

## WIRING DIAGRAMS

### Models HER, VE, PTE electric unit heaters

#### Two-In One Diagrams

Two wiring diagrams are furnished for each circuit configuration in this manual. Included are a connection diagram at the left for field installation and a circuit schematic at the right to aid in continuity and trouble shooting.

Solid lines show pre-wiring performed at the factory; dotted lines inform the installer of connections required to put the heater in operation.

**NOTE:** As indicated in every diagram, all wiring must comply with the National Electrical Code and all local codes. All components must agree with their respective power source.

#### Wiring Diagram Selection

Diagrams are readily identified in the page location index on the following page. This allows for the correct wiring diagram to be selected using the model, size, and power code of the unit heater.

##### Select the correct wiring diagrams as follows:

1. Determine unit heater model and size.
2. Select power code number from Table 2.3.
3. Reference unit heater model in the Page Location Index (Table 2.4) with power code number of the corresponding wiring diagram.

## CAUTION

Turn off all power to unit before wiring. Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations, contact factory.

#### Abbreviations and Symbols

To facilitate interpretation and enable simplification the abbreviations and symbols have been selected as recommended by ANSI (American National Standards Institute) and NEMA (National Electrical Manufacturers Association) standards.

XFMR or TR	Transformer
V	Volts
Hz	Cycle or Hertz
φ	Phase
LC	Limit Control
THERM or TH	Thermostat
G	Ground
HTR	Heater
H	Hot or High
SW	Switch
C	Common
"J" Box	Junction Box
L	Low
H <sub>1</sub> , H <sub>2</sub> , etc.	Transformer Primary Terminals
O.L.C.	Overload Contact
R	Relay
Rc	Relay Contact
VA	Volt-Ampere
X1, X2, etc.	Transformer Secondary Terminals
L1, L2, etc.	Electric Load Terminals
T1, T2, etc.	Starter or Motor Terminals

##### Wire Color Coding

BK	Black
BU	Blue
R	Red
W	White
Y	Yellow

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## 2-424.4 — WIRING DIAGRAMS MODELS HER, VE, PTE

**Table 2.1**  
Unit Power Requirements (AMPS) - HER Models

Power Supply	HER 50	HER 75	HER100	HER125	HER150	HER200	HER250
208/1	24.5	36.5	49.4	-	-	-	-
240/1	21.3	31.7	42.9	-	-	-	-
208/3	14.3	21.3	29.0	36.0	42.9	56.8	70.7
240/3	12.5	18.5	25.3	31.4	37.4	49.4	61.4
480/3	6.5	9.5	13.3	16.3	19.3	25.3	31.4

**Table 2.2**  
Unit Power Requirements (AMPS) - VE & PTE Models

Power Supply	VE 50	VE 75	VE 100	VE 150	VE 200	VE 250	VE/PTE 300		VE/PTE 400		VE/PTE 500	
							1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
208/1	-	-	-	-	-	-	-	-	-	-	-	-
240/1	21.4	31.9	42.3	-	-	-	-	-	-	-	-	-
208/3	14.5	21.4	28.3	42.5	-	-	-	-	-	-	-	-
240/3	12.7	18.6	24.6	37.0	49.0	-	-	-	-	-	-	-
480/3	6.7	9.7	12.7	19.0	25.0	31.0	19.5	37.6	25.5	49.6	31.5	61.5

**Table 2.3**  
Power Code Selection

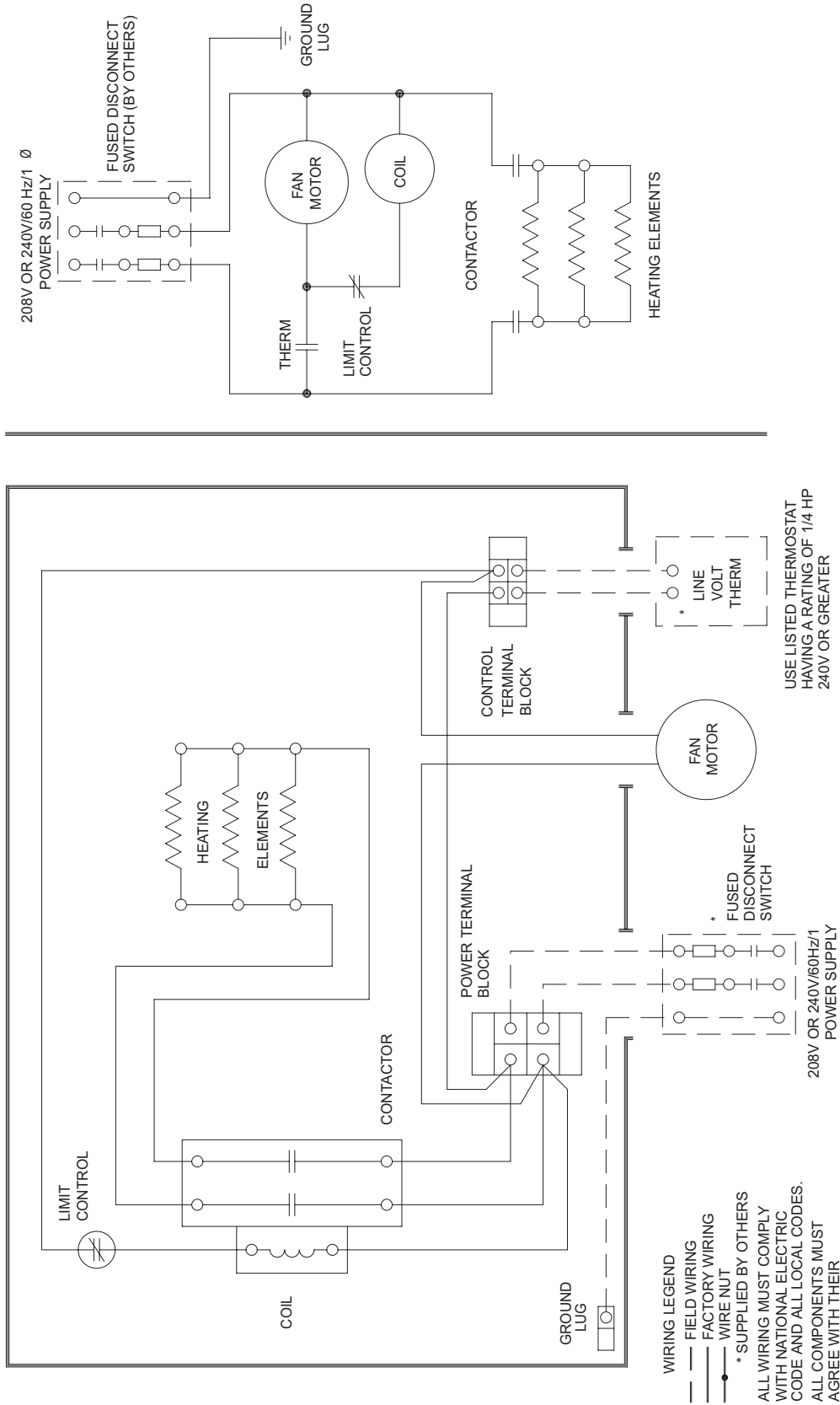
	Power Supply (Volts/Phase)				
	208V/1 $\phi$	240V/1 $\phi$	208V/3 $\phi$	240V/3 $\phi$	480V/3 $\phi$
Power Code	11	12	31	32	33

