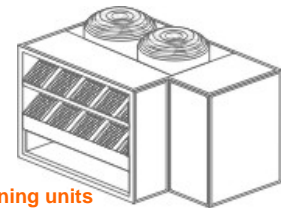# PDX series
11A / 21A / 11B

To be used with:

Packaged air conditioning units
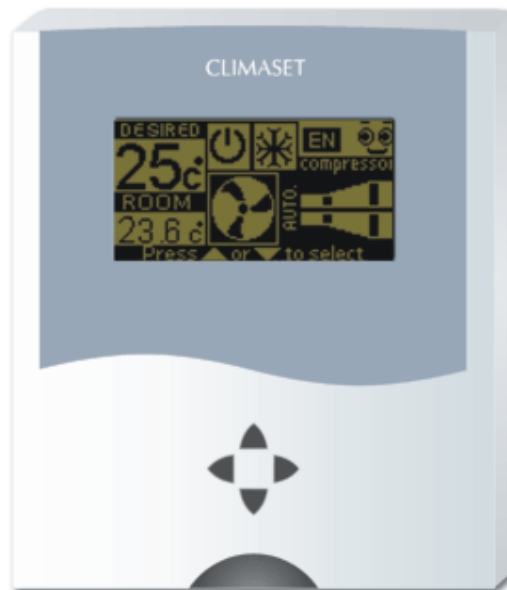
-Independent control of fan and compressor
-Can be used for either hot water or heat pump heating systems
-Single or double stages of compressor
-Simultaneous indication of room & desired temperature
-Animated screen
-Bilingual

CLIMASET®
Interactive Controllers

User's Guide

Contents

1. Your Climaset

Climaset PDX series are designed to work in conjunction with packaged air conditioning units to maintain the room air condition at the comfort level. It has the following functions:

1. Measurement of room temperature.
2. Interaction with user to adjust set points.
3. Interaction with the fan to turn it on/off according to the temperature difference or user command.
4. Interaction with the compressor to turn it on/off according to the fan status and user adjustment.

1.1. Keys
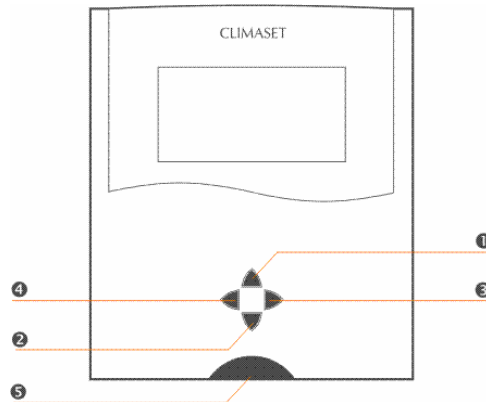
❶"Up" and ❷"Down":
   Use these keys to scroll the menus.
❸"Right" and ❹"Left":
   Use these keys to adjust the values in each menu item.
❺"Power":
   On/Off switch.

1.2. Screen elements

❶Room temperature: Indicates the current room temperature.

❷Desired temperature: Your desired room temperature.

❸Power status:

   Air conditioner apparatus is on.
   Air conditioner apparatus is off.

❹Season setting:

   The device is adjusted to work in summer.
   The device is adjusted to work in winter.

❺Fan status: If the icon is still, it indicates that the fan is switched off. If the fan icon rotates, it indicates that in case the "Auto" icon is off and the power setting is on, the fan is operating. In case the "Auto" icon is on, the air conditioner fan may or may not operate depends on temperature difference between room and desired and also power setting.

❻Compressor setting: IF it is still, it indicates that the compressor is off. If it is animated, the compressor sets to be on.

Note: The compressor automatically switches off when the fan switches off.

Note: In PDX +D series if the compressor setting is on, the compressor automatically switches on 3 minutes after fan starts. It protects the device against the contribution of the frost on evaporator coil, and eliminates the necessity for timer relays for compressor in air conditioning apparatus.

Note: You may order PDX series for heating with hot water coil instead of compressor (heat pump). In such a case the compressor is enforced to be off during winter.

❼Language setting: Indicates the status bar language. It may be English or your local presets language.

❽Status bar: Indicates the "Menu item" you wish to adjust. Use "Up" or "Down" keys to surf through these menus (Refer to section1.1 for "Up" and "Down" keys).

2. Using the menu

2.1. Accessing a menu function

Scroll with the "Up" or "Down" keys to access the desired menu function. Use "Right" or "Left" keys to adjust the set points (Refer to section 1.1 for "Up", "Down", "Right" and "Left" keys)(Refer to section 3 on adjusting set points and their functions).

2.2. List of menu functions

1. Fan status
2. Desired temperature
3. Compressor (on/off)
4. Season setting
5. English/Local

3. Menu functions

3.1. Fan status (Menu item 1)

Use "Right" or "Left" key to switch between "Fan always on" and "Auto" status.

- Fan always on: No matter what the room temperature and desired temperature are, the fan always continues to operate, unless user sets the power status off. During this mode thermostat controls the room temperature by switching on/off the compressor.
- Auto: Both the fan and the compressor switch on or off according to temperature difference between room and desired.

