

**INSTALLATION INSTRUCTIONS FOR SMOKE DETECTOR KITS
USED WITH KC/KG/KH/LC/LG092 - 150 UNITS**

Shipping and Packing List

53W80 single-sensor kit contains the following:

- 1 - Smoke detector sensor
- 1 - Smoke detector power board
- 1 - Supply bracket
- 1 - Hinged panel
- 1 - Hinged panel mounting bracket
- 1 - Panel holder
- 1 - Power harness (J255/1,4 -- used on KC, KG & KH units only)
- 1 - Power harness (J255/J262 -- used on LG & LC units only)
- 1 - Supply harness (P253/P252 -- used on KC, KG & KH units only)
- 1 - Return harness (P250/P251)
- 1 - Jumper harness (used on supply air SD units only)
- 1 - 36" metal sampling tube (used on supply air SD units only)
- 1 - 18" metal sampling tube (used on return air SD units only)
- 1 - Plastic exhaust tube
- 1 - Magnet
- 1 - Sensor manufacturer's instructions
 - #10 - 16 X 3/4" sheet metal screws
 - #8 - 32 X 1" thread-forming screws
 - #8 - 32 X 1/2" thread-forming screws
 - Insertion-type wire ties

53W81 dual-sensor kit contains the following:

- 2 - Smoke detector sensors
- 1 - Smoke detector power board
- 1 - Supply bracket
- 1 - Hinged panel
- 1 - Hinged panel mounting bracket
- 1 - Panel holder
- 1 - Power harness (J255/1,4 -- used on KC, KG & KH units only)
- 1 - Power harness (J255/J262 -- used on LG & LC units only)
- 1 - Supply harness (P253/P252 -- used on KC, KG & KH units only)
- 1 - Return harness (P250/P251)
- 1 - 36" metal sampling tube (used on supply air SD units only)
- 1 - 18" metal sampling tube (used on return air SD units only)
- 2 - Plastic exhaust tubes
- 2 - Magnets
- 1 - Sensor manufacturer's instructions
 - #10 - 16 X 3/4" sheet metal screws
 - #8 - 32 X 1" thread-forming screws
 - #8 - 32 X 1/2" thread-forming screws
 - Insertion-type wire ties

Application

LC and LG Units -- Smoke detector will send a 24Vac signal to the unit controller when smoke is sensed. The unit controller default mode will de-energize unit.

KC, KG and KH Units -- Smoke detector will interrupt the 24Vac signal to the unit control circuit when smoke is sensed. Unit will be de-energized.



Installation

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional installer, service agency or the gas supplier.

⚠ CAUTION

Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch.

