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MANUAL

BLAUBERG

AIR-TO-WATER SPLIT TYPE HEAT PUMP
INDOOR UNIT (HYDRONIC MODULE)

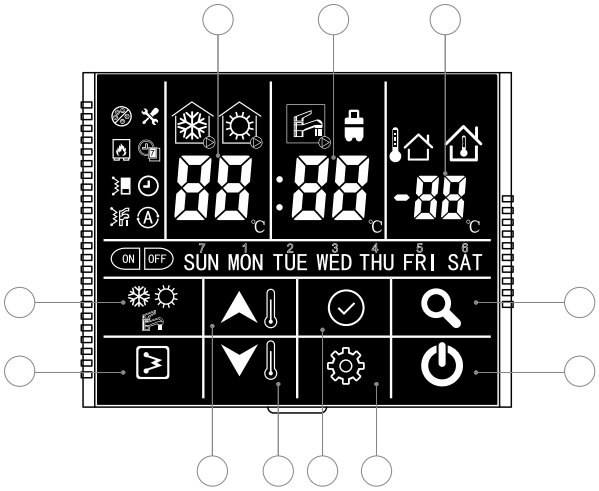
TOUCH SCREEN WIRED CONTROLLER

AIR-TO-WATER SPLIT TYPE HEAT PUMP INDOOR UNIT (HYDRONIC MODULE)

This wired controller is used for communicating with the system main board, controlling the operating status of the system through touch keys, and displaying the working status of the whole system through its LCD screen.
The wired controller and the main board will check whether the communication is successful within 1 minute after power-on. If the communication is not successful, the main control board (30 seconds) and the wired controller will alarm the communication fault. If the communication is successful later, the alarm fault is restored and normal operation control is restored.

■ Buttons / Indicator

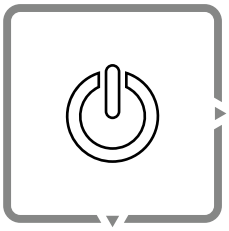
1. Mode Setting
2. Electric auxiliary heating
3. Temperature +
4. Temperature –
5. Setting
6. OK
7. ON/OFF
8. Query
9. Left digital tube
10. Middle digital tube
11. Right digital tube



	Anti-freezing		Error		Cooling mode ON
	External heat source (Reserved)		Weekly timer		Heating mode ON
	Hydronic module heater		Clock		DHW mode ON
	Water tank heater		Auto function		Outdoor temp.
ON	Timer ON	OFF	Timer OFF		Indoor Temp.
	Cooling mode		Heating mode		DHW mode
7 SUN	Day		Time / temp.		Holiday mode

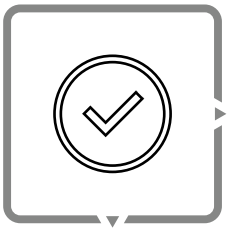
■ Notes on using conditions:

- Power supply: AC 220V±30%, the main board of the hydronic module supplies power to the wired controller.
- Working environment temperature: -30 °C … +50 °C.
- Working environment humidity: RH10 % … RH95 %.
- Touch any key when the screen is off to light up the screen.



ON / OFF

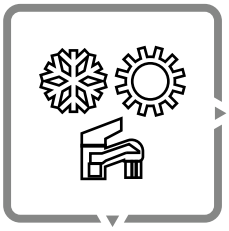
PRESS THIS BUTTON TO TURN THE UNIT ON OR OFF



OK

PRESS THIS BUTTON TO RETURN TO THE MAIN INTERFACE

Press ⓞ button to confirm the settings, exit all interfaces of the setting or query and return to the main interface.



MODE

PRESS THIS BUTTON TO SELECT THE MODE

1. When DHW mode is OFF

When the main interface is turned on or there is a timing state, press button:

Only heating model: the wired controller can only select heating mode;

Heat pump model: it will be selected heating - cooling - heating.

2. When DHW mode is ON.

When the main interface is turned on or there is a timing state, press button:

Only heating model: the wired controller can only select heating mode, DHW mode and heating + DHW combination mode;

Heat pump model: it will be selected heating - DHW - cooling - cooling + DHW - heating + DHW - heating.