**Table 2.4**  
Electric Unit Heater Page Location Index

Model No.	Power Code				
	11	12	31	32	33
HER 50	3	3	5	5	8
HER 75	3	3	5	5	8
HER100	4	4	5	5	8
HER125	-	-	5	5	8
HER150	-	-	6	5	8
HER200	-	-	7	7	8
HER250	-	-	7	7	8
VE 50	-	9	10	10	11
VE 75	-	9	10	10	11
VE 100	-	9	10	10	11
VE 150	-	-	13	13	14
VE 200	-	-	-	13	14
VE 250	-	-	-	-	14
VE 300	-	-	-	-	12
VE 400	-	-	-	-	12
VE 500	-	-	-	-	12
PTE300	-	-	-	-	12
PTE400	-	-	-	-	12
PTE500	-	-	-	-	12

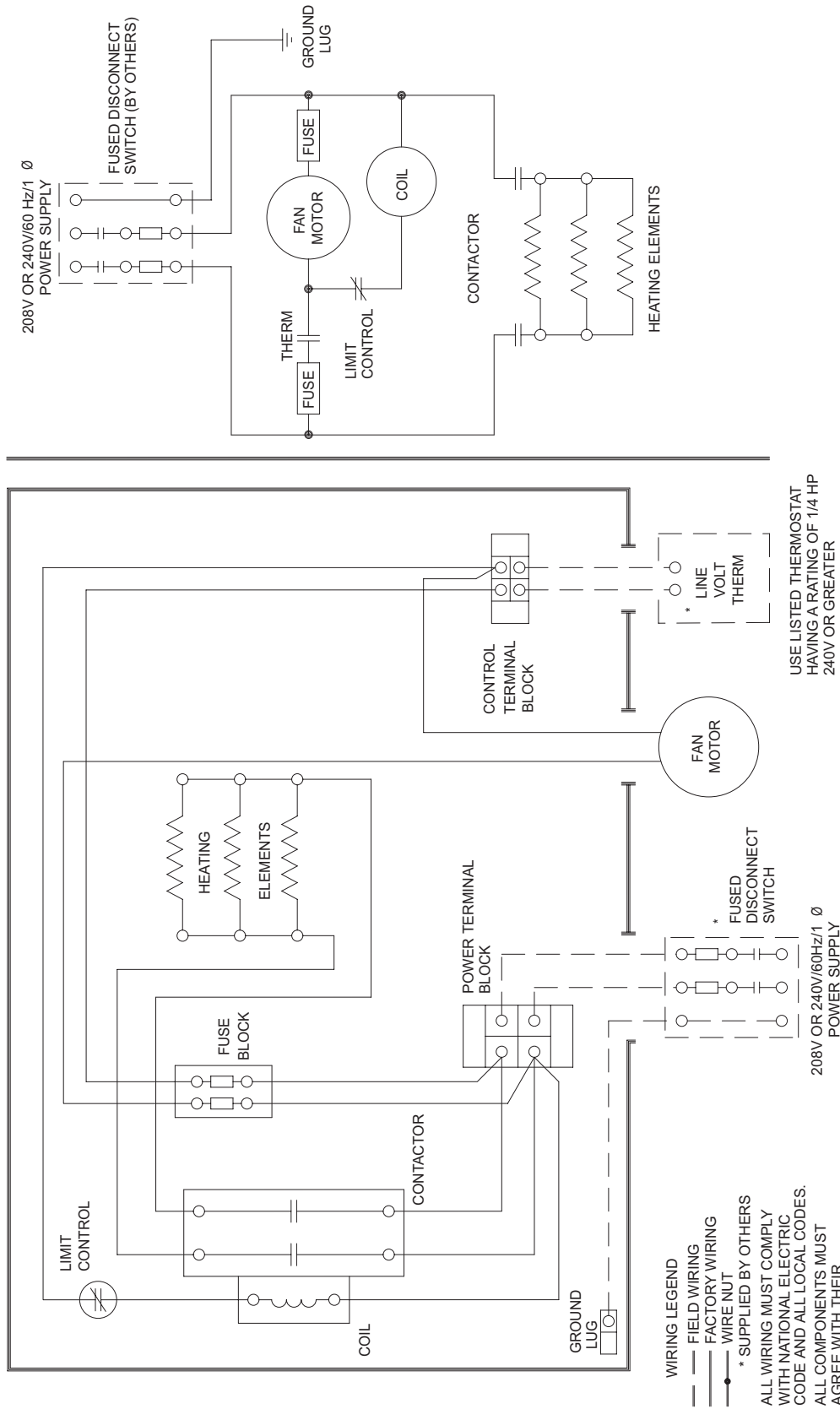
# 2-424.4 — WIRING DIAGRAMS MODELS HER, VE, PTE

