Manuals+ — User Manuals Simplified.

PROSTAT PRS3110 Non Programmable Thermostats User Manual

PROSTAT™
COMFORT CONTROL

Contents

User Manual

Non-Programmable Thermostats

PRS3110 Single Stage Heat / Cool Conventional and Heat Pump
PRS3210 Up to 2 Heat / 1 Cool Conventional and Heat Pump

Model number is located on back of thermostat

⚠ **Warning** Turn off power to the heating or cooling equipment before installation.

⚠️ **Attention** For installation by experienced service technicians only.

Read all instructions before proceeding.

This thermostat requires 24 Volt AC Power or two (2) properly installed "AA" Alkaline batteries for proper operation. When connecting 24 Volt AC Power the batteries may be installed as a backup. Thermostat installation and all components of the system shall conform to Class II Circuits per NEC code.

For use only as described in this manual. Any other use will void warranty.

1 Specifications

This thermostat is compatible with:

- Single stage heat / cool conventional and heat pump systems
- Conventional systems up to 2 heat / 1 cool (PRS3210 only)
- Single compressor heat pump systems with an auxiliary heat stage (PRS3210)
- 250 - 750 millivolt heat only systems

Electrical and control specifications:

- Electrical Rating: 24 Volt AC
- 1 amp maximum load per terminal
- AC Power: 18 - 30 Volts AC
- DC Power: 3.0 Volt DC (2 "AA" Alkaline Batteries Included)
- Control Range: 45° - 90° F (7° - 32° C)
- Temperature Accuracy: +/- 1° F (+/- .5° C)

Terminations

- PRS3110 - Rc, Rh, O, B, Y1, W1, G, C
- PRS3210 - Rc, Rh, O, B, Y1, E/W1, G, W2, C

2 Installation

⚠️ **Warning** Disconnect power before beginning installation.
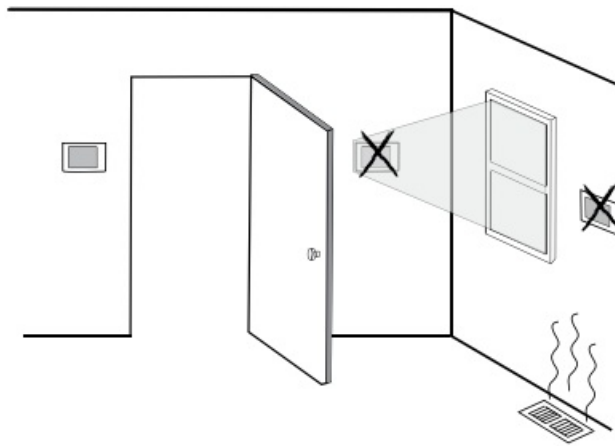
Thermostat Location
Install the thermostat approximately 5 feet (1.5m) above the floor in an area that has a good amount of air circulation and maintains an average room temperature.

Avoid installation in locations where the thermostat can be affected by drafts, dead air spots, hot or cold air ducts, sunlight, appliances, concealed pipes, chimneys and outside walls.
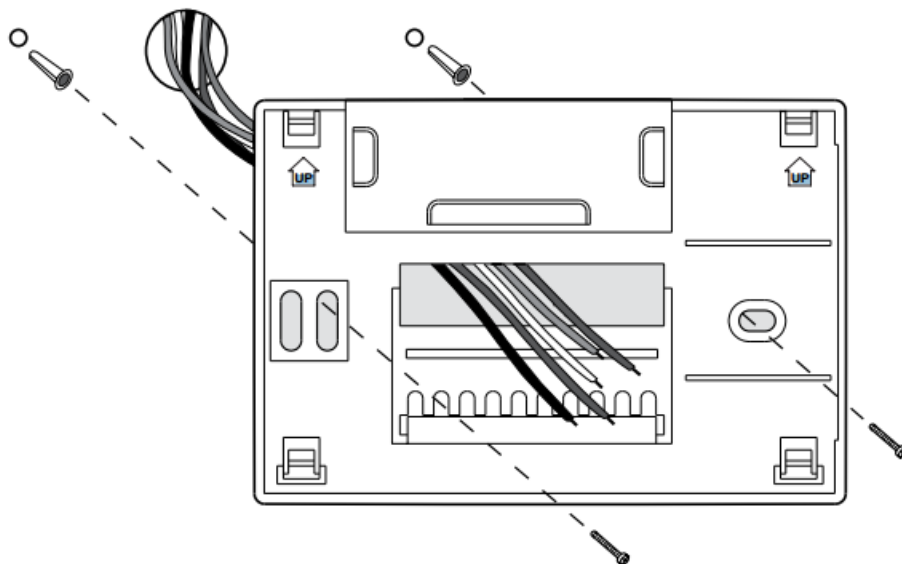
Install your new PROSTAT thermostat in 5 basic steps:

1. Install the Sub-Base
2. Provide Power
3. Connect Your Wires
4. Set Installer Switches
5. Attach Thermostat to Sub-Base

1 Install the Sub-Base:

- Remove the sub-base from the body of the thermostat.
- Mount the sub-base as shown below:

Drill 3/16″ pilot holes in your desired location. Use supplied anchors for drywall or plaster.

