

INSTALLATION INSTRUCTION

INSTALLATION INSTRUCTIONS FOR POWER EXHAUST USED WITH Q5SN AND R4G(M,N)-090/120 (R-22) UNITS AND P6SP, R6SP, Q6SP-072/120 (R410A) UNITS

FORM # 610A-0709 (610A-0808)

I - Shipping and Packing List

Package 1 of 1 contains:

- 1 - Power Exhaust Assembly
- 1 - Barometric Relief Hood
- 6 - #10 x 1/2 x 16 Hex Tec
- 1 - End Switch
- 1 - 1 1/2" Wire Grommet

Check contents for shipping damage. Contact the last carrier immediately if any shipping damage is found.

II - Application

Power exhaust can be used in down flow and horizontal economizer applications. This power exhaust is designed to relieve excess pressure that may occur with economizers or certain building conditions. All fan motors are recognized by UL. Permanently lubricated ball bearing and motor overload protection are standard.

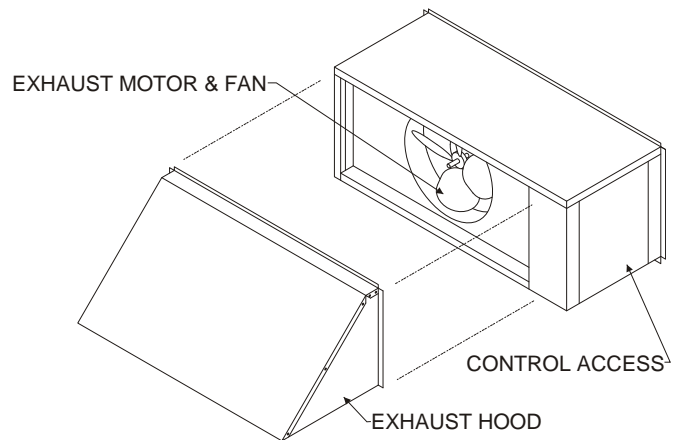


Figure 1

6, 7.5 and 10 Ton Package Systems - R4GM, R4GN, R6GP, P4SM, P4SN, P6SP, Q5SN, and Q6SP Series											
Unit Model	Nortek Global HVAC Part No.	Volts	Phase	No. of Fans	HP	High Speed		FLA	Fuse	MCA	MOP
						CFM	RPM				
R6GP and P6SP- 072* Series R4GM, R4GN, and R6GP - 090* Series P4SM, P4SN, and P6SP - 090* Series	547867	208	3	1	0.5	2350	1725	2.50	6A	3.13	5.63
		230						3.00	6A	3.75	6.75
	547868	460	3	1	0.5	2350	1725	1.50	3A	1.88	3.38
	547890	575	3	1	0.5	2385	1750	0.88	2A	1.10	1.98
R4GM, R4GN, and R6GP- 120* Series P4SM, P4SN, and P6SP- 120* Series Q5SN and Q6SP - 090*/120* Series	547876	208	3	1	0.75	4900	1140	4.00	9A	5.00	9.00
		230						4.00	9A	5.00	9.00
	547877	460	3	1	0.75	4900	1140	2.00	4A	2.50	4.50
	547891	575	3	1	0.75	4900	1140	1.50	3A	1.88	3.38

Note:
1. CFM is per fan curve @ 0.1" w.c. external static pressure
2. Applicable to R6GP, P6SP, Q5SN, and Q6SP Models only.

Table 1

Read these instructions in their entirety before proceeding with the installation of the power exhaust unit, control components, and its wiring.

Warning:

This kit is to be installed by a qualified service technician in accordance with these instructions and all codes having jurisdiction. Failure to follow these instructions could result in serious injury, property damage, or death. These instructions are primarily intended to assist qualified individuals experienced in the proper installation of this appliance. Some local codes require licensed installation/service personnel for this type of equipment.

