

Honeywell

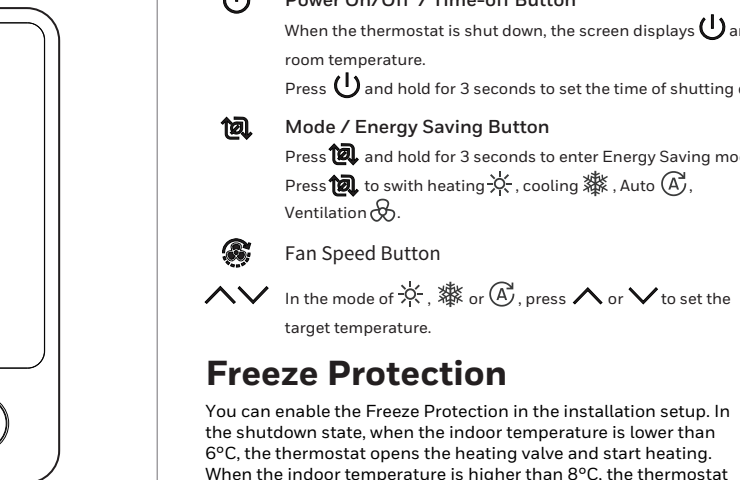
Thermostat

WL8 Series Thermostat

User Manual

Before installing and configuring the thermostat, read the user guide and keep it for future use.

Thermostat Appearance



1

Operating Your Thermostat

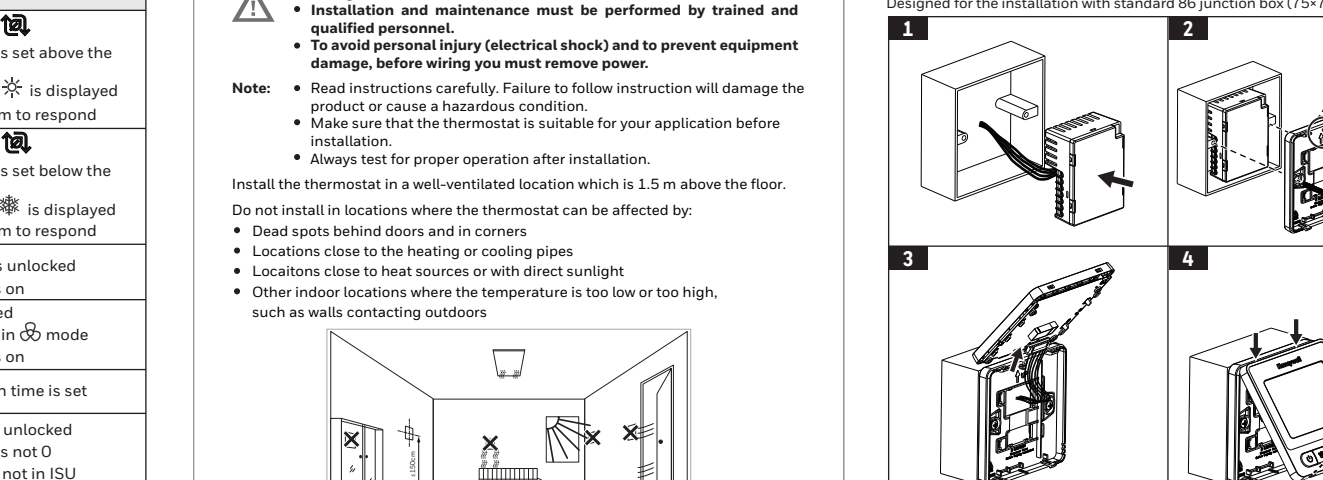
- Power On/Off / Time-off Button**
When the thermostat is shut down, the screen displays and room temperature.
Press and hold for 3 seconds to set the time of shutting down.
- Mode / Energy Saving Button**
Press and hold for 3 seconds to enter Energy Saving mode.
Press to switch heating , cooling , Auto , Ventilation .
- Fan Speed Button**
 In the mode of , , or , press or to set the target temperature.

