



### 1. Preface

Thank you for choosing QD-HVAC09, a brand new thermostats for central air conditioner produced by QUNDA. It is our great pleasure to bring convenience for your daily life. Please read the manual carefully before using the control system, which will really assist you in installing the control system correctly and getting the most from your new thermostat.

### 2. Production Function Overview

#### 2.1 Application

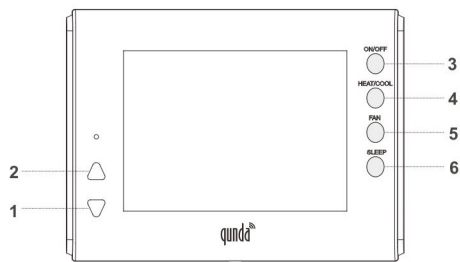
It is used at home, hotel, shopping mall, hospital and office block, which is easy to install. Featuring in multifunction and with large LCD screen display, it will bring comfort to you.

#### 2.2 Feature

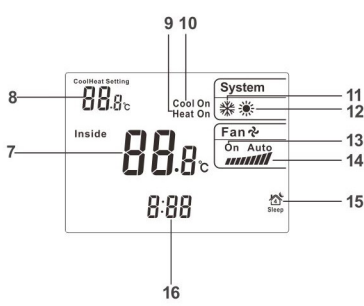
- ▶ 110-240VAC power supply
- ▶ Easy to install
- ▶ Display temperature calibration
- ▶ 6.8 sq. inch backlight LCD
- ▶ Set points and room temperature display simultaneously
- ▶ Maintains the temperature within the range of 0.5°C to the set point
- ▶ Compressor short cycling protection
- ▶ Automatic fan with adjustable 3 speed fan
- ▶ Sleep mode option
- ▶ Manual change over
- ▶ Never lose user setting in the event of power-off, no battery is required
- ▶ IR remote function (optional)

### 3. Diagram and Description

The Thermostat Buttons and Switches



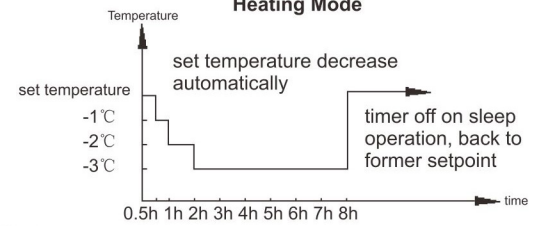
The Display



### Description

Serial No.	Description
1	Down key: when thermostat is on, it is for lowering the setting temperature; in the setting mode, it is for adjusting the parameter.
2	Up key: when thermostat is on, it is for raising the setting temperature; in the setting mode, it is for adjusting the parameter.
3	Power key: to turn on/off the thermostat manually.
4	Mode key: to switch the working modes when thermostat is on.
5	Fan speed: when thermostat is on, switch the fan through high, medium, low and auto.
6	Sleep key: to turn on/off the sleep function when thermostat is on.
7	Room temperature: display the room temperature.
8	Setting temperature: display the setting temperature when the thermostat is on.
9	Heating icon: the icon shows heating relays are in the working mode.
10	Cooling icon: the icon shows cooling relays are in the working mode.
11	Cooling mode icon: it shows the current mode is cooling.
12	Heating mode icon: it shows the current mode is heating.
13	Icon to show the working state of fan: the icon shows the fan is in the working state.
14	Fan speed icon: to show low, medium, high and auto speed separately.
15	Sleep icon: it appears when sleep function is on.
16	Sleep clock: to show the remaining time of the sleep mode.

### Heating Mode



#### Applications:

System switch on cool mode: to ensure better sleep, the setting temperature will raise 1°C automatically 1 hour later after the sleep mode is set, and 2°C after 2 hours and remain the same temperature until timer off, usually 8 hours later. Then it would return to regular setting automatically.

System switch on heat mode: to ensure better sleep, the setting temperature will decrease 1°C automatically half an hour later after the sleep mode is set, and 2°C after 1 hour and 3°C after 2 hours and remain the same temperature until timer off, usually 8 hours later. Then it would return to regular setting automatically.

**Press sleep again to exit the sleep mode.**

#### 4.2 Other functions:

- 1) Back-light function: by changing the system parameters, customers can set the back-light display, namely to display once you press the key, display all the time and with no back-light.
- 2) Remote function: you can also use IR remote to operate the thermostat. If customers need this function, contact with the factory to customize the products for you.

### 5. Parameters Setting

#### 5.1 Parameters Setting

Customers can just change the parameters for different user experience. When power off, press and hold "SLEEP" key for five seconds to enter the parameters setting interface. The room temperature display area, there will be the character for different parameters. While in sleep clock display area, the corresponding data for different parameters. Press "△" and "▽" to adjust different parameters. Repeat pressing "SLEEP" key to cycling display the each parameter. Press "ON/OFF" key to exit the parameter setting interface and save the parameters you set. (It will exit automatically and save the parameters. if there is no operation for 30 seconds in the setting process.)

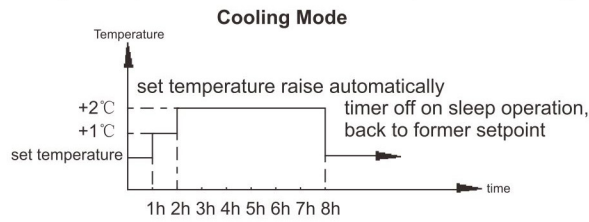
Step	Press Buttons	Display(Factory Defaults)	Press "△" or "▽" to select	Description
01	SLEEP 5 seconds	CL (0)	-5°C--5°C	Adjust temperature coefficient
02	SLEEP	AH (31°C)	20°C--35°C	Select maximum setting temperature limitation
03	SLEEP	AL (16°C)	5°C--20°C	Select minimum setting temperature limitation
04	SLEEP	rE (rE)	rE/rd	Memorize option before power loss
05	SLEEP	bL (1)	1, 2, 3	Display backlight option
06	SLEEP	CP (3)	0--10	Minimum compressor off-time cycle setting
07	SLEEP	FC (C)	F/C	Select °F or °C Readout
08	SLEEP	LA (On)	On/OFF	To decide whether fan would stop when reaching set temperature in cooling mode.
09	ON/OFF	RETURNS TO NORMAL OPERATION		

- 1) Select temperature recalibrates adjustment 5 LO to 5 HI  
You can adjust the room temperature display up to 5 higher or lower. The default setting is 0.

### 4. Basic operation

#### 4.1 Function:

- 1) Power on/off: press the "ON/OFF" key once to turn on the system. Meanwhile the room temperature, setting temperature, fan speed will be also displayed. Press again to turn off the system, system will be turned and screen shows nothing and compressor, reversing valve and fan stop working.
- 2) Setting temperature: when power on, press "△" or "▽" to set the temperature. Press once there will be 0.5°C difference. Press and hold "△" and "▽" to adjust the temperature instantly.
- 3) Mode key: when the thermostat is on, press "HEAT/COOL" key to switch mode. The icon "❄" shows it is in cooling mode. "Cool On" shows cooling relays are in the working mode. When it flickers, it shows the compressor is in the delayed protection state. When it disappears, it shows the environmental temperature has reached setting temperature. So it is the heating mode. Repeat press "HEAT/COOL" key to switch modes.
- 4) Fan speed setting: When power on, press it to switch the fan speed, from auto to low, medium, high, auto successively. Note: in the auto mode, when the difference between room temperature and setting temperature is more than 3°C, it will be high automatically; when the difference is 2-3°C, it will be medium automatically; when the difference is 1°C, it will be low automatically.
- 5) Sleep function: When power on, press "SLEEP" to enter the sleep mode. In the following 8 hours, the thermostats will work as the pics in the following shows.



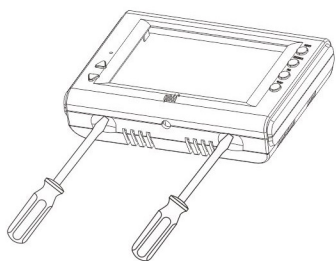
### Cooling Mode



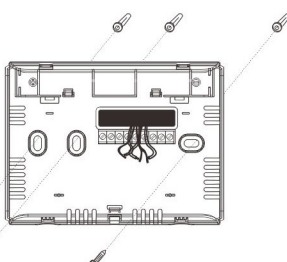
- 2) Select maximum temperature for heating  
This feature provides a maximum setpoint temperature for heat. It ranges from 20°C to 35°C. The default setting is 31°C.
  - 3) Select minimum temperature for cooling  
This feature provides a minimum set-point temperature for heat. It ranges from 5°C to 20°C. The default setting is 16°C.
  - 4) Memorize option after power failure  
Use "△" & "▽" button to select between rE and rd. rE means the thermostats will memorize its on or off status after power failure. When power supply come to normal, the thermostat will remain ON or OFF as it was before power failure. rd means no. The default setting is rE.
  - 5) Back-light display option  
Select 1 the light will be on when any key is touched. Default setting is 1. Select 2 without back-light display. Select 3 with back-light display constantly.
  - 6) Minimum compressor off time cycle setting  
To protect compressor from short cycling, you can set compressor off-time. 3 means off-time cycle is 3 minutes. When compressor time delay occurs, it would flash on the display and the flash would last for the time duration you set previously. Select 0 to cancel this function. The default setting is 3.
  - 7) Select °F or °C readout  
Changes the display readout to Centigrade or Fahrenheit as required. The default setting is "F". The default setting is C.
  - 8) To set the fan being on or off  
In the cooling mode, when temperature reaching the setting temperature, "On" shows the fan will keep working while "OF" shows the fan will stop working.
- 5.2 Restore factory settings**  
When power off, press "HEAT/COOL" key for 8 seconds to restore factory setting mode. Press "ON/OFF" key to restore factory setting and exit when "dEF" displays.

### 6. Installation and wiring

#### 6.1 Open the thermostats and cabling:

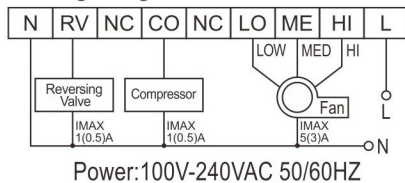


Step1: Insert the awl into the slot and pry up the front part of the panel to open it.



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

### Wiring Diagram

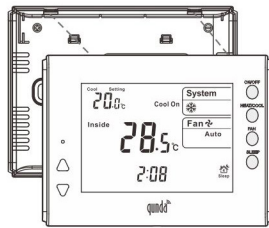


Power: 100V-240VAC 50/60HZ

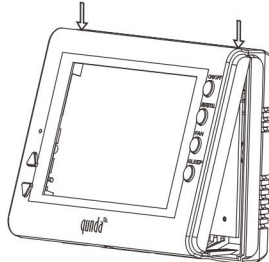
Step 3: install the system according to the diagram above.

**NOTE:** Please ask a professional to install the control system. Power-on test is a must before installation.

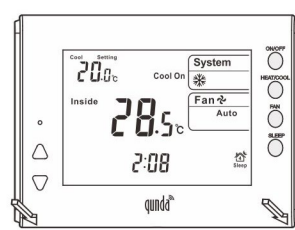
#### 6.2 Install thermostats as the pictures shows in the following:



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



Step 2: Hang the two hooks of the front part at 30° right to the snaps.



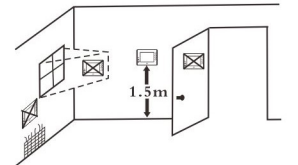
Step 3: Press the lower part of the front display panel to complete the installation.

**NOTE:** In Step 3, if the user think it is hard to connect the pin, please move the display panel slightly. Then it will be work.

### 7. Tips & Notifications

#### 7.1 Places to install the thermostats

- Install the thermostats as the pictures shows, usually 1.5 meters high from the ground. Do not install thermostat at following places:
1. where there are dead spots or drafts (in corners or behind doors)
  2. Places that do not require conditioning, enclosed thermal piping or gas duct
  3. Close to hot or cold air ducts
  4. Places with direct sunlight or places near the heating unit



#### 7.2 Tips for installation

1. If you use the hard plastic wire, bend specific angle in advance.
2. Cabling according to the wiring diagram.
3. When the temperature is too high or too low, you can see HI or LO in the display area, which means the temperature is beyond the effective temperature range.
4. Please do not press on the LCD screen or hit the controller.
5. As precise electronic device, pay attention not to crack or hit the thermostat.
6. Keep the thermostat away from water, mud and other stuff.
7. Peel off the protection film before using.

### 8. Specifications

#### Specifications

the display range of temperature.....	5°C to 50°C
the control range of temperature.....	5°C to 35°C
Display accuracy .....	±0.5°C
Electrical Rating.....	100 to 240 VAC, 50/60 Hz for hardware
Fan Relay Amps inductive.....	3A
Compressor/Reversing Valve Relay Amps inductive.....	3.0A per terminal
Operating ambient.....	0°C to +40°C
Operating humidity.....	90% non-condensing maximum
Dimensions of thermostat.....	118mm x 88mm x 30mm
Color.....	White

### 9. Package

Inner box	1
Thermostat	1
Bubble bag	1
Manual	1
Screw	2
Expansion pipe	2

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