



WIRING DIAGRAMS

for models PA, BA, gas-fired unit heaters

manufactured after August 1984

For units manufactured before September 1984 see Bulletin #6-430.3

DIAGRAM SELECTION

Diagrams are provided for both single- and three-phase circuits, and are readily identified in the Selection Table on the following page. The Selection Table enables easy selection of the correct wiring diagram after the electrical components of the unit heater have been determined. The control codes are listed to aid in locating the correct diagram.

DIAGRAM INTERCHANGEABILITY

The following Model PA and BA gas-fired unit heater wiring diagrams are for either 115-volt, 60 Hertz, single-phase power, or for 460-volt, 60 Hertz, three-phase electrical service.

The 115V / 60 Hz / 1 ϕ diagrams may also be utilized for 230V / 60 Hz / 1 ϕ by substituting 230-volt components for the 115-volt shown.

The 460V / 60 Hz / 3 ϕ diagrams may be converted to 208V / 60V / 3 ϕ by substituting a 208V / 115V transformer for 460V / 115V model shown.

The 460V / 60 Hz 3 ϕ diagrams may be modified to 230 / 60V / 3 ϕ by reconnecting the primary of the 460V / 115V transformer as shown or by substituting 230-volt components for the 115-volt shown and supplying 230V / 60 Hz / 1 ϕ power to the control system and accessories.

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.

POWER REQUIREMENTS — PROPELLER AND BLOWER MOTORS

Motor Ratings	Full Load Amperes				
	115V/60/1	230V/60/1	208/60/3	230/60/3	460/60/3
6W	0.6	0.3	—	—	—
16W	1.1	0.6	—	—	—
1/15HP	2.7	—	—	—	—
1/6HP	2.8	1.1	—	—	—
1/4HP	4.4	2.2	1.6	1.4	0.7
1/3HP	5.6	2.8	2.5	2.2	1.1
1/2HP	7.8	4.4	2.6	2.6	1.3
3/4HP	10.2	6.0	3.4	3.1	1.6
1HP	13.2	6.6	3.9	3.4	1.7
1-1/2HP	15.6	7.8	5.6	4.8	2.4
2HP	—	—	6.8	6.2	3.1
3HP	—	—	10.8	9.4	4.7

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
MV	Main Valve
PV	Pilot Valve
SO	Shut Off
RC	Relay Contact or Coil
G	Ground
H	Hot
SW	Switch
EPS	Electric Pilot Switch
HI	High
Lo	Low
Co	Common

"J" Box	Junction Box
H ₁ H ₂ , etc.	Transformer Primary Terminals
SUM	Summer Contact (Summer-Winter Switch)
WIN	Winter Contact (Summer-Winter Switch)
S-W	Summer-Winter Switch
O.L.C.	Overload Contact
C.S.	Power Venter Centrifugal Switch
FT _c	Fan Timer Contact
SPDT	Single-Pole Double-Throw Switch
VA	Volt Ampere
W	Watts

WIRE COLOR CODING	
BK	Black
BL	Blue
R	Red
W	White
Y	Yellow
X1, X2, etc.	Transformer Secondary Terminals
L1, L2, etc.	Electric Load Terminals
T1, T2, etc.	Starter or Motor Terminals

6-441 WIRING DIAGRAM MODELS PA/BA

WIRING DIAGRAM SELECTION

A) Field and Submittal Wiring Diagram Selection

Wiring in the field changes little when the brand of the controls furnished on the unit heater changes. Select correct wiring diagrams as follows:

- 1) Determine unit heater model and size.
- 2) Select control code number from Table 1.
- 3) Reference unit heater model in the Page Location Index with control code number and determine correct page number for single-phase or three-phase control. Single-phase wiring diagram page numbers are in the unshaded areas and three-phase diagrams are in the shaded areas.
- 4) Wiring diagrams for unit heaters with accessories will have the same page number as the wiring diagram for the appropriate unit heater control code, but are suffixed according to Table 2.

