



尺寸: 120\*120mm 材质: 105g铜版纸, 一颗骑马钉, 彩印

# **VIVE TP-P-HP21**

### Vive Comfort

Web: www.vivecomfort.com

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Equipment damage hazard. Do not switch the system to cool if the temperature is below 50°F (10°C).

Una version en español de este manual se puede descargar en la pagina web de la compañia.

# **Thermostat Operation**



Figure 1

### 1 LCD Display

See page 4 for details about this display read out.

### 2 Fan Switch

Select **ON** or **AUTO**. **ON** will run the fan continuously. **AUTO** will cycle the fan on only when the heating or cooling system is on.

### (3) Temperature Setpoint Buttons

Press the  $\blacktriangle$  or  $\mathbf{\nabla}$  buttons to select the desired room temperature.

### (4) System Switch

Selects the operation mode on your HVAC system. Selecting **HEAT** turns on the heat mode. Selecting **COOL** turns on the cool mode. Selecting **OFF** turns both heating and cooling off. Selecting **EMER** is typically used when compressor operation is not desired, or you prefer to use the back-up heating system only.

**Thermostat Operation** 

### 5 Reset

If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by pressing the reset button.

### 6 Time

Press the TIME button for 3 seconds to set current day and time.

### 7 Prgm

Move the SYSTEM switch to the HEAT position and Press PRGM once to ENTER THE HEATING PROGRAM; Also Move the SYSTEM switch to the OFF position, then press and hold the PRGM and RUN buttons for 3 seconds to enter the CONFIGURATION menu.

### 8 Run

Save and exit all setting including Configuration, Time setting, and Programming Setting.

### 9 Hold

With the SYSTEM switch set to HEAT or COOL, momentarily press the HOLD button. HOLD will be displayed. Use the ▲ and ▼ buttons to adjust the set-point temperature. The thermostat will hold the room temperature at the selected setting until you press the RUN button to restart the program operation.

### 🛕 Caution:

If the battery icon **c** on the display is flashing, it indicates that the batteries need to be replaced. When the thermostat is powered only by battery, the battery icon **c** will flash for approximately 2 months before the batteries are expected to expire.



1 Indicates the current room temperature

**Thermostat Quick Reference** 

- 2 Time and day of the week
- 3 Low Battery Indicator: Replace batteries when this indicator is shown.
- (4) Compressor protection timer delay

Note: When the thermostat compressor time delay occurs, the Cool On or Heat On display will flash during compressor lockout.

- **5** Setting temperature: Displays the user selectable setpoint temperature.
- 6 System Operation Indicators
- 7 Fan: On/Auto
- 8 System display

The COOL ON, HEAT ON or icon will display when the COOL, HEAT, or (fan) is on.

9 Mode

There are 4 modes of WAKE, LEAVE, RETURN, and SLEEP to set in programming.

10 Hold

Hold the room temperature at the selected setting until you press the RUN button to restart the program operation



The thermostat will operate from 2 size "AA" alkaline batteries or 24VAC power. When operated from batteries, connection to the "C" (common) or (neutral) terminal is not required. NOTE: When operated from batteries only, the LCD display backlight will be lighted less than 5 seconds after each button pressed, when backlight option are set to 2) or 3). If the battery icon on the display is flashing, it indicates that the batteries need to be replaced. When the thermostat is powered only by battery, the battery icon will flash for approximately 2 months before the batteries are expected to expire.

# **Battery Door Information**



Use the finger bevel on the lower portion of the thermostat to open the easy access battery door. Replace with 2 AA Alkaline Batteries. High quality Alkaline batteries are recommended.



### **Understanding Your Thermostats Staging:**

This thermostat controls 2 stages of heating. For reasons of energy efficiency the thermostat will try to maintain your comfort setting using only 1 stage. If the 2nd stage is necessary it will be used and you will see Stage 2 in the display.

### **Configuration operation**

### 1. Configuration Menu

The configuration menu allows you to set certain thermostat operating characteristics to your system or personal requirements. Move the SYSTEM switch to the OFF position, then press and hold the PRGM and RUN buttons for 3 seconds to enter the configuration menu. The display will show the first item in the configuration menu. Press the PRGM button to move to the next menu item, or press TIME to return to a previous menu item. To revert to factory default settings, including program settings. Use the ▲ and ♥ buttons to select. To exit the configuration menu and return to normal operation, press the RUN button. If no buttons are pressed within 130 seconds, the thermostat will exit the configuration menu. The configuration menu chart summaries the configuration options. An explanation of each option follows.

