

ACCESSORY KIT INSTALLATION INSTRUCTIONS

Single Enthalpy Kit & Required For Reheat Units 2EC0401 FOR USE WITH Smart Equipment™ CONTROLS ON 3-25 TON UNIT

GENERAL

This kit is required for reheat unit performance as well as to convert a dry-bulb economizer unit to a single enthalpy unit.

For reheat units, this sensor must be placed in the space or in the Return Air duct in order to sense the space humidity.

For non-reheat units, this sensor can be placed in the Outdoor Air Section of the unit to provide OAH (Outdoor Air Humidity) to provide single enthalpy operation.

Table 1: CONTENTS OF KIT – 2EC0401

ITEM	PN	DESC	QTY
1	5159977	Humidity Sensor w/ mounting plate	1
2	1066369	848-short 24" Red Wire	1
3	1182638	848-long 108" Red Wire	1
4	1066370	849-short 24" White Wire	1
5	1182640	849-long 108" White Wire	1
6	1066531	850-short 24" Black Wire	1
7	1183182	850-long 108" Black Wire	1
8	5803	#10 Screw	2
9	1063783	Install Manual	1

INSTALLATION

DETERMINE INTO WHICH UNIT THE KIT IS TO BE INSTALLED.

- For non-reheat units see section A
- For all 3 To 6 and 15 To 25 (ZR 036-060, ZR 078-150, ZR 180-300) Ton Reheat units see section B
- For 3 to 12.5 Ton (ZR 037-061, ZK A3-A5, ZR 078-150, ZK 06-12) Reheat Units see section C

TOOLS REQUIRED FOR INSTALLATION

(Not provided in this kit)

