ViviD Series

Color Touch Screen Thermostat

Technical Specification

Item	Definition
Build-in sensing element	Chip Temperature sensor
Accuracy	±1 ℃
Set-point range	5~35 ℃
Operation temp.	0~50 ℃
Operation humidity	5~95 %RH (non-condensing)
Power supply	AC90~240V, 50/60Hz
Display resolution	480 × 480, 4″ TFT-IPS color screen
Dimension	86 × 86 × 12mm (W × H × T)
Housing	Flame- retardant PC+ABS
IP level	IP30
Power consumption	<3W
Hole pitch	60mm (standard)
Terminal sizing	Max: 2 x 1.5 mm^2 or 1 x 2.5 mm^2 conductors
Load Rating	2A resistive, 1A inductive
Operation altitude	<2000 meters

On/off operation

- **Wiring**: Wiring correctly according to the wiring diagram on the power box.
- **Power on**: Once powered on, press the screen display on/off button  , and the main interface will be entered;
- **Power off**: In the power-on state, press the on/off button,  the thermo-stat can be turned off.

Homepage operation

1 WIFI	7 ECO mode	13 Temperature Up
2 Clock display	8 On/off	14 Setting Temperature
3 Room temperature icon	9 Setting	15 Auto Fan Speed
4 Temperature Down	10 System mode setting	16 High Fan Speed
5 Low Fan Speed	11 Temperature adjustment	17 Comfort Mode
6 Med Fan Speed	12 Room Temperature	

Set / Return

In the power on state, press set icon , enter in system setting page.

On setting page, press return icon , will be able to return to the previous page.

Model Selecting

When the computer is turned on, click the mode icon in the upper right corner of the main interface to switch the working mode. for cooling, for heating, for ventilation. For fan coil + heating models,click the mode icon in the upper right corner of the main interface, you can quickly enter the heating model selection button and select to enter the corresponding heating mode.

Fan speed control

When the thermostat is turned on, press the fan speed button to select the corresponding speed, low、med、high、auto.

Temperature Setting

In the power on state, press + or — the current setting temperature can be adjusted, and the setting temperature can be changed to 0.5 ° C with each click, and the temperature can also be quickly adjusted by pressing and holding the +/- button or sliding the temperature adjustment arc.

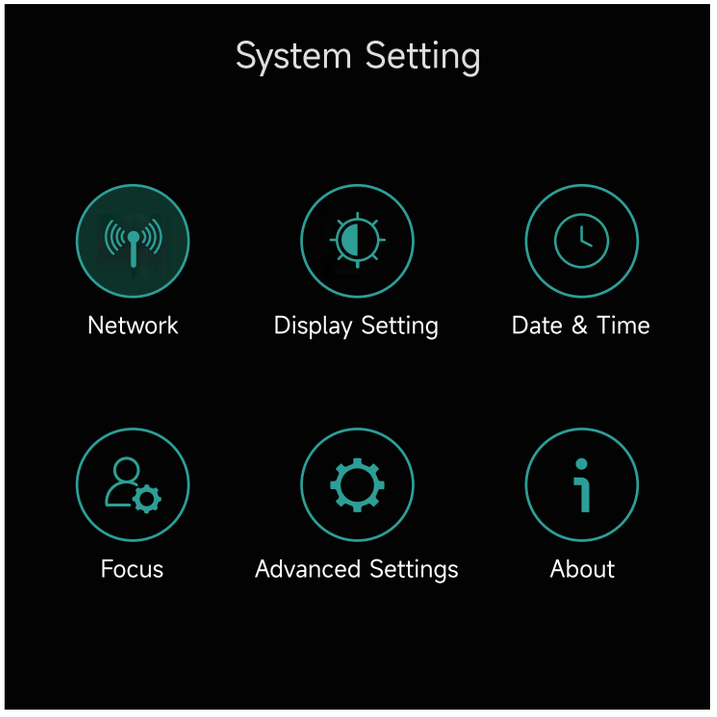
Preset scenes

Press or enter the corresponding preset scene, and set the temperature and fan speed according to the current operation mode (heating, cooling, and ventilation).

When starting a preset scene in the main interface, click the same preset scene icon to restore the temperature and fan speed that were manually set before; Second, adjust the current set temperature and fan speed to exit the current preset scene, and inherit the temperature and fan speed values of the preset mode (set temperature, mode, and fan speed); As the preset scene defines the temperature of cooling, heating, ventilation, fan speed, etc.

System setting operation

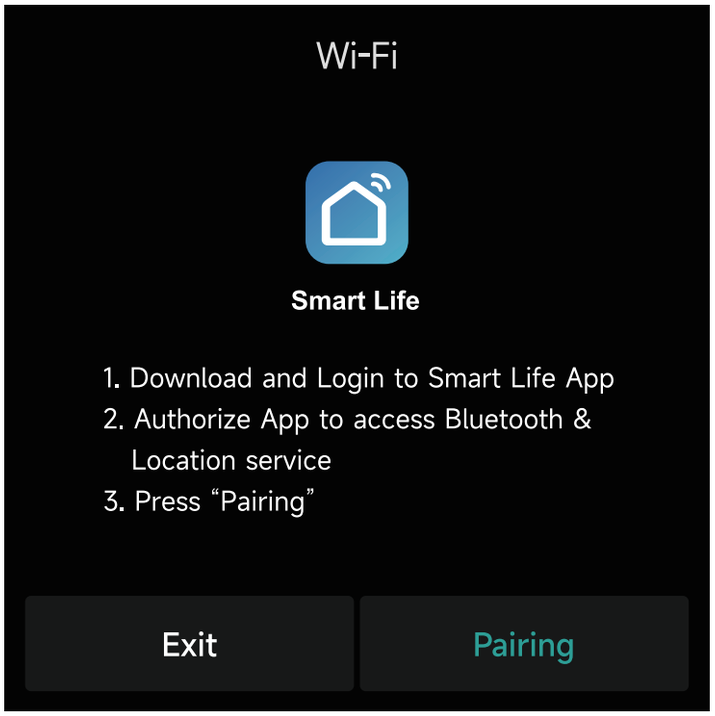
Press , enter system setting page.



Networking settings

Press networking setting icon enter Wi-Fi and RS-485 setting page.

- Click Wi-Fi setting icon， open APP on your phone, according to the instruction, operating wifi setting.



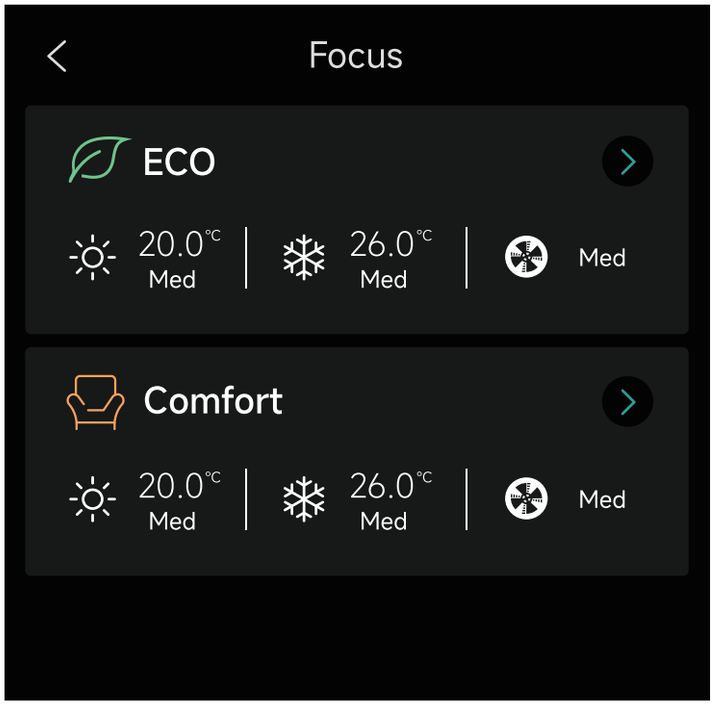
Note：Wi-Fi、bluetooth and location opened on your phone

- Click RS-485 enter MODBUS communication setting page. The default local address of the device is 01, which can be modified by the + – button, range 01-32. Baud rate 4800bps, 9600bps optional, check: odd check, even check, no check.

Display setting: enter to the display setting page. You can set and adjust the screensaver and screen display brightness.

