CLIMATE CONTROL SOLUTIONS
Bard Manufacturing Company
Bryan, Ohio 43506

INSTALLATION INSTRUCTIONS
CMA-27 DDC SENSORS

FOR USE WITH QA SERIES AIR CONDITIONERS

PURPOSE

The purpose of the CMA-27 kit is to allow the addition of sensors for connection to a DDC control system. These sensors include a dirty filter switch, a discharge air sensor, an airflow verification switch, and a compressor current sensor.

DESCRIPTION

The CMA-27 consists of field installable sensors for use with DDC control systems. The CMA-24 includes:

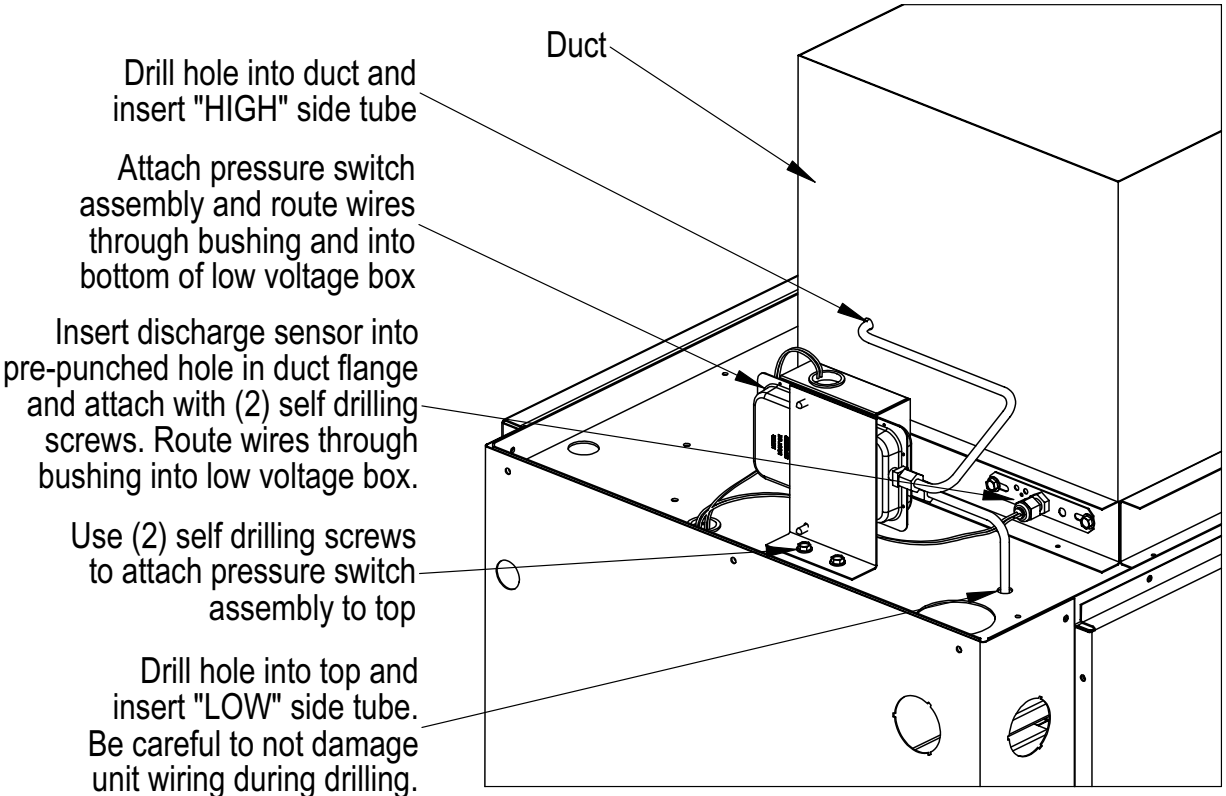
1. Installation Instructions
2. Airflow switch assembly
3. Dirty filter switch assembly
4. Compressor current sensor
5. Discharge air sensor
6. Low voltage terminal board
7. Terminal board label