⚠ CAUTION

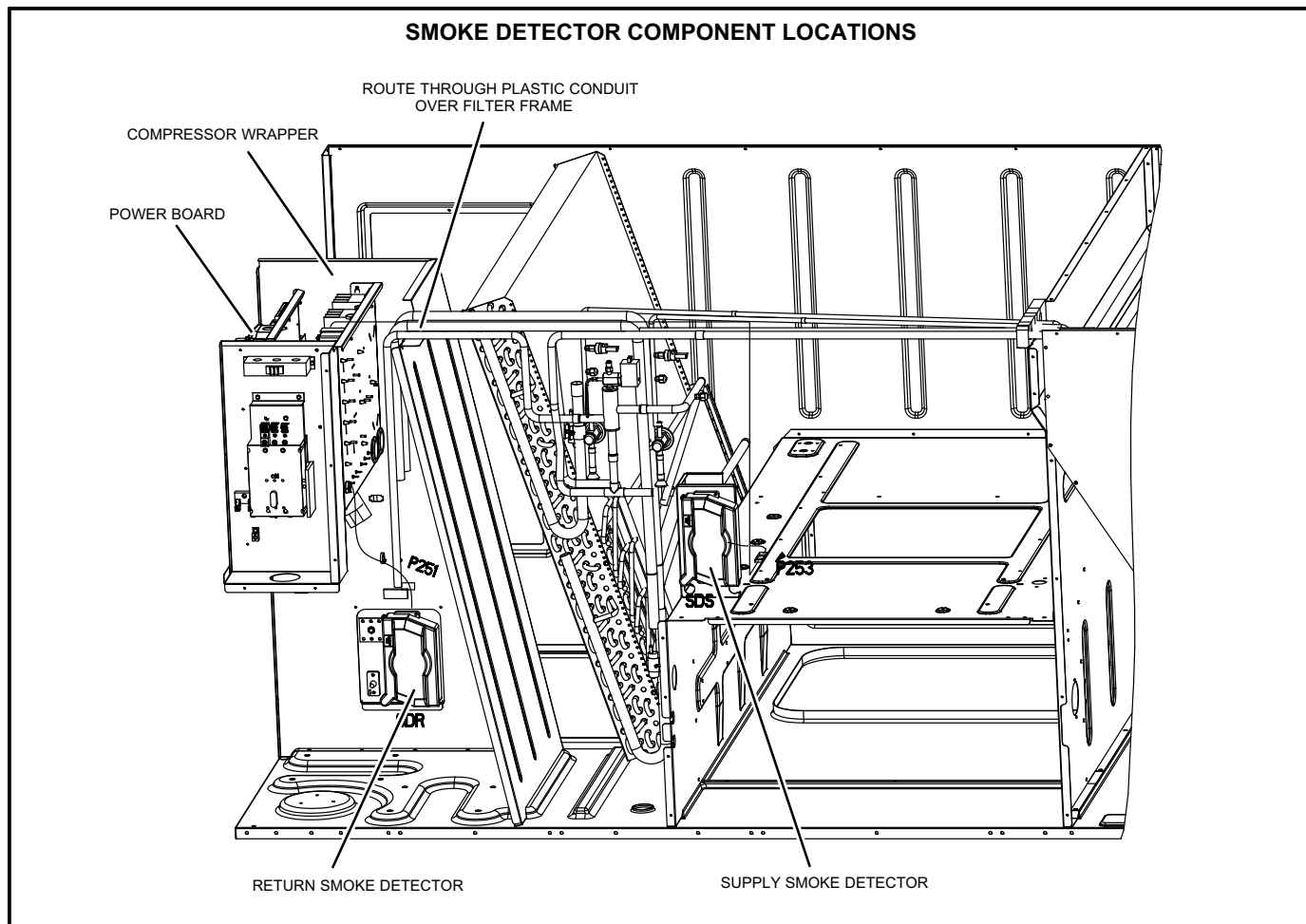
Danger of sharp metallic edges. Can cause injury. Take care when servicing unit to avoid accidental contact with sharp edges.

Smoke detector sensor and power board installation

Use manufacturer's instructions provided with smoke detector to install sensor(s) and power board. Refer to figure 1 for location of power board, supply air sensor and return air sensor.

Sampling tube installation

- 1 - Select the appropriate sampling tube.
Supply air sensor -- 36"
Return air sensor -- 18"
 - 2 - Slide metal sampling tube onto the back side of the sensor. When sensor is installed in return air applications, slide plastic exhaust tube onto back side of sensor. See figure 2.
- NOTE** - Plastic exhaust tube is NOT used in supply air applications and should be discarded.
- 3 - Orient sampling tube so that holes point toward the air stream.