3. Sterilization mode

Long press button, the water tank heater icon displays 5S, and the high-temperature sterilization mode is manually activated (DHW mode or cooling(heating) + DHW combination mode).

Note:

- The only heating model or heat pump model is selected by the SW2_1 dial of the hydronic module PCB, the factory default is the heat pump model.
- The domestic hot water mode is selected by the SW2_4 dial of the hydronic module PCB, the factory default is with DHW mode.

QUERY

PRESS THIS BUTTON TO CHECK THE DATA

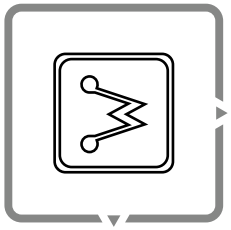
Press button to enter the query status, press button or no operation for 5 seconds to exit the query interface and return to the main interface.

Press button in the query status, it will show these data in turn:

- **Ts1:** AC side setting water temperature;
- **Ts2:** Domestic hot water setting temperature;
- **Tw_in:** Water inlet temperature of the heat exchanger;
- **Tw_out:** Water outlet temperature of the heat exchanger;
- **T1:** Water outlet temperature of the hydronic module;
- **T4:** Ambient temperature;
- **T6:** Temperature detected by temperature probe of the wired controller;
- **T7:** Water tank temperature;
- Capacity of the hydronic module;
- Operating capacity demand of hydronic module;
- Water pump output level.

Note:

- When the hydronic module SW2_4 is ON: select without domestic hot water function, **Ts2** and **T7** will show 0.
- The unit of horsepower is 0.1. For example, for 5 HP hydronic module, the spot check No.9 parameter should be 50.



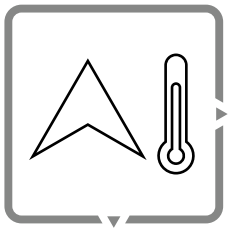
ELECTRIC AUXILIARY HEATING

PRESS THIS BUTTON TO TURN THE HEATER ON OR OFF

Press button when the heating mode is turned on in the main interface or the timer heating mode is on. The hydronic module heater icon is displayed. Press button again, and the hydronic module heater icon is not displayed.

Press button when the domestic hot water mode is turned on in the main interface or the timer domestic hot water mode is turned on. The water tank heater icon is displayed. Press button again, the water tank heater icon is not displayed.

Long press button, the main interface will display **«dF»** for 5 seconds, this is the forced defrosting function. Wait for 5 seconds to automatically exit the interface.



TEMPERATURE +

PRESS THIS BUTTON TO SET THE TEMPERATURE AND TIME

Temperature setting

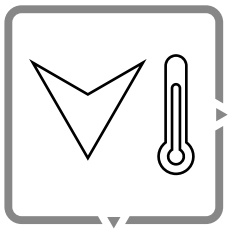
Press button for the first time in the main interface in the cooling and heating mode to enter the air-conditioning temperature **Ts1** setting interface.

In DHW mode, press button for the first time to enter the domestic hot water temperature **Ts2** setting interface.

Press button once to increase the setting temperature by 1°C. When the setting temperature reaches the highest value, press the button again that the setting temperature won't change.

In the combination mode of domestic hot water and cooling (heating), after pressing button for the first time, the water temperature flashes and enters the air-conditioning temperature **Ts1** setting interface. Press button or no operation for 5 seconds, water tank temperature flashes, enter the domestic hot water temperature **Ts2** setting interface. Press button or no operation for 5 seconds, then exit the temperature setting interface.

In the combination mode of domestic hot water and cooling (heating), press button continuously within 5 seconds to enter the temperature setting interface of the current operating mode. Press button or no operation for 5 seconds, then exit the temperature setting interface.



TEMPERATURE –

PRESS THIS BUTTON TO SET TEMPERATURE AND TIME

Temperature setting.