2 Provide Power

- **For 24 Volt AC power**, you must connect the common side of the transformer to the C terminal on the thermostat sub-base.
- **For primary or back-up power**, insert the 2 supplied "AA" type alkaline batteries into the battery compartment located in the rear housing of the thermostat. Make sure to position the Positive (+) and Negative (-) sides of

the batteries correctly with the +/- symbols in the battery compartment.

3 Connect Your Wires

Conventional Systems

Typical Wiring Configurations
NOTE: The "Installer Switch" option will be configured in the next step.

Heat Only or Millivolt
Set Installer Switch to **CONV**

Rh	Power Connection
W	Heat Relay (appears as **W1**/**E** on PRS3210)
G	Fan Relay **[note 4]**
C	24 Volt AC Transformer Common **[note 1]**

1 HEAT / 1 COOL Single or Dual Transformer
Set Installer Switch to **CONV**

Rh	24 Volt AC Power (heating transformer) **[note 2]**
Rc	24 Volt AC Power (cooling transformer) **[note 2]**
W1	Heat Relay (appears as **W1**/**E** on PRS3210)
Y1	Compressor Relay
G	Fan Relay
C	24 Volt AC Transformer Common **[note 1, 3]**

2 HEAT / 1 COOL Single or Dual Transformer
(PRS3210 Only) Set System Type to **CONV**

Rh	24 Volt AC Power (heating transformer) **[note 2]**
Rc	24 Volt AC Power (cooling transformer) **[note 2]**
W1	Heat Relay Stage 1
W2	Heat Relay Stage 2
Y1	Compressor Relay Stage 1
G	Fan Relay
C	24 Volt AC Transformer Common **[note 1, 3]**

NOTES – Conventional Systems
[1] If batteries are installed the 24 Volt AC common connection is optional
[2] Remove factory installed jumper for dual transformer systems
[3] In dual transformer systems, transformer common must come from cooling transformer

[4] If needed for system

Provide disconnect and overload protection as required.

Typical Wiring Configurations
NOTE: The "Installer Switch" option will be configured in the next step.

1 HEAT / 1 COOL – No Auxiliary Heat
Set Installer Switch to **HP**

Rh	24 Volt AC Power
Rc	Connected to Rh with supplied Jumper Wire
O or B	Changeover Valve **[note 2]**
Y1	Compressor Relay
G	Fan Relay
C	24 Volt AC Transformer Common **[note 1]**

2 HEAT / 1 COOL – Including Auxiliary Heat
(PRS3210 Only) Set Installer Switch to **HP**

Rh	24 Volt AC Power
Rc	Connected to Rh with supplied Jumper Wire
O or B	Changeover Valve **[note 2]**
Y1	Compressor Relay (1st stage heating/cooling)
W2	Auxiliary Heat Relay (2nd stage heating) **[note 3]**
W1/E	Emergency Heat Relay **[note 3]**
G	Fan Relay
C	24 Volt AC Transformer Common **[note1]**

NOTES – Heat Pump Systems
[1] If batteries are installed the 24 Volt AC common connection is optional.
[2] Select **O** for cool active or **B** for heat active.
[3] Install a field supplied jumper between the **W2** and **E** terminals if there is no separate emergency heat relay installed.

Provide disconnect and overload protection as required.

4 Set Installer Switches

Switch	Factory Default	Setting Options	Comments
CONV / HP	CONV	CONV	Select for conventional systems
		HP	Select for heat pump systems
F / C	F	F	Select for fahrenheit temperature scale
		C	Select for celsius temperature scale
HE / HG	HG	HG	Select for gas heat
		HE	Select for electric heat

NOTE: The reset button should be pressed after making any changes to the installer switches.

5 Attach Thermostat to Sub-Base

1. Line up the thermostat body with the sub-base.
2. Carefully push the thermostat body against the sub-base until it snaps into place.
3. Insert quick reference card into slot on top of thermostat.

3 Setting User Options

Advanced User Options

User options allow you to customize some of your thermostats features. Most users will not need to make any changes to the settings in this section.

To access the User Options menu, hold down both the ∧ and ∨ buttons for approximately 3 seconds until the screen changes and displays the first User Option.

Press the ∧ or ∨ button to change the setting for the displayed User Option. After you have made your desired setting, press ∧ and ∨ together to advance to the next User Option.

The thermostat will return to normal mode after your last user option is made or after no keys have been pressed for 15 seconds.

Table of User Options

No.	User Options	Factory Default	Setting Options	Comments
1	1st stage differential	0.5	0.5, 1.0 or 2.0	Select a 1st stage temperature differential of .5˚, 1˚ or 2˚ F (.2˚, .5˚ or 1˚C)
2	2nd stage differential (PRS3210 only)	2.0	1.0, 2.0, 3.0, 4.0, 5.0 or 6.0	Select a 2nd stage temperature differential of 1˚, 2˚, 3˚, 4˚, 5˚ or 6˚F (.5˚, 1˚, 1.5˚, 2˚, 2.5˚ or 3˚C)

Detailed Explanation of User Options:

Temperature Differential

(User Option 1 and 2)

The differential setting is the temperature control range that your thermostat will provide. The smaller the setting, the tighter your range of temperature control and comfort will be. The 2nd stage differential is only for systems with a second stage of heating (auxiliary heat).