Freeze Protection

You can enable the Freeze Protection in the installation setup. In the shutdown state, when the indoor temperature is lower than 6°C, the thermostat opens the heating valve and start heating. When the indoor temperature is higher than 8°C, the thermostat closes the heating valve and stop heating.

2

LCD Display



3

Troubleshooting Tips

If...	Then...
Does not work	- Set the mode to by press . - Make sure the temperature is set above the room temperature. - Check that the heating icon is displayed. - Wait 5 minutes for the system to respond.
Does not work	- Set the mode to by press . - Make sure the temperature is set below the room temperature. - Check that the cooling icon is displayed. - Wait 5 minutes for the system to respond.
Does not work	- Make sure the button is unlocked. - Check that the thermostat is on.
Does not work	- Make sure keypad is unlocked. - Make sure the system is not in mode. - Check that the thermostat is on.
The system turns off automatically	Check whether the shutdown time is set.
Shutdown Timer Does not work	- Make sure the button is unlocked. - Make sure the turn off time is not 0. - Make sure the thermostat is not in ISU. - Check that the thermostat is on.

4

Installation

- Warning:**
 - Installation and maintenance must be performed by trained and qualified personnel.
 - To avoid personal injury (electrical shock) and to prevent equipment damage, before wiring you must remove power.
- Note:**
 - Read instructions carefully. Failure to follow instruction will damage the product or cause a hazardous condition.
 - Make sure that the thermostat is suitable for your application before installation.
 - Always test for proper operation after installation.

Install the thermostat in a well-ventilated location which is 1.5 m above the floor.

- Do not install in locations where the thermostat can be affected by:
 - Dead spots behind doors and in corners
 - Locations close to the heating or cooling pipes
 - Locations close to heat sources or with direct sunlight
- Other indoor locations where the temperature is too low or too high, such as walls contacting outdoors

5

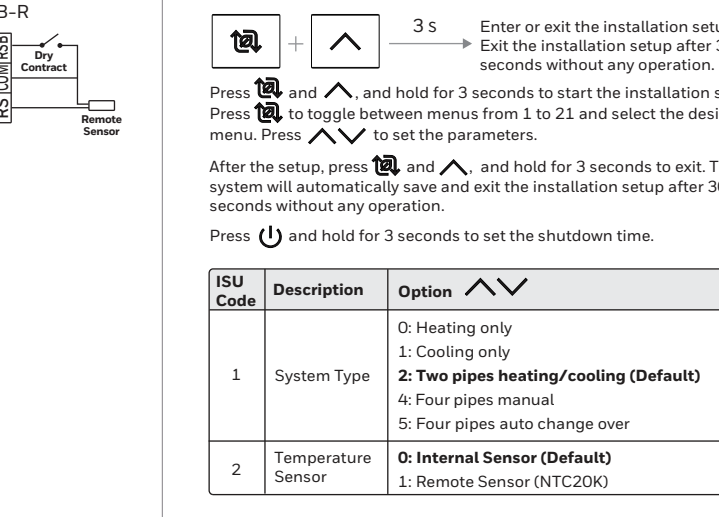
Terminals

Terminal	Description
FL	Low speed fan
FM	Middle speed fan
FH	High speed fan
N	Neutral wire
vO / v1	Heating or cooling valve opens
vC / v2	vC / v2: Heating or cooling valve closes v2: cooling valve opens (only for 4-pipe)
L	Live wire
RSB	Remote set back
COM	Common terminal (Remote set back and Remote Sensor)
RS	Remote sensor

Input Voltage: 220 / 230 VAC 50 / 60 Hz.
The thermostat must be equipped with overload protection.
The remote set back signal and the remote sensor signal can be connected simultaneously.
Remote Sensor: NTC20K(50046805-001).

