ACCESSORY KIT INSTALLATION MANUAL

LOW AMBIENT PRESSURE SWITCH KIT MODEL (S1-2LA06700224 & S1-2LA06700424)

FOR MODELS: SINGLE STAGE SPLIT SYSTEM AIR CONDITIONERS AND HEAT PUMPS

GENERAL INFORMATION

The low ambient pressure switch kit S1-2LA06700224 for R-22 models and S1-2LA06700424 for R-410A models) are designed to regulate condenser liquid pressure at low outdoor ambient temperatures by controlling the airflow over the condenser. The low ambient pressure kit will energize the outdoor motor when the liquid line pressure reaches 300 +/-10 PSIG for R-22 models and 360 +/-10 PSIG for R-410A models, it will stop the motor when the pressure falls below 150 +/- PSIG for R-22 models and 240 +/- PSIGfor R-410A models.

The supplied relay has a normally-closed contact. As the liquid pressure falls below the low setting of the pressure switch, the relay will energize and open the normally-closed contact, thus breaking the circuit of the fan motor, causing it to stop. As the liquid pressure increases above the high pressure setting of the pressure switch, the relay will de-energize and close the normally-closed contact, re-energizing the fan. Heat pumps use the 4-way reversing valve power for the control circuit of the low ambient kit in the order to disable low ambient fan cycling in the heat mode.

When applying this kit, a TXV must be used on the indoor coil- and a crankcase heater should be added. This will guard against liquid migration and hard starts which could lead to premature failure of the compressor.

When properly applied, this kit permits operation in cooling mode in low ambient conditions down to +20°F (-7°C).

PRE-INSTALLATION INFORMATION AND INSTRUCTIONS

⚠WARNING

Improper installation, adjustment service, or maintenance can cause injury or property damage; therefore, only a qualified installer or qualified service personnel should perform the conversion.

1. With this kit, only use motors that are single phase, permanent split, capacitor type or shaded pole motors.
2. Line Voltage Range: 120 to 600 Volts AC.
3. Wiring must comply with all local and national electric codes.
4. Crankcase heater should be applied in conjunction with this kit.

INSPECTION

The following list details the parts included in this kit. Inspect the kit to ensure that all the parts are included.

TABLE 1: Source 1

ITEM	QTY.	DESCRIPTION
1	1	Pressure Switch
2	1	Relay
3	2	Black Wire
4	1	Black Wire
5	2	Screw #10-16x3/8
6	2	Wire Tie
7	1	Tee Fitting
8	1	Line Splice Connection

INSTALLATION

⚠WARNING

Make sure the electric power is shut-off. Failure to disconnect the electric power could result in electric shock and severe injury from the outdoor fan.

1. Disconnect power to the unit.
2. Remove the control access panel.
3. Locate the liquid line base valve and remove the cap off the schrader valve.
4. Attach the tee fitting and pressure switch to the liquid line base valve , as shown in Figure 1.

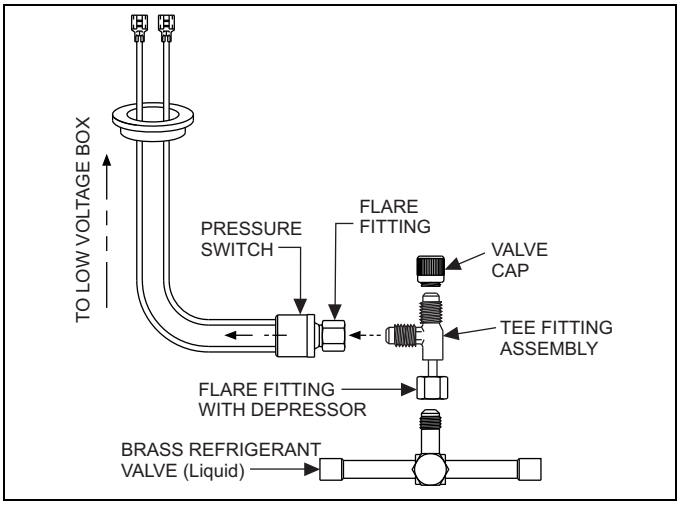

FIGURE 1: Pressure Switch Assembly

5. Tighten all connections using a 9/16” wrench. Check the connections between the switch and schrader valve for leaks.
6. Route the pressure switch wires through the grommet located on the bottom of the control box. Secure the wires away from hot refrigerant lines with a wire tie.
7. Secure the relay with #10 screws included in the kit. Use the relay to mark and drill two (9/64 inch) holes so that the relay is 1/2 inch away from high voltage wiring and components.
8. To wire the low ambient pressure kit:
   a. For 1 and 3 phase AC, use Figure 2.
   b. For 1 and 3 phase HP, use Figure 3*.

