
INSTALLATION INSTRUCTIONS

ELECTRIC HEAT PACKAGES

Models:

EHWA3S-B06B	EHWA5S-A15B
EHWA4S-A05B	EHWA5S-A20B
EHWA4S-A10B	EHWA5S-B06B
EHWA4S-A15B	EHWA5S-B09B
EHWA4S-A20B	EHWA5S-B15B
EHWA5S-A05B	EHWA5S-C06
EHWA5S-A08B	EHWA5S-C09
EHWA5S-A10B	EHWA5S-C15

FOR USE WITH WA SERIES
WALL MOUNTED AIR CONDITIONERS
SEE TABLE 1 FOR MODEL USAGE



Climate Control Solutions

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CONTENTS

General Information

Nomenclature	3
Description of Equipment	3
Important	3
Shipping Damage	3
Unpacking Electric Heat Package	3
Wiring Main Power	5

Installation

Installation of Heater Package	7
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Tables

Table 1 Heater Usage by Model Matrix	4
Table 2 Electrical Data	6
Table 3 Terminal and Screw Mounting	9
Table 4 Wiring Diagram Usage Matrix	13

Figures

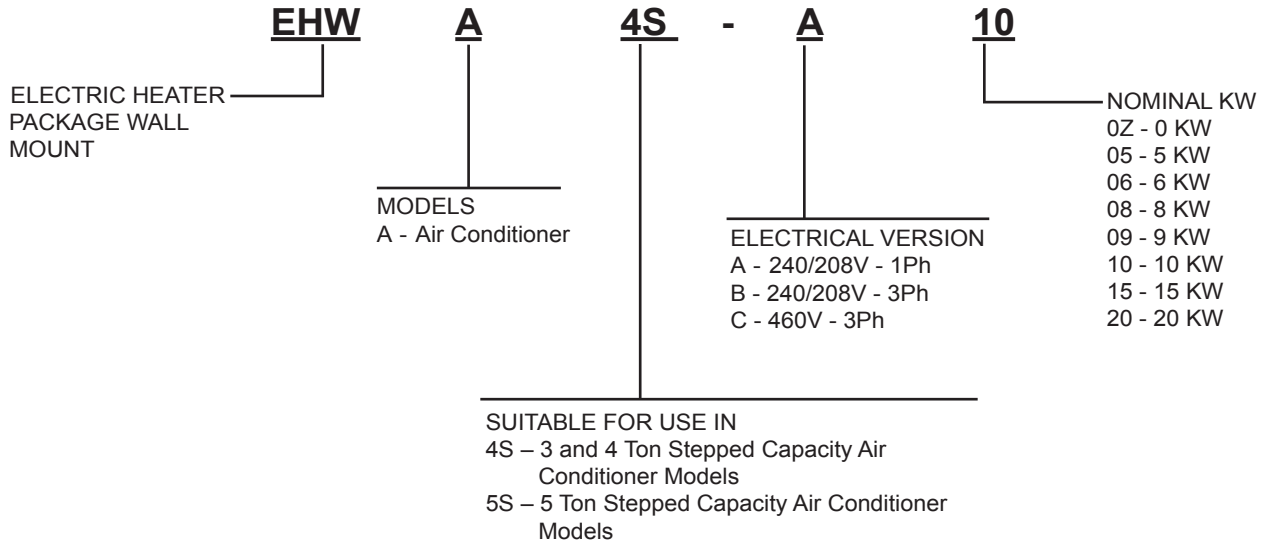
Figure 1 Electrical Connections	5
Figure 2 Installation of Heater Package	8
WA3S, WA4S & WA5S Models	
Figure 3 Rod Support and Screw Mounting	9
Figure 4A - 4D Terminal Identification	10
Figure 5 Wiring Directions	11
WA3S, WA4S & WA5S Models	
Figure 6 Marking Serial Plate	12

Wiring Diagrams

4097-176A	14
4097-177A	15
4097-178A	16
4097-179A	17
4097-180A	18
4097-240A	19
4097-241A	20
4097-340	21
4097-341	22

GENERAL INFORMATION

NOMENCLATURE



DESCRIPTION OF EQUIPMENT

The EHWA series electric heater packages are capable of being field-installed and suitable for use with Bard wall mount air conditioners. The packages consist of the electric heat strip, the heater control base which includes the heat contactors, and circuit breaker of pull disconnects, installation instructions and wiring diagrams. See Table 1 for nominal electrical data and BTU output. Before installation, check unit serial plate to insure the heater package model that you intend to install is listed as a heater package that is suitable for use with the Bard wall mount hi boy unit. See Table 1 and Figure 6.

IMPORTANT

The equipment covered in this manual is to be installed by trained, experienced service and installation technicians.

SHIPPING DAMAGE

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent.

UNPACKING ELECTRIC HEAT PACKAGE

Remove the heat package from the shipping carton. The heat package must consist of the following:

1. Basic heater.
2. Electric heat control base and wiring.
3. Installation instructions.
4. Wiring diagram (2), one to be applied to unit.
5. Adhesive label to remark serial plate to indicate new model number. This is attached to the front of these instructions.

**TABLE 1
HEATER USAGE BY MODEL MATRIX**

- Designed for adding electric heat to 0 KW units
- Circuit breaker standard on 230/208V models
- Disconnect standard on 460V models
- UL listed
- CUL listed

Air Conditioner Models	-A00 Models 230/208-1		-B00 Models 230/208-3		-C00 Models 460-3	
	Heater Model #	KW	Heater Model #	KW	Heater Model #	KW
WA3S1	EHWA4S-A05B	5	EHWA3S-BO6B EHWA5S-BO9B EHWA3S-B15B	6 9 15	EHWA5S-C06 EHWA5S-C09 EHWA5S-C15	6 9 15
	EHWA5S-A08B	8				
	EHWA4S-A10B	10				
	EHWA4S-A15B	15				
	EHWA4S-A20B	20				
WA4S1	EHWA4S-A05B	5	EHWA5S-BO6B EHWA5S-BO9B EHWA3S-B15B	6 9 15	EHWA5S-C06 EHWA5S-C09 EHWA5S-C15	6 9 15
	EHWA5S-A08B	8				
	EHWA4S-A10B	10				
	EHWA4S-A15B	15				
	EHWA4S-A20B	20				
WA5S1	EHWA5S-A05B	5	EHWA5S-BO6B EHWA5S-BO9B EHWA3S-B15B	6 9 15	EHWA5S-C06 EHWA5S-C09 EHWA5S-C15	6 9 15
	EHWA5S-A08B	8				
	EHWA4S-A10B	10				
	EHWA4S-A15B	15				
	EHWA4S-A20B	20				

 **WARNING**

Only use factory provided heaters in approved combinations of heater models to unit models as shown on this table. Failure to use approved combinations as shown or modification to heaters, could result in fire causing damage, bodily injury or death.

WIRING MAIN POWER

1. On all installations, size unit power supply wiring for the minimum circuit ampacity requirement for the unit and heater package combination listed on the unit serial plate.

For existing installations, addition or upgrading of a heater package may require that larger supply wires be run to the unit. Resize all power supply wires for the minimum circuit ampacity rating listed on the unit serial plate that is applicable for your combination of unit and heater package.

WARNING

Install properly sized power supply leads for the unit/heater combination minimum circuit ampacity as listed on the unit serial plate. Hazard of fire. Failure to install properly sized conductors could result in fire.

