



INSTALLATION AND USER MANUAL

240V Wired and RF Programmable Thermostat



AN RWC BRAND



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Specification

Power source: 100-240VAC 50/60Hz

Load current output: 250VAC 3(2)A

Temperature setting range: 5~35°C

Display accuracy: 0.1°C

Setting accuracy: 0.5°C

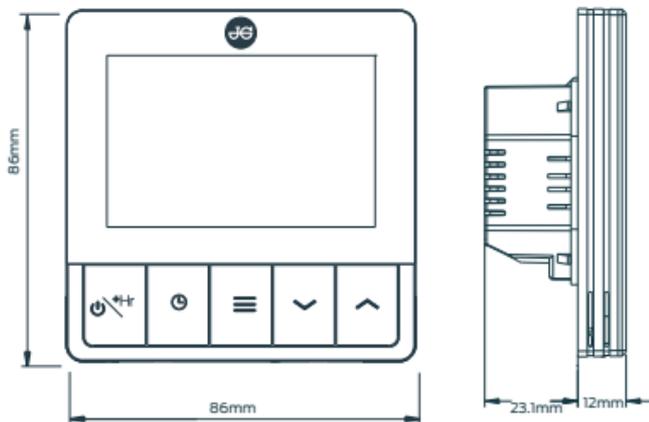
Storage temperature: -10~60°C, 0~90%RH

Ambient temperature: 0~50°C, 0~80%RH

Wireless frequency: Lora 868MHz

Note:

For connecting to the internet you must use the John Guest Gateway - JGWAY1.



Important safety information

Read all of the information in this manual before installing this thermostat.

Always turn off the power at the main power source by unscrewing the fuse, or switching the circuit breaker to the off position before installing, removing, cleaning, or servicing this thermostat.

Only a professional contractor should install this thermostat.

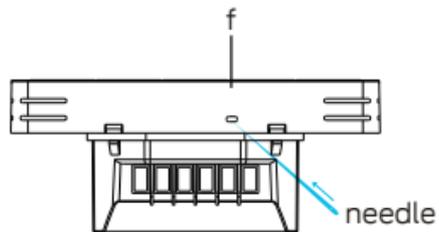
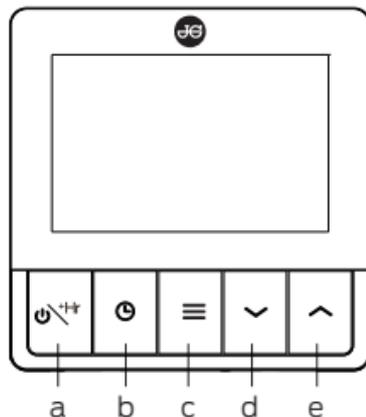
All wiring must conform to local and national building and electrical codes and regulations.

If the system is not operating properly, check the wiring and replace the fuse if necessary.

Use this thermostat only as described in this manual.

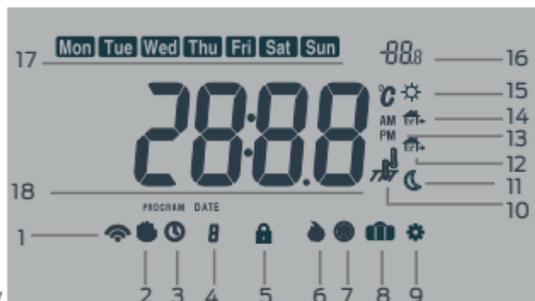
Thermostat display

- a  ON/OFF/Boost
- b  Time setting
- c  Menu button
- d  Lower temperature setting
- e  Raise temperature setting
- f Reset



Thermostat display

- 1 If the icon  is not shown then WiFi is not connected
If the signal is lost after connection the icon will flash
- 2 Manual mode
- 3 Programming mode
- 4 Zone number - If flashing then the connection to the wiring centre has been lost
- 5 Key lock
- 6 Boiler on/off
- 7 Frost protection
- 8 Holiday mode
- 9 Settings menu
- 10 Mode: Room mode, floor mode, dual temperature mode
- 11 Sleep mode
- 12 Away mode
- 13 AM/PM
- 14 Back home mode
- 15 Wake up
- 16 Temperature setting/Boost display
- 17 Weeks icon
- 18 Room temperature/time display



ON/OFF function

Press 'ON/OFF' to turn the thermostat ON. Press and hold 'ON/OFF' again to turn the thermostat OFF.

