

HORIZONTAL PROP POWER EXHAUST FOR 3-12.5 TON UNITS DBC, DBG, DBH, DRC, DRG, & DRH MODELS KIT INSTRUCTIONS

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WARNING

ONLY PERSONNEL THAT HAVE BEEN TRAINED TO INSTALL, ADJUST, SERVICE OR REPAIR (HEREINAFTER, "SERVICE") THE EQUIPMENT SPECIFIED IN THIS MANUAL SHOULD SERVICE THE EQUIPMENT. THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU SERVICE THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY INJURY OR PROPERTY DAMAGE WHICH MAY RESULT. IN ADDITION, IN JURISDICTIONS THAT REQUIRE ONE OR MORE LICENSES TO SERVICE THE EQUIPMENT SPECIFIED IN THIS MANUAL, ONLY LICENSED PERSONNEL SHOULD SERVICE THE EQUIPMENT.

IMPROPER INSTALLATION, ADJUSTMENT, SERVICING OR REPAIR OF THE EQUIPMENT SPECIFIED IN THIS MANUAL, OR ATTEMPTING TO INSTALL, ADJUST, SERVICE OR REPAIR THE EQUIPMENT SPECIFIED IN THIS MANUAL WITHOUT PROPER TRAINING MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

PROP 65 WARNING FOR CALIFORNIA CONSUMERS



WARNING

Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

0140M00517-A

ATTENTION INSTALLING PERSONNEL

As a professional installer, you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair, it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

DESCRIPTION

The horizontal prop power exhaust kits are used in conjunction with the model numbers listed at the top of this installation instruction. These kits are not applicable to vertical applications. See Table 1 for package usage.

The power exhaust kit includes (1 or 2) 300mm EBM prop-type fan(s), mounted in power exhaust housing. Wiring harnesses are provided to connect the power exhaust to the economizer for low voltage, and to the unit single point connection for high voltage.

The power exhaust housing is constructed of pre-painted steel to match color of rooftop unit. For 7½-12½ Ton applications, the power exhaust replaces the barometric relief hood on the field supplied return air duct, and mounts near the economizer.

PART NUMBER	TONS	VOLTAGE	Height	Width	Depth
0270L01170	3 to 6	208/230V 1&3 Phase	20	21.25	17
0270L01171		460V 3 Phase			
0270L01137	7½ to 12½	208/230V 1&3 Phase	18.38	36.5	17
0270L01138		460V 3 Phase			

**TABLE 1- PART NUMBER PACKAGE USAGE AND
DIMENSIONS**



WARNING

ELECTRICAL SHOCK HAZARD

FAILURE TO FOLLOW THIS WARNING COULD CAUSE PERSONAL INJURY AND/OR DEATH.

BEFORE BEGINNING MODIFICATION, BE CERTAIN THAT THE MAIN-LINE ELECTRICAL DISCONNECT SWITCH IS IN THE OFF POSITION. CLOSE THE MAIN GAS SUPPLY SHUTOFF VALVE. TAG DISCONNECT SWITCH AND GAS VALVE WITH SUITABLE WARNING LABELS.

**IMPORTANT: FOLLOW ALL APPLICABLE LOCAL
ELECTRICAL CODES AND NEC (NATIONAL ELECTRICAL
CODE), WHEN INSTALLING THESE KITS.**



The wire shall be sized to include power exhaust MCA and MOP. See Table 2 for electrical data.