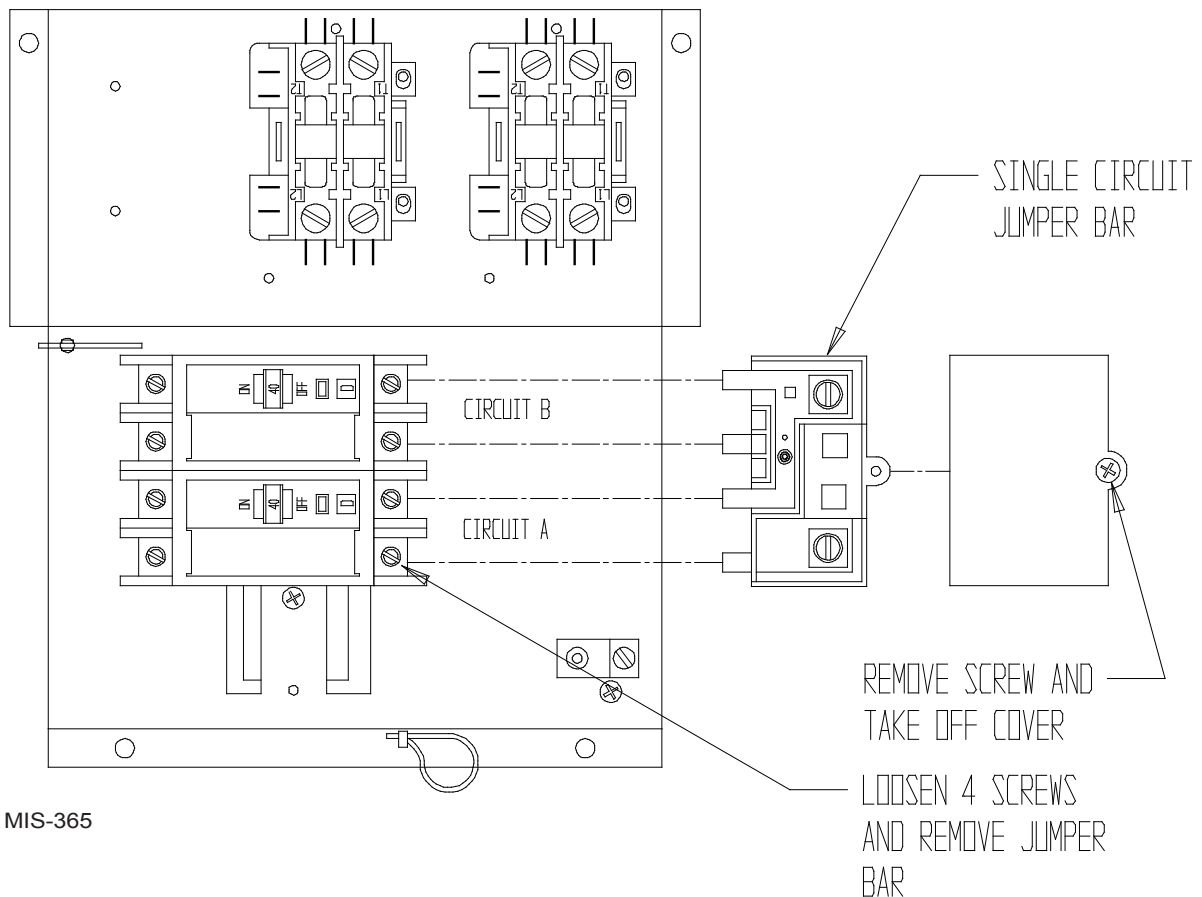
2. All heater packages covered by this manual are factory-wired for a single supply circuit. The following heater packages are field convertible to a dual or triple supply circuit if required or desired:

EHWA4S-A10B	EHWA4S-A15B
EHWA4S-A20B	EHWA5S-A10B
EHWA5S-A15B	EHWA5S-A20B

3. To convert the above heater packages to dual circuit configuration before installation, loosen 6 screws holding jumper bar in place. Remove jumper bar. Circuit A + B + C are now identified on the heater package. See Figure 1.

Wire should be sized to the minimum circuit ampacity as specified on the serial plates of units that accept these heater packages for circuits A + B + C.

**FIGURE 1
ELECTRICAL CONNECTIONS**



MIS-365

**TABLE 2
ELECTRICAL DATA AND BTU OUTPUT**

Electric Heat Table														
Nominal KW	At 240V (1)				At 208V (1)				At 480V (2)			At 460V (2)		
	KW	1-Ph Amps	3-Ph Amps	Btuh	KW	1-Ph Amps	3-Ph Amps	Btuh	KW	3-Ph Amps	Btuh	KW	3-Ph Amps	Btuh
5.0	5.0	20.8		17,065	3.75	18.0		12,799						
6.0	6.0		14.4	20,478	4.50		12.5	15,359	6.0	7.2	20,478	5.52	6.9	18,840
8.0	8.0	33.3		27,304	6.00	28.8		20,478						
9.0	9.0		21.7	30,717	6.75		18.7	23,038	9.0	10.8	30,717	8.28	10.4	28,260
10.0	10.0	41.7		34,130	7.50	36.1		25,598						
15.0	15.0	62.5	36.1	51,195	11.25	54.1	31.2	38,396	15.0	18.0	51,195	13.80	17.3	47,099
20.0	20.0	83.3		68,260	15.00	72.1		51,195						

(1) These electric heaters are available in 230/208V units only

(2) These electric heaters are available in 480V units only

INSTALLATION OF HEATER PACKAGE

1. Disconnect all power to unit before installation.



WARNING

Disconnect all power to unit before installing heater package. Hazard of electrical shock. Failure to disconnect power could result in injury or death.

2. Before installation, check unit serial plate to insure that the heater package model that you intend to install is listed as a heater package suitable for use with the unit.

Under no circumstances shall a heater package be installed in a unit if the model number of the heater package does not appear on the unit serial plate.



