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Dallas, Texas, USA

PACKAGED UNITS - KITS

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NOVAR 3051 DDC INSTALLATION KIT

INSTALLATION INSTRUCTIONS FOR NOVAR 3051 DDC KIT (19F75) USED WITH SC/SG SERIES UNITS

**THIS MANUAL MUST BE LEFT WITH THE OWNER
FOR FUTURE REFERENCE**

Shipping and Packing List

Package 1 of 1 contains:

- 1 – Return air sensor (A2) with P62 connector
- 1 – Discharge air sensor (RT1) with P63 connector
- 1 – Bracket, DDC controls
- 1 – Bag assembly containing:
 - 4 – #8-32 X 1/2" screws
 - 1 – Wiring diagram sticker
 - 6 – #10-16 X 5/8" screws

NOTE: NOVAR 3051 DDC NOT INCLUDED.

Application

The NOVAR 3051 DDC is used with SCC/SGC and SCH/SGH series units. It can be used as a replacement for the NOVAR 2024 DDC. This kit provides all of the necessary parts required to install the 3051 DDC on the referenced Lennox rooftop models.

An A74 room air sensor is used to monitor space temperature. Do not install the return air sensor if a room air sensor is used. The room air sensor is wired to the Prodigy® control by the control's contractor.

The RT1 discharge air sensor monitors discharge or supply air temperature.

!WARNING

Improper installation, adjustment, alteration, service or maintenance can cause personal injury, loss of life, or damage to property.

Installation and service must be performed by a qualified installer or service agency.

!CAUTION

Physical contact with metal edges and corners while applying excessive force or rapid motion can result in personal injury. Use caution when working near these areas during installation or while servicing this equipment.

!WARNING



Electric shock hazard.

Can cause injury or death.

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

Unit may have multiple power supplies.

Installation

1. Disconnect all electrical power to unit.
2. Open compressor section access doors.
3. If the NOVAR 3051 DDC is replacing a NOVAR 2024 DDC, remove four screws attaching 2024 DDC to mounting panel and replace with 3051 DDC, then proceed to "Figure 5. 240 Units – Accessing DDC (Top View)" on page 2 for wire routing. If 3051 DDC is a new install, perform step 4 or 5 depending on unit size.
4. 036, 060, 120 Units: Position DDC hinged mounting panel as shown in figure 1. Make sure the DDC faces the A55 Prodigy control board. Align holes on hinged bracket with dimples on the unit side. Secure DDC panel to unit with two 5/8" screws.

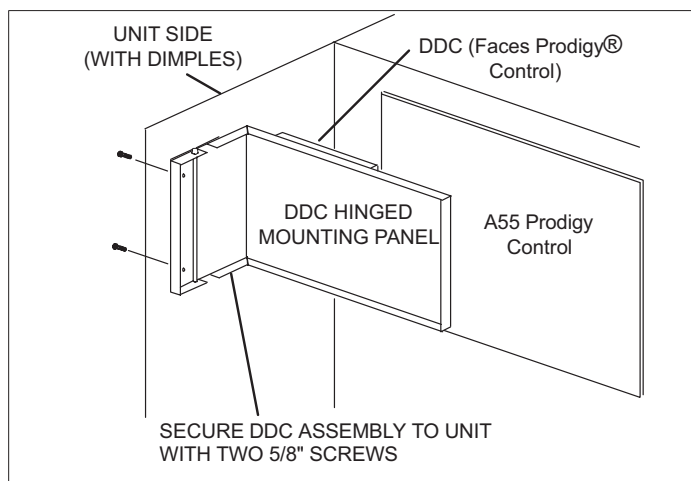


Figure 1. 036, 060, 120 Units – Installing DDC Hinged Mounting Panel

Pivot hinged panel away from Prodigy® control board to access the DDC.

See "Figure 2. 036, 060, 120 Units – Accessing DDC (Top View)" on page 2.