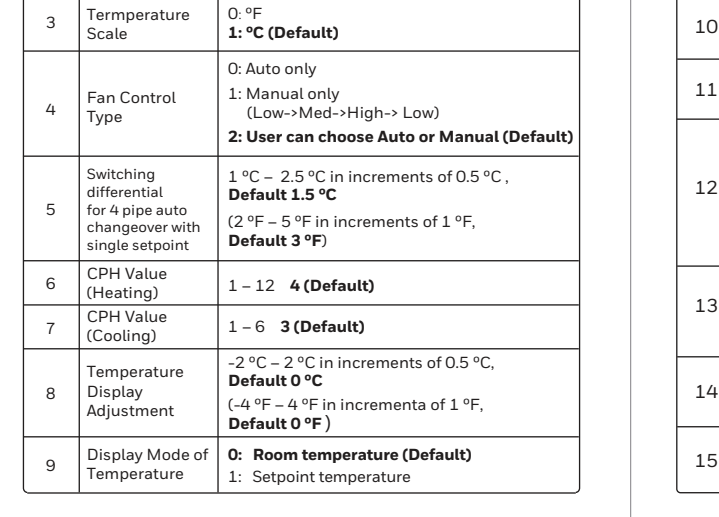
6

Two-pipe Wiring - Two-wire Valve



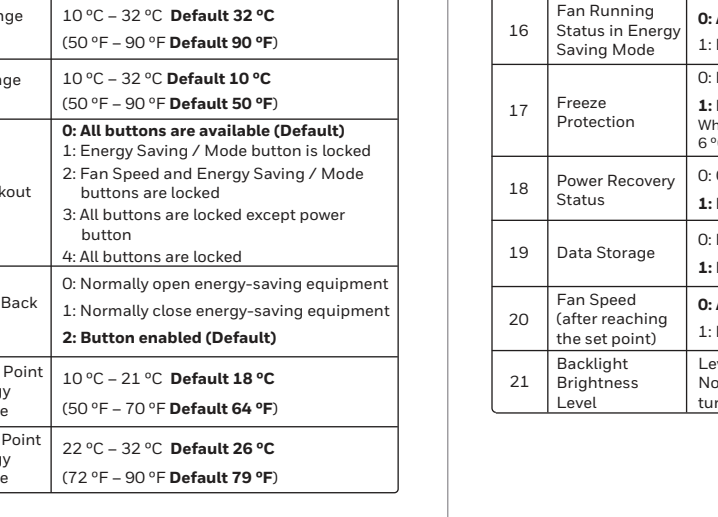
7

Two-pipe Wiring - Three-wire Valve



8

Four-pipe Wiring - Two-wire Valve



9

Installation Setup

ISU Code	Description	Option
1	System Type	0: Heating only 1: Cooling only 2: Two pipes heating/cooling (Default) 3: Four pipes manual 4: Four pipes auto change over
2	Temperature Sensor	0: Internal Sensor (Default) 1: Remote Sensor (NTC20K)

10

Terminals

Terminal	Description
FL	Low speed fan
FM	Middle speed fan
FH	High speed fan
N	Neutral wire
vO / v1	Heating or cooling valve opens
vC / v2	vC / v2: Heating or cooling valve closes v2: cooling valve opens (only for 4-pipe)
L	Live wire
RSB	Remote set back
COM	Common terminal (Remote set back and Remote Sensor)
RS	Remote sensor

Input Voltage: 220 / 230 VAC 50 / 60 Hz.
The thermostat must be equipped with overload protection.
The remote set back signal and the remote sensor signal can be connected simultaneously.
Remote Sensor: NTC20K(50046805-001).

11

Two-pipe Wiring - Two-wire Valve

12

Two-pipe Wiring - Three-wire Valve

13

Four-pipe Wiring - Two-wire Valve

14

Installation Setup

ISU Code	Description	Option
3	Temperature Scale	0: °F 1: °C (Default)
4	Fan Control Type	0: Auto only 1: Manual only (Low->Med->High-> Low) 2: User can choose Auto or Manual (Default)
5	Switching differential for 4 pipe auto changeover with single setpoint	1 °C - 2.5 °C in increments of 0.5 °C, Default 1.5 °C (2 °F - 5 °F in increments of 1 °F, Default 3 °F)
6	CPH Value (Heating)	1 - 12 4 (Default)
7	CPH Value (Cooling)	1 - 6 3 (Default)
8	Temperature Display Adjustment	-2 °C - 2 °C in increments of 0.5 °C, Default 0 °C (-4 °F - 4 °F in increments of 1 °F, Default 0 °F)
9	Display Mode of Temperature	0: Room temperature (Default) 1: Setpoint temperature