B) Service and Trouble Shooting

Because internal or factory wiring may vary depending on controls manufacturer, the wiring diagrams must be selected with the series identity number when servicing or trouble shooting unit heater control system. Wiring diagrams in this bulletin are for unit heaters manufactured after August 1984 and the series identity number is the 5th thru the 7th digits of the unit heater serial number.

EXAMPLE: Serial No. — 02021080984 has a series identity number of 108.

To select the correct wiring diagram:

- 1) Determine unit heater model and size from serial plate located on the rear of the unit.
- 2) Determine the control code numbers from box marked *Control Code*, also on the serial plate.
- 3) Determine the *series identity number* from unit serial number.

- 4) Select the Page Location Index which corresponds to the *series identity number* of the unit heater, then proceed with Steps 3 and 4 of Field and Submittal Wiring Diagram Selection.

EXAMPLE SELECTION

Select correct single-phase wiring diagram for a BA-170A, Control Code 28, series identity number 108.

Locate the Page Location Index which shows the page numbers for units with series identity number 108. Select the page number where the column for the BA-170 intersects with the line for control code 28. The correct single phase wiring diagram for this unit, without accessories, is found on page 15 in the unshaded area. If this unit also had a power venter the correct wiring diagram would be found on page 15b as determined from the page suffixes shown in Table 2.

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.

The heavier lines in the connection diagram indicate line voltage; the lighter lines are for low voltage. Solid lines show pre-wiring performed at the factory; dotted lines inform the installer of connections required to put the heater in operation.

TABLE 1 — CONTROL CODE DESCRIPTIONS

08, 09	Intermittent Pilot Ignition, Non-Lockout, fan-time delay, low voltage thermostat, Natural Gas.
11, 12	Standing Pilot, 100% Shut-Off, fan-time delay, low voltage thermostat, Natural Gas.
25, 26	Two Stage, Standing Pilot, 100% Shut-Off, Natural Gas.
28, 29	Intermittent Pilot Ignition with Lockout, fan-time delay, low voltage thermostat, Natural Gas.
51, 52	Mechanical Modulation, Intermittent Pilot Ignition, Non-Lockout, Natural Gas. (BA Models only)
55, 56	Two-Stage, Intermittent Pilot Ignition, Non-Lockout, Natural Gas.
61, 62	Mechanical Modulation, Intermittent Pilot Ignition with Lockout, Natural Gas, (BA Models only)
65, 66	Two-Stage, Intermittent Pilot Ignition with Lockout, Natural Gas.
76, 77	Mechanical Modulation, Intermittent Pilot Ignition with Lockout, Propane Gas. (BA Models only)
78, 79	Intermittent Pilot Ignition with Lockout, fan-time delay, low voltage thermostat, Propane Gas.
81, 82	Standing Pilot, 100% Shut-Off, fan-delay, low-voltage thermostat, Propane Gas.
83, 84	Two-Stage, Standing Pilot, 100% Shut-Off, Propane Gas.
95, 96	Two-Stage, Intermittent Pilot Ignition with Lockout, Propane Gas.

TABLE 2 — ACCESSORY SUFFIXES

Page Suffix	Accessory
a	Summer/Winter Switch
b	Power Venter
c	Summer/Winter Switch and Power Venter

PAGE LOCATION INDEX: Series Identity Number 101

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	—	—	—	—	—	—	—	—	—	—	—	—	—
25, 26	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	—	—
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	3 4
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	3 4
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	3 4
78, 79	—	—	—	—	—	—	—	—	—	—	—	—	—
81, 82	—	—	—	—	—	—	—	—	—	—	—	—	—
83, 84	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 102

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	—	—	—	—	—	—	—	—	—	—	—	—	—
25, 26	—	—	—	—	—	—	—	—	—	—	—	5 6	5 6
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	— 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	—
55, 56	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8
61, 62	—	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	—
65, 66	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8
76, 77	—	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	—
78, 79	—	—	—	—	—	—	—	—	—	—	—	—	—
81, 82	—	—	—	—	—	—	—	—	—	—	—	—	—
83, 84	—	—	—	—	—	—	—	—	—	—	—	5 6	5 6
95, 96	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8	7 8