INSTALLATION INSTRUCTIONS

1. Disconnect all power to unit before installing sensors.
2. Open inner and outer control panel covers. Remove service blower access panel.
3. Install the airflow switch assembly. (See Figure 1.)
4. Route the wires into the low voltage terminal strip.
5. Install the filter switch assembly. (See Figure 2.)
6. Route the filter switch wires through the control panel and to the low voltage terminal strip.
7. Install the discharge air sensor. (See Figure 1.)
8. Route the discharge air sensor wires into the low voltage terminal strip
9. Remove the black wire from the compressor contactor. (See Figure 2).
10. Route the wire through the hole in the current sensor and reconnect wire.
11. Mount the current sensor to the control panel.
12. Route the current sensor wire into the low voltage box. (See Figure 2.)
13. Attach wires to the terminal board according to the wiring diagram. (See Figure 3.)
14. Carefully push wires into the low voltage box and install terminal board. (See Figure 3.)
15. Attach terminal board label to terminal board. (See Figure 3.)
16. Attach “CMA-24” label and wiring diagram to the inner control panel cover above the unit wiring diagrams.
17. Make low voltage connections from the DDC controller to the terminal board.
18. Install the blower access cover and control panel covers.
19. Apply power to unit
20. Turn the unit blower on.
21. Restrict the filter of the unit by 75%.
22. Adjust the filter switch until it trips.
23. Remove restriction and reset filter switch.
24. Install the service panel.

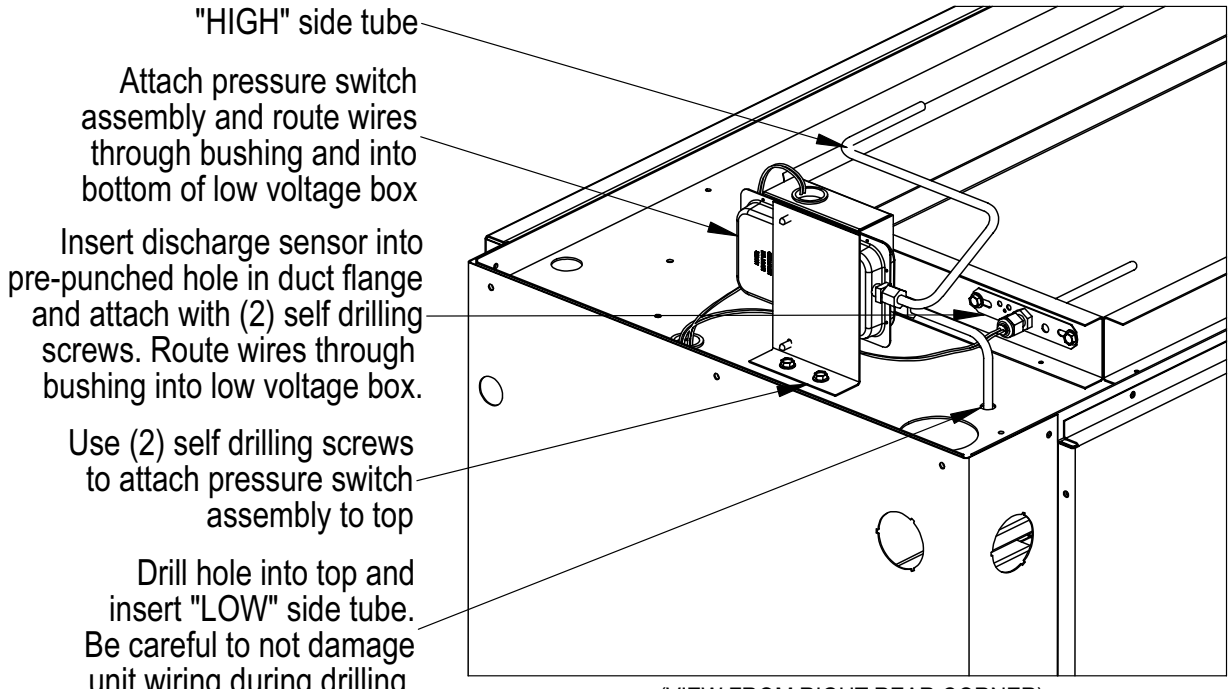
Figure 1

Installation into a Ducted System



(VIEW FROM RIGHT REAR CORNER)

