

# Installation, Operation, & Maintenance

IOM # IOM4100

Rev. # A

## A2L Sensor and TXV Installation Ceiling Fan Coils

### ATTENTION:

Read all instructions thoroughly and retain all manuals for future reference.

## COPYRIGHT

The manufacturer works to continually improve its products and as a result, it reserves the right to change design and specifications without notice.

**\*\*\*WARNING TO INSTALLER, SERVICE PERSONNEL AND OWNER\*\*\***

Altering the product or replacing parts with non-authorized factory parts voids all warranty or implied warranty and may result in adverse operational performance and/or a possible hazardous condition to service personnel and occupants. Company employees and/or contractors are not authorized to waive this warning.

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# SAFETY CONSIDERATIONS



1. **READ THE ENTIRE MANUAL BEFORE BEGINNING INSTALLATION.**
2. Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause personal injury or damage.
3. Consult a qualified licensed installer, service agency, or your distributor for information assistance. The qualified licensed installer or service agency must use factory-authorized kits or accessories when servicing this product.
4. Refer to the individual instructions packaged with kits or accessories when installing.
5. Follow all safety codes.
6. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.

This appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.


Children should be supervised to ensure that they do not play with the appliance.


Use adequate personal protection equipment when installing and performing maintenance. After switching off and locking-out an electrical disconnect, verify a safe condition with an electrical tester. Discharge a capacitor before handling any PSC motor and wiring. Use eye protection and cut resistant gloves and sleeves to protect against metal edges and screws.

## RECOGNIZE THE FOLLOWING SAFETY NOTATIONS THROUGHOUT THIS MANUAL AND POSTED ON THE EQUIPMENT:

**WARNING**

Indicates a potentially hazardous situation or unsafe practices that could result in severe personal injury or death and/or damage to property.

**WARNING**

**ELECTRIC SHOCK HAZARD**



Signifies potential electrical shock hazards that could result in personal injury or death.

**CAUTION**

Indicates a potentially hazardous situation that may result in minor or moderate personal injury.

**IMPORTANT**

Suggests important procedure steps to insure proper installation, reliability, or operation.

**NOTE**

Used to highlight suggestions, which may result in enhanced installation, reliability or operation.

## Bill of Materials

Components in Kit
Thermal Expansion Valve (TXV)
Tailpiece/liquid line attachment
O-rings (x2)
Nut
A2L Sensor
A2L Sensor Mounting Bracket
A2L Wire Kit
Self-Tapping Screws (4)
A2L Label - Flammable
A2L Label - Warning
A2L Label - TXV
A2L Label - Height Requirements
Strain Relief Bushing
Installation Instructions
Zip Ties

## A2L Sensor Mounting

- 1) Remove control box cover.
- 2) Attach A2L sensor to bracket with provided screws. Figure 1.1
- 3) Attach bracket to unit as shown in Figure 1.2. Use provided screws. Bracket is installed on the header side.
- 4) Remove knockout, and attach bushing in Figure 1.4 to protect sensor wire kit.
- 5) Connect the A2L harness (Figure 1.5) from the sensor (Figure 1.3]) to the unit wiring kit Molex. Refer to the **unit wiring diagram** for sensor wiring. Figure 2 shows an example wiring diagram excerpt.
- 6) Use zip-ties (provided in kit) to tidy any long wires. Keep loose wires away from fan.