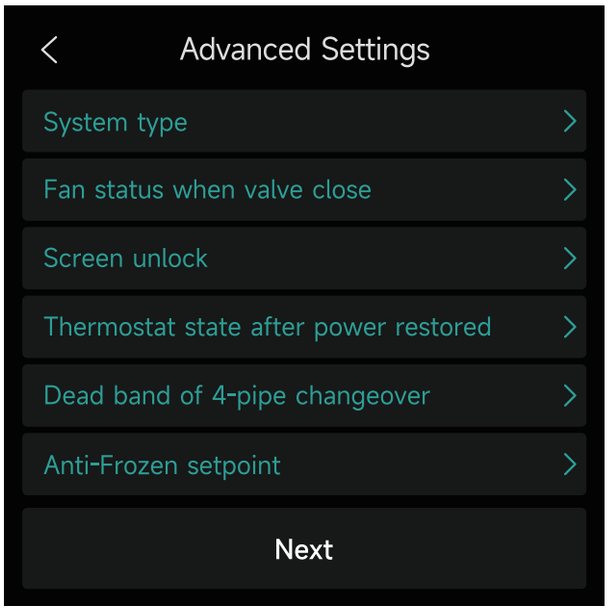
Time setting: enter to time setting page. Swipe up and down in the current date area to modify the year, month, day, hour, and minute.

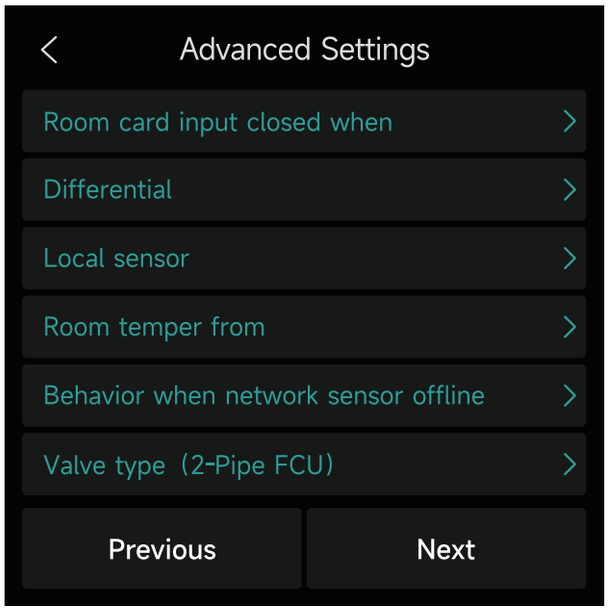
Scene mode setting: enter to scene mode setting page. Set the set temperature and fan speed under cooling and heating in the preset scene, and the fan speed in ventilation mode, pass + – to set the set temperature, click the fan speed icon to set the fan speed of high, medium, low, and automatic, and save the set value after exiting.

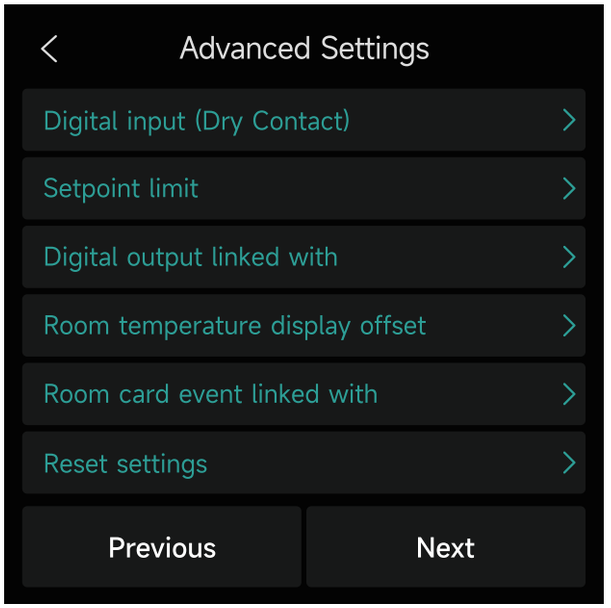


Advance setting: in system setting page, enter to password page, enter password to the advanced setting page.

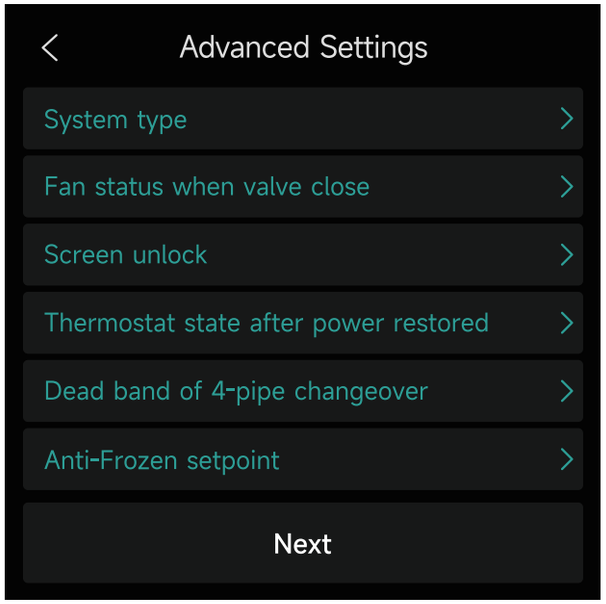
- **ViviD-W** - **ViviD-F** - **ViviD-FW**:

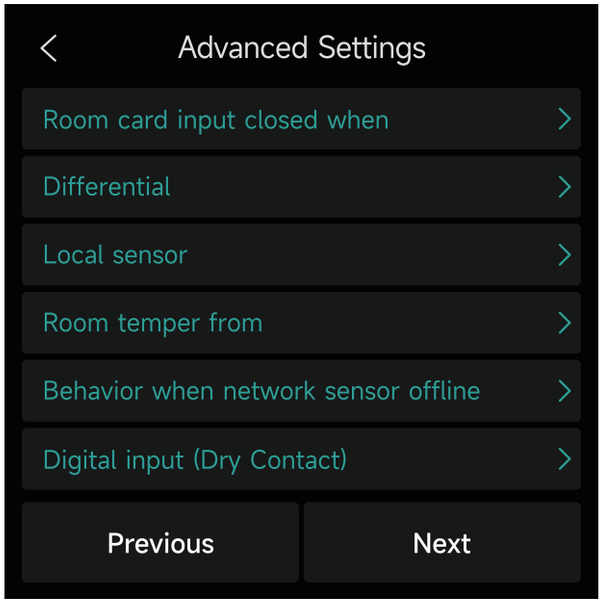


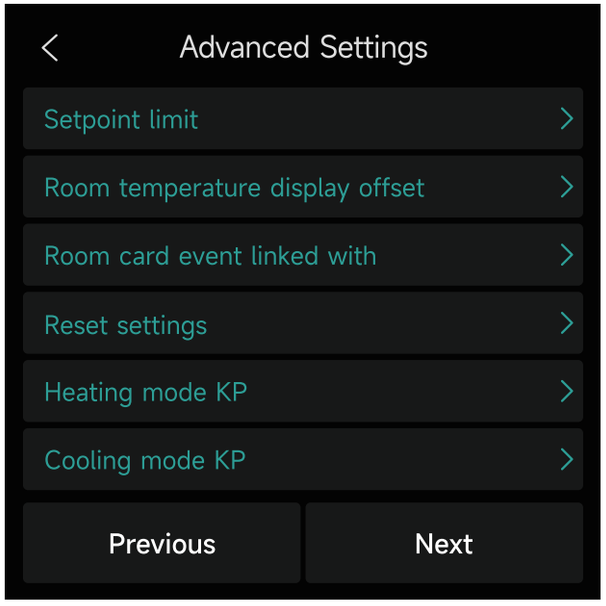


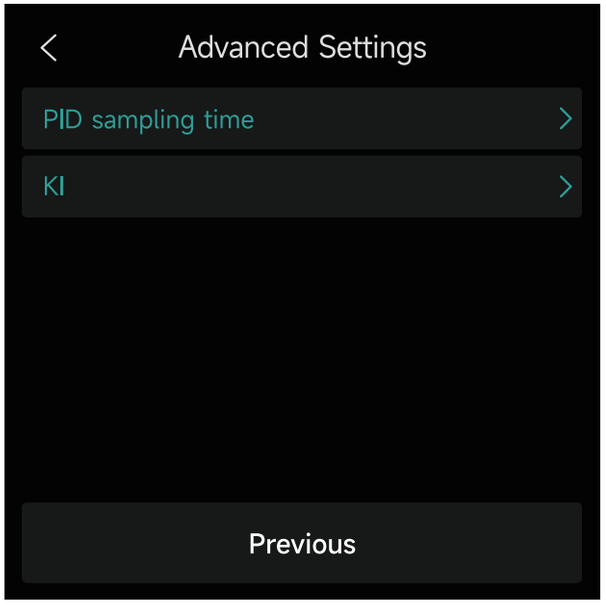


• ViviD-PF :


Advanced Settings
System type
Fan status when valve close
Screen unlock
Thermostat state after power restored
Dead band of 4-pipe changeover
Anti-Frozen setpoint
Next

