

Air Conditioner and Heat Pump

Installation Instructions

Low Ambient Control Kit

R22: 913549A 10 SEER Models
918359 12 and 13 SEER Models

R-410: 918837 12 through 15 SEER Models

INTRODUCTION

These instructions are primarily intended to assist qualified individuals experienced in the proper installation of heating and/or air conditioning appliances. Before beginning the installation, read these instructions thoroughly and follow all warnings and cautions in the instructions and on the unit. Improper installation, service, adjustment, or maintenance can cause explosion, fire, electrical shock, or other conditions which may result in personal injury or property damage.

The Low Ambient Control Kit is designed for use in air-conditioner and heat pump products. The kit consists of a pressure switch, a service adapter tee, a 24V relay for heat pump applications, and miscellaneous parts for mounting. The kit is intended to maintain system pressures at normal levels should cooling be required at low outdoor temperatures. The pressures are controlled by a pressure switch that cycles the outdoor fan motor. When the liquid pressure drops below the designated pressure setting, the fan motor is switched off. If the liquid pressure then rises above the recommended pressure setting, the fan motor is switched on again.

INSTALLATION SEQUENCE

WARNING:

To avoid risk of electric shock, personal injury, or death, disconnect electrical power to the unit before performing any maintenance or service. The unit may have more than one electric power supply.

The installation sequence is as follows:

1. Read these installation instructions completely before proceeding.
2. Disconnect all power to the unit.
3. At the front of the unit remove the service panel to the control box. This will have all of the electrical control components within and in the case of the R4 units the gas control components as well.
4. Remove the front panel with the service ports and drain tube opening from the unit.
5. There are two service valves in the interior of the unit. Locate the one in the 1/2" diameter compressor discharge line. In the case of a split system, locate the 3/8" service valve (high side).