SMOKE DETECTOR SENSOR WITH SAMPLING TUBE AND EXHAUST TUBE

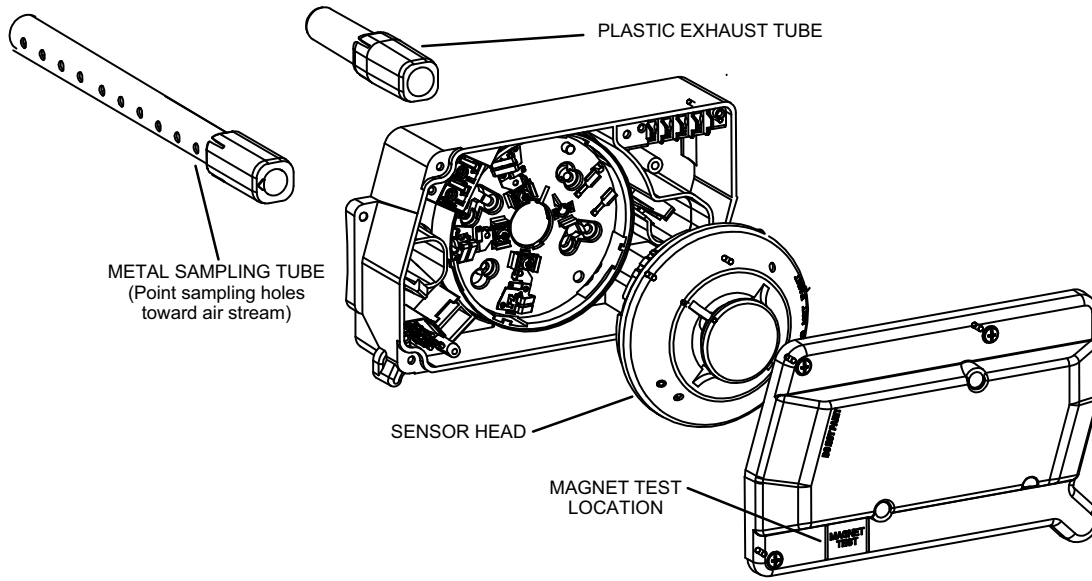


FIGURE 2

Wiring

KC, KG & KH CONTROLS AREA

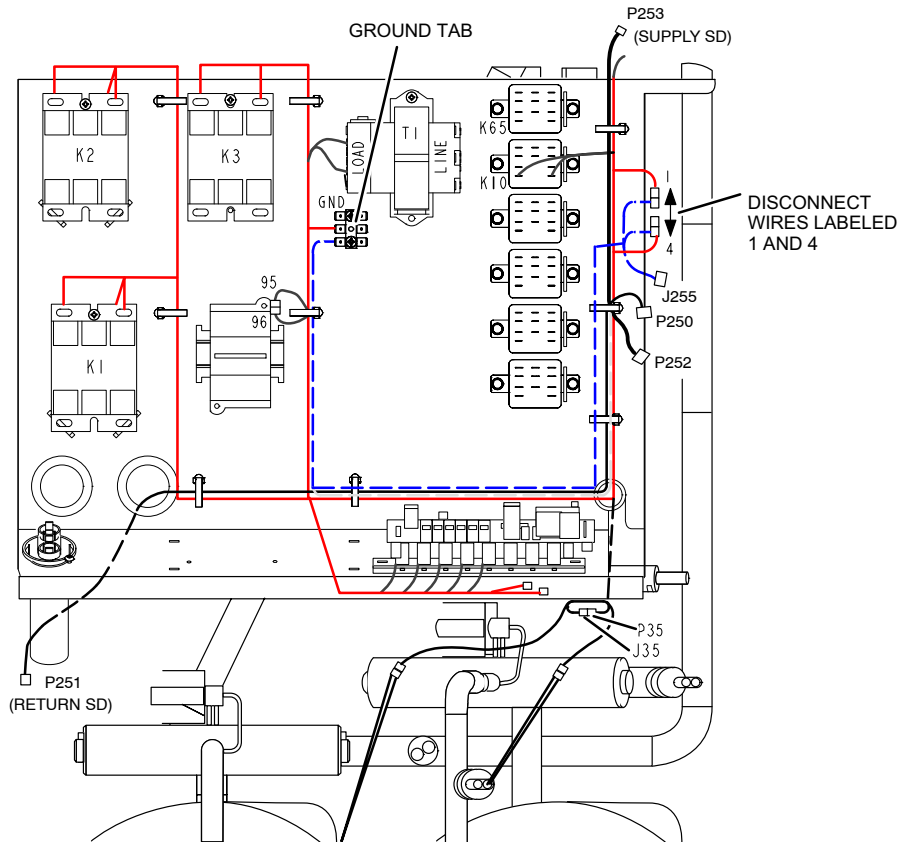


FIGURE 3

KC, KG and KH Units

- 1 - Supply air smoke detector applications -- Route harness wires across the top of the unit. Secure wires to existing bundle and route from the control area to the blower compartment as shown in figure 1. Take care to secure wires away from other components.
- 2 - Locate and disconnect wires labeled 1 and 4 in control area. See figure 3.
- 3 - Connect wires labeled 1, 4 and GND from kit harness to wires labeled 1 and 4 and ground tab in unit. Position J255 plug near P250 and P252 plugs. See Figure 3.
- 4 - Secure power board to hinged panel using two #8-32X1" screws. Route power board harness as