WARNING

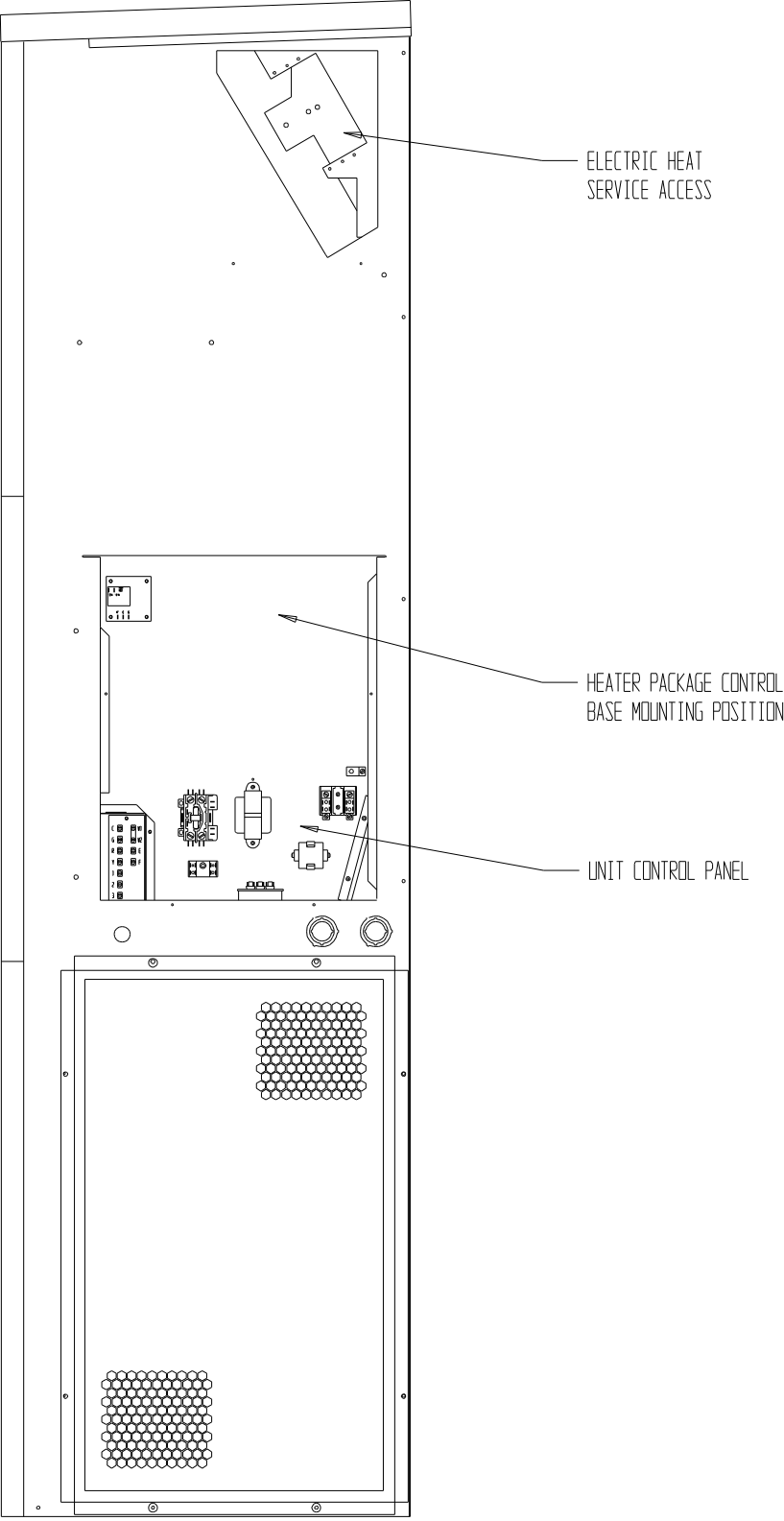
Install only heater packages listed on unit serial plate. Hazard of fire or electrical shock. Failure to install listed heater package could result in fire, injury or death.

3. Remove electric heater access panel and control panel cover, both inner and outer. See Figure 2.
4. All heaters are installed with the line break limits positioned to the top of the unit. Install heat strip(s) through heater access opening. Position heat strip support rod in heater support hole 1, 2 or 3 as indicated in Table 1 and Figure 3. Secure in place with 2 sheet metal screws in mounting holes as indicated in Table 1 and Figure 3.

On heater packages with 2 heat strips 10KW heater first in position closest to the outlet air frame. See Figures 4C.

5. Install heater control base into top of control panel as shown in Figure 5. Secure with 4 sheet metal screws provided.
6. Plug male 6 pin connector into mating connector mounted in control panel. See Figure 5.
7. Connect red compressor supply lead to L1 of terminal block. Connect black compressor supply lead to L2 of terminal block. See Figure 5 and wiring diagram.
8. Route wires from heater control base up through raceway or grommet in top right corner of control panel to the heaters. See Figure 5.
9. Wire heater package per wiring diagram supplied with this heater package. All wires are stamped with wire numbers that correspond with terminal numbers on the wiring diagram and stamped numbers on the heat strip. Low voltage limit switch wires are terminated with insulated quick connect terminals. See Figure 4.
10. Attach adhesive wiring diagram directly above unit wiring diagram on inner control panel cover.
11. Recheck all wiring. Break out appropriate circuit breaker tabs on inner control panel cover to allow trip lever to protrude. Replace control panel and heater access panels
12. Resupply power to the unit and check for proper operation.
13. Remark serial plate with self-adhesive label attached to the front of this manual. See Figure 6.

FIGURE 2
INSTALLATION OF HEATER PACKAGE
WA3S, WA4S AND WA5S MODELS

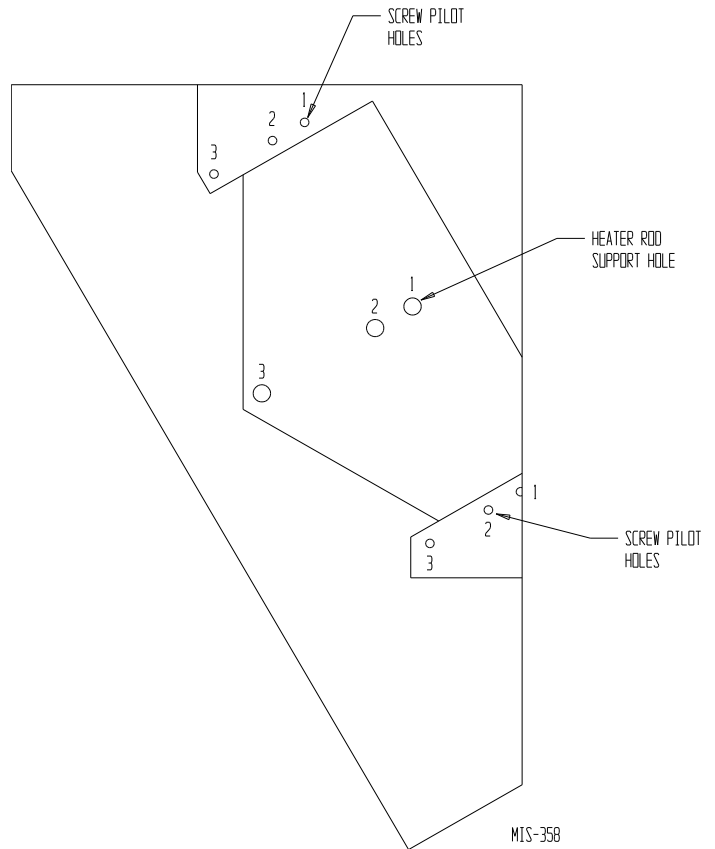


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TABLE 3
REFER TO FIGURES 3 AND 4

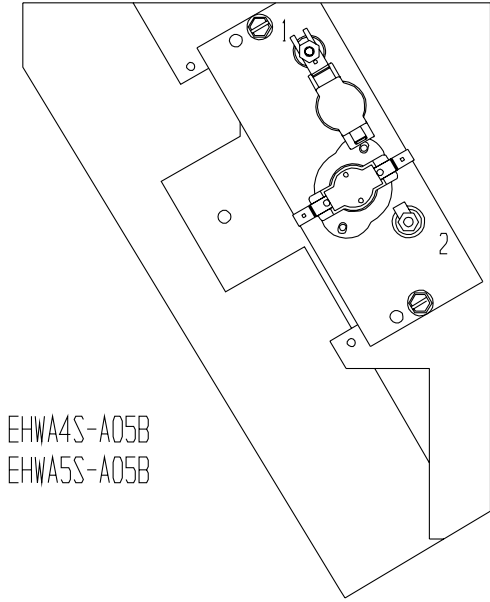
Heater Package Model Number	Figure 4 Heater Terminal Identification Drawing	Figure 3 Rod Support and Screw Mounting Position
EHWA4S-A05B	4A	1 + 1
EHWA4S-A10B	4B	1 + 1
EHWA4S-A15B	4C	2 + 2
EHWA4S-A20B	4D	1 + 1 & 3 + 3
EHWA5S-A05B	4A	1 + 1
EHWA5S-A08B	4B	1 + 1
EHWA5S-A10B	4B	1 + 1
EHWA5S-A15B	4C	2 + 2
EHWA5S-A20B	4D	1 + 1 & 3 + 3
EHWA3S-B06	4B	1 + 1
EHWA3S-C06	4B	1 + 1
EHWA3S-C09	4B	1 + 1
EHWA4S-C06	4B	1 + 1
EHWA5S-B09B	4B	1 + 1
EHWA5S-B15B	4D	1 + 1 & 3 + 3
EHWA5S-C06	4B	1 + 1
EHWA5S-C09	4B	1 + 1
EHWA5S-C15	4D	1 + 1 & 3 + 3