PART NUMBER	208V, 1PH, 60Hz			230V, 1PH, 60Hz		
	FLA	MCA	MOP	FLA	MCA	MOP
0270L01170	1.7	2.1	3.7	1.5	1.9	3.4
0270L01137	3.3	4.1	5.4	3.0	3.8	4.9

PART NUMBER	460V, 3PH, 60Hz		
	FLA	MCA	MOP
0270L01171	0.5	0.6	1.1
0270L01138	1.0	1.3	1.6

TABLE 2 - ELECTRICAL DATA

FLA - Full Load Amps

MCA - Minimum Circuit Amps


MOP - Maximum Overcurrent Protection

N/A - Not Applicable


TO INSTALL THE HORIZONTAL POWER EXHAUST, PERFORM THE FOLLOWING PROCEDURES:

1. Turn off unit power supply and install lockout tag. For gas units, turn off the gas supply.


NOTE: BEFORE INSTALLING, ENSURE VOLTAGE OF POWER EXHAUST AGREES WITH POWER SUPPLY TO THE EQUIPMENT.


CAUTION

UNIT DAMAGE HAZARD
FAILURE TO FOLLOW THIS CAUTION MAY RESULT IN EQUIPMENT DAMAGE. BE CAREFUL TO ROUTE WIRES TO AVOID PINCHING OR CUTTING DURING ASSEMBLY. IT CAN BE DIFFICULT TO PROTECT THE WIRES WHILE ATTACHING THE POWER TO THE UNIT.


CAUTION

CUT / SEVER HAZARD
Failure to follow this caution may result in personal injury.
Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing, safety glasses and gloves when handling parts and servicing air conditioning equipment.



2. Cut a rectangular opening in the return air duct with the opening edge 36 inches from the horizontal return opening on the RTU. Drill pilot holes around perimeter of opening using a #27(Ø 0.144 inch) drill bit; See Figures 8 & 9 for dimensional details.
3. Install the horizontal economizer per the instructions provided with the economizer. For 7½-12½ Ton

applications, do not install the Barometric Relief Hood shipped with the economizer.

4. Remove the shipping blocks from the bottom of the accessory horizontal power exhaust. (Fig 1)

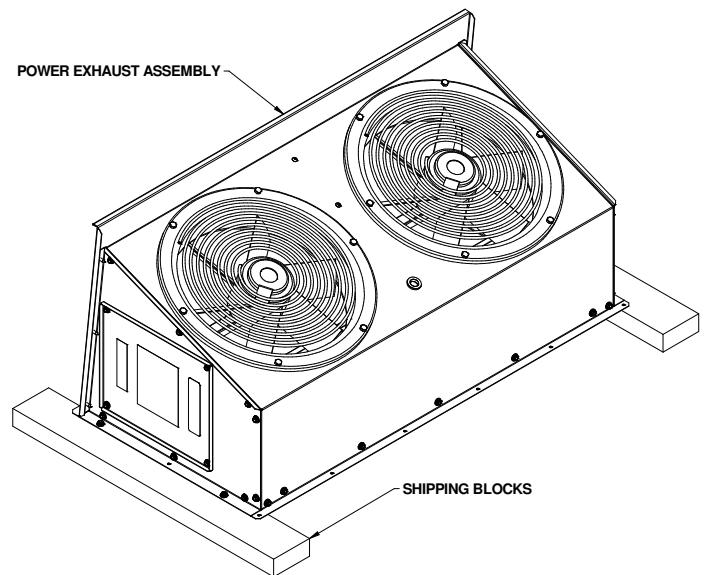


FIGURE 1 - SHIPPING BLOCK

5. Place the power exhaust close to the duct opening to allow for wiring harness connections.
6. Follow the wiring instructions specific to the economizer. Be sure power exhaust wiring does not interfere with damper operation.

POWER EXHAUST WIRING FOR W7220 CONTROLLER

1. Plug the supplied low voltage harness into the 4-pin connector located in the upper knockout on the power exhaust assembly. (Fig. 2 & 3)
2. Route the low voltage harness through the duct opening and wire grommet (located on economizer), then connect the wires to the W7220 controller. See wire diagrams on pages 6 and 7 for details.
3. Plug the supplied high voltage harness into the 4-pin connector located in the lower knockout on the power exhaust assembly. (Fig. 2 & 3)
4. Route the high voltage harness through the duct opening and wire grommet (located on economizer).