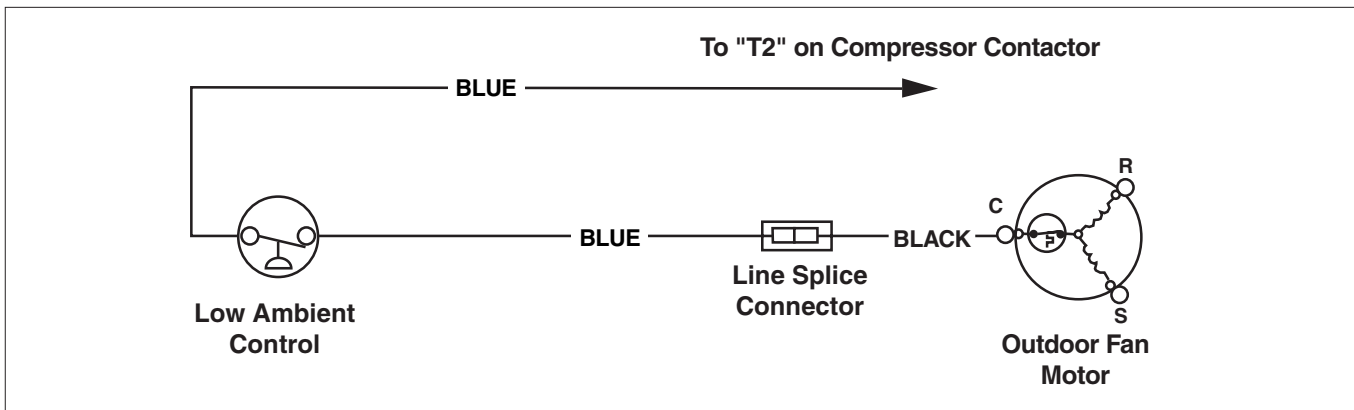


Figure 1. Air Conditioner Low Ambient Control Kit Wiring Diagram

6. Remove the cap from the service valve. Mount the service adapter tee, provided with kit, onto the service valve and tighten. Mount the pressure switch onto the port of service adapter that does not have valve core and tighten. Replace the cap, removed from the service valve, onto service port of adapter tee that includes a valve core.
7. Route the two wire leads from the switch through the wire grommet at the top of the panel separating the compressor from the control box.
 - A. For Air Conditioners**
 - a) Remove the fan motor common lead from "T2" on the contactor (black wire).
 - b) Using wire splice provided connect one lead from the pressure switch to the fan motor lead.
 - c) Connect the other pressure switch lead to "T2" on the contactor. (See Figure 1)
 - B. For Heat Pumps**
 - a) Mount the relay provided in the control box, near the low voltage compartment.
 - b) Connect the two black wires to terminals #1 and #3 on the relay and route the wires through the low voltage divider. Connect one black wire to "O" on the defrost board. Connect the other black wire to 24V common ("C" on the defrost board).
 - c) Connect the "Y" adapter terminal, provided with the kit, to terminal #4 of relay.
 - d) Remove the black outdoor fan motor wire from "DF2" on the defrost board and connect it to the adapter on terminal #4 of relay.
 - e) Connect the piggyback end of the white wire to terminal #5 of relay and connect the other end to "DF2" on the defrost board.
 - f) Connect one wire lead from the pressure switch to terminal #5 of relay and the other to terminal #4 of relay.
 8. Tie all wires back as needed.
 9. Replace the service panels removed in Steps #2 through #5.
 10. Restore power to the unit.

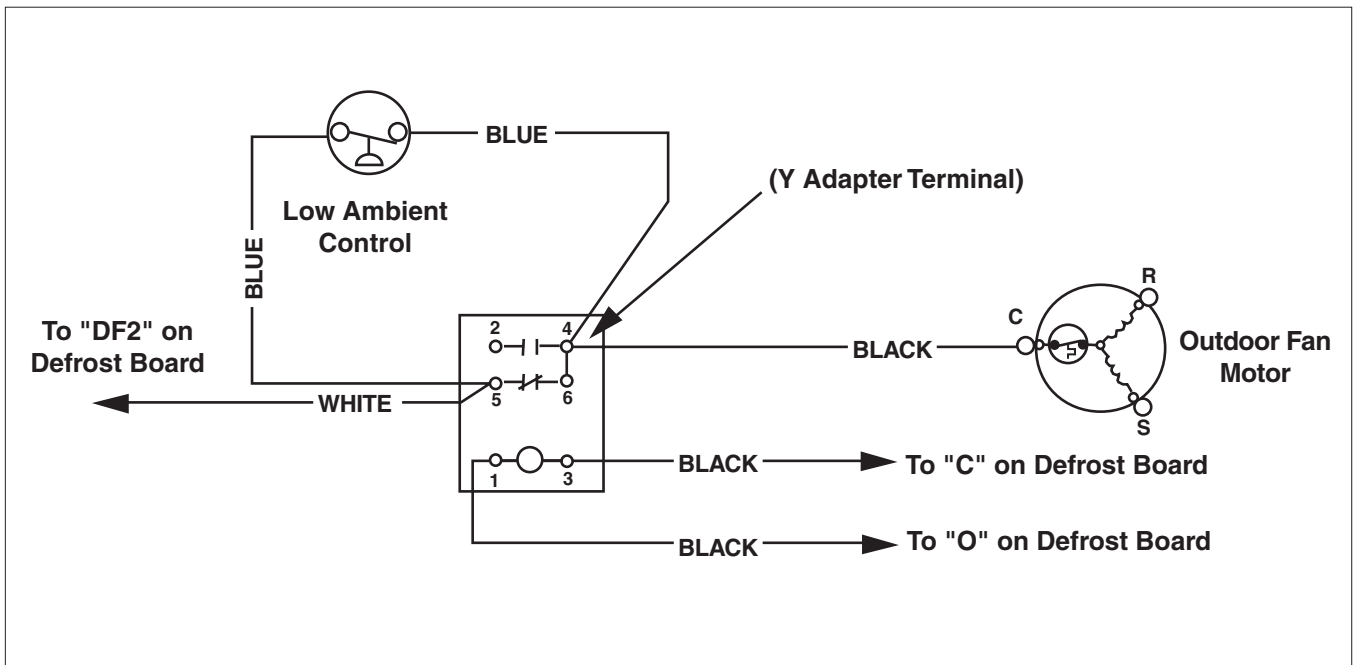


Figure 2. Heat Pump Low Ambient Control Kit Wiring Diagram

