

Field Kit Installation Manual: H Series - Horizontal Discharge Modulating Heat Pump Furnace and VS ECM Compatibility Kit (HMH7AK002)

6096433-UAI-B-0721

General

NOTICE

Before installation of this kit, see Table 1 to determine if this kit applies to the selected outdoor model. If the outdoor model is not listed in Table 1, this kit cannot be applied correctly to link an air handler to a H Series modulating discharge unit.

Table 1: Compatible models

Models
HMH72B241S
HMH72B361S
HMH72B481S
HMH72B601S

This kit is required to run a Johnson Controls air handler with a H Series modulating heat pump. If you are pairing this outdoor unit with a gas furnace, the room thermostat must be a heat pump thermostat that can manage fossil fuel operation. The purpose of the kit is to provide necessary parts for installation and allow the H Series outdoor section to reduce airflow from the indoor unit when the outdoor terminal S1 is energized. The H Series outdoor section is designed for lower airflow when S1 is energized and does not function correctly without this kit. The kit also reverses the logic of the reversing valve to allow the indoor section unit to function according to the same mode as the outdoor section.

Kit contents

Table 2: Kit contents

Item	Quantity
Relay plate	1
SPDT 24-V relays	2
5-wire 36-in. harness	2
#8 x 1/2-in. screw	4
#12 x 3/4-in. screw	4
Instruction sheet	1
Wiring diagram VS ECM/furnace	1
Drier	1

Installation overview

1. Install the bi-flow filter/drier included when the indoor equipment is in place at a suitable location near the indoor section.
2. Remove the screws that secure the blower door of the indoor section and remove the door.
3. Install the relays provided before wiring the thermostat to the indoor and outdoor sections, but after mechanical installation of both pieces of equipment. You must install the relays in the indoor section and connect the relays into the thermostat wiring using wire connectors. See [Installing the relay plate for air handlers](#), [Installing the relay plate for furnaces](#), [Wiring the S1 relay](#), and [Wiring the RV relay](#) for detailed instructions.
4. When the relay plate is secured, and all field wiring is connected, replace and secure the blower door in reverse order of removal.
5. Proceed with the startup instructions in the *Installation Manual* for the HMH7 series.

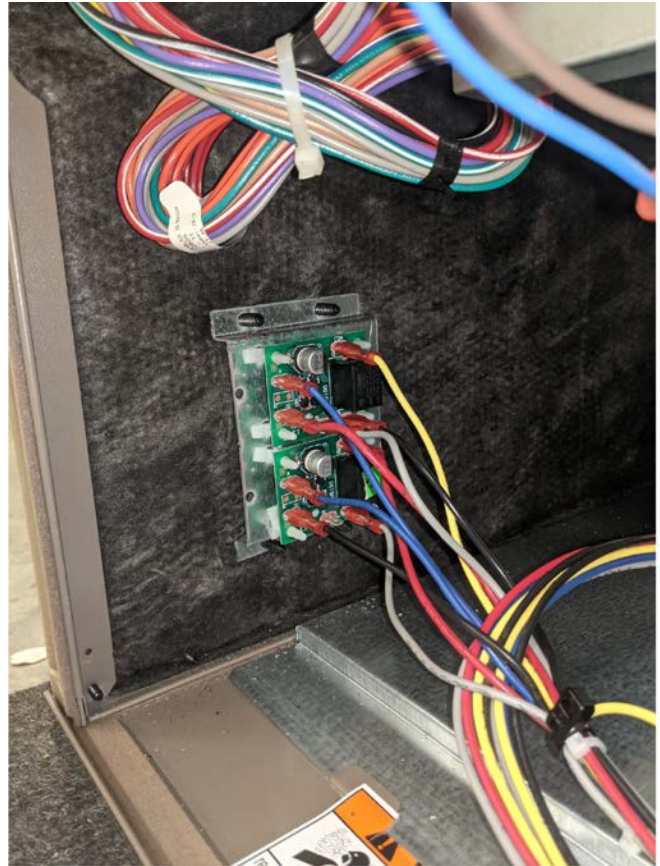
Installing the relay plate for air handlers

1. Remove the screw at the front of the control panel securing the transformer. Without removing the transformer wiring, move the transformer to the side to allow access.
2. Install the relay plate on the right-hand side using the existing four screw holes on the rear of the control panel with the #12 screws provided. See Figure 1.
 **Note:** The relays shown in Figure 1 may be different form factors from the relays you receive, depending on part availability.
3. When the relay plate is in place, reinstall the transformer.

Figure 1: Air handler relay plate installation



Figure 2: Furnace relay plate installation



Installing the relay plate for furnaces

1. Use a 3/16-in. drill bit to drill out the four holes required. Use the relay plate as a template for aligning the hole locations.
2. To attach the relay plate, insert the #12 screws provided from the outside of the casing in. See Figure 2.

① **Note:** The relays shown in Figure 2 may be different form factors from the relays you receive, depending on part availability.

Wiring the S1 relay

About this task: The S1 relay is the relay located nearest the relay plate mounting flange without the notch.

NOTICE

The harnesses contained in the kit have different size connectors on each end. Pay close attention to the connectors so the correct ones are removed.

1. On the first five-wire harness, remove the 1/4-in. connectors from the relay harness wires and strip the insulation.
2. Attach the harness as follows. See Figure 3.
 - a. Connect the yellow wire to the room thermostat Y connection.
 - b. Connect the red wire to terminal S1 of the outdoor section.
 - c. Connect the blue wire to the C connection (C on the indoor control).
 - d. Connect the black wire to the Y/Y2 connection (Y/Y2 on the indoor control).
 - e. Connect the gray wire to the Y1 connection (Y1 on the indoor control).

Wiring the RV relay

About this task: The RV relay is the relay located nearest the notch in the relay plate mounting flange.

1. On the second five-wire harness, remove the 1/4-in. connector from the relay harness wires and strip the insulation.
2. Attach the harness as outlined in the following steps. See Figure 3.

① **Note:** The yellow wire in this harness is not used.

- a. Connect the red wire to the R connection (R on the indoor control).
- b. Connect the blue wire to the C connection (C on the indoor control).
- c. Connect the gray wire to the O connection (O on the indoor control).
- d. Connect the black wire to the room thermostat O/B (reversing valve) wire.

Wiring diagram

Figure 3: Wiring diagram