ELECTRIC UNIT HEATER WIRING DIAGRAMS



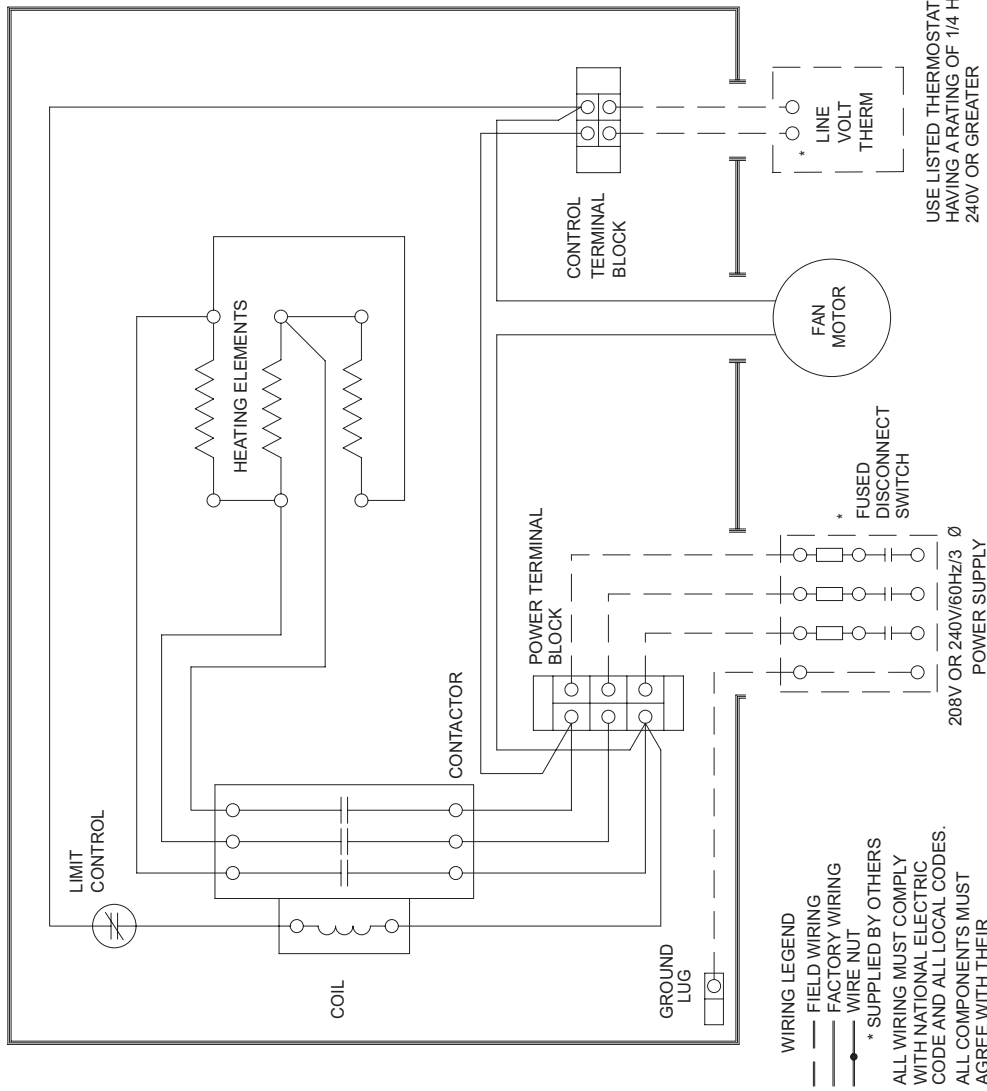
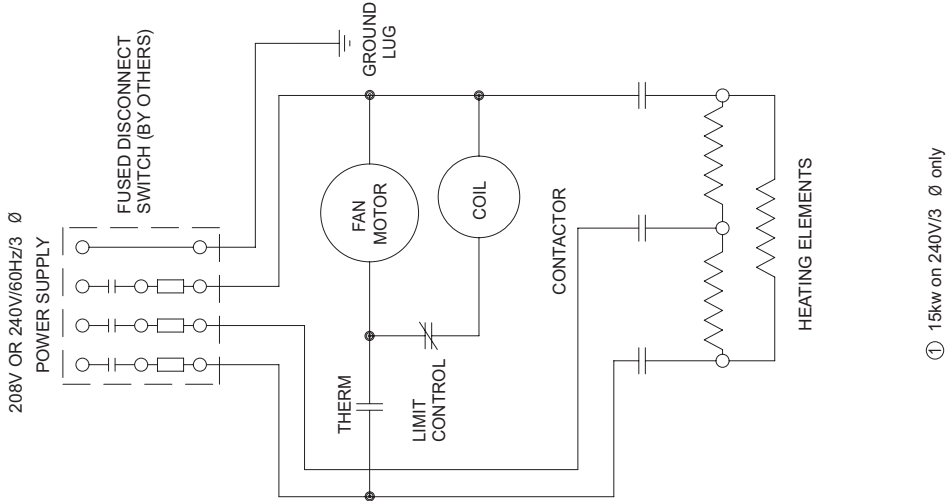
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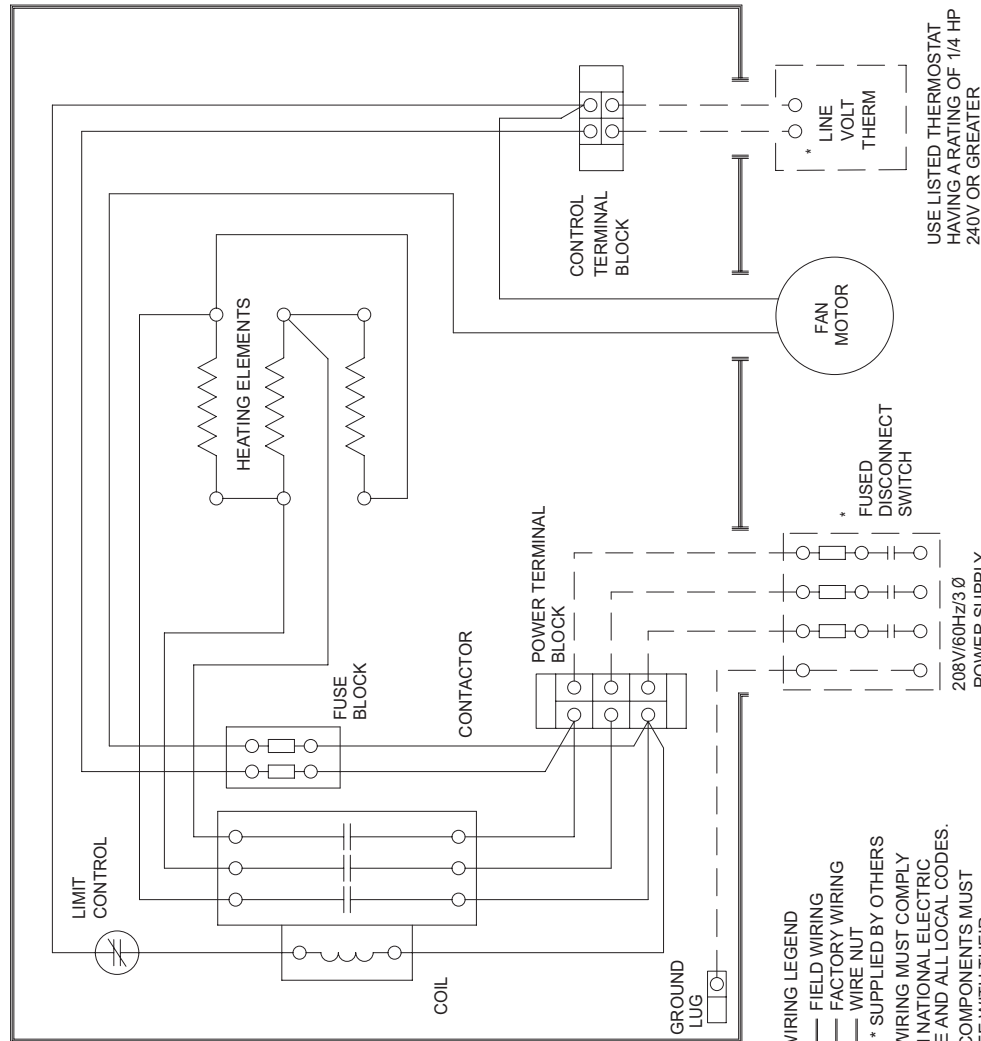