Installation into a Non-Ducted System

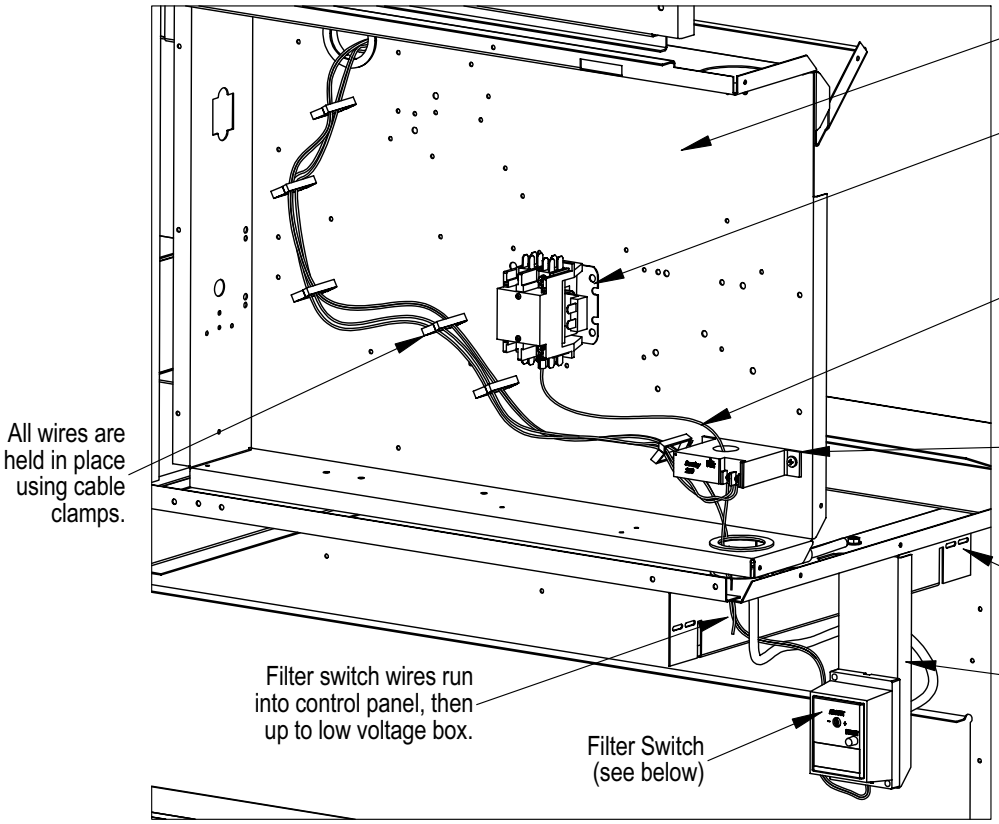


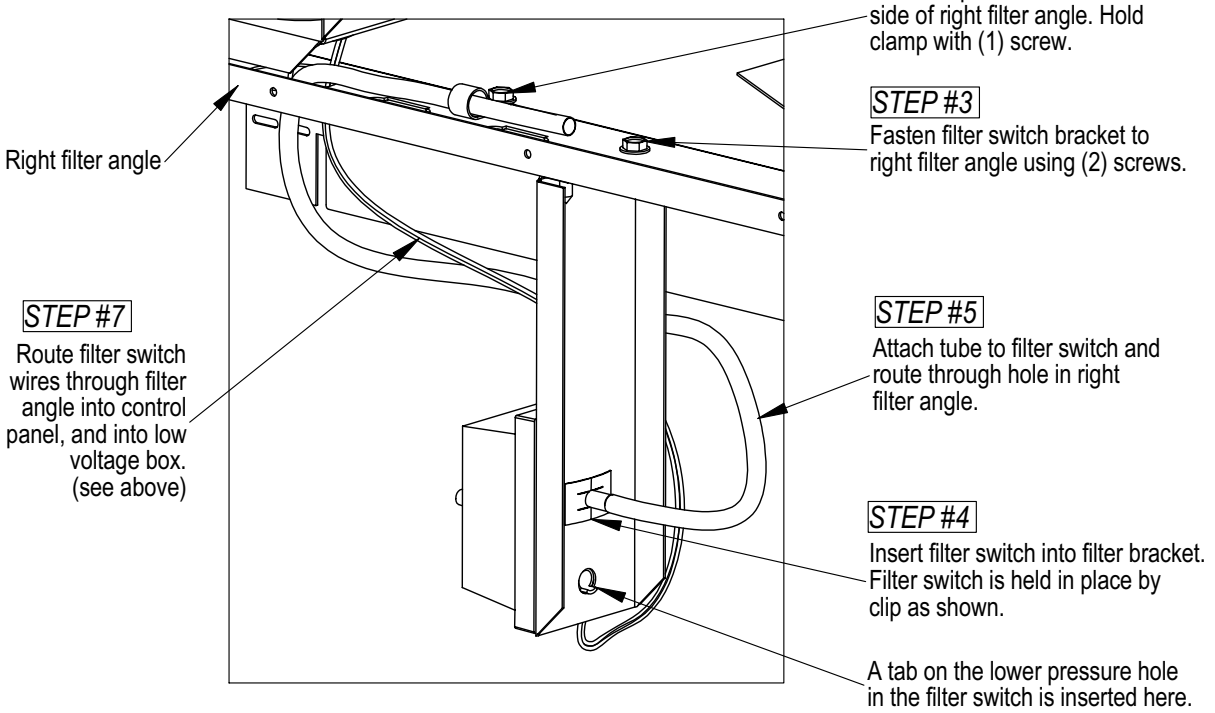
(VIEW FROM RIGHT REAR CORNER)