PAGE LOCATION INDEX: Series Identity Number 103

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	—	—	—	—	—	—	—	—	—	—	—	—	—
25, 26	—	—	—	—	—	—	—	—	—	—	—	—	—
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	—
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	—
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	—
78, 79	—	—	—	—	—	—	—	—	—	—	—	—	—
81, 82	—	—	—	—	—	—	—	—	—	—	—	—	—
83, 84	—	—	—	—	—	—	—	—	—	—	—	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 104

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	—	—	—	—	—	—	—	—	—	—	—	—	—
25, 26	—	—	—	—	—	—	—	—	—	—	—	—	—
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	—
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	—
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	—
78, 79	—	—	—	—	—	—	—	—	—	—	—	—	—
81, 82	—	—	—	—	—	—	—	—	—	—	—	—	—
83, 84	—	—	—	—	—	—	—	—	—	—	—	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 105

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12
25, 26	—	—	—	—	—	—	—	—	—	—	—	—	—
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	—
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	—
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	—
78, 79	—	—	—	—	—	—	—	—	—	—	—	—	—
81, 82	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12
83, 84	—	—	—	—	—	—	—	—	—	—	—	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 106

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	13 14	13 14
25, 26	—	—	—	—	—	—	—	—	—	—	—	—	—
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	—
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	—
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	—
78, 79	—	—	—	—	—	—	—	—	—	—	—	—	—
81, 82	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	13 14	13 14
83, 84	—	—	—	—	—	—	—	—	—	—	—	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 107

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	—	—	—	—	—	—	—	—	—	—	—	—	—
11, 12	—	—	—	—	—	—	—	—	—	—	—	19 20	19 20
25, 26	—	—	—	—	—	—	—	—	—	—	—	—	—
28, 29	—	—	—	—	—	—	—	—	—	—	—	—	—
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	—
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	—
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	—
78, 79	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16
81, 82	—	—	—	—	—	—	—	—	—	—	—	—	—
83, 84	—	—	—	—	—	—	—	—	—	—	—	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 108

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16
11, 12	—	—	—	—	—	—	—	—	—	—	—	—	—
25, 26	—	—	—	—	—	—	—	—	—	—	—	—	—
28, 29	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16	15 16
51, 52	—	—	—	—	—	—	—	—	—	—	—	—	—
55, 56	—	—	—	—	—	—	—	—	—	—	—	—	—
61, 62	—	—	—	—	—	—	—	—	—	—	—	—	—
65, 66	—	—	—	—	—	—	—	—	—	—	—	—	—
76, 77	—	—	—	—	—	—	—	—	—	—	—	—	—
78, 79	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18
81, 82	—	—	—	—	—	—	—	—	—	—	—	—	—
83, 84	—	—	—	—	—	—	—	—	—	—	—	—	—
95, 96	—	—	—	—	—	—	—	—	—	—	—	—	—

PAGE LOCATION INDEX: Series Identity Number 109

Control Code	PA 30	PA/BA 50	PA/BA 75	PA/BA 105	PA/BA 130	PA/BA 150	PA/BA 170	PA/BA 200	PA/BA 225	PA/BA 250	PA/BA 300	PA/BA 350	PA/BA 400
08, 09	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18
11, 12	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
25, 26	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
28, 29	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18	17 18
51, 52	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
55, 56	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
61, 62	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
65, 66	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
76, 77	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
78, 79	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
81, 82	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
83, 84	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
95, 96	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —

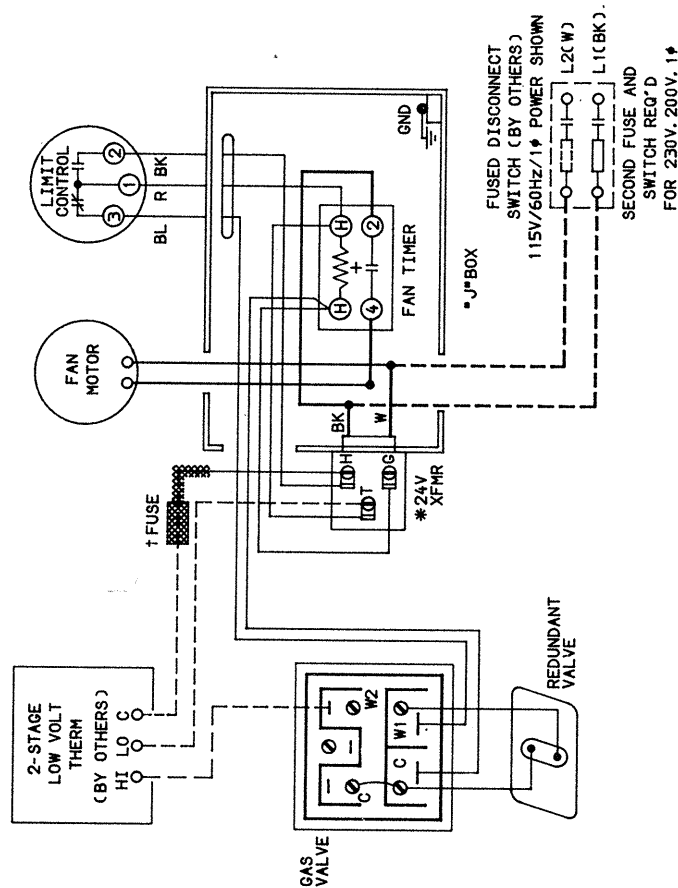


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	LINE
	24V.



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1½-BK&Y (OR 0)

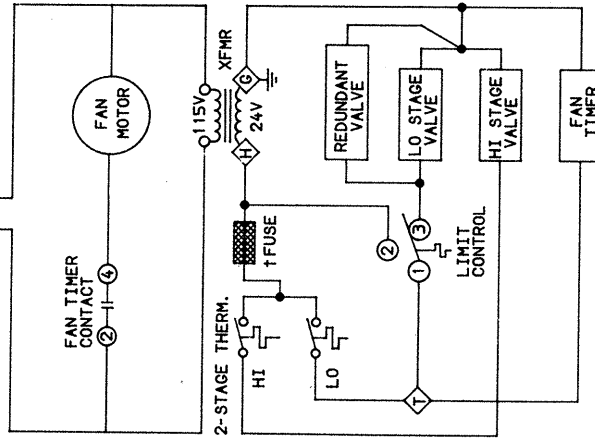
200V/60Hz/1½-BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

115V/60Hz/1½ POWER SHOWN
L1(BK) L2(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)
SECOND FUSE AND
SWITCH REQ'D
FOR 230V, 200V, 1½



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

5H70081B28 — Single-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat. (Rev. D)