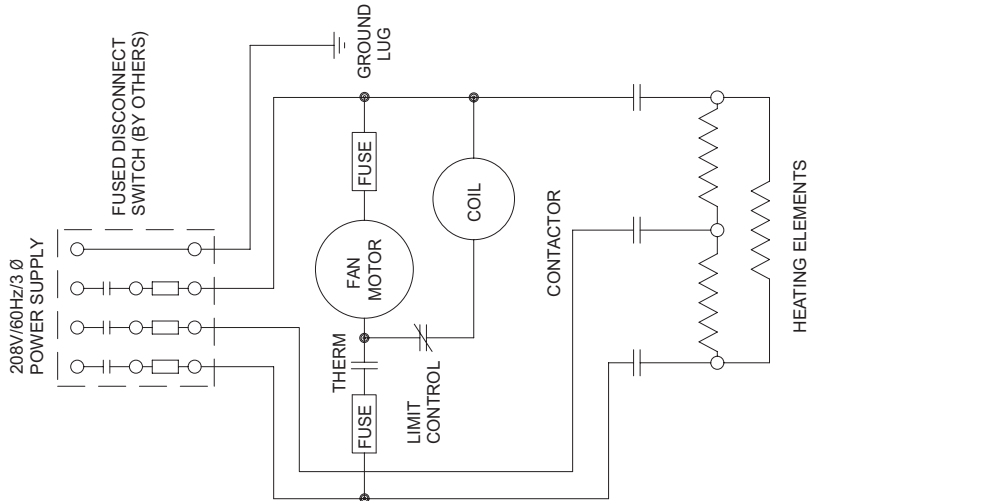
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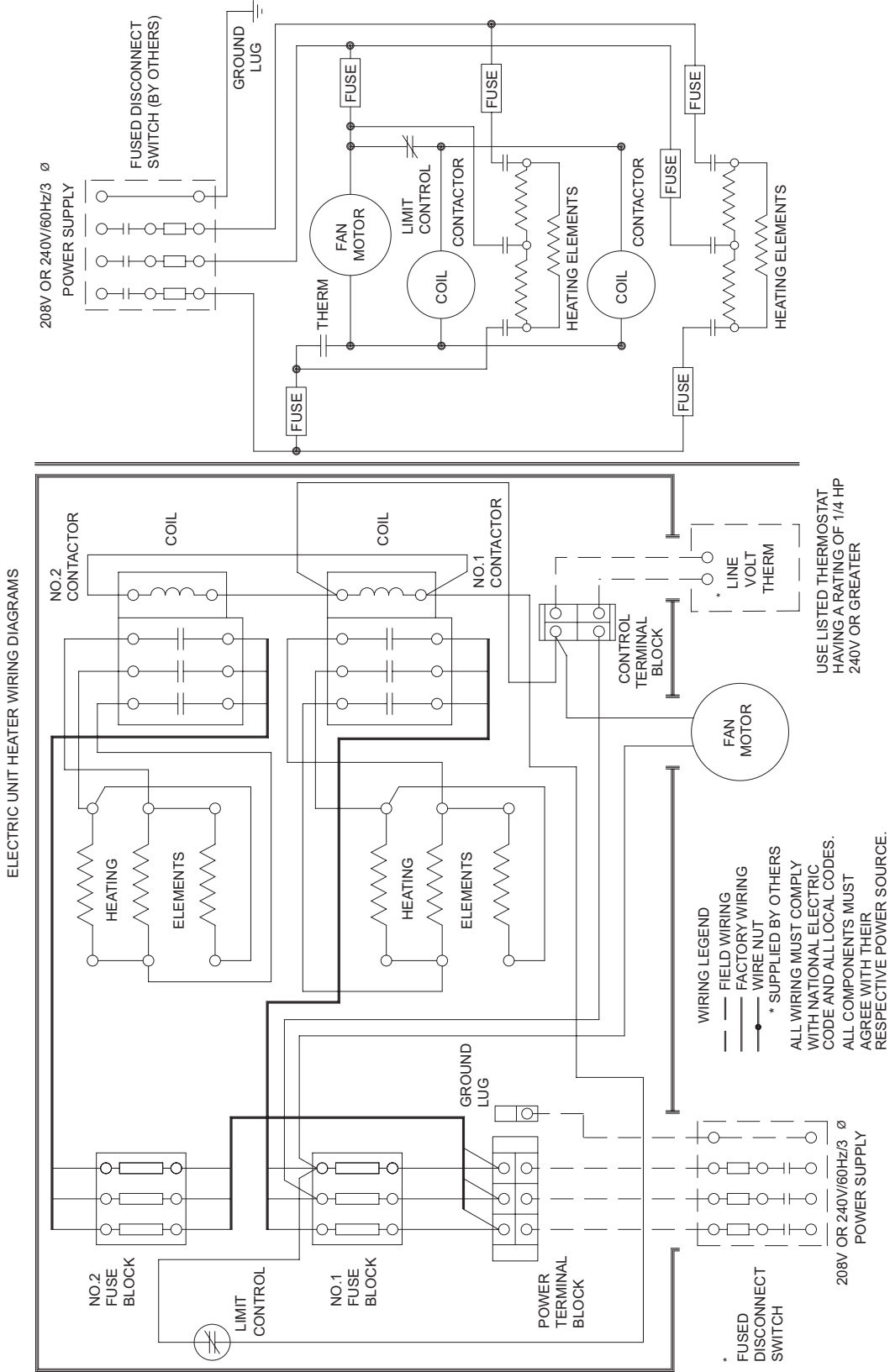
**WIRING LEGEND**  
 --- FIELD WIRING  
 --- FACTORY WIRING  
 ● WIRE NUT  
 \* SUPPLIED BY OTHERS