Key lock function

In the main display interface, press and hold '↓' '↑' at the same time to activate or cancel the key lock. When activated, no keys can be used. The thermostat will display '🔒'.

Boost function

Press 'ON/OFF' to switch the setting temperature or boost control. When the display shows 'T', press '↓' '↑' to select boost hour. The length of time the heating will be boosted is displayed. When the time elapses the screen returns to the temperature display.

Press 'ON/OFF' to cancel and go back to the temperature display setting.

Holiday mode

With the power on, press '≡' to switch between manual mode, programming mode and holiday mode. After selected holiday mode '🏠' will display and will run at 16°C. Press '≡' to cancel holiday mode.

Boost function can be used during holiday period.

Open window function

If the room temperature drops 6°C in 4 minutes, the open window function will activate and display '[]', then turn down all heating. When the room temperature increases by 2°C the thermostat will return to normal operation. Press any button to cancel the open window function while it is active.

Anti-seize function

If the thermostat has not been activated for over 1 week then to prevent the valve and pump from seizing, the thermostat will run the system for 5 minutes.

Frost protection

In frost protection mode, when the temperature drops below what has been selected, the thermostat will start the heating until the temperature has been raised by 3°C.

Intelligent function

The intelligent function adjusts the starting time for home heating according to the temperature measured within the building. It preheats your rooms to the temperature according to your schedule.

Time Proportional and Integral (TPI) display

The TPI function increases boiler efficiency by firing the boiler at regular intervals, adjusting firing duration with demand, to maintain set room temperatures. It can provide great cost savings.

Time setting

Press and hold '⌚' for 4 seconds, press '⌚' to select year, month, day, time scale, time, press '↓' '↑' to adjust setting, press '⌚' to confirm.

If there are no actions for 10 seconds, the thermostat will return to temperature display mode.

Press '⌚' to check time, year, month, day.

Setting the date and time on initial start up

Plug in the power supply. Press '↓' or '↑' to set year, press '⌚' to set month, day, time scale, time, press '↓' '↑' to adjust the setting.



Year



Month



Day



12h/24h optional



Time

Programme setting

Programme setting: 4/6 period programming optional (factory default: 6 period).

When thermostat is on, press and hold '≡' to enter the programming mode. Press '▼' or '▲' to select the programming week (5+2, 5+1+1 or 7 individual day optional).

Press '≡' to enter time setting mode. Press '▼' or '▲' to select time, press '≡' to enter temperature setting mode, Press '▼' or '▲' to select temperature. Press '≡' to save and exit. If no buttons are pushed for 10 seconds, the thermostat will exit program setting automatically.

Default programming (6 period programming)

					
Wake up	Away	Back home	Away	Back home	Sleep
6:00 20°C	8:00 16°C	11:00 20°C	14:00 16°C	18:00 20°C	22:00 16°C

(4 period programming)

			
Wake up	Away	Back home	Sleep
6:00 20°C	8:00 16°C	18:00 20°C	22:00 16°C

In programming state, press and hold '▼' '▲' at the same time to restore factory settings, display 'dEF'

Operation mode

Programming mode (The factory default is programmable)

The thermostat will run according to the pre-set schedule. The screen will show '🕒'

Manual mode

From programming operation mode, press '☰' to enter the manual mode, the screen will display '👉'. Press '^' or 'v' to immediately adjust the temperature and save automatically.

Temporary hold mode

The thermostat will keep the room at the temporary set temperature, and will resume the programme operation mode when you enter the next programme. In programming operation mode, press '^' or 'v' to enter the temporary hold mode, the screen display '👉🕒'. Press '^' or 'v' to immediately adjust the temperature and save automatically.

