



1. Preface

Thank you for choosing QD-HVAC09, a brand new thermostat for central air conditioning system. QD-HVAC09 is carefully designed to be the temperature regulator for industrial and civil buildings and suitable for the control of fan coil valve, electric heating valve or heating electric equipment, aiming to provide you with the most trusty and comfortable room temperature.

2. Product Introduction Overview

2.1 Application

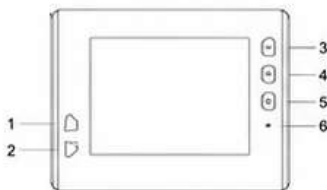
It is widely used in hotel, shopping mall, hospital and office block, which is easy to match all kinds of interiors and will not take LCD screen display, it will bring comfort for you.

2.2 Feature

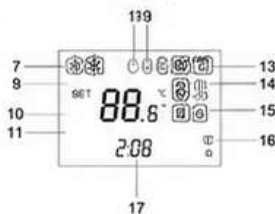
- Big screen LCD power supply
- Weekly programmable
- 5+2 or 6+1 or 7 days schedule
- Display temperature calibration
- Set points and room temperature display simultaneously
- Memory when power is off, data lock when power is off, time will not reset
- Low/medium/high speed fan selectable
- Automatic or manual operation 3-speed fan
- Automatic lock keys
- Manual changeover
- Optional remote sensing (in the event of power-off, no battery is required)
- Twin setpoint function (heating/cooling)

3. Diagram and Description

The Thermostat Below and its Buttons



The Display



Description

Serial	Description
1	Down: set when thermostat is on; or learning the setting temperature. In the programming mode: turn to the previous step.
2	Up: set when the thermostat is on; or learning the setting temperature. In the setting mode, it is for adjusting the parameter.
3	Menu: to be in or out of the menu; confirm the setting.
4	Mode: switch between Manual mode and Auto mode or turn on the manual mode in Auto mode, it will not affect the programmed plan and quit.
5	Sleep: turn on or turn off the sleep function when thermostat is on.
6	Power: turn thermostat on/off by pressing (long press).
7	Setting temperature: displays the current temperature when thermostat is on.
8	Room temperature: can show real time temperature or the setting mode.
9	Cooling icon: the icon shows cooling mode is working.
10	Heating icon: the icon shows the current mode is heating.
11	Fan icon: the icon shows which of the fan mode the fan is in.
12	Auto icon
13	Fan speed icon: the icon low, medium, high rate and speed operating.
14	Sleep icon: it appears while sleep function is on.
15	Lock icon: it appears while the keys are in locking mode.
17	

4. Basic operation

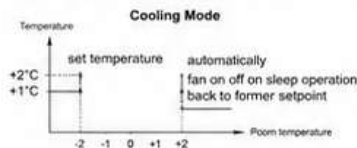
4.1 Function:

Power on/off: press the "MODE" key once to turn on the system. Meanwhile the room temperature, setting temperature, time and week will be displayed. Press the "MODE" key once more will turn it off. During off state, the thermostat will compressor, heating valve and low speed working. "8" to set the temperature down; "▲" to set it up. Set the parameters, please refer to "6.4" for the information of adjustment of each function.

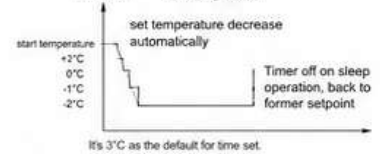
So later screen will show room temp. on screen, "Heating On" icon will show. It is heating mode; "8" icon is cooling mode, "Fan On" shows cooling relay are working; "9" icon is Low speed of fan; "▲" is Mid. speed of fan; "▲" is high speed of fan; "AUTO" is auto mode; "G" is not used. Press the key "MODE" to change the manual mode and program mode to manual mode and Auto mode.

Caution: Risk of Electric Shock. Can cause injury or death. Disconnect power supply before installing.

4Fan speed setting: When power on, press the fan speed button to adjust the fan speed: low, mid, high, auto speed. When it is auto mode, it will according to the difference between room temperature and setting temperature to run fan speed as below: when difference is $\geq 2^{\circ}\text{C}$, it is high speed; when difference is $1^{\circ}\text{C} \sim 2^{\circ}\text{C}$, it is mid speed; when difference is $\leq 1^{\circ}\text{C}$, it is low speed. It is low speed when heating is in Auto mode. It is high speed in Cool mode. See the following show.



Heating Mode



Applications:

We think you may need to save more energy in winter, by setting temperature will decrease automatically by $1^{\circ}\text{C}/2^{\circ}\text{C}$ while sleeping (8 hours by default). The timer will start when 2 hours after falling asleep, then the set temperature will decrease 1°C (by default); 2 hours later, the set temperature will decrease 1°C (by default). The thermostat will run under the new sleep mode setpoint to save energy and will run until the timer off. For example, if the set sleep mode is 16°C , room temperature is 20°C , the thermostat will run under the sleep mode setpoint 19°C after 2 hours, the sleep mode setpoint 18°C after another 2 hours, then rise sleep again to exit the sleep mode.

Other functions:

- 1) Schedule function: for changing the subitem parameters, customize can set the spec time and temperature. (Refer to 6.2)
- 2) Holiday function: for holiday setting, customize can set the holiday mode and holiday time. (Refer to 6.3)
- 3) Parameter function: can also set the range to expand the thermostat for customers need function, contact with the factory to customize the products firmly.

