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**HOT WATER HEAT KIT**

**INSTALLATION INSTRUCTION FOR HOT WATER HEAT KIT (90W84)**

**⚠ WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause personal injury, loss of life, or damage to property.

Installation and service must be performed by a licensed professional installer (or equivalent) or a service agency.

**⚠ CAUTION**

Physical contact with metal edges and corners while applying excessive force or rapid motion can result in personal injury. Be aware of, and use caution when working near these areas during installation or while servicing this equipment.

**⚠ WARNING**



**Electric Shock Hazard.** Can cause injury or death. Unit must be grounded in accordance with national and local codes.

Line voltage is present at all components when unit is not in operation on units with single-pole contactors. Disconnect all remote electric power supplies before opening access panel. Unit may have multiple power supplies.

**Shipping and Packing List**

Check unit for shipping damage. Consult last carrier immediately if damage is found.

| Catalog Number | Part Names           | Part Numbers | Qty. |
|----------------|----------------------|--------------|------|
| 90W84          | DC Relay, 22VDC      | 102297-01    | 1    |
|                | 3PDT Relay           | 67K6601      | 1    |
|                | Delay-On-Make Relay  | 99P41        | 1    |
|                | 9-Pin Wiring Harness | 609345-01    | 1    |
|                | Wiring Diagram       | 537516-01    | 1    |

**Field-Provided Supplies**

The following field-provided supplies may be required.

- 1/4" quick connects
- Control wiring (various lengths)

**General**

Hot water heat kit (90W84) adapts CBX32MV and CBX40UHV units for use with a boiler to provide hot water heating in select applications. When used with an air conditioner, the hot water provides first-stage heating. When used with a heat pump, the hot water provides second-stage heating.

This kit is only approved for use in systems using either the ComfortSense® 7000 thermostat or icomfort™-enabled thermostat. Wiring modifications shown are in addition to field wiring detailed in the instructions provided with the air handler.

**Thermostat Configuration**

**HEAT PUMP APPLICATIONS**

The ComfortSense® 7000 will need to be reconfigured for use with:

- Heat pump with hot water heat (see figure 4).
- Compressor low balance set point of 40°F.

Since the hot water coil is downstream of the coil, the heat pump and boiler can be operated simultaneously. In emergency heat mode, the blower CFM drops to the lower heat table CFM setting.

**AIR CONDITIONER APPLICATIONS**

In applications with condensing units, configure ComfortSense® 7000 for hot water heat (see figure 4).

In icomfort™-enabled systems, see figure 4 for heat discovery procedures and the icomfort™-enabled thermostat installer guide to configure the thermostat.

**Kit Installation**

This kit can be installed for any of the following variations:

- Air handler - hot water heat and air conditioner
- Air handler - hot water heat and heat pump

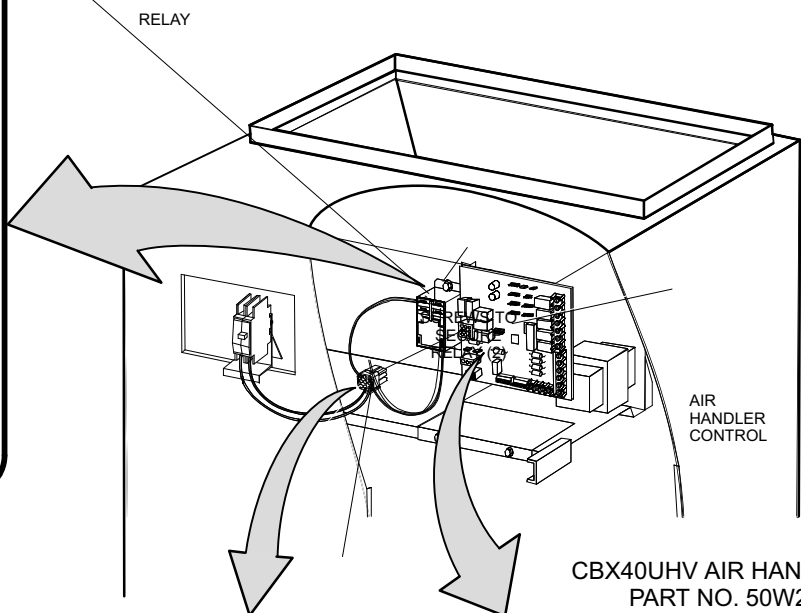
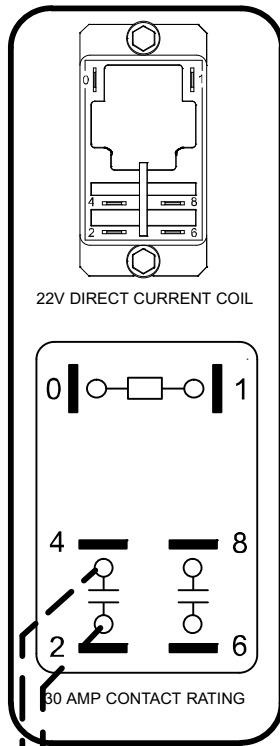


# AIR HANDLER - HOT WATER HEAT AND HEAT PUMP / AIR CONDITIONER WITH ICOMFORT™-ENABLED SYSTEM

- All configurations will use the heat relay terminals **0** and **1** connected to pins **1** and **3** on the 9-pin connector.
- Heat discovery must be completed before powering the icomfort™ -enabled thermostat, if not, the icomfort™ -enabled setup will need to be performed again after air handler heat discovery. The icomfort™ -enabled thermostat will control operation as single-stage hot water heat.

Refer to *icomfort™-enabled Thermostat Installer's System Setup Guide, Setting up Equipment Parameters* for configuring hot water heating equipment.

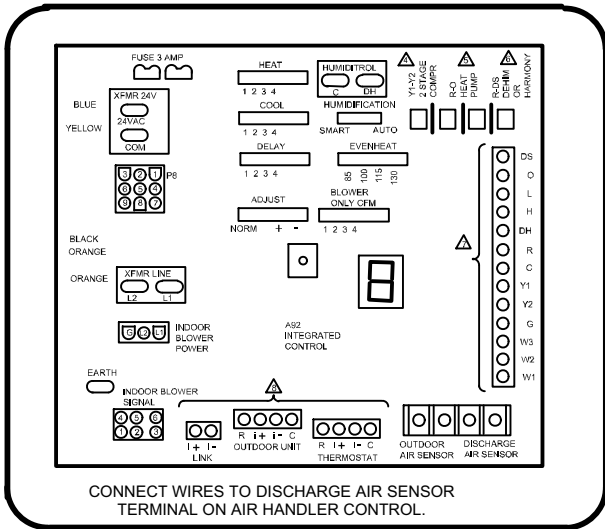
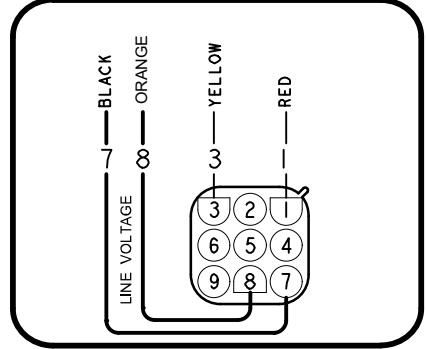
1. Press **start**
2. Navigate to **equipment** tab.
3. Under system devices, select **AIR HANDLER** and select **edit** to the right of the box.
4. Select **Electric heating Air flow** and select **edit** to the right of the box.
5. Use the **UP** or **DOWN** arrows to set the desired **CFM**. Select **save** when done.
6. Under **Equipment Name**, scroll down to **Heating Indoor Blower OFF Delay** and select **edit** to the right of the box.
7. Use the **UP** or **DOWN** arrows to set a maximum of 10 seconds. Select **save** when done
8. Under **Equipment Name**, scroll down to **Heating Indoor Blower ON Delay** and select **edit** to the right of the box.
9. Use the **UP** or **DOWN** arrows to set a maximum of five (5) seconds. Select **save** when done
10. Toggle to **exit**



Heat relay contacts 4 and 2 must be used to control boiler when configured with icomfort Touch® thermostat only.

TO BOILER CONTROL

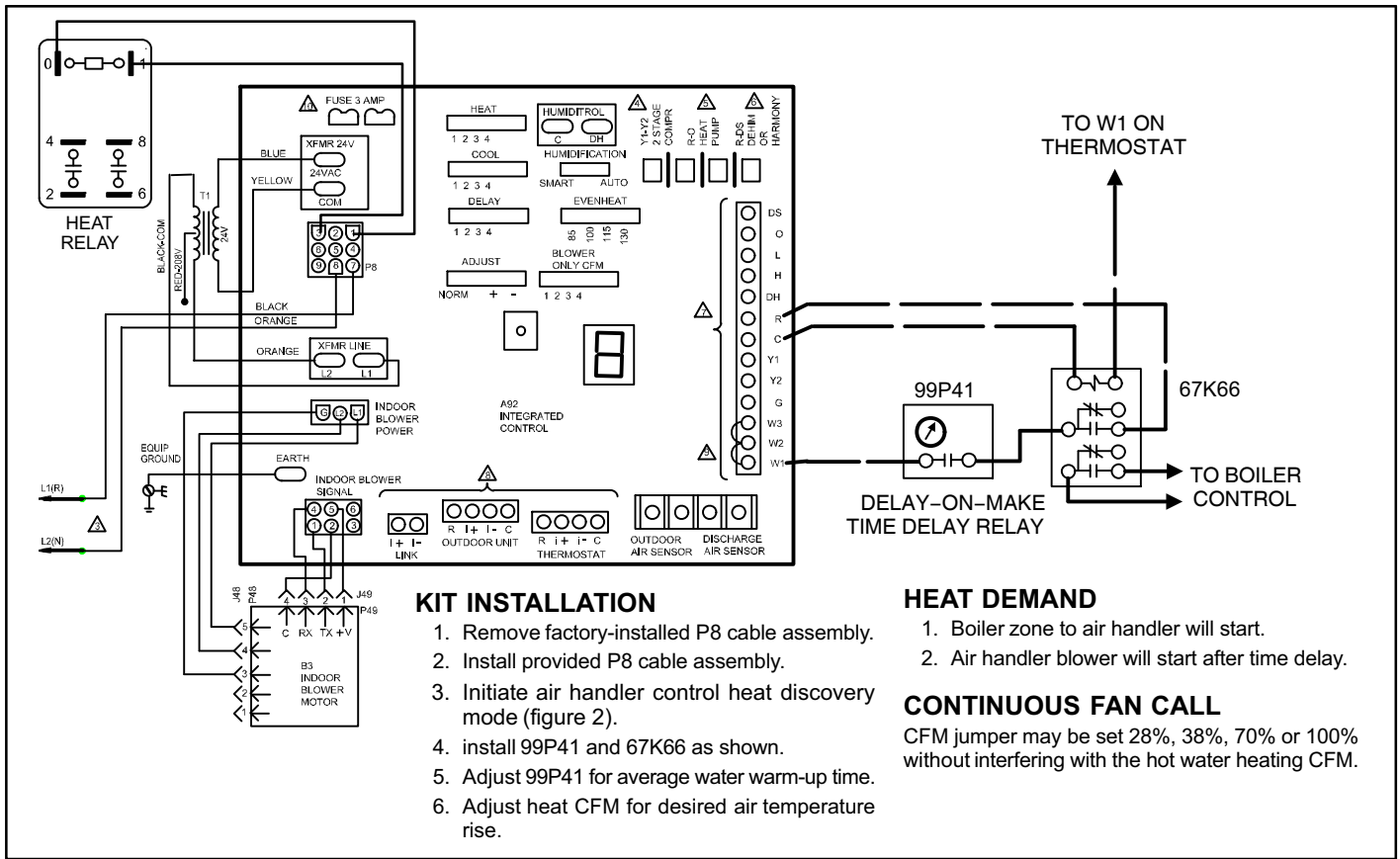
### 9-PIN CONNECTOR



NOTE — EVENHEAT MODE CANNOT BE ENABLED WITH HARMONY III DUE TO EACH CONTROL REQUIRING ITS OWN DISCHARGE AIR SENSOR.

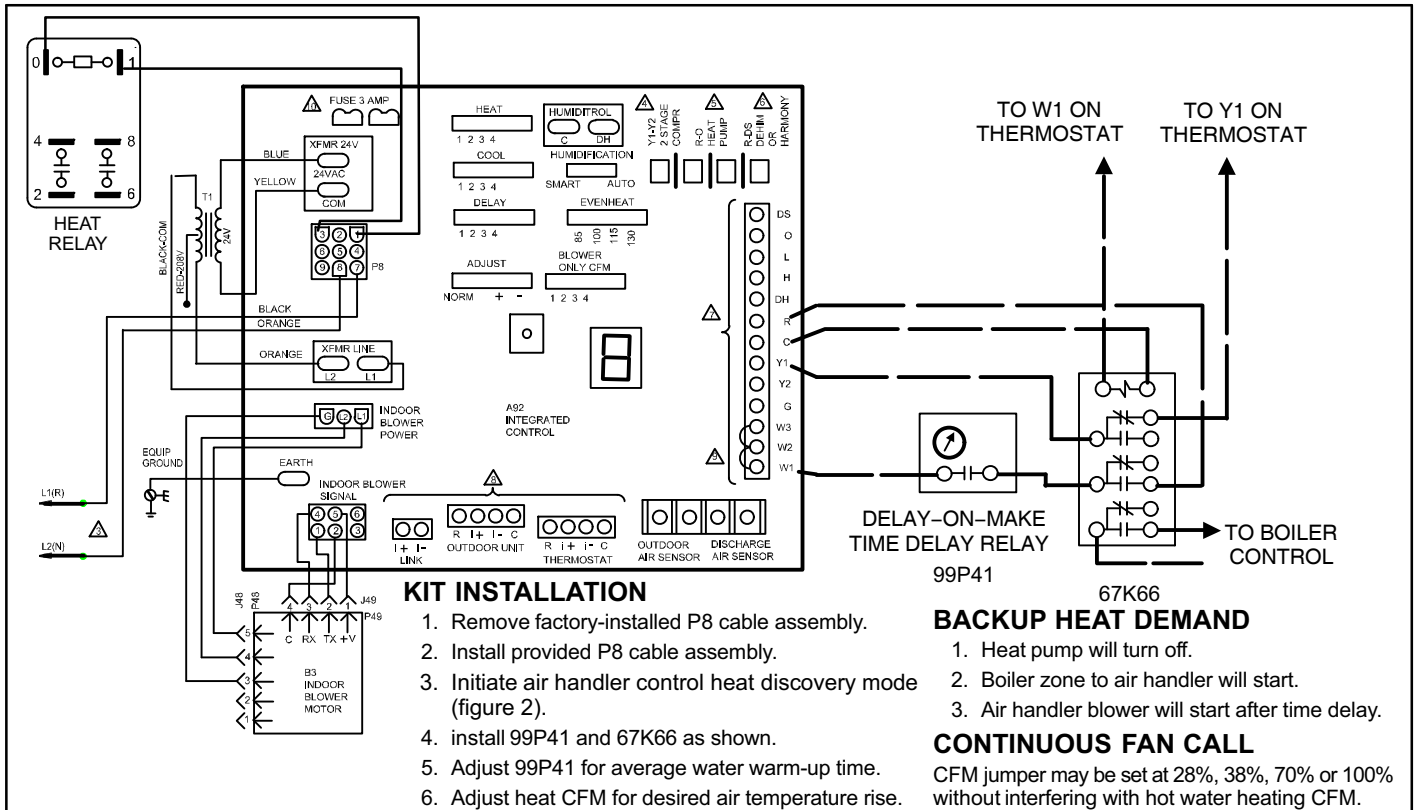
Figure 1. Air Handler - hot water heat and heat pump / air conditioner with icomfort™-enabled system

**OPTION 1 — AIR HANDLER - HOT WATER HEAT AND AIR CONDITIONER WITH COMFORTSENSE® 7000**



**Figure 2. Air handler - hot water heat and air conditioner with ComfortSense® 7000**

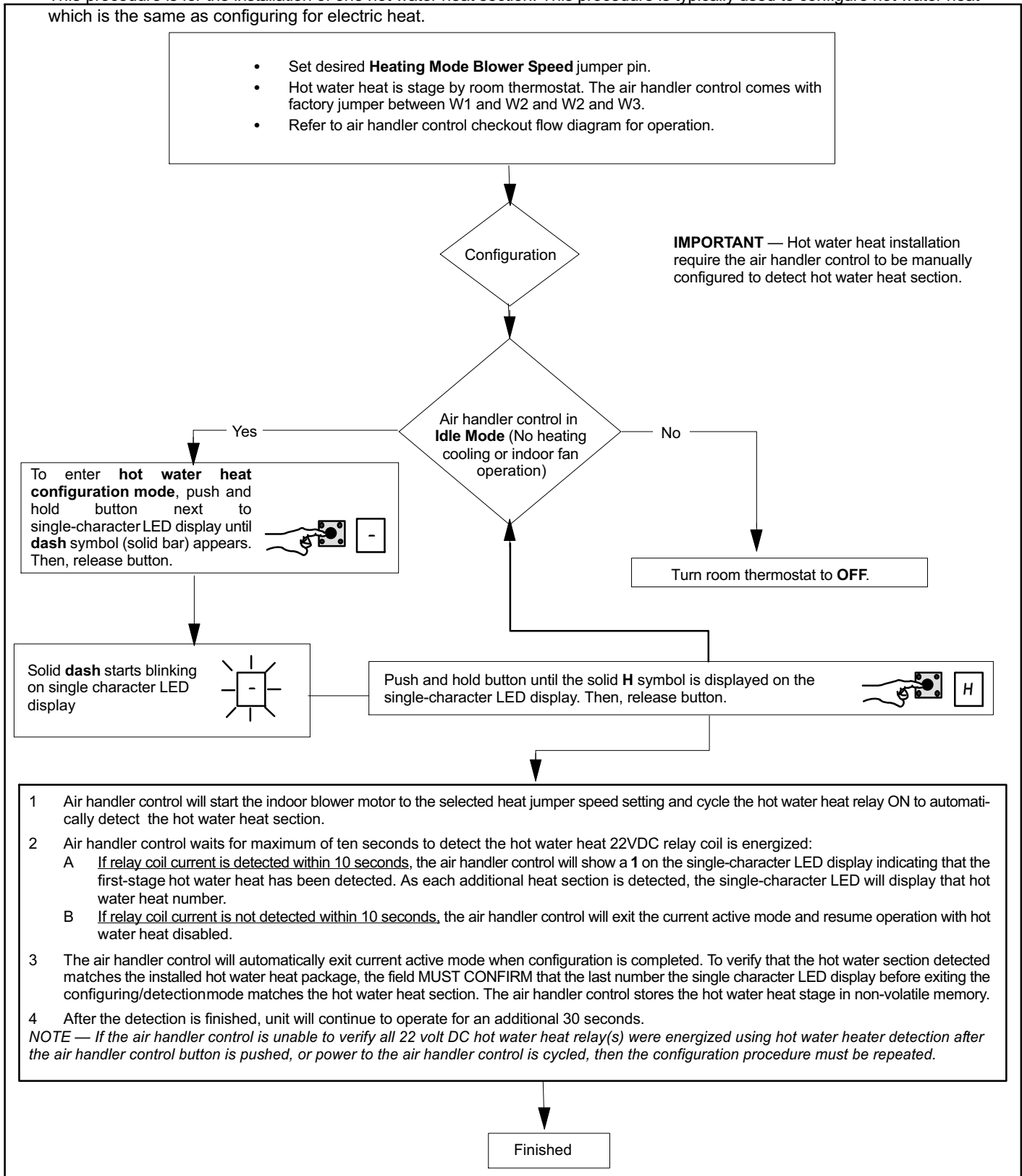
**OPTION 2 — AIR HANDLER - HOT WATER HEAT AND HEAT PUMP WITH COMFORTSENSE® 7000**



**Figure 3. Air handler - hot water heat and heat pump with ComfortSense® 7000**

## Configuring/Detecting Hot Water Heat Section

This procedure is for the installation of one hot water heat section. This procedure is typically used to configure hot water heat which is the same as configuring for electric heat.



**Figure 4. Heat Discovery Mode**