Alarm instructions

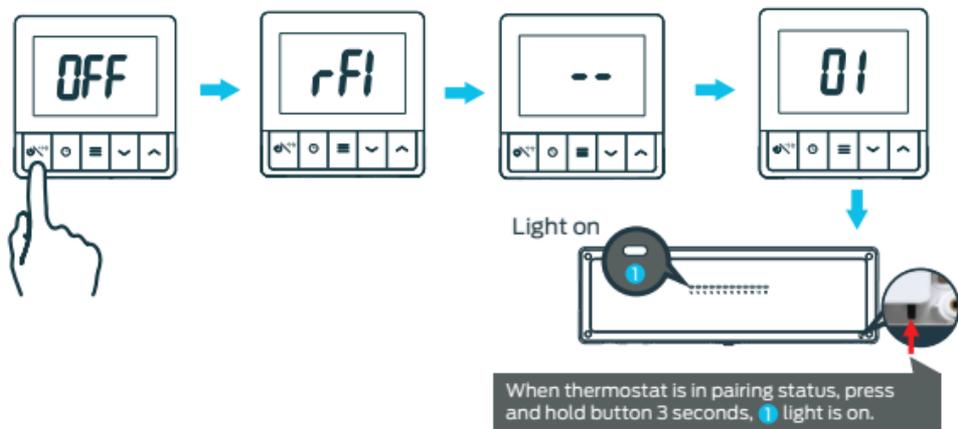
Err. display	Err. condition	Result
Er1	Internal sensor short circuit	Thermostat shut down all heating output
Er2	Internal sensor open circuit	Thermostat shut down all heating output
Er3	External sensor short circuit	Thermostat shut down all heating output
Er4	External sensor open circuit	Thermostat shut down all heating output

Pairing

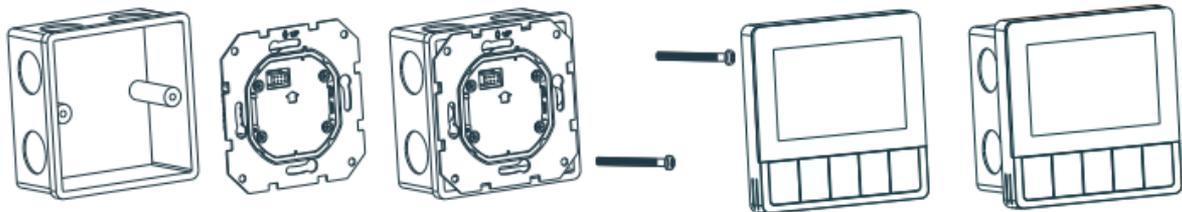
Connecting the thermostat and wiring centre

1. With the thermostat power off, press and hold the on/off button for 4 seconds to enter pairing mode (display should show “rfi”).
2. Press the on/off button again to send a signal to the wiring centre (display should show “- -”).
3. On the Wiring Centre, press and hold the pairing button for 3 seconds to enter pairing mode

4. Use the Wiring Centre pairing button to select the desired zone, indicated by the LED
5. Leave the wiring centre for 3 seconds. The LED should flash to indicate it is pairing to the thermostat
6. Once paired, the wiring centre LED will move to the next available zone. Press and hold the pairing button once again to exit the pairing mode
7. The thermostat is now connected to the chosen zone



Installation



1 Install the base

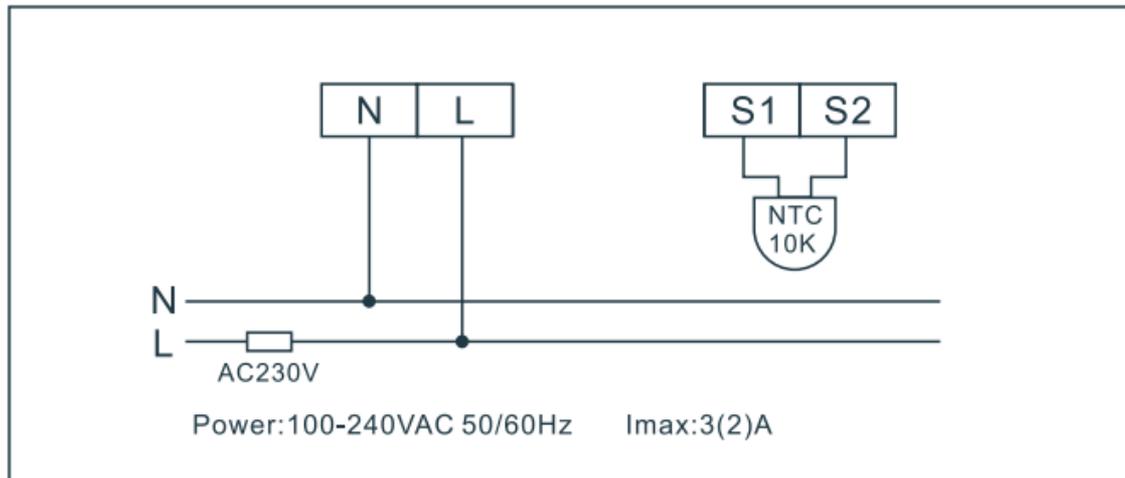
2 Mounting screws

3 Install the panel

4 Finish

Wiring diagram

Wiring diagram for 230V connections:



Suggest cable is not over 1.5mm

Configuration menu

With the thermostat turned off, press and hold '≡' to enter the configuration menu. Press '≡' to select different parameters. Press '^' 'v' to adjust parameters. Press and hold '≡' for 3 seconds, display 'dEF', indicates all the configuration settings have reverted to factory default setting. The thermostat will return to 'OFF' mode if no buttons are pushed within 10 seconds.

