# SUPPLEMENTAL INSTRUCTIONS

## CMA-40 DDC Sensors

The purpose of the CMA-40 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-40 kit is for use with Bard models W18-36AB wall-mount air conditioners. ***NOTE:*** *This kit is not intended for units with mechanical dehumidification. Component mounting locations as depicted in these instructions will encounter obstructions if attempting to install on units with dehumidification.*

The CMA-40 consists of field-installable sensors for use with DDC control systems. The CMA-40 includes:

- 7960-849 Supplemental Instructions
- 910-1894 Airflow Switch Assembly
- CMC-31 Dirty Filter Switch Kit
- 910-1223 Compressor Current Sensor
- 910-1224 Discharge (Supply) Air Sensor
- 8607-021 Low Voltage Terminal Board
- 7961-837 Terminal Board Label
- 8611-033 7/8" Snap Bushing (2)
- 1012-065 Phillips Head Screw (6)
- 1012-086 Hex Head Screw (8)
- 7961-312-0483 CMA-40 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

***NOTE:*** *Low ambient kit required for Balanced Climate and compressor operation below 60º F (sold separately).*

**⚠ 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.***

**⚠ WARNING**

***Exposed moving parts.***

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

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

**⚠ 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.***

Bard® SINCE 1914
Climate Control Solutions

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506

www.bardhvac.com

Manual: 7960-849
Supersedes: ***NEW***
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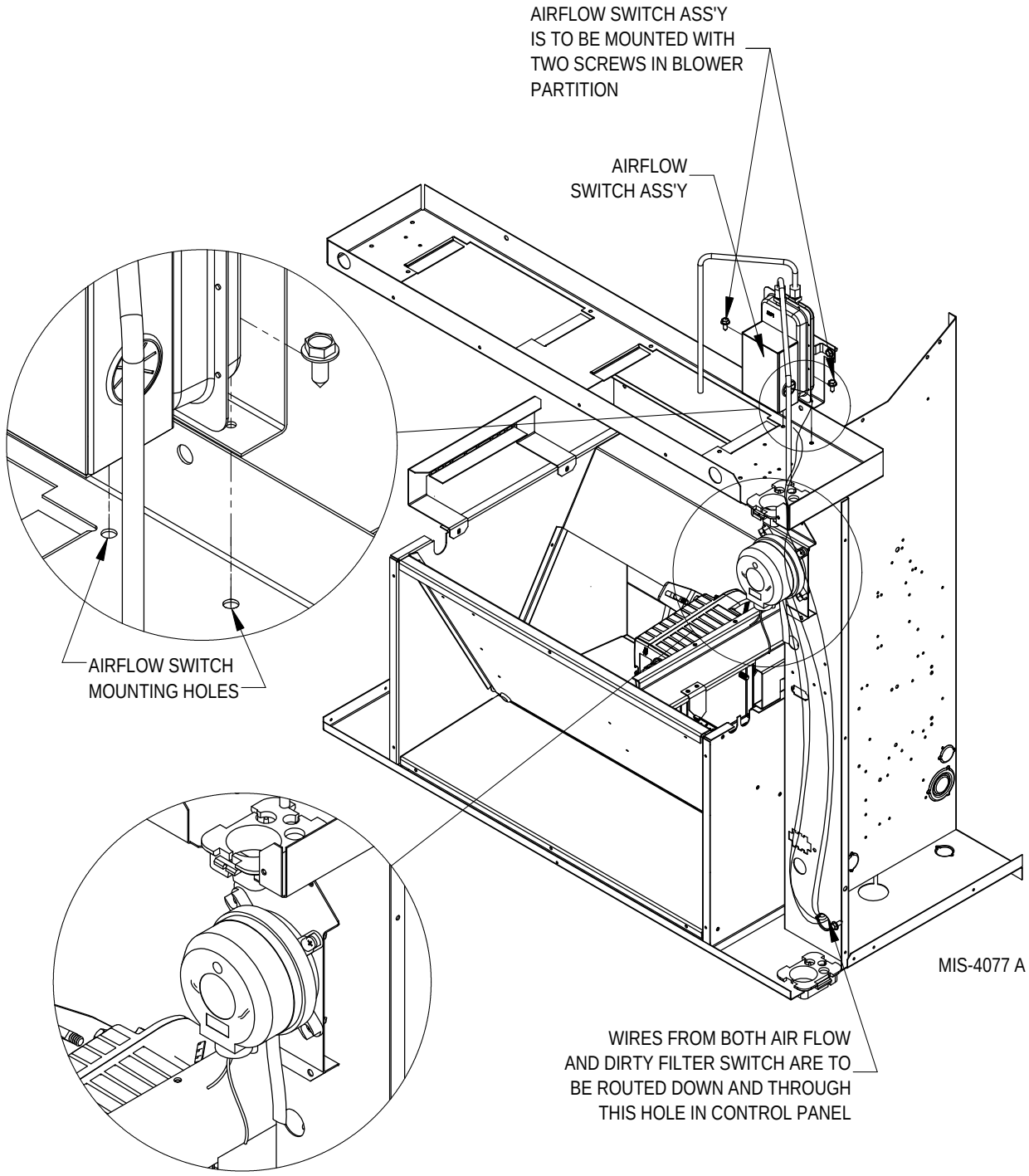
## Installation