*To connect wires to “O” and “C” in the low voltage box, cut off wire connections from the additional black wires provided in kit and strip insulation from wire. Use existing wire nuts to connect into “O” and “C” junction.

9. Replace the control access panel and restore power to the unit.
10. With the unit running in the cooling mode, make sure the outdoor fan operates properly and replace all schrader valve caps.

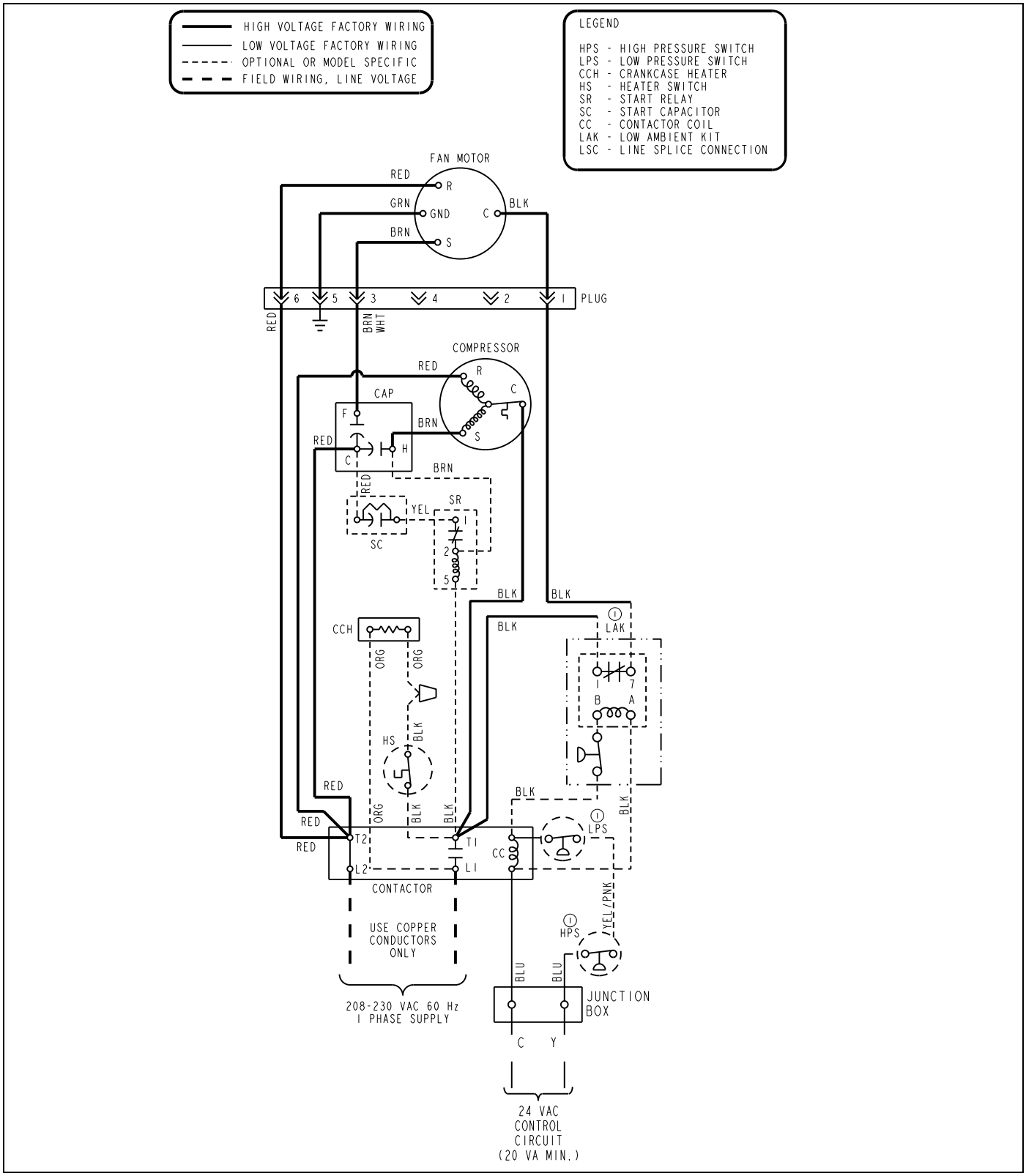

FIGURE 2: Wiring Connections for Single Stage Air Conditioning Units

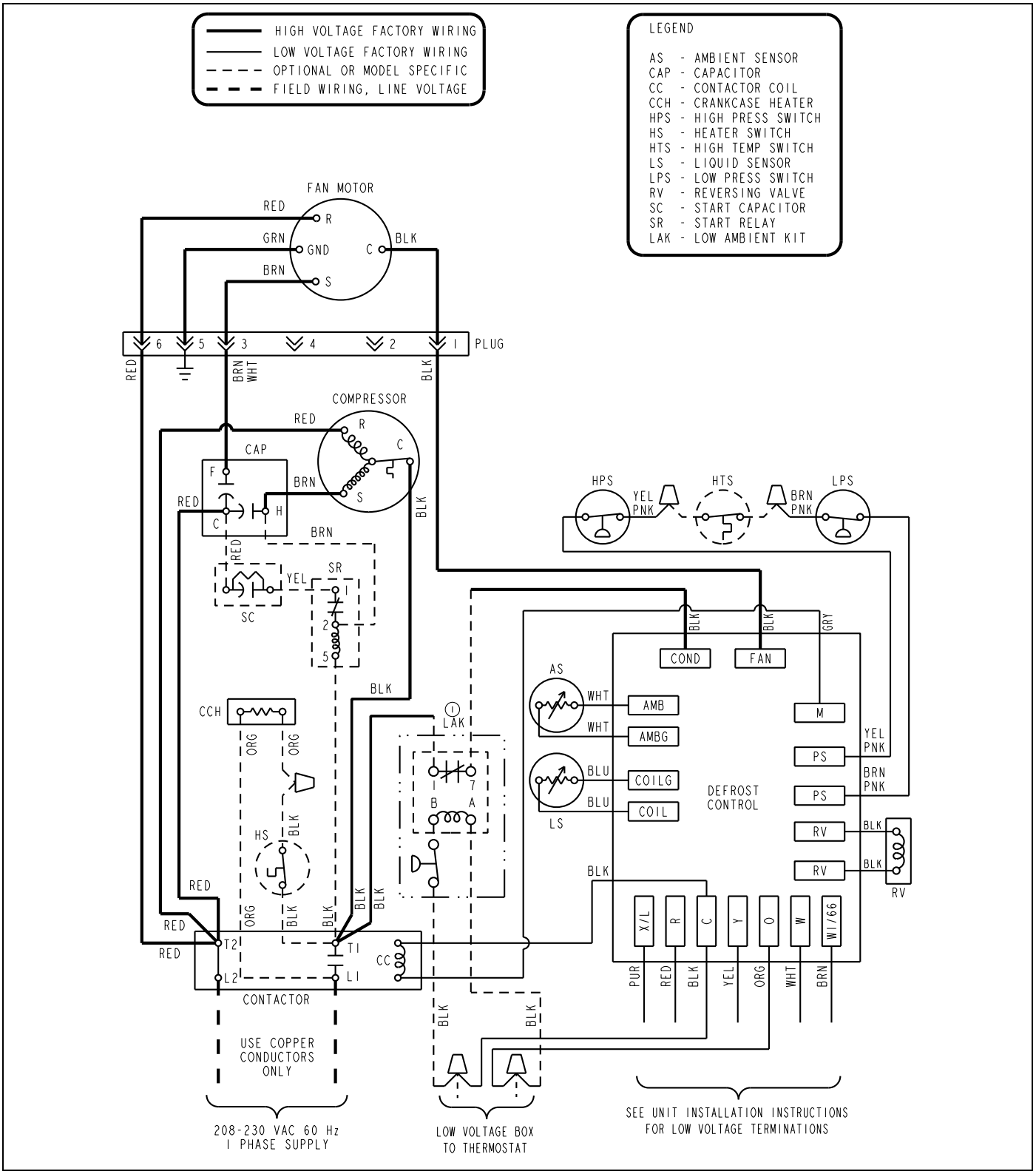

FIGURE 3: Wiring Connections for Single Stage Heat Pump Units

513433-UAI-B-0214
Supersedes: 513433-UAI-A-0509

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