

**INSTALLATION INSTRUCTIONS FOR NOVAR 2024 DDC KIT LB-114470E (86W93) & LB-114470F (86W94) USED WITH SCC/SGC UNITS**

**Shipping & Packing List**

Package 1 of 1 contains:

- 1 - NOVAR 2024 DDC assembly (A1)
- 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

**Application**

The NOVAR 2024 DDC is used with SCC/SGC series units.

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 controls 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.

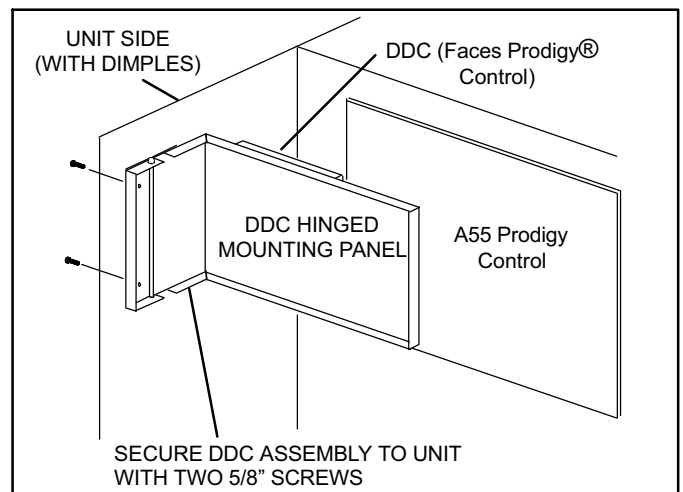
**⚠ WARNING**



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.

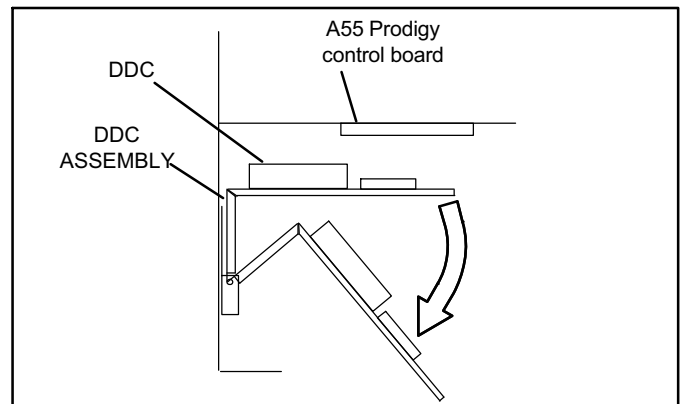
**Installation**

1. Disconnect all electrical power to unit.
2. Open compressor section access doors.
3. Depending on the size of unit, perform step 4 or 5.
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**

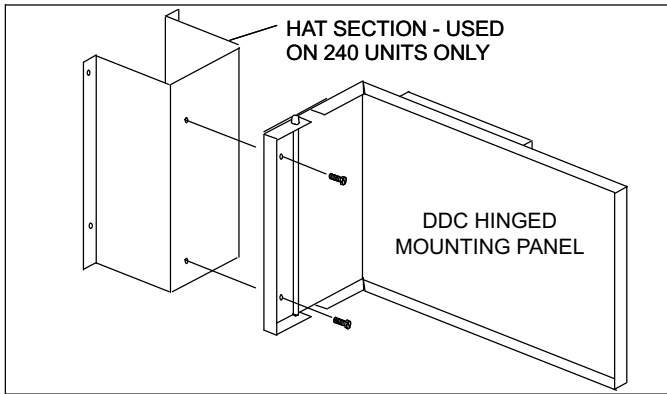
Pivot hinged panel away from Prodigy® control board to access the DDC. See figure 2.



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

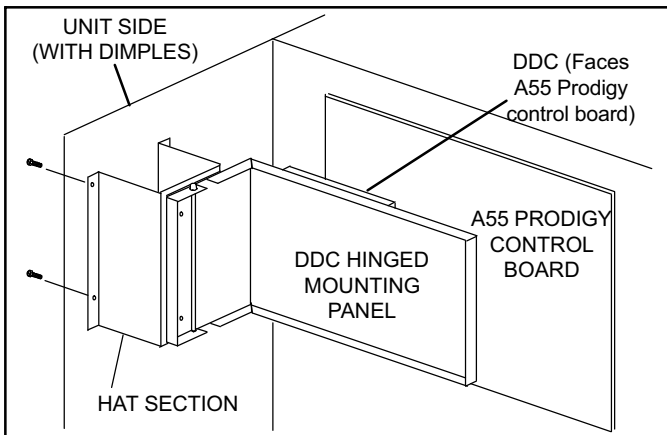


5. **240 Units:**—Attach the hat section provided in the kit to the DDC assembly using two 5/8" screws (see figure 3.)