FIGURE 3
ROD SUPPORT AND
SCREW MOUNTING POSITIONS



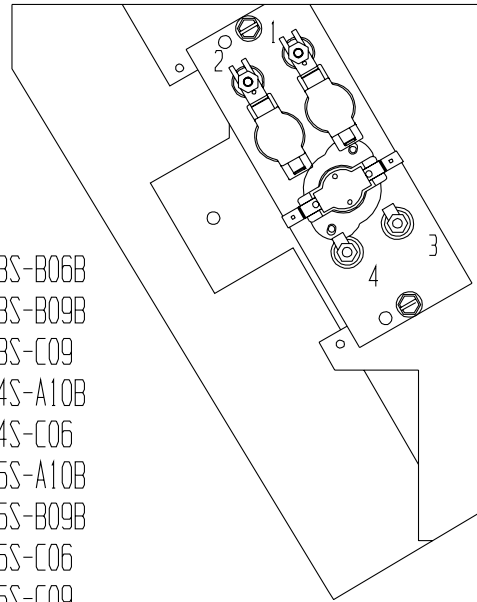
**FIGURES 4A – 4D
HEATER TERMINAL IDENTIFICATION DRAWINGS**

FIGURE 4 A



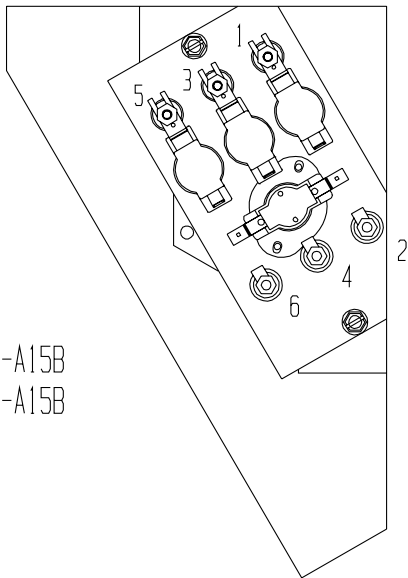
EHWA4S-A05B
EHWA5S-A05B

FIGURE 4 B



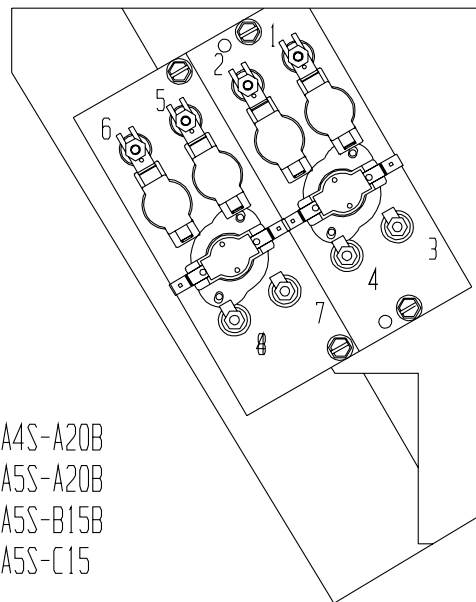
EHWA3S-B06B
EHWA3S-B09B
EHWA3S-C09
EHWA4S-A10B
EHWA4S-C06
EHWA5S-A10B
EHWA5S-B09B
EHWA5S-C06
EHWA5S-C09

FIGURE 4 C



EHWA4S-A15B
EHWA5S-A15B

FIGURE 4 D

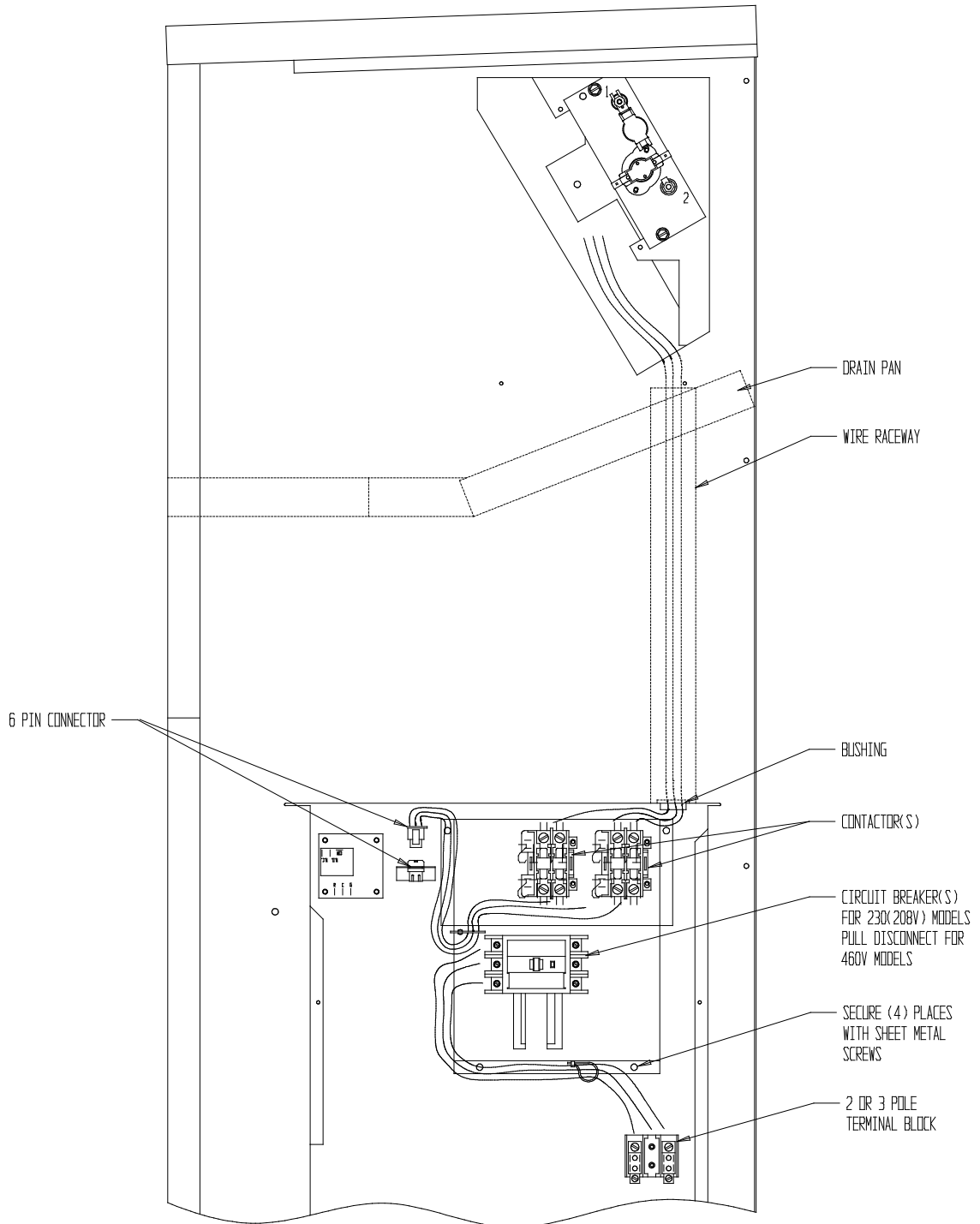


EHWA4S-A20B
EHWA5S-A20B
EHWA5S-B15B
EHWA5S-C15

NOTE: LIMIT DEVICES TO BE AT
TOP OF AIR FRAME WHEN INSTALLING.

