

expert4house BHT-003 Series Zigbee Thermostat



expert4house BHT-003 Series Zigbee Thermostat User Guide

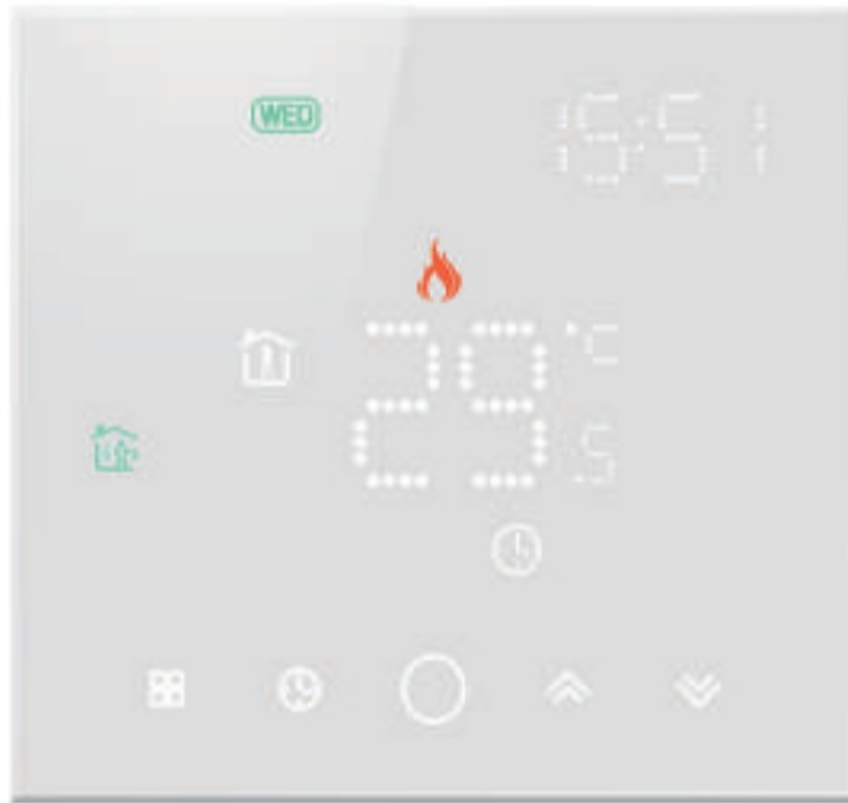
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expert4house BHT-003 Series Zigbee Thermostat



PRODUCT INFORMATION

- **Specifications**

- **Model:** BHT-003 Series Zigbee Thermostat
- **Compatible with:** Water Heating/Boiler/Electric Heating systems
- **Power Supply:** 95 ~ 240 VAC, 50 ~ 60HZ
- **Current Load:** 3A
- **Timing Error:** < 1%
- **Shell Material:** PC + ABS (flame retardant)
- **Wire Terminals:** Wire 2 x 1.5 mm² or 1 x 2.5 mm²

Product Usage Instructions

- **Installation**

- Make sure the power is turned off.
- Refer to Fig 1 for the correct wiring configuration.
- Connect the power supply and load it into the appropriate terminals. Refer to the user manual for wiring details and Fig 3 for reference.
- Mount the thermostat properly on the wall. Refer to Fig 4 for guidance.

- **Home Screen Quick Reference**

- **Week Lock:** Indicates if the thermostat is locked or unlocked.
- **Period:** Displays the current period (e.g., Morning, Afternoon, Evening).
- **Room Temp.:** Shows the current temperature in the room.
- **Set Temp.:** Displays the desired temperature set by the user.
- **Underfloor Heating:** Indicates if the underfloor heating is turned on.
- **WIFI:** Indicates if the thermostat is connected to a Wi-Fi network.