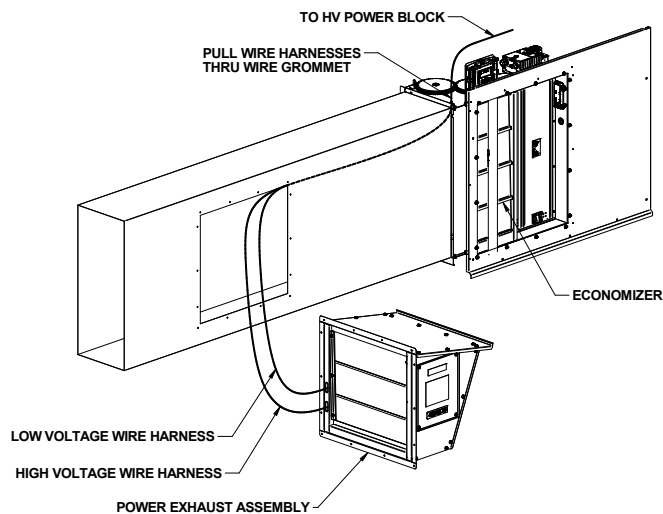


FIGURE 2 – 3-6 Ton Power Exhaust Wiring

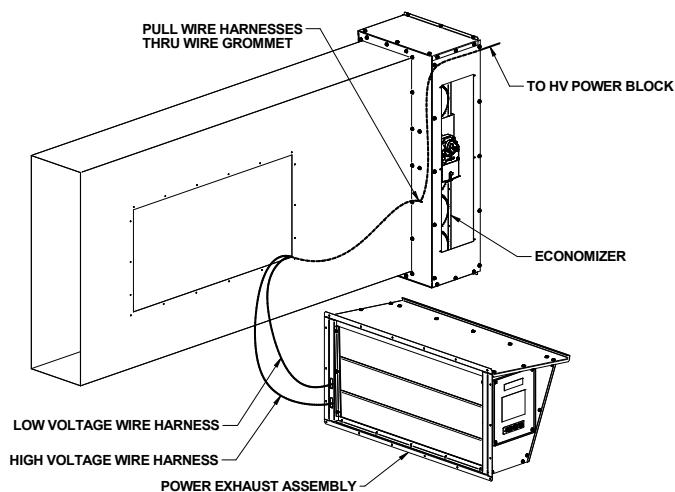


FIGURE 3 – 7½-12½ Ton Power Exhaust Wiring

5. Plug the other end of the high voltage harness into the unit single point connection on the partition panel. (Fig. 4)

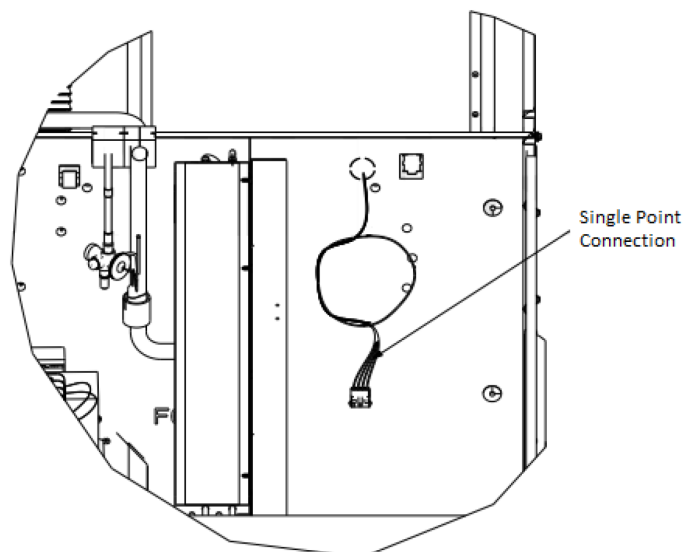


FIGURE 4 - SINGLE POINT CONNECTION

NOTE: IF THE UNIT IS NOT EQUIPPED WITH SINGLE POINT CONNECTION, EXTERNAL POWER MUST BE SUPPLIED TO THE POWER EXHAUST. DO NOT CONNECT TO UNIT POWER. UNIT MCA AND MOP CALCULATED BASED ON FACTORY INSTALLED EQUIPMENT, SO COMPONENTS MAY NOT BE SIZED APPROPRIATELY.