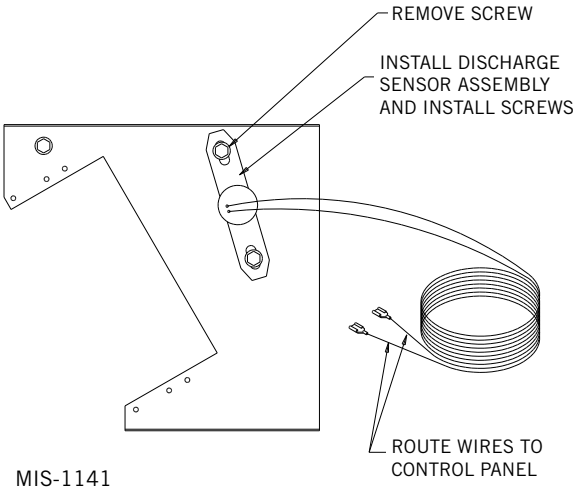
1. Disconnect all power to wall mount before installing sensors.
2. Remove inner and outer control panel covers. Remove electric heater access panel, service panel and blower access panel.
3. Install the airflow switch assembly using two (2) hex head screws. Use the holes in the blower partition shown in Figure 1.
4. Route the wires into the control panel.
5. Install the filter switch assembly. Refer to 7960-853 instructions provided with the CMC-31 kit.

**FIGURE 1**



6. Route the filter switch wires into the control panel.
7. Remove screw from the electric heater bracket (see Figure 2).

**FIGURE 2**

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8. Install the discharge (supply) air sensor using the screw removed in Step 7 and one (1) additional hex head screw supplied with kit.
9. Route the discharge air sensor wires into the control panel through the electric heat wire chase as shown in Figure 3.
10. Remove the black wire from the compressor contactor (see Figure 3).
11. Route the wire through the hole in the current sensor and reconnect wire.
12. Mount the current sensor to the control panel.
13. Route the current sensor wire, airflow switch wire, filter switch wire and discharge air sensor wire into the low voltage box.
14. Attach wires to the terminal board according to the wiring diagram. See Figure 3 and Figure 4 (page 4).
15. Carefully push wires into the low voltage box and install terminal board using two (2) phillips head screws (see Figure 5 on page 4).