15

Installation Setup

ISU Code	Description	Option
10	Heating Range Stops	10 °C - 32 °C Default 32 °C (50 °F - 90 °F Default 90 °F)
11	Cooling Range Stops	10 °C - 32 °C Default 10 °C (50 °F - 90 °F Default 50 °F)
12	Keypad Lockout	0: All buttons are available (Default) 1: Energy Saving / Mode button is locked 2: Fan Speed and Energy Saving / Mode buttons are locked 3: All buttons are locked except power button 4: All buttons are locked
13	Remote Set Back Enabled	0: Normally open energy-saving equipment 1: Normally close energy-saving equipment 2: Button enabled (Default)
14	Heating Set Point of the Energy Saving Mode	10 °C - 21 °C Default 18 °C (50 °F - 70 °F Default 64 °F)
15	Cooling Set Point of the Energy Saving Mode	22 °C - 32 °C Default 26 °C (72 °F - 90 °F Default 79 °F)

16

Installation Setup

ISU Code	Description	Option
16	Fan Running Status in Energy Saving Mode	0: Auto (Default) 1: Low speed
17	Freeze Protection	0: Disabled 1: Enabled (Default) When the room temperature is lower than 6 °C (43 °F), the freeze protection will be enabled.
18	Power Recovery Status	0: OFF 1: Previous status (Default)
19	Data Storage	0: Disabled 1: Enabled (Default)
20	Fan Speed (after reaching the set point)	0: Automatic speed (Default) 1: Low speed
21	Backlight Brightness Level	Level 0 - 10 (Default 3) Note: When set to 0, the backlight is turned off.

17

Installation Setup

ISU Code	Description	Option
1	System Type	0: Heating only 1: Cooling only 2: Two pipes heating/cooling (Default) 3: Four pipes manual 4: Four pipes auto change over
2	Temperature Sensor	0: Internal Sensor (Default) 1: Remote Sensor (NTC20K)

18

Installation Setup

ISU Code	Description	Option
3	Temperature Scale	0: °F 1: °C (Default)
4	Fan Control Type	0: Auto only 1: Manual only (Low->Med->High-> Low) 2: User can choose Auto or Manual (Default)
5	Switching differential for 4 pipe auto changeover with single setpoint	1 °C - 2.5 °C in increments of 0.5 °C, Default 1.5 °C (2 °F - 5 °F in increments of 1 °F, Default 3 °F)
6	CPH Value (Heating)	1 - 12 4 (Default)
7	CPH Value (Cooling)	1 - 6 3 (Default)
8	Temperature Display Adjustment	-2 °C - 2 °C in increments of 0.5 °C, Default 0 °C (-4 °F - 4 °F in increments of 1 °F, Default 0 °F)
9	Display Mode of Temperature	0: Room temperature (Default) 1: Setpoint temperature

19

Installation Setup

ISU Code	Description	Option
10	Heating Range Stops	10 °C - 32 °C Default 32 °C (50 °F - 90 °F Default 90 °F)
11	Cooling Range Stops	10 °C - 32 °C Default 10 °C (50 °F - 90 °F Default 50 °F)
12	Keypad Lockout	0: All buttons are available (Default) 1: Energy Saving / Mode button is locked 2: Fan Speed and Energy Saving / Mode buttons are locked 3: All buttons are locked except power button 4: All buttons are locked
13	Remote Set Back Enabled	0: Normally open energy-saving equipment 1: Normally close energy-saving equipment 2: Button enabled (Default)
14	Heating Set Point of the Energy Saving Mode	10 °C - 21 °C Default 18 °C (50 °F - 70 °F Default 64 °F)
15	Cooling Set Point of the Energy Saving Mode	22 °C - 32 °C Default 26 °C (72 °F - 90 °F Default 79 °F)

