


# Installation Instructions

**NOTE:** Read the entire instruction manual before starting the installation.

## SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual Installation Instructions packaged with the kits or accessories.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for brazing operations. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to unit. Consult local building codes and National Electrical Code (NEC) ANSI/NFPA 70 and Canadian Electrical Code CSA C22.1 for special installation requirements.

Recognize safety information. This is the safety-alert symbol . When you see this symbol on the unit or in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE**. The words DANGER, WARNING, and CAUTION are used with the safety-alert symbol. **DANGER** identifies the most serious hazards which **will** result in severe personal injury or death. **WARNING** signifies hazards which **could** result in personal injury or death. **CAUTION** is used to identify unsafe practices which **may** result in minor personal injury, or product and property damage. **NOTE** is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

## INTRODUCTION

This instruction covers the installation of condensate freeze protection kit, Part No. KGAHT0201CFP for use with 35-in. (889 mm) tall high-efficiency condensing gas furnaces.

## DESCRIPTION AND USAGE

The condensate freeze protection (condensate trap with heat pad) kit is designed to protect a high-efficiency furnace condensate drain trap from freezing when the furnace is installed in an area where temperatures may be below 32°F (0°C).

The Condensate Freeze Protection Kit contains the following items:

**Table 1 – Kit Contents**

DESCRIPTION	QUANTITY
Condensate Trap with Heat Pad	1
120V to 24V Step-down Transformer	1
KA56GR140 7/8" Grommets	2
Trap Grommet	1
Installation Instructions	1

## CAUTION

### FURNACE MAY NOT OPERATE HAZARD

Failure to follow this caution may result in furnace operation stoppage and frozen water pipes when temperatures may be below 32° F (0° C). This kit is not designed to prevent drain line from freezing. Additional field supplied protection must be taken to protect drain line from freezing.

## WARNING

### ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in electrical shock, fire, personal injury or death.

The installation of this heat tape kit on the furnace condensate drain trap must be installed per these instructions to prevent electrical and fire hazards.

## GENERAL

**NOTE:** Use only these instructions to install the Condensate Freeze Protection kit on the 35-in tall high-efficiency furnaces. Refer to the installation instructions supplied with the furnace for all other installation requirements.

1. This kit is designed for freeze protection of only the furnace condensate trap.
2. This kit replaces the condensate trap supplied with the furnace.
3. Additional field-supplied freeze protection of the remaining condensate line and condensate pump (when used) may be required.
4. Follow all other installation or local code requirements.

**NOTE:** The in-line thermostat does not turn the heater on until the ambient temperature is below 35°F (2°C).

### Condensate Trap Upflow Orientation

When the furnace is installed in the upflow position, replace the factory installed condensate trap with the condensate trap included in the Condensate Freeze Protection Kit. Refer to Condensate Drain section of the installation instructions included with the furnace for information how to install the condensate drain.

### Condensate Trap Downflow Orientation and Horizontal Orientations

When the furnace is installed in the downflow or horizontal positions, the factory-installed trap must be replaced with the condensate trap included in the Condensate Freeze Protection Kit

and relocated as shown in installation instructions included with the furnace. Refer to the appropriate section for details on relocating the condensate trap. Refer to Condensate Drain section of the installation instructions included with the furnace for information how to install the condensate drain.

When the furnace is installed in the Horizontal position as a direct-vent 2-pipe furnace, a field-supplied, accessory Horizontal Installation Kit (trap grommet) is required. The kit contains a rubber casing grommet designed to seal between the furnace casing and the condensate trap. Refer to the installation instructions included with the furnace for details.

**NOTE:** The Horizontal Installation Kit (trap grommet) is NOT required for single-pipe, ventilated combustion air, or other non-direct vent applications.

## **WARNING**

### **ELECTRICAL SHOCK, FIRE, OR EXPLOSION HAZARD**

Failure to follow this warning could result in personal injury, death or property damage.

Before installation, modifying or servicing system, main electrical disconnect switch must be in the OFF position and install a lockout tag. There may be more than one disconnect switch. Lockout and tag switch with a suitable warning label.

1. Disconnect power to the furnace.
2. Replace the factory installed condensate trap with condensate trap included in the kit in the required orientation. Refer to the installation instructions included with the furnace for additional details on installing and relocating the condensate trap.
3. Discard the factory-supplied condensate trap.
4. Install the 24VAC transformer to a field-supplied external furnace junction box opposite of the J-box installed inside the furnace.