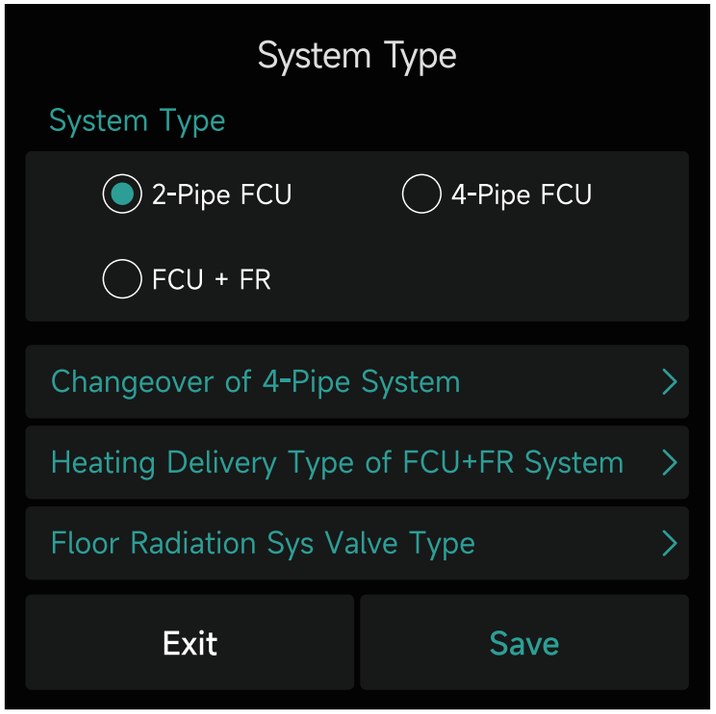

Advanced Settings
Room card input closed when
Differential
Local sensor
Room temper from
Behavior when network sensor offline
Digital input (Dry Contact)
Previous
Next


Advanced Settings
Setpoint limit
Room temperature display offset
Room card event linked with
Reset settings
Heating mode KP
Cooling mode KP
Previous
Next


Advanced Settings
PID sampling time
KI
Previous

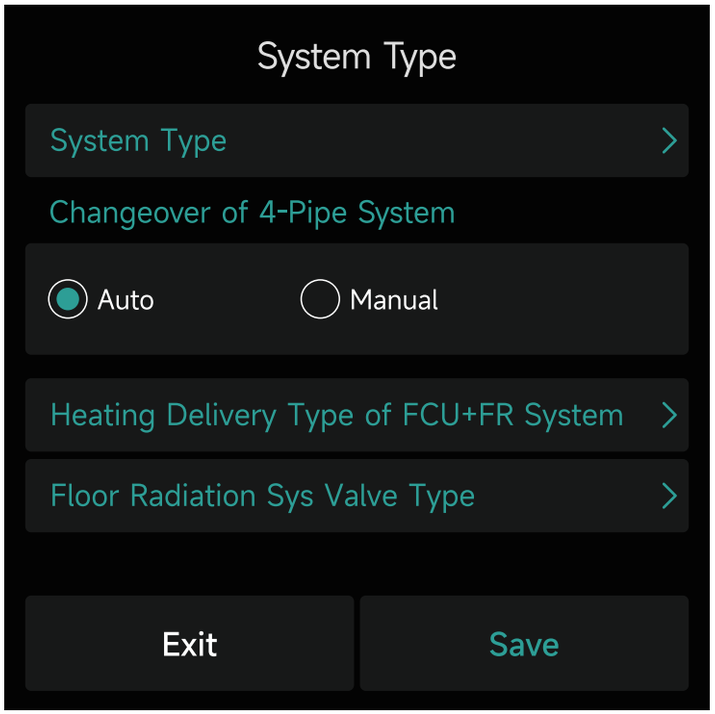
Model settings

ViviD-W does not support setting models, ViviD-F and ViviD-FW can be set as 2-pipe model, 4-pipe model (can be set as automatic, manual), fan coil+ floor heating model, ViviD-PF can be set as 2-pipe model , four controls (can be set as automatic, manual) models.



Four-pipe automatic mode (no ventilation mode)

After turning on the four-pipe automatic mode, the thermostat mode key is invalid, and the working mode issued by 485 and APP is invalid. The thermostat automatically switches the cooling and heating modes according to the room temperature and set to the temperature (the return difference is adjustable by 1-3 ° C, and the dead zone is adjustable from 0-3 ° C). Run the cooling mode when the cooling demand is met, and execute the heating mode when the heating demand is met.

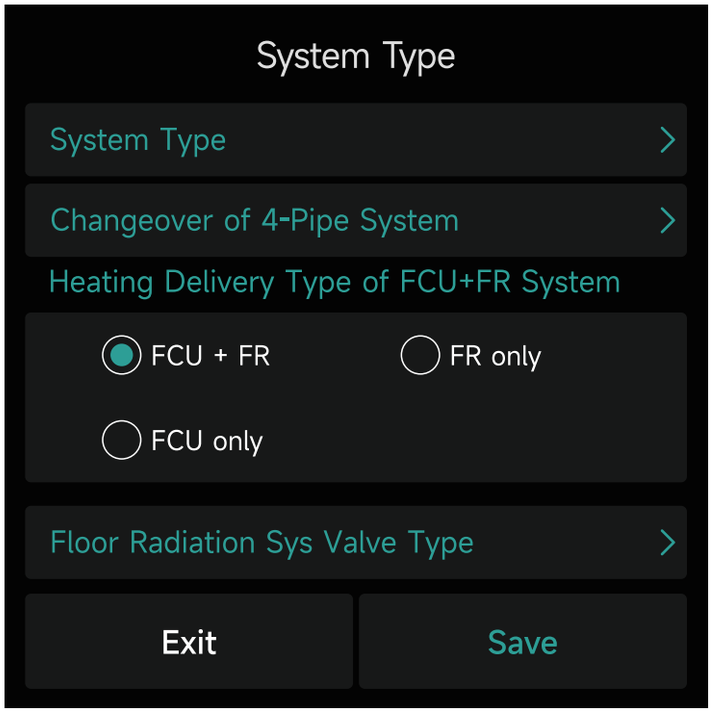


Fan coil+ Floor heating model for heating equipment

Type of heating equipment for fan coil+ floor heating model:

when set to single floor heating the fan and coil valve are not opened during heating, and the fan speed is not optional;

When setting a single fan coil or fan coil + floor heating: the fan and coil valve can be opened during heating, and the fan speed can be set.

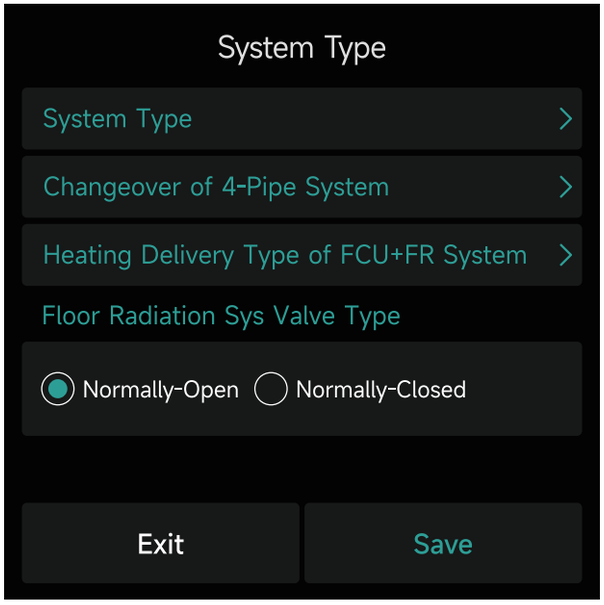


Floor heating valve type setting

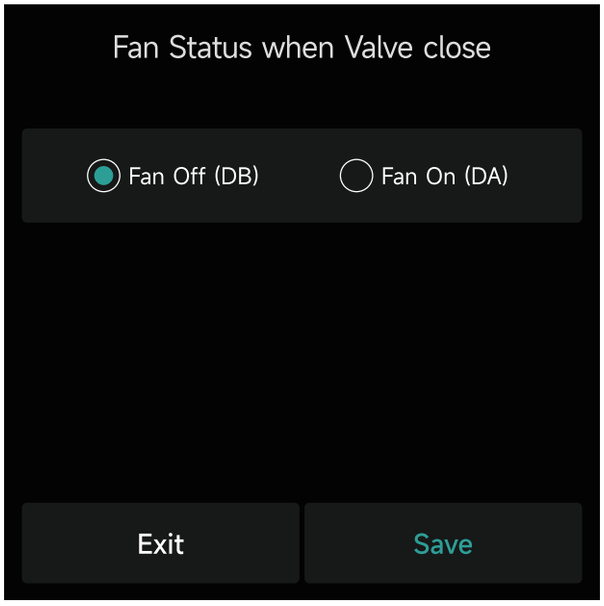
Normally open: valve 2 with 220V when there is no heating demand, valve 2 with 0V when there is heating demand.

