

INSTALLATION INSTRUCTIONS LD4120 SMOKE DETECTOR REPLACEMENT KIT (73W51 & 73W52; LB-90945R & S) USED WITH SGA/SCA/LGB/LCB/LGE/LCE036-240 UNITS

Shipping and Packing List

Package 1 of 1 contains:

- 1- Smoke detector
- 3- Sampling tubes (two tubes on 73W52)
- 1- Smoke detector bracket
- 1- Sampling tube bracket (73W52 only)
- 1- Bag assembly containing:
 - 1-Magnet
 - 6-#10-16 X 5/8" screws
 - 2-#8-32 X 1" screws

Application

The smoke detector replacement kit is used on SGA/SCA/LGB/LCB/LGE/LCE036, 060, 120, 240, & 288 units. LD4120 replaces DH400 and DH100 smoke detectors. 73W51 is used in return air installations and 73W52 is used in supply air installations.

Smoke detector will send a 24vac signal to the unit A55 IMC when smoke is sensed. IMC default mode will de-energize unit. Some units will interrupt the main power signal to the unit to de-energize the unit when smoke is detected.

Installation

Refer to manufacturer's instructions provided with smoke detector.

Install Sampling Tubes

- 1- Install sampling and exhaust tubes in smoke detector before installing smoke detector or bracket in unit. The exhaust tube is packaged with the smoke detector. See figure 1. Also refer to figure 2 and 3 for supply air installations and figure 5 for return air installations. Discard unused tubes.

Unit	Tube Length (in.)	
	Supply Air	Return Air
036/060	18	18
120	30	30
240	30	36

⚠ 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 qualified installer, service agency or the gas supplier

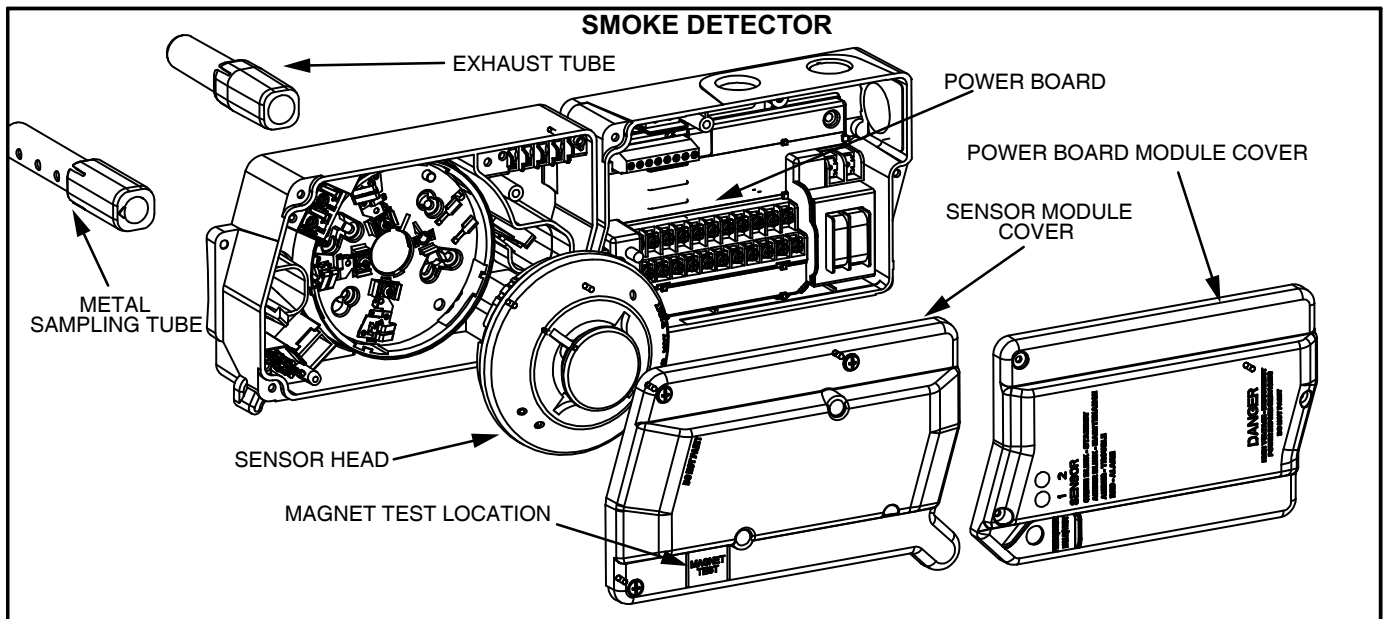


FIGURE 1



⚠ CAUTION

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

Supply Air Installations - With Plug

This section is used when replacing a supply air smoke detector which is equipped with a 15-pin plug.