Step	Press Buttons	Displayed (Factory Defaults)	Press ▲ or ▼ to select	Description
1	PRGM+RUN 5 seconds	CC ( FA )	FA or SL	Select (FA)st or (SL)ow cooling cycles Default = FA
2	PRGM	HC (FA)	FA or SL	Select (FA)st or (SL)ow Heating cycles per hour. Default = FA
3	PRGM	bL(2)	1-3	Select Backlight display. 1 = off, 2 = 30 seconds any button push, 3 = continuous. Default = 2

4	PRGM	FL (00)	00, 1 to 12	Default = 00. A selection of "00" deactivates the filter feature.
5	PRGM	FC (F)	F or C	Select Temperature display to indicate °F or °C. Default = F
6	PRGM	CL(0)	+4 to -4	Select temperature calibration point up to 4° higher or 4° lower. Default = 0
7	PRGM	CP (5)	0 or 5	Compressor Lockout delay. 0 = none 5 = 5 Minutes Default = 5
8	PRGM	IC (0)	1 or 0	Intelligent Recovery Option. "1" = Active "0" = Deactivated.
9	PRGM	AU(2)	2 or 10	Aux Heat offset $2 = 2^{\circ} F$ below "Y" on $10 = 10^{\circ} F$ below "Y" on Aux Heat offset $2 = 2^{\circ} F$ below "Y" on $10 = 10^{\circ} F$ below "Y" on Default = #2
10	RUN	Return to normal operation		

### Figure 5

### 1. Select cooling cycle rate

The **FA** setting is used to produce shorter cooling cycles. The **SL** setting produces a longer cooling cycle. Both settings produce very accurate temperature control and can be set to your personal preference. **FA** cycles the system at a 0.5°F (0.5°C), and **SL** cycles the system at 1.5°F (1.5°C).

Continued on next page...

# **Thermostat Quick Reference**

Select filter time in months

### 2. Select heating cycle rate

The **FA** setting is used to produce shorter heating cycles. The **SL** setting produces a longer heating cycle. Both settings produce very accurate temperature control and can be set to your personal preference. **FA** cycles the heat pump system at a 0.5°F differential and Aux heating at 2.0°F below first stage on. **SL** cycles the heat pump system at a 1.5°F differential, and Aux heating at 2.0°F below first stage on.

### 3. Select display backlight

The display backlight improves display contrast in low lighting conditions. Select **1** for NO backlight display. Select **2** for the backlight to come on for approximately 30 seconds when any button of the thermostat is touched. Select **3** for the backlight to remain on continuously.

NOTE: When operated from batteries (No "C" terminal connection, or if AC power goes off), the LCD display backlight will be disabled regardless of which configuration number is selected.

### 4. Select filter replacement run time

The thermostat will display the Filter Alarm after a set time of operation. This is a reminder to change or clean your air filter. This time can be set from 0 to 12 months in 1 month increments. Selection of 00 WILL CANCEL THIS FEATURE.

a) When in configuration the selections are in months, each month selections are equal to 30 days. b) Move the SYSTEM switch to the HEAT or COOL position, then press and

hold the ▲ and ▼ buttons for 5 seconds to review filter running days.

To exit the review menu press the  $\blacktriangle$  or  $\triangledown$  buttons one time. Or If no buttons are pressed within 1 5 seconds, the thermostat will exit the configuration menu. In review mode, press and hold the  $\blacktriangle$  and  $\triangledown$  15 sec. to clean the filter warning. It will show "dEF" blink. To reset the filter days – refer to configuration item 5 operation.

### 5. Select °F or °C readout

Changes the display readout to Centigrade or Fahrenheit as required.

### 6. Select temperature recalibration

This feature allows you to adjust the displayed room temperature up to 4° higher or lower. Your thermostat can be accurately calibrated to match your previous thermostat. The current or adjusted room temperature will be displayed on the display.

### 7. Select compressor lockout delay

To protect the compressor from short cycling, you can select compressor off-time cycle between 0 or 5 minutes. When the thermostat compressor time delay occurs, the Cool On or Heat On display will flash during compressor lockout.

