KAALP0301R22
KAALP0401PUR
KAALP0501PUR

LOW PRESSURE SWITCH KIT

Installation Instructions

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

SAFETY CONSIDERATIONS

Installing and servicing air conditioning equipment can be hazardous due to system pressure and electrical components. Only trained personnel should install or service air conditioning equipment.

Untrained personnel can perform basic maintenance functions, such as cleaning coils and cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on air conditioning equipment, observe precautions in the literature, and on tags and labels attached to the unit.

Recognize safety information. This is the safety-alert symbol ⚠ When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.
Understand these signal words; DANGER, WARNING, and CAUTION. These words 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 would 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.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

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

Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.

⚠ CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.

Use only the kit components described in this installation procedure.

INTRODUCTION

These instructions cover installation of Low Pressure Switch Kit KAALP0301R22 on split system air conditioners containing R-22 refrigerant, KAALP0401PUR on air conditioners containing R -410A refrigerant or KAALP0501PUR on air conditioners containing R-454B refrigerant.

The device is designed to shut down the outdoor section in the event of unusually low vapor (suction) pressure, preventing damage to the compressor.

Kit Contents

Kit Contents	Qty
Low Pressure Switch	1
Adapter Tee	1
Flare Gasket	2
Pressure Switch Adapter Tube	1
Wire Adapter Kit	1
Installation Instructions	1

INSTALLATION

⚠ CAUTION

EQUIPMENT DAMAGE AND/OR OPERATION HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

When making flare connections, use one of the flare gaskets provided in the kit to ensure a leak-tight refrigerant connection. Use a backup wrench to avoid breaking connection or splitting flare.

NOTE: The liquid and vapor service valves are located outside of the unit at the rear. The smaller valve is the liquid service valve; the larger valve is the vapor service valve.

Switch Refrigerant Connections:

NOTE: The liquid- and vapor-service valves are located outside of the unit at the rear. The smaller valve is the liquid-service valve; the larger valve is the vapor-service valve.

1. For vertical discharge units, remove knockout in service panel next to service valves. For horizontal discharge units, either drill a hole in the service valve plate or route switch through existing service valve holes.
2. Remove valve core from one end of adapter tee provided in kit.
3. Securely connect pressure switch adapter tube flare nut to side of adapter tee without valve core.
4. Route the adapter tube completely through the knockout (vertical discharge units) or service valve hole (horizontal discharge units) so that tee can be attached to vapor service valve later.
5. Securely connect pressure switch flare nut, using flare gasket, to male flare fitting on the pressure switch adapter tube inside the unit.
6. Remove seal cap from service fitting on vapor-service valve on unit and securely connect to remaining male flare fitting on adapter tee.
7. Securely connect flare nut on adapter tee, using flare gasket to service fitting on service valve.
8. On back seating valves, remove service valve stem cap and open valve 3/4 turn.
9. Replace service valve stem cap finger-tight and further tighten cap 1/6 turn, or 1/12 turn on back seating valves.
10. Check all refrigerant connections for leaks and repair if necessary.

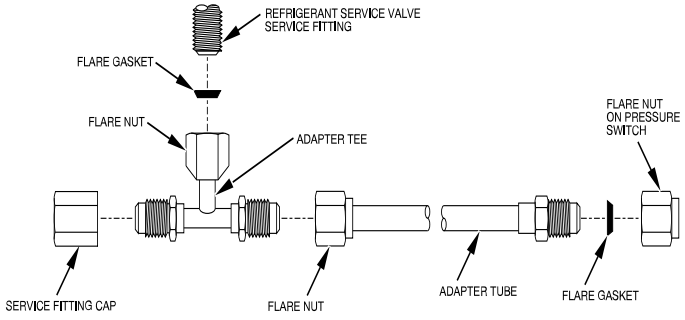


Fig. 1 – Low Pressure Switch Refrigerant Connections

ELECTRICAL CONNECTIONS

Refer to Fig. 2 and proceed as follows:

1. Locate unit contactor coil terminals or, if equipped, compressor time delay terminal T1. Use Wire Adapter Kit to connect 1/4 in. connections to the 1/8 in. terminals on R-454B contactors
2. On units without compressor time delay, make electrical connections as follows:
   a. One pressure switch in unit:
   - Disconnect Y lead from contactor coil terminal.
   - Connect 1 pressure switch lead to Y lead.
   - Connect other pressure switch lead to contactor coil terminal.
   - Use wire adapter kit to connect 1/4 in. connections to the 1/8 in. terminals on R-454B contactors.

   b. Both high and low pressure switches in unit:
   - Disconnect Y lead from contactor coil terminal.
   - Connect 1 high pressure switch lead to Y lead, then connect other high pressure lead to 1 low pressure lead.
   - Connect remaining low pressure lead to contactor coil terminal.
   - Use wire adapter kit to connect 1/4 in. connections to the 1/8 in. terminals on R-454B contactors.
3. On units with compressor time delay, make electrical connections as follows:
   a. One pressure switch in unit:
   - Disconnect wire leading to T1 on time delay board.
   - Connect 1 pressure switch lead to disconnected lead. Connect other pressure switch lead to T1 on time delay board.

   b. Both high and low pressure switches in unit:
   - Disconnect wire leading to T1 on time delay board.
   - Connect 1 high pressure lead to disconnected lead, then connect other high pressure lead to 1 low pressure lead.
   - Connect remaining low pressure lead to T1 on time delay board.
4. Restore power and check unit operation.

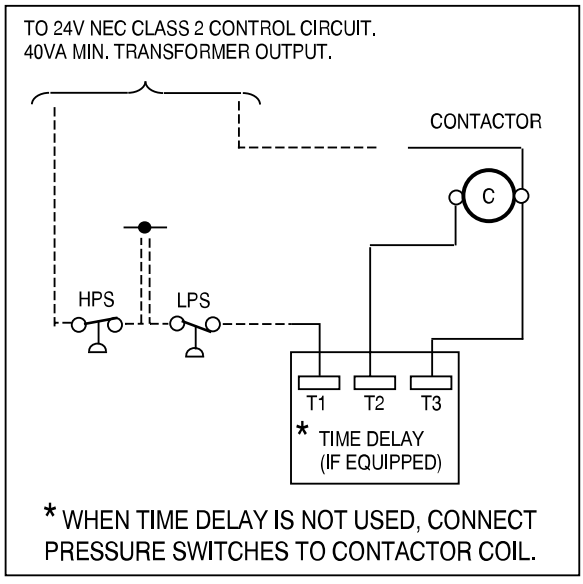


Fig. 2 – Air Conditioner Electrical Connections

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