- Hex nut driver 5/16"
- Small flat head screwdriver
- Phillips screwdriver

DIP SWITCH

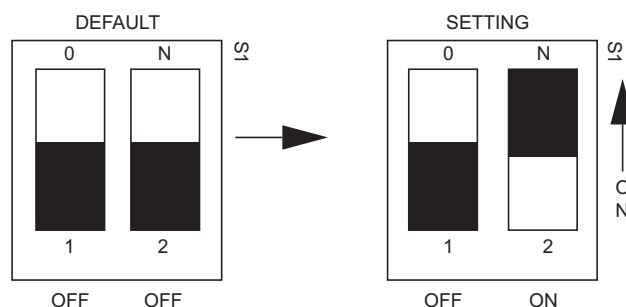


FIGURE 1 - DIP SWITCH SETTINGS FOR ALL UNITS

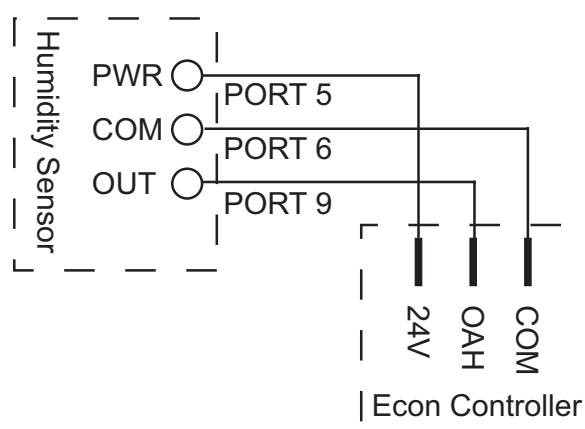


FIGURE 2 - WIRING FOR OUTDOOR AIR HUMIDITY

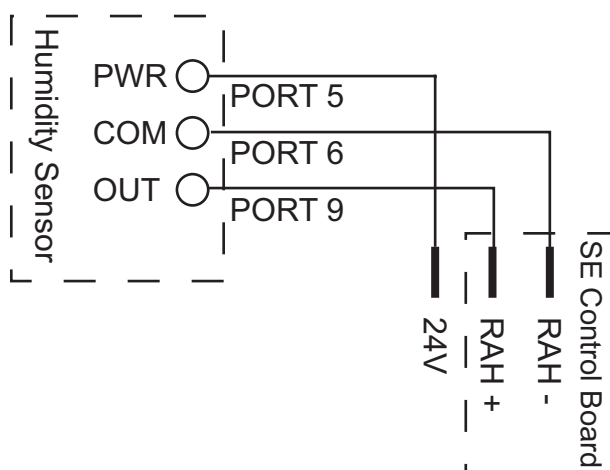


FIGURE 3 - WIRING FOR RETURN AIR HUMIDITY

SECTION A – NON-REHEAT

1. Power down the unit.
2. Install Lockout-Tagout devices to electrical disconnects. Verify all power sources are de-energized using a volt meter.
3. Disconnect power and follow all safety procedures.
4. Remove the outside air hood (economizer hood), and filter access panel. Keep the screws.
5. Separate the front face plate and back of the humidity sensor by sliding out at the top.
6. Switch 1 to OFF, Switch 2 to ON. Ensure DIP switch settings are as shown in Figure 1.
7. Attach wiring that came in this kit between Economizer controller and humidity sensor. See Figure 2.
 - 848/R: Port 5 (24V PWR) on sensor to 24VAC on Economizer Control Board
 - 849/W: Port 9 (OUT) on sensor to OAH on Economizer Control Board
 - 850/BK: Port 6 (COM) on sensor to COM on Economizer Control Board
8. Mount the sensor along the top side of the economizer partition as shown in Figures 4 -7.
9. Reattach front face plate of the humidity sensor and tighten the small screw on the top. Use the screws provided in this kit.