- 1- Install the sampling tube bracket in the smoke detector bracket. See figure 2.
- 2- Install smoke detector and bracket in unit as shown in figure 3. Secure both in place using four 5/8" screws.
- 3- Connect the smoke detector plug to unit J102.

Supply Air Installations - No Plug

This section is used when replacing a supply air smoke detector which is NOT equipped with a 15-pin plug.

- 1- Some units have a separate power source for the smoke detector instead of the main circuit breaker. Disconnect the 24 volt wires as shown in figure 4.

CAUTION – Transformer has 120 VAC input.

- 2- Open the cover of LD4120 smoke detector. Remove and discard the 6- and 15-pin plugs and harnesses.
- 3- Use foil tape to cover the open access hole. Knock out the optional access hole on the end of the detector. See figure 3.
- 4- Remove the cover from the old smoke detector. Mark wires with terminal number if not already marked. Disconnect wiring from old terminal strip.
- 5- Route wiring through new access hole and connect to new LD4120 smoke detector according to terminals shown in table 1. Replace cover.
- 6- Remove sampling tube brace from smoke detector bracket. Install on the opposite side of smoke detector bracket using the holes provided. See figures 2 and 3.
- 7- Install the smoke detector on the smoke detector bracket and install the bracket in the unit. Drill new mounting holes if required.
- 8- Reconnect the smoke detector wires to the transformer.