- **Clock:** Displays the current time.
- **Heating On:** Indicates if the heating system is turned on.
- **Temp. Manual:** Allows the user to manually adjust the temperature.
- **Energy-saving Programmable:** This enables the user to set a programmable schedule for energy-saving purposes.
- **Operation**
 - **During Power On:**
 - **Power On/off:** Press the power button to turn the thermostat on or off.
 - **Manual & Programmable Mode:** Touch the mode button to switch between manual mode and programmable mode. In programmable mode, the period cannot be adjusted. To change the period, switch to manual mode. In manual mode, press the temperature buttons to set the desired temperature.
 - **Lock/Unlock:** Press and hold the lock icon for 5 seconds to lock or unlock the thermostat.
 - **Set Programmable Schedule:** Touch and hold the period icon (e.g., Monday) to set the desired temperature for that period. Repeat this process for other periods and days of the week. Press once more to confirm and exit.

FAQs

- **Q: What is the model definition of the BHT-003 series thermostat?**
 - **A:** The model definition consists of the following codes:
 - **GC:** Water/Gas Boiler, 3A
 - **L:** Backlight
 - **P:** Weekly Programmable
 - **W:** Wifi
 - **Z:** Zigbee
 - **S2:** Both internal sensor and floor external sensor
- **Q: What should I do before wiring and installing the thermostat?**
 - **A:** Before wiring and installing the thermostat, make sure the power is turned off. Also, ensure that the installer is a trained and experienced service technician.

For Water Heating/Boiler/Electric Heating

Welcome

- Thank you for your purchase. Your new thermostat will provide uniform and comfortable temperature control throughout every room on your property.
- We bring together technology, craftsmanship, and the highest quality materials to provide you with a safe, reliable product combined with a sleek, contemporary design.
- Please read this installation/programming manual for comprehensive instructions on installing and operating your thermostat.
- Please also ensure a suitably qualified person installs your thermostat and complies with all local regulations.

In the box you will find

- Thermostat 1pc
- User Guide 1pc
- QC Passed 1pc
- Screws 2pc
- Floor Sensor (2.5m) (Floor sensor is Optional) 1pc

ABOUT YOUR THERMOSTATS

The BHT-003 series range has been developed to control electric underfloor, water heating or water/gas boiler systems. These units are designed for use in commercial, industrial, civil and domestic properties

MODEL DEFINITION

- **GA:** Water heating, 3A GC: Water/Gas Boiler, 3A
- **GB:** Electric floor Heating, 16A
- **L:** Backlight
- **P:** Weekly Programmable
- **W:** Wifi
- **N:** Modbus Communication
- **Z:** Zigbee
- **S2:** Both internal sensor and floor external sensor
- **For example** BHT-003 GC

FEATURES

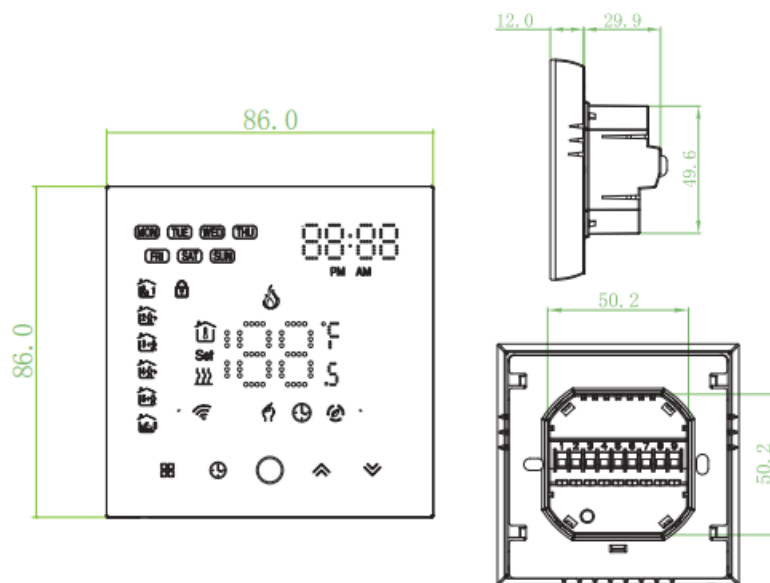
On Appearance

1. Convenient operation creates a convenient life.
2. Options of black and white housing.
3. Fashion design blends in with any decor.
4. Touch Screen display with backlight is easy to read, even in the dark.
5. Bright buttons always remind you the world truly exists.
6. Easy UI interface could be used even by a child.