Normally closed: the valve 2 is 0V when there is no heating demand, and the valve 2 is 220V when there is heating demand.

ViviD-PF without this setting



When the room temperature reaches the set temperature: you can set the mode of the fan to stop running (DB) or the fan to continue to run (DA) after the room temperature reaches the set temperature



Key locking: There is no lock by default, after selecting "password lock", click on the upper right corner of the main interface to select the working mode, you need to enter the corresponding password to unlock.

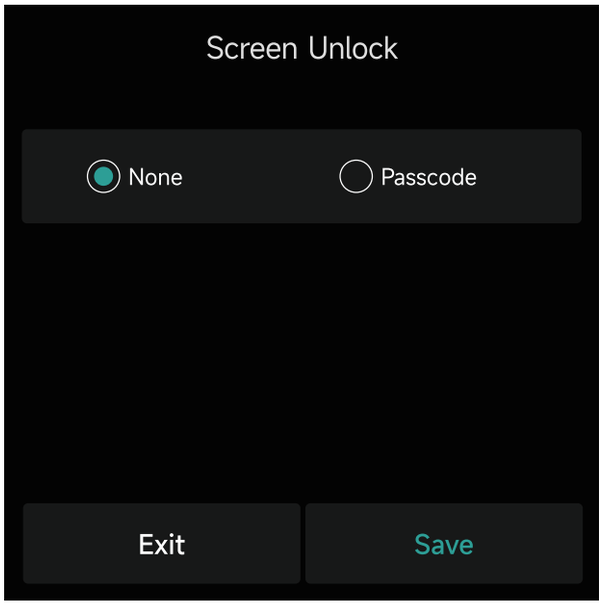
Power-off memory: You can choose "power on", "power off", "memory" after the device is re-

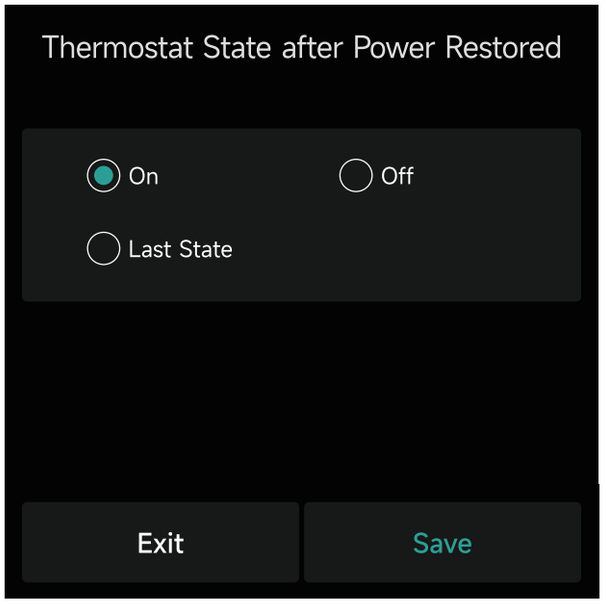
powered on, factory default: power off

Power off: When the thermostat is powered on or off, restart the thermostat and turn it off.

Power on: When the thermostat is powered on or off, restart the thermostat and turn it on.

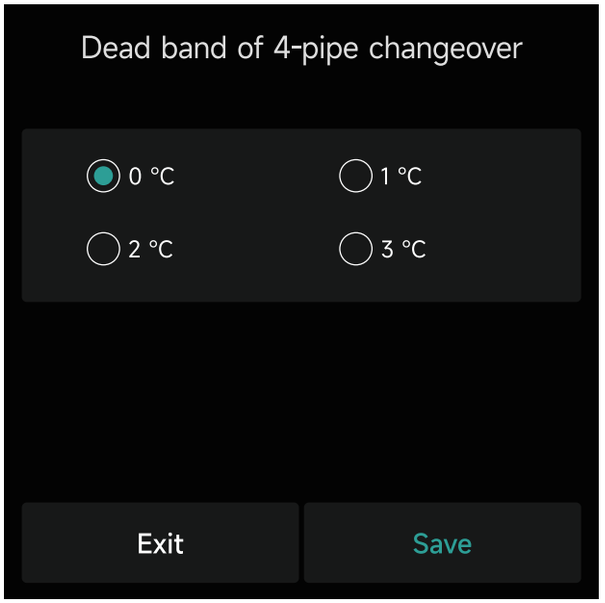
Memory: Turn on before the last power-off, keep it on next time you power it on, turn it off before power-off last time, and keep it off next time you power it off.





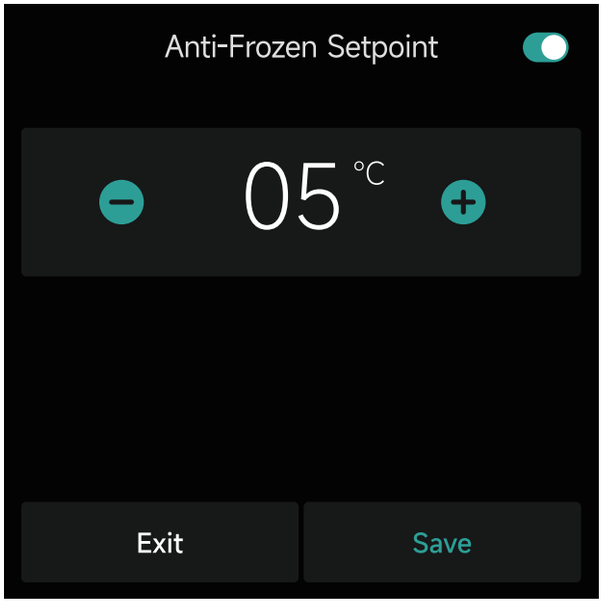
4-pipe dead band

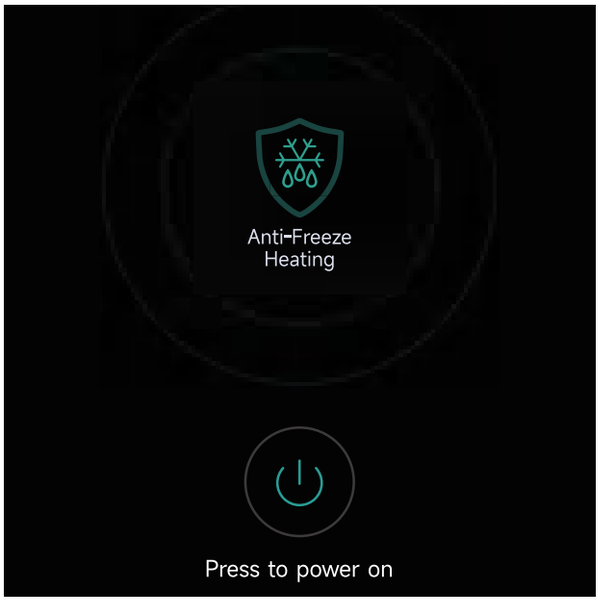
It can be selected between 0, 1, 2, 3 ° C. The dead band is a temperature range centered on the set temperature within which the thermostat is neither cooled nor heated.



Freeze protection

When the indoor temperature ≤ the setting value of antifreeze protection, the thermostat will automatically turn on the heating and display the antifreeze protection symbol to turn on the heating equipment; When the indoor temperature rises to the antifreeze protection set value of +2 ° C, the antifreeze protection icon is turned off and the thermostat is automatically turned off.