Notice: Using "Fan always on" mode, you may enjoy permanent flow of the air while the temperature also is in control.

Note: If you ordered your thermostat to be used with air conditioner which utilizes hot water coil for heating, "Fan always on" mode will be automatically eliminated during winter.

3.2. Desired temperature (Menu item 2)

It is the temperature you like to maintain your room. The standard set point for comfort condition in the residential zones is 24˚c, but you can set a higher or lower temperature if you wish.
The minimum allowable temperature is 16˚c and the maximum is 31˚c. You can use "Right" key to increase the value or "Left" key to decrease it (Refer to section 1.1 for "Right" and "Left" keys). As you change the value

the result appears on the desired temperature section of the screen (Refer to section 1.2 to find the "Desired temperature" on the screen).

Note: If you set a value much lower than 24˚c in summer or much higher in winter, it may cause your air conditioning device to work continuously. The set point which causes the device to work continuously depends on outside temperature, air conditioning device heating and cooling capacity and some other items related to your building.

Note: If you set a value much higher than 24˚c in summer or much lower in winter, it may cause your air conditioning device not to start working. For a brief on the conditions which cause such a behavior refer to the previous note.

3.3. Compressor on/off (Menu item 3)

Use "Right" or "Left" key to switch the compressor on or off (Refer to section 1.1 for "Right" and "Left" keys).

Note: Compressor is always off when the fan is off, no matter what the setting is.

Note: If you use +D series the compressor connector switches on 3 minutes after the fan starts. It guarantees the protection of the evaporator coil against contribution of the frost and eliminates the necessity of timer relay in air conditioner apparatus for compressor.

Note: IF you ordered your thermostat for use with the air conditioner with hot water coil for heating, this menu function will automatically eliminated during winter.

3.4. Season settings (Menu item 4)

Set the current season for the controller to work properly.
Setting the "summer" in this field causes the controller to switch the air conditioner on if the room temperature is higher than desired.
In "winter" mode, the air conditioner switches on, if the room temperature is lower than desired.

Use "Right" or "Left" key to adjust the current season. The result appears at "Season setting" section of the screen (Refer to section 1.2 to find "Season setting" section of the screen and section 1.1 for "Right" and "Left" keys).

Notice: Not setting this field correctly may cause your air conditioner not to start working.

3.5. English/Local (Menu item 5)

It indicates language of the items of the status bar. If "English" is selected, all menu functions will appear in English. If local is selected, all menu functions of the status bar will appear in your local language.

3.6. Back light

Pressing any keys on the wall mounted unit turns on the back light for several seconds. It enhances reading during the night.

4. Installation guide

4.1. Mounting the wall mounted unit

Position the mounting plate on the wall. Level the mounting plate. Use a pencil to mark the mounting holes. Remove the plate from the wall and drill 3/16" holes in wall. Tap anchors into drilled holes. Reposition the plate and loosely insert two mounting screws into the holes. Level the plate for appearance. Tighten mounting screws.
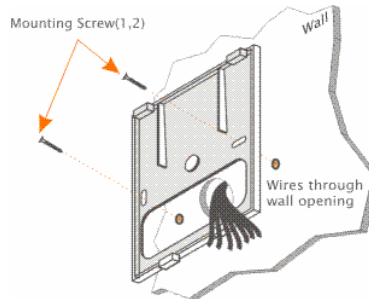
### 4.2. Proper wiring technique for the wall mounted unit

Please refer to the sketch below for the proper wiring technique. Also refer to section 4.5 for arrangement of the wires.
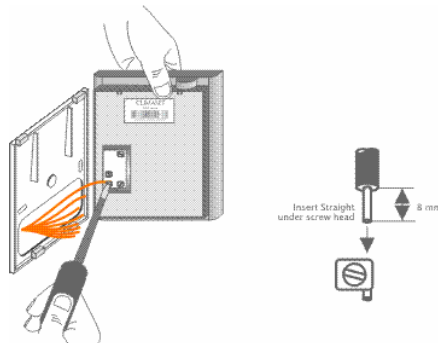
4.3. Engaging the wall mounted unit

Engage tabs at the top of the units and the wall plate. Gently press lower edge of the case to latch. To remove the "Wall mounted unit" from the wall, the top should be pulled out first.
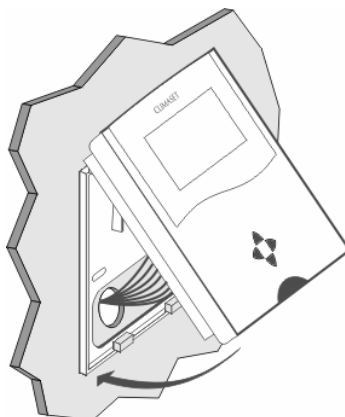
4.4. Wall mounted unit connectors