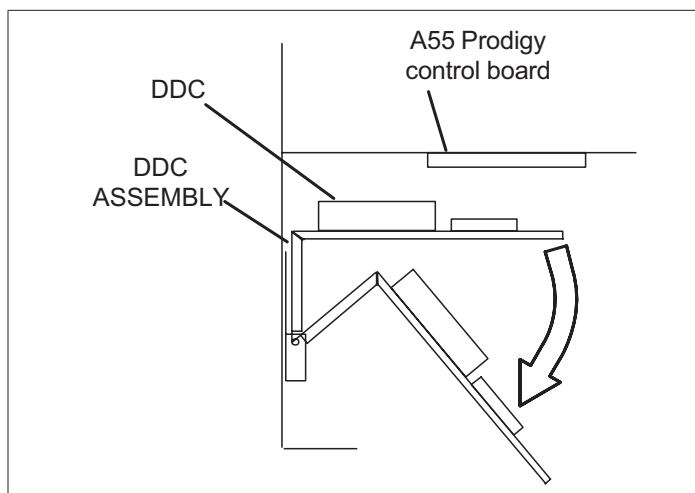


Figure 2. 036, 060, 120 Units – Accessing DDC (Top View)

5. 240 Units: Attach the hat section provided in the kit to the DDC assembly using two 5/8" screws (see figure 3.)

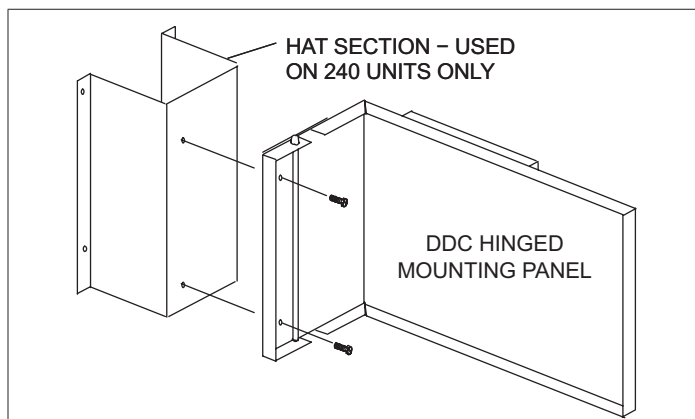


Figure 3. 240 Units – Attaching DDC Hinged Mounting Panel to Hat Section

Position the DDC assembly as shown in figure 4. Make sure the DDC faces the A55 Prodigy control board. Align holes on hat section with dimples on the unit side. Secure hat section to unit with four 5/8" screws.

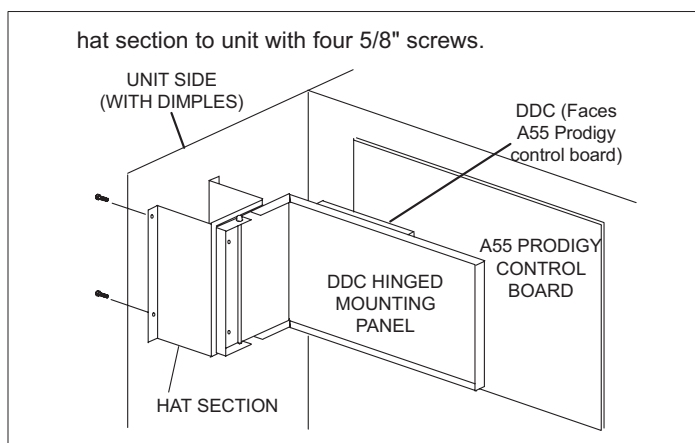


Figure 4. 240 Units – Installing DDC/Hat Section

Pivot hinged panel away from A55 Prodigy control board to access DDC (see figure 5).

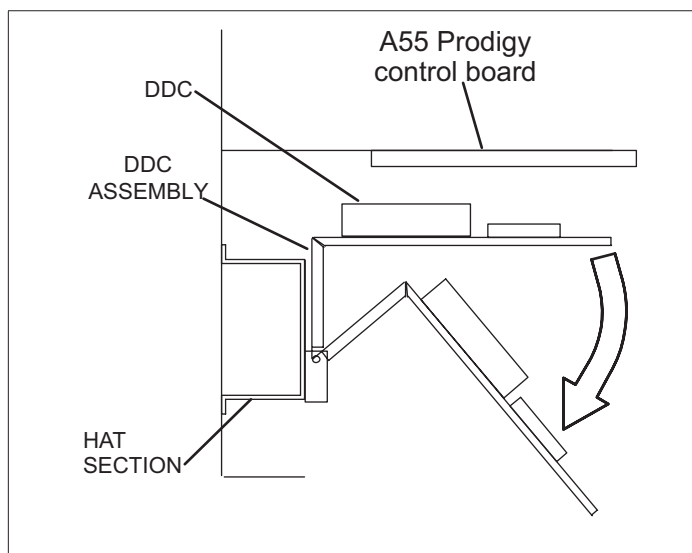


Figure 5. 240 Units – Accessing DDC (Top View)