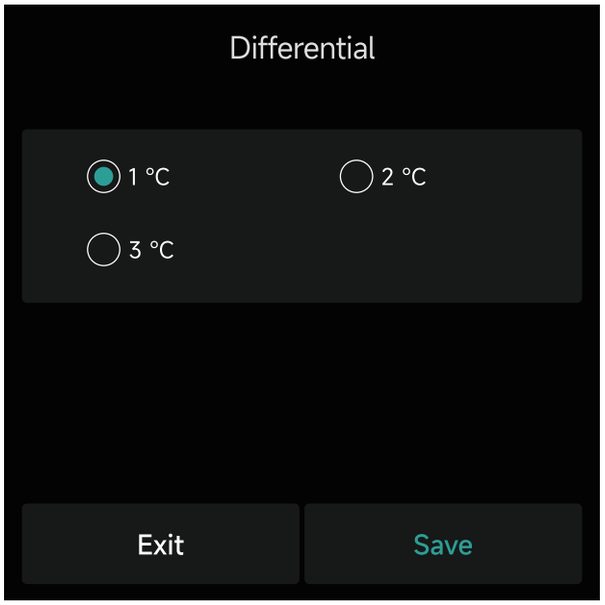


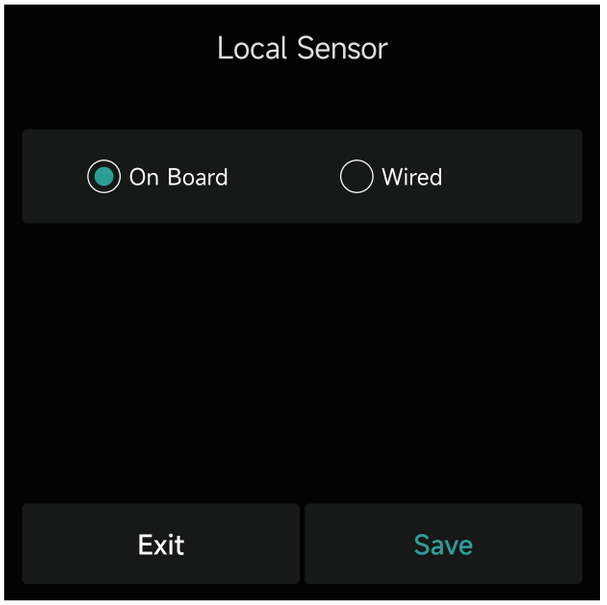


Key card settings: After the external sensor is selected and wired as the door card, you can select the door to "close after card pulling" or "close after card insertion" on the device side.

Differential setting: Enter the advanced settings menu and select the thermostat temperature control differential temperature of 1° C, 2° C or 3° C. The default value is 1°C.

Temperature sampling source: The temperature sampling source can be set as a built-in sensor or an external temperature sensor in the thermostat.



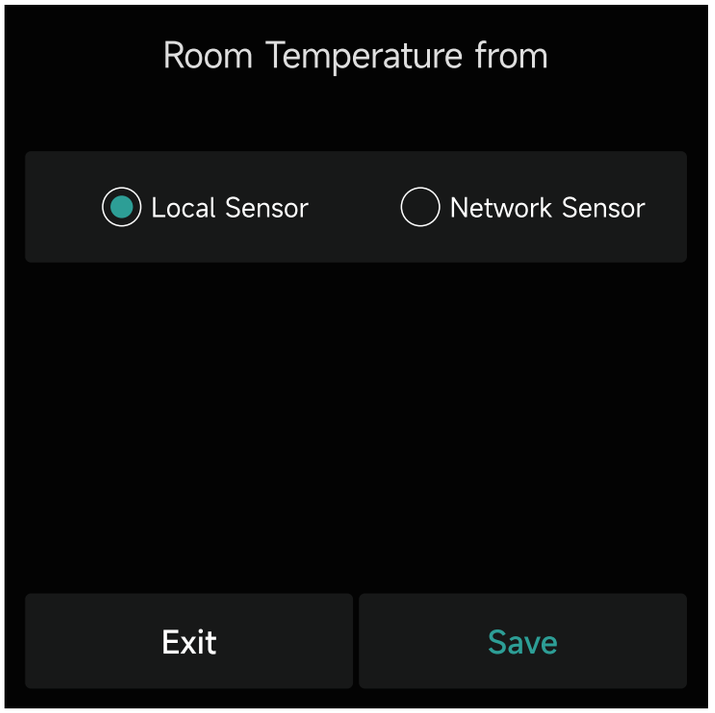


Room temperature source

can be set to: local, or network, used to indicate the room temperature.

When set to Local, the corresponding sensor is used according to the configuration of the local sensor type.

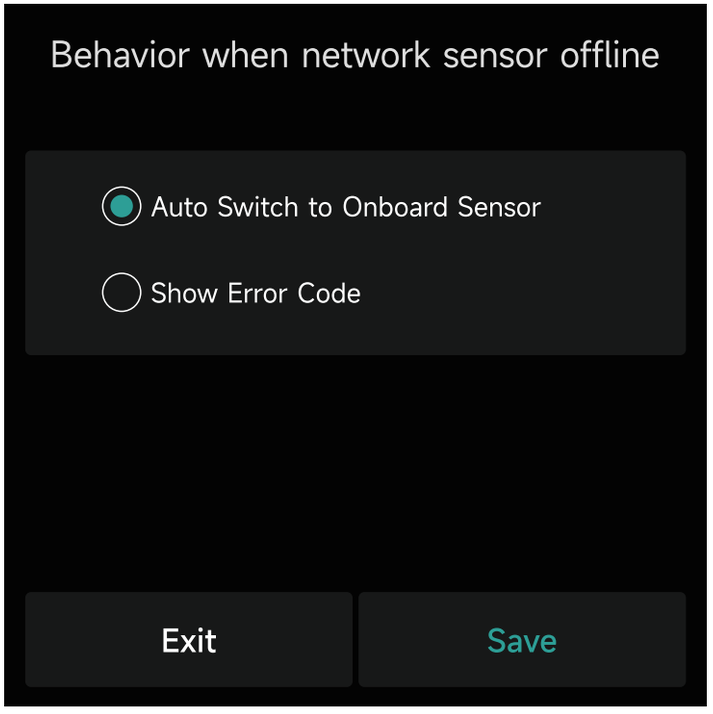
When set to the network, the room temperature is displayed using the temperature data from the network.



Countermeasures for network temperature cannot be obtained

can be set: automatically switch to enable local sampling temperature, or report the corresponding fault code.

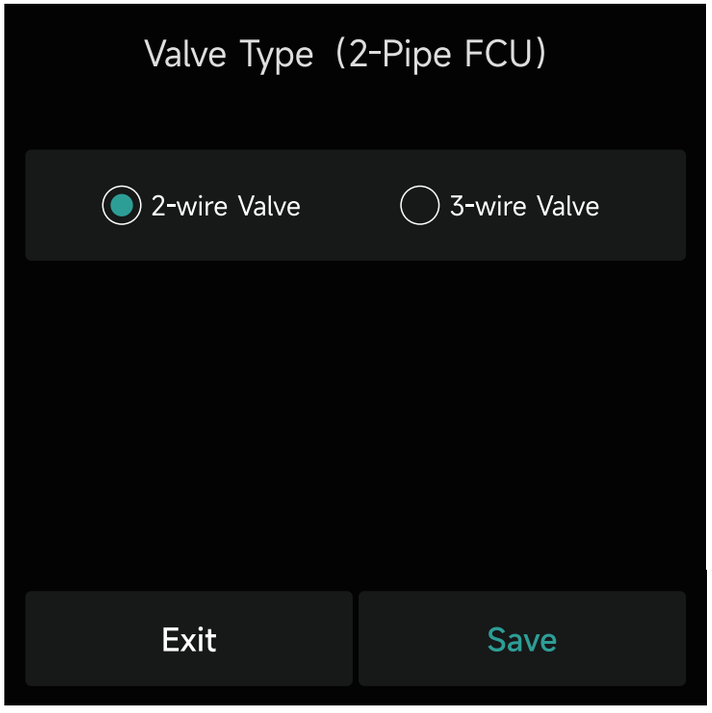
If the external temperature write timeout and the execution logic of the external temperature write timeout is to enable local sampling temperature, the corresponding local sensor is used according to the configuration of the local sensor type. If the external temperature is written to the timeout and the network temperature fault is handled as the corresponding fault code, the alarm message is the remote write synchronization timeout.



2-pipe model： can be set as a two-wire valve, or a three-wire valve。

When it is set as a two-wire valve and there is no need for cooling/heating, there is no terminal output, and when there is a demand, it corresponds to the valve opening terminal output.

When it is set to a three-wire valve and there is no need for cooling/heating, the valve closes the terminal output, and if there is a demand, it corresponds to the valve opening terminal output.（ViviD-PF without this setting）

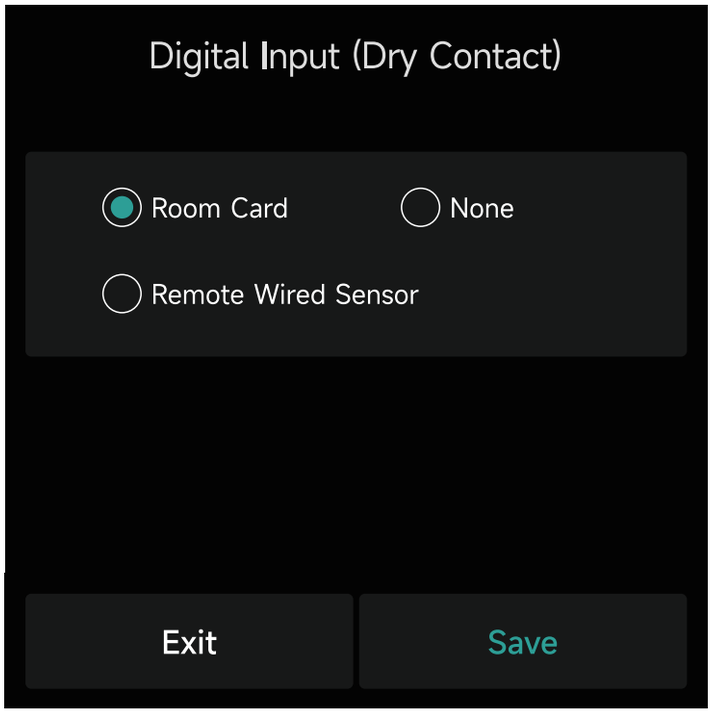


Dry contact input

Dry contact input (S1/D1 and S2/D2) can be selected as "external temperature sensor" or "key card".