4.4.1. PDX 11A / 21A

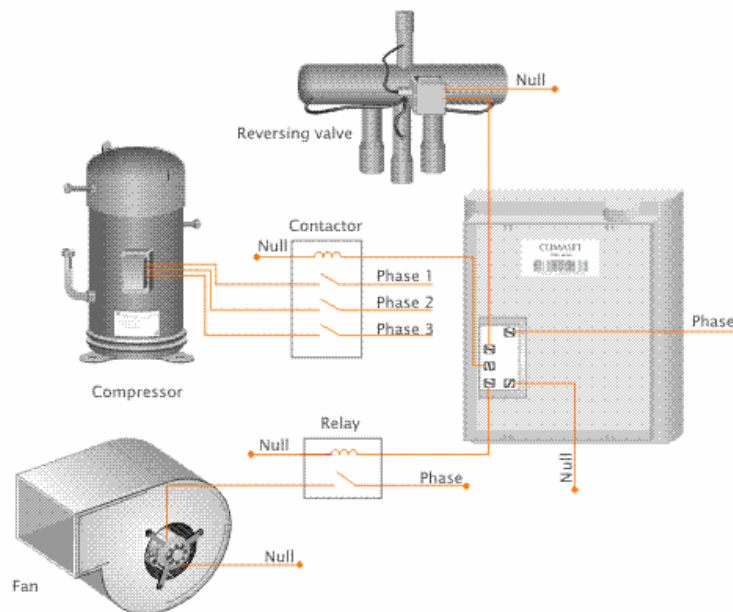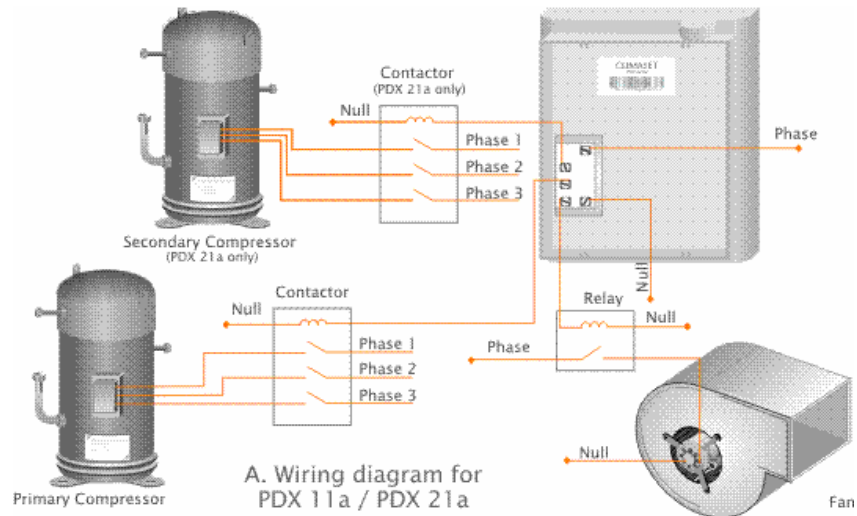| Connector No.	Description	Input / Output	Electrical Characteristics
1	Phase/Vin	Input	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC
2	Null/GND	Input	Null/GND
3	Fan	Output	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC
4	Compressor primary stage	Output	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC
5	Compressor secondary stage(PDX 21A)	Output	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC

4.4.2. PDX 11B

Connector No.	Description	Input / Output	Electrical characteristics
1	Phase/Vin	Input	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC
2	Null/GND	Input	Null/GND
3	Fan	Output	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC
4	Compressor	Output	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC
5	Reversing valve	Output	220VAC/48VAC/24VAC/12VAC/48VDC/24VDC/12VDC

- Check your dealer for proper input voltage. The device is not prepared with auto voltage detection mechanism and applying improper voltage may cause irreparable damages on electronic parts.

- Different categories of output voltage are available for PDX series. Please confirm with your dealer for proper output voltage which is suitable for your air conditioner device.

4.5. Wiring diagram

Contactor
(PDX 21a only)

Null

Phase 1
Phase 2
Phase 3

Phase

Secondary Compressor
(PDX 21a only)

Contactor

Null

Phase 1
Phase 2
Phase 3

Phase

Relay

Null

Null

Primary Compressor

A. Wiring diagram for
PDX 11a / PDX 21a

Fan

Null

Reversing valve

Contactor

Null

Phase 1
Phase 2
Phase 3

Phase

Compressor

Relay

Null

Phase

Null

Fan

Null

5. Care and maintenance

Care should be taken about the following items which may cause warranty obligation.

1. Do not use detergents   or   any chemicals to clean the Climaset. It may cause damages to electronic parts inside.

2. Climaset is designed to be used for residential comfort. Do not store it in hot or cold areas. Also it should not be stored in dirty or dusty environment.

3. Do not attempt to open any part of the Climaset. There is no part inside which you can service it. Ask your local dealer for services, if necessary.

4. Keep the Climaset dry. Moisture can cause irreparable damages on electronic parts.

6. Specifications

Wall mounted unit	Temperature Sensitivity	0.1 °C
	Display Resolution	128×64
	Backlight	Enabled
	Display Width	66 mm / 2.6 inches
	Display Length	32.7 mm / 1.3 inches
	Width	130 mm / 5.1 inches
	Length	110 mm / 4.3 inches
	Height	42 mm / 1.6 inches
Operating condition	Temperature	0 °C to 70 °C
	Humidity	5% to 90% non-Condensing