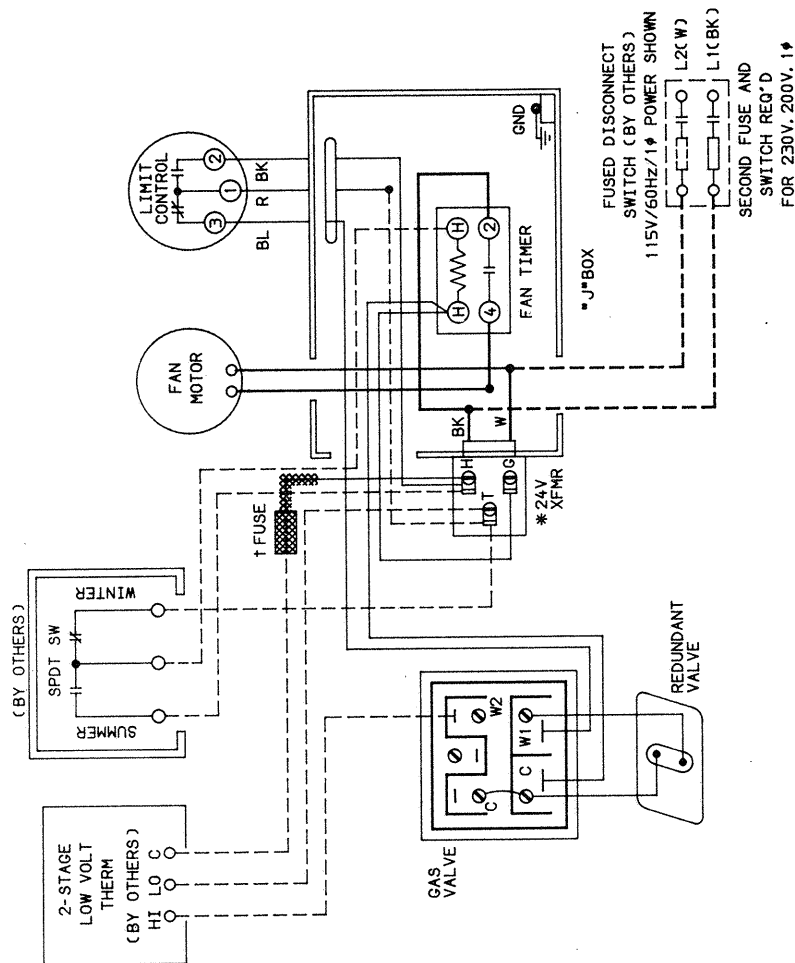


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FAN MOTOR	—
FAN TIMER	—
WIRE NUT	—



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105 °C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

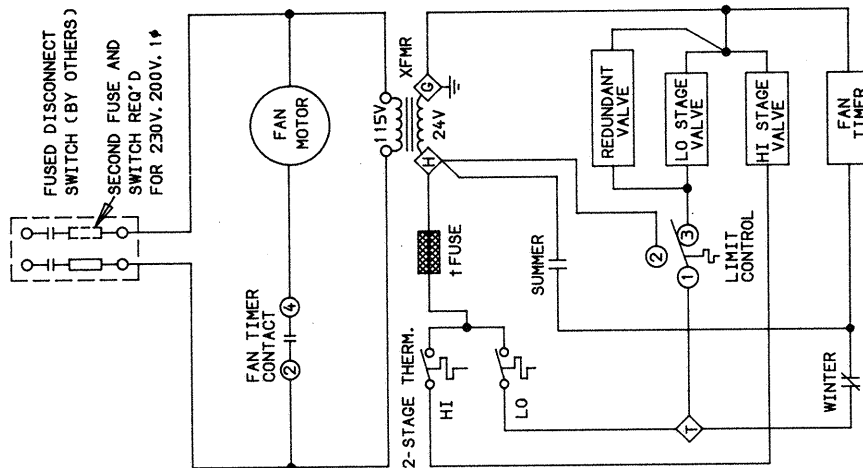
230V/60Hz/1φ-BK&Y(COR 0)

200V/60Hz/1φ-BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

115V/60Hz/1φ POWER SHOWN
L1(BK) L2(W)