### 8. Intelligent Recovery Option

The thermostat has an intelligent recovery function that brings your room temperature to the set temperature at exactly the pre-set time by turning on the Heating earlier. Select 1 to activate the intelligent recovery function, Select 0 to deactivate the intelligent recovery function.

### **MANUAL OPERATION**

### **1. HOLD TEMPERATURE**

With the SYSTEM switch set to HEAT or COOL, momentarily press the HOLD button. HOLD will be displayed. Use the  $\blacktriangle$  and  $\lor$  buttons to adjust the set-point temperature. The thermostat will hold the room temperature at the selected setting until you press the RUN button to restart the program operation.

### 2. TEMPERATURE OVERRIDE

Press the  $\blacktriangle$  and  $\triangledown$  buttons until the temperature you want is displayed. The thermostat will override the current programming and keep the room temperature at the selected temperature until the next program period begins. Then the thermostat will automatically revert to the program.

### 3. CHECK COUNT BACK FOR FILTER REPLACEMENT

a) When in configuration the selections are in months, each month selections are equal to 30 days. b) Move the SYSTEM switch to the HEAT or COOL position, then press and hold the ▲ and ▼ buttons for 5 seconds to review filter running days.

To exit the review menu press the ▲ or ▼ buttons one time. Or If no buttons are pressed within 15 seconds, the thermostat will exit the configuration menu. In review mode, press and hold the ▲ and ▼ 15 sec. to clean the filter warning. It will show "dEF" blink. To reset the filter days – refer to configuration item 5 operation.

# **Thermostat Quick Reference**

# **Thermostat Quick Reference**

### **MANUAL OPERATION**

### SET CURRENT DAY AND TIME

Press the TIME button for 3 seconds. The display will show the hours numbers flashing. Press and hold either the  $\blacktriangle$  or  $\checkmark$  button until the correct hour and AM/PM designator is reached. (AM begins at midnight, PM begins at noon). Press the TIME button again. The display will show the minutes numbers flashing. Press and hold either the  $\blacktriangle$  or  $\checkmark$  button until the correct minutes are reached. Press the TIME button again. The display will show the day of the week flashing. Press and hold either the  $\bigstar$  or  $\checkmark$  button until the correct week day is selected. Press the RUN button once. The display will now show the correct day of the week and the correct time. Note: The time of day clock MUST be set to the correct day and time in order for the programmed times to be correct.

Look at the factory preprogrammed times and temperatures shown in the Factory default program setting. If this program will suit your needs, simply press the RUN button to begin running the factory preset program.

If you wish to change the preprogrammed time and temperature, follow these steps: Determine the time periods and temperatures for your program. You must program four periods for each day. However, you may use the same heating and cooling temperatures for consecutive time periods. You can choose heating temperature, cooling temperature and start time independently. (for example, you may select 5:00 am AND 70° F as the weekday 1st period heating start time and temperature and also choose 7:00 AM and 76° F as the weekday 1st period cooling start time and temperature. Use the table below to plan your program time periods and the temperatures you want during each period. Fill in the completed table to have a record of your program.

### EXAMPLE:

Heating/Cooling Schedule Plan (Factory default program setting)

		Weekdays (5 day)		Saturday and Sunday	
Mode	Period	Start Time	Temperature	Start Time	Temperature
Heat	1st	6:00 AM	70°F	6:00 AM	70°F
	2nd	8:00 AM	62°F	8:00 AM	62°F
	3rd	6:00 PM	70°F	6:00 PM	70°F
	4th	10:00 PM	62°F	10:00 PM	62°F
Cool	1st	6:00 AM	75°F	6:00 AM	75°F
	2nd	8:00 AM	83°F	8:00 AM	83°F
	3rd	6:00 PM	75°F	6:00 PM	75°F
	4th	10:00 PM	78°F	10:00 PM	78°F

Figure 6

### ENTER THE HEATING PROGRAM

1) Move the SYSTEM switch to the HEAT / COOL position to select mode.

2) Press PRGM once. PRGM SETTING will display, and "MONTUE WED THU FRI" (indicating weekday program) will appear in the display (flashing). Also displayed are the current programmed start time for the 1st heating period (flashing), and the currently programmed temperature.

3) Press the ▲ and ▼ buttons to select the desired 1st heating period start time. The time will change in 15 minute increments. When your selected time is displayed, press the TIME button to change to the temperature mode.

4) Press the ▲ and ▼ buttons to select the desired 1st heating period temperature.
5) Press PRGM once. The currently programmed start time and set point for the 2nd heating program will appear.