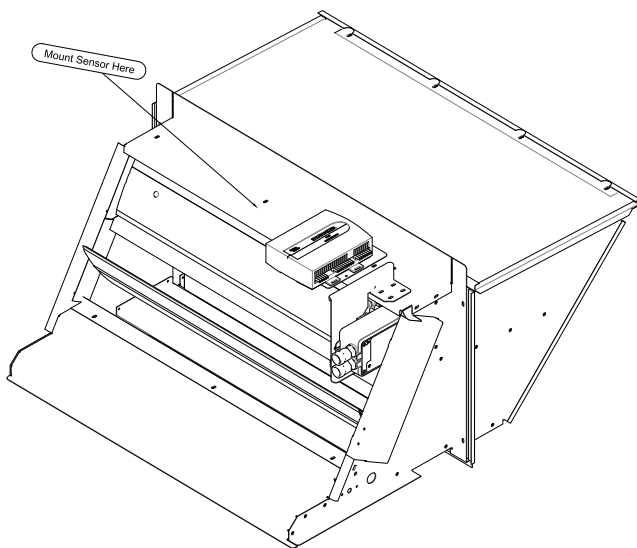


FIGURE 4 - 3-12.5 TON HUMIDITY SENSOR LOCATION

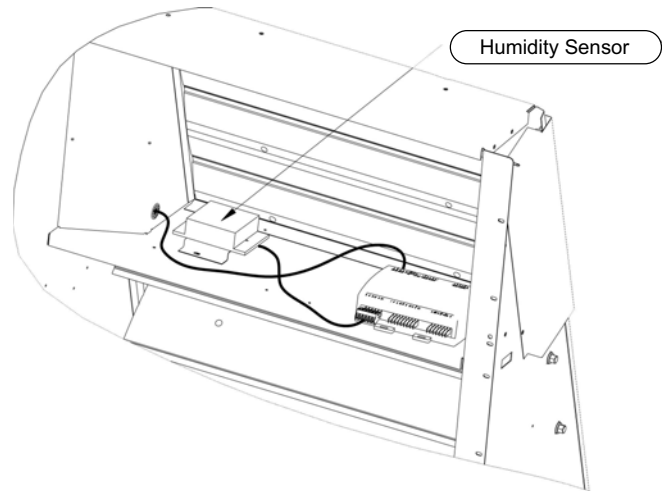


FIGURE 5 - 3-12.5 TON HUMIDITY SENSOR LOCATION

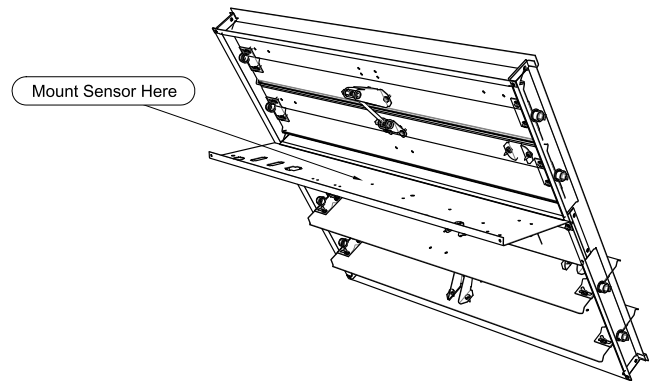


FIGURE 6 - 3-6 TON HUMIDITY SENSOR LOCATION

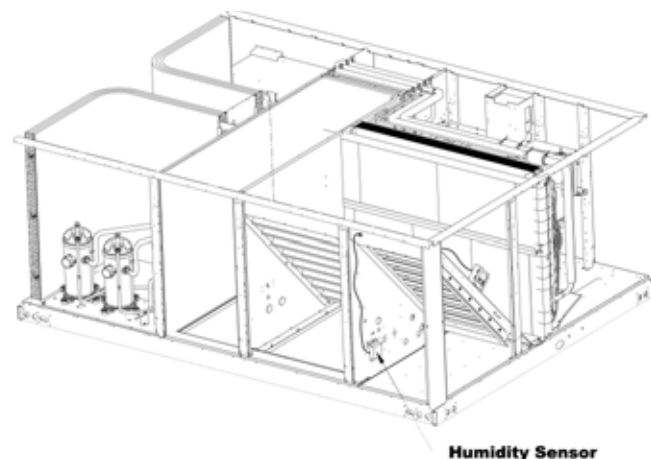


FIGURE 7 - 15-25 TON HUMIDITY SENSOR LOCATION

SECTION B – 3 TO 6 AND 15 TO 25 TON REHEAT UNITS

1. Power down the unit.
2. Install Lockout-Tagout devices to electrical disconnects. Verify all power sources are de-energized using a volt meter.
3. Disconnect power and follow all safety procedures.
4. Remove the appropriate panels to access the economizer section (depending if the unit is a horizontal or down-flow application).
5. Separate the front face plate and back of the humidity sensor by sliding out at the top.
6. Switch 1 to OFF, Switch 2 to ON. Ensure DIP switch settings are as shown in Figure 1.
7. Locate the 3 wires (R,W,B) in the Return section of the unit. See Figure 3.
 - 823/R: Port 5 (24V PWR) on sensor to 24VAC on Unit Control Board
 - 825/W: Port 9 (OUT) on sensor to (RAH +) on the Unit Control Board
 - 824/BK: Port 6 COM on the sensor to (RAH- on the unit control board
8. Mount sensor in the Return Air section of the unit or in the Return Air ductwork as shown in Figures 8-9.
9. Reattach front face plate of the humidity sensor and tighten the small screw on the top. Use the screws provided in this kit.