When the external input device is selected as "external sensor" and the temperature control mode is selected as "single external", the input terminals S1 and S2 are valid for connecting to the external sensor.

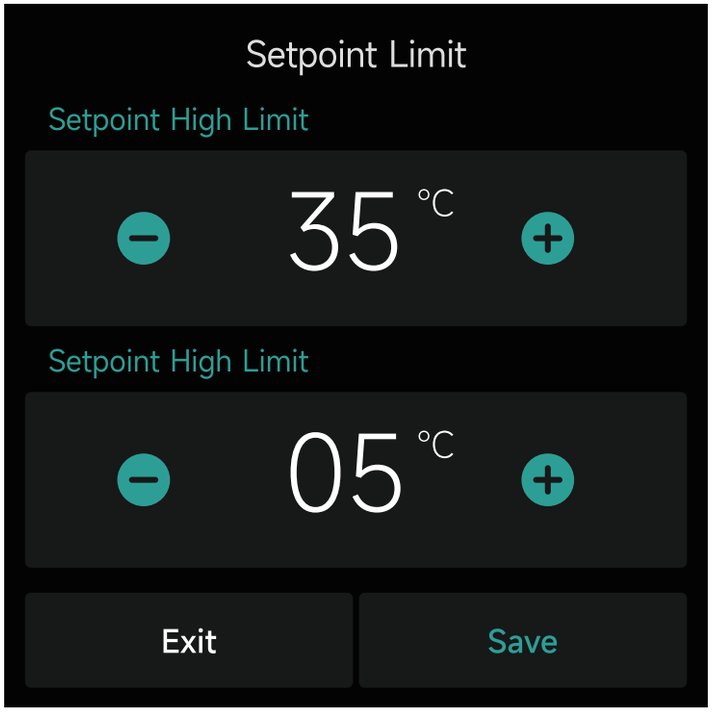
When the external input device selects "Keycard", the input terminals D1 and D2 are the switch signal inputs. The external sensor is ineffective.



Upper and lower temperature limits

factory default: upper limit 35°C; The lower limit is 5 °C.

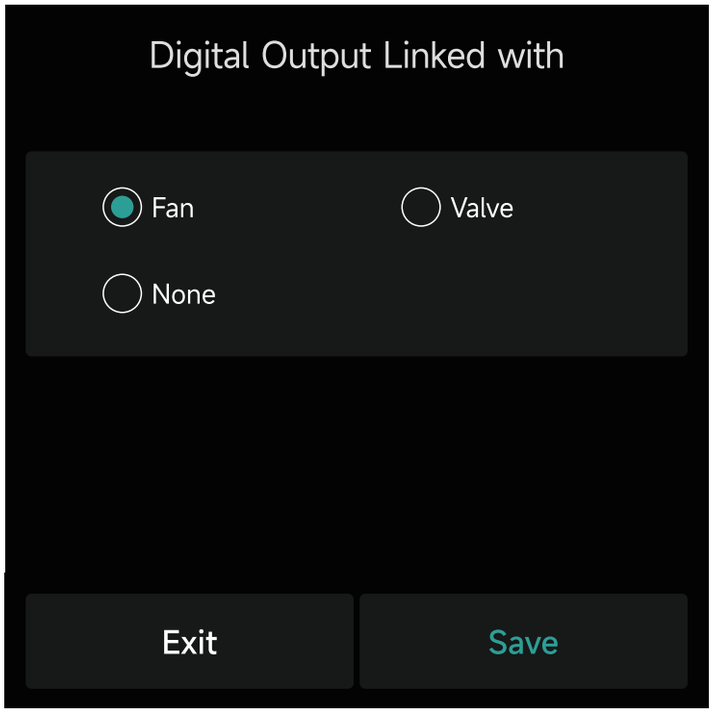
The upper and lower limits of the temperature can be set by the "+" and "–" buttons, and the upper and lower limits have an interlock function when setting, and the lower limit value needs to be < the upper value of 2 ° C, and the upper limit value needs to be > the lower limit value of 2 ° C. After the setting is successful, the temperature setting of the main interface and the set temperature of the time period will run according to this range.



Linkage output setting

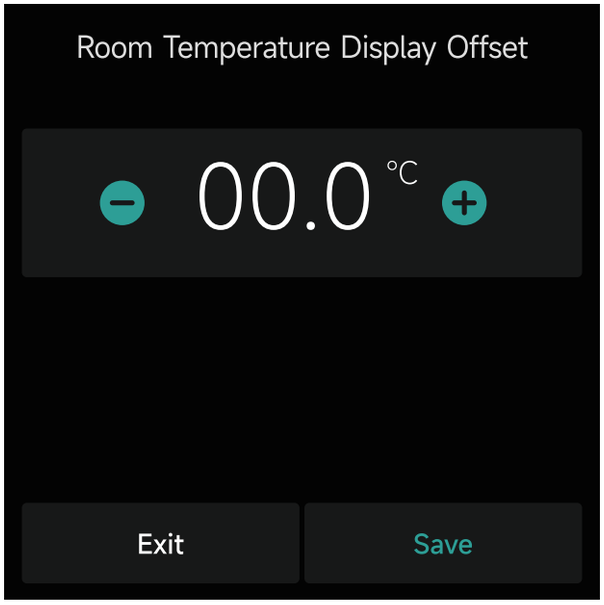
The C1/C2 terminal of the power box can be configured as the linkage output, and C1/C2 is the dry contact, which is disconnected by default, and can be linked to the fan or valve.

The 220V signal can be connected to the C1 (or C2) terminal as the input, and the C2 (or C1) terminal as the output to link the external equipment.
ViviD-PF without this setting.

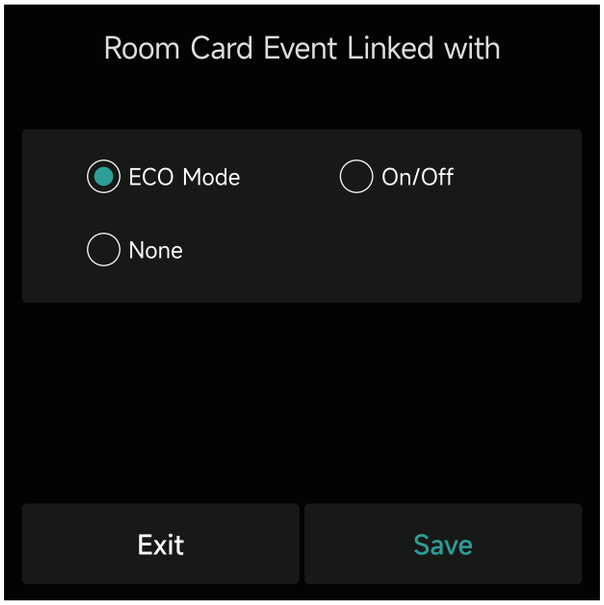


Note: External resistive load at the terminal, current < 2A; The external inductive load current < 1A.

Temperature display value correction: The user can correct the display temperature in 0.5 ° C steps via the panel, ranging from -5.0 to +5.0, with the default setting of 00.0°C.

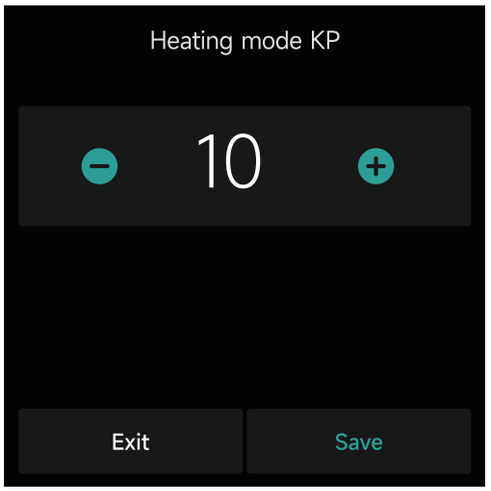


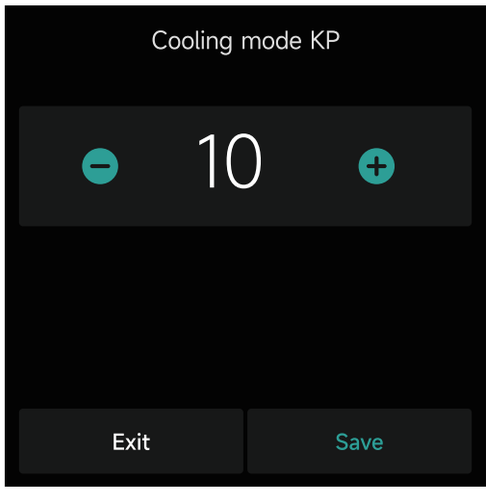
Key card linkage option: key card linkage: energy saving, power on/off, or no linkage.

