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# SUPPLEMENTAL INSTRUCTIONS

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## CMA-44 DDC Sensors

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The purpose of the CMA-44 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.

The CMA-44 kit is for use with Bard models W42-72AC wall-mount air conditioners.

The CMA-44 consists of field-installable sensors for use with DDC control systems. The CMA-44 includes:

- 7960-855 CMA-44 Supplemental Instructions
- 910-2070 Airflow Switch Assembly
- 910-2071 Filter Switch Assembly
- 910-2073 Filter Switch Light Assembly
- 910-2090 Compressor Current Sensor
- 910-1224 Discharge Air Sensor
- 8607-021 Low Voltage Terminal Board
- 7961-837 Terminal Board Label
- 7960-854 CMC-33 Supplemental Instructions
- 8201-159 Relay, DPDT

- 3018-2134 Orange Wire (2)
- 7950-005 Nylon Cable Clamp (2)
- 8611-028 1/2" Snap Bushing (2)
- 8611-047 3/4" Snap Bushing (2)
- 1012-065 Phillips Head Screw (7)
- 1012-086 Hex Head Screw (7)
- 1012-153 Smooth Hex Head Screw (2)
- 7950-012 Push Mount Cable Tie (6)
- 7950-004 Ladder Cable Tie (2)
- 7961-312-0512 CMA-44 Unit I.D. Label

Field-supplied tools needed:

- Personal protection equipment, including gloves and safety glasses
- 5/16" nut driver
- Phillips head screwdriver
- Small flat head screwdriver for securing wire in terminal blocks
- Multimeter for troubleshooting

### **WARNING**

***Exposed moving parts.***

***Disconnect all electrical power before servicing.***

***Failure to do so can result in severe injury or amputation.***

### **WARNING**

***Electrical shock hazard.***

***Disconnect the remote electric power supply or supplies before servicing.***

***Failure to do so can result in serious injury or death.***



***Climate Control Solutions***

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Manual: 7960-855  
Supersedes: **NEW**  
Date: 9-24-19

# CAUTION

**Sharp metallic edges.**

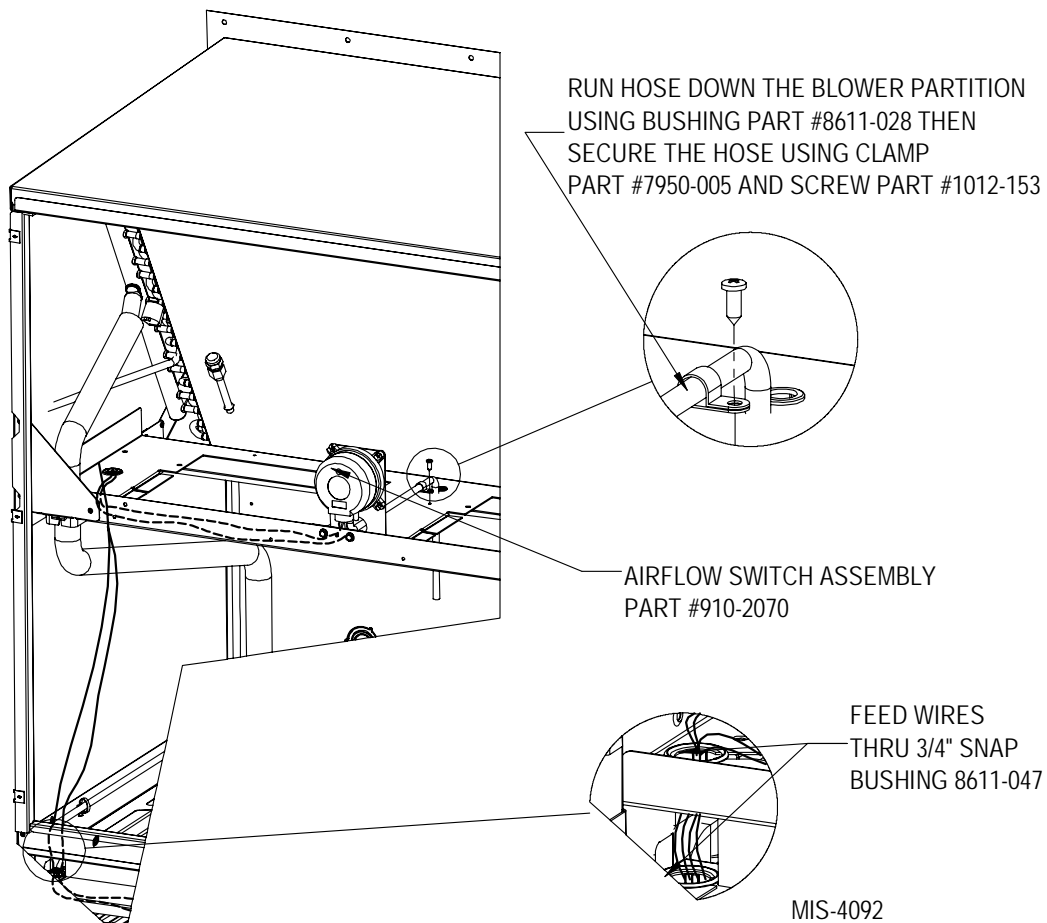
**Take care and wear appropriate protective devices to avoid accidental contact with sharp edges.**