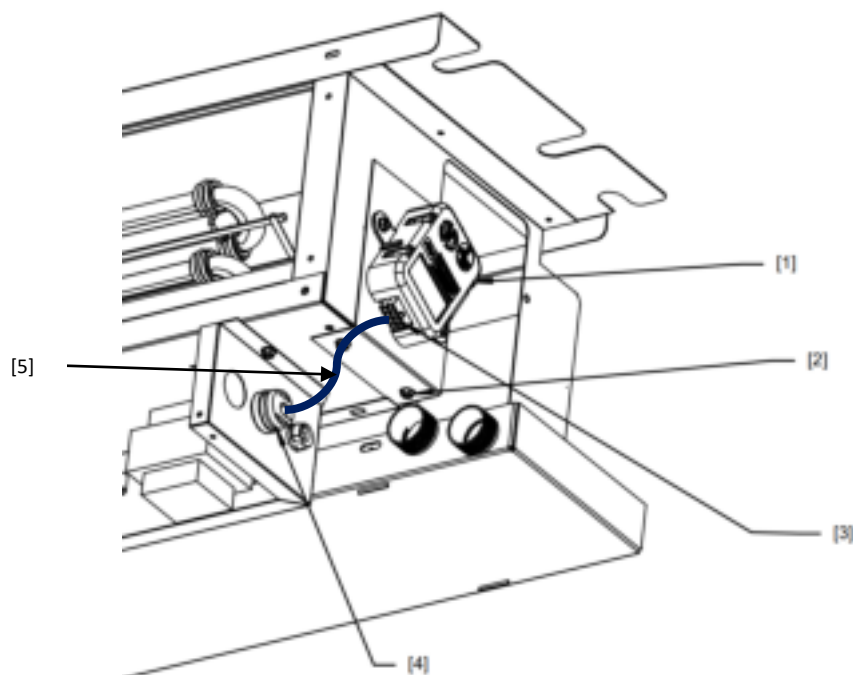


Figure 1: A2L Sensor Placement

## A2L Sensor Wiring

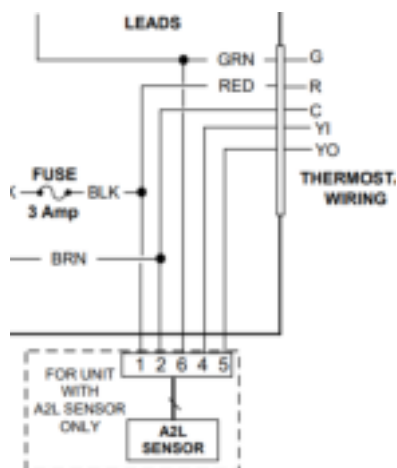


Figure 2: A2L Sensor example wiring

## Label Placement

1. Attach the 4 labels provided in kit as shown in Figure 3.

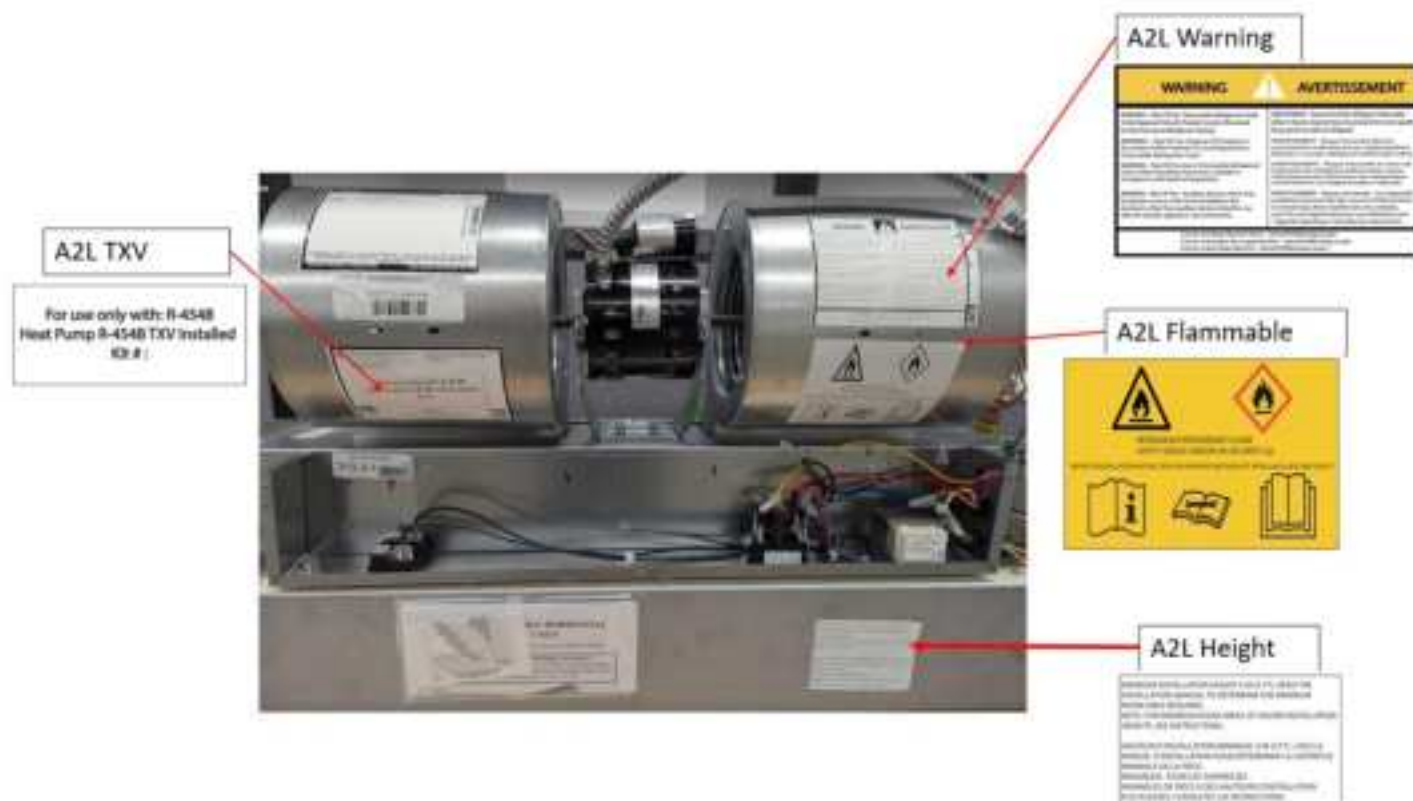


Figure 3: Additional Label Placements

## TXV Installation

- 1) Depressurize Schrader valve, remove liquid line tube from piston distributor body and discard.
- 2) Remove piston/orifice from inside of distributor body and discard. See figure 4.
- 3) Remove 1/4" cap from suction line equalizer fitting.
- 4) Check to make sure expansion valve has the correct refrigerant rating (R410A, R454B or R32).
- 5) Braze on liquid line to TXV attachment. Figure 5.1
- 6) Attach liquid line and nut to expansion valve male thread. Use provided O-rings. See figure 5.2.
  - a. **Torque to 260 in-lbs.**
- 7) Attach expansion valve nut to distributor male thread. Use provided O-rings. See figure 5.3