6. Remove the unit control panel and securely terminate the single point connection leads to the unit power block (line side of compressor contactor on 3-6 ton DBG) and ground lug. Replace the unit control panel when complete. (Fig. 5)

3-6 Ton Single Point Connection Leads

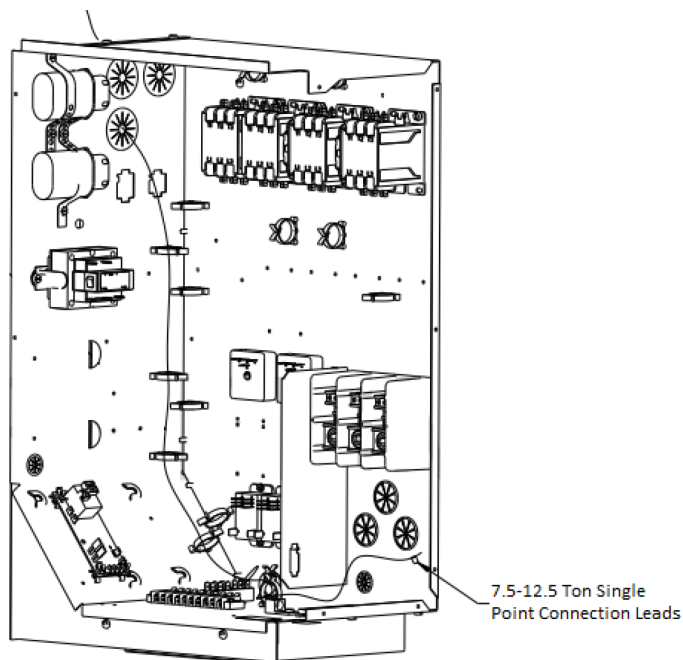
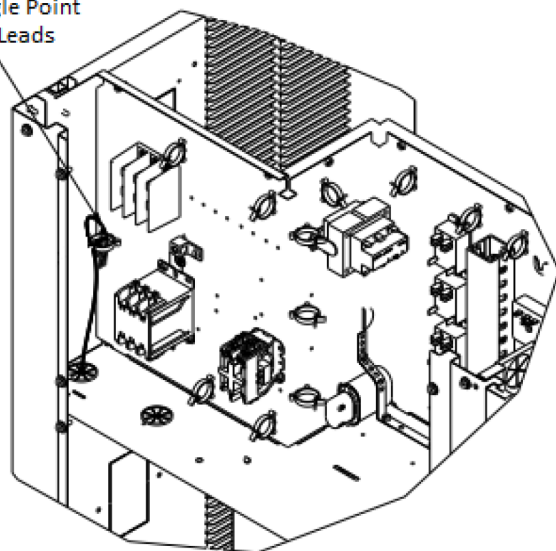


FIGURE 5 - SINGLE POINT CONNECTION LEADS

ATTACHING POWER EXHAUST TO THE RETURN AIR DUCT:

1. Make sure all power exhaust harnesses are connected as indicated in the previous steps.
2. Make sure all wiring is secure. Use field-supplied wire ties if necessary. Be sure that wiring does not interfere with operation of the HVAC unit, economizer, or power exhaust.
3. Apply gasket from hardware bag to the mating flanges of the power exhaust. (Fig. 6)
4. Lift power exhaust and install over the duct opening using the #10 x 3/4in. long screws provided. (Fig 6). Make sure wiring harnesses are properly secured.