- 5 - Use two #8 - 32 X 1/2" screws to secure smoke detector hinged panel to hinged panel mounting bracket. See details A and B on figure 4.
- 6 - Use two #8 - 32 X 1/2" screws to secure panel holder to left side of compressor wrapper.
- 7 - Use two #8 - 32 X 1/2" screws to secure hinged panel assembly to control box.
- 8 - Secure P255, J250 and J252 harness ends to the insertion-type wire tie located in the control box.
- 9 - Make jack/plug connections as shown in figure 5 when installing return air smoke detector only, figure 6 when installing supply air smoke detector only, and figure 7 when installing both supply and return air smoke detectors.

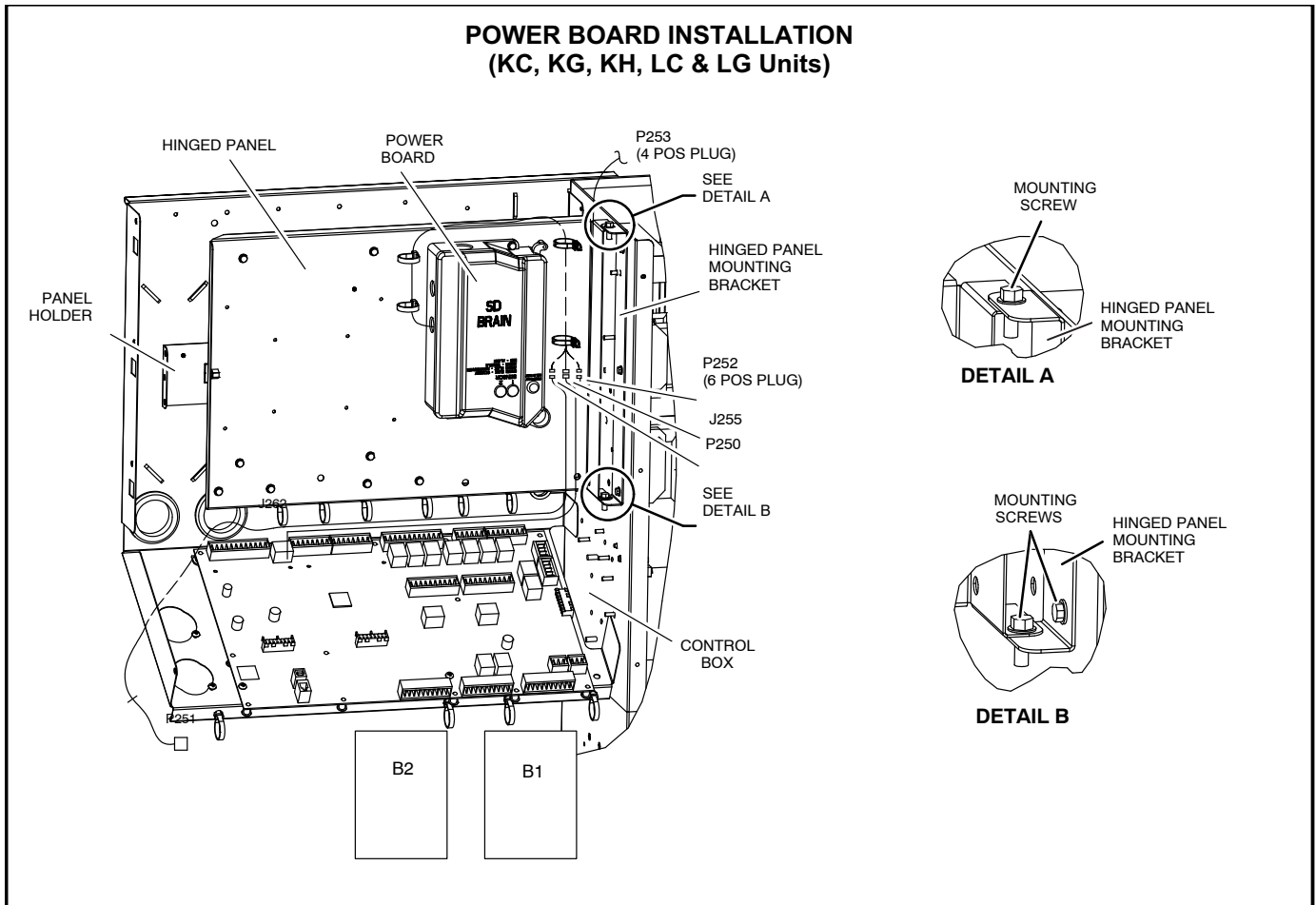


FIGURE 4

KC, KG or KH Unit Application with Single Return Air Smoke Detector
 (Note: Verify that power board DIP switch is set to 1)

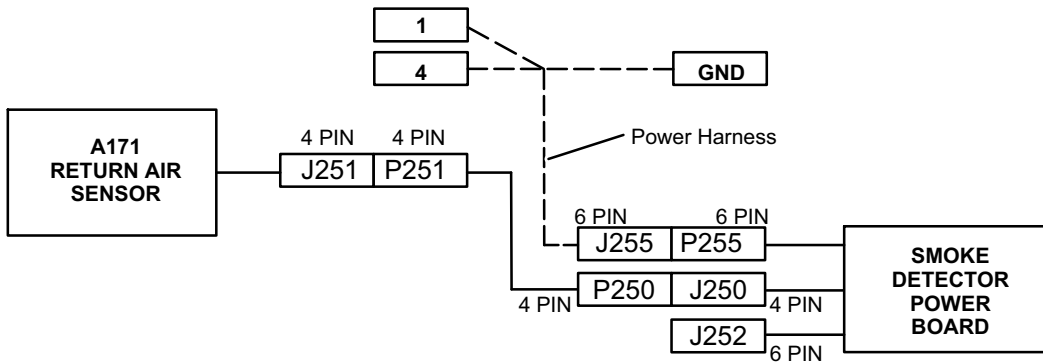


FIGURE 5

KC, KG or KH Unit Application with Single Supply Air Smoke Detector
 (Note: Verify that power board DIP switch is set to 1)

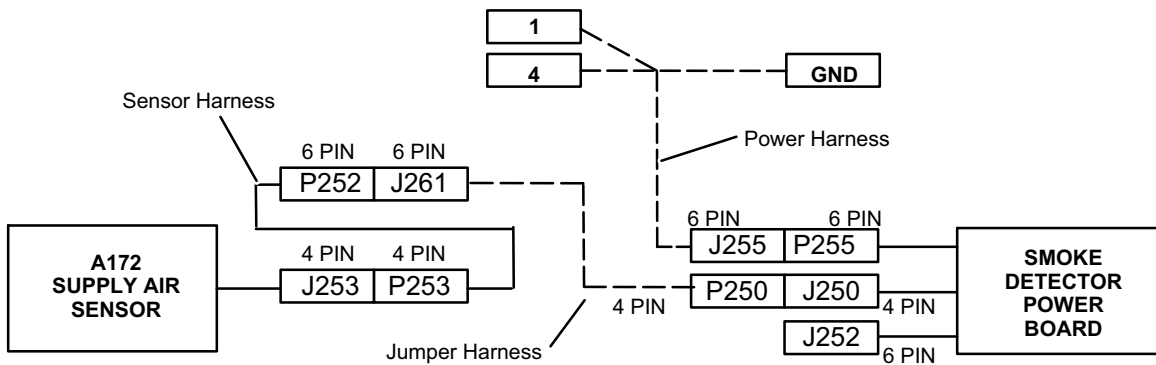


FIGURE 6

KC, KG or KH Unit Application with Return Air and Supply Air Smoke Detectors
 (Note: Change power board DIP switch setting to 2)