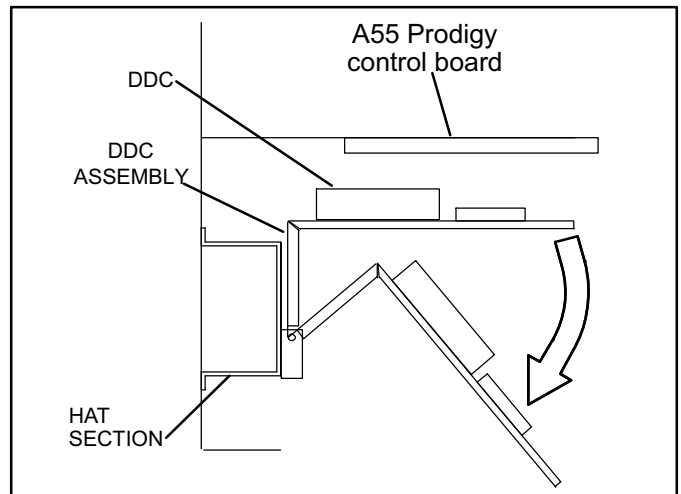
**Figure 3. 240 Units - Attaching DDC Hinged Mounting Panel to Hat Section**

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**

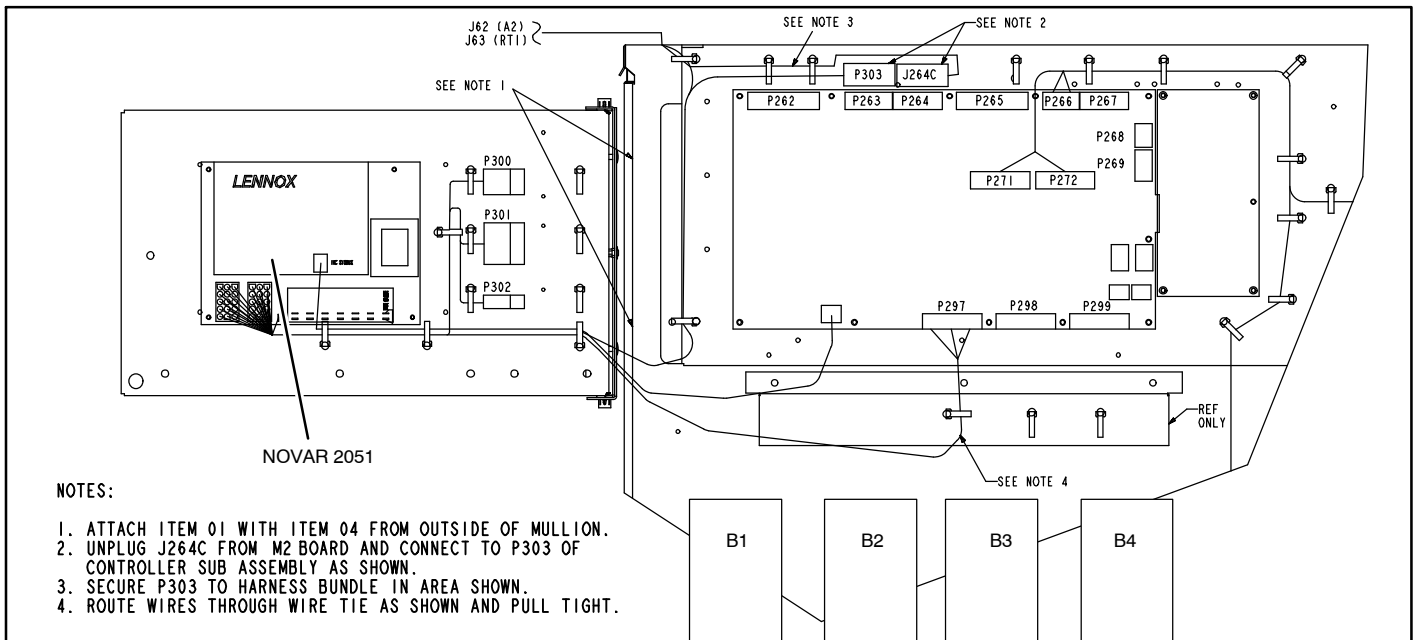
Pivot hinged panel away from A55 Prodigy control board to access DDC (see figure 5).