Item	Press button	Displayed (factory default)	Press v or ^ to select	Descriptions
1	≡	CL (00°C)	-6°C ~ +6°C	Temperature correction value
2	≡	RM (35°C)	20°C ~ 50°C	Select maximum setting temperature
3	≡	RL (50°C)	5°C ~ 20°C	Select minimum setting temperature
4	≡	BL (2)	1/2/3	Backlight mode 1: Backlight always bright 2: When a button is pressed, the backlight is bright for 15 seconds 3: Backlight is off

Configuration menu

Item	Press button	Displayed (factory default)	Press \downarrow or \uparrow to select	Descriptions
5	≡	db (05 ^{°C})	0.2 ^{°C} - 5 ^{°C}	When the temperature is < room temperature -setting value, the heating will stop. When the temperature is < room temperature + setting value, the heating will start.
6	≡	Pr (On)	ON/OFF	Program option ON/OFF
7	≡	SE (6)	4/6	Select Programming period in one day 6-6 time zones; 4-4 time zones
8	≡	ES (OFF)	On/OFF	Intelligent function option ON : Turn on intelligent function OFF : Turn off intelligent function
9	≡	OP (OFF)	On/OFF	Open window function option ON/OFF

Configuration menu

Item	Press button	Displayed (factory default)	Press \downarrow or \uparrow to select	Descriptions
10	≡	<i>RF (ON)</i>	On/OFF	Frost protection option ON/OFF
11	≡	<i>PP (100^{°C})</i>	5°C-17°C	Frost protection temperature setting
12	≡	<i>PI (ON)</i>	On/OFF	TPI function option: ON/OFF
13	≡	<i>RL (ON)</i>	On/OFF	Anti-seize function selection: ON/OFF
14	≡	<i>bH (NC)</i>	nC/nO	Select the actuator type NC/NO
15	≡	<i>S_n (100)</i>	100/10	External sensor 100 : NTC100K 10 : NTC10K
16	≡	<i>ct (Sr)</i>	Sr/SF/rF	External sensor function option Sr : room mode rF : room and floor mode SF : floor mode

Configuration menu

Item	Press button	Displayed (factory default)	Press \downarrow or \uparrow to select	Descriptions
17	≡	Pt (27.0°C)	6 – 45°C	Select maximum floor setting temperature limitation
18	Press '⏻' to confirm and exit.			

Gateway specification

Adapter output: 5V $\overline{\text{---}}$ 1A

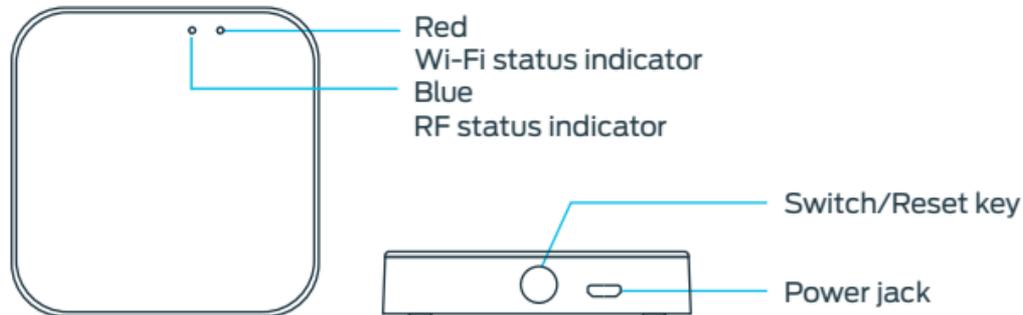
Working temperature: -10°C~55°C

Working humidity: 10%-90%(no condensation)