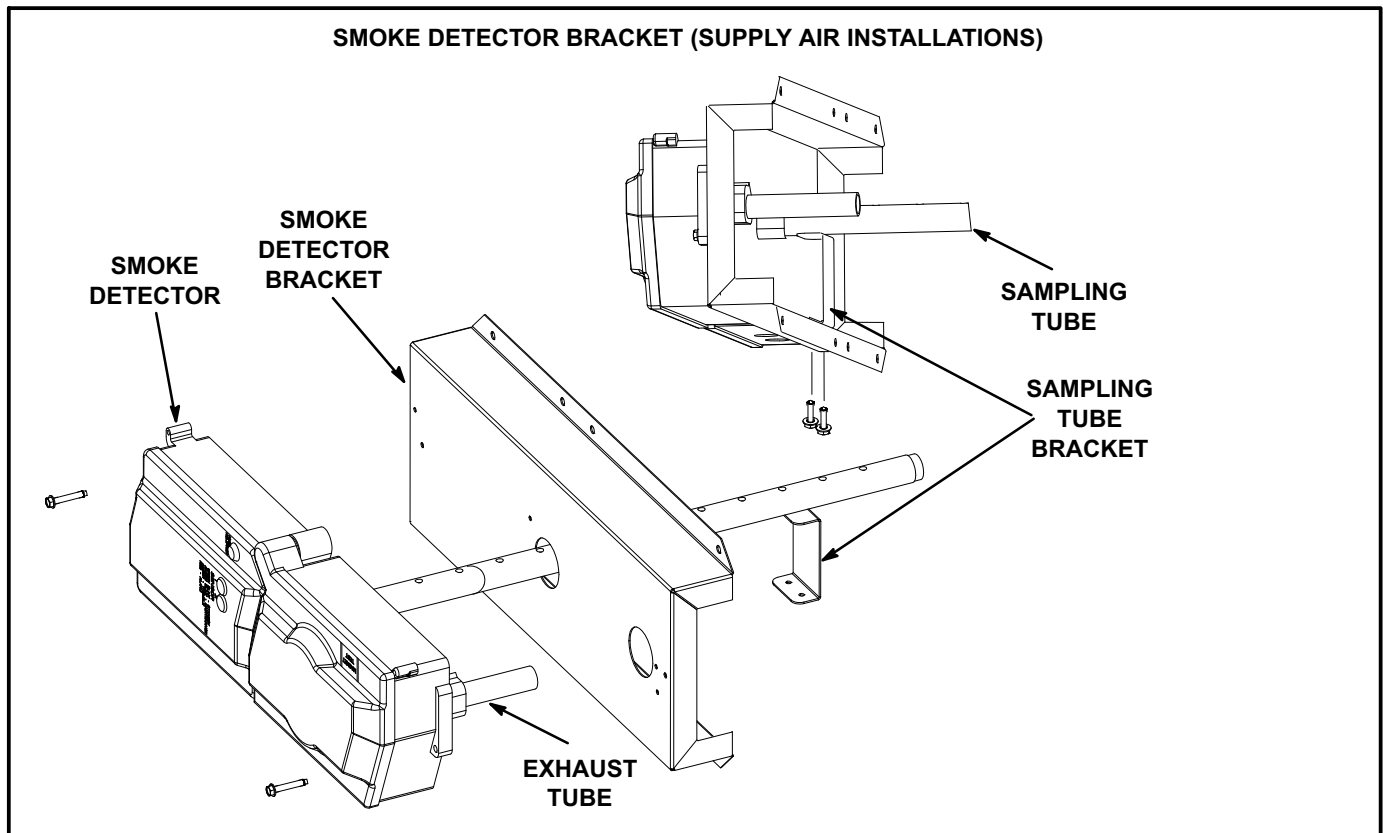


FIGURE 2

SMOKE DETECTOR - SUPPLY AIR INSTALLATIONS

- 1- Holes in sampling tube must face upward toward blower.
- 2- Insert tubes from the back side of the smoke detector until tubes snap into place.
- 3- Install the red cap on the end of the sampling tube that is exposed to the air stream.
- 4- Place magnet on sheet metal close to the detector.
- 5- Apply foil tape over the two sampling tube holes closest to the smoke detector.

Smoke detector rotated 180° when detector being replaced is not equipped with a 15-pin plug.

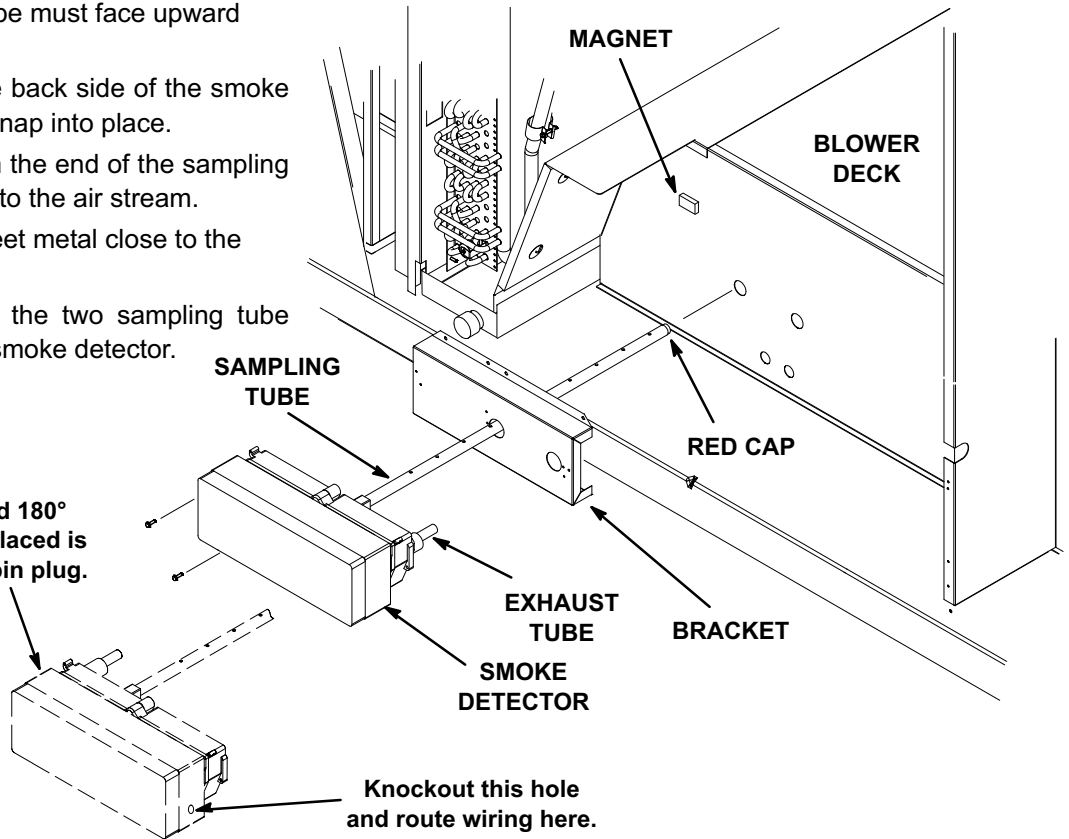
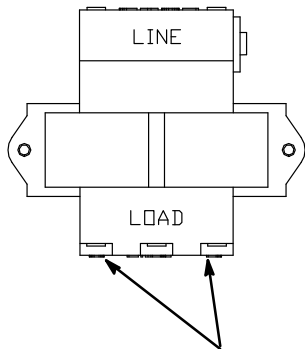


FIGURE 3

DISCONNECT SEPARATE POWER SUPPLY (WHEN PRESENT)



Disconnect 24v wires
to smoke detector.