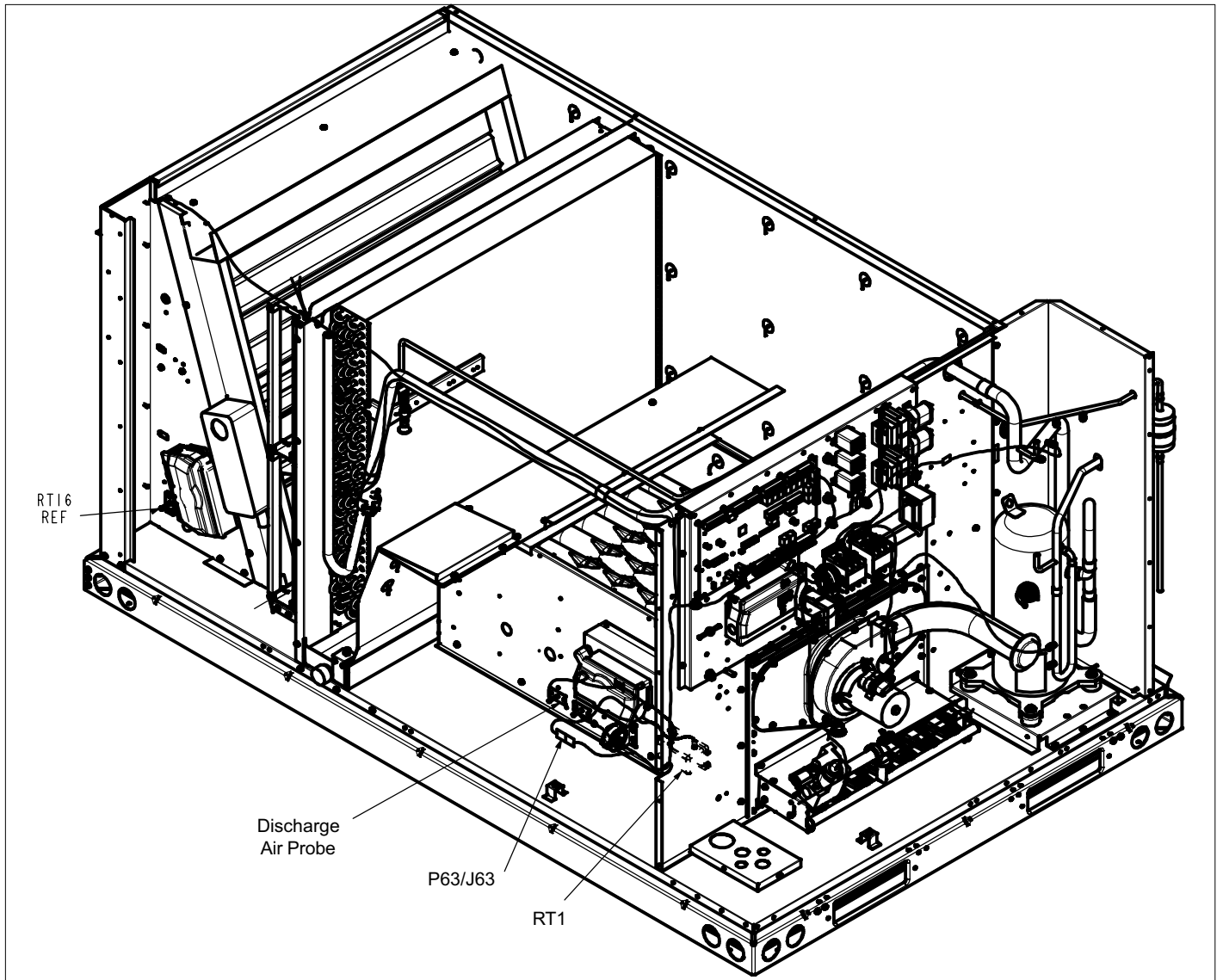
**Figure 5. 240 Units - Accessing DDC (Top View)**

Route harnesses coming from sub-assembly as shown in figure 6 for the following steps 1 through 3.

1. 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. SCC/SGC 036/060 units: see Figure 7. SCC/SGC 120/240 units: see Figure 8.



