

## T6818DP08 Digital Thermostat

Data Sheet



### Application

T6818DP08 digital thermostats are designed for application of 3-speed fan and valves in 2-pipe fan coil system.

Including:

- 2-pipe cool only/heat only/manual changeover between heat and cool
- Ventilation mode
- Manual 3-speed fan control

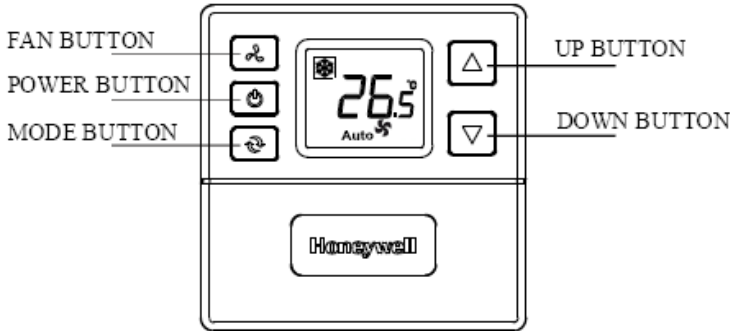
### Features

- Cabinet compact design with white Appearance, suitable for office, hotel and residential building
- Digital LCD with Kelly backlight
- Independent installation on 86 size box
- Easy to install and set-up
- Adjustment of display room temperature
- Temperature unit either °C or oF
- Lock or unlock keys in Installer Set-up
- User setting can be kept when power off

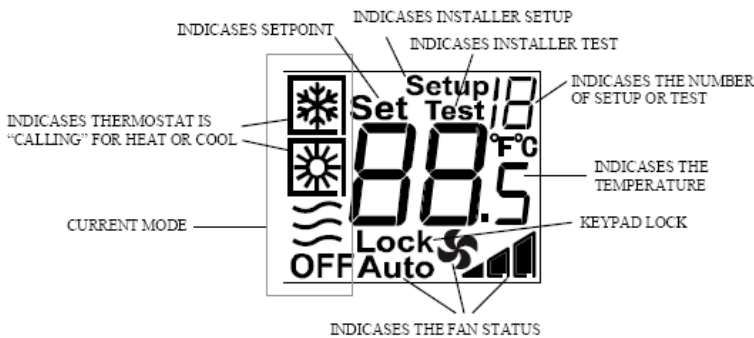
### Specification

Item	Back-light	2pipe/ 4pipe	Operation voltage (VAC)	Ventilation	Manual/ Automation Fan
T6818DP08	kelly	2 pipe	220V	Y	Y

## Mechanical Design



## LCD Display



## Function

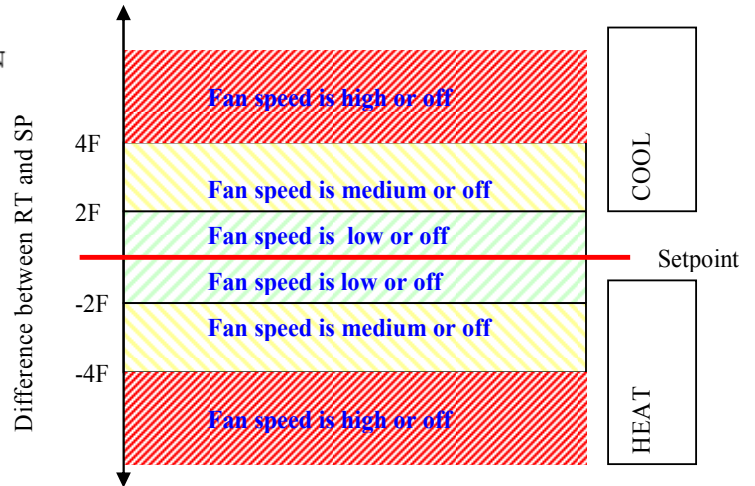
### Valve control

Thermostat acquires the room temperature via its integrated sensor and maintains the setpoint by delivering on/off output.

### Fan Operation

Fan can be selected as manual or automatic 3-speed operation. In Manual mode, the fan is switched to the selected speed via control output Gh, Gm, Gl.

In automatic mode, fan speed depends on the difference between room temperature and setpoint. When room temperature reaches setpoint, valve will be closed and meanwhile, fan will be closed either.



## Temperature display

The displayed temperature can be set to display room temperature or setpoint. The setting can be made during ISU process.

## Backlight

Pressing any key will activate the backlight. Backlight will turn off after 8 seconds. When in ISU mode or 'Installer test' mode, the backlight will turn off after 60 seconds without operation.