FIGURE 4

TABLE 1

Smoke Detector Terminal Marking			Description
DH400	DH100	LD4120H	
1	9	1	24V AC/DC
2	10	2	24V AC/DC
3	2	3	R Reset
4	11	4	R Test
5	15	5	Alarm
6	20	6	Aux Out -
7	19	7	Aux Out +
8	4	8	Alarm, Com
9	5	9	Alarm, NO
10	14	10	SUP, NO
11	3	11	SUP, Com
12	120 VAC	12	120 VAC
13	120 VAC	13	120 VAC
15	16	15	Aux A, NC
16	6	16	Aux A, Com
17	17	17	Aux A, NO
18	7	18	Aux B, NO
19	18	19	Aux B, Com
20	8	20	Aux B, NC
21	13	21	SUP, NC
22	12	22	Int+
23	1	23	Int/Aux-

Return Air Installations - With Plug

This section is used when replacing a return air smoke detector which is equipped with a 15-pin plug.

- 1- Install smoke detector as shown in figure 5. Secure in place using two 1" screws.

IMPORTANT - The bracket is installed in SGA/SCA240 & 288 units only; discard bracket when installing smoke detector in SGA/SCA036, 060, and 120 units.

- 3- Connect the smoke detector plug to unit J102.

Return Air Installations - No Plug

This section is used when replacing a supply air smoke detector which is NOT equipped with a 15-pin plug.

- 1- Some units have a separate power source for the smoke detector instead of the main circuit breaker. Disconnect the 24 volt wires as shown in figure 4.

CAUTION - Transformer has 120 VAC input.

- 2- Open the cover of new LD4120 smoke detector. Remove and discard the 6- and 15-pin plugs and harnesses.
- 3- Remove the cover from the old smoke detector. Mark wires with terminal number if not already marked. Disconnect wiring from old terminal strip.
- 4- Route wiring through new LD4120 smoke detector access hole and connect wiring to according to terminals shown in table 1. Replace cover.
- 5- Assemble smoke detector according to manufacturer's instructions and previous section.
- 6- Install the smoke detector on the smoke detector bracket and install the bracket in the unit. Drill new mounting holes if required.
- 7- Reconnect the smoke detector wires to the transformer.

SMOKE DETECTOR - RETURN AIR INSTALLATIONS

- 1- Holes in sampling tube must face downward toward unit base.
- 2- Insert tubes from the back side of the smoke detector until tubes snap into place.
- 3- Install the red cap on the end of the sampling tube that is exposed to the air stream.
- 4- Place magnet on sheet metal close to the detector.

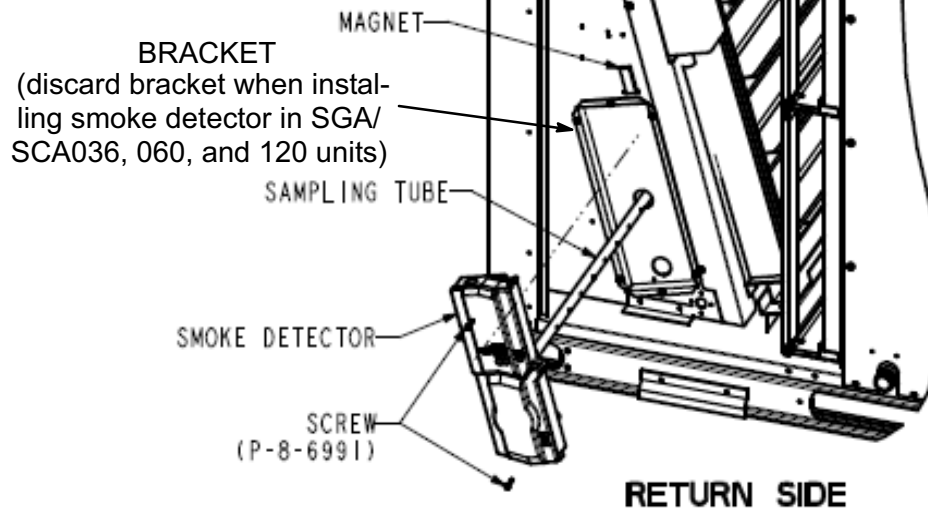


FIGURE 5