**Figure 6. Connecting DDC Jack/Plugs**



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

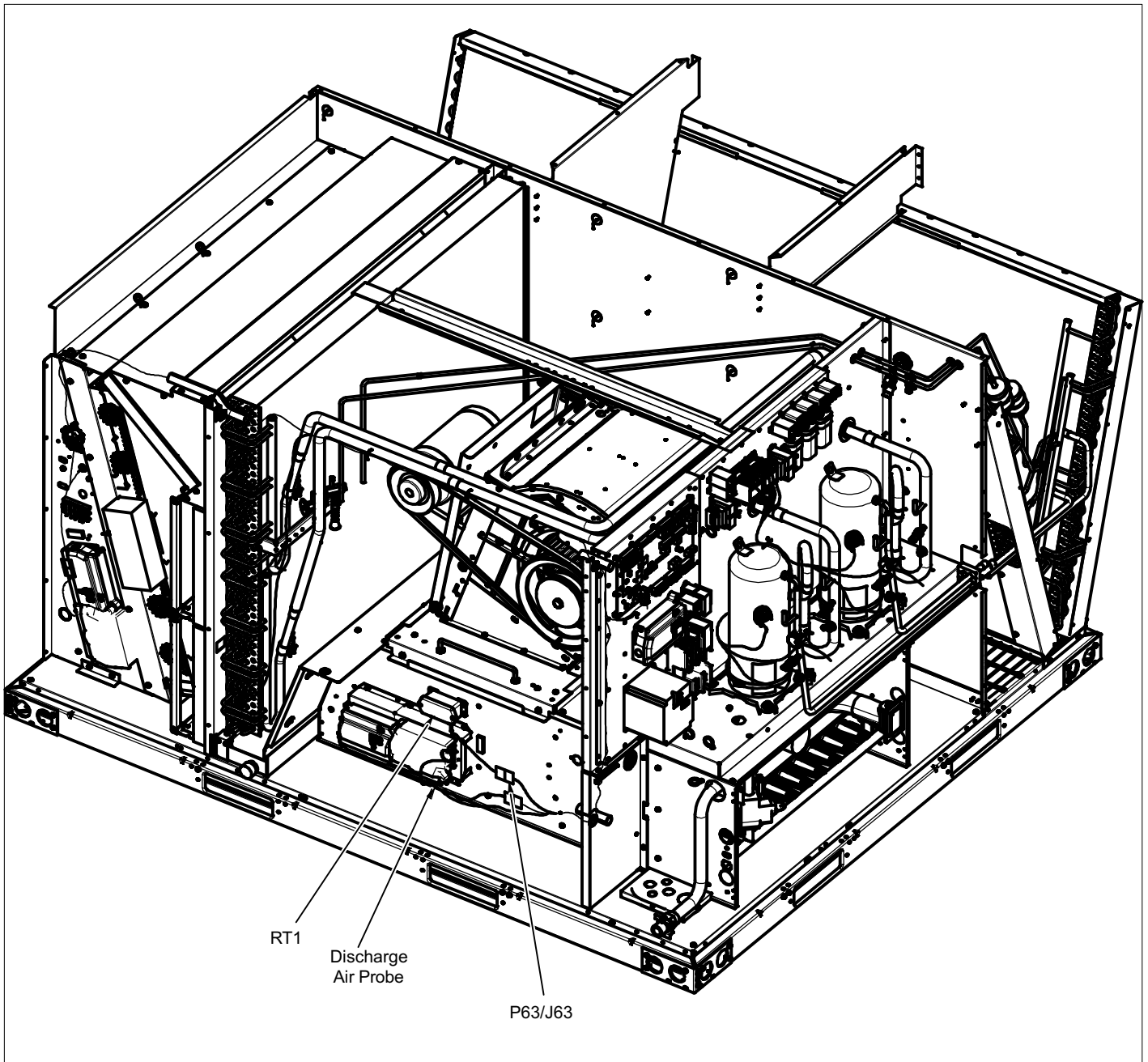
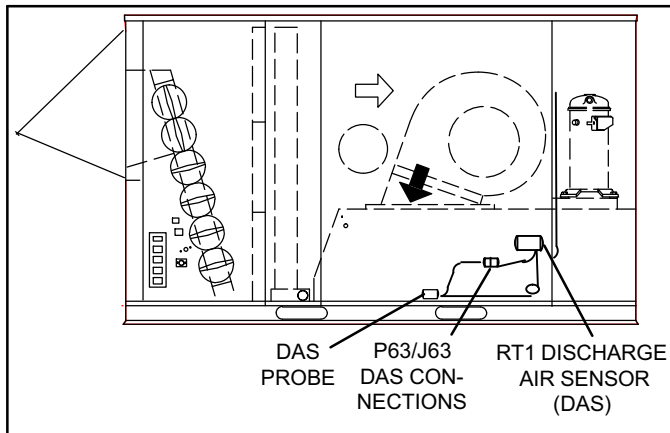