MIS-2044 A

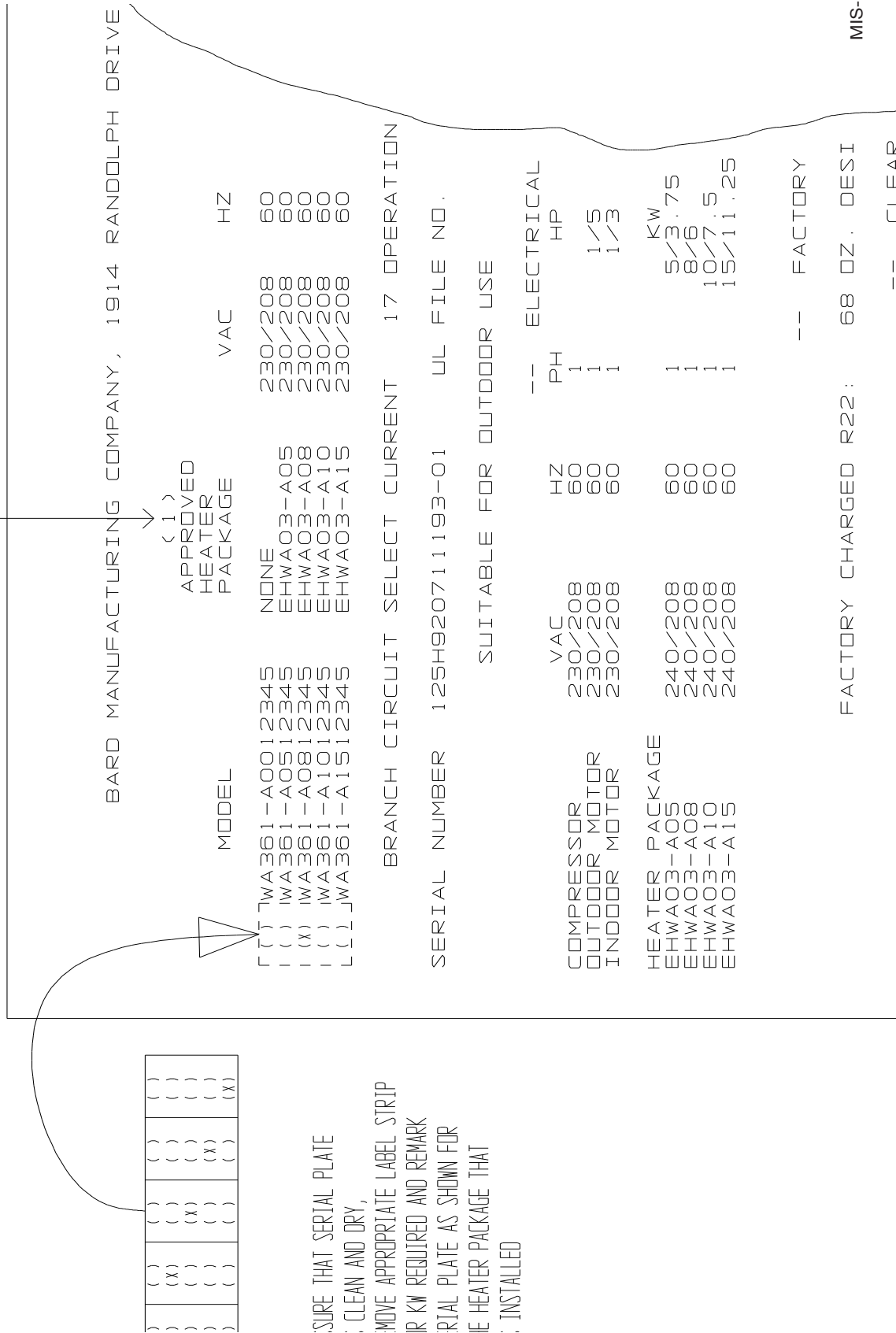
**FIGURE 5
WIRING DIRECTIONS
WA3S, WA4S AND WA5S MODELS**



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**FIGURE 6
 MARKING SERIAL PLATE LABEL**

INSTALL ONLY HEATER PACKAGES LISTED HERE.



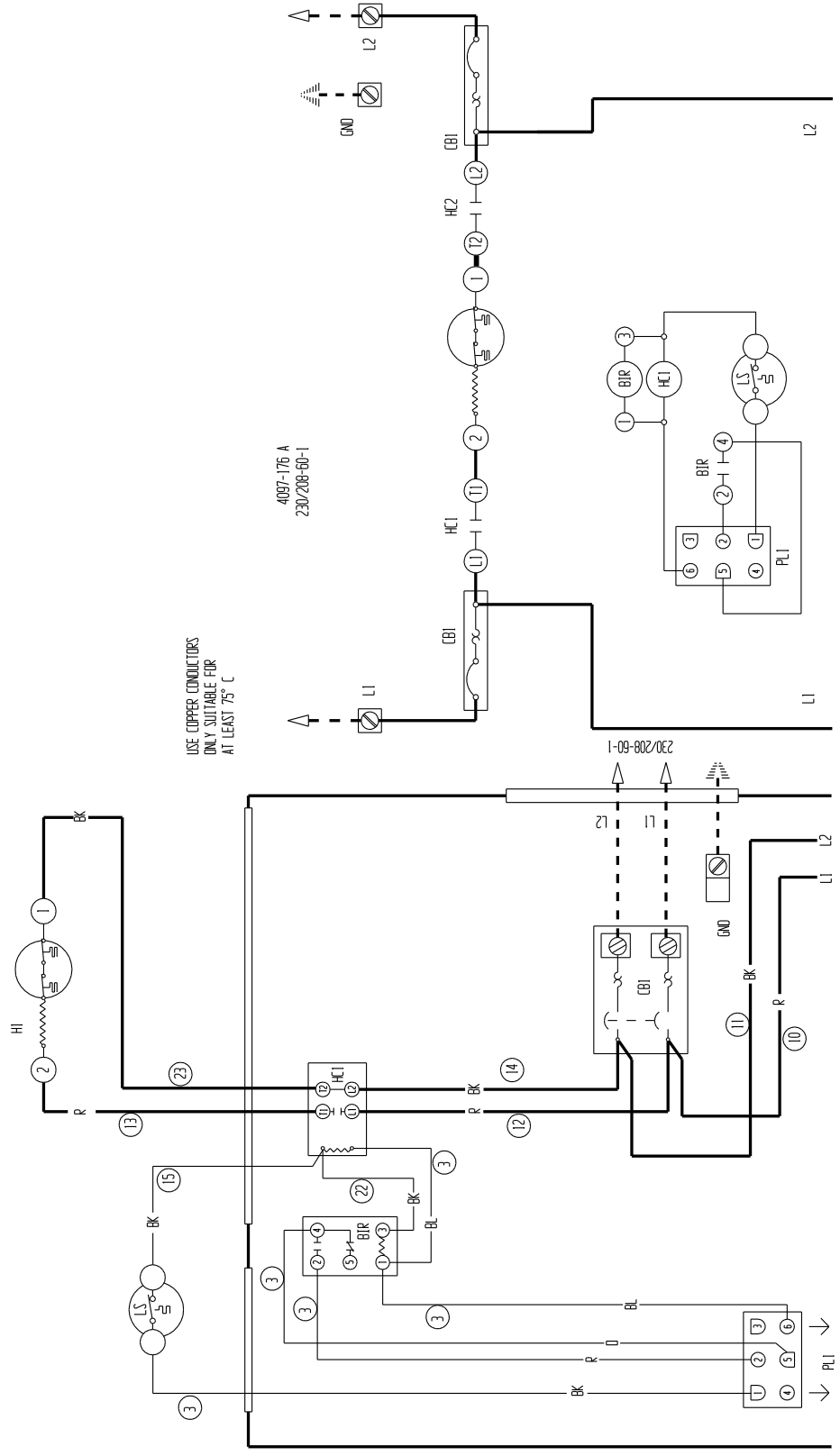
()	()	()	()	()
(X)	()	()	()	()
()	(X)	()	()	()
()	()	()	(X)	()
()	()	()	()	(X)

