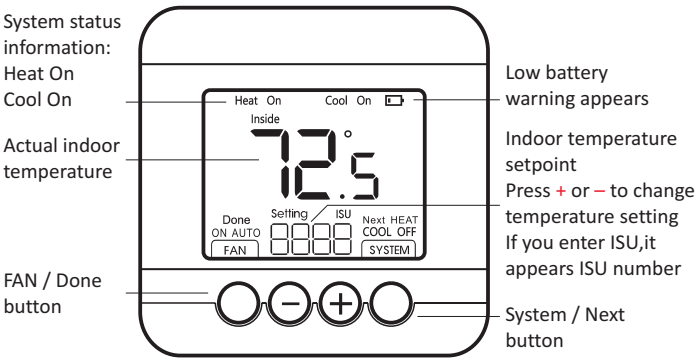
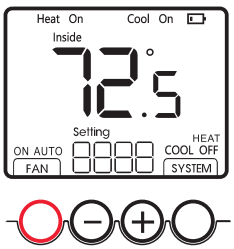
107402
Non-Programmable Thermostat

Thermostat controls



The screen will wake up by pressing any button. Depending on how your thermostat was installed, the screen light may always be on.

FAN operation settings



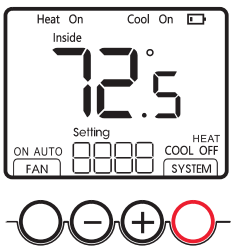
Press FAN button to cycle through the available modes.

FAN modes:

– ON: Fan is always on.

– AUTO: Fan runs only when the heating or cooling system is on.

System operation settings



Press SYSTEM button to cycle through the available modes.

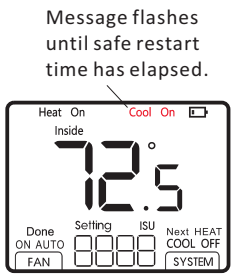
System modes:

– Heat:Thermostat controls only the heating system.

– COOL:Thermostat controls only the cooling system.

– OFF:Heating and cooling system is off. Fan will still operate if fan is set to On.

Built-in compressor protection



Damage can occur if the compressor is restarted too soon after shutdown. This feature forces the compressor to wait for a few minutes before restarting.

During the wait time, the display will flash the message Cool On (or Heat On if you have a heat pump).

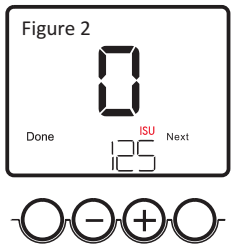
When the safe wait time has elapsed, the message stops flashing and the compressor turns on.

Installer setup (ISU)



Figure 1

1 Press and hold FAN button and + button [See Figure 1] for approximately 3 seconds to enter menu. The screen shows ISU 125. [See Figure 2]



2 Press + button or - button to change values within a setup option.

3 Press Next button to advance to the next setup option.

4 Press Done button to Save and return to the main menu screen.

NOTE: To keep the factory default settings, press Next button to dEF and press + button . Once you pass the last option, the thermostat will automatically save and return you to the main menu.

NOTE: A complete list of all setup (ISU) parameters and options starts below.

Installer setup options (ISU)