Figure 8. Routing J63 RT1 Harness (120,240 Units)

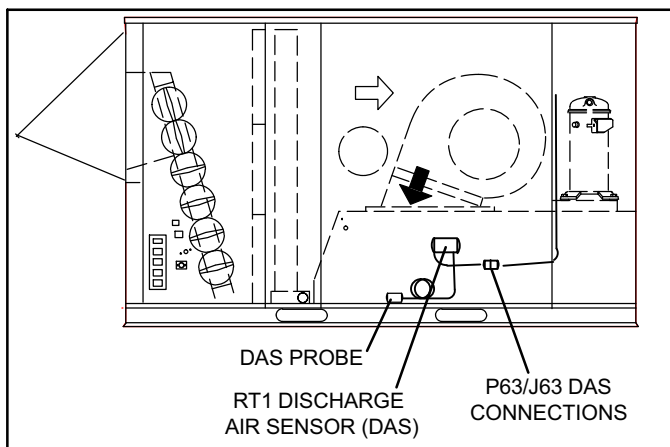
## Discharge Air Sensor RT1

1. Insert discharge air sensor probe into knockout as shown in figure 9 (036, 060 units) or figure 10 (120, 240 units). Secure with two screws provided.



**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)**

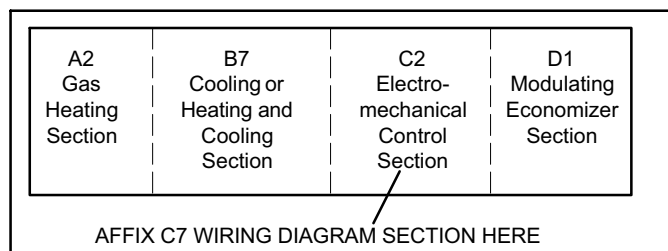
## Wiring

### Field Wiring

Controls contractor completes field wiring connections to optional system components shown in dotted lines in figure 12.

