one day (24H); One day's programming always starts at 00:00, ends at 24:00.

## ② Copy a day's program to other day:

Copy function can be used to simplify the programming. For example: If you want to copy programming data from Sunday to Monday, you can operate following the steps below:

Under program setting page, press  or  until 7 (=Sunday) is flashing, then long press  until icon  occurs, it means copy is successful processed; next, select by pressing  or  until 1(=Monday) is flashing, then press  button to complete paste to Monday.

If necessary, can continue to choose other programming day, press  button to paste.



### 3.2.3 Override mode setting

Under Auto mode, it operates temperature control according to your program, but if press  or , you also can temporarily adjust temperature. In this case, icon

**AUTO MAN** appears on the screen, which means

Override Mode started, Override control only functions in

current programming time and automatically return to the Auto Mode once next programming period coming. Press  to exit.



### 3.2.4 Manual control mode setting

Press  button to swift between each control mode, when **MAN** shows on screen, means Manual control mode started; in manual mode, you can select  or  casually to adjust temperature and each temperature adjustment is permanent.



### 3.2.5 Holiday mode setting

Press  until icon **HOL** shows on screen, means the Holiday mode started. Pressing  or  can set a holiday's starting time and ending.

After setting a holiday plan, it automatically change to Auto mode. When holiday starting time is coming, smart radiator controller PTV30 enters holiday mode automatically. During holiday, the radiator controller PTV30 starts frost protection function, saving energy and protecting the device. By the end of the holiday time, it will give you a well warmed room as you wished in advance.



### 3.2.6 ECO mode setting

Pressing  button can enter ECO mode. In this mode, icon ECO display on screen.

ECO mode is energy saving mode, in this mode, the radiator controller keeps the room temperature within energy-saving temperature (energy saving temperature is default 9°C, and can be reset in the user options).

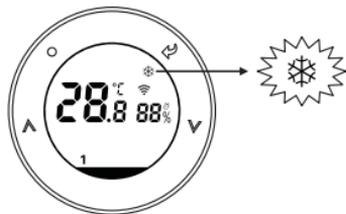


Pressing  button can enter / exit ECO mode.

### 3.2.7 OFF mode setting

Long press  button to enter OFF mode.

In OFF mode, display icon  on the screen, the radiator controller start frost protection function (frost protection temperature is default 7°C, and can be reset in the user options).

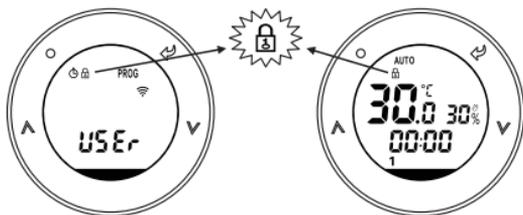


Long press  button to exit OFF mode.

### 3.2.8 Child lock setting

In order to guard against children's wrong operation, smart radiator controller PTV30 has child lock function. In child lock state, device will not respond to any button operation.

Long press  button and enter menu page. Choose  icon, press  to set child lock.



Long press button  to exit child lock.

### 3.2.9 Mac id display

Long pressing the  button when the TRV on MAN mode. The MAC id will show on the display. Pressing  to exist.



## 4. Users' option

❶ Users' option page: Long press  button and enter menu page. Press  or  button until **USER** icon flashes, and press  button to enter users' option page.



❷ In users' option page, temperature display area shows ID option of users, and time display area shows users' option value.



❸ Modification of users' options: when enter users' option page, option ID flashes. Select the target option ID by  or , enter the target option ID by pressing  modify, at this time, item value flashes. Press  or  button to adjust item value, and press  button to save value. After successful modification, it can continue to modify other users' option, or press  button to exit setting.

## Users' option table

ID	Option Content	Minimum	Maximum	Default value
1	Change 12h or 24h clock	12	24	24
2	Switch into other preset program	1	3	1
3	Change temperature offset °C	-10	10	0
4	Restore factory setting	OFF	ON	OFF
5	To disable Off function (after the setting, long pressing OFF key will not enter the OFF mode)	OFF	ON	OFF
6	Frost Protection function(turn it on, in OFF mode will be in a state of frost prevention)	OFF	ON	ON
7	Pre-set the lowest temperature	0	5	5
8	re-set the highest temperature	32	60	32
9	Pre-set the ECO temperature	ID7	ID8	9

ID	Option Content	Minimum	Maximum	Default value
10	Valve protection time (unit: minute, 0 means no protection, after opening valve protection, if valve is not opened for 24 hours, it will automatically open output at 10 o'clock every morning)	0	5	0
11	Activate Smart Remote Control (App remote control)	OFF	ON	ON
12	Temperature unit: Celsius / Fahrenheit switch	C	F	C
13	Change humidity	-30	30	0
14	Window opening function	OFF	ON	OFF
15	Window opening stop heating time	0	120	0
16	OFF mode target temperature range setting	ID7	ID8	5

## 5. Products Specification

Operating Temperature	0 to 50°C
Control object	Heating system
Display	LCD with backlight
Actuator	Electric
Frequency	868 MHz, 433Mhz for option, two-way
Communication Range (open space)	100 meters
Temperature setting range	5 °C to 32°C (0.5°C step)
Temperature control precision	+/- 0.3°C
Frost protection temperature	5 °C
Humidity range	10 to 90%RH

Humidity precision	+/- 5%RH
Time	12 hour/24 hour
Noise level	< 30 dBA
Dimensions (HxWxD)	H91 × 51.5mm
IP class	IP30
Standard	CE

Technical specifications are subject to change without notice