



# PC8900A Control Panel

**TRADELINE®**

## INSTALLATION INSTRUCTIONS

### APPLICATION

The PC8900 Control Panel provides 24 Vac energy saving control for a heating and cooling system, while providing reliable, precise temperature control, ventilation control, humidity control, programmable fan control and air filter/cleaner status information.

The PC8900 must be used with a W8900 Remote Module.

The PC8900 includes a SYSTEM light, which is lit when the heating or cooling system is running, and a CHECK light, which lights as a prompt to check messages on the CHECK list.

These models will replace most heating/cooling system thermostats. Check Table 1 to make sure the thermostat is compatible with the intended system.

**Table 1. Compatibility Chart.**

System Type	Compatible with PC8900
Gas—Standing Pilot	Yes
Gas—Electronic Ignition	Yes
Gas-Fired Boilers	Yes
Gas—Millivolt	See Note a
Oil-Fired Boilers	Yes
Oil-Fired Furnace	Yes
Electric Furnace	Yes
Electric Air Conditioning	Yes
Baseboard Electric (120/240 Line Volt)	See Note b
Heat Pumps/Multistage Equipment	Yes

- a Use R8222N Relay if installing as part of millivolt system (see W8900 Remote Module Instructions form 69-0894).
- b Use R8222D Relay if installing as part of a 120/240 Vac baseboard electric system (see W8900 Remote Module Instructions, form 69-0894).

### SPECIFICATIONS

**Temperature Setting Range:**  
45°F to 88°F (7°C to 31°C).

**Humidity Setting Range:**  
10% to 80%.

**Operating Relative Humidity:**  
5% to 90%, noncondensing.

**Finish:**  
White

**Dimensions in in. (mm):**  
6-3/8 (163) width x 4 (102) height x 1-5/8 (41) depth.

**Accessories:**  
205224A Wall Cover Plate to cover marks left on the wall by the old thermostat.  
C7189A Wall Mount Indoor Air Temperature Sensor.  
C7089A Outdoor Sensor.



### RECYCLING NOTICE

If this control is replacing a control that contains mercury in a sealed tube, do not place your old control in the trash.

Contact your local waste management authority for instructions regarding recycling and the proper disposal of any control containing mercury in a sealed tube.

If you have any questions, call Honeywell Inc. at 1-800-468-1502, Monday through Friday, 7 AM to 5:30 PM, Central time.



## INSTALLATION

### When Installing this Product...

1. Read these instructions carefully. Failure to follow instructions can damage the product or cause a hazardous condition.
2. Check the ratings on the product and the compatibility in Table 1 to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After completing installation, use these instructions to check out product operation.



### CAUTION

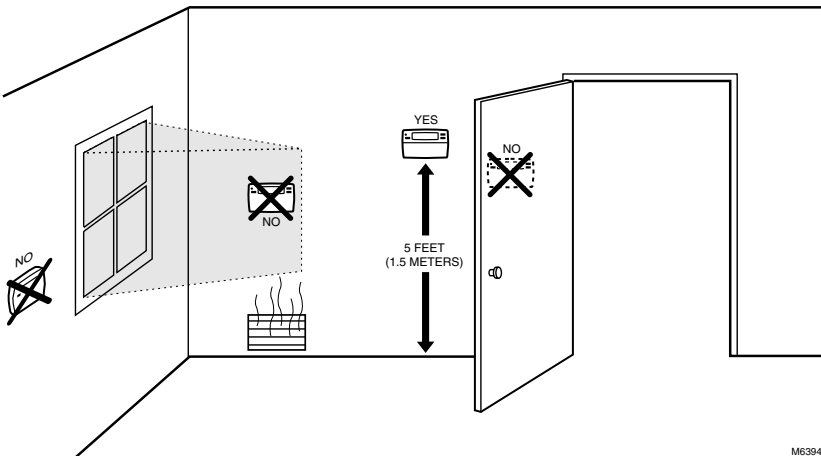
Disconnect power supply before wiring to prevent electrical shock or equipment damage.