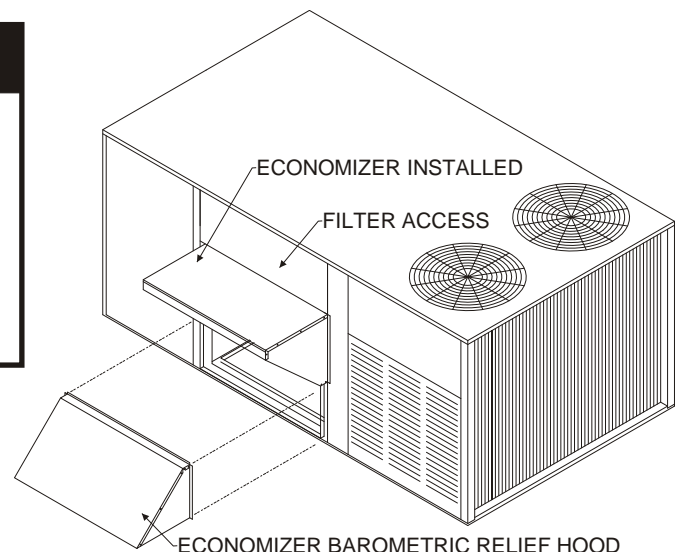


Figure 2

III - Installation and Electrical Connections

1. Disconnect all power to unit.
2. Cut and discard wire tie securing wire bundle to the damper motor

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Important - DO NOT cut other wires. Inspect for damaged connections or loose wires.

3. Remove the barometric relief hood of economizer, if previously installed, and retain screws for later use. See Figure 2.

Notice to Installer: This accessory provides a switch for sensing economizer operation and will need to be mounted and wired to the economizer prior to installation of the power exhaust unit. See installation instructions provided with the switch for set up and connection to economizer for proper power exhaust operation.

Warning:

All electrical wiring must comply with the latest edition of the National Electrical Code (NEC) - NFPA 70.

For R4G(M,N)- 090/ 120 (R-22) Models - IMPORTANT: See unit rating label before operating this accessory to ensure correct field supply wire size has been installed to the unit for proper operation of this accessory.

4. Remove plastic hole plug (located on economizer panel between fresh air and return air vanes) and replace with 1 ½" bushing supplied with this kit.
5. Route power exhaust high voltage supply wiring with quick connect plug up through bushing and connect to unit power exhaust plug located to the top right above unit filter rack assembly next to unit economizer plug. Ensure all wiring is secured and away from the economizer vane travel.
6. Route power exhaust micro switch and low voltage control wiring up through bushing and follow installation instructions provided with the switch. Ensure all wiring is secured and away from the economizer vane travel.

For Q5SN- 090/120 (R-22) Models and R6GP, P6SP, Q6SP – 072/090/120 (R410A) Models -

NOTE: Application of this accessory on Q5SN-090/120 or R6GP and (P6,Q6)SP–072/090/ 120 models requires a separate branch circuit be brought to the accessory for proper operation. See Table 1 or the accessory rating label for proper branch circuit electrical requirements. (Field Supplied)

4. Remove plastic hole plug (located on economizer panel between fresh air and return air vanes) and replace with 1 ½" bushing supplied with this kit.
5. Route power exhaust micro switch and low voltage control wiring up through bushing and follow installation instructions provided with the switch. Ensure all wiring is secured and away from the economizer vane travel.
6. Removal of the 6 pin/4 wire harness assembly from the "LINE" side of the power exhaust control fuse block is required prior to field wire attachment. Attach properly sized field wire to control contactor.

DOWN FLOW APPLICATION

7. Secure power exhaust to the unit face with screws provided.
8. Install barometric relief hood in front of exhaust air opening.
9. Reconnect power to the unit. Energize economizer to an opening greater than what the power exhaust activation switch is set for to verify proper accessory operation.