Continued on next page...



### MANUAL OPERATION (Continue...)

6) Repeat steps 3 and 4 to select the start time and heating temperature for the 2nd heating program period.

7) Repeat steps 3 thru 5 for the 3rd and 4th heating program periods.

8) Press PRGM once. PRGM SETTING will display, and "SAT SUN" indicating weekday program) will appear in the display (flashing). Also displayed are the current programmed start time for the 1st heating period (flashing), and the currently programmed temperature.

9) Repeat steps 3 thru 7 to complete Saturday and Sunday programming.

10) When you have completed entering your heating program, press RUN.

### ENTER THE COOLING PROGRAM

Caution: If the outside temperature is below 50°F; disconnect power to the cooling system before programming. Energizing the air conditioner compressor during cold weather may cause damage to the compressor.

1) Move the SYSTEM switch to the COOL position.

2) Follow "Enter the Heating Program" for entering your cooling program, using your selected cooling times and temperatures.

### **CHECK YOUR PROGRAMMING**

Follow these steps to check your thermostat programming one final time before beginning thermostat operation:

1) Move the SYSTEM switch to HEAT.

2) Press PRGM to view the 1st weekday heating period time and temperature. Each time you press PRGM the next heating period time and temperature will be displayed in sequence for weekday, then Saturday and Sunday program periods (you may change any time or temperature during this procedure).

3) Press RUN.

4) Move the SYSTEM switch to COOL.

5) Repeat step 2 to check the cooling program.



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# Thermostat Quick Reference

### MANUAL OPERATION (Continue...)

6) Move the SYSTEM switch to HEAT or COOL and press RUN to begin program operation. REVERT TO FACTORY DEFAULT PROGRAM SETTINGS Press the RESET button. All user's changed settings will revert to factory default settings (Including configuration settings).

### **CHECK THERMOSTAT OPERATION**

If at any time during testing your system does not operate properly, contact a qualified service person. Turn on power to the system.

### FAN OPERATION

Move the system switch to the OFF position. If your system does not have a "G" (Fan) terminal connection, skip to the Heating System.

1. Move the fan switch to the ON position. The blower should begin to operate.

 $2. Move the fan switch to the AUTO <math display="inline">\,$  position. The blower should stop immediately.

### HEATING SYSTEM

1.Move the SYSTEM switch to the HEAT position. If the auxiliary heating system has a standing pilot, be sure to light it

2.When the (FA)st heating cycle rate is selected in the configuration menu, (see configuration menu item 2), the thermostat will call for heat at  $0.5^{\circ}$ F ( $0.5^{\circ}$ C) below set-point, and turn off at set point. When the (SL)ow heating cycle rate is selected, the thermostat will call for heat at  $1.5^{\circ}$ F ( $1.5^{\circ}$ C) below set-point, and turn off at set-point. When the thermostat will call for heat at  $1.5^{\circ}$ F ( $1.5^{\circ}$ C) below set-point, and turn off at set-point. When the thermostat will call for heat at  $1.5^{\circ}$ F ( $1.5^{\circ}$ C) below set-point, and turn off at set-point. When the thermostat calls for heat, the heat pump system should begin to operate. The display will show Heat Pump 1. If the Heat On display is flashing, the compressor lockout feature is operating in the heat pump mode. (Note: See Configuration menu item 7).

3. The Aux heating will activate when the actual room temperature is 2.0° F or more below the Setpoint temperature. (10°F When selected in the configuration menu). When Aux heating turns on, "Aux 1+2" will be illuminated.

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### MANUAL OPERATION (Continue...)

### COOLING SYSTEM

CAUTION: To prevent compressor damage, if the outdoor temperature is below 50°F (10°C), DO NOT operate the cooling system

1. Move the SYSTEM switch to the COOL position

2.When the (FA)st cooling cycle rate is selected in the configuration menu, (see configuration menu item 2), the thermostat will call for cooling at  $0.5^{\circ}F$  ( $0.5^{\circ}C$ ) above set-point, and turn off at set point. When the (SL)ow cool cycle rate is selected, the thermostat will call for cooling at  $1.5^{\circ}F$  ( $1.5^{\circ}C$ ) above set-point, and turn off at set-point. When the (SL)ow cool cycle rate is selected, the thermostat will call for cooling, the display will show COOL On. If the COOL On display is flashing, the compressor lockout feature is operating. mode. (Note: See Configuration menu item 8).