On Functionality

1. Powerful functions are available such as Modbus /WIFI /Zigbee etc.,
2. 0.5°C Accuracy keeps the temperature within the level you set.
3. Data memory when power is off.
4. 5+1+1 four periods programmable maximize comfort and economy.
5. Create a thermostat group for Centralized control
6. All setting languages synchronize your time zone, address, and language.

DIMENSION



TECHNICAL DATA

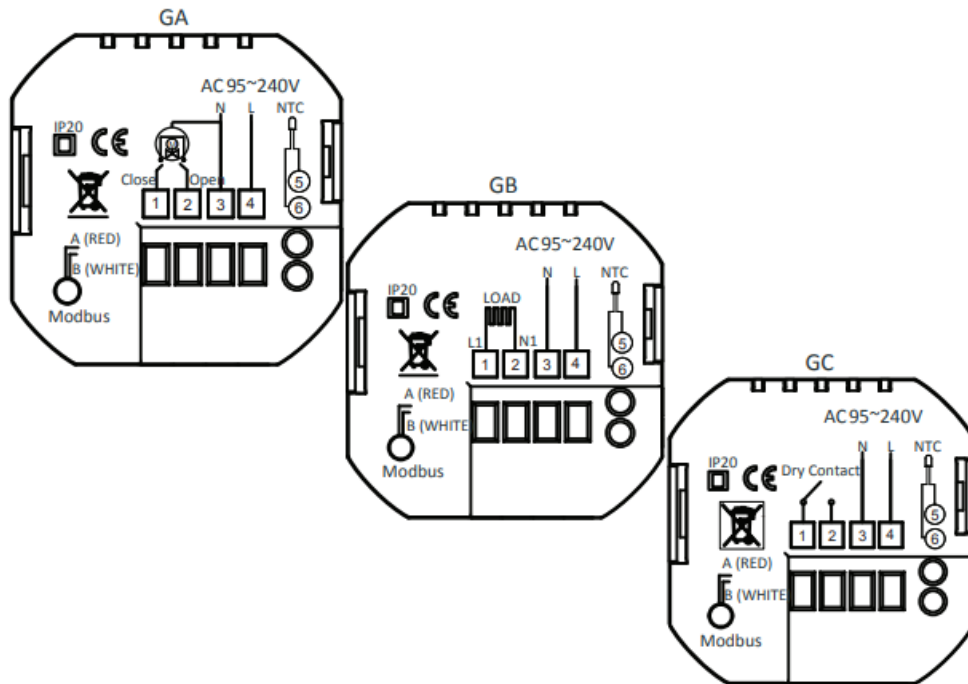
- **Power Supply:** 95 ~ 240 VAC, 50 ~ 60HZ
- **Current Load:** 3A (water heating/water boiler/gas boiler) 16A (electric heating)
- **Sensor:** NTC
- **Accuracy:** +0.5 C
- **Set Temp. Range:** 5 -35C
- **Display Temp. Range:** 5 ~ 99 C
- **Ambient Temp.:** 0 ~ 45 C
- **Ambient Humidity:** 5 ~ 95% RH (Non-Condensing)
- **Storage Temp.:** -5 ~ 45 C
- **Power Consumption:** <1.5W
- **Timing Error:** < 1%
- **Shell Material:** PC +ABS (flame retardant)
- **Installation Box:** 86 * 86mm Square or European 60mm Round Box
- **Wire Terminals:** Wire 2 x 1.5 mm² or 1 x 2.5 mm²
- **Protection Class:** IP20
- **Buttons:** Capacitive Touch Buttons

BEFORE WIRING AND INSTALLING

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. The installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

CAUTION: Electrical Shock or Equipment Damage Hazard. Can shock individuals or short equipment circuitry. Disconnect power supply before installation.