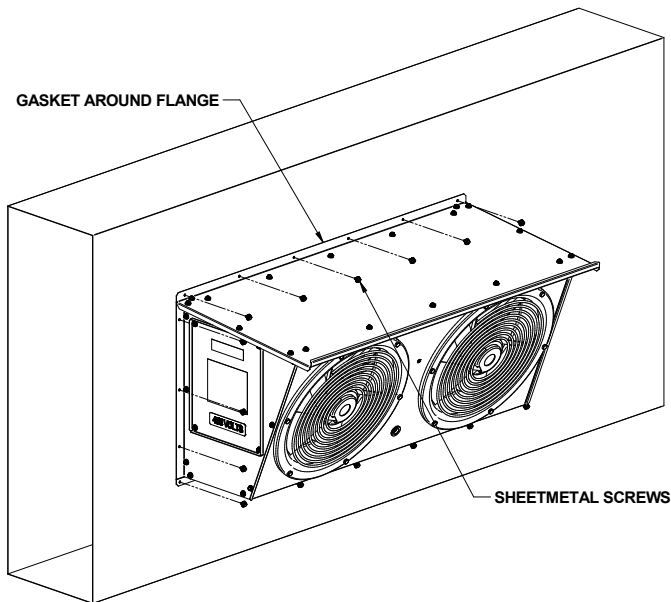


FIGURE 6 – POWER EXHAUST INSTALLED ON DUCT

5. Return power to unit and remove lockout tag. For gas units, turn on the gas supply.
6. Test power exhaust operation by setting the power exhaust set point on the economizer controller to 0%. Power exhaust performance is shown in Fig 7.

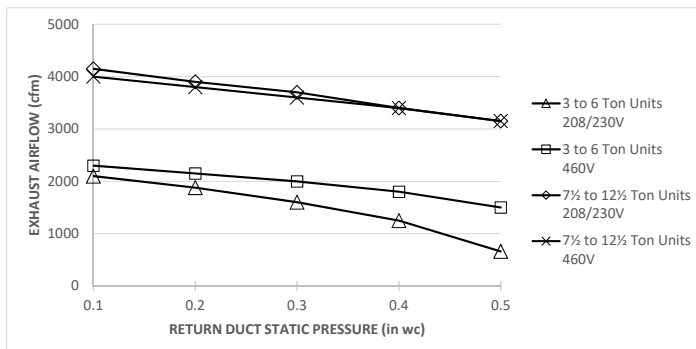


FIGURE 7 – POWER EXHAUST PERFORMANCE

7. Adjust the power exhaust set point on the economizer controller to the desired activation point per unit schematic.

HORIZONTAL RETURN AIR PANEL

The drawing includes a plan view on the left and a perspective view on the right. The plan view shows a rectangular panel with a central square opening. Dimensions for the plan view are as follows:

- Overall Width:** 36.00
- Overall Height:** 19.25 (labeled as 19.25 I.D.)
- Central Opening Dimensions:** 18.00 (width) and 19.25 (height, labeled as 19.25 I.D.)
- Panel Thickness:** 0.144 (indicated by a dimension line and the symbol $\varnothing .144$)
- Internal Spacing (Plan View):**
 - Top: 6.50, 6.24, 6.50
 - Bottom: 6.50, 7.30, 6.50
 - Left: 6.3, 2.22, 7.29, 6.02, 3.50
 - Right: 6.3, 2.22, 7.29, 6.02, 3.50

The perspective view on the right shows the panel's depth and internal structure, including a central vertical duct and side panels with horizontal louvers. A small rectangular component is visible on the top surface.

FIGURE 8 - 3 TO 6 TON DUCT CUT-OUT DETAIL

HORIZONTAL RETURN AIR PANEL

Technical drawing showing the front and side views of a horizontal return air panel with dimensions in feet and inches.