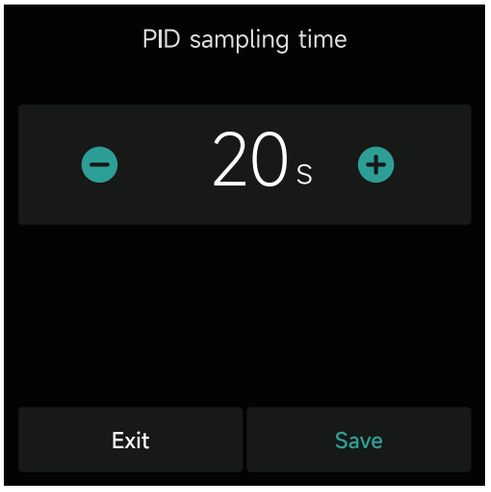


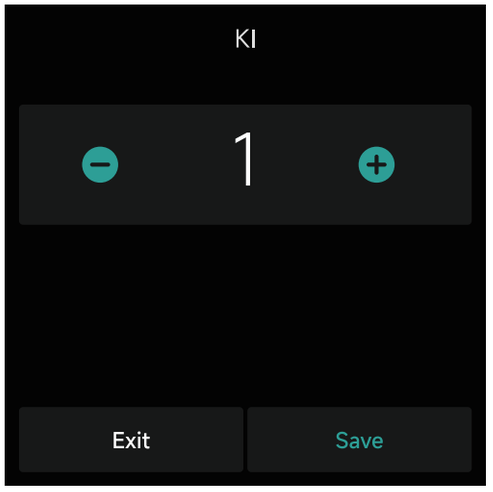
PID parameters

the user can adjust the KP value of cooling, heating, and heating: when the temperature difference is the same, the larger this value, the higher the initial output voltage. The KI value can be adjusted by the user, and the higher the value, the greater the output voltage accumulated each time. The sampling time can be adjusted by the user, and the lower this value, the higher the frequency of voltage accumulation.（**Only ViviD-PF with this setting**）



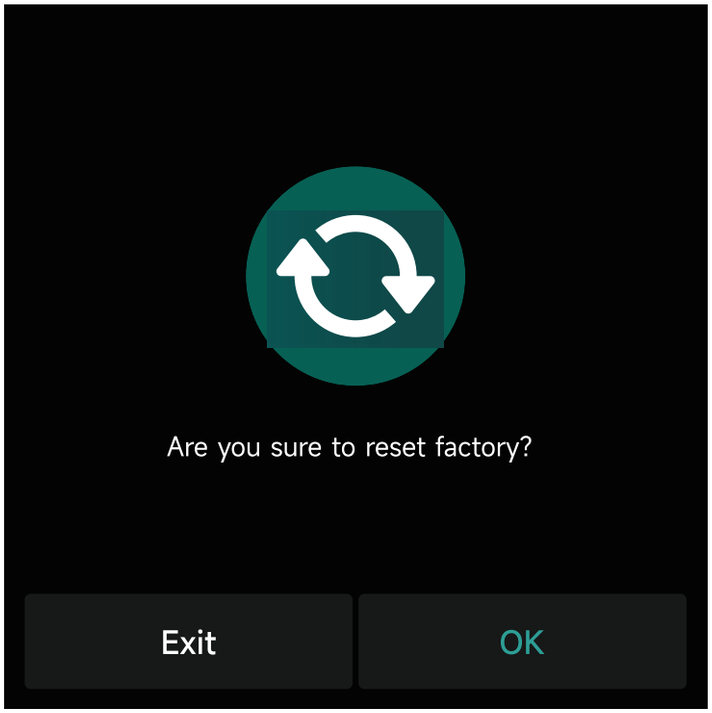






Factory reset:

Click the "Factory Reset" button to enter the factory confirmation interface, click OK, and the thermostat will be executed immediately factory reset. After the factory reset, all parameters will be restored to the factory default state.

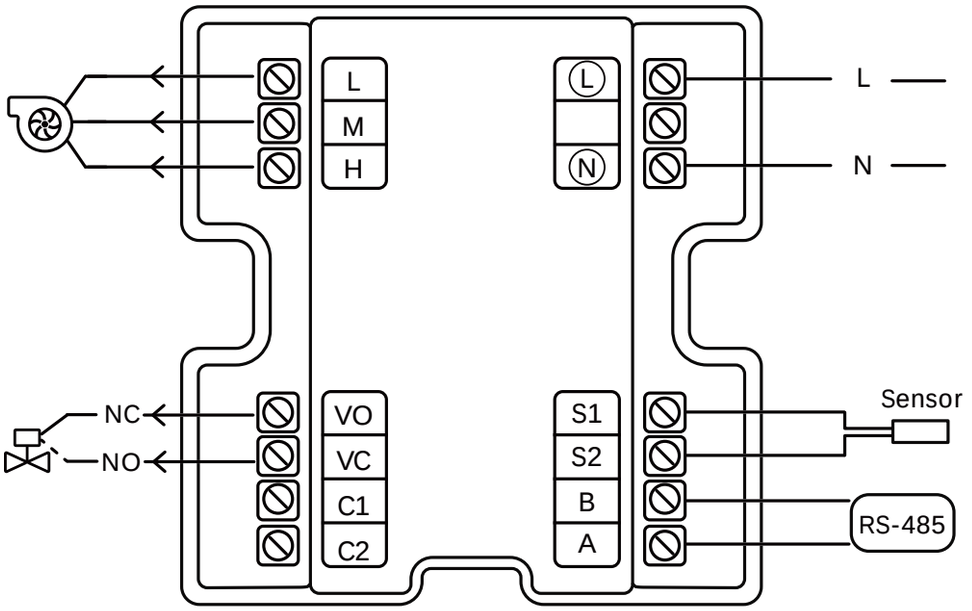


About this machine

In the system setting page, enter ⓘ to about this machine page, You can view the local information: software version, hardware version, MAC address, product model, and other information.

Model and wiring

1、2-Pipe Model：ViviD-F/ViviD-FW

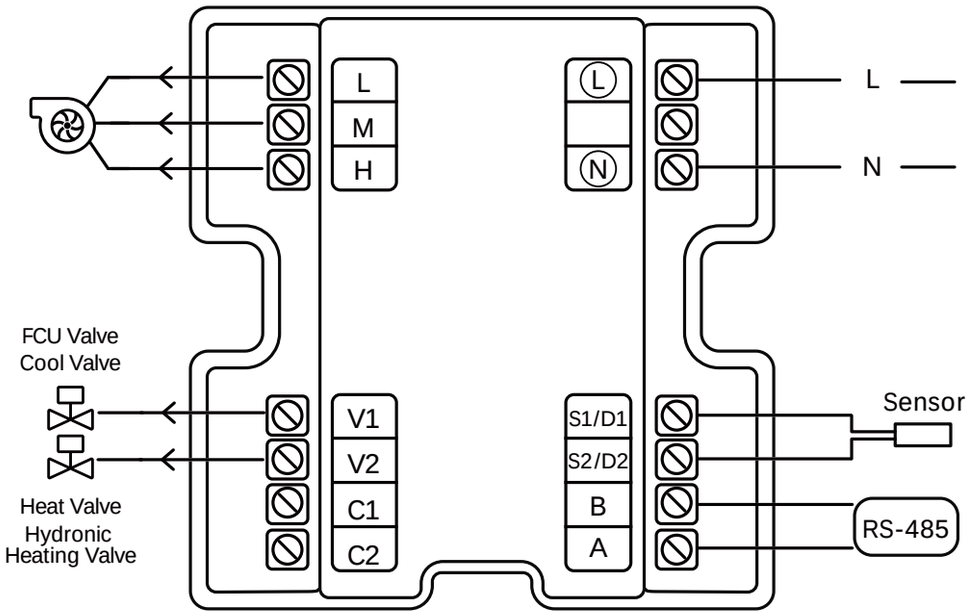


- The two wire valve and three wire valve can be selected for the 2-pipe model.
- The two-wire valve needs to be connected to the valve 1 and the valve 2, without output control;
- Three-wire valve, valve 1 is open, valve 2 is closed. Default is two-wire valve.