WIRING



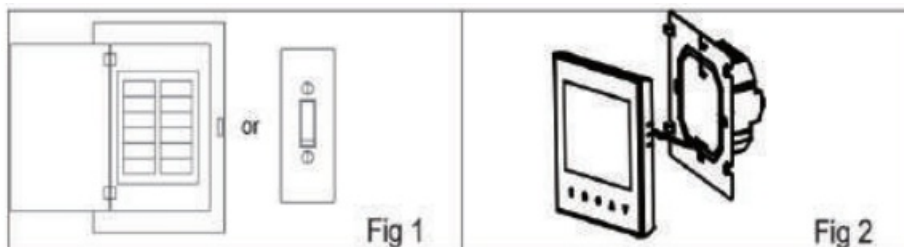
Note:

- GA is for water heating;
- GB is for electric heating;
- GC is for water/gas boiler;
- NTC and Modbus are optional.

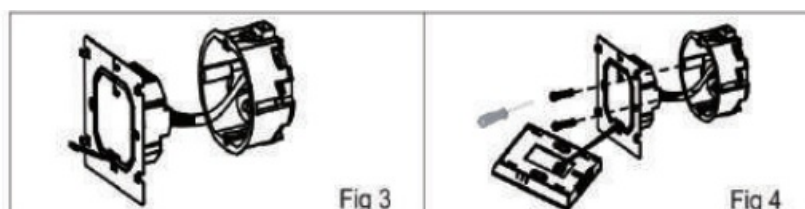
INSTALLATION

Your thermostat is suitable for installation within a standard 86mm pattress box or a European 60mm pattress box.

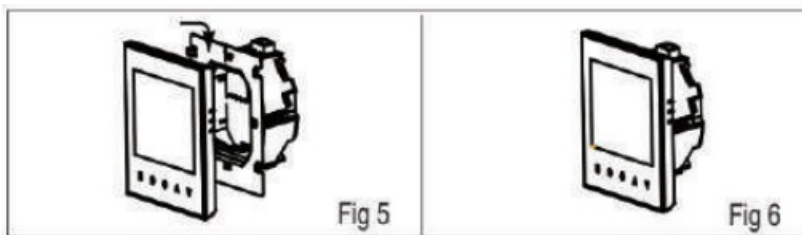
- **Step 1.** Keep the power off. See Fig 1.
- **Step 2.** Remove the mounting Plate by rotating the LCD part. See Fig 2.



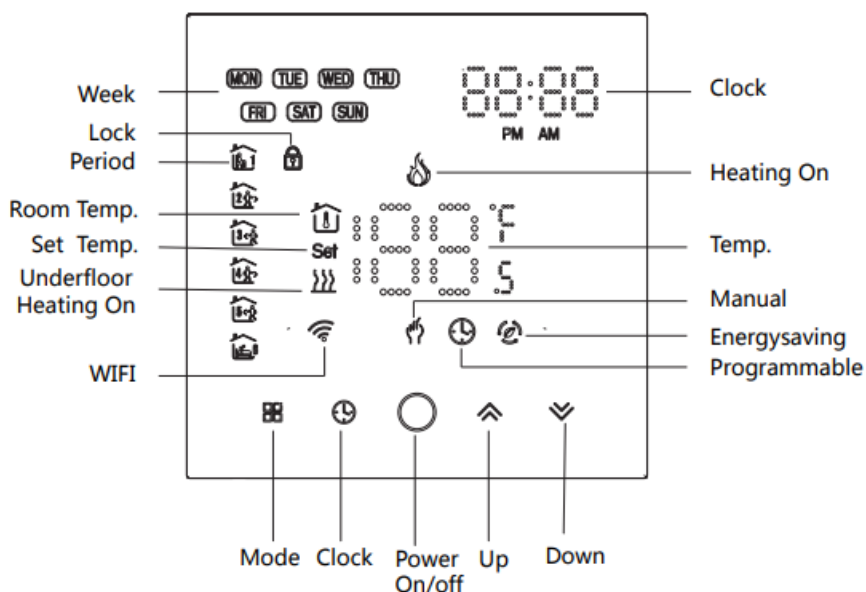
- **Step 3.** Connect the power supply, and load it into the appropriate terminals. (see “Wiring your thermostat” for details and Fig 3).
- **Step 4.** Fix the mounting plate into the wall with screws in the box. See Fig 4.