#ISU	ISU Name	ISU options(Factory default in bold)
125	Temperature Indication Scale	**0 = Fahrenheit** 1 = Celsius
200	Heating System Type	**1 = Conventional Forced Air Heat** 2 = Heat Pump 3 = Radiant Heat 5 = None (Cool Only) Note: This option selects the basic system type your thermostat will control.
205	Heating Equipment Type	Conventional Forced Air Heat: 1 = Standard Efficiency Gas Forced Air **2 = High Efficiency Gas Forced Air** 3 = Oil Forced Air 4 = Electric Forced Air 5 = Hot Water Fan Coil Heat Pump: **7 = Air to Air Heat Pump** 8 = Geothermal Heat Pump Radiant Heat: **9 = Hot Water Radiant Heat** 12 = Steam Note: This option selects the equipment type your thermostat will control. Note: This feature is NOT displayed if feature 200 is set to Cool Only
218	Reversing Valve O/B	**0 = O (O/B in Cool)** 1 = B (O/B in Heat) Note: This option is only displayed if the Heat Pump configured. Select whether reversing valve O/B should energize in cool or in heat.
220	Cool / Compressor Stages 200=Conv / 200=HP	0, **1** Note: Select how many Cool or Compressor stages of your equipment the thermostat will control. Set value to 0 if you do not have Cool Stage/Compressor Stage.
221	Heat Stages	0, **1** Note: Select how many Heat stages of your equipment the thermostat will control.
230	Fan Control in Heat	1 = Equipment Controls Fan **2 = Thermostat Controls Fan** Note: This ISU is only displayed if ISU 205 is set to Electric Forced Air or Fan Coil.
430	Minimum Cool Setpoint	50 °F to 99 °F **(50 °F)** 10.0 °C to 37.0 °C **(10.0 °C)** Note: The cool temperature cannot be set below this level.
431	Maximum Heat Setpoint	32 °F to 90 °F **(90 °F)** 0 °C to 32.0 °C **(32 °C)** Note: The heat temperature cannot be set above this level.
1400	Backlighting	**0 = On Demand** 1 = Continuous Note: Common wire needed for continuous. This ISU will not be shown if the device is powered only by battery.
1420	Temperature Display Offset	–3 to 3F **(0)** -1.5 to 1.5C **(0)** Note: 0 °F - No difference in displayed temperature and the actual room temperature. The thermostat can display up to 3 °F (1.5 C) lower or higher than the actual measured temperature.
dEF	Factory default settings	**Factory default in bold**

Battery replacement

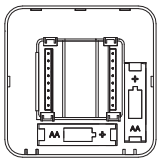
Batteries are optional (to provide backup power) if your thermostat was wired to run on AC power when installed. If your thermostat was not wired to run on AC power, then batteries are required.

Install fresh batteries immediately when the low battery icon appears. The icon appears about two months before the batteries are depleted.

Even if the low battery icon does not appear, you should replace batteries once a year, or before leaving home for more than a month.

NOTE: When replacing batteries, alkaline batteries are recommended.

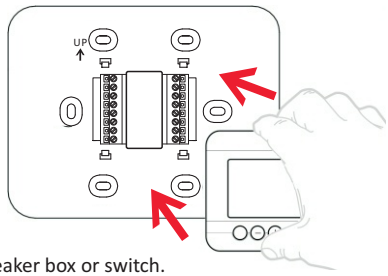
When the low battery warning appears, press gently to loosen the thermostat and then carefully pull it from the wall mount.



Insert fresh alkaline AA batteries and reinstall thermostat.

Thermostat mounting

1. Secure the base plate to the wall with screws and try to keep it level.
2. Correctly connect wires and push the excess wire back to the wall opening
3. Pin the pinhole on the base plate with the thermostat and push gently until the thermostat is captured in place.
4. Turn on the power at the circuit breaker box or switch.



Cover Plate installation

1 Before starting, turn the power off at the breaker box or switch.

2 Pull wires through wire hole of the cover plate.

3 Make sure the cover plate is horizontal and note the mark UP.See Figure 3.

4 Drill holes at marked positions as shownbelow, then tap in supplied wall anchors

5 Use any three of the six screw holes to mount the cover plate to the wall or the electric box. Place cover plate over anchors, insert and tighten mounting screws.

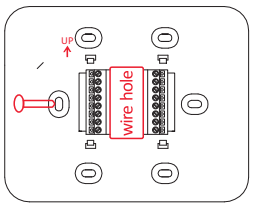
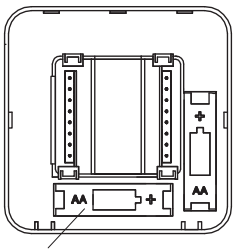


Figure 3

Power options

Insert R and C wires into designated terminals for primary AC power (C terminal is optional if batteries are installed, but it is recommended). Remove wires by depressing the terminal tabs.