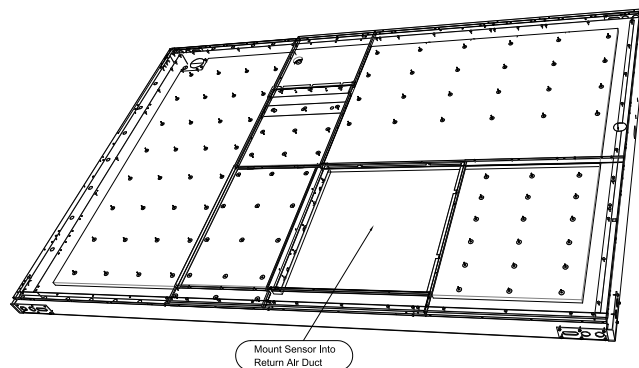


FIGURE 8 - 15-25 TON HUMIDITY SENSOR LOCATION

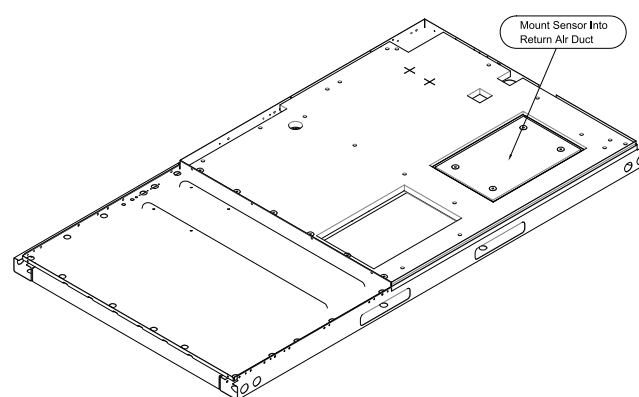


FIGURE 9 - 3-6 TON HUMIDITY SENSOR LOCATION

SECTION C – 3 TO 12.5 TON (ZR 037-061, ZK A3-A5, ZR 078-150, ZK 06-12) REHEAT UNITS

1. Power down the unit.
2. Install Lockout-Tagout devices to electrical disconnects. Verify all power sources are de-energized using a volt meter.
3. Disconnect power and follow all safety procedures.
4. Remove the appropriate panels to access the economizer section (depending if the unit is a horizontal or down-flow application).
5. Separate the front face plate and back of the humidity sensor by sliding out at the top.
6. Switch 1 to OFF, Switch 2 to ON. Ensure DIP switch settings are as shown in Figure 1.
7. Locate the 3 wires (R,W,B) in the Return section of the unit. See Figure 3.
 - 388/R: Port 5 (24V PWR) on sensor to 24VAC TB2-1 terminal block
 - 362/W: Port 9 (OUT) on sensor to (RAH +) on the Unit Control Board

- 364/BK: Port 6 (COM) on sensor to (RAH-) on unit Control Board
8. Mount sensor in the Return Air section of the unit or in the Return Air ductwork as shown in Figure 10.
 9. Reattach front face plate of the humidity sensor and tighten the small screw on the top. Use the screws provided in this kit.