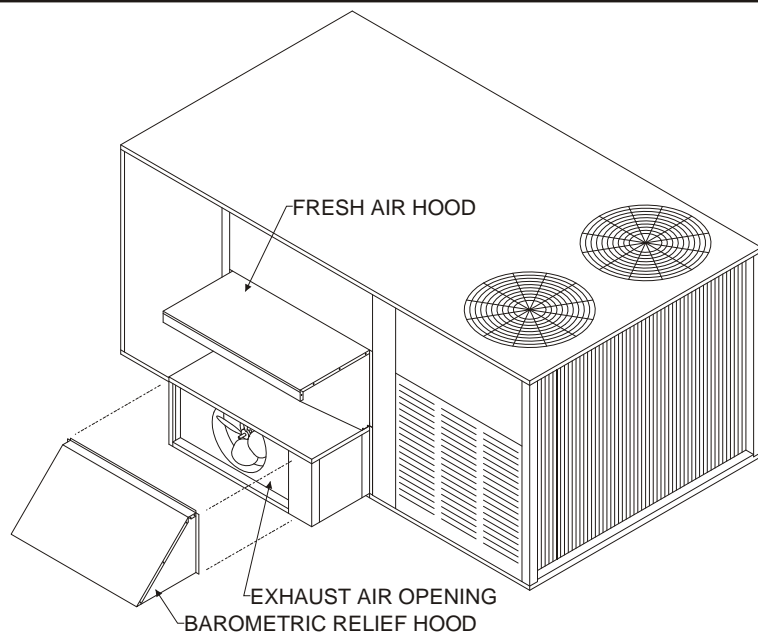


Figure 3

INSTALLATION INSTRUCTION

INSTALLATION INSTRUCTIONS FOR POWER EXHAUST USED WITH Q5SN AND R4G(M,N)-090/120 (R-22) UNITS AND P6SP, R6SP, Q6SP-072/120 (R410A) UNITS

HORIZONTAL APPLICATION

- Secure power exhaust to side face of the horizontal duct over the precut hole with screws provided. Support assembly as required. Caulk all seams to ensure a leak free seal.
- Install barometric relief hood in front of exhaust air opening.
- Reconnect power to the unit. Energize economizer to an opening greater than what the power exhaust activation switch is set for to verify proper accessory operation.

Return Duct Size:

6 and 7.5 Ton Models - 31 1/2" W x 12 3/8" H
10 Ton Models - 31 1/2" W x 19" H

Horizontal duct at unit requires 1" top and bottom flanges and 2 1/2" side flanges for proper mounting and sealing to economizer and unit.

Power Exhaust Air Opening:

6 and 7.5 Ton Models - 30" W x 11 1/2" H
10 Ton Model - 30" W x 18" H

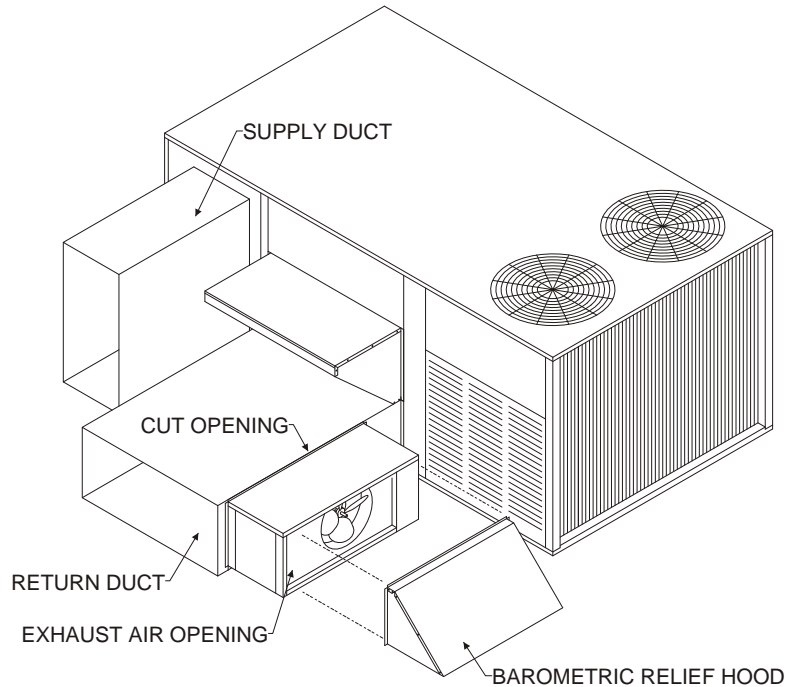


Figure 4

E# = WIRE END DESIGNATION

- E2 STUD #6 18 Ga. Wire
- E3 Female ¼ Quick Disc.
- E4 Male ¼ Quick Disc. Insul
- E6 Wire Nut Size 73B