## Ventilation

Pressing Mode, enter ventilation. Fan speed can be selected to automatic or manual 3-speed control mode.

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## Keypad lock

The default status of 'Keypad Lock' is all keys available and it can be changed in ISU mode. Keypad lock has the following settings:

- All keys are available (Default)
- System button is locked out
- Fan and System button are locked out

## Technical specification

Power supply	220VAC ( $\pm 10\%$ ) ,50Hz
Control algorithm	PI, on/off output
Accuracy	$\pm 1^{\circ}\text{C}$ at $21^{\circ}\text{C}$
Load rating	Fan 4(2)A, Valve 2(1)A
Relay life	100, 000 times
Setpoint range	10–32 $^{\circ}\text{C}$
Installation	86 $\times$ 86mm box
Protection class	IP20
Environmental	
Operation temperature	$-18^{\circ}\text{C}$ ~ $49^{\circ}\text{C}$
Shipping temperature	$-35^{\circ}\text{C}$ ~ $65^{\circ}\text{C}$
Relative humidity	5~95%
Comment span	Min 0.75mm <sup>2</sup>

## Wiring Diagrams

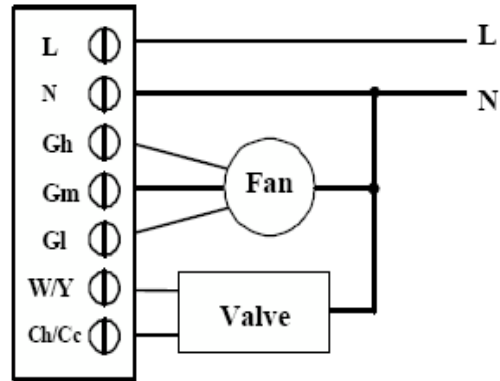


Fig2.2 Typical wiring for ON/OFF control in 2 pipes Heat/Cool/1H1C (VC6013)

## Terminal Designations

Terminal	Description
L	Line Voltage Power
N	Neutral Voltage Power
Gh	High speed fan
Gm	Medium speed fan
Gl	Low speed fan
W/Y	Heating open/cooling open
Ch/Cc	Heating close/cooling close

## Operating modes

### 1. Power On/Off

Press the POWER button to switch thermostat to the On/Off mode.

### 2. Fan switch

Press the FAN button to select Fan mode Low , Med , High or Auto.

### 3. System Mode Setting

Press the MODE button to choose Heat , Cool or Vent mode.

### 4. Temperature Setting

In Heat/Cool mode press the UP or DOWN button to select the desired temperature setting.

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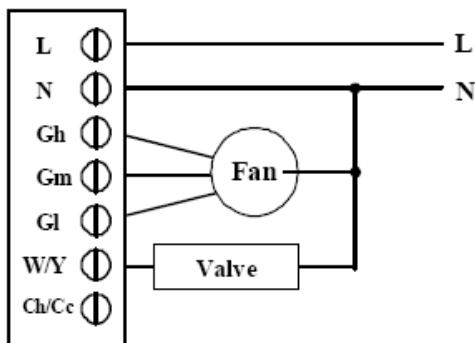
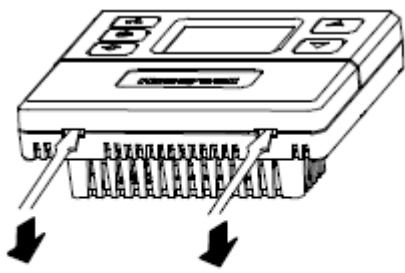


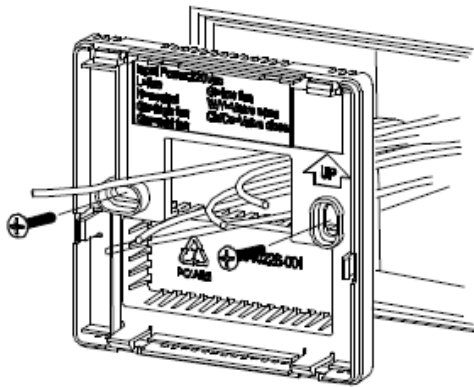
Fig2.1 Typical wiring for ON/OFF control in 2 pipes Heat/Cool/1H1C (VC4013)