20

Installation Setup

ISU Code	Description	Option
16	Fan Running Status in Energy Saving Mode	0: Auto (Default) 1: Low speed
17	Freeze Protection	0: Disabled 1: Enabled (Default) When the room temperature is lower than 6 °C (43 °F), the freeze protection will be enabled.
18	Power Recovery Status	0: OFF 1: Previous status (Default)
19	Data Storage	0: Disabled 1: Enabled (Default)
20	Fan Speed (after reaching the set point)	0: Automatic speed (Default) 1: Low speed
21	Backlight Brightness Level	Level 0 - 10 (Default 3) Note: When set to 0, the backlight is turned off.

21

Installation Setup

ISU Code	Description	Option
3	Temperature Scale	0: °F 1: °C (Default)
4	Fan Control Type	0: Auto only 1: Manual only (Low->Med->High-> Low) 2: User can choose Auto or Manual (Default)
5	Switching differential for 4 pipe auto changeover with single setpoint	1 °C - 2.5 °C in increments of 0.5 °C, Default 1.5 °C (2 °F - 5 °F in increments of 1 °F, Default 3 °F)
6	CPH Value (Heating)	1 - 12 4 (Default)
7	CPH Value (Cooling)	1 - 6 3 (Default)
8	Temperature Display Adjustment	-2 °C - 2 °C in increments of 0.5 °C, Default 0 °C (-4 °F - 4 °F in increments of 1 °F, Default 0 °F)
9	Display Mode of Temperature	0: Room temperature (Default) 1: Setpoint temperature

22

Installation Setup

ISU Code	Description	Option
10	Heating Range Stops	10 °C - 32 °C Default 32 °C (50 °F - 90 °F Default 90 °F)
11	Cooling Range Stops	10 °C - 32 °C Default 10 °C (50 °F - 90 °F Default 50 °F)
12	Keypad Lockout	0: All buttons are available (Default) 1: Energy Saving / Mode button is locked 2: Fan Speed and Energy Saving / Mode buttons are locked 3: All buttons are locked except power button 4: All buttons are locked
13	Remote Set Back Enabled	0: Normally open energy-saving equipment 1: Normally close energy-saving equipment 2: Button enabled (Default)
14	Heating Set Point of the Energy Saving Mode	10 °C - 21 °C Default 18 °C (50 °F - 70 °F Default 64 °F)
15	Cooling Set Point of the Energy Saving Mode	22 °C - 32 °C Default 26 °C (72 °F - 90 °F Default 79 °F)

23

Installation Setup

ISU Code	Description	Option
16	Fan Running Status in Energy Saving Mode	0: Auto (Default) 1: Low speed
17	Freeze Protection	0: Disabled 1: Enabled (Default) When the room temperature is lower than 6 °C (43 °F), the freeze protection will be enabled.
18	Power Recovery Status	0: OFF 1: Previous status (Default)
19	Data Storage	0: Disabled 1: Enabled (Default)
20	Fan Speed (after reaching the set point)	0: Automatic speed (Default) 1: Low speed
21	Backlight Brightness Level	Level 0 - 10 (Default 3) Note: When set to 0, the backlight is turned off.

24

Installation Setup

ISU Code	Description	Option
3	Temperature Scale	0: °F 1: °C (Default)
4	Fan Control Type	0: Auto only 1: Manual only (Low->Med->High-> Low) 2: User can choose Auto or Manual (Default)
5	Switching differential for 4 pipe auto changeover with single setpoint	1 °C - 2.5 °C in increments of 0.5 °C, Default 1.5 °C (2 °F - 5 °F in increments of 1 °F, Default 3 °F)
6	CPH Value (Heating)	1 - 12 4 (Default)
7	CPH Value (Cooling)	1 - 6 3 (Default)
8	Temperature Display Adjustment	-2 °C - 2 °C in increments of 0.5 °C, Default 0 °C (-4 °F - 4 °F in increments of 1 °F, Default 0 °F)
9	Display Mode of Temperature	0: Room temperature (Default) 1: Setpoint temperature