SURE THAT SERIAL PLATE
 IS CLEAN AND DRY,
 MOVE APPROPRIATE LABEL STRIP
 OR KW REQUIRED AND REMARK
 SERIAL PLATE AS SHOWN FOR
 THE HEATER PACKAGE THAT
 IS INSTALLED

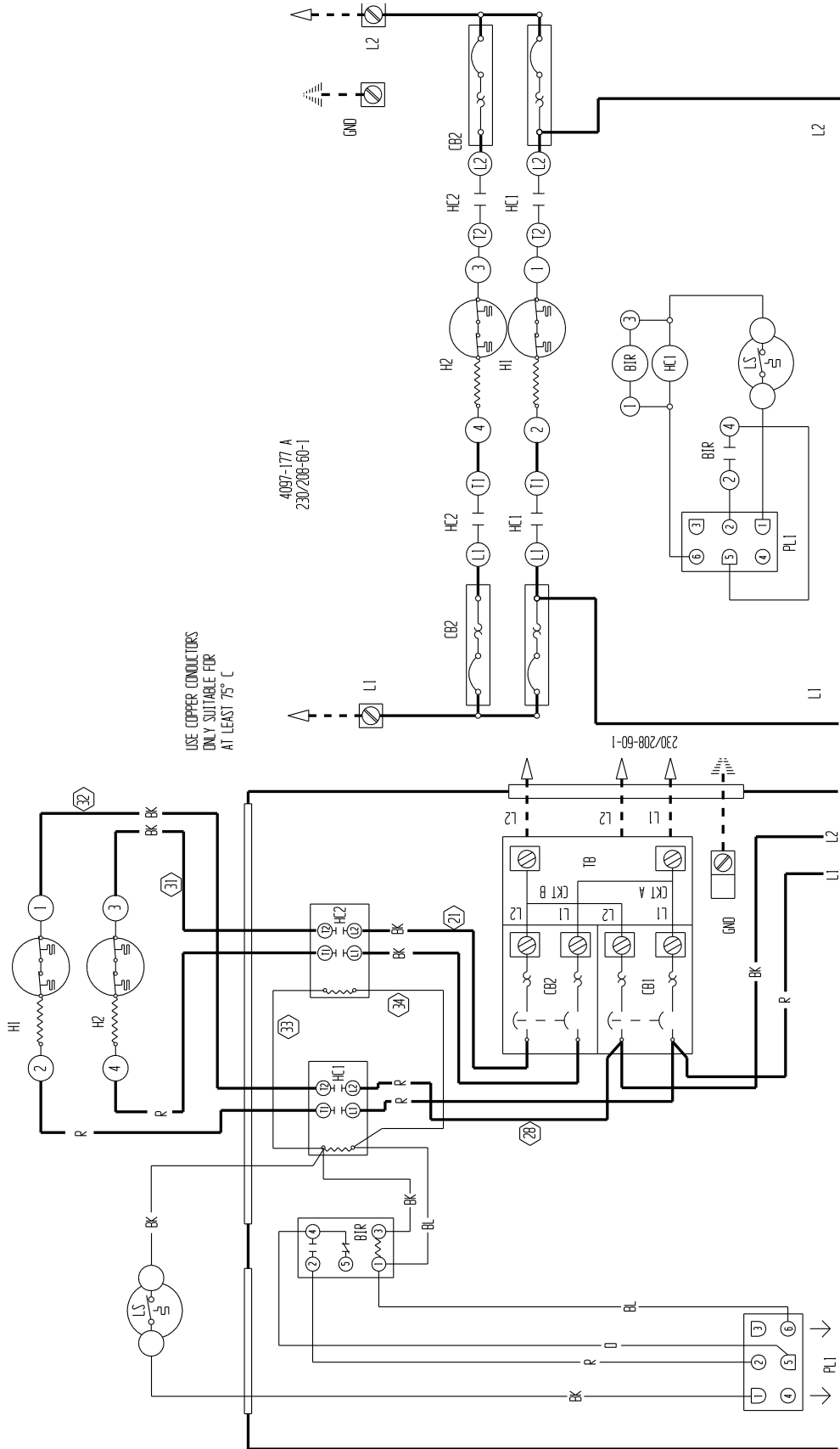
**TABLE 4
ELECTRIC HEAT WIRING DIAGRAM MODEL USAGE**

	EHWA3S-B06B	EHWA4S-A05B	EHWA4S-A10B	EHWA4S-A15B	EHWA4S-A20B	EHWA5S-A05B	EHWA5S-A08B	EHWA5S-A10B	EHWA5S-A15B	EHWA5S-A20B	EHWA5S-B06B	EHWA5S-B09B	EHWA5S-B15B	EHWA5S-C06	EHWA5S-C09	EHWA5S-C15
4097-176A		X				X										
4097-177A			X					X								
4097-178A				X					X							
4097-179A					X					X						
4097-180A																
4097-240A	X						X				X	X				
4097-241A													X			
4097-340														X	X	
4097-341																X