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







HOME SCREEN QUICK REFERENCE





OPERATION












During Power On

1. **Power On/off:** Press  to turn the thermostat on/off.
2. **Manual & Programmable**
 - Touch  (mode) to change between manual mode and program mode.
 - In the manual mode,  will display at the bottom of the screen
 - In programmable mode, the period icon  will show on the left side.
3. **Setting Temperature**
 - In the mode of programmable, set temperature, time could not be adjusted. If the user wants to change, please go to manual mode or programmable mode.
 - In the mode of manual, press   to set the desired temperature.
4. **Adjusting/Setting the Clock**
 - Touch the icon  to set minute, hour, and weekday (1 = Monday,
 - 2 = Tuesday etc.) by using the   – arrows. Press  once more to confirm and exit.

5. Locking your Thermostat

- Press and hold the   for 5 seconds to lock/unlock your thermostat
- In item 3 of high senior options, you can select full lock or half lock.

6. Adjusting/setting the Program Schedules

- In program mode, touch and hold the icon  until the weekday schedule settings appear (1 2 3 4 5 will show along the left of the screen).
- Use the   and arrows to adjust the on-time.
- Press the icon  and use the   and arrows to set the time (1st period). Press @ again and use A and arrows to set the temp.
- Press the icon  and use the   and arrows to set the time and temp. (2nd period). Repeat this process for periods 3 4 and 5 6.
- Press the icon  once more to enter the Saturday schedule settings (6 will show along the left of the screen).
- Repeat the above process to set the period and temp. and Sunday schedule.
- Press  once more to confirm and exit.

Default settings for program schedule

Time display	MON.-FRI. (①②③④⑤ shows on screen)		SAT. (⑥ shows on screen)		SUN. (⑦ shows on screen)	
	TIME	TEMP.	ON-TIME	TEMP.	ON-TIME	TEMP.
Period 1	6:00~8:00	20	6:00~8:00	20	6:00~8:00	20
Period 2	8:00~11:30	15	8:00~11:30	20	8:00~11:30	20
Period 3	11:30~13:00	15	11:30~13:00	20	11:30~13:00	20
Period 4	13:30~17:00	15	13:30~17:00	20	13:30~17:00	20
Period 5	17:00~22:00	22	17:00~22:00	20	17:00~22:00	20
Period 6	22:00~6:00	15	22:00~6:00	15	22:00~6:00	15

- A separate schedule may be set for weekdays (Mon – Fri) and for weekends (Sat or Sun).

Checking the Temperature of Floor Sensor

- Press and hold  the arrow for 5 seconds to display the temp. of floor sensor.

During Power Off

• Setting the Functions and Options

- When power is off, press and hold  and  at the same time for 5 sec. in order to reach system

function. Then press  to change the different items.

- All the settings will confirm automatically when the power is on.

Code	Function	Setting and options	Default
1	Temperature compensation	-9 to 9 °C (for internal sensor)	-3
2	Deadzone Temp.	1-5°C	1
3	Button Locking	01:All buttons are locked except the power button. 01:All buttons are locked.	1
4	Sensor typer	In: Internal Sensor(to control the temp.) Ou: External Sensor (to control the temp.) AL: Internal & External Sensor (Internal sensor to control the temp., external sensor to limit the temp.)	AL
5	Min. Set Temp.	5-15°C	5
6	Max.Set Temp.	15-45°C	30
7	Temp. display	00:Display set Temp. and Room Temp. 01:Only display set Temp.	00
8	Low temp. protection setting.	0-10°C	0
9	High temp. protection setting.	25-70°C	45
A	Daytime display brightness (6:00-22:00)	0-8	1
B	Brightness display brightness (22:00-06:00)	0-8	1
C	Reset	00: No factory reset; 01: Factory reset	00
D	version number		U1

About ZigBee

ZigBee CONNECTION Step 1 Download your APP (Fig 1-1)

- Search for “Smartlife” in Apple Store or Google Play or use a browser to scan the QR code above (Figure 1-2), and complete account registration and installation according to the guidance of the APP.