**FIGURE 3**

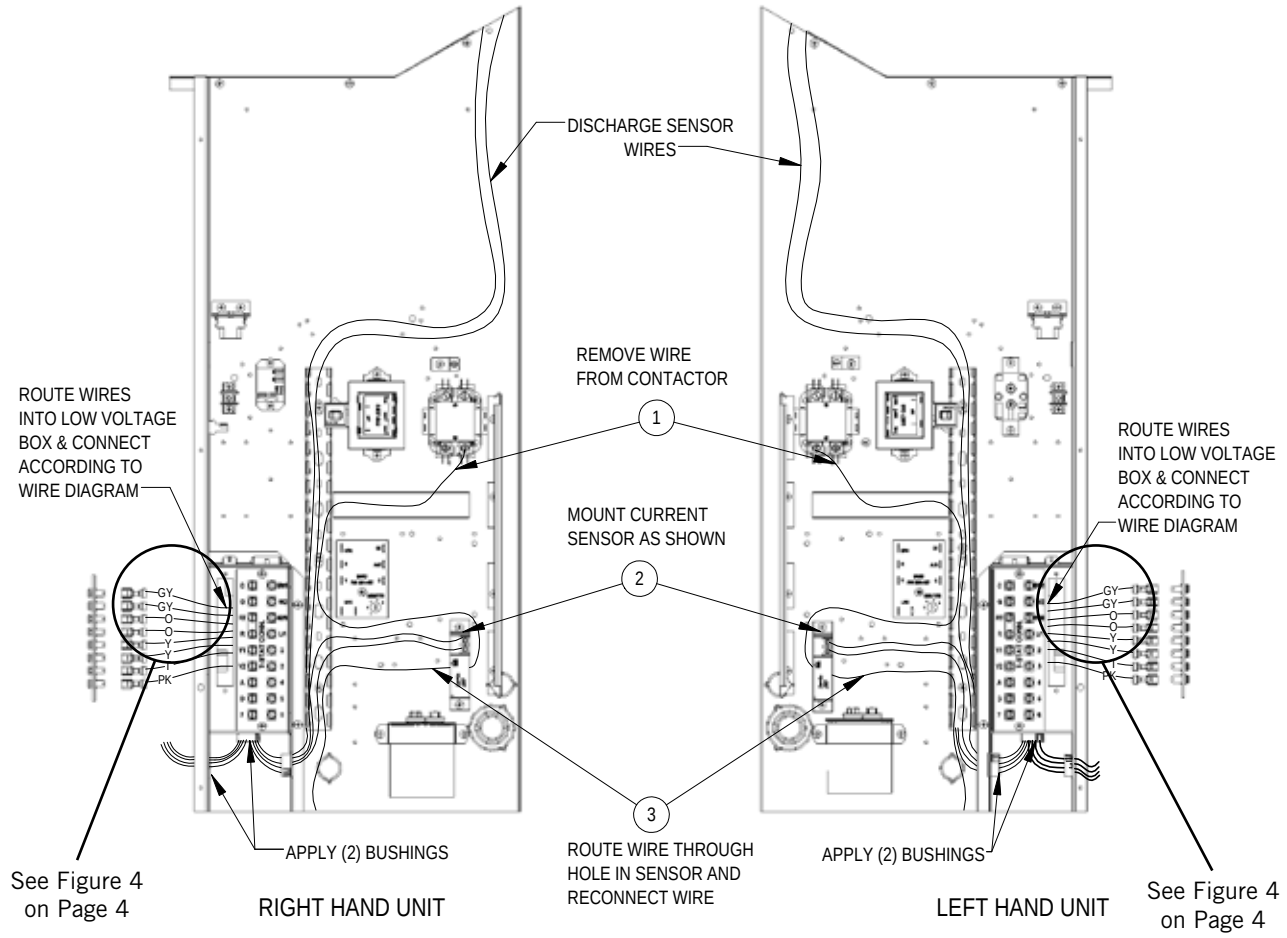


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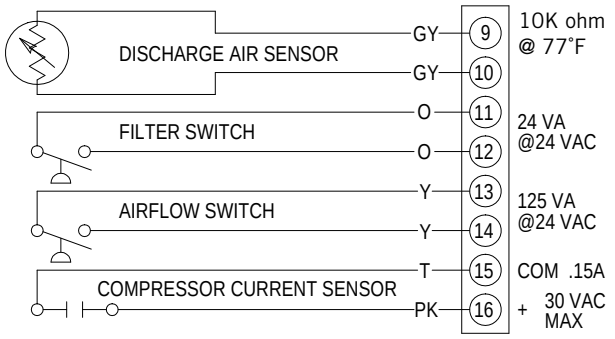
**FIGURE 4**