Insert AA batteries for primary or backup power.

Specifications

Temperature Ranges:
Heat: 32 °F to 90 °F (0 °C to 32.0 °C)
Cool: 50 °F to 99 °F (10.0 °C to 37.0 °C)

Operating Ambient Temperature:
32 °F to 102 °F (0 °C to 38.9 °C)

Shipping Temperature:
-20 °F to 120 °F (-28.9 °C to 48.9 °C)

Operating Relative Humidity:
5% to 90% (non-condensing)

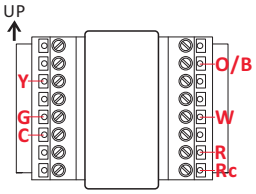
Physical Dimensions in inches (mm) (H x W x D):
4-1/16" H x 4-1/16" W x 1-5/32" D
103.5 mm H x 103.5 mm W x 29 mm D

Electrical Ratings

Terminal	Voltage (50/60Hz)	Running Current
W Heating	20-30 Vac	0.02-1.0 A
(Powerpile)	750 mV DC	100 mA DC
Y Compressor Stage 1	20-30 Vac	0.02-1.0 A
G Fan	20-30 Vac	0.02-0.5 A
O/B Changeover	20-30 Vac	0.02-0.5 A

Wiring terminal designations

- **Y** — Compressor contactor (stage 1)
- **G** — Fan Relay
- **C** — 24VAC common. For 2 transformer systems, use common wire from cooling transformer.
- **O/B** — Changeover Valve
- **W** — Heat relay (stage 1)
- **R** — 24VAC power from heating transformer
- **Rc** — 24VAC power from cooling transformer



Note: Not all terminals may be used, depending on the system type that is being wired. The most commonly used terminals are shaded.

Wiring conventional systems: forced air and hydronics

1H/1C System (1transformer)

R Power[1]
Rc [R+Rc by jumper]
Y Compressor contactor
C 24VAC common [3]
W Heat relay
G Fan relay

1H/1C System (2transformers)

R Power (heating transformer) [1]
Rc Power (cooling transformer) [1]
Y Compressor contactor
C 24VAC common [3, 4]
W Heat relay
G Fan relay

Heat-only System

R Power[1]
Rc [R+Rc by jumper]
C 24VAC common [3]
W Heat relay

Cool-only System

R Power[1]
Rc [R+Rc by jumper]
Y Compressor contactor
C 24VAC common [3]
G Fan relay

Heat-only System (Series 20)[5]

R Series 20 valve terminal "R" [1]
Rc [R+Rc by jumper]
Y Series 20 valve terminal "W"
C 24VAC common [3]
W Series 20 valve terminal "B"

Heat-only System with Fan

R Power[1]
Rc [R+Rc by jumper]
C 24VAC common [3]
W Heat relay
G Fan relay

Heat-only System (Power open zone valve) [5]

R Power[1]
Rc [R+Rc by jumper]
W Valve
C 24VAC common [3]

Wiring heat pump systems

1H/1C Heat Pump System

R Power[1]
Rc [R+Rc by jumper]
Y Compressor contactor
C 24VAC common [3]
O/B Changeover valve [7]
G Fan relay

NOTES

Wire specifications: Use 18- to 22-gauge thermostat wire. Shielded cable is not required.

[1] Power supply. Provide disconnect means and overload protection as required.

[3] Optional 24VAC common connection.

[4] Common connection must come from cooling transformer.

[5] In ISU set Heat system type to Radiant Heat. Set number of cool stages to 0.

[7] In Installer Setup, set changeover valve to O (for cool changeover) or B (for heat changeover).