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES. ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

**WARNING**  
 ALL UNITS MUST BE WIRED AS SHOWN IN THIS WIRING DIAGRAM. INCORRECT WIRING MAY BE HAZARDOUS TO PERSON AND PROPERTY. DAMAGE TO OR FAILURE OF UNITS CAUSED BY INCORRECT WIRING IS NOT COVERED BY STANDARD WARRANTY.

USE LISTED THERMOSTAT HAVING A RATING OF 1/4 HP 240V OR GREATER

# 2-424.4 — WIRING DIAGRAMS MODELS HER, VE, PTE

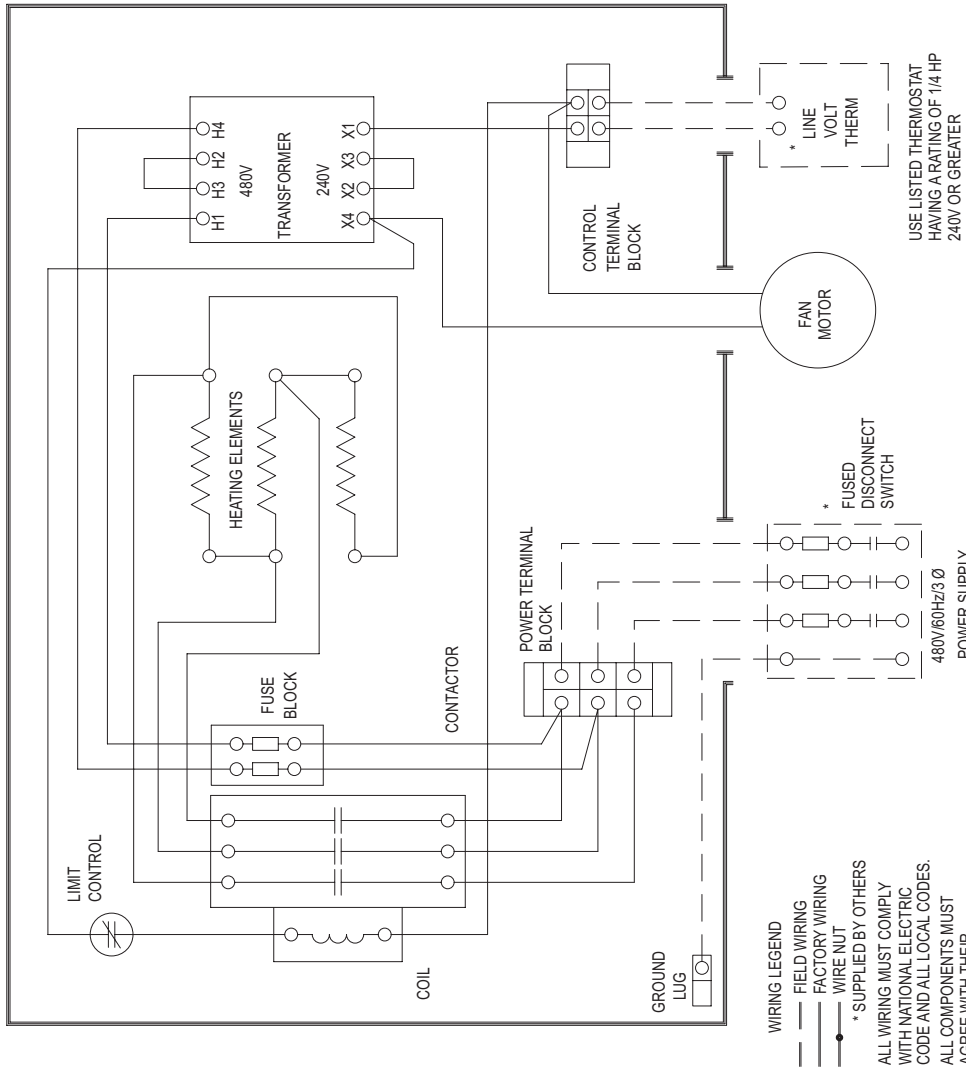
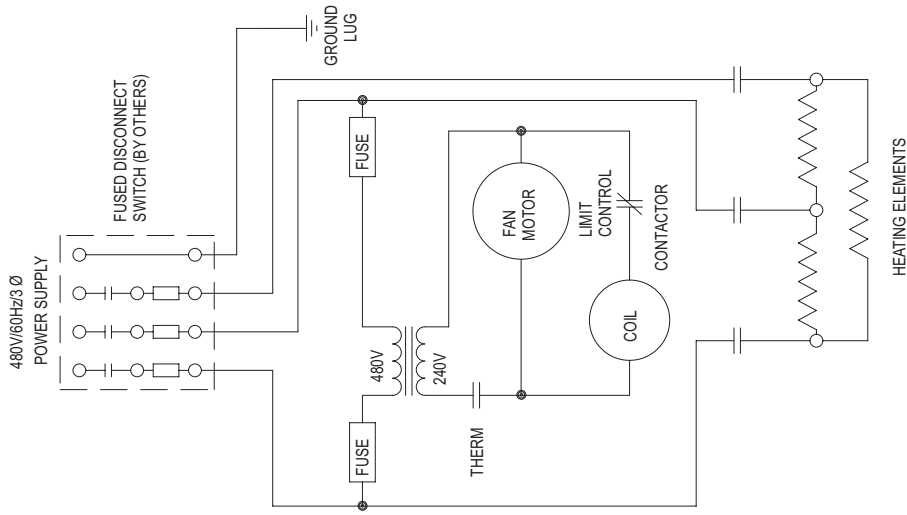


5H70253A6

208V or 240V, three-phase power supply, 20kw, 25kw Horizontal Models

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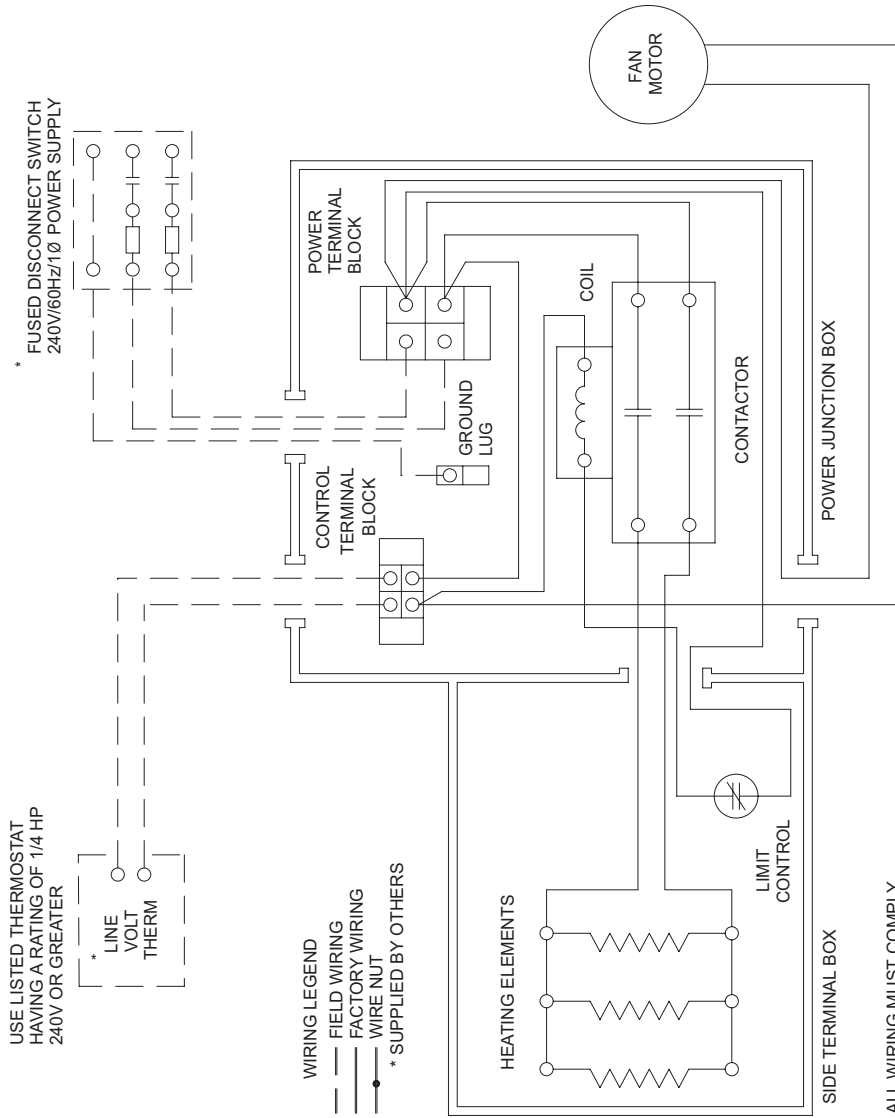
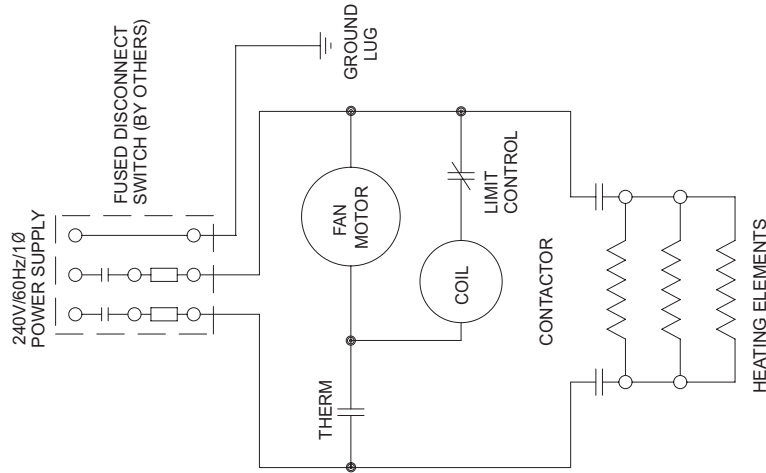
ELECTRIC UNIT HEATER WIRING DIAGRAMS