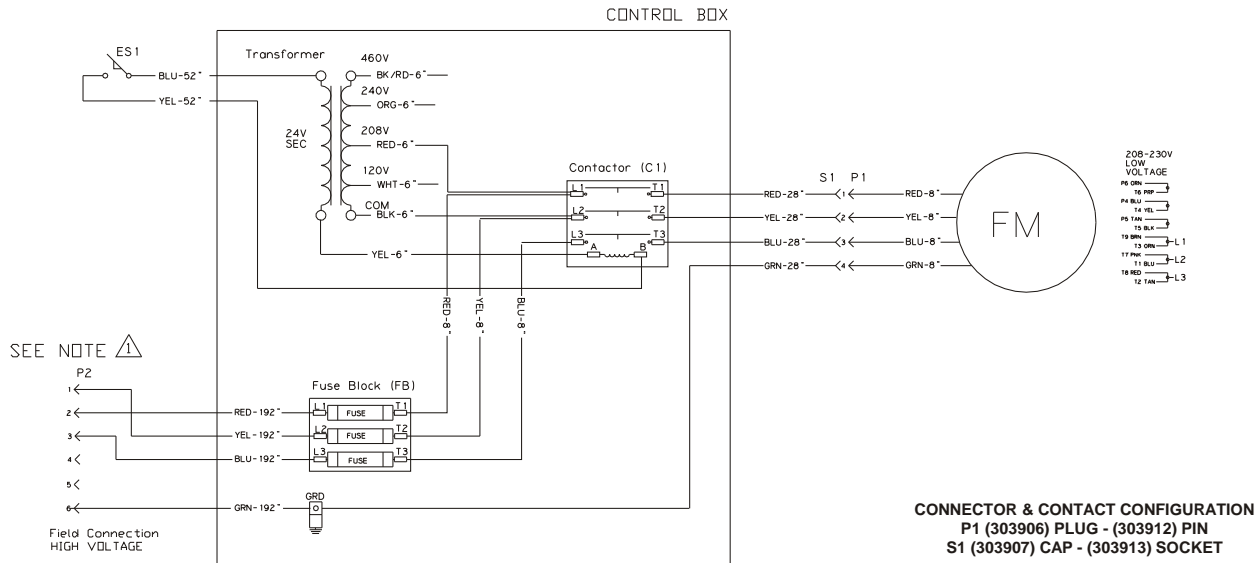
HARNESS LEADS ARE 14 GA. WIRE WITH NO END DESIGNATION

COMPONENT CODE

- C1 Contactor
- ES1 End Switch
- FB Fuse Block
- FM Fan Motor
- GRD Ground
- P1 Fan Plug Male
- P2 Unit Plug Male
- S1 Control Box Female

WIRE COLOR CODE

- | | | | |
|-------|-----------|-----|-------|
| BK/RD | Black/Red | BLK | Black |
| YEL | Yellow | WHT | White |
| ORG | Orange | RED | Red |
| GRN | Green | BLU | Blue |



Notes:

1 For R4G(M,N)- 090/ 120 (R-22) Models - Connect high voltage 6 pin/4 wire wiring harness to unit supplied plug.

For Q5SN- 090/120 (R-22) Models and R6GP, P6SP, and Q6SP - 072/090/120 (R410A) Models - Remove 6 pin/4 wire harness assembly from the "LINE" side of control fuse block and connect properly sized (Field Supplied) branch circuit wiring. See Table 1.

