



# VOLCANO INTELLIGENT THERMOSTAT MANUAL



RB-2305HT



Volcano series is a thermostat for domestic water heating system, which can be used in underfloor heating system for individual room temperature control and individual household temperature control. By sensing the comparison between room temperature and set temperature, it can accurately control the operation status of the underfloor heating system and achieve the purpose of energy saving while improving the comfort.




This series of thermostats can not only be directly connected to thermal actuators and heat source equipment, but can also be combined with the base station to achieve a perfect system of centralised indoor temperature monitoring and control .

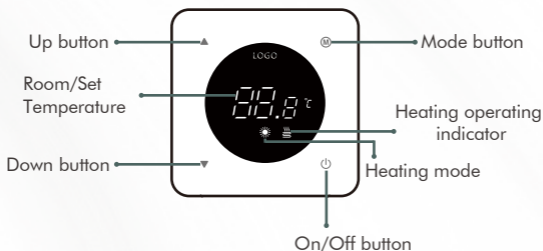
## Technical parameters

- Model: RB-2305HT
- Voltage: 100-240VAC~ 50/60Hz
- Temperature control range: internal 5°C~35°C/external 5°C~60°C
- Temperature control accuracy:  $\pm 1^\circ\text{C}$
- Temperature sensor: NTC
- Housing material: PC flame retardant
- Load current: 3A (MAX)
- Dimension: 86mmX86mmX12.8mm
- Color: White/Black/White&Black

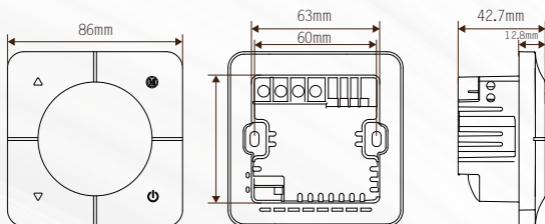
## Functions and displays

In the power-on state, the user can operate as follows.

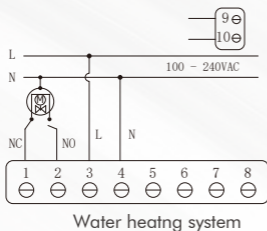
-  Mode button: Long press 1 second to enter the selection and setting of advanced functions
-  On/Off button: Long press 1 second to turn on or off the power
-  Up/Down button: temperature adjustment and parameter selection



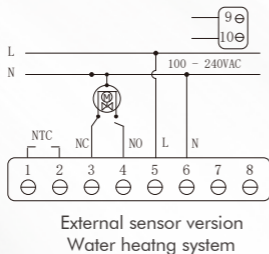
## Dimensions



## Electric connection



- 1: Normally open valve
- 2: Normally closed valve
- 3: L line
- 4: N line
- 9/10: Dry contact connection



- 1/2: NTC
- 3: Normally open valve
- 4: Normally closed valve
- 5: L line
- 6: N line
- 9/10: Dry contact connection

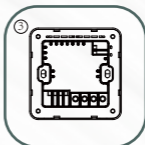
## Installation



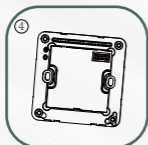
Disassemble the housing: use a 3.5mm wide straight screwdriver. Reach in along the seam and break it lightly to open the panel.



move the panel up and down to separate the panel from the bottom shell



Connect the relevant lead wires in the concealed box to the terminal block specified in the power board according to the wiring diagram.



Fasten the bottom shell to the wall concealed box with screw.



Connect the display board with the power board through the cable socket



Adjust panel installation posture and matching gap, then debug and delivery

### Attention

1. The front-end power supply of the thermostat switch should be set up with an independent switch or power socket. The user should cut off the power supply to ensure safety when the control system is not in use .

2. Installation requires professional installation and maintenance personnel to operate, the thermostat switch input circuit should be configured to the front end of the appropriate power switch. After installation, users should be trained on how to use the thermostat and told that the power should be cut off when it is not working.

3. Installation position requires 1.4 metres high from the ground, avoiding direct sunlight on the thermostat, and should shelter from wind and heat sources.

4. Connect the circuit according to the wiring diagram of the bottom shell. If the controller does not match with the equipped installation diagram, please contact the dealer or factory in time.

5. Equip the load according to the marked current, and prohibit overload installation and matching.






## Other operations and tips

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- High temperature protection tip: When the room temperature is higher than the protection value, the temperature display value starts flashing and the load is automatically switched off. When the indoor temperature is lower than the protection value, the temperature display value stops flashing and the protection status is cancelled automatically.
- Low temperature protection tip: When the indoor temperature is lower than the protection value, the temperature display value starts flashing and the load turns on automatically. When the indoor temperature is higher than the protection value, the temperature display stops flashing and the protection status is cancelled automatically.
- Temperature sensor failure prompt:  
Please select the internal and external temperature sensor correctly. If the selection is wrong or the sensor is faulty (damaged), E1, E2, E3 or E4 will appear on the display interface, and the thermostat will stop working until the fault is eliminated. E1 and E2 represent that the built-in sensor is not detected or the built-in sensor is faulty. E3 and E4 represent that the external sensor is not detected or the external sensor is faulty.
- Valve protection function included in the device.

## Advanced Settings

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Long press  under power-on condition to enter the setting mode of internal and external sensors, press   to change the parameter value, press  to switch to the next item, and press  to confirm and save automatically after adjusting the parameters.

- ▲ Internal and external probe selection: "In" for internal sensor (internal sensor for temperature measurement), "Out" for external sensor (external sensor for temperature measurement), "ALL" for internal and external sensor (control temperature by internal sensor, limit temperature by external sensor).

**Note:** If an external probe is not connected and an external probe is selected, E3 and E4 alarms will appear on the screen. To cancel the alarm, please press the factory reset key combination or press the M key within 30 seconds of shutting down to switch to the correct temperature probe.

Long press **Ⓜ** under the state of power off to enter the advanced parameter setting mode, press **▲▼** to change the parameter value, press **Ⓜ** to switch to the next item, and press **⓪** to confirm and save automatically after adjusting the parameter.

Display code	Option contents (press Ⓜ to switch)	Default setting	Press up and down to adjust, ⓪ confirm to save
H1	temperature compensation	0 C	-9 C ~ +9 C
H2	start-up temperature difference	2 C	0 C ~ 9 C
H3	High temperature protection	45 C	30 ~ 60 C
H4	Low temperature protection	5 C	5 ~ 10 C

**Restore factory value:** within 20 seconds after switching off the power, press "▲" and "▼" at the same time for 5 seconds, the thermostat will be restored to the factory default value. The thermostat will restart and enter the working state after restoring the factory settings and full display.

## Fault resolution

Fault phenomenon		Possible causes	Measures
No display on thermostat		<ol style="list-style-type: none"> <li>Power line input error or no power input</li> <li>Panel and power board plug port misalignment</li> </ol>	<ol style="list-style-type: none"> <li>Check the power cord connection or power input voltage</li> <li>Check the power board, re-insertion</li> </ol>
Temperature display is not normal		Check if the compensation correction is correct	Compensation correction in the first item of advanced settings
When sensor selection is IN (internal sensor)	Short circuit display E1	internal Sensor Failure	Check whether the pins of the internal sensor for are short circuit or disconnected.
	Open circuit display E2		
When the sensor selection is OUT (external sensor)	Short circuit display E3	External Sensor Failure	Check whether the pins of the external sensor are short-circuited or disconnected, which can be done in the Advanced Settings, select the internal sensor in the second item.
	Open circuit display E4		
When the sensor selection is ALL	Internal sensor short circuit display E1	internal Sensor Failure	Please refer to the above measures for IN (internal sensor) or OUT (external sensor).
	Internal sensor open circuit display E2		
	External sensor short circuit display E3		
	External sensor open circuit display E4		

 **Note:** In order to improve the quality of the product and experience, the product may be updated from time to time, if this note fails to indicate in time, please understand!