1. If the 3051 DDC is replacing a 2024 DDC, the old wiring harness must be removed from the unit and replaced with the 106177-01 harness provided. Refer to wiring diagram and figures 7 and 8 below to connect harness to DDC and discharge air sensor. If the 3051 DDC is a new install, route harnesses coming from sub-assembly as shown in "Figure 6. 240 Units – Accessing DDC (Top View)" on page 3 for the following steps 1 through 3. Disconnect J264C from M2 board and connect to P303 of controller sub-assembly.
2. Connect connectors (J297A, B and C) to M2 board J297.
3. Route J63 Harness through conduit bushing.
4. Route harnesses coming from DDC Control sub-assembly J63 down to lower blower support panel.
 - 036/060 units: see "Figure 7. Routing J63 RT1 Harness (036,060 Units)" on page 3.
 - 120/240 units: see "Figure 8. Routing J63 RT1 Harness (120,240 Units)" on page 4.

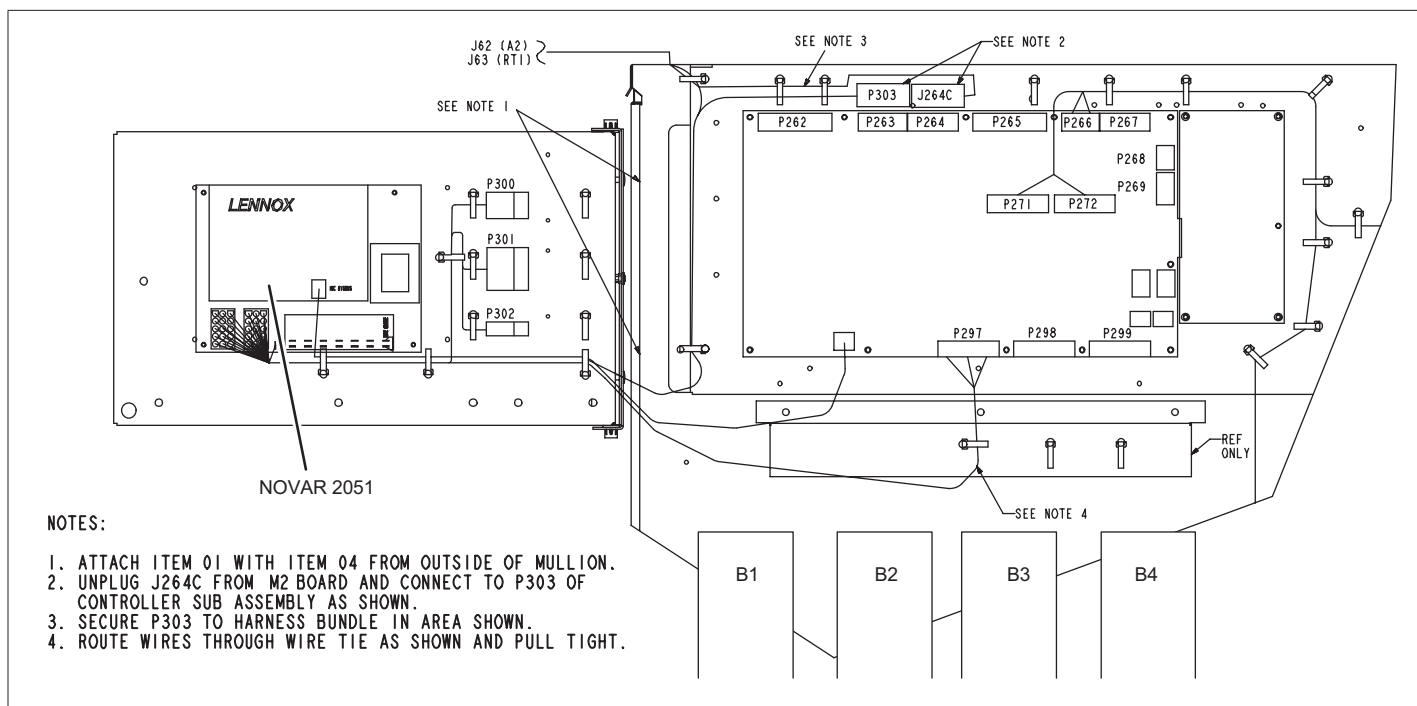


Figure 6. 240 Units – Accessing DDC (Top View)

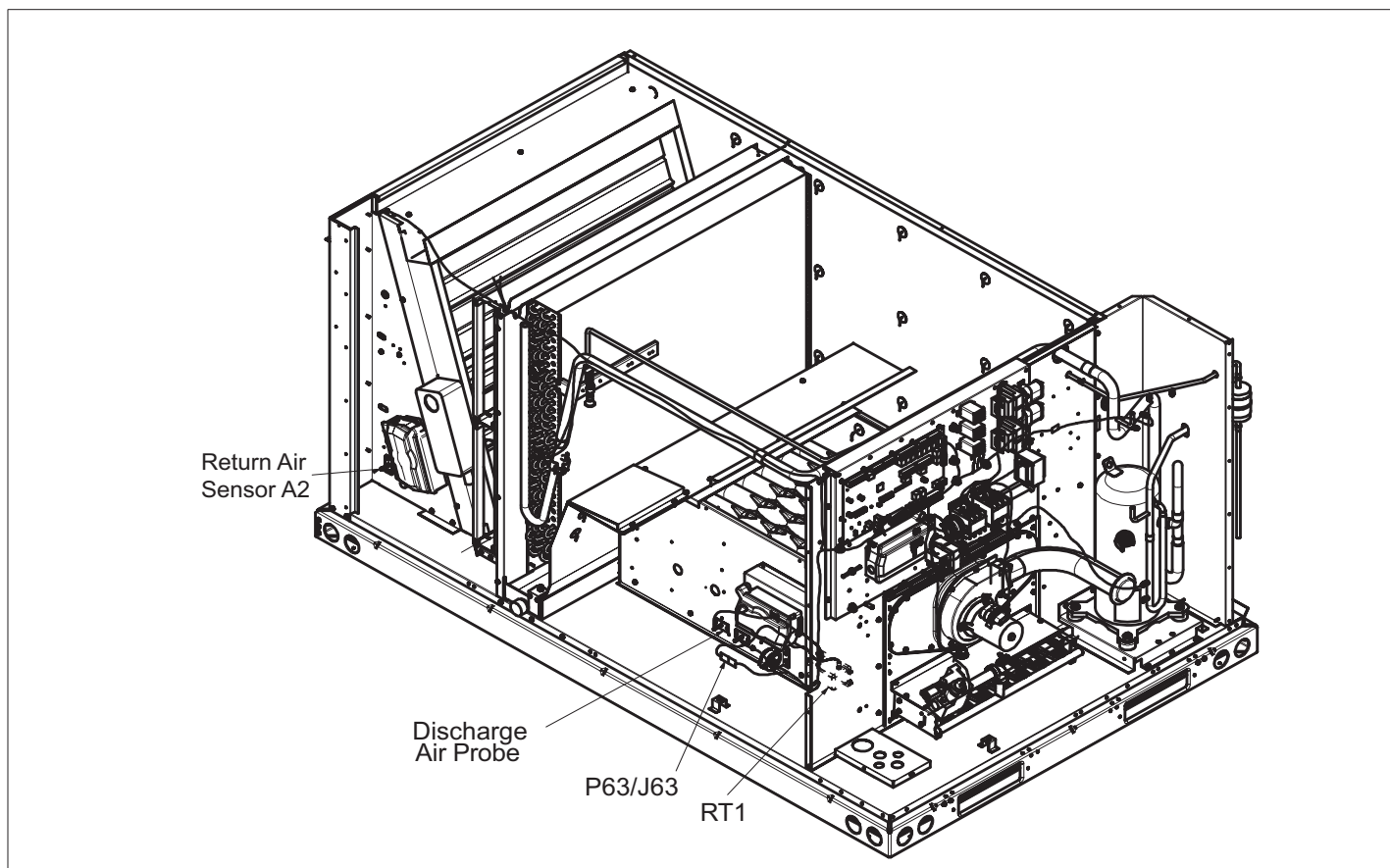


Figure 7. Routing J63 RT1 Harness (036,060 Units)