Press ▽🌡 button for the first time in the main interface in the cooling and heating mode to enter the air-conditioning temperature **Ts1** setting interface;

In DHW mode, press ▽🌡 button for the first time to enter the domestic hot water temperature **Ts2** setting interface;

Press ▽🌡 button once to decrease the setting temperature by 1°C. When the setting temperature reaches the lowest value, press the button again so that the setting temperature won't change.

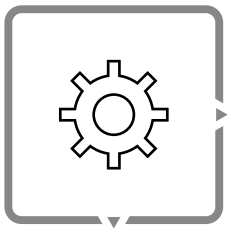
In the combination mode of domestic hot water and cooling (heating), after pressing ▽🌡 button for the first time, the water temperature flashes and enters the air-conditioning temperature **Ts1** setting interface. Press ✓ button or no operation for 5 seconds, water tank temperature flashes, enter the domestic hot water temperature **Ts2** setting interface. Press ✓ button or no operation for 5 seconds, then exit the temperature setting interface.

In the combination mode of domestic hot water and cooling (heating), press ▽🌡 button continuously within 5 seconds to enter the temperature setting interface of the current operating mode. Press ✓ button or no operation for 5 seconds, then exit the temperature setting interface.

Note:

Digital tube display:

- When there is DHW mode: When in standby, the left digital tube displays the water outlet temperature **T1** of hydronic module, and the middle digital tube displays the temperature **T7** of water tank. When setting the temperature, the left digital tube displays the AC side setting water temperature **Ts1** and the middle digital tube displays Domestic hot water setting temperature **Ts2**.
- When there is no DHW mode: When in standby and setting temperature, the left digital tube displays the water outlet temperature **T1** of the hydronic module, and the middle digital tube displays AC side setting water temperature **Ts1**.



SETTING

PRESS THIS BUTTON TO SET DIFFERENT FUNCTIONS

1. Clock

Short press ⚙ button, the clock 🕘 icon flashes. When the clock icon flashes, short press ✓ button, the current time is displayed on the right side, the clock icon becomes constantly on, and it automatically exits after 10 seconds;

When the clock icon flashes, long press ✓ button to enter the time setting interface.

2. Weekly timer

Press ⚙ button twice, the weekly timer icon 📅 flashes. When the weekly timer icon flashes, short press ✓ button to enter the weekly timer viewing interface.

In weekly timer viewing interface, press ∧ or ∨ button to check:

- Timer on: the digital tube displays the timer on time;
- Timer on: the digital tube displays the timer setting temperature;
- Timer off: the digital tube displays the timer off time.

When the weekly timer icon flashes, long press ✓ button to enter the weekly timer setting interface.

3. Power-down memory setting

Press ⚙ button three times, middle digital tube displays 1, meaning the controller with power-down memory (default). Press ∧ or ∨button, when it displays 0, meaning the controller without power-down memory.

Press ⚙ button three times, after middle digital tube display 1 or 0, long press ⚙ button, in order to clear weekly setting and reset the controller.

4. WiFi configuration (for the wired controller with WiFi function)

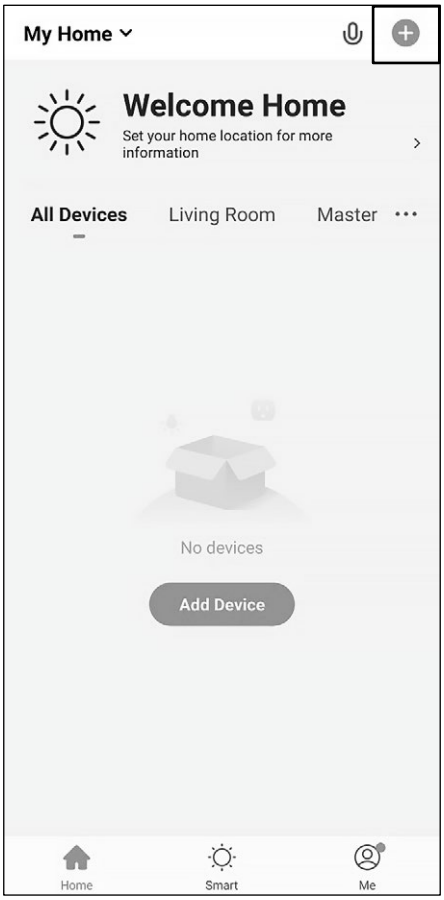
Press ⚙ four times, Ⓐ icon flashes. Long press setting button ⚙ and then the middle digital tube show 0, which means the controller is in configuration states.