Note:

Weak electricity wire "A, B, S1/D1, S2/D2, C1, C2" cannot be in the same trunking with strong electricity wire AC220V, otherwise it will easily cause damage to the thermostat!

2、4-Pipe Model/(fan coil+ floor heating Model)：ViviD-F/ViviD-FW



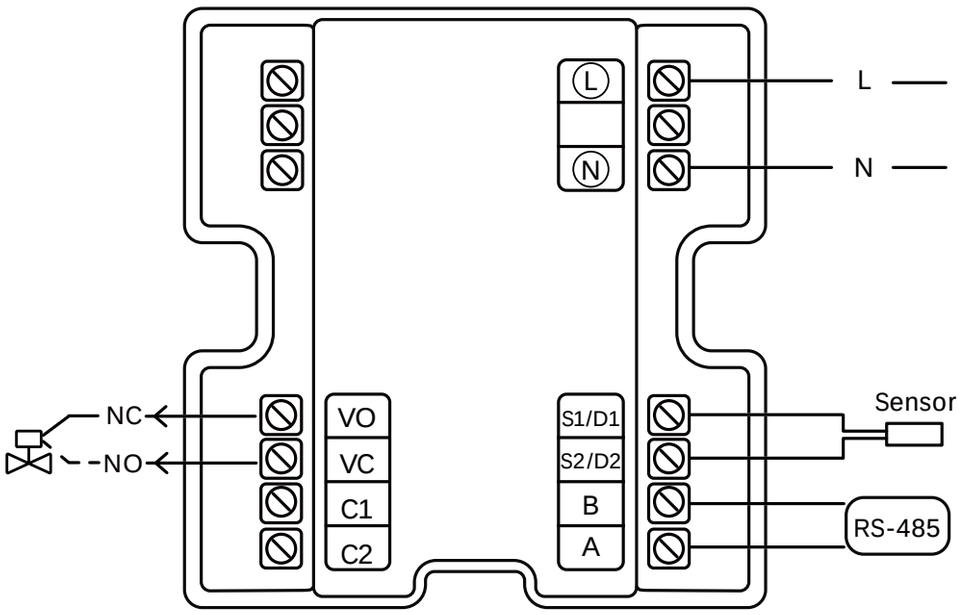
● **4-pipe model:** valve 1 and valve 2 is connected to two two-wire valves, valve 1 for cold water, valve 2 for hot water; fan coil+ floor heating Model: valve 1 and valve 2 connected to two two-wire valves, valve 1 for fan coil valve, valve 2 floor heating valve.

● **fan coil+ floor heating Model :**floor heating valve type can be selected as normally open or normally closed In addition to the conventional cooling mode, the heating mode can be selected: fan coil + floor heating, single floor heating or single fan coil

Note:

In the fan coil+ floor heating mode, the return difference of the coil valve is the set return difference of +2 ° C, open the coil valve and fan when the conditions are met, and close it directly when it is not satisfied. Weak electricity wire "A, B, S1/D1, S2/D2, C1, C2" cannot be in the same trunking with strong electricity wire AC220V, otherwise it will easily cause damage to the thermostat!

3、Water heating Model ViviD-W



The water heating model can be connected to a two-wire valve or a three-wire valve.

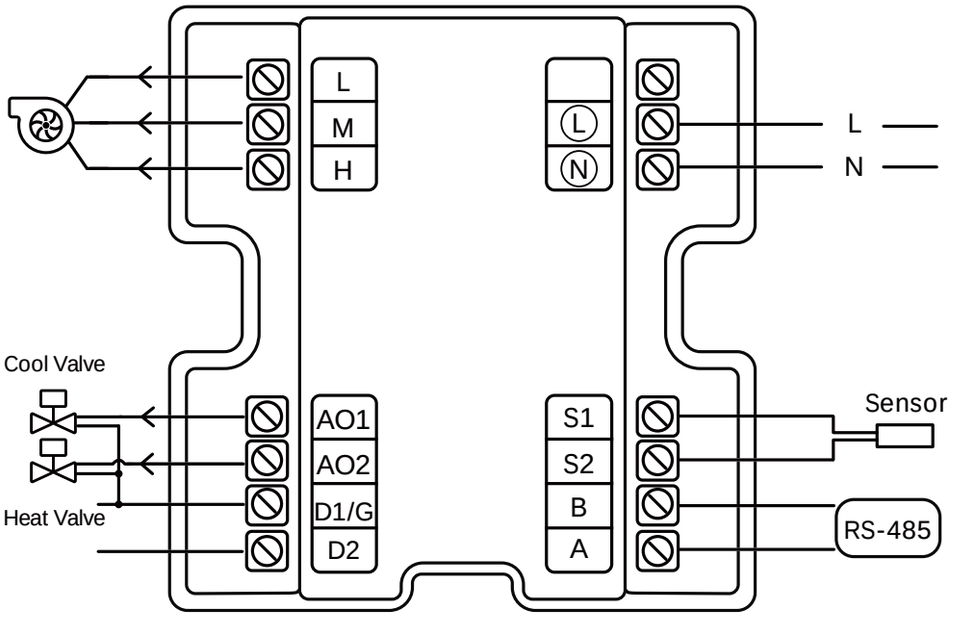
1）The two-wire normally closed hot water valve is connected to the "off" terminal, and the output is 220V when there is a heating demand, and the hot water valve is opened.

2）Three-wire hot water valve, power on to open the valve, connected to the "off" terminal; Power on the valve and wire to the "on" terminal.

Note:

Weak electricity wire "A, B, S1/D1, S2/D2, C1, C2" cannot be in the same trunking with strong electricity wire AC220V, otherwise it will easily cause damage to the thermostat!

4、0-10V Valve Model ViviD-PF



0-10V valve model: valve 1 and valve 2 are connected to 0-10V valves respectively. AO1 is connected to the cold water valve, AO2 is connected to the hot water valve, the thermostat controls the opening of the valve, and cooperates with the fan of the corresponding gear to achieve cold and hot control.

Note:

G : Common (0~10V)"-" **AO1 AO2:** output (0~10V) "+"

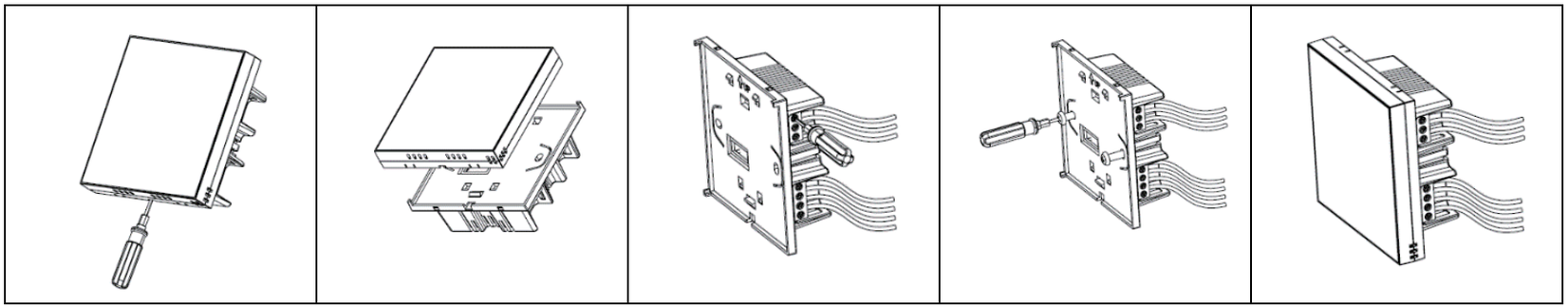
D1 D2: Dry contacts input weak electricity signals

D1/G, D2, S1, S2, AO1, AO2, A, B cannot be routed with strong electrical signals N wire, L wire, High Speed Hi, Medium Speed Med, Low Speed Low in one trunking , otherwise it will easily cause damage to the thermostat!

Installation diagram

Please wire correctly in strict accordance with the wiring diagram, and do not let water, mud and other debris enter the thermostat, otherwise it will cause damage to the thermostat!

Do not wire when powering on, otherwise it will affect personal safety and damage to the equipment! The wiring length of the external sensor should not exceed 10 meters.



1. Disassemble the main control board: use a 3.5mm wide slotted cone to extend along the inclined plane to a depth of 4mm in the card slot, and pry it up slightly to open the hook.

2. Remove the junction box.

3. Wiring correctly according to the wiring diagram.

4. Use the two screws in the box to fix the bottom plate of the thermostat with the wires on the wall.

5. Attach the thermostat body vertically to the power supply assembly and the installation is complete.

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