## Installation & Commissioning

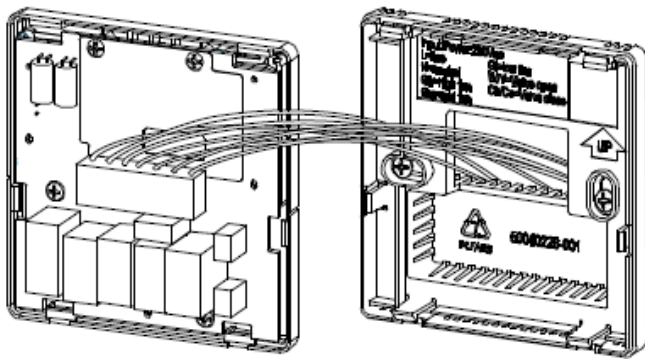
## Troubleshooting Tips



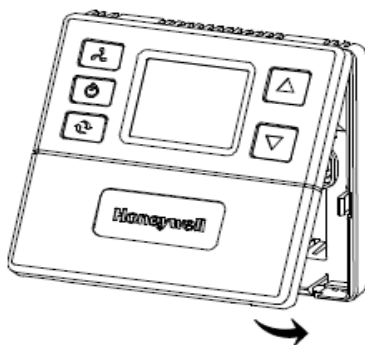
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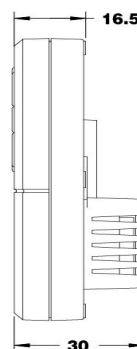
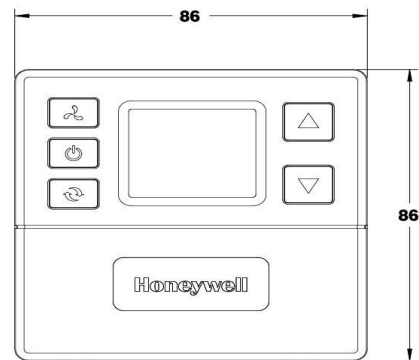
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If...	Then...
Heating system does not turn on.	<ul style="list-style-type: none"> <li>◆ Set the mode to Heat "☀️" by pressing the Mode button.</li> <li>◆ Check that the heat temperature setting is above the room temperature.</li> <li>◆ Check heating on icon "☀️" shows solidly in the display.</li> <li>◆ Wait five minutes, for the heating system to respond.</li> </ul>
Cooling system does not turn on.	<ul style="list-style-type: none"> <li>◆ Set the Mode button to cool "❄️" by pressing the Mode button.</li> <li>◆ Check that the cool temperature setting is below the room temperature.</li> <li>◆ Check cooling on icon "❄️" shows solidly in the display.</li> <li>◆ <span style="border: 1px solid red; padding: 2px;">Wait five minutes, for the cooling system to respond</span></li> </ul>
The Mode button doesn't work.	<ul style="list-style-type: none"> <li>◆ Check whether the keypad is locked or not.</li> <li>◆ Check whether the thermostat is off.</li> </ul>
The Up or Down button doesn't work.	<ul style="list-style-type: none"> <li>◆ Check whether the keypad is locked or not.</li> <li>◆ Check whether the system is working in Ventilation mode.</li> <li>◆ Check whether the thermostat is off.</li> </ul>

## Dimension



# Setup Function Setting

## installer

Press and hold MODE and UP buttons for 3 seconds to enter (or exit) Installer Setup (ISU) mode.

In ISU mode press MODE button to change item number and UP/DOWN button to change

No.	Description	Possible Options
1	System type	0 Heat only
		1 Cool only
		<b>2 Two pipes IHIC manual (Default)</b>
2	Temperature scale	0 °F <b>1 °C (Default)</b>
3	Fan Control Type	0 Auto only
		1 Constant only
		<b>2 Both (Default)</b>
4	CPH value For Heat	1
		2
		3
		<b>4 (Default)</b>
		5
		6
		7
		8
		9
		10
		11
		12
5	CPH value For Cool	1
		2
		<b>3 (Default)</b>
		4
		5
		6

No.	Description	Possible Options
6	Display Temperature adjustment	-2 °C (-4 °F)
		-1.5 °C (-3 °F)
		-1 °C (-2 °F)
		-0.5 °C (-1 °F)
		<b>0 °C (0 °F) (Default)</b>
		0.5 °C (1 °F)
7	Temperature Display mode	1 °C (2 °F)
		1.5 °C (3 °F)
		2 °C (4 °F)
		<b>0 Display Room Temperature (Default)</b>
8	Heating Range Stops	1 Display Setpoint
		10-32 °C <b>Default 32 °C</b> (50-90 °F <b>Default 90 °F</b> )
9	Cooling Range Stops	10-32 °C <b>Default 10 °C</b> (50-90 °F <b>Default 50 °F</b> )
10	Keypad Lockout	0 All keys available <b>(Default)</b>
		1 MODE button is locked out
		2 FAN and MODE buttons are locked out
		3 All buttons are locked out except POWER button
		4 All buttons are locked out

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