### Location and Mounting

**NOTE:** The following location guidelines apply only if a remote sensor is not part of the installation. If a remote sensor is installed, the PC8900 can be installed in any convenient location, with these guidelines applying to the sensor location.

Locate the PC8900 where it will not be subjected to tampering.

1. Choose a location on an inside wall about 5 ft (1.5m) above the floor. A horizontally mounted standard 2 in. x 4 in. (51 mm x 102 mm) outlet box can also be used at the selected location for the PC8900.
2. Be sure that the wire distance between the PC8900 and the W8900 does not exceed 200 feet.
3. Be sure that there is good air circulation at average temperature at the chosen location. Avoid the following locations because they can introduce errors in temperature measurements.
  - Hot areas caused by:
    - Concealed pipes or ducts.
    - Drafts from fireplaces or other heat sources.
    - Convection or radiant heat from the sun or electrical equipment.
  - Cold areas caused by:
    - Concealed pipes or ducts.
    - Drafts from windows and doors.
    - Unheated areas on the other side of the wall location.
  - Dead air areas:
    - Behind doors, furniture and curtains.
    - In corners and alcoves.
4. Mark the area on the wall where the PC8900 or outlet box will be mounted.
5. Run cable to a hole at the selected wall location. Pull approximately 3 inches of wire through the opening. Color-coded 18-gauge thermostat wire is recommended.
6. Position wiring plate on wall.
7. Level the wiring plate, for appearance only, using the posts on top of the wiring plate. Device will function properly even when not level.
8. Mark three mounting holes using a pencil.
9. Remove wiring plate from wall and drill 3/16 inch holes in wall, if drywall, as marked. For firmer material such as plaster or wood, drill 7/32 inch holes. Gently tap anchors provided into drilled holes until flush with the wall. See Fig. 2.
10. Position wiring plate over holes in wall or outlet box, pulling wires through wiring opening. Loosely insert two mounting screws into holes.
11. Tighten mounting screws.



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Fig. 1. Typical Location of PC8900.

**NOTE:** If the old thermostat has left marks on the wall that are not covered by the PC8900, order part no. 205224A Wall Cover Plate to mount between the wall and the PC8900.

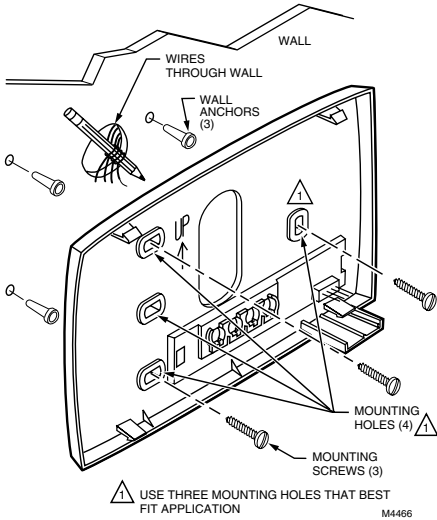


Fig. 2. Mounting PC8900 Wiring Plate.

## WIRING

### ! CAUTION

Keep wiring at least one foot away from large inductive loads such as motors, line starters, lightning ballasts and large power distribution panels. Failure to follow these wiring practices can introduce electrical interference (noise), which can cause erratic system operation. Use shielded cable to reduce interference when rerouting is not possible. Ground the shielded cable to the GND terminal on the W8900.

### IMPORTANT

Erratic temperature readings can occur as a result of any of the wiring practices described below. These practices must be avoided to assure proper operation. Use shielded cable to reduce interference when rerouting of wiring is not possible.

- Do not route thermostat wiring with building power wiring, next to control contactors or near light dimming circuits, electric motors or welding equipment.
- Avoid poor wiring connections.
- Avoid intermittent or missing building earth ground.

### ! CAUTION

Disconnect power supply before connecting wiring to prevent electrical shock or equipment damage.

All wiring must comply with applicable electrical codes, ordinances, and regulations.

- Loosen the terminal screws and insert one wire beneath each numbered terminal (1,2,3,4). Note the color of wire that is attached to each terminal number to later match the colors with the terminals on the W8900 Remote Module. See Fig. 3 and 4 for technique and wiring diagram. Four wires are required at the thermostat to assure operation.
- Securely tighten screw terminals.
- Push excess wire back into the hole. Plug the hole with nonhardening caulk, putty or insulation to prevent drafts from affecting PC8900 operation.

### IMPORTANT

In replacement applications, more than four wires may be available. In these applications, tape off the unused wires at the PC8900 location and W8900 location.

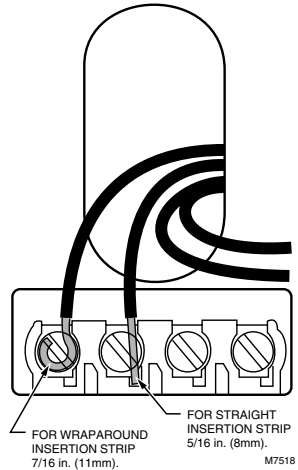
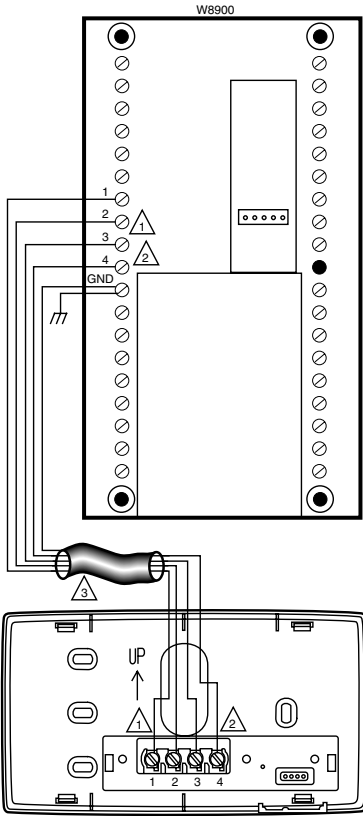


Fig. 3. Proper Wiring Technique.



- 1 NOTE WHICH COLOR WIRE IS ATTACHED TO EACH TERMINAL.
- 2 FOUR WIRES ARE REQUIRED FOR PROPER OPERATION. IF FEWER THAN FOUR ARE AVAILABLE, ADDITIONAL WIRES MUST BE RUN TO PC8900 LOCATION. IF MORE THAN FOUR ARE AVAILABLE, TAPE OFF UNUSED WIRES.
- 3 IF SHIELDED CABLE IS REQUIRED, GROUND TO GND TERMINAL ON W8900.

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**Fig. 4. Wiring Diagram for PC8900 to the W8900 Remote Module.**

## Mounting the PC8900 on the Wiring Plate

To mount the PC8900 on the wiring plate, engage the tabs on the wiring plate with the back of the PC8900 and then press the PC8900 to latch.

## OPERATION

The PC8900 is not a typical thermostat. It senses temperature and humidity conditions in the living space and transfers the information to the W8900 Remote Module. The W8900 activates the proper equipment based on room conditions and programmed settings.

## CHECKOUT

### **WARNING**

Do *not* jumper any PC8900 wires in an attempt to activate equipment.

See checkout procedures included with W8900 Remote Module.

To test for 24V at the PC8900, measure between terminals 1 and 4.

## CALIBRATION

The PC8900 is calibrated at the factory and cannot be recalibrated in the field.

## PROGRAMMING

See Owner's Guide, form 69-0891, for programming instructions.

## POWER OUTAGES

The PC8900 requires no backup batteries. In event of power outage, the time of day and day are retained for approximately six hours. Program times, temperatures, and settings will be held indefinitely.

NOTE: When power is restored, the time and day information must be re-entered.

## W8900 REMOTE MODULE INSTALLATION

To install the W8900 Remote Module, refer to form 69-0894 for instructions packed with the remote module.

**Honeywell**

Home and Building Control  
Honeywell Inc.  
1985 Douglas Drive North  
Golden Valley, MN 55422

Home and Building Control  
Honeywell Limited-Honeywell Limitée  
35 Dynamic Drive  
Scarborough, Ontario  
M1V 4Z9



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