Wifi frequency: 2.4G Wi-Fi

Wireless frequency: Lora 868MHz

Dimensions: 60.5 × 60.5 × 16.1mm

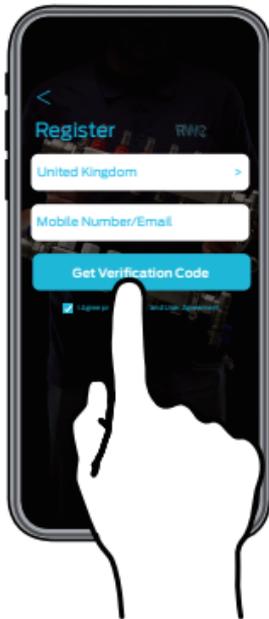
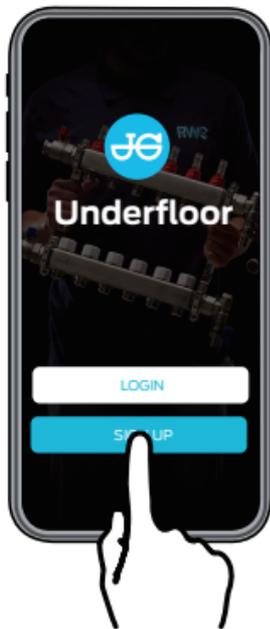


Connecting the App

Download and register

Click App store (click Android application market)

Search for 'JG Underfloor' and download

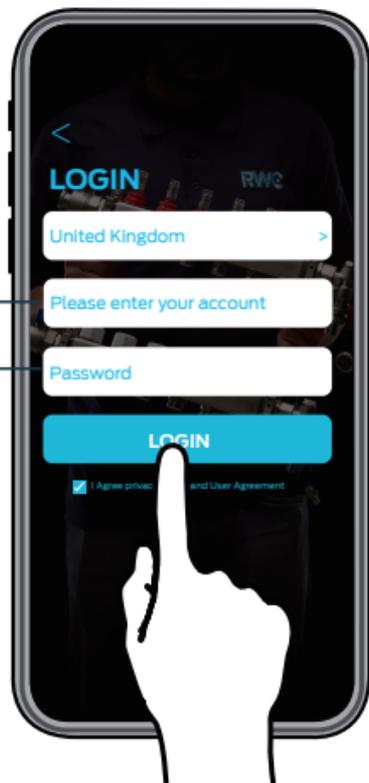


Login

When you finish the registration, log into your email and click on the link to activate your account. Your APP is now ready to use.

Registered mailbox /phone number

Insert your password



Connecting to the Gateway

Tips: First, please turn on the location of your phone.
Press and hold the reset key of gateway until the light turns red and blinks.



- 1 Enter the 'HOME' interface of the app, click the '+' on the top right.



- 2 Click 'Wireless thermostat'.



- 3 Enter your Wi-Fi account and password. Click 'Next'



- 4 Tick 'Confirm and proceed', then click 'Next' (Follow instruction to reset device)



- 5 Adding device...