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ELECTRIC UNIT HEATER WIRING DIAGRAMS



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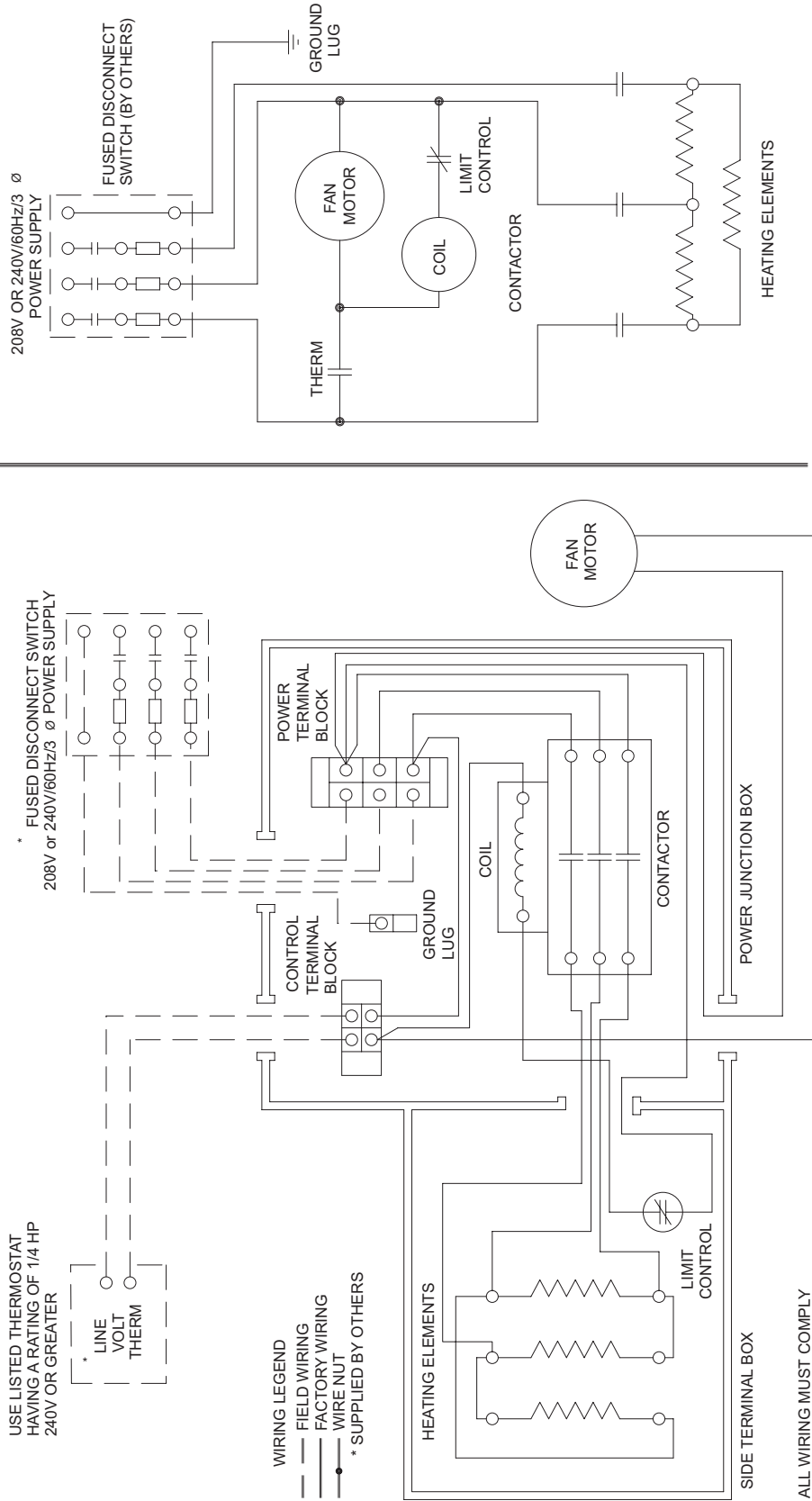


- WIRING LEGEND**
- FIELD WIRING
  - FACTORY WIRING
  - WIRE NUT
  - \* SUPPLIED BY OTHERS

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ELECTRIC UNIT HEATER WIRING DIAGRAMS