4 Operating Your Thermostat

Setting the System Control Mode

The System Control has several modes of operation that can be selected by moving the SYSTEM switch to the appropriate position.

COOL Only your cooling system will operate
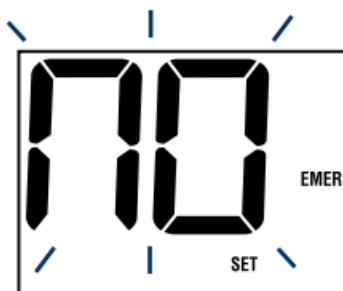**OFF** Heating and cooling systems are off.
HEAT Only your heating system will operate.

Additional Switch Position (Model PRS3210 Only):

EMER Operates a backup heat source (Emergency Heat) for heat pump systems only.

NOTE: If your model PRS3210 was configured for a conventional system (CONV) then you will not have the EMER (emergency heat) option and "NO EMER SET" will flash in the display if EMER is selected with the system switch.

Setting the Fan Control Mode

The Fan Control has 2 modes of operation - AUTO and ON. The mode can be selected by moving the FAN switch to the appropriate position.

AUTO The system fan will run only when your heating or cooling system is running.
ON The system fan stays on.
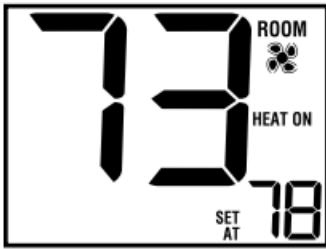
Temperature Adjustment

Press the ∧ or ∨ button to adjust the current set point temperature.

Status indicators appear in the display to let you know if your system is heating, cooling or off.
HEAT ON Indicates your heating system is running.
COOL ON Indicates your cooling system is running.

Additional Status Indicators (Model PRS3210 Only):

AUX Indicates that the auxiliary stage of heating is running (Multi-Stage Systems only).
EMER Indicates that the emergency heating system is running (Heat Pump Systems only).

Resetting the Thermostat

This thermostat provides you with a reset button that will erase all of your user settings. To reset the thermostat, use a small object such as a tooth pick or paperclip and gently press the button located inside the small hole on the front of the thermostat housing labeled "reset".

5 Additional Operation Features

Compressor Protection

This thermostat includes an automatic compressor protection delay to avoid potential damage to your system from short cycling. This feature activates a short delay after turning off the system compressor.

6 Thermostat Maintenance

Changing the Batteries

Depending on your particular installation, this thermostat may be equipped with two (2) "AA" type alkaline batteries.

If batteries are installed and they become low, a low battery indicator will appear in the display. You should change your batteries immediately when you see the low battery signal by following these instructions.

1. Remove thermostat body by gently pulling it from base.
2. Remove old batteries and replace with new batteries.
3. Make sure to correctly position the (+) and (-) symbols.
4. Gently push thermostat body back onto base.

NOTE: We recommend replacing the thermostat batteries annually or if the thermostat will be unattended for an extended period of time.

Thermostat Cleaning

Never spray any liquid directly on the thermostat. Using a soft damp cloth wipe the outer body of the thermostat. Never use any abrasive cleansers to clean your thermostat.

Store this manual for future reference.

5 Year Limited Warranty

PROPARTS warrants each new PROSTAT thermostat against any defects that are due to faulty material or workmanship. This warranty and our liability does not apply to batteries, nor does it include damage to merchandise or the thermostat resulting from accident, alteration, neglect, misuse, improper installation or any other failure to follow PROSTAT installation and operating instructions. This limited warranty applies for the duration of the warranty period from the original date of purchase by a professional service technician.

PROPARTS agrees to repair or replace at its option any PROSTAT thermostat under warranty provided it is returned postage prepaid to our warranty facility in a padded carton within the warranty period, with proof of the original date of purchase and a brief description of the malfunction. This limited warranty does not include the cost of removal or re-installation.

This warranty gives you specific legal rights and you may also have other rights that vary from state to state or province to province. Answers to any questions regarding our limited warranty may be obtained by writing our corporate offices.

For warranty service, please visit your nearest PROPARTS facility.

Technical Assistance: **855-445-2466** (U.S.)

All trademarks are the property of their respective owners.
©2018 PROPARTS • All Rights Reserved • Made in China.

PRS3110-100-02

Documents / Resources

PROSTAT™ User Manual COMFORT CONTROL / Non-Programmable Thermostats / PRS3110 Single Stage Heat / Cool Conventional and Heat Pump / PRS3210 Up to 2 Heat / 1 Cool Conventional and Heat Pump	**PROSTAT PRS3110 Non Programmable Thermostats** [pdf] User Manual PRS3110, PRS3210, PRS3110 Non Programmable Thermostats, PRS3110, Non Programmable Thermostats, Programmable Thermostats, Thermostats

References

- **User Manual**