MIS-1893

Figure 2

Filter Switch and Current Sensor Installation

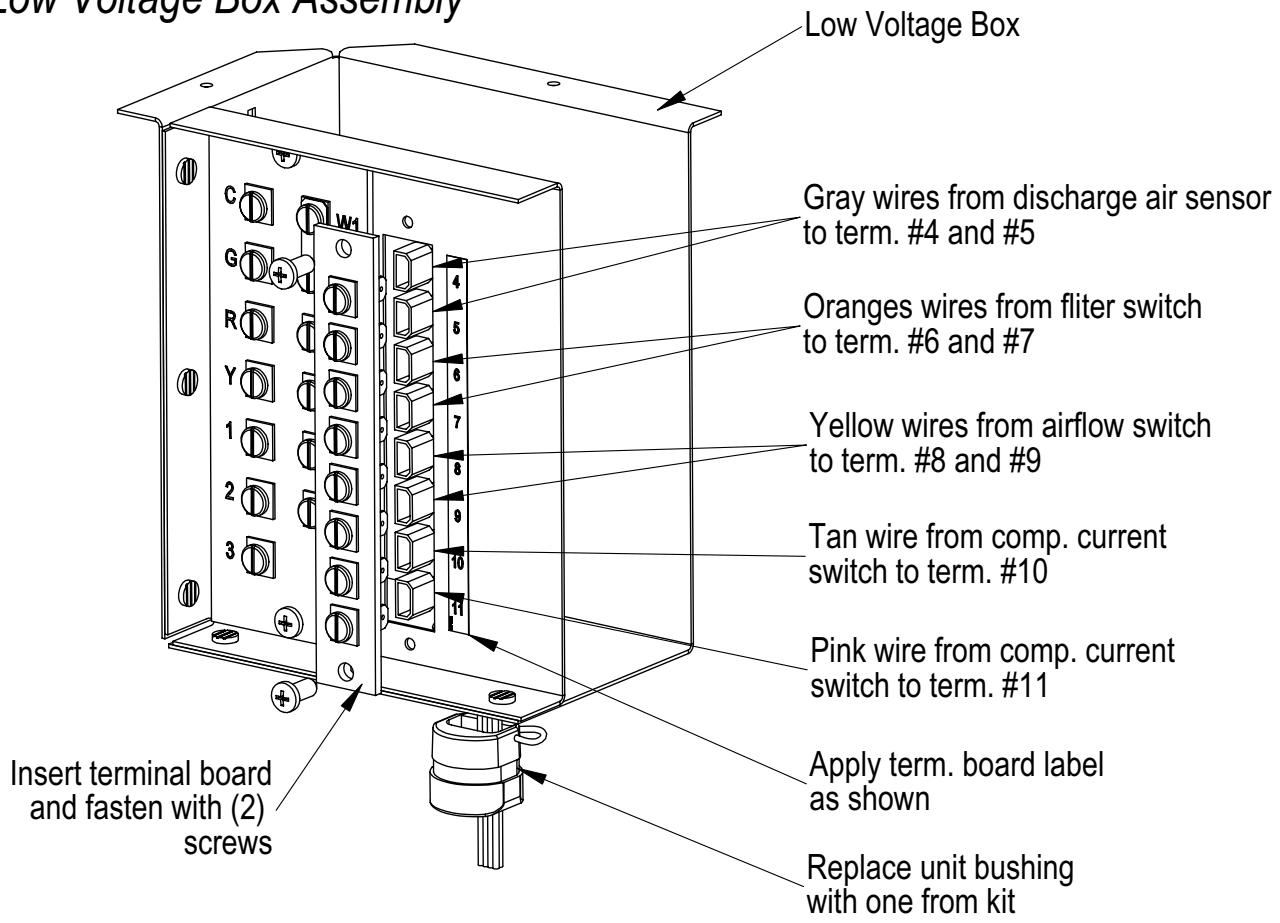




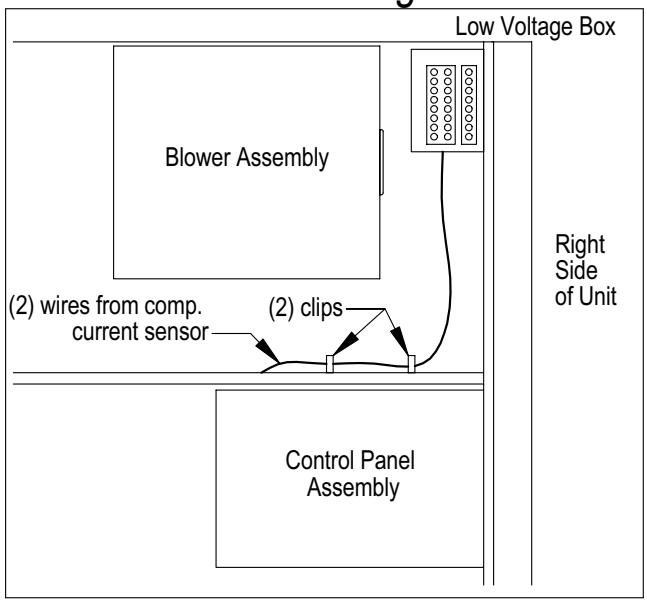