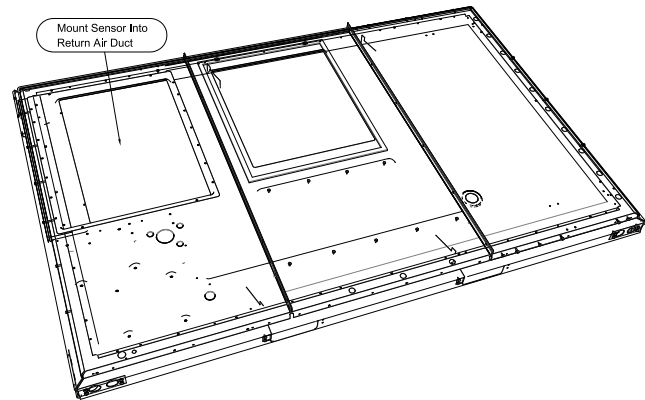


FIGURE 10 - 3-12.5 TON HUMIDITY SENSOR LOCATION

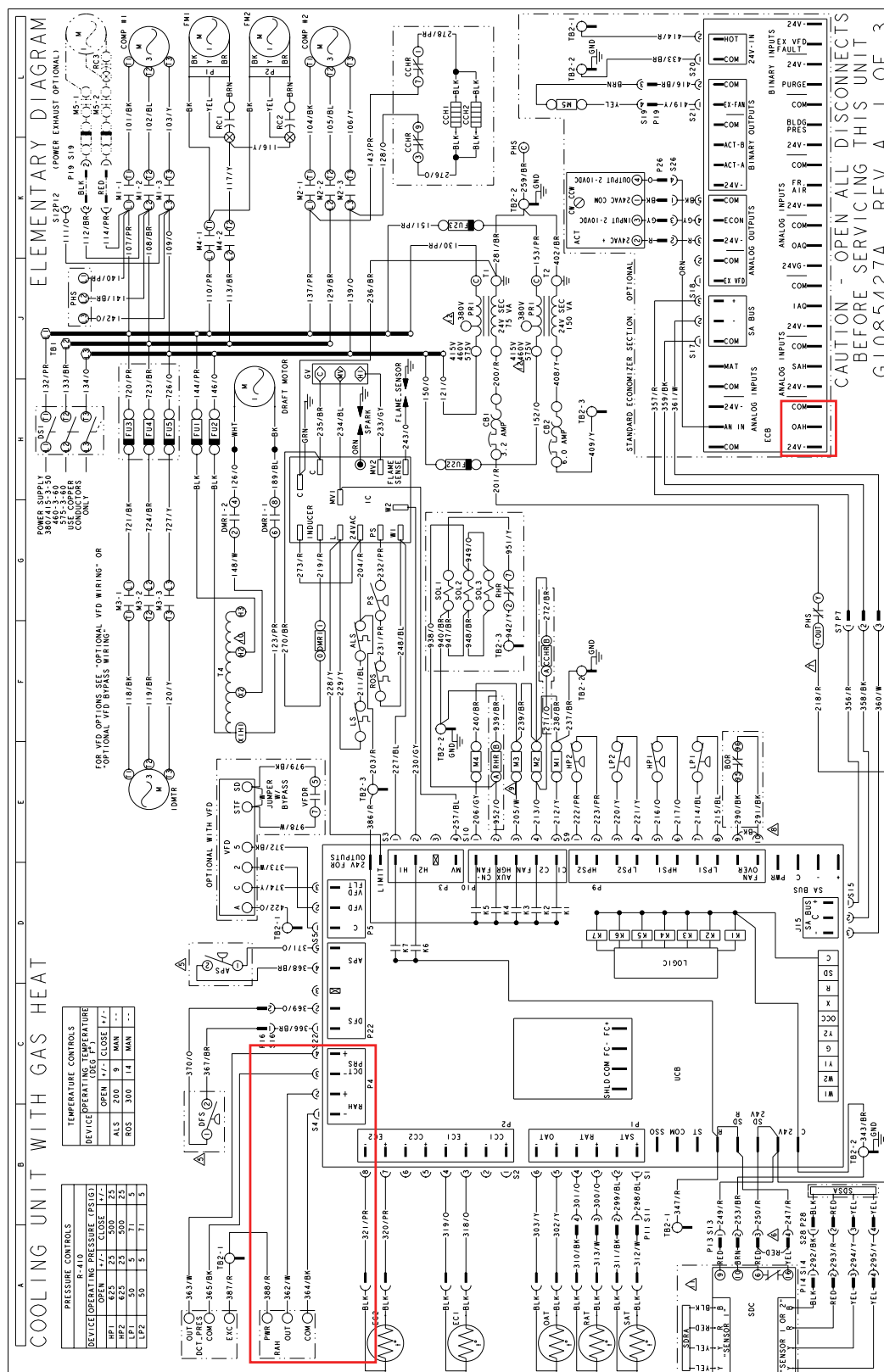


FIGURE 11 - TYPICAL 3-12.5 TON WIRING DIAGRAM