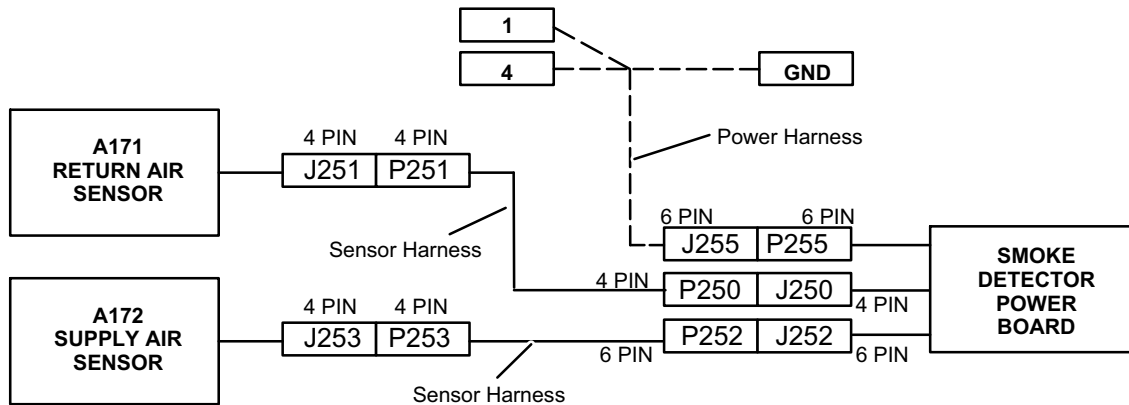


FIGURE 7

LC and LG Units

- 1 - Install power board and hinged panel in control box as outlined in steps 4 through 7 in KC, KG and KH wiring section. See figure 4.
- 2 - Secure P255, J250 and J252 harness ends to the insertion-type wire tie located in the control box. See figure 8.
- 3 - Make jack/plug connections as shown in figure 9

when installing return air smoke detector only, figure 10 when installing supply air smoke detector only, and figure 11 when installing both supply and return air smoke detectors.

NOTE - Harness P252/P253 is factory-installed and is located near the supply sensor and power board hinged panel. Plugs are located in the unit near the the sensor(s) and power board.