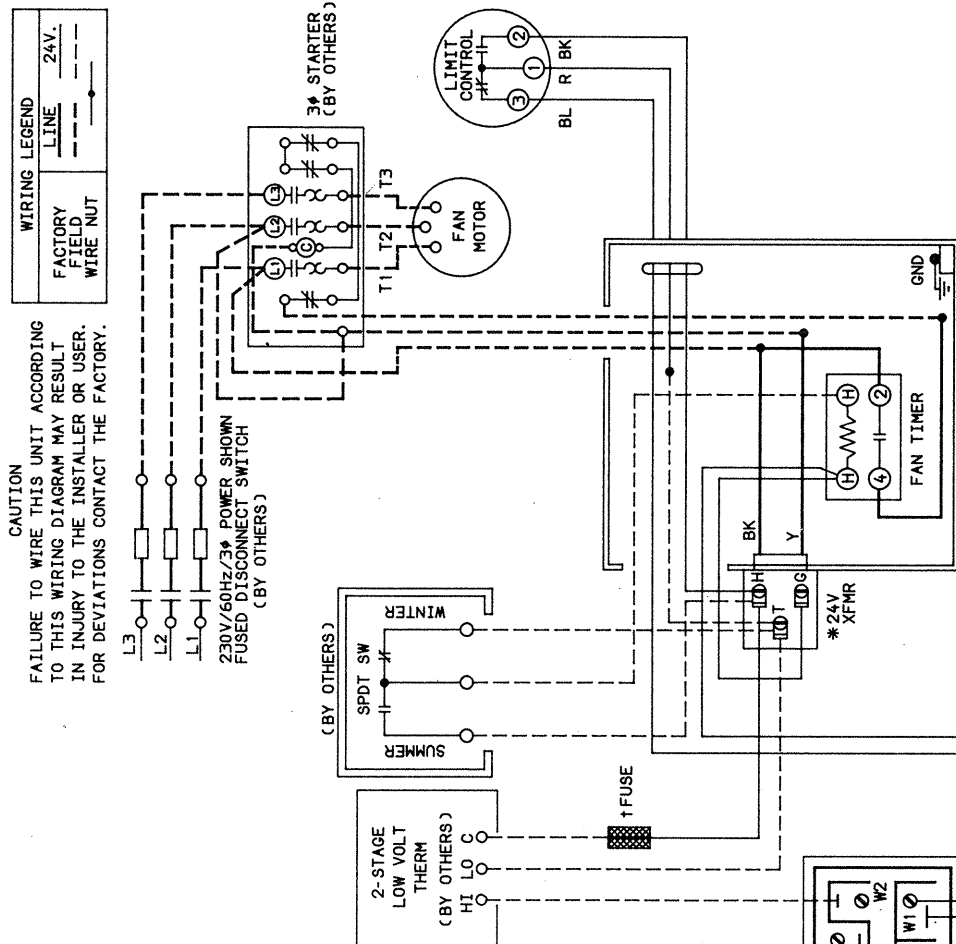
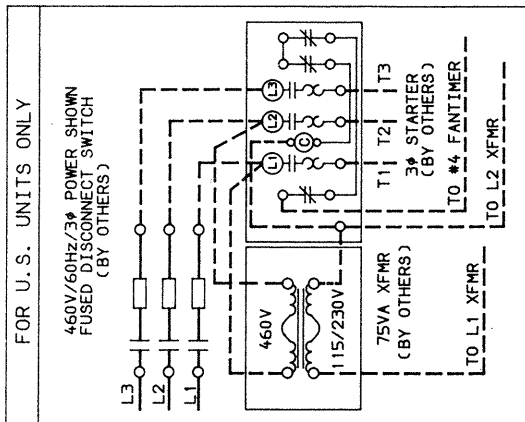
INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B61 — Single-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, summer/winter switch. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