Fig1



Fig2 IOS/Android

- **Step 2.** The second step is to confirm that you have connected to the Tuya zigbee wired or wireless gateway. For the gateway connection process, please refer to the manual of the gateway you purchased; the following process is based on the "wireless smart zigbee gateway"
- **Step 3.** Connect the thermostat Check the tutorial below to complete the connection and setup.
- **Method 1:** Scan the QR code to configure the network guide (Fig 3.1-Fig 3.4)

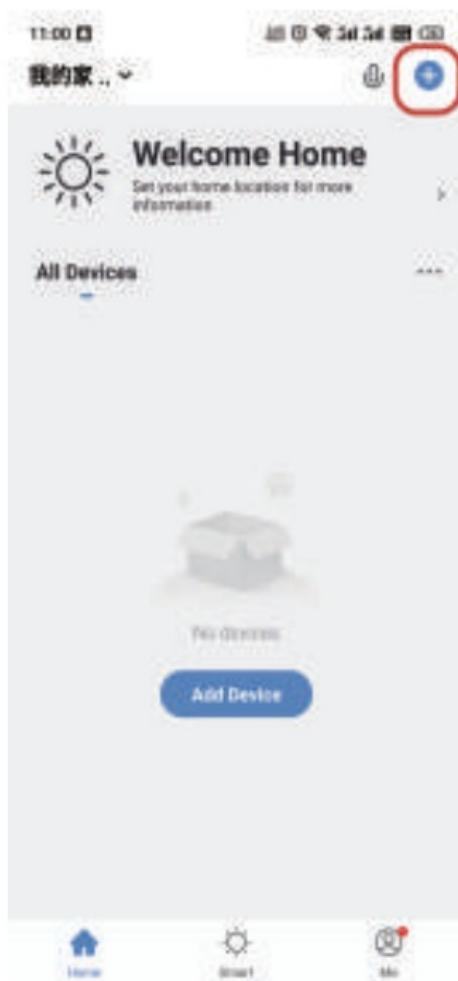


Fig3.1



Fig3.2



Scan this QR code

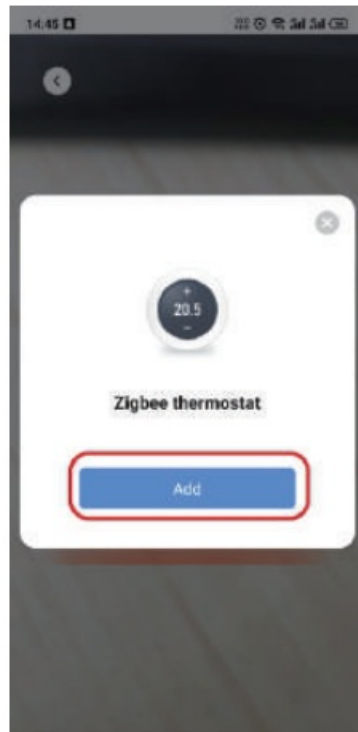


Fig3.3

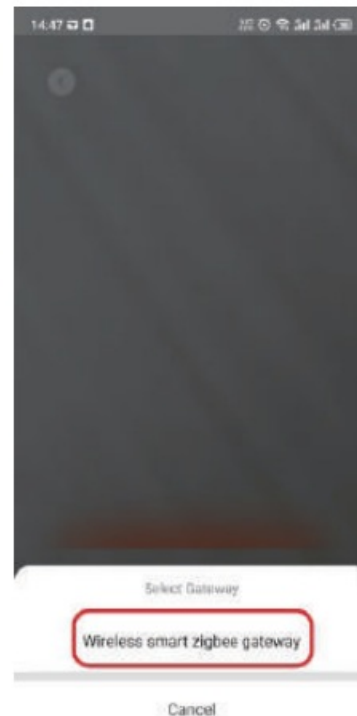


Fig3.4

- **Method 2:** Ordinary distribution network guidance (Fig. 3. 5 & Fig. 3.6)



Fig3.5



Fig3.6

Network distribution mode:

1. Zigbee quick connect

- When the thermostat is off, press and hold the “down button” until the thermostat screen flashes quickly and displays the “ZigBee” icon, and then operate according to the following figure (Fig3.7-Fig3.8).