### **EMERGENCY HEAT SYSTEM**

EMER bypasses the Heat Pump to use the heat source wired to terminal E on the thermostat. EMER is typically used when compressor operation is not desired, or you prefer back-up heat only. 1. Move the SYSTEM switch to EMER position, EMER will flash on the display.

2. When the (FA)st heating cycle rate is selected in the configuration menu (See configuration menu item 2), the thermostat will call for Emergency heat at 0.5°F below set-point, and turn off at set-point. When (SL)ow heating cycle rate is selected, the thermostat will call for emergency heat at 1.5°F below Setpoint, and turn off at set-point. As the thermostat calls for Emergency heat, the display will show Heat on and +2, EMER will display flashing and HEAT PUMP will be blank. All these indicate emergency heating is operating.

If all functions operate properly, the thermostat is installed correctly.

### **REPLACING BATTERIES**

If your thermostat was pre-installed, the batteries may be in place. If the battery icon on the display is flashing, it indicates that the batteries need to be replaced. When the thermostat is powered only by battery, the battery icon will flash for approximately 2 months before the batteries are expected to expire.

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# **Thermostat Quick Reference**

### MANUAL OPERATION (Continue...)

Important: Replace the batteries when the low battery message flashes on the display. This will keep the thermostat operating properly. With two "AA" batteries installed, your thermostat will maintain time and continuously display the temperature during a loss of AC power.

1. Place the COOL/OFF/HEAT switch in the OFF position.

2. Put the FAN AUTO/ON switch in the AUTO position.

3. Gently pull the cover straight off the base.

4. Install two "AA" alkaline batteries in the battery compartment.

Be sure to match the positive (+) ends of the batteries with the positive terminals marked in the battery compartment.

5. It may take as long as 30 seconds for the low battery icon to disappear after changing batteries. CAUTION: Incorrect battery installation can damage the thermostat and void the warranty.

### Troubleshooting

If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by pressing the reset button (See Figure 1). If the thermostat has power, and has been reset and still does not function correctly, contact your heating/cooling service contractor.

Symptom	Possible Cause	Corrective Action
No Heat/No Cool/No Fan	<ol> <li>Blown fuse or tripped circuit breaker</li> <li>Furnace power switches to OFF.</li> <li>Furnace blower compartment door or panel loose or not properly installed</li> </ol>	Replace fuse or reset breaker. Turn switch to ON. Replace door panel in proper position to engage safety interlock or door switch.
No Heat	1. Pilot light not lit. 2. System switch not set to Heat 3. Loose connection to thermostat or system 4. Furnace Lockout Condition. Heat may also be intermittent	Relight Pilot Set System Switch to Heat and raise set point above room temperature Verify thermostat and system wires are securely attached. Many furnaces have safety devices that shut the

Continued on next page...



# Thermostat Quick Reference

# Troubleshooting (Continue...)

Symptom	Possible Cause	Corrective Action	
No Heat	5. Heating System Requires service or thermostat requires replacement	system down when a lockout condition occurs. If the heat works intermittently, contact the furnace manufacturer or local service person for assistance. Diagnostic: Set System Switch to Heat and raise the Setpoint above room temperature. Within a few seconds the thermostat should make a soft click sound. This sound usually indicates the thermostat is working properly. If the thermostat does not click, try the reset operation listed above. If the thermostat does not click after being reset, contact your heating and cooling service person or place of purchase for replacement. If the thermostat clicks, contact the furnace manufacturer or a service person to verify the heating system is operating correctly.	
No Cool	<ol> <li>System Switch not set to Cool</li> <li>Loose Connection to thermostat or System</li> <li>Compressor lock-out is activated.</li> </ol>	Set system switch to Cool and lower set point below room temperature. Verify thermostat and system wires are securely attached. Wait five minutes until the compressor protection time is up. There may be up to a five minute delay before the thermostat can activate the compressor if the compressor lock-out option is selected in the configuration menu.	
Continued on next page			