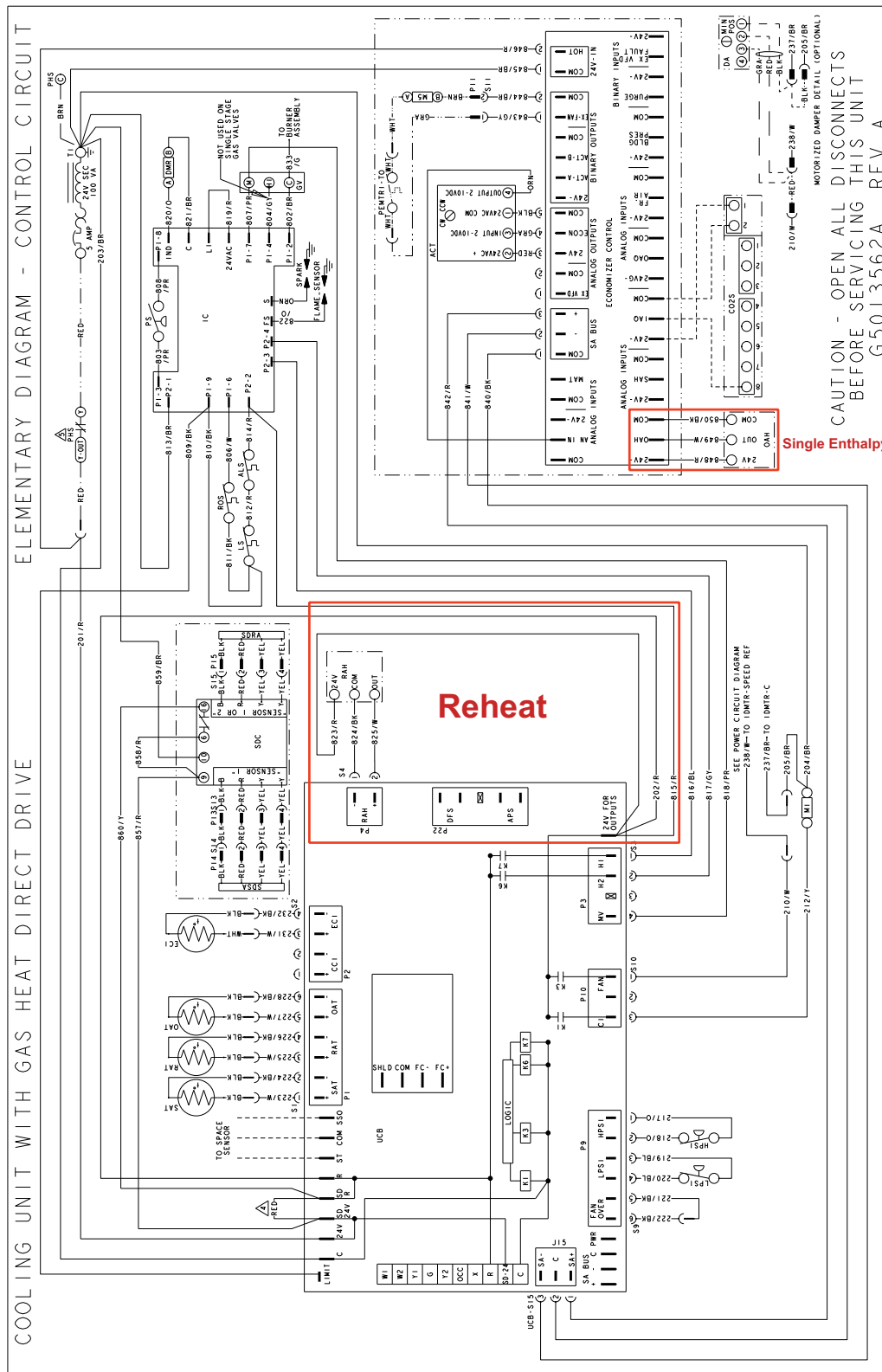


FIGURE 12 - TYPICAL 3-6 TON, 3-12.5 TON CDR AND 15-25 TON WIRING DIAGRAM

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