### 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.

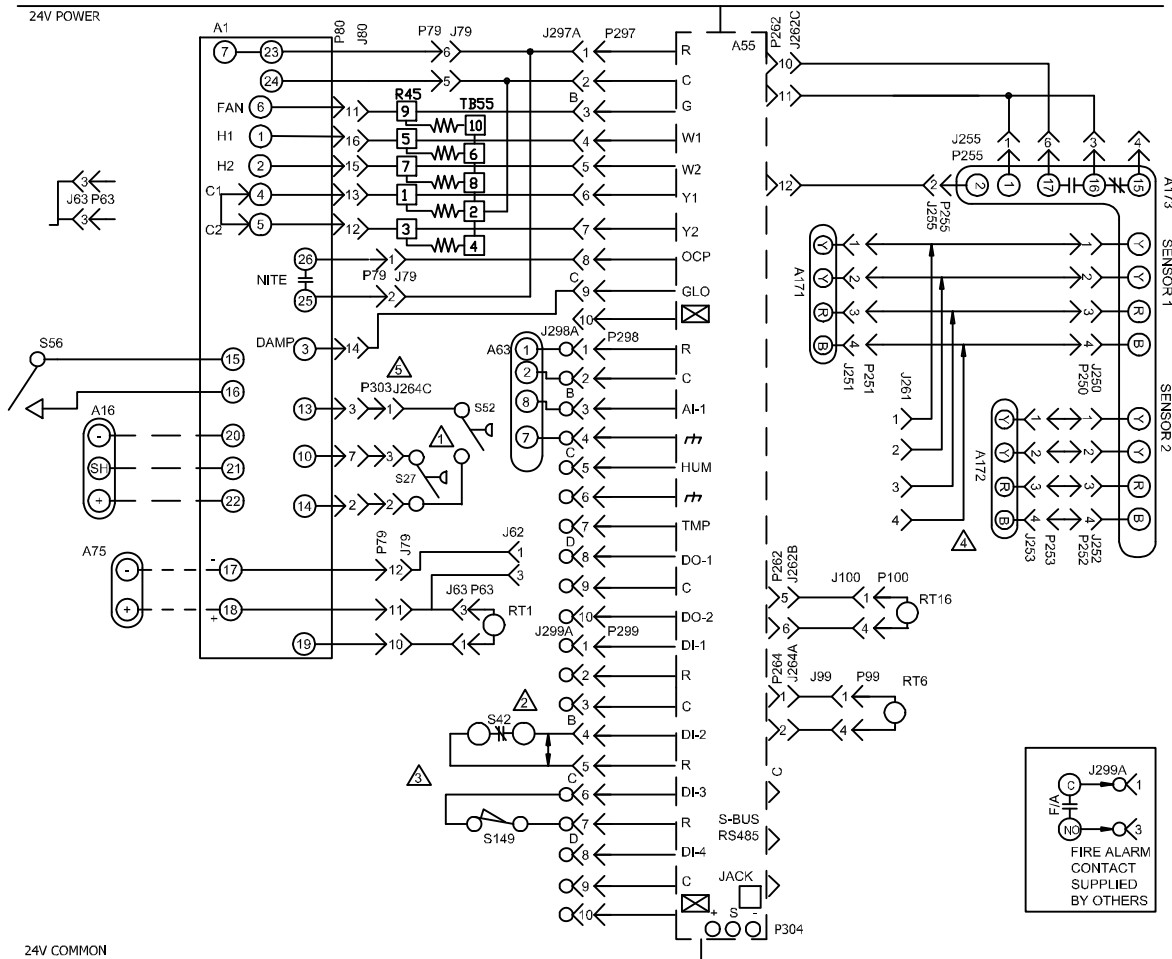


**Figure 11. Complete System Diagram**

### 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.



KEY	COMPONENT
A1	PANEL LOGIC
A16	CONTROL MICROPROCESSOR
A55	PANEL, MAIN
A63	SENSOR, CO2 (IAQ) OPTIONAL
A75	SENSOR, ROOM
A171	SENSOR ONE, SMOKE, RETURN AIR
A172	SENSOR TWO, SMOKE, SUPPLY AIR
A173	MODULE, CONTROL SMOKE DETECTION
R45	STRIP, RESISTOR 1K OHM, 5WATT, TRIAC
RT1	SENSOR, DISCHARGE AIR
RT6	SENSOR, A65 DISCHARGE AIR (IMC)
RT16	SENSOR, RETURN AIR TEMP
S27	SWITCH, FILTER
S42	SWITCH, OVERLOAD RELAY BLOWER MOTOR LO
S52	SWITCH, AIRFLOW
S56	SWITCH, MOMENTARY OVERRIDE
S149	SWITCH, OVERFLOW
TB55	TERMINAL STRIP FOR 1K RESISTOR

J/P	JACK/PLUG DESCRIPTION
62	RETURN SENSOR A2
63	DISCHARGE AIR SENSOR RT1
79	NOVAR HEADER
80	NOVAR FIGTAIL
99	RT6 RETURN AIR SENSOR
100	RT16 SUPPLY AIR SENSOR
250	SMOKE DETECTOR ONE
251	SMOKE DETECTOR ONE
252	SMOKE DETECTOR TWO
253	SMOKE DETECTOR TWO
255	MODULE, CONTROL SMOKE DETECTION
261	SUPPLY SMOKE DETECTOR JUMPER
262	ECONOMIZER
284	BLOWER DECK
297	THERMOSTAT - DDC INTERFACE
298	IAQ INTERFACE
299	SAFETY INTERFACE
303	BLOWER PROVING SWITCH
304	SYS BUS

- ⚠ S27 AND S52 USED WITH ETM 2024, M2 SETTINGS NEED TO BE MODIFIED WHEN TRANSFERRING TO ETM/2024
- ⚠ S42 HOOKUP FOR UNITS LESS INVERTER, SEE INVERTER WITH BYPASSING FOR S42 OR INVERTER ALARM INPUT HOOKUP
- ⚠ M2 SETTINGS NEED TO BE MODIFIED WHEN S42 OR S149 ARE INSTALLED
- ⚠ CONNECT A172 SENSOR TO J261 ON SUPPLY AIR SMOKE DETECTOR ONLY
- ⚠ WHEN FIELD INSTALLING NOVAR 2024, UNPLUG J264C FROM M2 AND CONNECT TO P303 AS SHOWN

— DENOTES OPTIONAL COMPONENTS  
 - - - CLASS II FIELD WIRING

	STRATEGOS WIRING DIAGRAM	11/11
	ACCESSORIES	
CONTROL FOR SG/SC UNITS NOVAR ETM 2024		
SECTION C		REV 0
Supersedes 537203-01	New Form No. 537479-01	

Figure 12. Control for SCC/SGC Units - NOVAR 2024