# Troubleshooting (Continue...)

Symptom	Possible Cause	Corrective Action
Heat, Cool or Fan Runs Constantly	1. Fan switch set to FAN ON 2. Possible short in wiring 3. Possible short in thermostat 4. Possible short in Heat/Cool/ Fansystem	Check each wire connection to verify they are not shorted or touching together. No bare wire should stick out from under terminal screws. Try resetting the thermostat as described below. If the condition persists, the manufacturer of your system or service person can instruct you on how to test the Heat/Cool system for correct operation. If the system operates correctly, replace the thermostat.
Furnace Cycles too fast or too slow	1. The location of the thermostat and/or the size of the heating system may be influencing the cycle rate.	Item 2 in the Configuration Menu is the adjustment that controls the heating cycle rate. If an acceptable cycle rate is not achieved using the FA or SL adjustment, contact a local service person for additional suggestions.
Cooling cycles too fast or too slow	1. The location of the thermostat and/or the size of the heating system may be influencing the cycle rate.	Item 1 in the Configuration Menu is the adjustment that controls the cooling cycle rate. If an acceptable cycle rate is not achieved using the FA or SL adjustment, contact a local service person for additional suggestions.
Thermostat Setting and Thermometer disagree	1. Thermostat thermometer setting requires adjustment.	The thermostat temperature calibration can be adjusted +\- 3 degrees as listed in item 7 of the Configuration menu. No other adjustment is possible.

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# Warranty Information

# **Thermostat Quick Reference**

# Troubleshooting (Continue...)

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Symptom	Possible Cause	Corrective Action
Clock looses or gains time	1. Loss of power to thermostat and low batteries	The thermostat will maintain its program in memory even with no power and no batteries, but the clock time will be incorrect when power is restored. See No Heat/No Cool/No Fan above for items to check in the system.
Thermostat does not follow program	1. AM or PM set incorrectly in program 2. AM or PM set incorrectly on the clock 3. Voltage spike or static discharge	Check current clock and program setting including the AM or PM designation for each time period. If a voltage spike or static discharge occurs, use the Reset Operation listed above.
Blank display and /or keypad not res ponding	1. Loss of power and dead batteries. 2. Voltage spike or static discharge	Replace batteries and check heat/cool system for proper operation. If a voltage spike or static discharge occurs, use the Reset Operation listed above.

# **Warranty Registration**

Your new thermostat has 1 year limited warranty. You must register your thermostat within 60 days of installation. Without this registration the warranty period will begin on date of manufacture. For warranty issues please contact the HVAC professional that installed this product. You can register your new thermostat here:

### Online

Go to the company website, select warranty registration and fill out a short registration form.

# **Warranty Registration**

Name:	Thermostat Model:
Address:	Date Installed:
City: State: Zip:	Complete form to: Thermostat Warranty Registration WWW.vivecomfort.com

# **Installation Manual**

Vive Comfort Web: www.vivecomfort.com

### **Thermostat Application Guide**

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (With Aux. or Emergency Heat)	Yes
Multi-Stage Systems	No
Heat Only Systems( Only Emergency Heating)	Yes
Heat Only Systems - Floor or Wall Furnace	Yes
Cool Only Systems	Yes
Millivolt Conventional Systems	No
Two Transformer Systems	No

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### Power Type

Battery Power for Display not Control Hardwire (Common Wire)

**TP-P-HP21** 

A trained, experienced technician must install this product.

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Una version en español de este manual se puede descargar en la pagina web de la compañia.

### Specifications

The thermostat should be installed approximately 4 to 5 feet above the

floor. Select an area with average temperature and good air circulation.

# **Installation Tips**

### Wall Locations

# Installation Tip

Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

# Do not install thermostat in locations:

- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts
- (in corners or behind doors)Where there might be
- concealed chimneys or pipes

### **Subbase Installation**

Horizontal Mount
 Vertical Mount



Fasten the base loosely to the wall as shown in Figure 8, using two mounting screws. Place a level against the bottom of the base and adjust until level, then tighten the screws. (Leveling is for appearance only, and will not affect thermostat operation.)

### Installation Tip: Electrical Hazard

Always turn off power at the main power source by removing the fuse, or switch the circuit breaker to the off position before installing, removing, cleaning, or servicing this thermostat.

# Mercury Notice

All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.

# **Installation Tips**

### **Mount Thermostat**



1. Push the button to open thermostat front cover





2. Installing the screws in the base cover into the junction box and finish wiring.

Use the finger bevel on the lower portion of the thermostat to open the easy access battery door.