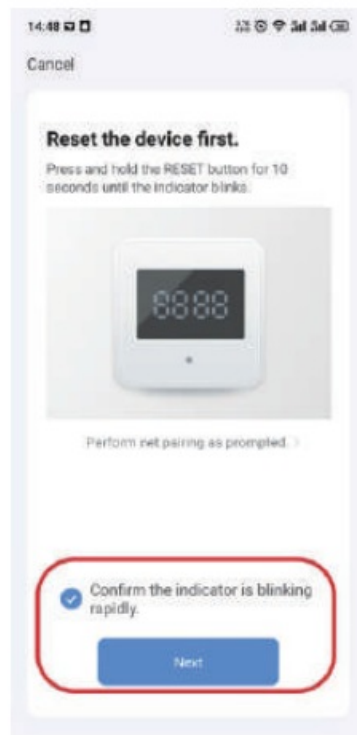


Fig3.7

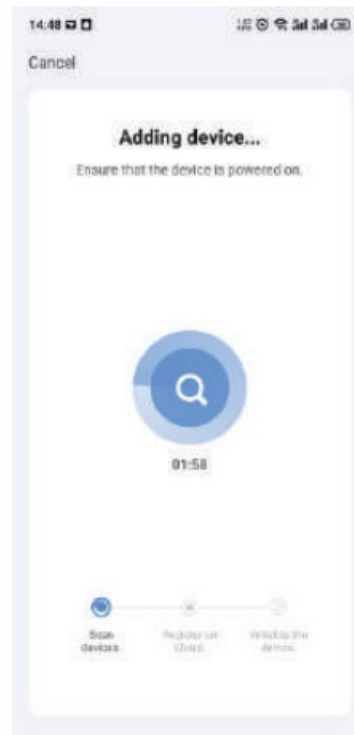


Fig3.8

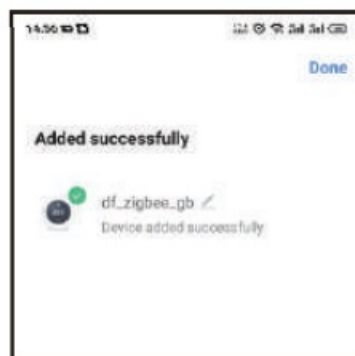


Fig3.9

2. Zigbee gateway connection

- With the thermostat turned off, press and hold the “down button” until the thermostat screen flashes quickly and displays the “ZigBee” icon, and then operate according to the following figure (Fig3.10-Fig3.13).