208 Volt 3 Phase Power Exhaust for Q5SN and R4G(M,N)-090/120 and R6GP, P6SP, and Q6SP-072/090/120 Units

Date: July 1, 2009
Supersedes: 04-09-99
Drawn by: MGL
Unit #: 547867 / 547876
Diagram#: 4650713W
Approved by:

E# = WIRE END DESIGNATION

- E2 STUD #6 18 Ga. Wire
- E3 Female ¼ Quick Disc.
- E4 Male ¼ Quick Disc. Insul
- E6 Wire Nut Size 73B

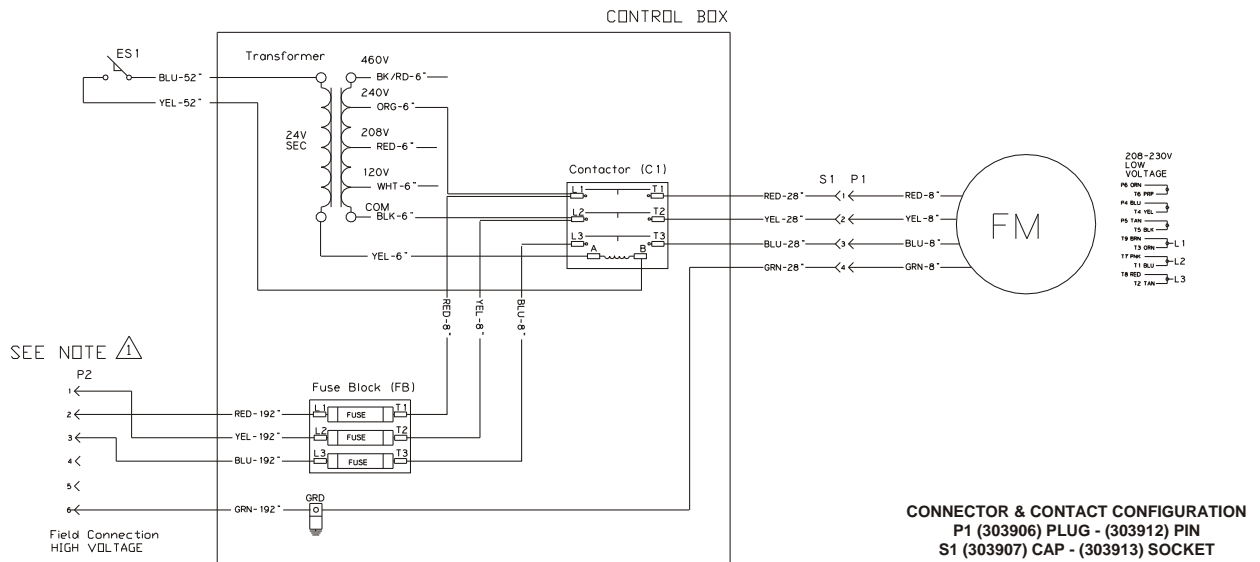
HARNESS LEADS ARE 14 GA. WIRE WITH NO END DESIGNATION

COMPONENT CODE

- C1 Contactor
- ES1 End Switch
- FB Fuse Block
- FM Fan Motor
- GRD Ground
- P1 Fan Plug Male
- P2 Unit Plug Male
- S1 Control Box Female

WIRE COLOR CODE

- | | | | |
|-------|-----------|-----|-------|
| BK/RD | Black/Red | BLK | Black |
| YEL | Yellow | WHT | White |
| ORG | Orange | RED | Red |
| GRN | Green | BLU | Blue |



Notes:

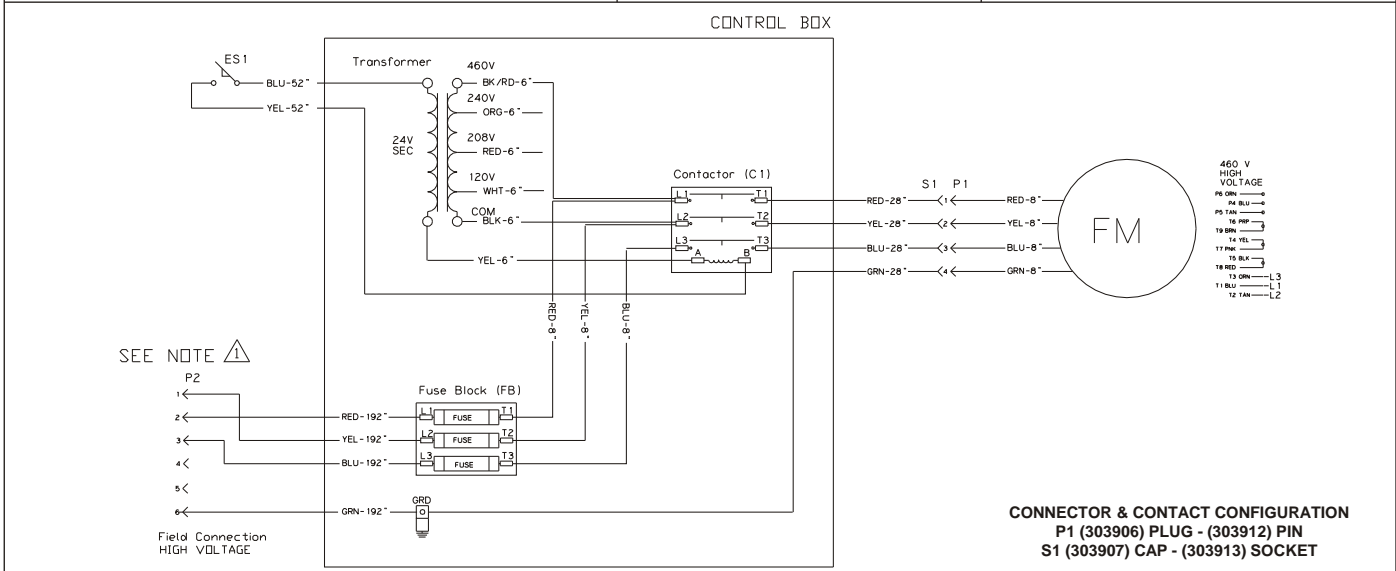
1 For R4G(M,N)- 090/ 120 (R-22) Models - Connect high voltage 6 pin/4 wire wiring harness to unit supplied plug.

For Q5SN- 090/120 (R-22) Models and R6GP, P6SP, and Q6SP - 072/090/120 (R410A) Models - Remove 6 pin/4 wire harness assembly from the "LINE" side of control fuse block and connect properly sized (Field Supplied) branch circuit wiring. See Table 1.

230 Volt 3 Phase Power Exhaust for Q5SN and R4G(M,N)-090/120 and R6GP, P6SP, and Q6SP-072/090/120 Units

Date: July 1, 2009
Supersedes: 04-09-99
Drawn by: MGL
Unit #: 547867 / 547876
Diagram#: 4650723W
Approved by:

E# = WIRE END DESIGNATION	COMPONENT CODE	WIRE COLOR CODE
E2 STUD #6 18 Ga. Wire	C1 Contactor	BK/RD Black/Red BLK Black
E3 Female ¼ Quick Disc.	ES1 End Switch	YEL Yellow WHT White
E4 Male ¼ Quick Disc. Insul	FB Fuse Block	ORG Orange RED Red
E6 Wire Nut Size 73B	FM Fan Motor	GRN Green BLU Blue
	GRD Ground	
	P1 Fan Plug Male	
	P2 Unit Plug Male	
	S1 Control Box Female	



Notes:

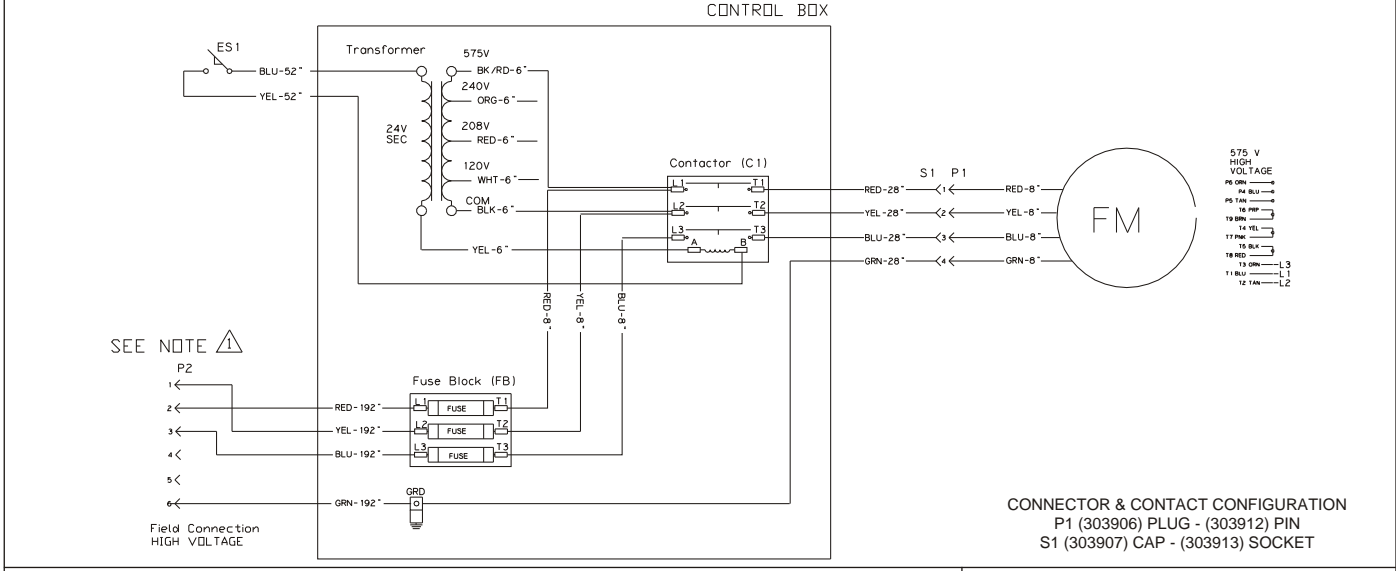
1 For R4G(M,N)- 090/ 120 (R-22) Models - Connect high voltage 6 pin/4 wire wiring harness to unit supplied plug.

For Q5SN- 090/120 (R-22) Models and R6GP, P6SP, and Q6SP - 072/090/120 (R410A) Models - Remove 6 pin/4 wire harness assembly from the "LINE" side of control fuse block and connect properly sized (Field Supplied) branch circuit wiring. See Table 1.

460 Volt 3 Phase Power Exhaust for
 Q5SN and R4G(M,N)-090/120 and R6GP, P6SP, and
 Q6SP-072/090/120 Units

Date: July 1, 2009
Supercedes: 04-09-99
Drawn by: MGL
Unit #: 547868 / 547877
Diagram#: 4650733W
Approved by:

E# = WIRE END DESIGNATION	COMPONENT CODE	WIRE COLOR CODE
E2 STUD #6 18 Ga. Wire	C1 Contactor	BK/RD Black/Red BLK Black
E3 Female ¼ Quick Disc.	ES1 End Switch	YEL Yellow WHT White
E4 Male ¼ Quick Disc. Insul	FB Fuse Block	ORG Orange RED Red
E6 Wire Nut Size 73B	FM Fan Motor	GRN Green BLU Blue
	GRD Ground	
	P1 Fan Plug Male	
	P2 Unit Plug Male	
	S1 Control Box Female	



Notes:

1 For R4G(M,N)- 090/ 120 (R-22) Models - Connect high voltage 6 pin/4 wire wiring harness to unit supplied plug.

For Q5SN- 090/120 (R-22) Models and R6GP, P6SP, and Q6SP - 072/090/120 (R410A) Models - Remove 6 pin/4 wire harness assembly from the "LINE" side of control fuse block and connect properly sized (Field Supplied) branch circuit wiring. See Table 1.

575 Volt 3 Phase Power Exhaust for
 Q5SN and R4G(M,N)-090/120 and R6GP, P6SP, and
 Q6SP-072/090/120 Units

Date: July 1, 2009
Supercedes: 04-09-99
Drawn by: MGL
Unit #: 547890 / 547891
Diagram#: 4650743W
Approved by: