

CP-3-HP Installation and Operation Instructions

3 Heat / 2 Cool Heat Pump with Fossil Fuel option

Auto Changeover - First Call Priority - Time Share

Fossil Fuel Applications:

Fossil fuel may be used as the auxiliary heat source with the CP-3-HP allowing for up to 2 stages of cooling and 3 stages of heating. For systems having a 2 stage furnace, W1 and W2 are jumpered at the furnace. This method utilizes the internal furnace upstage timer to bring on second stage fossil fuel.

Sequence of Operation:

2 Heat / 1 Cool

When a zone thermostat calls for heating and the outdoor temperature is above the balance point as established by the CP-3 OTS, the heat pump operates as first stage heat. If there is a call for second stage heat (auxiliary), or if any thermostat is placed in the emergency heat mode, the panel will automatically de-energize the heat pump and bring on the furnace. When the outdoor temperature falls below the balance point, the heat pump will be locked out and the furnace will become first stage.

3 Heat / 2 Cool

When a zone thermostat calls for heating and the outdoor temperature is above the balance point as established by the CP-3 OTS, both compressor stages of the heat pump will operate as normal. If there is a call for third stage heat (auxiliary), or if any thermostat is placed in the emergency heat mode, the panel will automatically de-energize all heat pump stages and bring on the furnace. When the outdoor temperature falls below the balance point, the heat pump will be locked out and the furnace will become first stage.

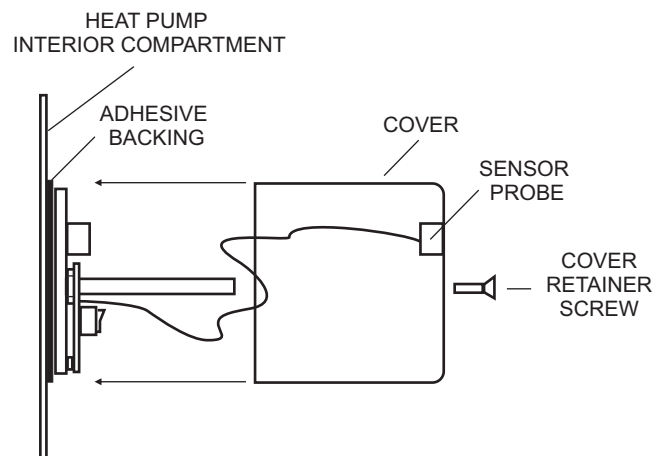
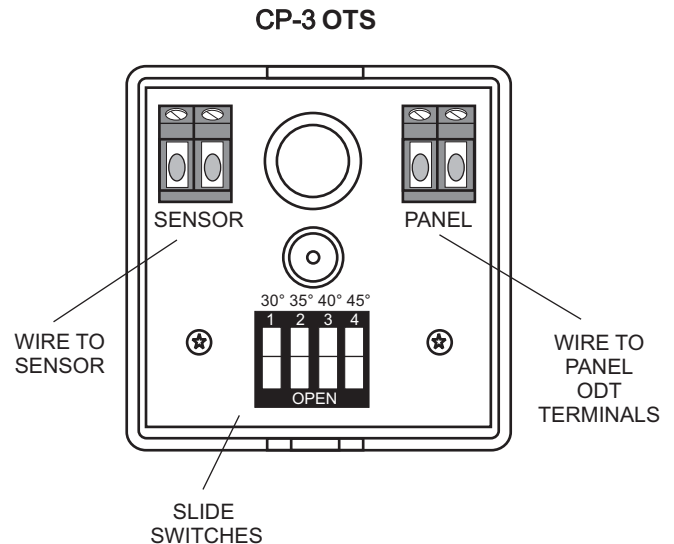
Installing and wiring the CP-3 OTS

The CP-3 OTS is an adjustable electronic sensor used for both selecting the outdoor balance point and measuring the outdoor temperature. This information determines when the heat pump will be locked out and only the furnace will be used for heating.

Before installing the CP-3 OTS, remove the retaining cover and select the outdoor balance point temperature using the slide switches.

| SETPOINT | SWITCH SETTING |
|-----------------|-----------------------|
| 30° F | 1 Closed - 2,3,4 Open |
| 35° F (Default) | 2 Closed - 1,3,4 Open |
| 40° F | 3 Closed - 1,2,4 Open |
| 45° F | 4 Closed - 1,2,3 Open |

Mount the CP-3 OTS on a vertical surface inside the heat pump cabinet to avoid direct sunlight, freezing rain or snow.



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Specifications

Panel Dimensions:

Height: 8.0 Inches
 Width: 6.0 Inches
 Depth: 1.375 Inches

Mounting:

Snap Track with 2 back plate screws

Operating Temperature Rating:

-40° F to 150° F

Operating Humidity:

5% to 90% RH non-condensing

Wiring:

18-gauge wire for all equipment and system connections

Time Delays:

3 minutes minimum off between heating and cooling calls
 3 minutes minimum off on high and low limit
 20 minute time share
 Purge ON = 1 minute

Thermostats:

Single or multi-stage heat pump
 Programmable or non-programmable
 Auto or manual changeover

Terminal Designations

Thermostats:

| | |
|----|-----------------------------|
| C | 24Vac (Common) |
| R | 24Vac (Hot) |
| W | Auxiliary or Emergency Heat |
| Y1 | First Stage Compressor |
| Y2 | Second Stage Compressor |
| | Compressor |
| G | Fan |

Dampers:

| | |
|------|----------------|
| D PC | Powered Closed |
| D C | Common |
| PO | Powered Open |

High / Low Limit

| | |
|-----|----------------------|
| DAS | Discharge Air Sensor |
| DAS | (2 wire) |

Outdoor Thermostat

| | |
|-----|----------------------|
| OTS | Used for Fossil Fuel |
| OTS | (2 wire) |

HVAC Equipment:

| | |
|-----|-----------------------------|
| RH | 24Vac Heating Transformer |
| RC | 24Vac Cooling Transformer |
| W | Auxiliary or Emergency Heat |
| Y1 | First Stage Compressor |
| Y2 | Second Stage Compressor |
| G | Fan |
| O/B | Reversing Valve |

Panel Power:

| | |
|---|----------------|
| R | 24Vac (Hot) |
| X | 24Vac (Common) |

Typical System Layout