**Failure to do so can result in personal injury.**

## INSTALLATION

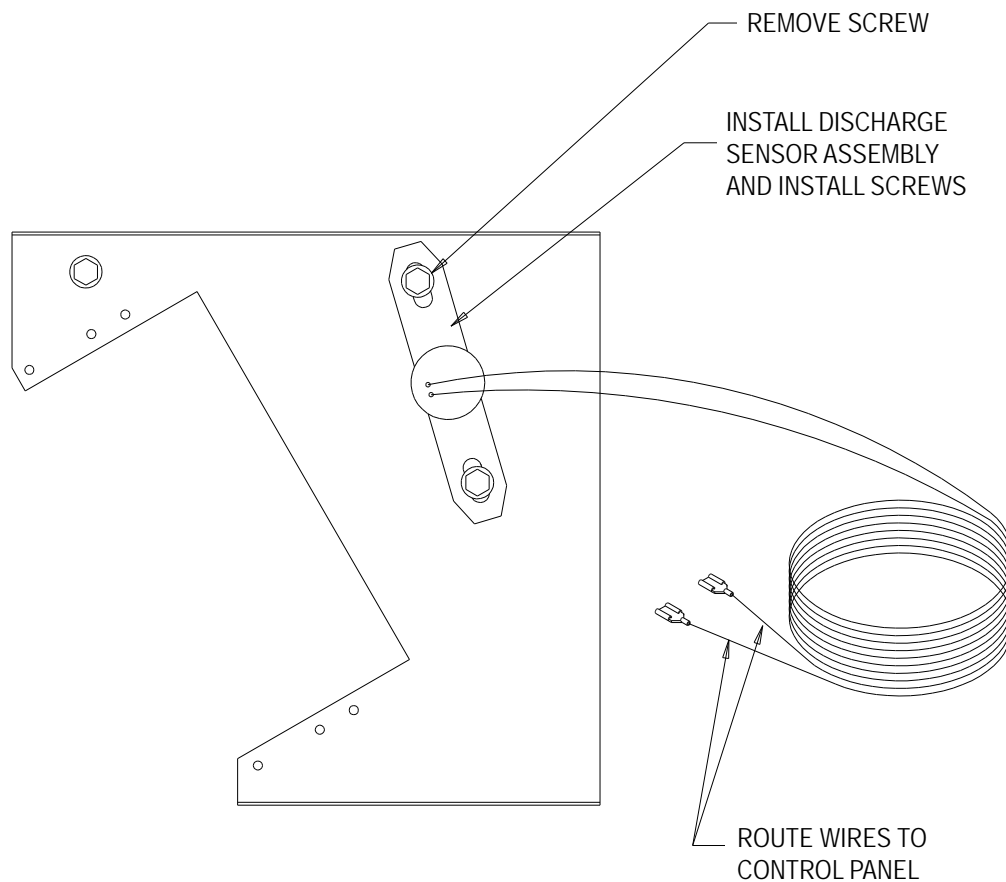
1. Disconnect all power to wall mount before installing sensors.
2. Remove inner and outer control panel covers. Remove electric heater access panel, front condenser grill and upper front door.
3. Install the airflow switch assembly (see Figure 1). Use two (2) 1012-086 screws to attach the switch bracket to the blower partition.
4. Install one (1) 8611-028 snap bushing in the back of the blower partition and route the hose from the airflow switch through the bushing as shown in Figure 1.
5. Secure the hose to the blower partition using the 7950-005 nylon clamp and the 1012-153 smooth hex head screw as shown in Figure 1.
6. Install the 8611-047 snap bushings in the filter partition and control panel bracket as shown in Figure 1.
7. Route the wires from the airflow switch down through the blower partition and into the control panel as shown in Figure 1.
8. Install the filter switch items using the 7960-854 instructions. Filter switch testing and adjustment can be made after all sensors have been installed.