- 6 Click 'Done', it means the gateway has been added successfully

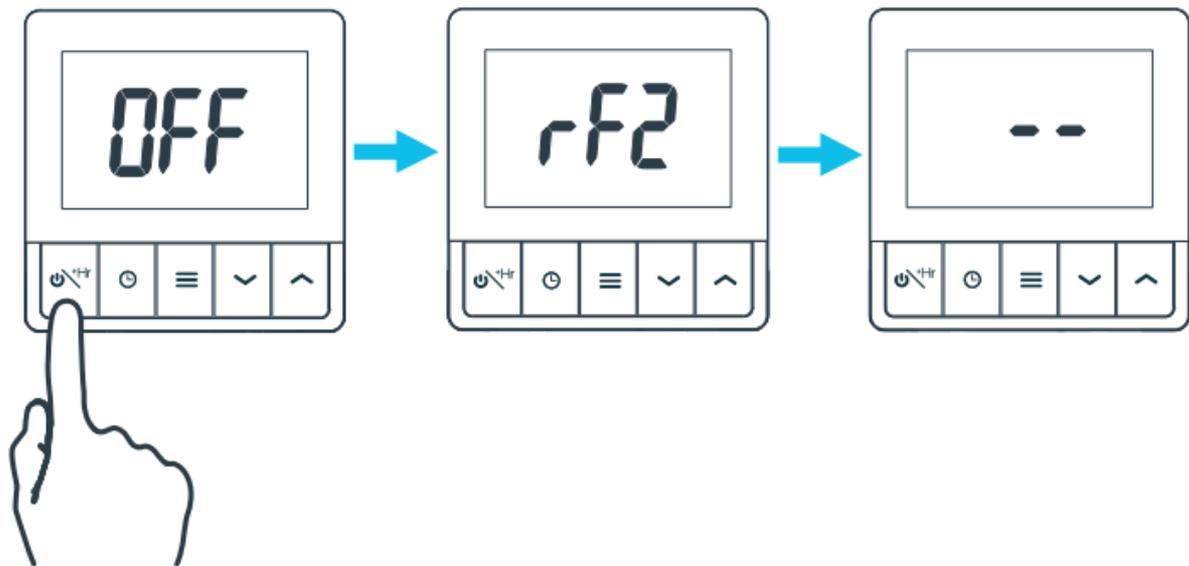


Tips

Before pairing the gateway, you need to power on the gateway. When pairing a gateway, the mobile phone and the gateway must connect to the same network.

Add thermostat

Before adding the thermostat, press and hold '⏻' for 3 seconds, press '↓' '↑' to select 'rf2', then press '⏻' to enter code match status and it will display '- -' then then follow these steps to connect the app.

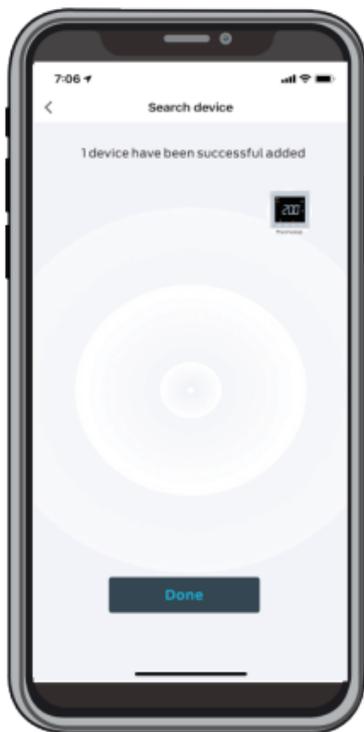




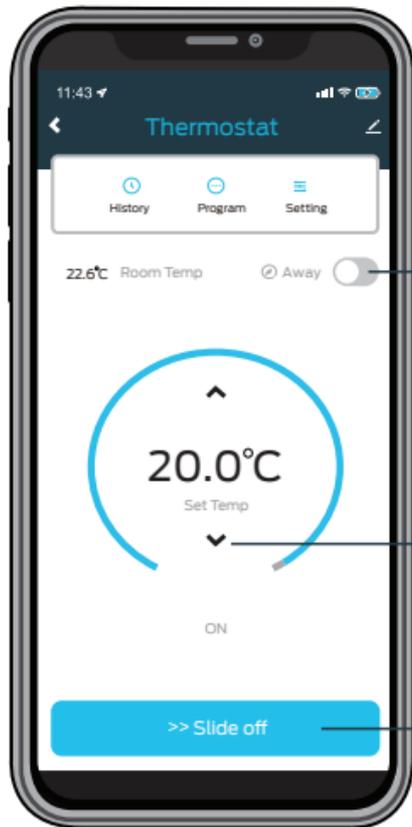
1 Click '+ Add subdevice'



2 Adding device...



- 3 Added successfully
Click 'Done'.



Temporary leaving mode:

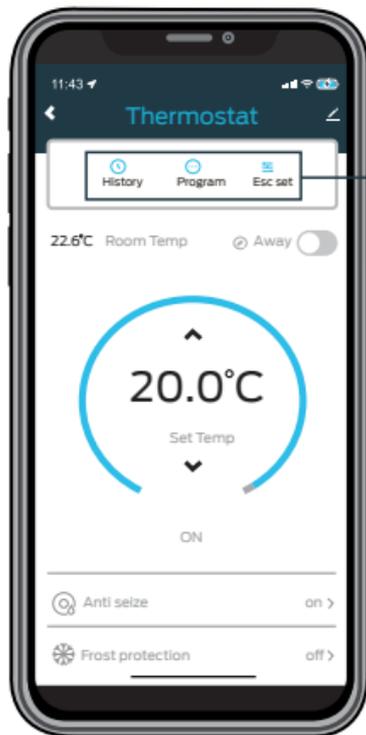
If you are away from home temporarily, click the 'Away' button, the temperature will remain at 16°C, the energy-saving icon '🌿' turns green and is on.