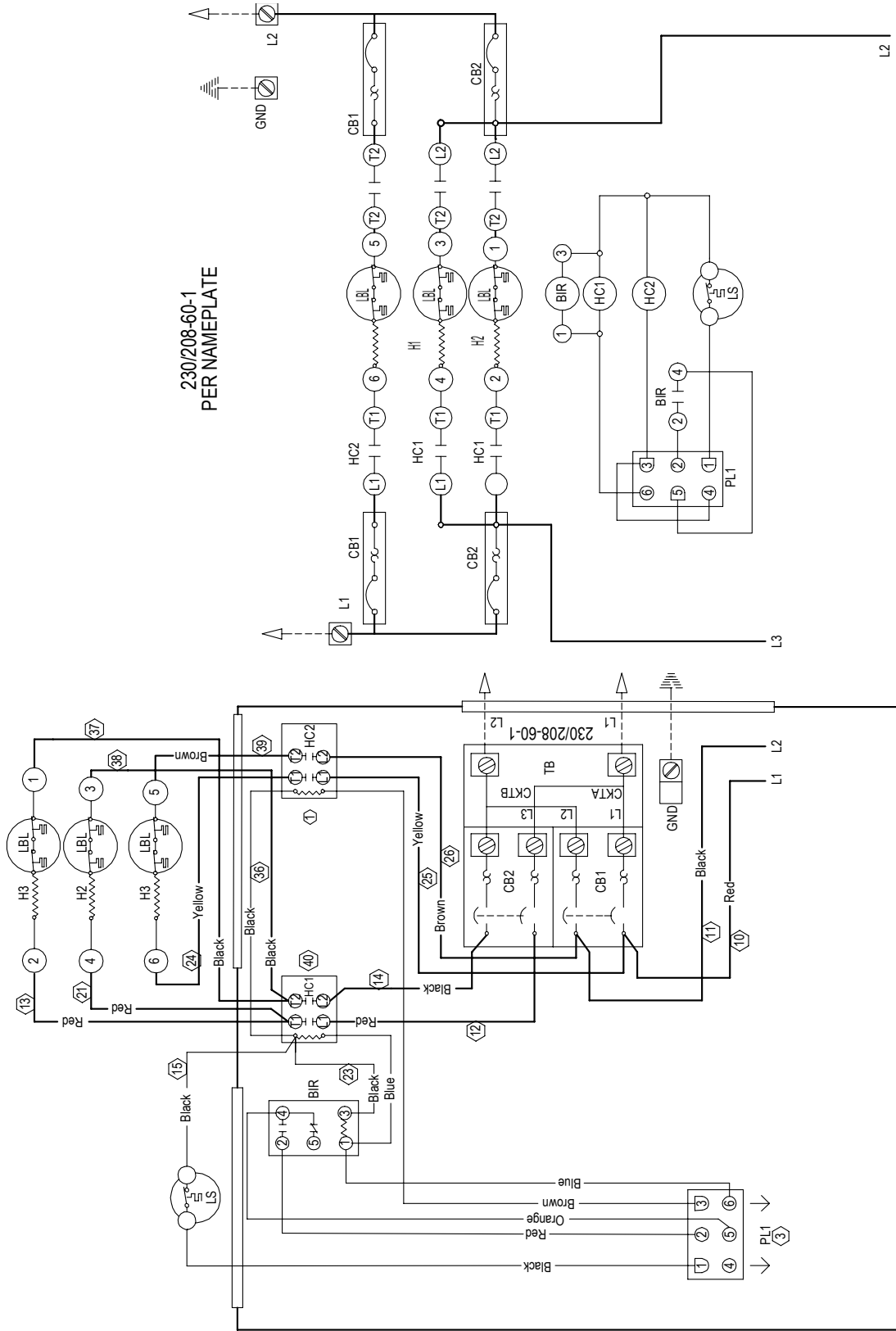
4097-176A



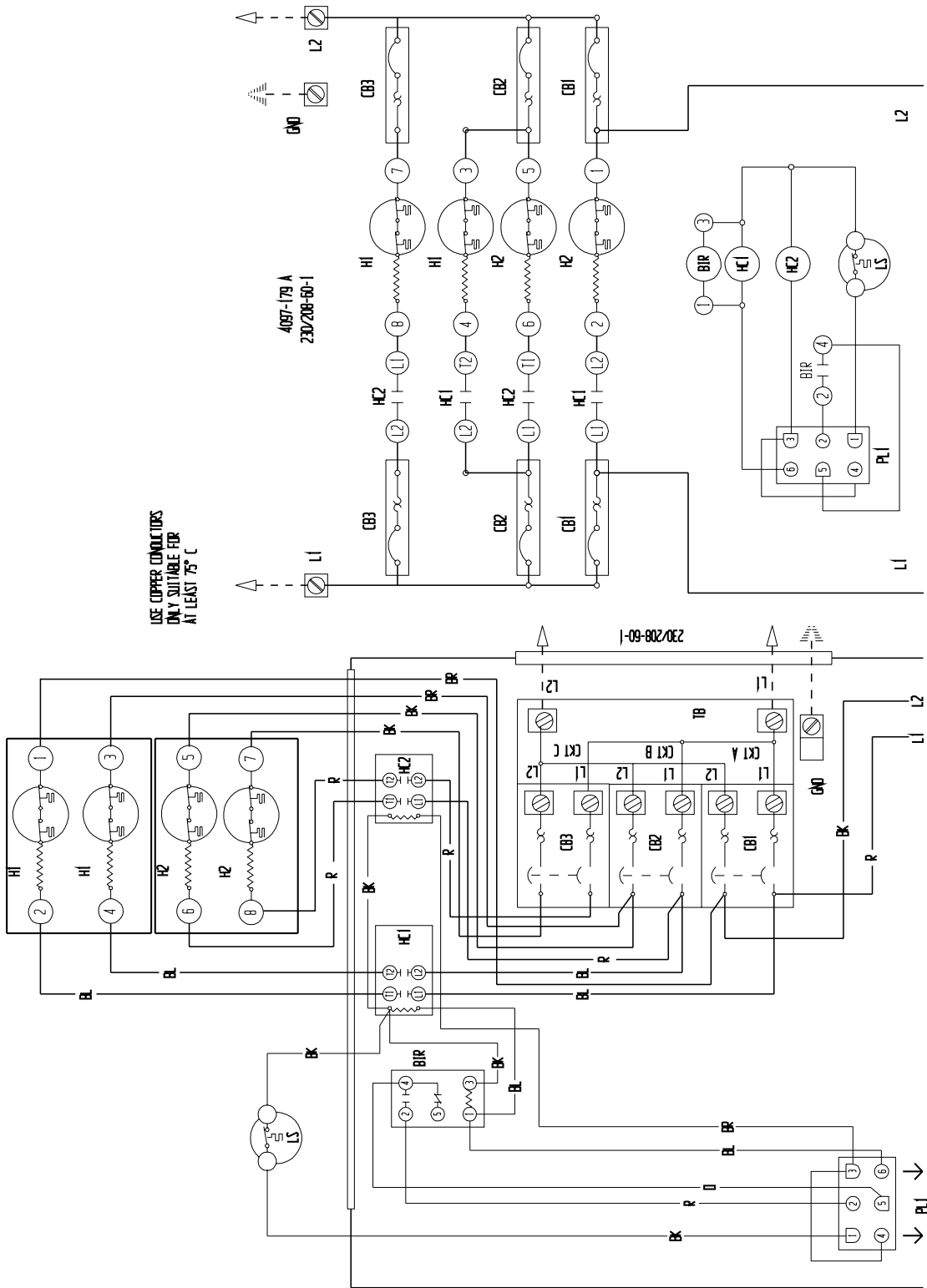
4097-177A