25

Installation Setup

ISU Code	Description	Option
10	Heating Range Stops	10 °C - 32 °C Default 32 °C (50 °F - 90 °F Default 90 °F)
11	Cooling Range Stops	10 °C - 32 °C Default 10 °C (50 °F - 90 °F Default 50 °F)
12	Keypad Lockout	0: All buttons are available (Default) 1: Energy Saving / Mode button is locked 2: Fan Speed and Energy Saving / Mode buttons are locked 3: All buttons are locked except power button 4: All buttons are locked
13	Remote Set Back Enabled	0: Normally open energy-saving equipment 1: Normally close energy-saving equipment 2: Button enabled (Default)
14	Heating Set Point of the Energy Saving Mode	10 °C - 21 °C Default 18 °C (50 °F - 70 °F Default 64 °F)
15	Cooling Set Point of the Energy Saving Mode	22 °C - 32 °C Default 26 °C (72 °F - 90 °F Default 79 °F)

26

Installation Setup

ISU Code	Description	Option
16	Fan Running Status in Energy Saving Mode	0: Auto (Default) 1: Low speed
17	Freeze Protection	0: Disabled 1: Enabled (Default) When the room temperature is lower than 6 °C (43 °F), the freeze protection will be enabled.
18	Power Recovery Status	0: OFF 1: Previous status (Default)
19	Data Storage	0: Disabled 1: Enabled (Default)
20	Fan Speed (after reaching the set point)	0: Automatic speed (Default) 1: Low speed
21	Backlight Brightness Level	Level 0 - 10 (Default 3) Note: When set to 0, the backlight is turned off.

27

Installation Setup

ISU Code	Description	Option
3	Temperature Scale	0: °F 1: °C (Default)
4	Fan Control Type	0: Auto only 1: Manual only (Low->Med->High-> Low) 2: User can choose Auto or Manual (Default)
5	Switching differential for 4 pipe auto changeover with single setpoint	1 °C - 2.5 °C in increments of 0.5 °C, Default 1.5 °C (2 °F - 5 °F in increments of 1 °F, Default 3 °F)
6	CPH Value (Heating)	1 - 12 4 (Default)
7	CPH Value (Cooling)	1 - 6 3 (Default)
8	Temperature Display Adjustment	-2 °C - 2 °C in increments of 0.5 °C, Default 0 °C (-4 °F - 4 °F in increments of 1 °F, Default 0 °F)
9	Display Mode of Temperature	0: Room temperature (Default) 1: Setpoint temperature

28

Installation Setup

ISU Code	Description	Option
10	Heating Range Stops	10 °C - 32 °C Default 32 °C (50 °F - 90 °F Default 90 °F)
11	Cooling Range Stops	10 °C - 32 °C Default 10 °C (50 °F - 90 °F Default 50 °F)
12	Keypad Lockout	0: All buttons are available (Default) 1: Energy Saving / Mode button is locked 2: Fan Speed and Energy Saving / Mode buttons are locked 3: All buttons are locked except power button 4: All buttons are locked
13	Remote Set Back Enabled	0: Normally open energy-saving equipment 1: Normally close energy-saving equipment 2: Button enabled (Default)
14	Heating Set Point of the Energy Saving Mode	10 °C - 21 °C Default 18 °C (50 °F - 70 °F Default 64 °F)
15	Cooling Set Point of the Energy Saving Mode	22 °C - 32 °C Default 26 °C (72 °F - 90 °F Default 79 °F)

29

Installation Setup

ISU Code	Description	Option
16	Fan Running Status in Energy Saving Mode	0: Auto (Default) 1: Low speed
17	Freeze Protection	0: Disabled 1: Enabled (Default) When the room temperature is lower than 6 °C (43 °F), the freeze protection will be enabled.
18	Power Recovery Status	0: OFF 1: Previous status (Default)
19	Data Storage	0: Disabled 1: Enabled (Default)
20	Fan Speed (after reaching the set point)	0: Automatic speed (Default) 1: Low speed
21	Backlight Brightness Level	Level 0 - 10 (Default 3) Note: When set to 0, the backlight is turned off.

30

Installation Setup