After you arrive at home, click the button again to recover the previous temperature setting.

Press '^', 'v' to adjust temperature

Slide to power on/power off

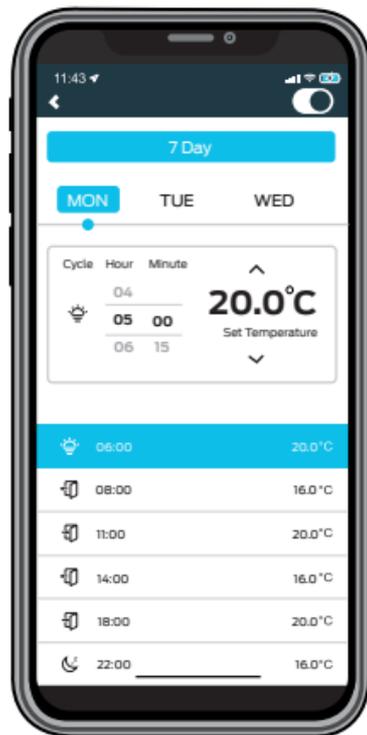
APP Setting-programming



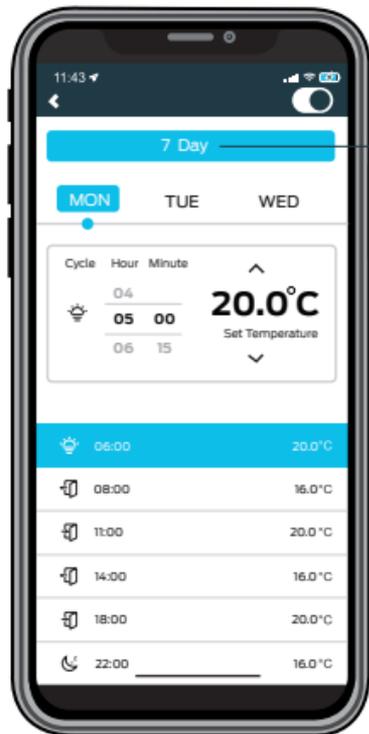
Click the 'Program' to enter the programming mode

Click the 'History' for checking the historical temperature records

Click the 'Esc set' for setting specific parameters



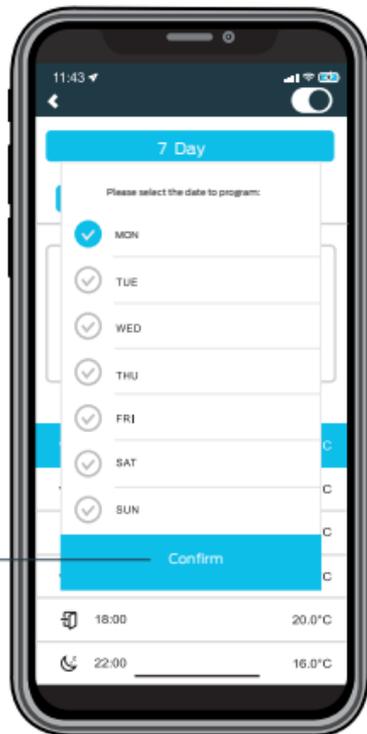
APP Setting-Multi-day Programming



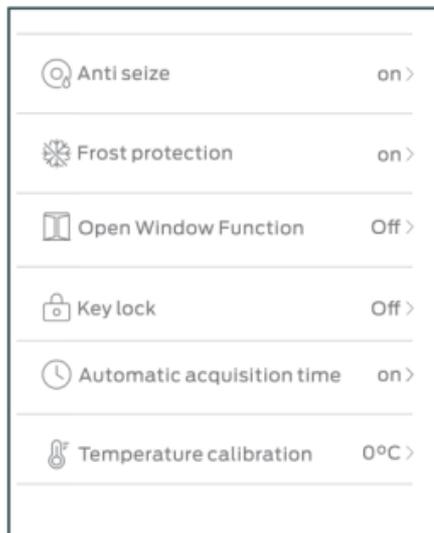
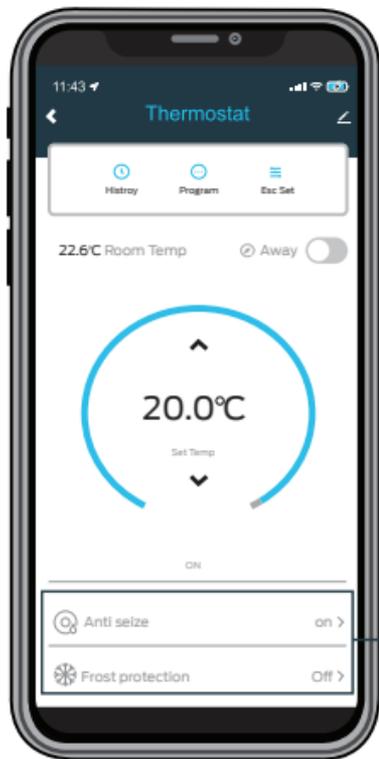
Click '7 Day' to select the date