| LEGEND | |
|---|---|
| GY | GRAY |
| O | ORANGE |
| Y | YELLOW |
| T | TAN |
| PK | PINK |

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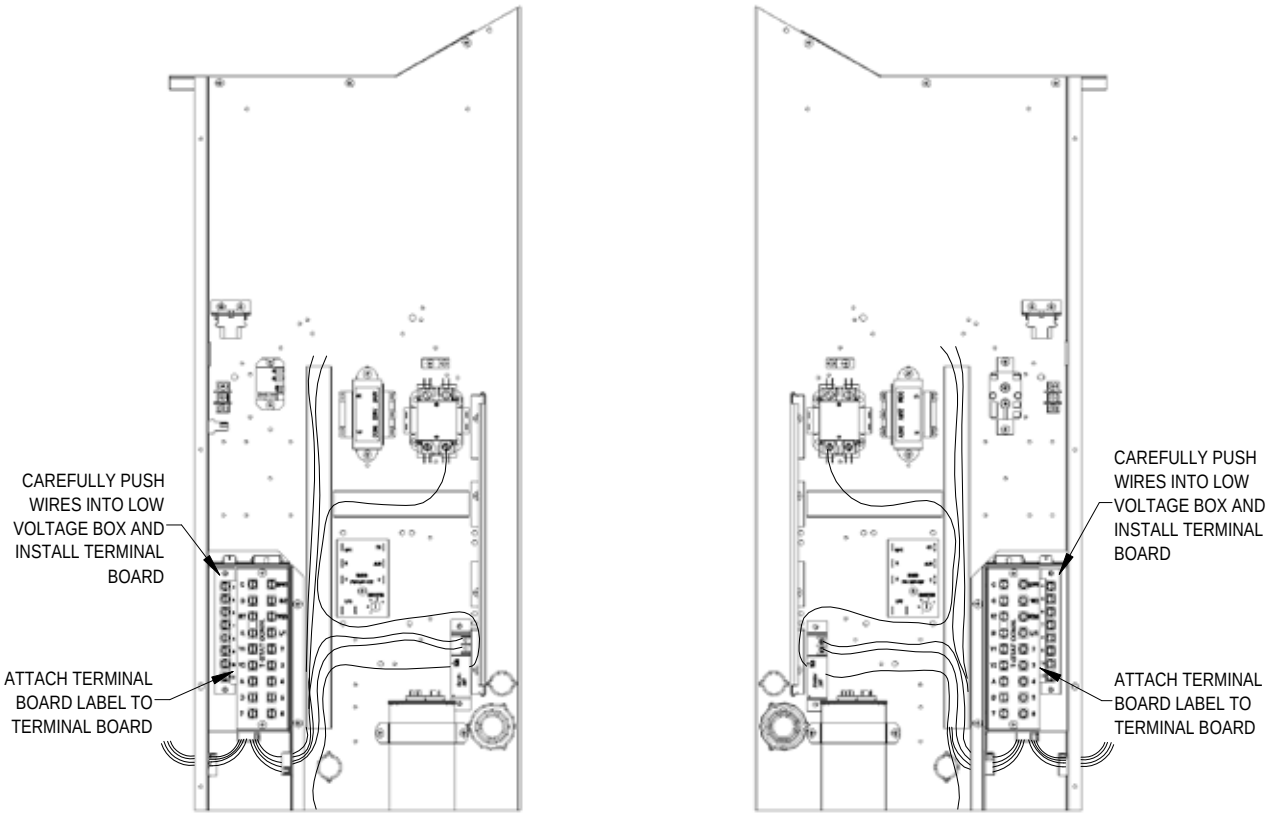
NOTE: USE CLASS ONE WIRING FOR CONNECTION TO THE LOW VOLTAGE TERMINAL BLOCK

16. Attach terminal board label to terminal board.
17. Attach “CMA-40” label and wiring diagram to the inner control panel cover above the unit wiring diagrams.
18. Make low voltage connections from the DDC controller to the terminal board.
19. Install the blower access cover, control panel covers and heater access panel.
20. Apply power to unit
21. Turn the unit blower on.
22. Restrict the filter of the unit by 75%.
23. Adjust the filter switch until it trips.
24. Remove restriction and reset filter switch.
25. Install the service panel.

**FIGURE 5**




RIGHT HAND UNIT

LEFT HAND UNIT

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