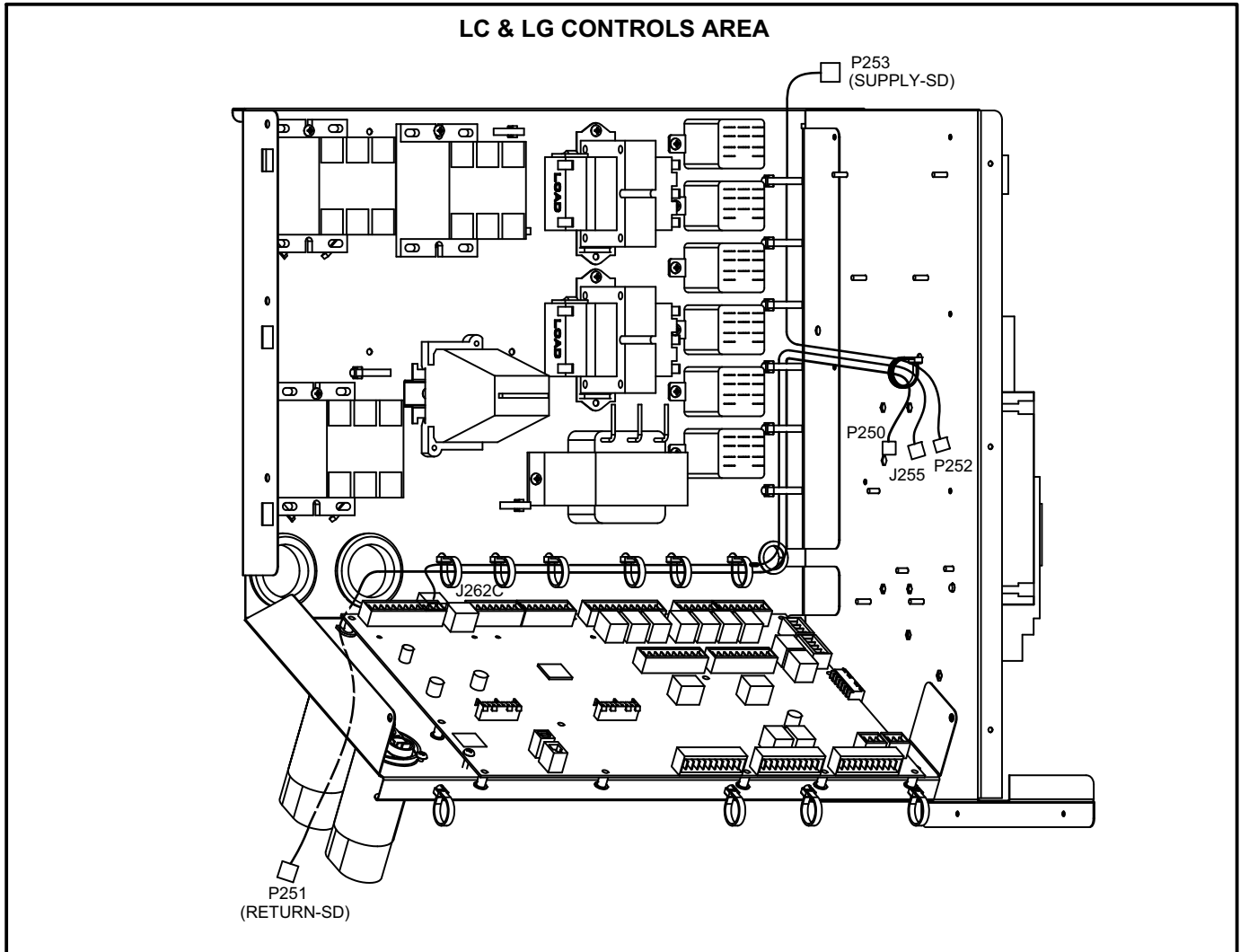


FIGURE 8

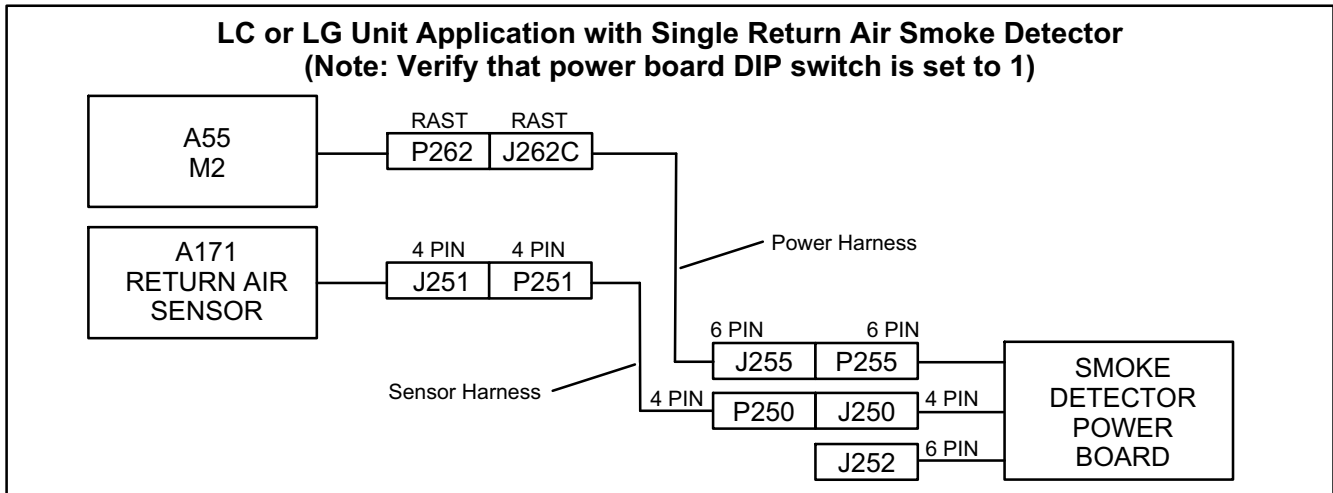


FIGURE 9

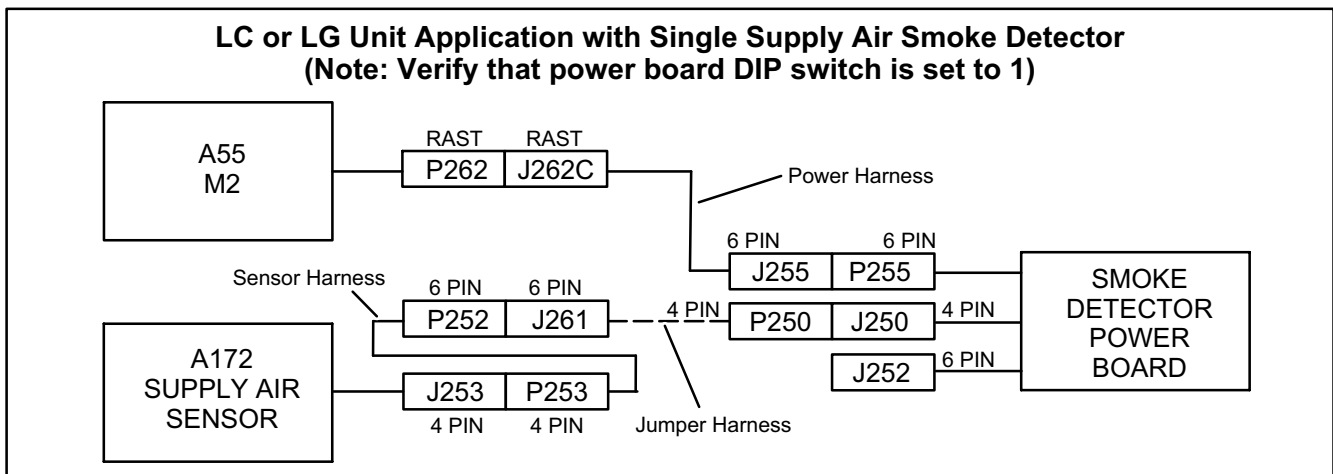


FIGURE 10

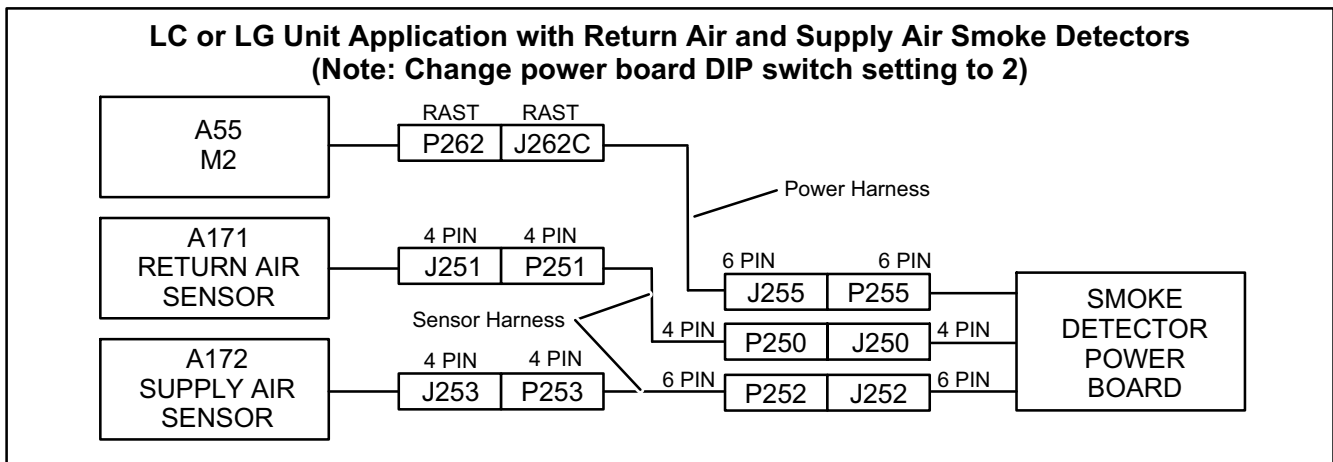


FIGURE 11

Test Magnet(s)

A test magnet is provided in a bag assembly with each sensor. Remove the magnet from the bag assembly and place it on a metal surface near the sensor. The magnet is used during test procedures.

Maintenance and Test Procedure Instructions

The sensor manufacturer's instructions, which are provided with each sensor, outline information on maintenance and test procedures. Place these instructions in the literature pouch for future reference.