MIS-1894

Figure 3

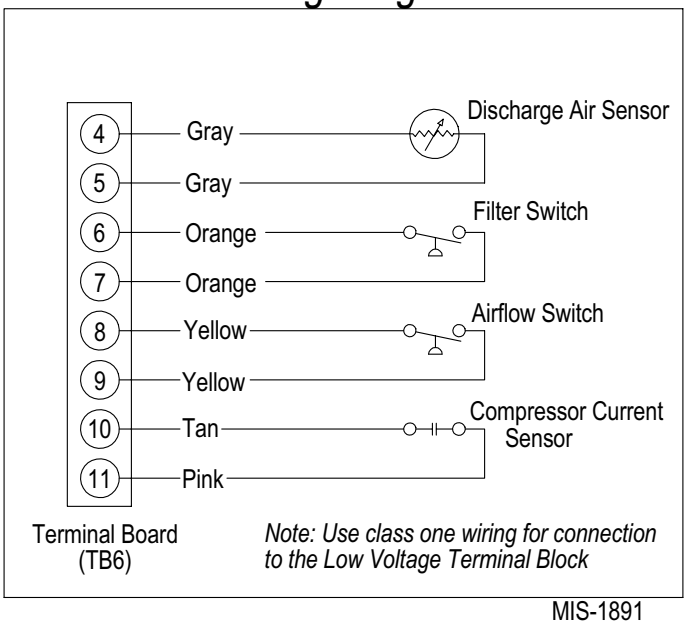
Low Voltage Box Assembly



Wire Routing



Wiring Diagram



MIS-1891