USE LISTED THERMOSTAT HAVING A RATING OF 1/4 HP 240V OR GREATER

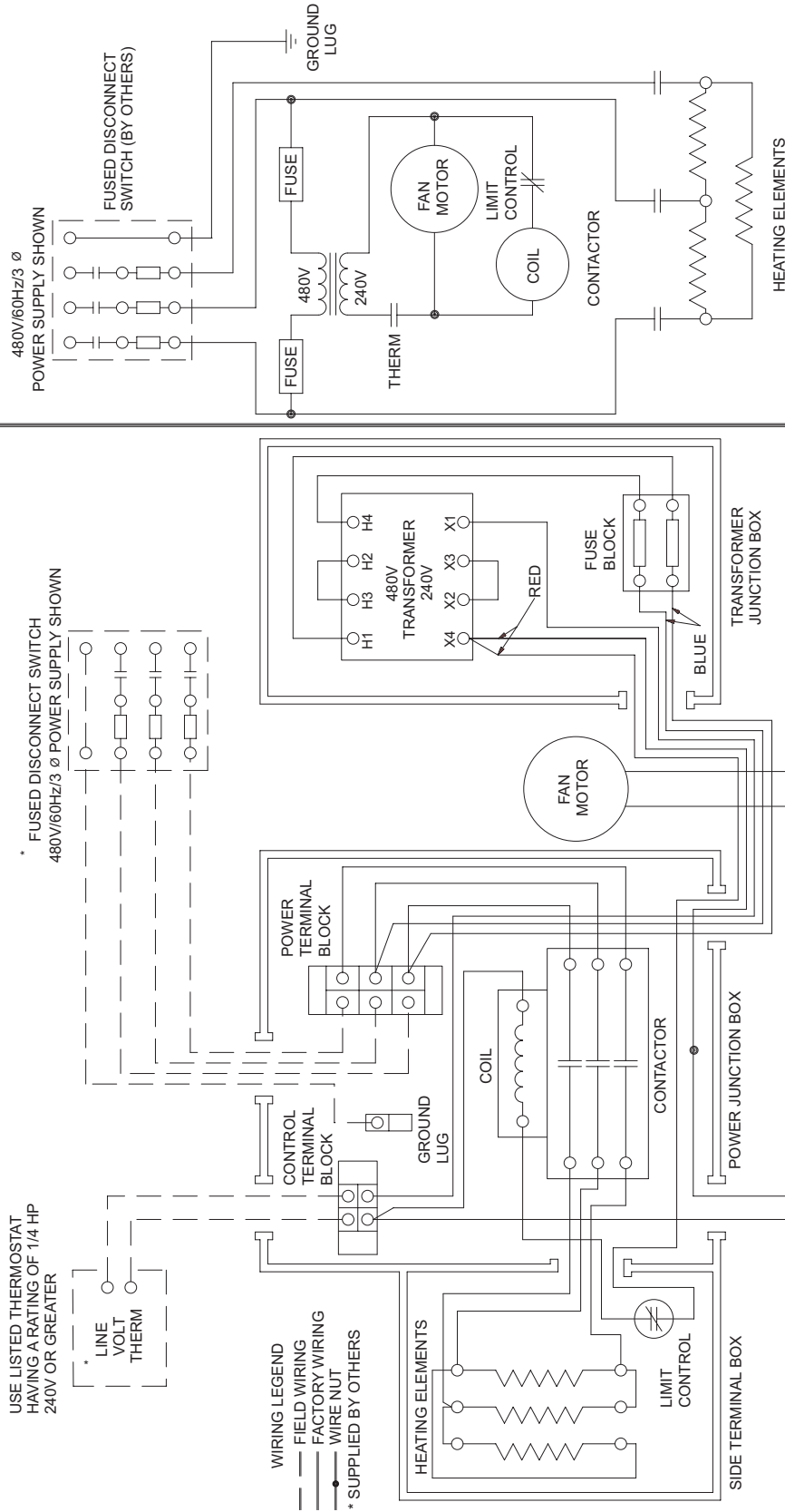
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 - - - FACTORY WIRING  
 —●— WIRE NUT  
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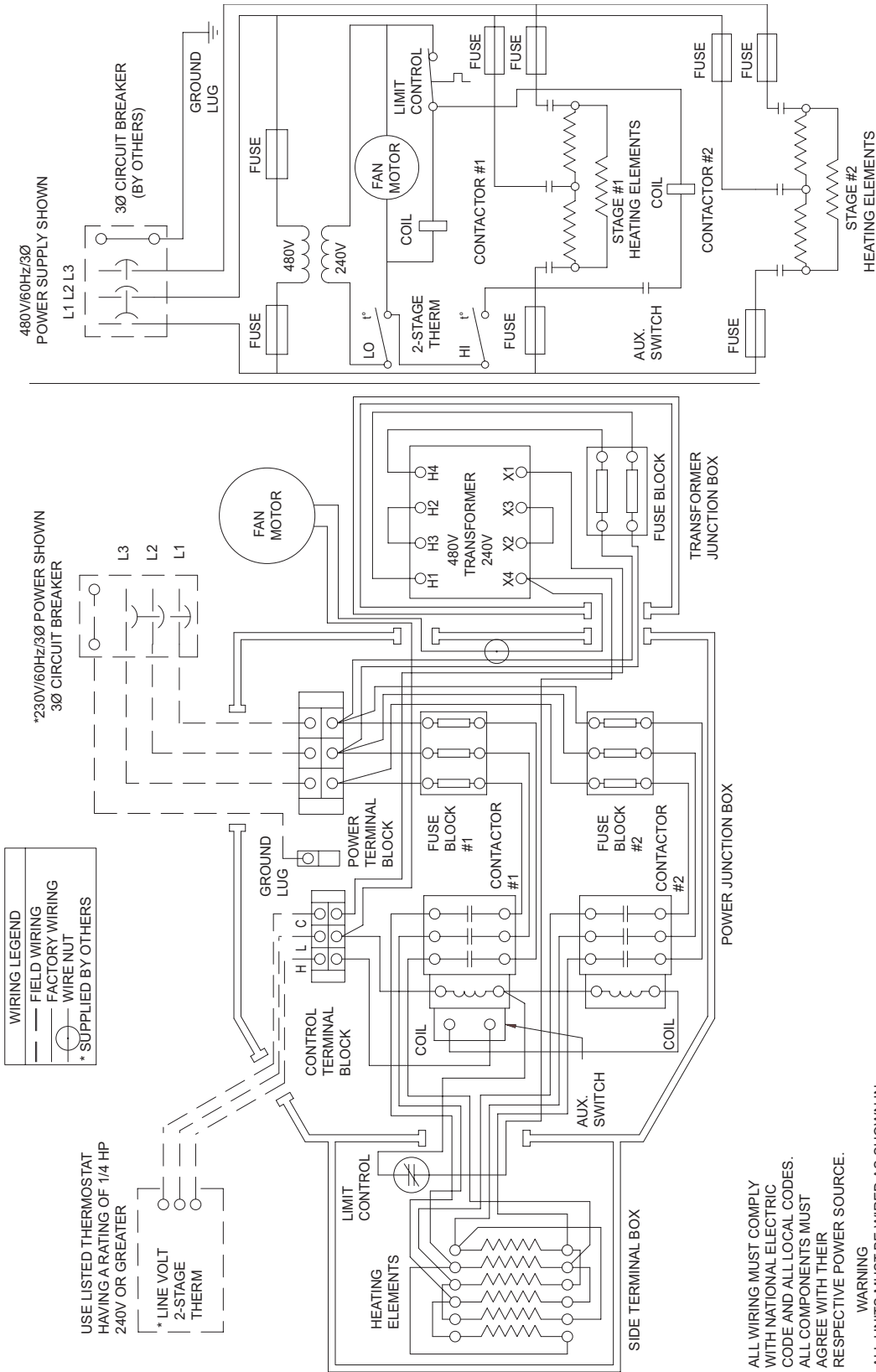
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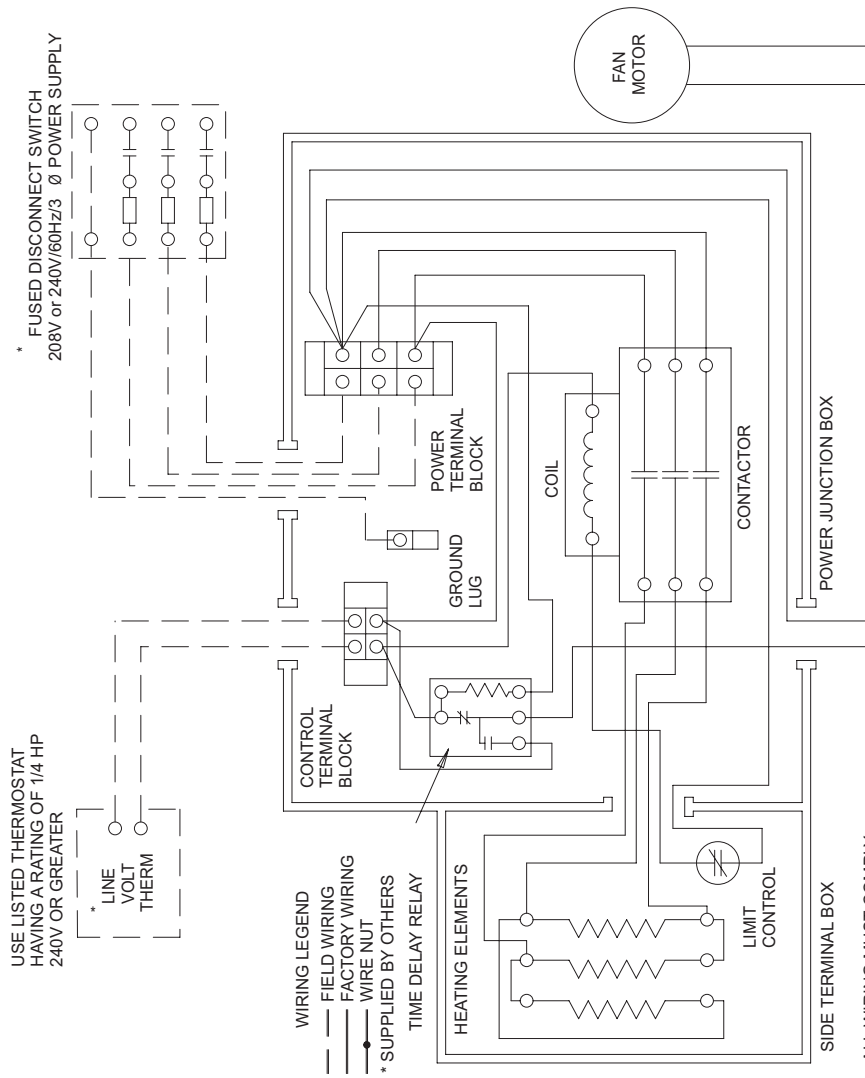
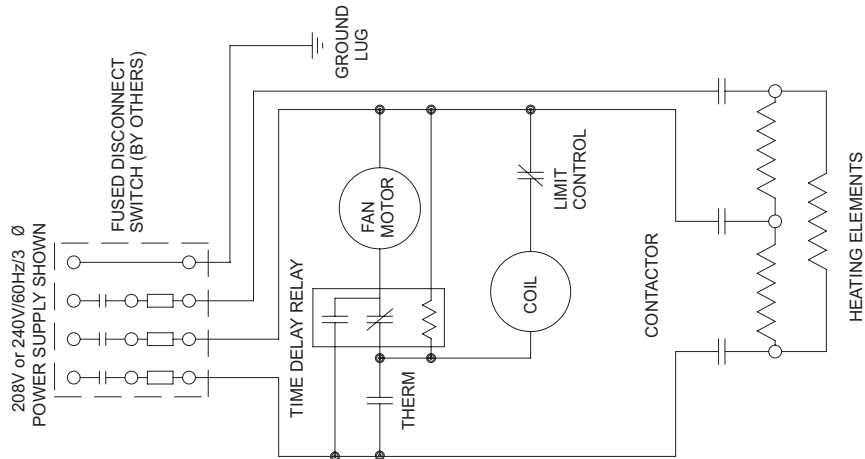
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ELECTRIC UNIT HEATER WIRING DIAGRAMS