- 1 Click the 'Program' to enter the programming mode
- 2 Slide up and down to select the time, press '^' 'v' to set temperature in different periods of time
- 3 Click 'Submit' to confirm

Click 'Confirm' after selecting the date

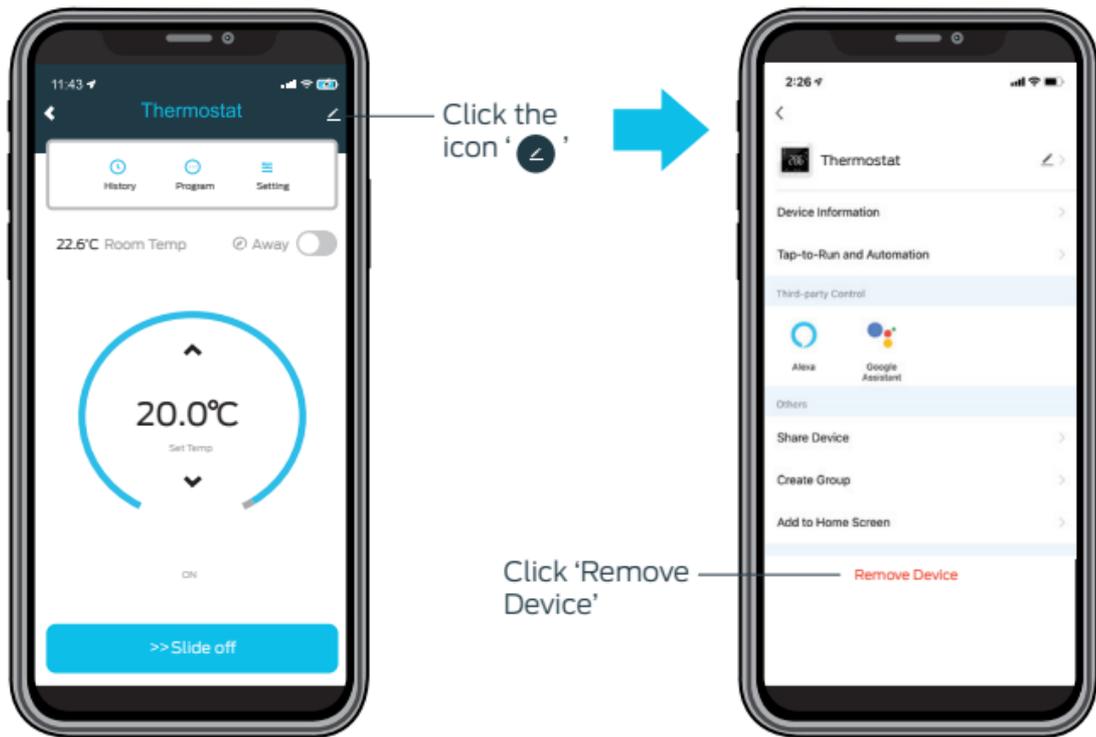


Optional Parameter Setting



Slide up and down to select different optional parameters

Remove devices



Voice command

After waking up the speaker you can say:

Amazon Alexa

- * Alexa, turn on bedroom.
- * Alexa, turn off bedroom.
- * Alexa, raise the bedroom by 1 degree.
- * Alexa, drop the bedroom by 1 degree.
- * Alexa, set the bedroom to 16 degrees.

Google Assistant

- * Ok, Google, turn on bedroom.
- * Ok, Google, turn off bedroom.
- * Ok, Google, set the bedroom to 16 degrees.

Tips:

Bedroom is the device name. You can name it during the device set up.
The temperature graduations and format must be the same in the speaker and the thermostat.



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