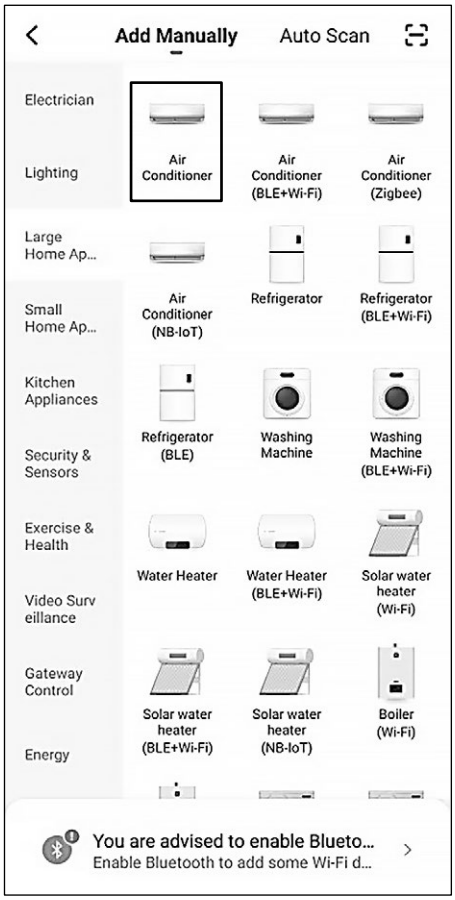
Add the heat pump in Tuya APP according to pictures below. Download Tuya Smart APP → Add a device (choose «Large Home Appliances» – «Air Conditioner») → Connect a WiFi → input the WiFi password to connect to WiFi → Connecting → Heat pump is added successfully.

Note:

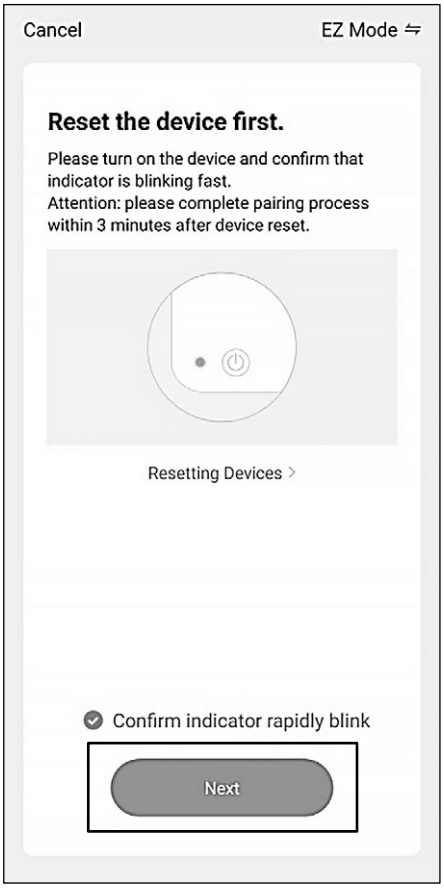
Time setting

Press ⚙ button to enter the clock setting interface. At this time, the clock day icon flashes and the day of the week can be set. After selecting the day, press ✓ button and the hour(left digital tube) icon flashes and the hour can be set. Then press ✓ button, the minute (middle digital tube) icon flashes, you can set the minute value, press ✓ button to complete the setting and exit the time setting operation, and return to the main interface.

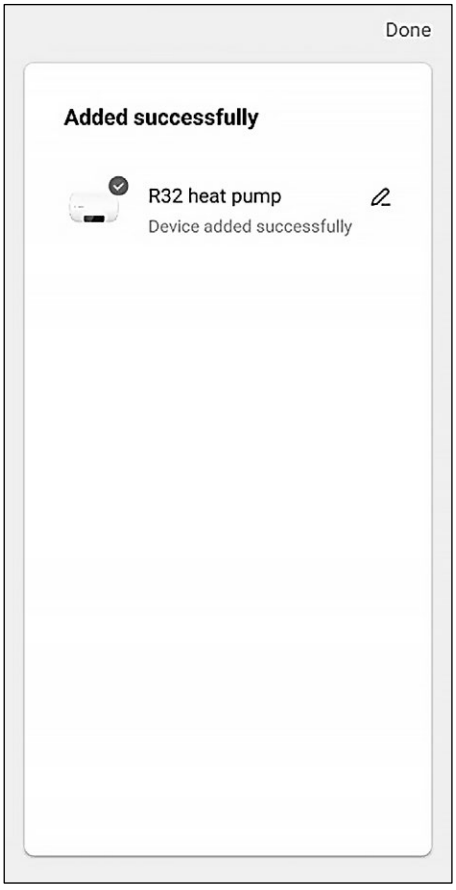

My Home
Welcome Home
Set your home location for more information
All Devices
Living Room
Master
No devices
Add Device
Home
Smart
Me

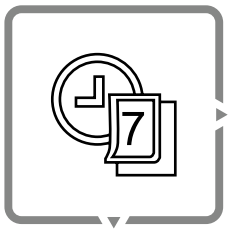

Add Manually
Auto Scan
Electrician
Lighting
Large Home Ap...
Small Home Ap...
Kitchen Appliances
Security & Sensors
Exercise & Health
Video Surv eillance
Gateway Control
Energy
Air Conditioner
Air Conditioner (BLE+Wi-Fi)
Air Conditioner (Zigbee)
Air Conditioner (NB-IoT)
Refrigerator
Refrigerator (BLE+Wi-Fi)
Refrigerator (BLE)
Washing Machine
Washing Machine (BLE+Wi-Fi)
Water Heater
Water Heater (BLE+Wi-Fi)
Solar water heater (Wi-Fi)
Solar water heater (BLE+Wi-Fi)
Solar water heater (NB-IoT)
Boiler (Wi-Fi)
You are advised to enable Blueto...
Enable Bluetooth to add some Wi-Fi d...

Cancel
Select 2.4 GHz Wi-Fi Network and enter password.
If your Wi-Fi is 5GHz, please set it to be 2.4GHz. Common router setting method
2.4GHz
5GHz
apf
11111111
Next


Cancel
EZ Mode
Reset the device first.
Please turn on the device and confirm that indicator is blinking fast.
Attention: please complete pairing process within 3 minutes after device reset.
Resetting Devices
Confirm indicator rapidly blink
Next

Cancel
Adding device...
Ensure that the device is powered on.
01:45
Scan devices.
Register on Cloud.
Initialize the device.


Done
Added successfully
R32 heat pump
Device added successfully



WEEKLY TIMER

PRESS THIS BUTTON TO SET THE WEEKLY TIMER

Enter the weekly timer setting mode, ON icon flashes, press ∧ or ∨ button to select **ON** or **OFF**, and press ✓ button, at this time OFF icon is always on, and enter the boot time setting.

Long press ∧ or ∨ button to switch setting items. When the **ON** icon is always on, **SUN** icon starts to flash (flashing indicates that the setting is adjustable), short press ∧ or ∨ button to switch from **SUN-SAT**. After selecting a day, press ✓ button and the icon will be on. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

After finishing setting the days, the selected day's icon is always on (if no day is selected, the currently flashing day will be selected). Long press ∨ button, at this time «Hour» (left digital tube, initial value is 08, if it has been set, the last set value is displayed, the temperature unit is not displayed) flashes, short press ∧ or ∨ button to select the time (00–23), short press ✓ button, the number is always on. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

After «Hour» setting is completed, long press ∨ button. At this time, «Minute» (middle digital tube, initial value is 00, if it has been set, the last set value is displayed, temperature unit is not displayed) flashes, short press ∧ or ∨ to select the time (00–59). Short press ✓ button, the number is always on. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

After the time setting is completed, long press ∨ to enter the timer mode setting.