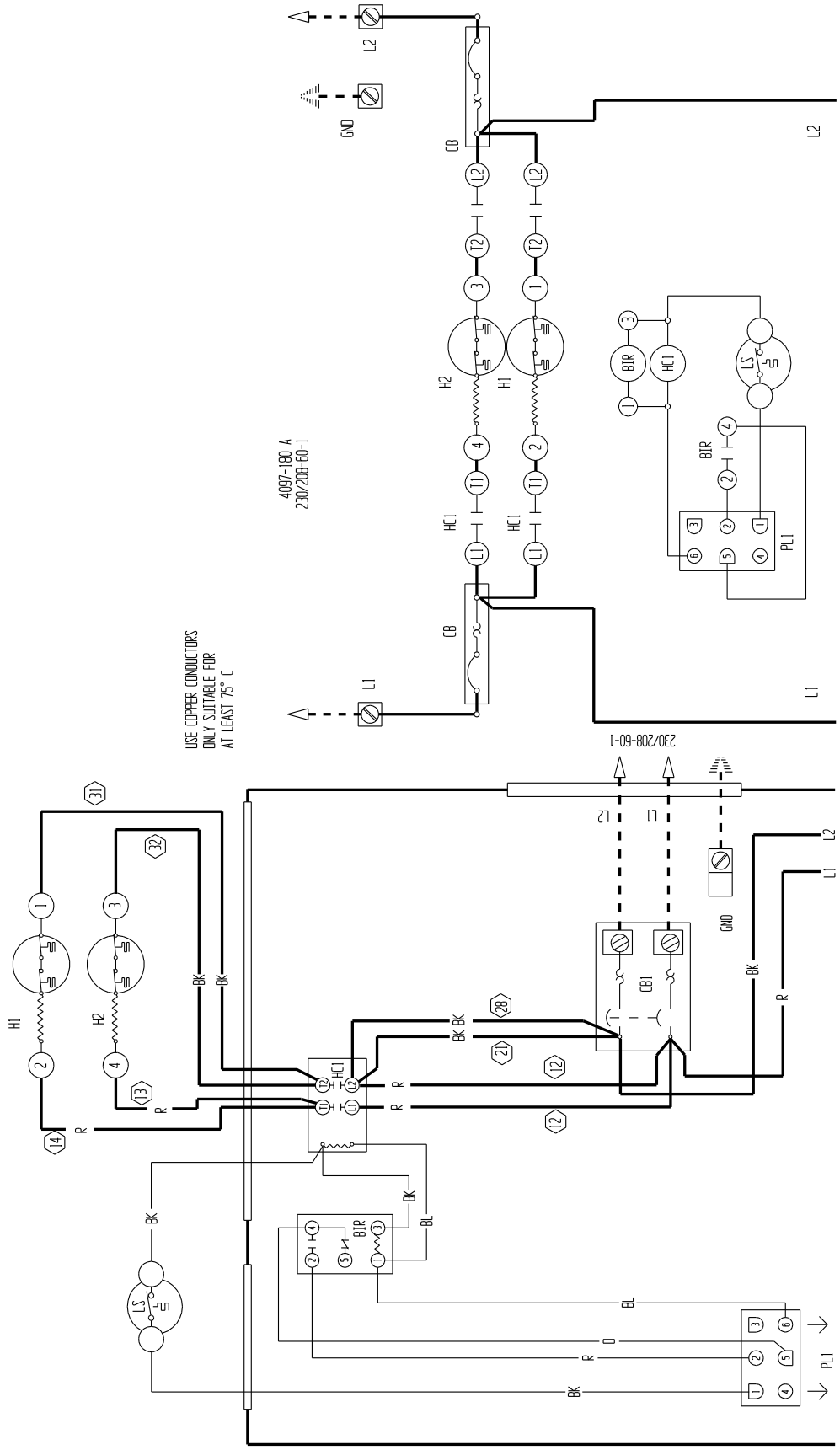
4097-178A



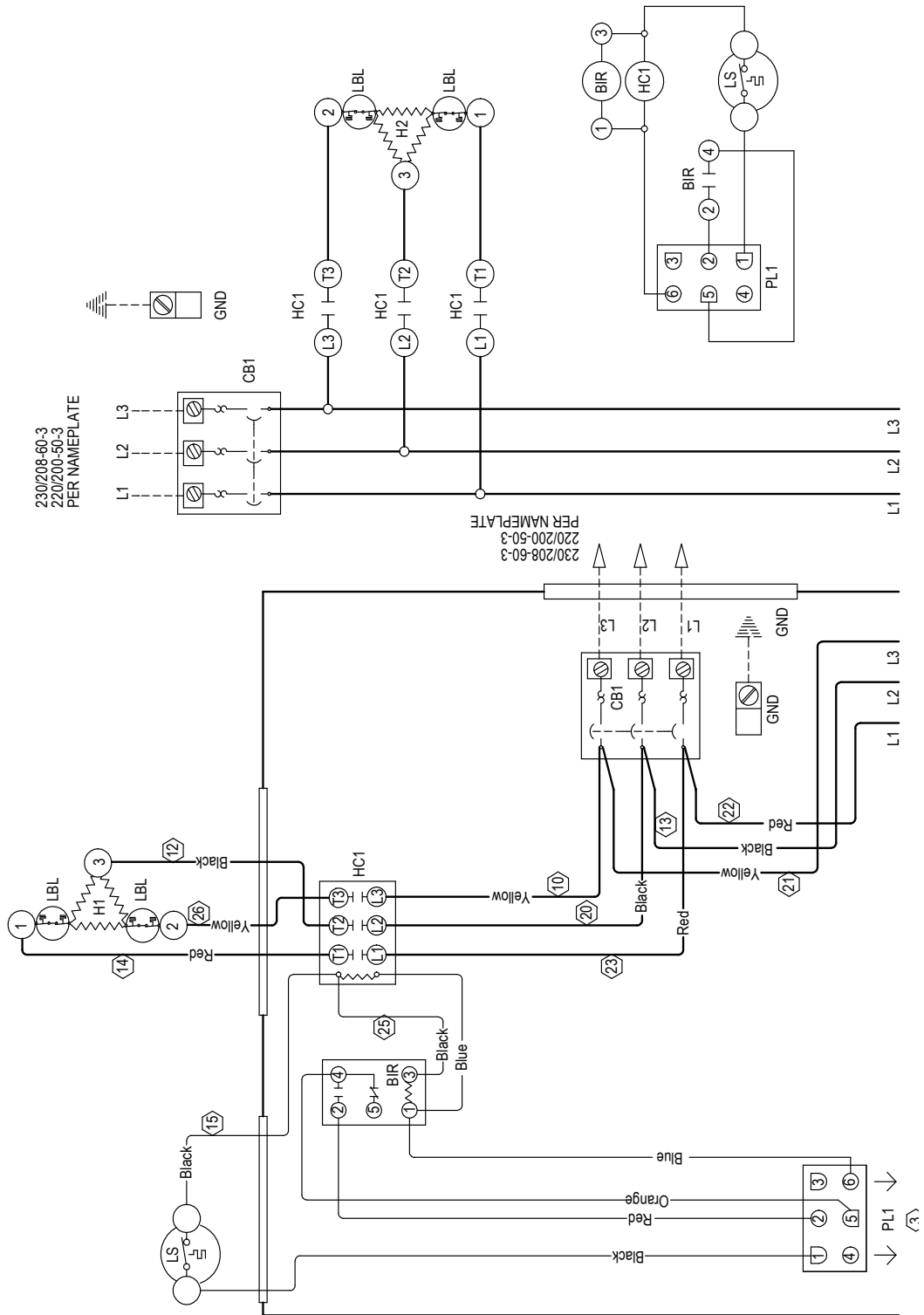
4097-179A



4097-180A



4097-240A



4097-241A