3. Open the slide cover, fitting the 2AA battery

4. Close the lid.

Figure 9

### Features

- Large LCD display with backlight, continuous backlight option.
- Simultaneous heat and cool set point storage.
- Display of room temperature, set temperature and current time simultaneously.
- Fan switch with ON and AUTO.
- Permanent user setting retention during power loss. No batteries are required.
- Operates from 24VAC.
- Optional "AA" batteries provide continuous time and temperature display during power loss.
- Optional temperature display of Fahrenheit or Celsius scale.
- Air Filter change Indicator.
- Compressor short cycling protection available.
- Low Battery Indicator.
- Display temperature calibration.
- Separate B and O terminals available.
- Both emergency heating and hold mode are available for comfort and energy saving.
- Separate 5-day (weekday) + 2-day (Saturday/Sunday) programming with four separate time/ temperature periods per day.
- Display temperature recalibrates.

# Important

### Installing batteries backwards can damage the thermostat.

1. Install two fresh "AA" alkaline batteries in the battery compartment. Be sure to match positive (+) ends of batteries with positive (+) battery terminals in the battery compartment (The thermostat will not operate from 2 size "AA" alkaline batteries or 24VAC power. When batteries are installed the clock will be maintained during power outages.).

- 2. Replace the cover on the thermostat by snapping it in place.
- 3. Turn on power to the system at the main service panel.
- 4. Test thermostat operation as described in the following section.

# Wiring

### **REMOVE THE OLD THERMOSTAT**



### WARNING ! Electrical Shock Hazard

1. Turn off power to the heating and cooling system by removing the fuse or switch the appropriate circuit breaker off.

2. Turn off power to the heating and cooling system by removing the fuse or switch the appropriate circuit breaker off.

- 3. Remove the cover of the old thermostat. This should expose the wires.
- 4. Label the existing wires from the existing thermostat before removing.
- 5. After labeling the wires, remove the wires from the wire terminals.

6. Remove the existing thermostat from the wall.

7. Refer to the following section for instructions on how to install this thermostat.

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### WARNING ! Electrical Shock Hazard

Turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position before removing the existing thermostat.

1. Turn off power to the heating and cooling system by removing the fuse or switching the appropriate circuit breaker off.

2. Place the system switch (EMER/HEAT/OFF/COOL) in the OFF position.

3. Place the FAN (ON /AUTO) switch in the AUTO position.

4. Gently pull the cover straight off the base. (See Figure 9.)

5. Put the thermostat base against the wall where you plan to mount it. (Be sure the wires will feed through the wire opening in the base of the thermostat.)

6. Mark the placement of the mounting holes.

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7. Move the base out of the way. Drill mounting holes. Use a hammer to tap in the supplied anchors into the mounting holes.

8. Fasten the base loosely to the wall as shown in Figure 8, using two mounting screws. Place a level against the bottom of the base and adjust until level, then tighten the screws. (Leveling is for appearance only, and will not affect thermostat operation.)

9. Insert stripped, labeled wires into matching wire terminals. See "Wiring Diagrams", Figure 10/11.

# Wiring

### **Wiring Diagrams**

Power from C wire (Without battery)



# Wiring

### **Terminal Designations**

	Heat Pump System 1 HEAT 1 COOL / 2 HEAT 1 COOL
R	Transformer Power
С	Transformer Common
В	Changeover Valve Energized in HEAT
0	Changeover Valve Energized in COOL
G	Fan Relay
Aux	Auxiliary Heat (Require a jumper to connect Aux and E in two stage of heating)
E	Emergency Heat
Y	First Stage of Heat and Cool

Figure 12

# Wiring

### FAN OPTION SWITCH

Read the following information before setting the fan option switch (See figure 1). If you are unsure of your application, contact a qualified service person.

This thermostat is configured from the factory to energize the fan on a call for heat. If your system is an electric heat or heat pump that REQUIRES the thermostat to turn on the fan on a call for heat, place the fan option switch in the ELEC position. If your system does not require the thermostat to energize the fan on a call for heat such as fossil fuel (gas, oil, etc.), forced air system as well as hydraulic heating systems, place the fan option switch in the GAS position.

### **BATTERY OPERATION**

The thermostat is powered by 24VAC. Batteries are not required for proper operation, but with two "AA" batteries installed, your thermostat will maintain time and continuously display the temperature during a loss of power.

Note\* Jumper required to use a single Aux Heat for both AUX Heating and Emergency Heating. Note\*\* When presented with 24VAC on "L" terminal, the "Alarm" icon will flash on the display.