**Figure 1**



9. Remove screw from the electric heater bracket (see Figure 2).
10. Install the discharge air sensor.
11. Route the discharge air sensor wires down through the conduit elbow, into the upper control panel and then down into the main control panel. See Figure 3 on page 4 for routing.
12. Remove the black wire from the compressor contactor (see Figure 4 on page 5).
13. Route the wire through the hole in the current sensor and reconnect wire.
14. Mount the current sensor to the panel directly below the control panel as shown in Figure 4.
15. Route the current sensor wire into the control panel (see Figure 4).
16. Attach wires to the terminal board according to the wiring diagram (see Figure 5 on page 6).
17. Carefully push wires into the low voltage box and install terminal board (see Figure 4).
18. Attach terminal board label to terminal board (see Figure 4).
19. Attach "CMA-44" label and wiring diagram to the inner control panel cover beside the unit wiring diagrams.
20. Make low voltage connections from the DDC controller to the terminal board.
21. Install the blower access cover, front grill, inner control panel cover and heater access panel.
22. Apply power to unit
23. Refer to filter switch manual 7960-854 to test and adjust the filter switch setting.
24. Install the outer control panel cover. This completes the installation.

**Figure 2**



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Figure 3

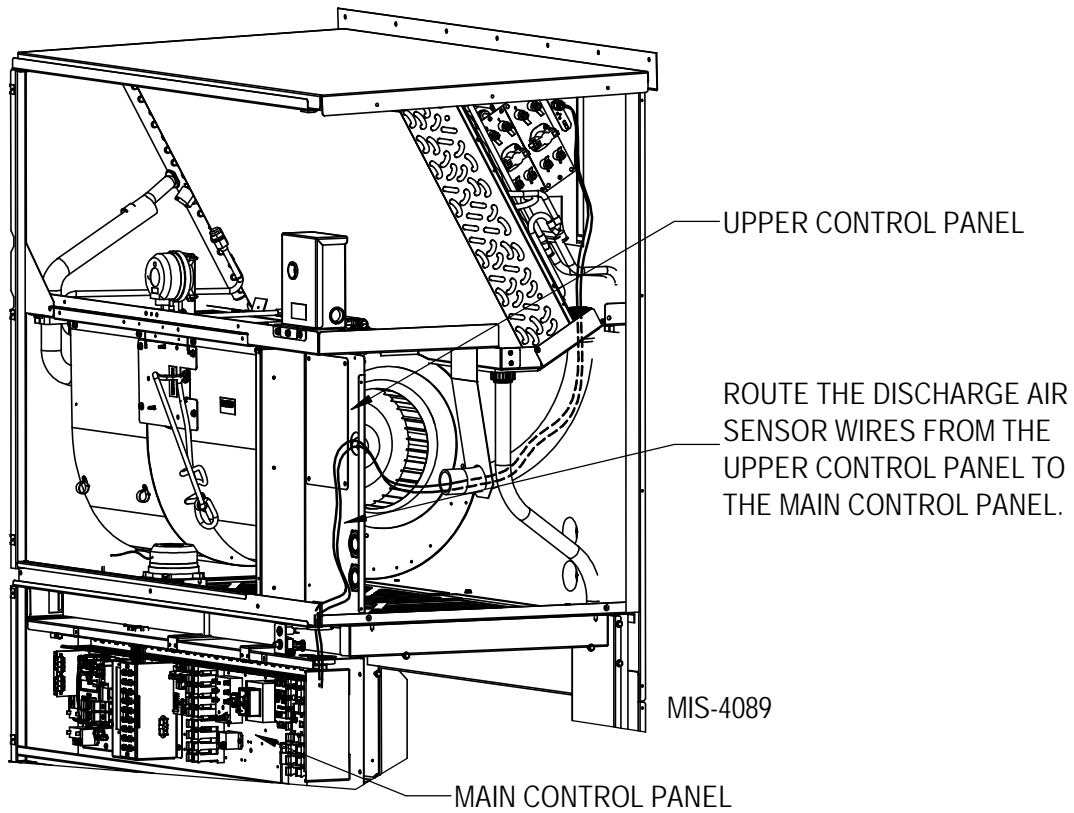
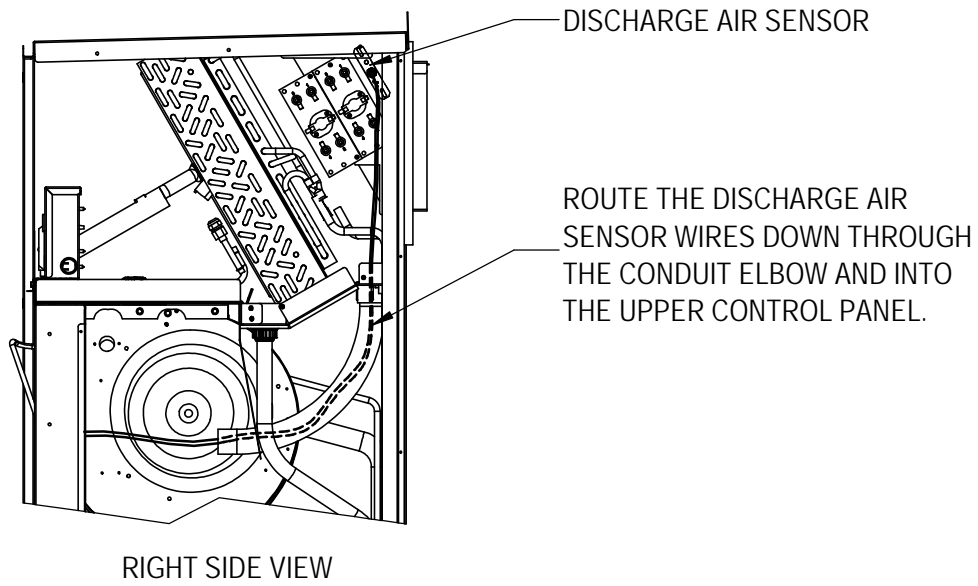