5. Parameters Setting

5.1 Parameters Setting

Customers can adjust the parameters for different user experience. When thermostat is on, press "MENU" key for 5s to enter the parameter setting status. Then press "▲" or "▼" key to switch. When it shows the code you need setting parameter, please press "MODE" key to enter the adjustment for different parameters. Press "▲" and "▼" to adjust different parameters. Press "MODE" key to confirm the modification. Press "MENU" key to exit. Please refer to the following table for details.

Step	Press Button	Display(Fleshing)	Press "▲" or "▼" To Adjust	Description
01	MENU	00	-3 ~ 3°C	Adjust temperature calibration
02	MENU	AH (01)	00 ~ 12	Select maximum setpoint limit in heating mode
03	MENU	AL (01)	00 ~ 12°C	Select minimum setpoint limit in cooling mode
04	MENU	AC (01)	-3 ~ 3°C	Display temperature calibration
05	MENU	dF (01)	-	Dead zone of temperature in°C
06	MENU	FC (01)	00 ~ 15	Fan mode in 01: the fan will run when cool on
07	MENU	LA (01)	ON/OFF	The outer sensor for the real room temperature detection
08	MENU	RES	-	Restore to factory OPERATION

- 1) Select temperature readjustment adjustment 5.1.1.00 is 1H
You can adjust the room temperature display up to 5 higher or lower. The default setting is $\pm 0.5^{\circ}\text{C}$.

2) Select maximum temperature for heating

The max. settable and adjustable temperature for heat. It ranges from 20°C to 35°C . The default setting is 35°C .

3) Select minimum temperature for cooling

The minimum settable and adjustable temperature for heat. It ranges from 00°C to 10°C . The default setting is 05°C .

4) Display temperature calibration

User can adjust the room temperature. If and if it means the thermostat display temperature is 1°C higher, when it is -1.0°C , it means the thermostat display temperature is 1°C lower. The range of temperature correction is -3.0°C to $+3.0^{\circ}\text{C}$, the default setting is $\pm 0.5^{\circ}\text{C}$.

5) Back-light display option

Select 1 to light on the LCD when any key is touched. Default setting is 1. Select 0 to light off on the LCD always.

6) Dead zone of temperature in°C setup

In this function, you can choose $\pm 0.5^{\circ}\text{C}$ or $\pm 1^{\circ}\text{C}$ to control cooling or heating. When setting is $\pm 0.5^{\circ}\text{C}$, dead zone is a half degree, as the display, and the fan never runs when room temperature is within this dead zone.

7) Select Fan status

Select 1: the fan will run in cool on. The default setting is 1. Select 0: cool off and fan off.

8) Select whether to use the external or internal sensor to measure Temp.

Select 1 to use the internal sensor on thermostat to measure temp. "In" is displayed. The default setting is 1. Select 0 to use the external sensor "In" is not displayed.

9) Restore factory settings

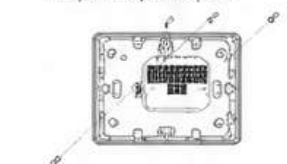
When power off, pressing "MODE" key and "▲" key at the same time for 5s, screen shows "RES" and restore factory setting. "RES" displays, then press "MODE" key.

6. Installation and wiring

6.1 Opens the thermostats and displayer

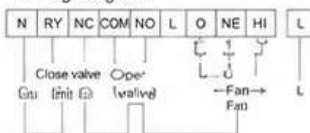


Step1: Insert the nail into the slot and pry up the front part of the panel to open it.



Step2: For horizontal: mount put one screw left and one screw right.

Wiring Diagram



Power: 100V-240VAC 50/60Hz

(skin *) is the system according to the diagram above.

Attention: Please make sure the wiring is correct before power on.

6.2 Install thermostats as the pictures shows in the following:



Step 1: Aim at the 3 inner snaps in the higher part of the thermostat.



Step 2: Hang the two hooks of the front cart at 30° angle to the base.



Step 3: Press the lower part of the front display to the base to complete the installation.

Caution: If it is not installed in the right way, it will cause issue in the product. Please follow the instruction strictly.

7. Tips & Notifications

7.1 Places to install the thermostat

Install the thermostat in the indoor room.

Never install it in the places that have a strong air circulation or bad circulation.

As usual the thermostat should be installed in a wall (1.5m above the floor).

Places to be avoided are:

1. Close to the heating appliance
2. Place to be exposed to sunlight
3. Place to be exposed to the outdoor near the heating unit
4. Place to be filled with dead air
5. Place to be exposed to steam, heat energy and other
6. Keep thermostat away from the children
7. Places to be exposed to strong vibration, impact easily, you can also set up the LCD in the display case separately, but please refer to 8.1 for the display case mounting dimensions.
8. A place to be exposed to more water, such as near the sink
9. Place to be exposed away from door, you can order it.

8. Specifications

Power supply	100 ~ 240 VAC, 50/60 Hz
Display range of temperature	5°C to 35°C
Set range of temperature	5°C to 35°C
Display accuracy	$\pm 0.5^{\circ}\text{C}$
Min. load current	200mA (100V~240VAC, 50/60 Hz)
Fan Relay Ampere Inductive load	3A per terminal
Cooling system	0°C to $+40^{\circ}\text{C}$
Operating ambient	-10°C to $+60^{\circ}\text{C}$
Operating humidity	5%~90% RH (non-condensing)
Dimension (mm)	86mm x 86mm x 32.5mm

9. Package

Item name	1
Thermostat	1
User manual	1
Screw	2
Expansion pipe	2

Name: QUNDA (Quanzhou) Technology (Jiangsu) Co., Ltd.
Address: No.18 Lu-Cong Road, Taicang, Jiangsu
Made in China

Web site: www.qunda.com

Print code: 2132GD