Short press ❄☼ button, **Heating** icon flashes → **DHW** icon flashes → **Cooling** icon flashes → **Cooling** and **DHW** icons flash simultaneously → **Heating** and **DHW** icons flash simultaneously. (Only the internal icon flashes, the box does not flash.)

Press ✓ button to select the mode, the corresponding icon is always on, and the corresponding digital tube flashes. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

When the mode icon flashes, the temperature value is always on and displayed as the last set value. If it has never been set, the default cooling value is 7 °C, the heating value is 45 °C, and the hot water value is 50 °C.

Temperature setting

If only cooling or heating mode is set

Long press ∨ button to enter the temperature setting interface. The left digital tube flashes. Short press ∧ or ∨ button to set different target water temperatures in cooling or heating mode. Press ✓ button to select the setting temperature value, and the value is always on. (The initial temperature setting value is the last setting temperature or the default temperature.

If only DHW mode is set

Long press ∨ button to enter the temperature setting interface. The middle digital tube flashes. Short press ∧ or ∨ button to set different target water temperature in the domestic hot water mode. Press ✓ button to select the setting temperature value. (The initial temperature setting value is the last setting temperature or the default temperature.)

If the combination mode is set

Long press ∨ button to enter the temperature setting interface. The left digital tube flashes. Short press ∧ or ∨ button to set different target water temperatures in cooling or heating mode. Press ✓ button to select the setting temperature value, and the value is always on. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

Long press ∨ button, the middle digital tube flashes, short press ∧ or ∨ button to set the indoor target water temperature in the domestic hot water mode. Press ✓ button to select the setting temperature value, and the value is always on. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

(The initial temperature setting value is the last setting temperature or the default temperature.)

After the temperature setting is completed, long press ❄☼ button, and return to the weekly timer setting mode (**ON** or **OFF**), and you can select the timer **OFF** to enter the **OFF** time setting interface.

When the OFF icon is always on, Long press ∨ button to select days for timer shutdown. Short press ∧ or ∨ button to switch from **SUN-SAT**. After selecting a day, press ✓ button and the icon will be on. Press ✓ button again to cancel the selection, the icon flashes, and you can reset it.

After select days, long press ∨ button, left digital tube flashes, set timer shutdown hour. Short press ✓ button to select the time, short press ✓ button again to cancel.

After setting the «Hour», long press ∨ button. At this time, «Minute» (middle digital tube, initial value is 00, displays the setting value of the boot time, temperature unit is not displayed) flashes, and a short press ∧ or ∨ button to select time, 00–59), short press ✓ button, the number is always on.

Long press ✓ button to complete the weekly timer setting.

Error code

Error code	Description
E0	Water flow switch failure
E1	Communication failure between the hydronic module and outdoor unit
E2	Water outlet temperature sensor T1 malfunction
E5	Outdoor unit failure
E6	Water tank temperature Sensor T7 malfunction
E7	Heat exchanger water inlet temperature sensor Tw_in malfunction
E8	Heat exchanger water outlet temperature sensor Tw_out malfunction
E9	Communication failure between the hydronic module and wired controller
EF	Mode conflict
P0	EEPROM protection
P1	Excessive temperature difference between the water inlet and outlet protection
P2	Water shortage protection

Spot check

No.	Description	Notes
1	AC side setting water temperature Ts1	
2	Domestic hot water setting temperature Ts2	When the hydronic module is without domestic hot water function, it will show 0
3	Water inlet temperature of heat exchanger Tw_in	
4	Water outlet temperature of heat exchanger Tw_out	
5	Water outlet temperature of hydronic module T1	
6	Ambient temperature T4	
7	Temperature detected by temperature probe of wired controller T6	
8	Water tank temperature T7	When the hydronic module is without domestic hot water function, it will show 0.
9	Capacity of hydronic module	Capacity (HP) = value * 0.1
10	Operating capacity demand of hydronic module	Capacity (HP) = value * 0.1
11	Water pump output level	

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