  - a. **Torque to 260 in-lbs.**
- 8) Carefully bend and secure 1/4" equalizer tube to suction line equalizer fitting with a wrench. Figure 5.4. No valve core is required.
  - a. **Torque to 125 in-lbs.**
- 9) Locate and mount expansion valve sensing bulb on suction line above the centerline of the tube. Figure 5.5  
Position should be between 9 and 3 o'clock.

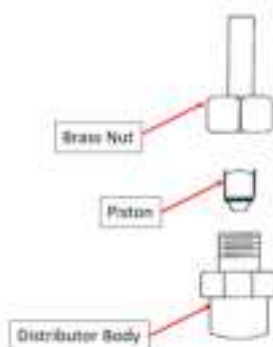


Figure 4: Piston (to be removed)

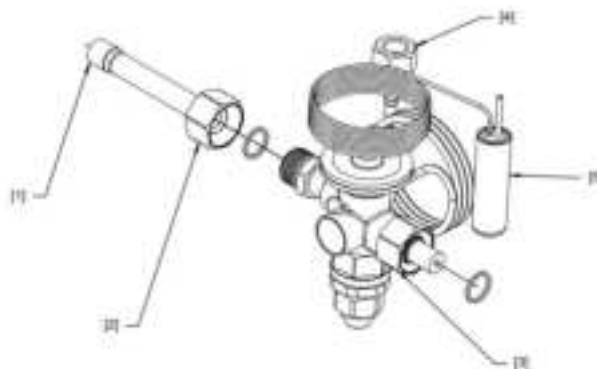


Figure 5: TXV attachment



## Final Check

- Leak check all connections after unit has been pressurized.
- Follow manufacturer system guidelines for charging.
- Follow best HVAC installation practices for installing fittings.



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The manufacturer works to continually improve its products, reserving the right to change design and specifications without notice.

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