Installation Instructions

High Temperature Sensor

Precedent™ Packaged Rooftop Units
3 to 25 Tons

Model Number: FIAHTST001*

Used with: Precedent models with Symbio™ controls.

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

September 2024 **ACC-SVN260B-EN**

1

Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

2

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- **Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.**
- **When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.**
- **If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

3

⚠ WARNING

Follow EHS Policies!

Failure to follow instructions below could result in death or serious injury.

- **All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.**
- **Non-Trane personnel should always follow local regulations.**

⚠ WARNING

R-454B Flammable A2L Refrigerant!

Failure to use proper equipment or components as described below could result in equipment failure, and possibly fire, which could result in death, serious injury, or equipment damage.
The equipment described in this manual uses R-454B refrigerant which is flammable (A2L). Use ONLY R-454B rated service equipment and components. For specific handling concerns with R-454B, contact your local representative.

Copyright

Trademarks

All trademarks referenced in this document are the trademarks of their respective owners.

Revision History

Updated Inspection section.

4

General Information

Carefully review installation instructions.

- The sensors provide high limit cutout with manual reset in warm air to air conditioning systems.
- The sensors may be used to detect heat from a fire in the air conditioning or ventilation ducts and shut off air circulation to contain the fire.
- The sensors come with case and cover, and mount directly to the ductwork.

Inspection

1. Unpack all components of the kit.
2. Check carefully for shipping damage. If any damage is found, report it immediately, and file a claim against the transportation company.

Parts List

Table 1. Parts list

Qty	Description
1	Control limit - 135ºF Open
1	Control limit - 240ºF Open
4	10-16 x 0.50 Screws

5

Installation

⚠ WARNING

Hazardous Voltage!

Failure to disconnect power before servicing could result in death or serious injury.
Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Verify that no power is present with a voltmeter

Sensors should be mounted where elements can respond quickly to air temperature changes in the system. In a ventilating or air conditioning installation, the safety control is normally installed upstream of the fan. Where there is no intake duct, the sensor may be mounted on a suitable bracket so air entering the fan is drawn across the element. In a downflow furnace installation, locate a sensor where the circulation of air is not restricted by baffles. Do not permit element guard to touch internal parts.

Table 2. Sensors

Sensor	Frequency Setting	
X13100040010	Open at 135ºF	Install in return duct
X13100040020	Open at 240ºF	Install in supply duct

1. At the selected location, cut a hole in the sheet metal. See Figure 1 to Figure 3 for dimensions.
2. Drill engagement holes in the sheet metal for mounting screws. See Figure 1 to Figure 3 for dimensions.

6

Wiring

Important: *All wiring must be installed in accordance with local codes and the National Electrical Code ANSI/NFPA70 latest revision.*

Using field supplied wire, route wires to Symbio™ 700 J18 input in main control box. Refer to main unit schematic, sheet 3 for connections.

Loads connected to the control terminals must not exceed the following electrical rating (in amperes).

Table 3. Electrical rating (in amperes)

	30 Vac	120 Vac	240 Vac
Full Load[(a)]	2	10	5
Locked Rotor	–	60	30

(a) 0.25 amp full load at 0.25 to 12Vdc.
1600 VA maximum connected load.

There are no field adjustments to make to this sensor.

To Reset

When the temperature has dropped approximately 25ºF below cutout point, push and release the button protruding through the cover.

1. Place a part number order to request sensor(s) replacement or service.
2. Never use a lighted match or any direct flame to heat the bimetal element for checking the operation.
3. Sensors do not require lubrication.

7

Figure 1. Mounting and case dimensions

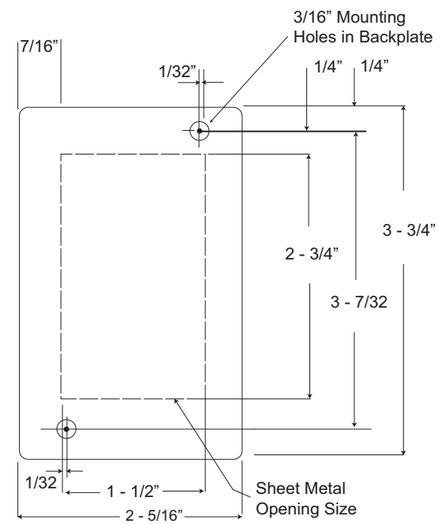


Figure 2. Mounting and backplate dimensions

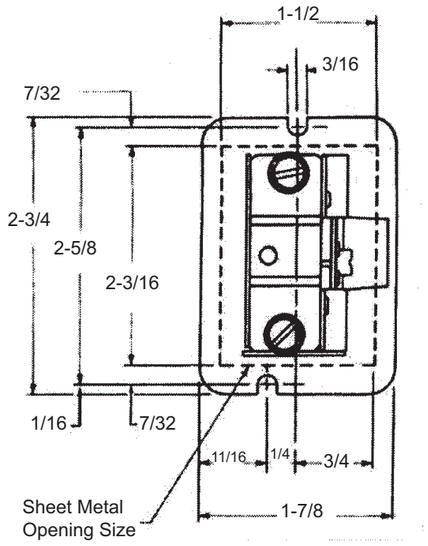
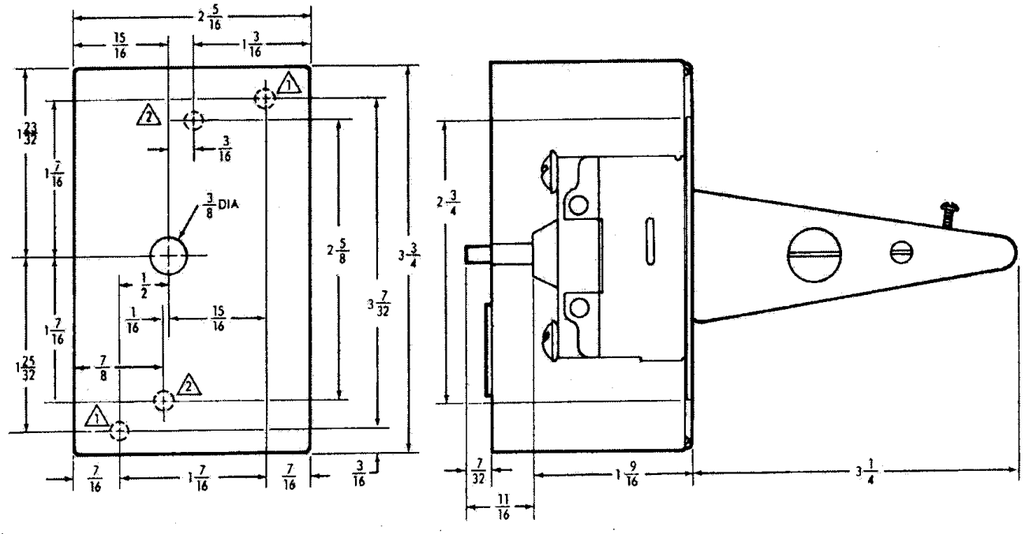


Figure 3. Control dimensions



1 3 16 DIAMETER MOUNTING HOLES L4029E WITH CASE AND COVER.
2 5 32 DIAMETER MOUNTING HOLES L4029F LESS CASE AND COVER.

Trane and American Standard create comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or americanstandardair.com.

ACC-SVN260B-EN 15 Sep 2024
Supersedes ACC-SVN260A-EN (Aug 2022)