5. Connect the 115 VAC wires for the transformer to the 115 VAC wires in the J-box. Connect the black wire to line voltage, the white wire to neutral, and the green wire to ground. See Fig. 1.
6. Remove an unused 7/8-in. knockout in the casing near the junction box. The knockout selected should be in a position to allow the wires to reach the 24VAC transformer terminals, and also so that the in-line thermostat on the trap is outside the cabinet.
7. Install the round grommet included in the kit in the 7/8-in. knockout. See Fig. 2.
8. Route the low voltage wires for the heat pad wires through the grommet installed in 7/8-in. knockout.

## **CAUTION**

### **FURNACE RELIABILITY HAZARD**

Failure to follow this caution may result in unit component damage.

The low voltage wires may be longer than necessary. DO NOT cut excess wire to shorten the length of the wire. Removing excess wire from the heat pad may result in removal of the in-line thermostat of the heat pad.

If the in-line thermostat is removed, the heat pad will stay energized above 35°F (2°C) and shorten the life of the heat pad.

9. Ensure that wires are routed away from the burner, inducer fan or other hot or moving parts.
10. Connect the heater terminals to the 24VAC transformer terminals.
11. Ensure that the in-line thermostat is outside the cabinet.
12. Secure any excess wire in a workman-like manner.
13. Install the remaining condensate drain per the furnace installation instructions.