Figure 4

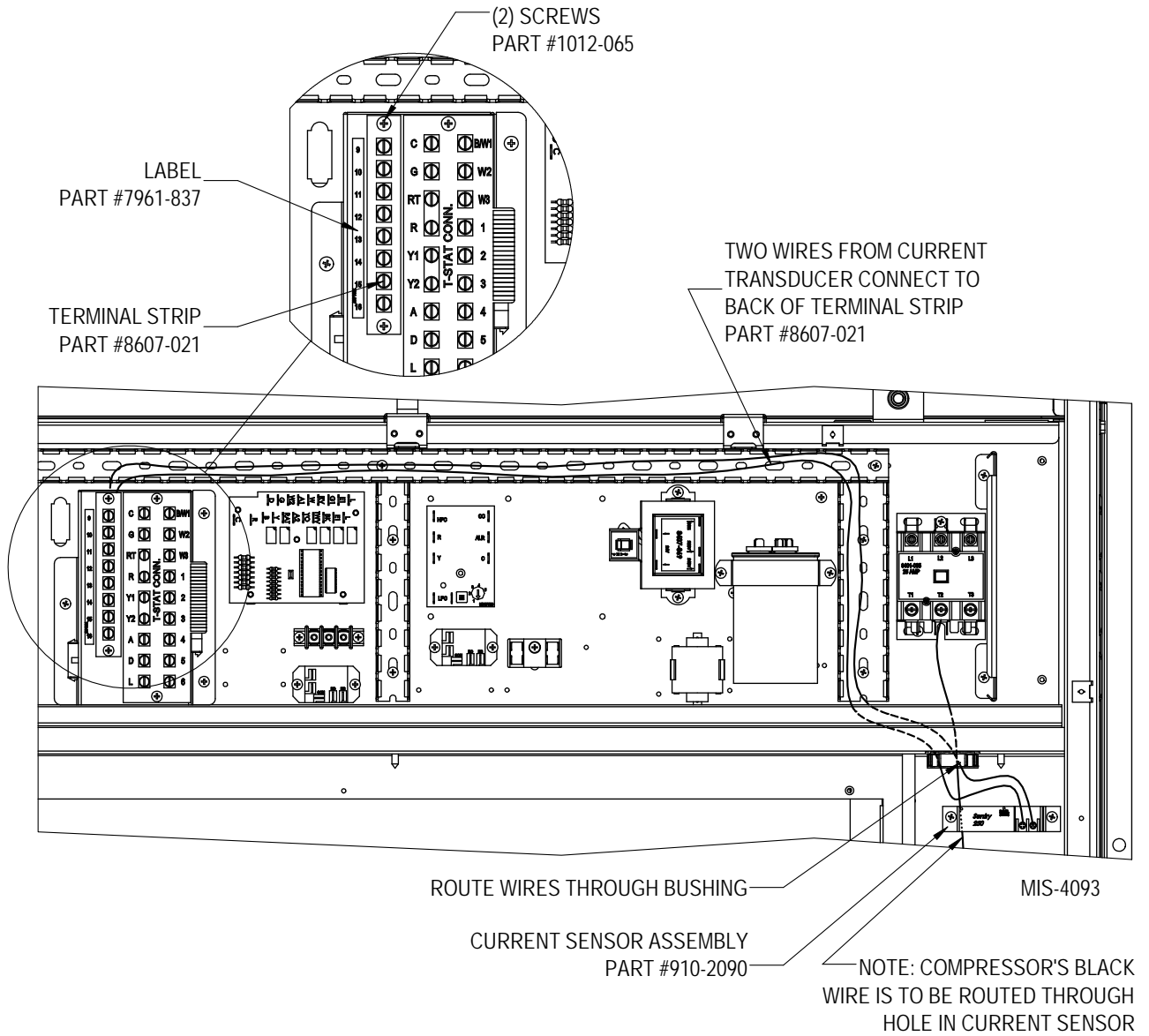
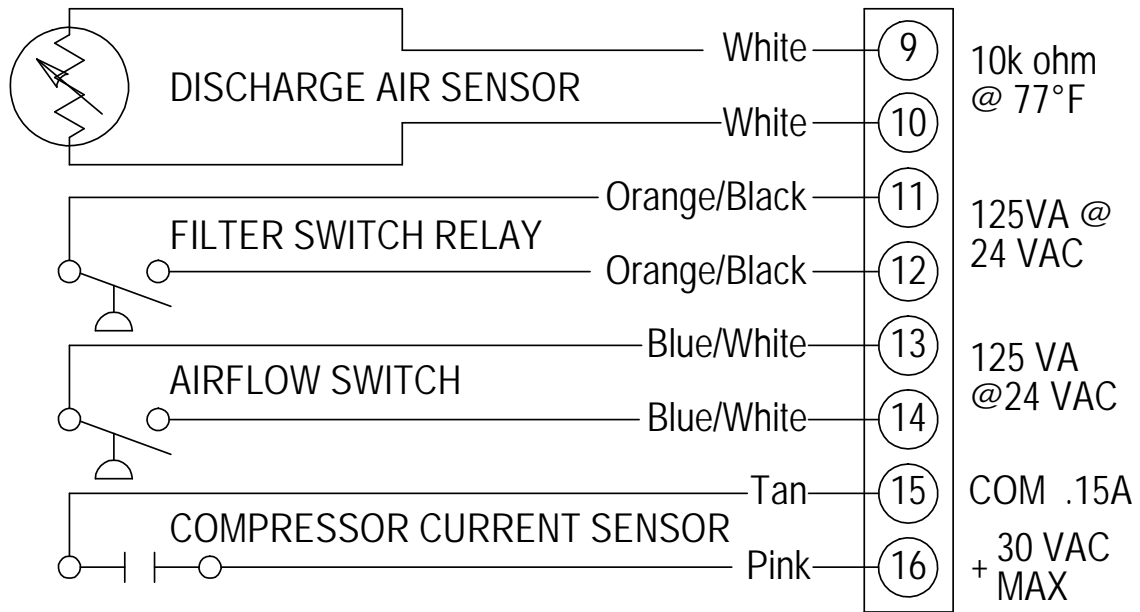


Figure 5

### LOW VOLTAGE SENSOR CONNECTIONS



NOTE: USE CLASS ONE WIRING FOR CONNECTION TO THE LOW VOLTAGE TERMINAL BLOCK

MIS-4090