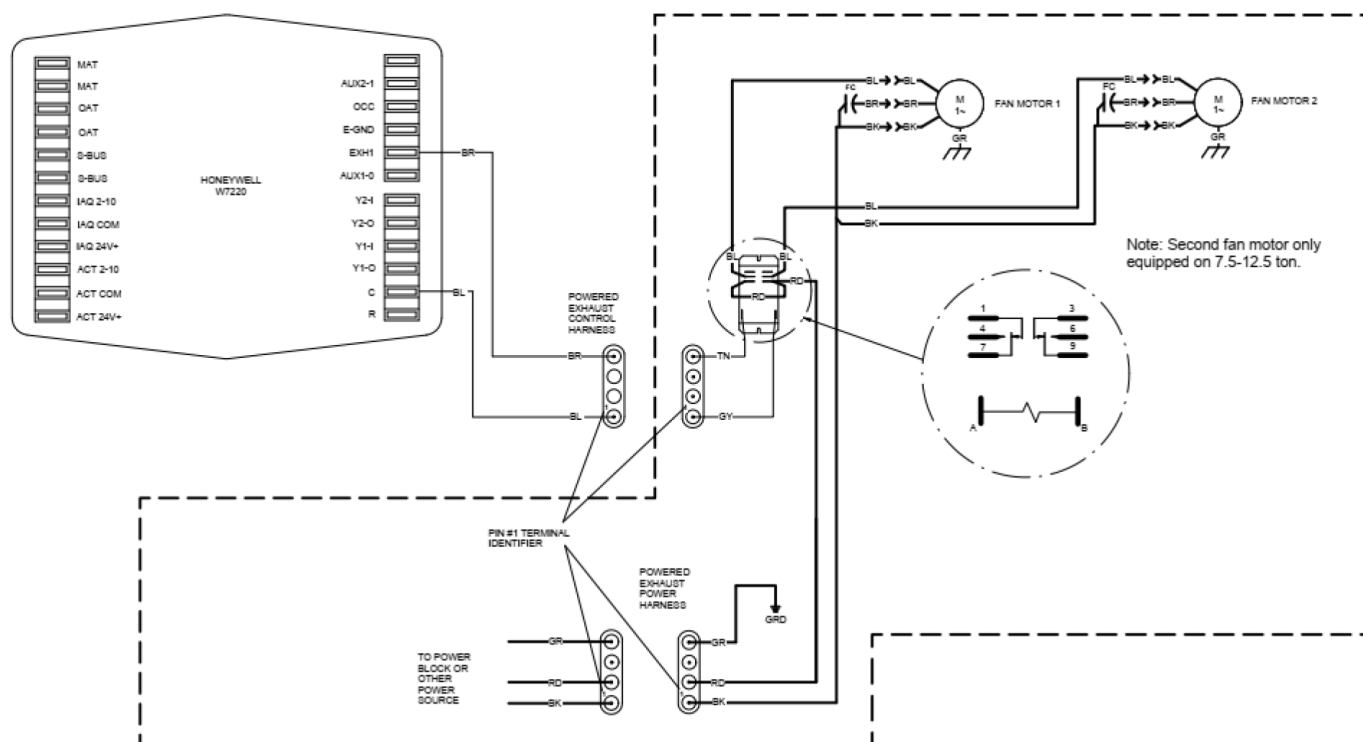
Front View Dimensions:

- Overall Width: 36.00
- Overall Height: 16.75 I.D.
- Internal Width: 34.50 I.D.
- Internal Height: 16.75 I.D.
- Panel Thickness: .69
- Top Flange Thickness: 6.67
- Bottom Flange Thickness: 3.38
- Internal Flange Thickness: 5.40
- Panel Spacing: 7.12 (6 equal segments)
- Panel Spacing: 6.88 (5 equal segments)

Side View Dimensions:

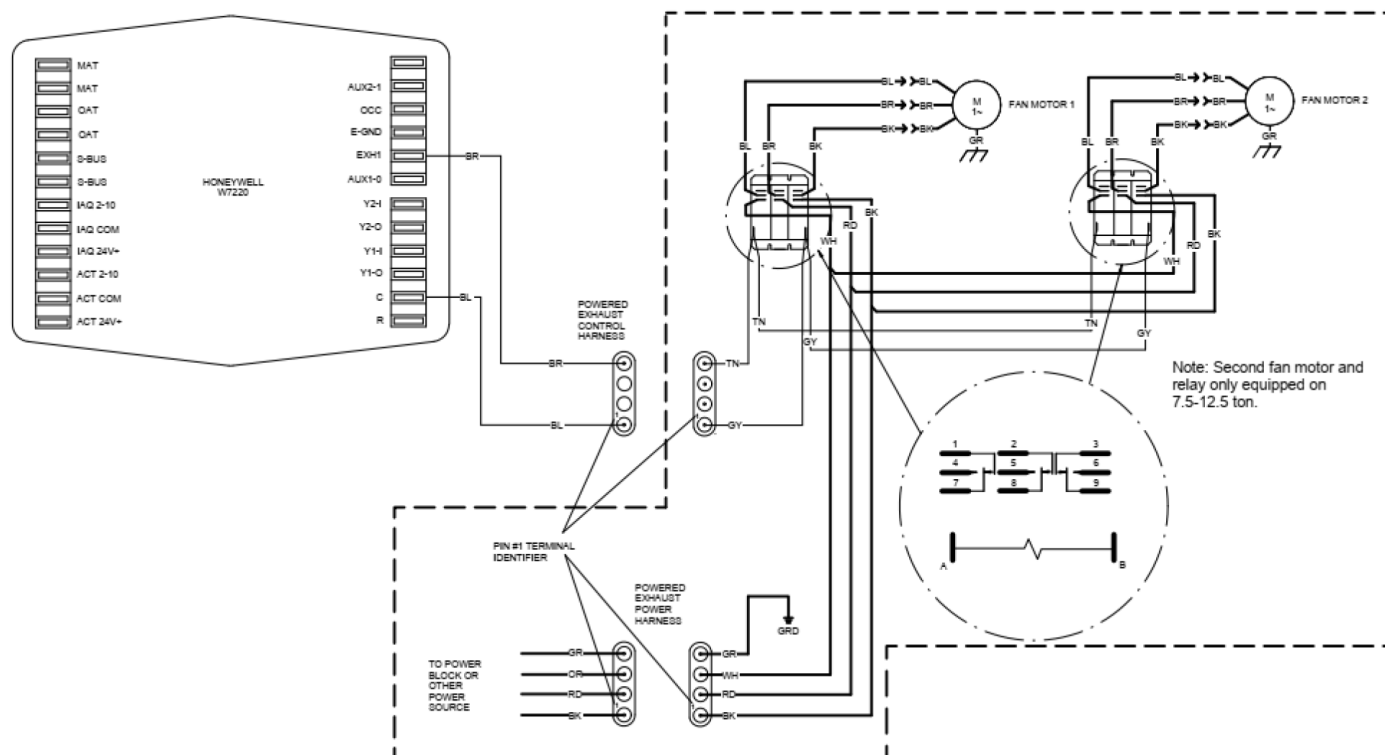
- Panel Thickness: .144

FIGURE 9 – 7½ TO 12½ TON DUCT CUT-OUT DETAIL



WIRING DIAGRAM – POWER EXHAUST – PROPELLER, Non-DDC, 1PH/3PH (230V)

NOTE: Wiring is subject to change. Always refer to the unit wiring diagram and accessory wiring diagram booklet for the most up-to-date wiring.



WIRING DIAGRAM – POWER EXHAUST – PROPELLER, Non-DDC, 3PH (460V)

NOTE: Wiring is subject to change. Always refer to the unit wiring diagram and accessory wiring diagram booklet for the most up-to-date wiring.

CUSTOMER FEEDBACK

Daikin is very interested in all product comments.

Please fill out the feedback form on the following link:

<https://daikincomfort.com/contact-us>

You can also scan the QR code on the right to be directed to the feedback page.



Our continuing commitment to quality products may mean a change in specifications without notice.

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