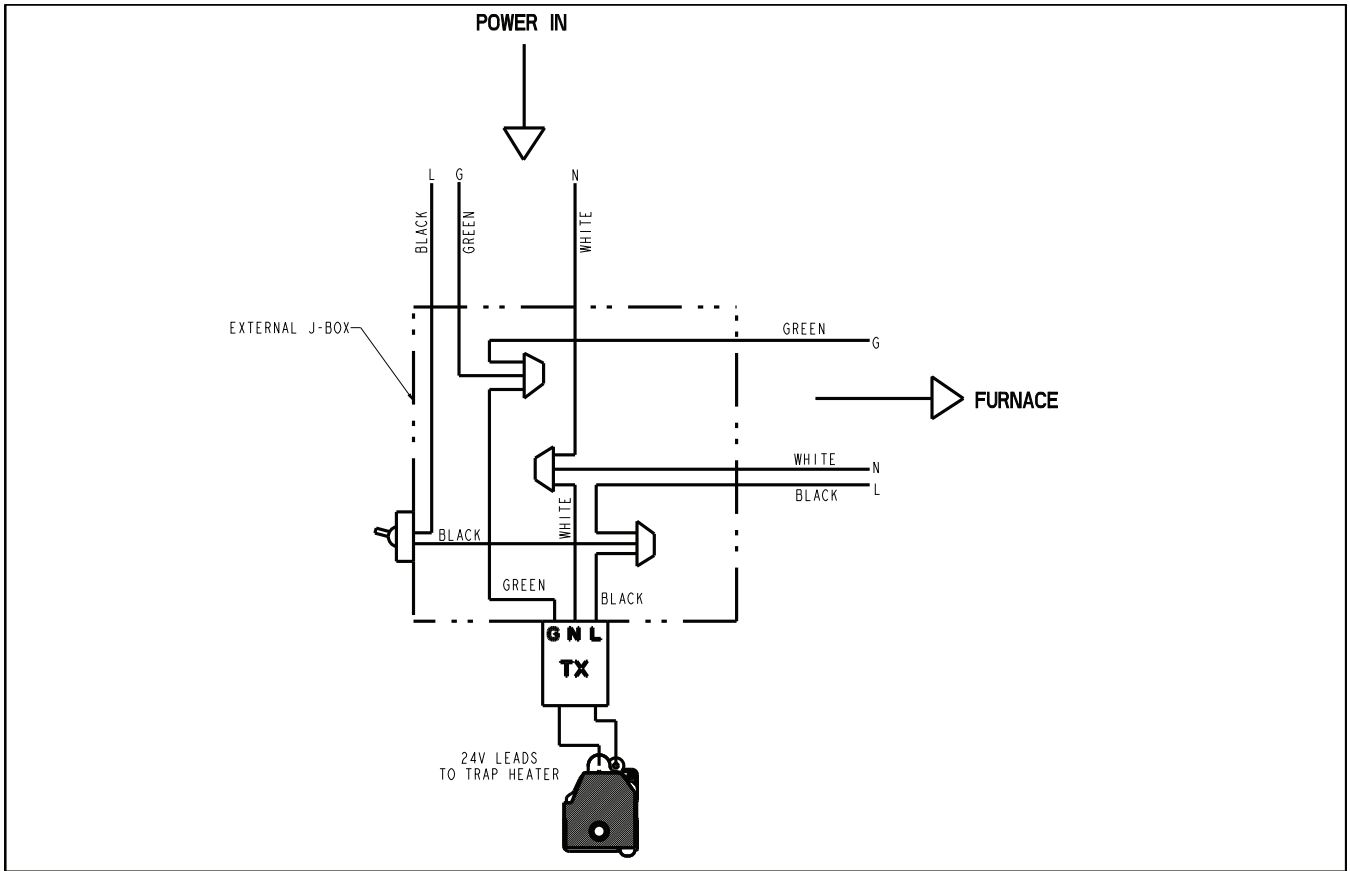


Fig. 1 - Wiring Schematic

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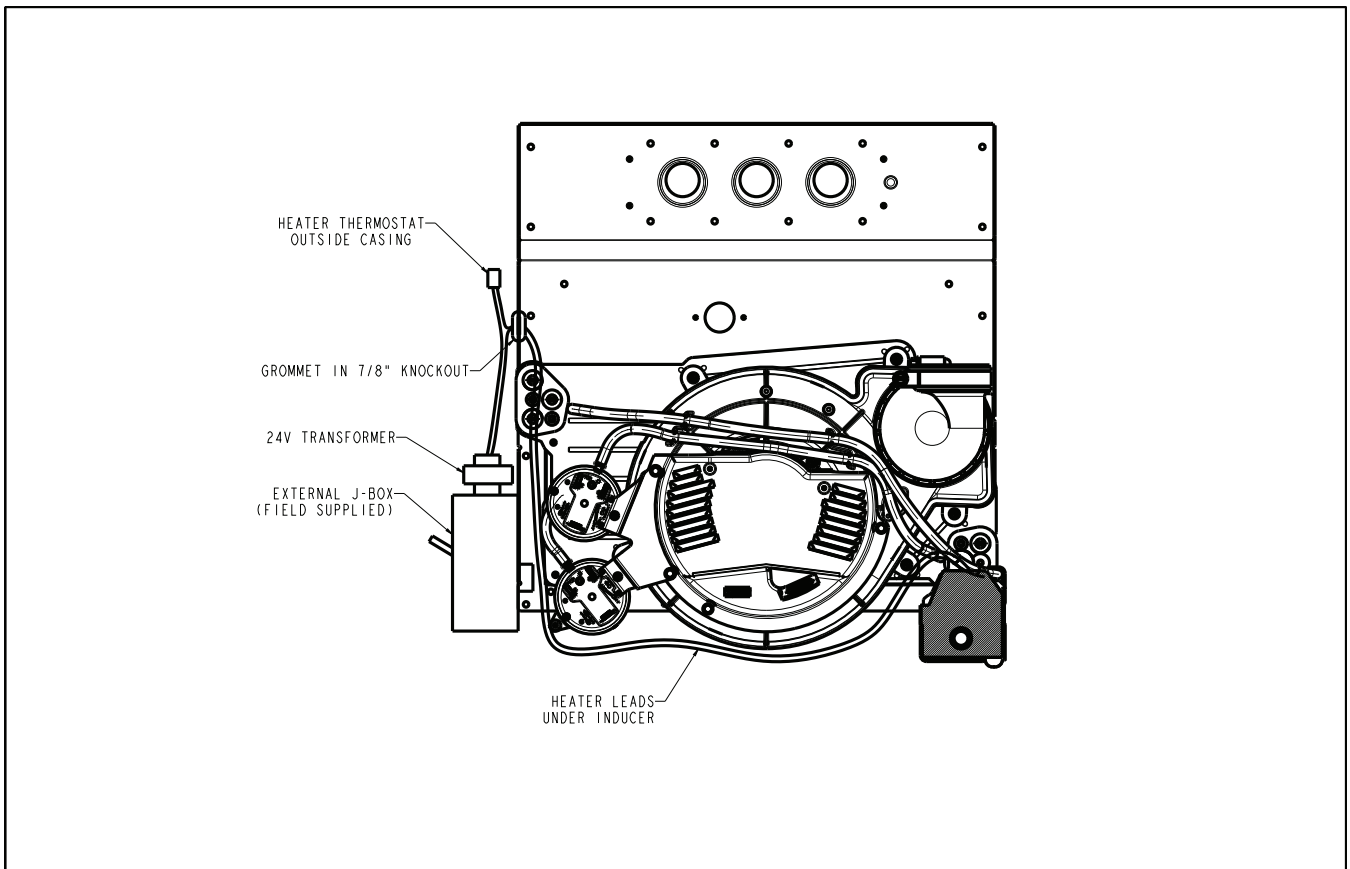


Fig. 2 - Wire Routing

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