Honeywell

WS8 Series Wall-Mounted Module

For use in fan coil units

Product Data

Key Features

Extra-large LCD screen and interface
Optional temperature display (room temperature or set temperature)
Optional manual or automatic fan speed control
Super-cooling protection
Key lock
Temperature setting range can be set
Standard 86 wall-mounted box installation

Technical Specifications

Operating voltage: 100VAC-240VAC 50-60Hz
Load capacity: Resistive – Fan unit 3A; valve 2A
Inductive – Fan unit 1A; valve 0.6A
Protection rating: IP20
Temperature setting range: 10~30°C (Celsius)
50~86°F (Fahrenheit)
Temperature display range: -10~50°C (Celsius)
14~99°F (Fahrenheit)
Temperature of operating environment:
-30~60°C (Celsius)
-22~140°F (Fahrenheit)
Relative humidity: 5-95%RH

Product Data

The WS series of wall-mounted modules are temperature-control products with LCD screen designed for installation in 86-box to provide real-time display of actual indoor temperature or set temperature and on/off control of fan coil valves for indoor temperature regulation.
The product provides super-cooling function and manual or automatic control of the fan speed. The product is recommended for use with valves controlling the fan coil unit.

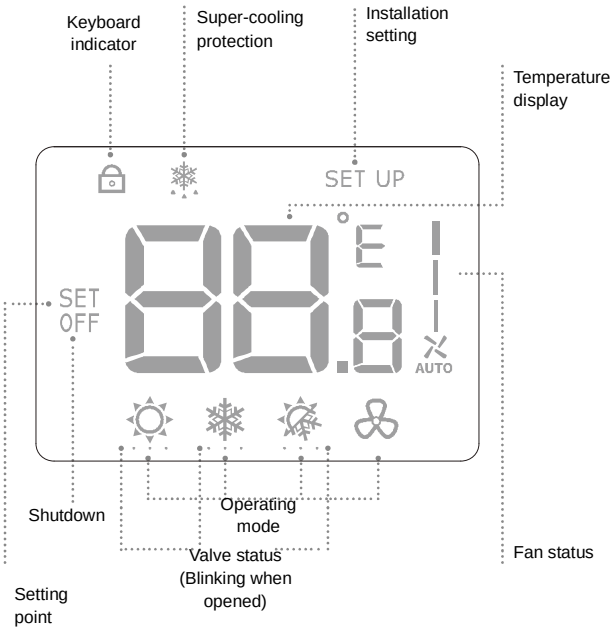
Order Numbers

Model No.	Voltage	2-pipe/4-pipe	Backlight	Ventilation Mode
WS8B2WB/U	100-240Vac	2	Yes, with white backlight	Yes
WS8B4WB/U	100-240Vac	4	Yes, with white backlight	Yes

Product Design

Appearance of Thermostat

LCD Screen



Functions

Valve Control

The thermostat obtains readings on indoor temperature through integrated sensors, and issues command to open valve to maintain set temperature. The operating model for the 3-speed fan consists of manual or automatic control.

Under manual control, fan speed is regulation through control of FH, FM and FL output. Under automatic control, the fan speed depends on the difference between the room temperature and the set temperature. The fan shuts when the valve shuts.

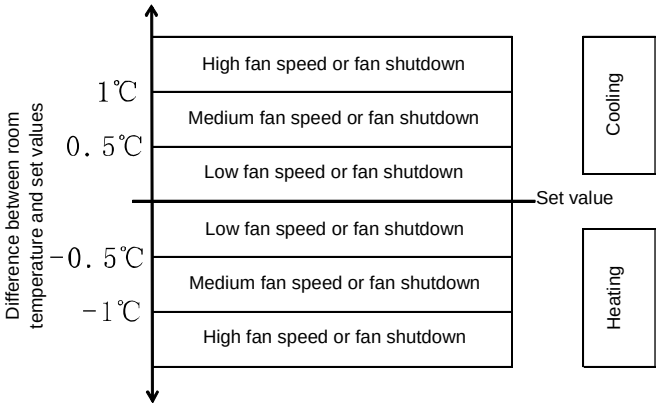


Figure 1 Automatic wind speed control algorithm

Temperature display

The temperature displayed on the screen can be room temperature or set temperature. This can be changed during installation of the device.

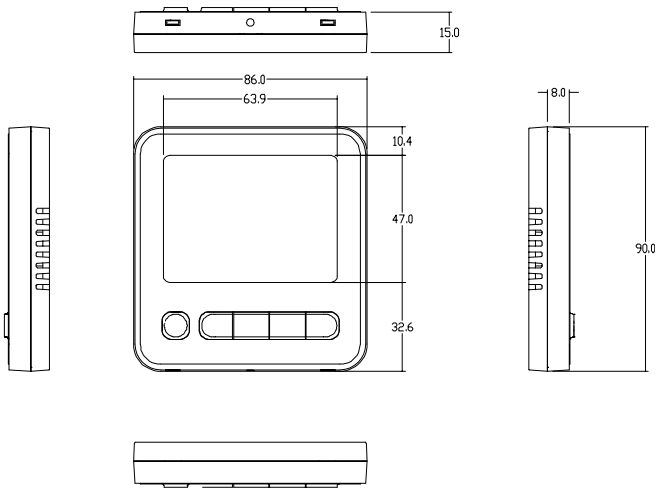
Backlight

The backlight can be activated by pressing any button. It will last for 8 seconds after pressing the last button. Under installation setting or testing mode, the backlight will remain on for 60 seconds after pressing the last button.

Keyboard lock

It is possible to lock or unlock the keyboard while the device is not in menu setting mode. Under the lock mode, the device will be locked when all the buttons are pressed.

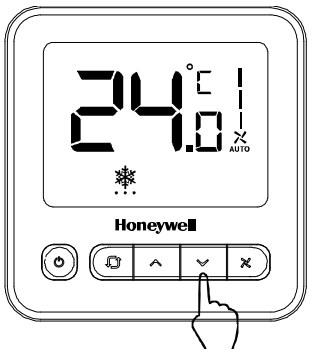
Dimensions (mm)



Operation mode

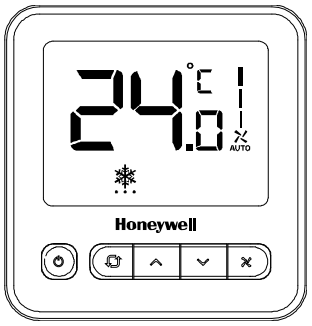
Comfort mode

Under comfort mode, press the Up or Down button to set the temperature. The control mode includes individual cooling, individual heating, and manual regulation of cooling/heating interchange.



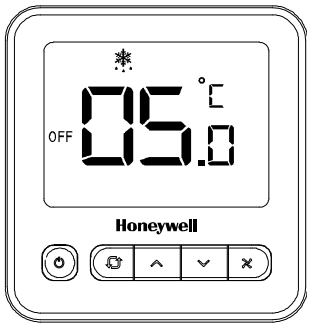
Ventilation mode

Enter ventilation mode by pressing the Mode button. Under this mode, the fan will operate on the manually-set fan speed. The valve does not work.



Super-cooling protection mode

It is possible to select Prohibit (default) or Activate super-cooling protection mode. Under this mode (it is not available if individual cooling is selected), if the thermostat is off and the temperature is below 6°C, the super-cooling function will activate the thermostat or the heating mode until temperature reaches 8°C.



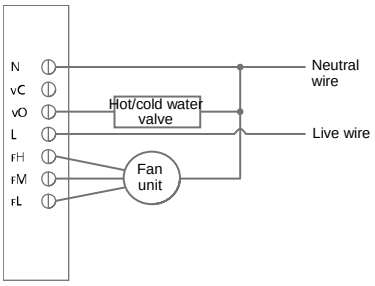
Product Wiring Diagram

Dual-pipe Application

Wiring diagram 1

Dual wire

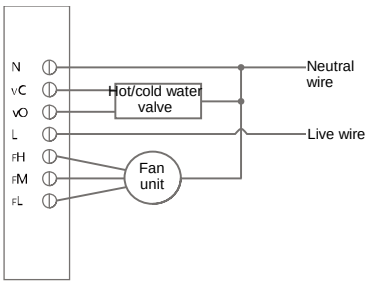
Wiring diagram for electric valve



Wiring diagram 2

Triple wire

Wiring diagram for electric valve

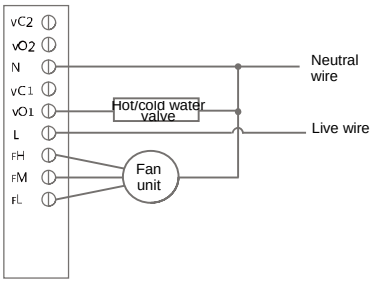


Dual-pipe Application

Wiring diagram 1

Dual wire

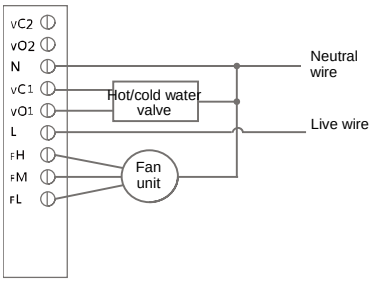
Wiring diagram for electric valve



Wiring diagram 2

Triple wire

Wiring diagram for electric valve

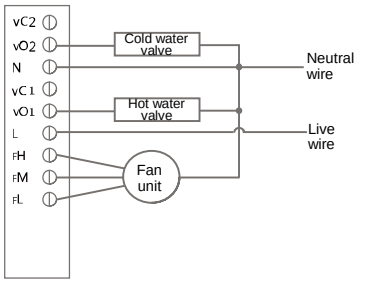


Quadruple-pipe Application

Wiring diagram 1

Dual wire

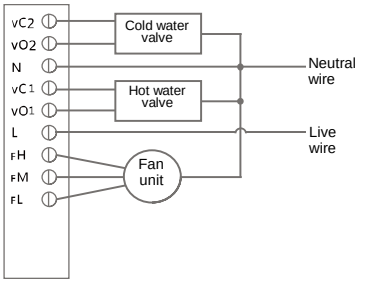
Wiring diagram for electric valve



Wiring diagram 2

Triple wire

Wiring diagram for electric valve



Definition of Terminals

Symbols	Description
vC2	Cooling valve is closed (for quadruple-pipe only)
vO2	Cooling valve is open (for quadruple-pipe only)
N	Power source neutral wire
vC1	Heating/cooling valve is closed
vO1	Heating/cooling valve is open
L	Power source live wire
FH	High fan speed
FM	Medium fan speed
FL	Low fan speed

Troubleshooting

Malfunction	Action
Fails to activate	Press to change the operating mode to "☼" (heating mode) Check if the set temperature is higher than current indoor temperature Check if the valve status indicator light is blinking Check if the heating system is responding after 5 minutes
Fails to activate	Press to change the operating mode to "❄" (cooling mode) Check if the set temperature is lower than current indoor temperature Check if the valve status indicator light is blinking Check if the cooling system is responding after 5 minutes
Fails to work	Check if the button is locked Check if the device is in OFF mode
Fails to work	Check if the button is locked Check if the device is in mode Check if the device is in OFF mode

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Subject to change without notice.