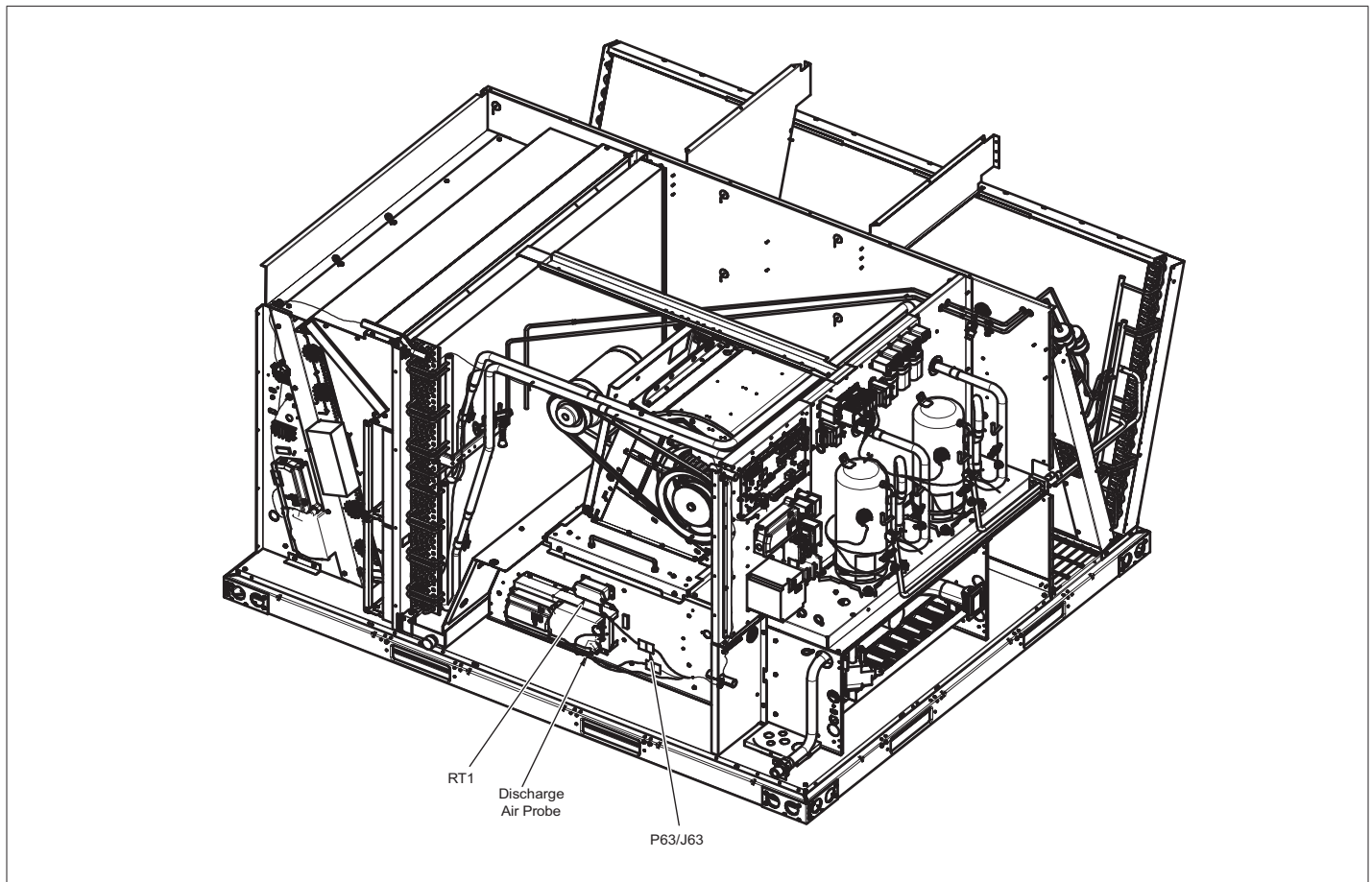


Figure 8. Routing J63 RT1 Harness (120,240 Units)

Discharge Air Sensor RT1

1. If NOVAR 3051 DDC is replacing a NOVAR 2024 DDC, then remove the current discharge air sensor and replace with sensor provided in kit. If the 3051 DDC is a new install, insert discharge air sensor probe into knockout as shown in figure 9 (036, 060 units) or figure 10 (120, 240 units). Secure with the provided two screws.