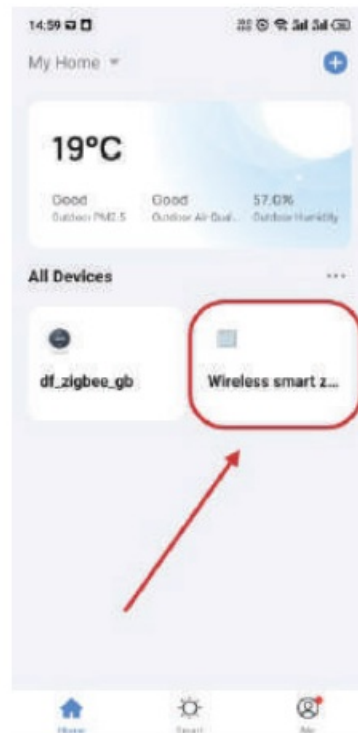


Fig3.10

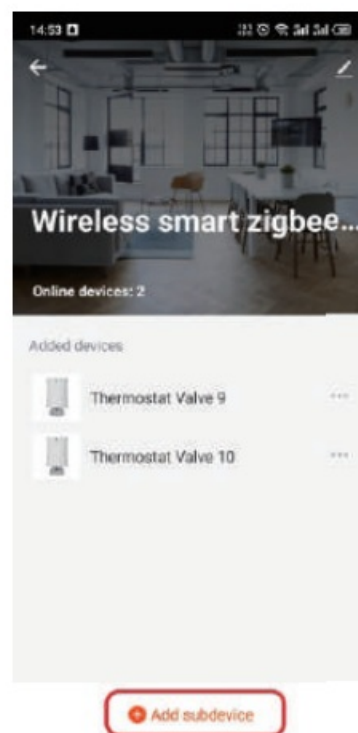


Fig3.11

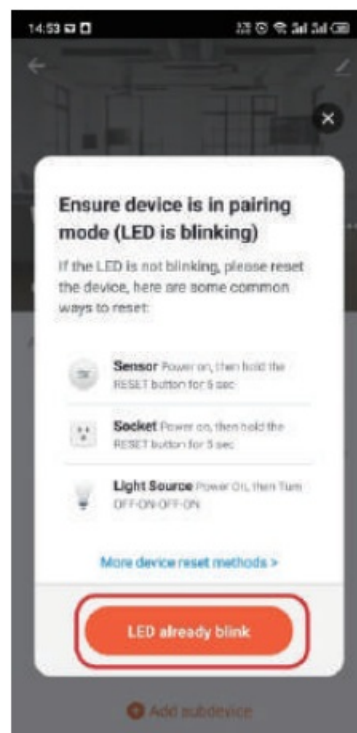


Fig3.12

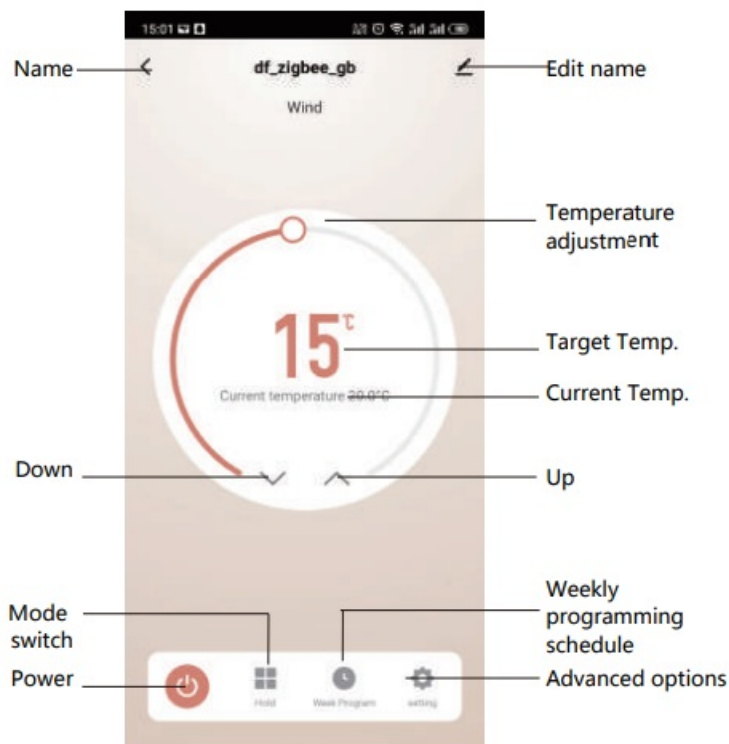


Fig3.13



Fig3.14

- APP operation interface description (heating thermostat)




Simplement Exception Handling

No.	Phenomenons	Handling
1	The power is on but without display.	Check if the terminals between the LCD panel and the Power Unit Box are loose.
2	Without output but display works.	Use a new LCD panel or new Power Unit Box to replace the old one.
3	Room Temp. Is a little different from the actual.	Do temperature calibration in item 1 of high senior options

Service

- 24-months warranty since the date of purchase. Service calls, please contact period may need a charge.

Documents / Resources

	expert4house BHT-003 Series Zigbee Thermostat [pdf] User Guide BHT-003 Series, BHT-003 Series Zigbee Thermostat, Zigbee Thermostat, Thermostat
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References

- [User Manual](#)

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