USE LISTED THERMOSTAT HAVING A RATING OF 1/4 HP 240V OR GREATER

\* FUSED DISCONNECT SWITCH 208V or 240V/60Hz/3 Ø POWER SUPPLY

- WIRING LEGEND**
- FIELD WIRING
  - FACTORY WIRING
  - WIRE NUT
  - \* SUPPLIED BY OTHERS

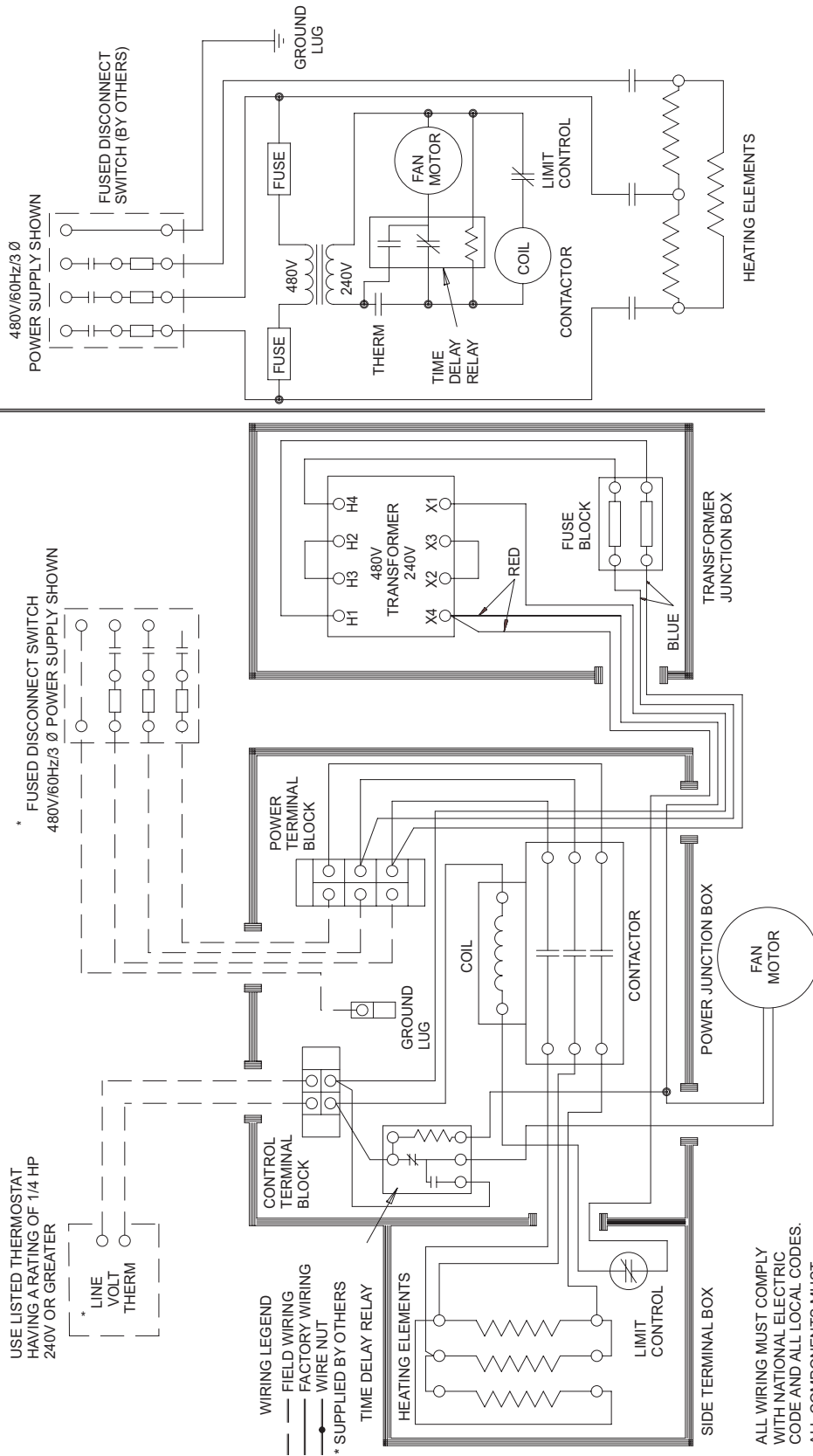
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For SERVICE contact your local qualified installation and service contractor or appropriate utility company.

As Modine Manufacturing Company has a continuous product improvement program, it reserves the right to change design and specifications without notice.

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