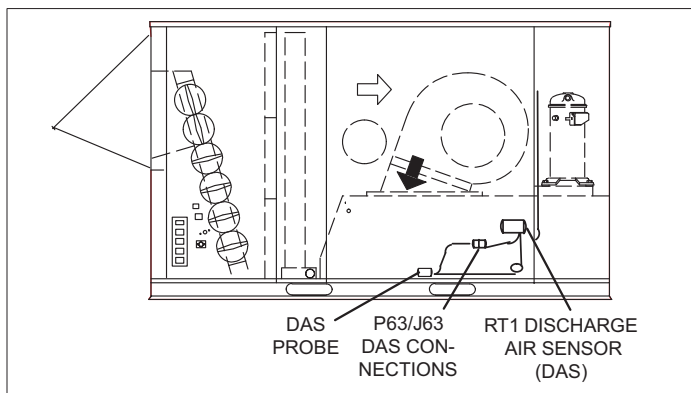


Figure 9. RT1 Discharge Air Sensor (036, 060 Units)

2. Connect RT1 discharge air sensor plug P63 to RT1 discharge air sensor jack J63.

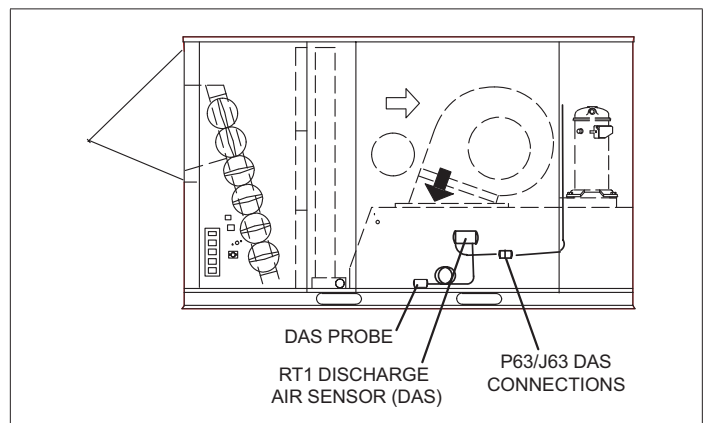


Figure 10. RT1 Discharge Air Sensor (120, 240 Units)

Wiring

FIELD WIRING

Controls contractor completes field wiring connections to optional system components shown in dotted lines in “Figure 12. Control for NOVAR 2024 Units (For Reference Purposes Only)” on page 6.

WIRING DIAGRAMS

Wiring diagram sections are affixed to inside of unit panel in alpha-numeric order. Figure 11 shows an example of a complete system diagram on an installation consisting of an SGA240 unit with an electro-mechanical or electronic control system and a modulating economizer. Affix the C7” section wiring diagram, provided, over the top of the existing C” section wiring diagram.

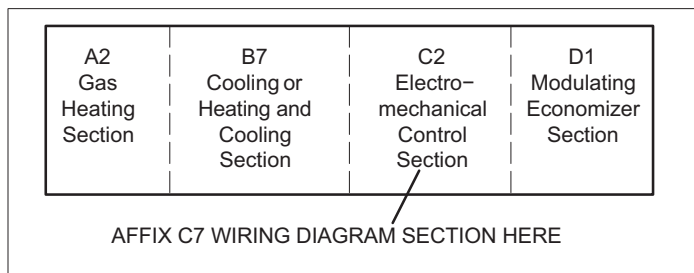


Figure 11. Complete System Diagram

FINAL WIRING CHECK

Before applying power to unit check the following wiring:

1. Jack/plug connections to DDC and RT1 sensor.
2. Jack/plug connections to system options such as electric heat or economizers.
3. Polarity of wiring between A16 control microprocessor, room air sensor if used, and TB1 terminal strip.
4. Line voltage to unit and/or options such as electric heat.

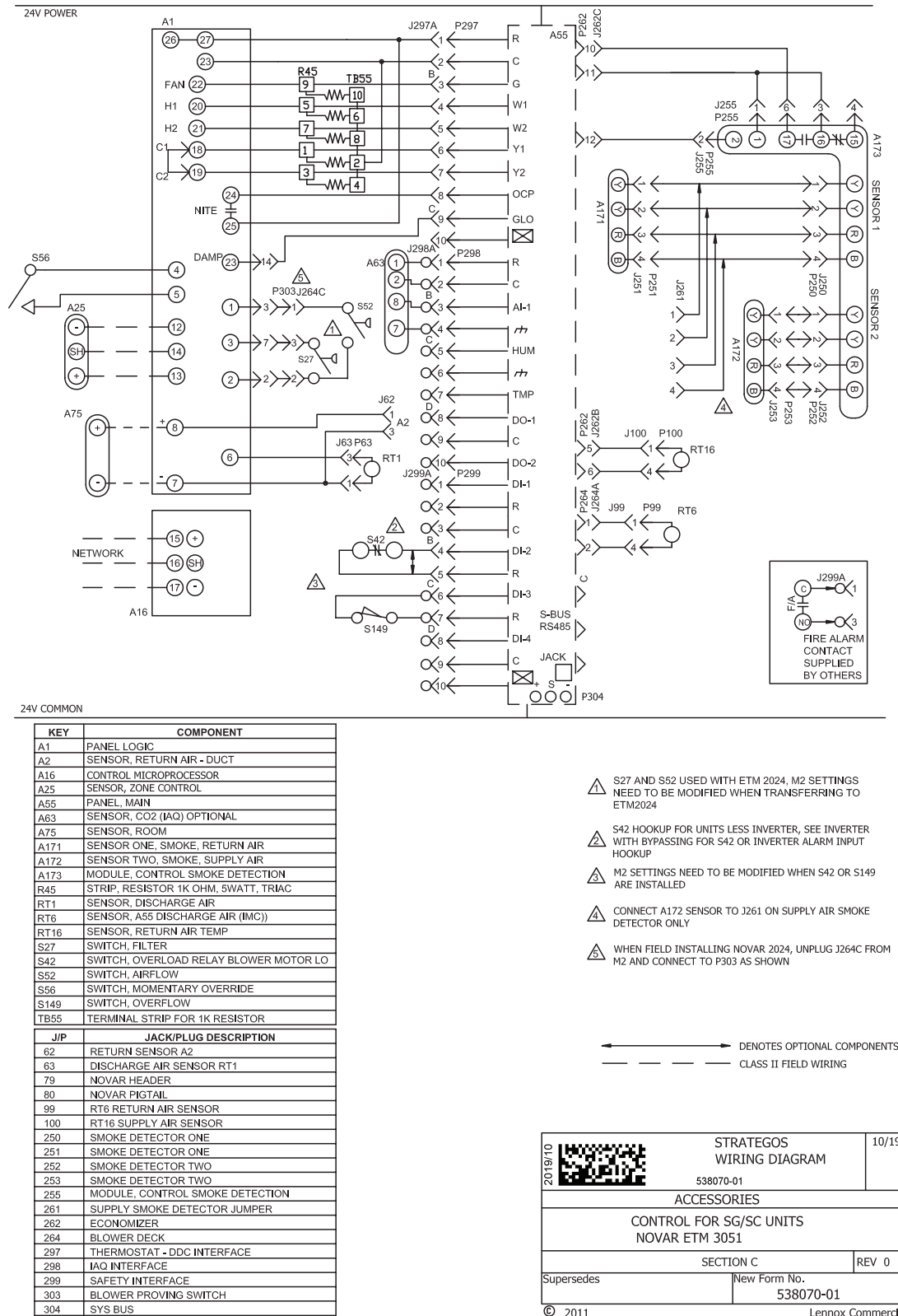


Figure 13. Control for NOVAR 3051 Units