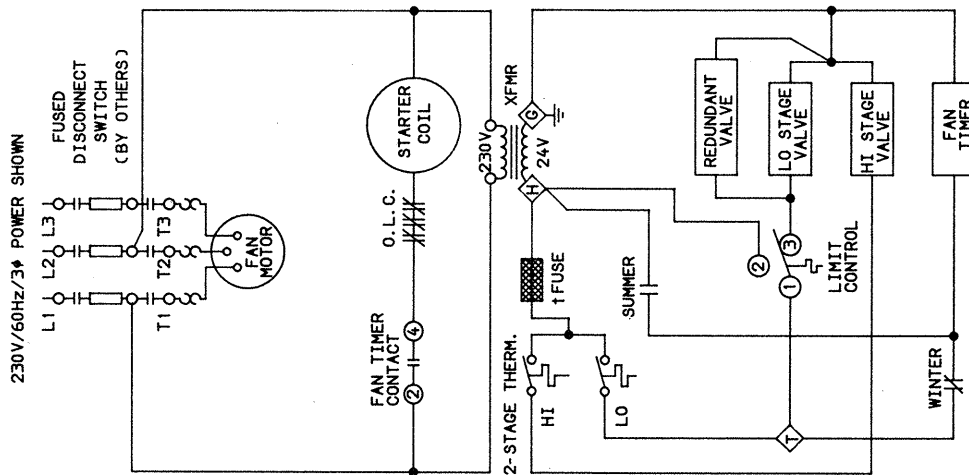


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

*ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&YCOR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B64 — Three-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, summer / winter switch. (Rev. A)

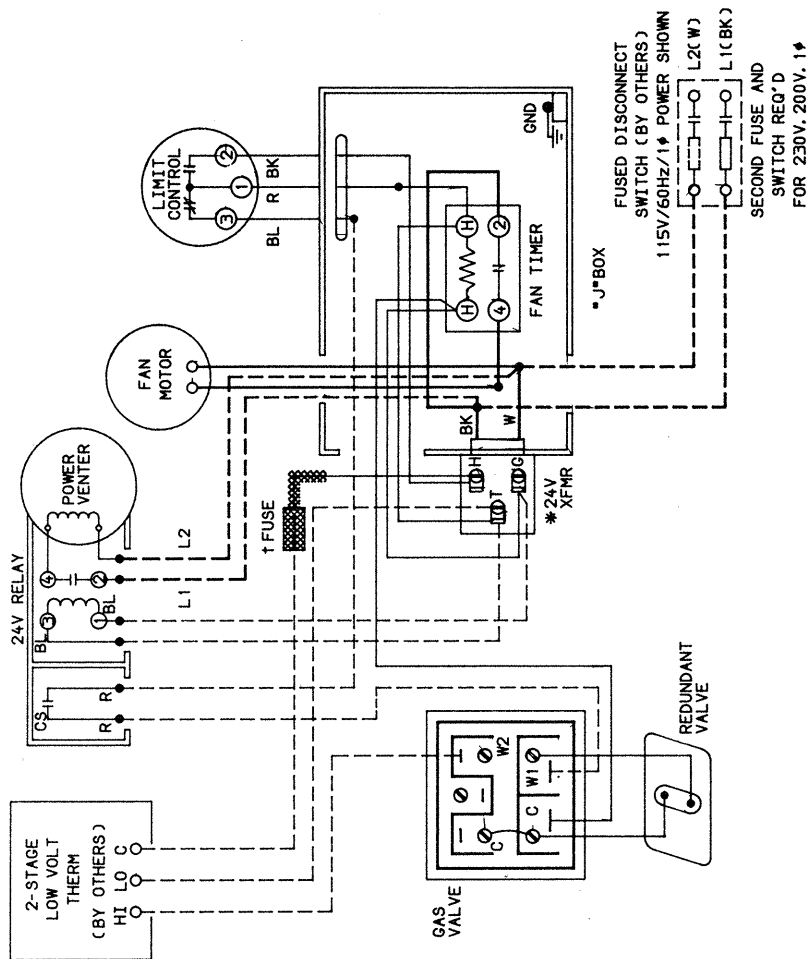


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1φ-BK&YCOR 0)

200V/60Hz/1φ-BK&R

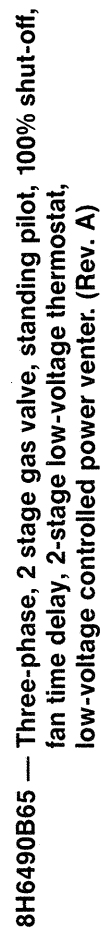
WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B62 — Single-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, low-voltage controlled power venter. (Rev. A)



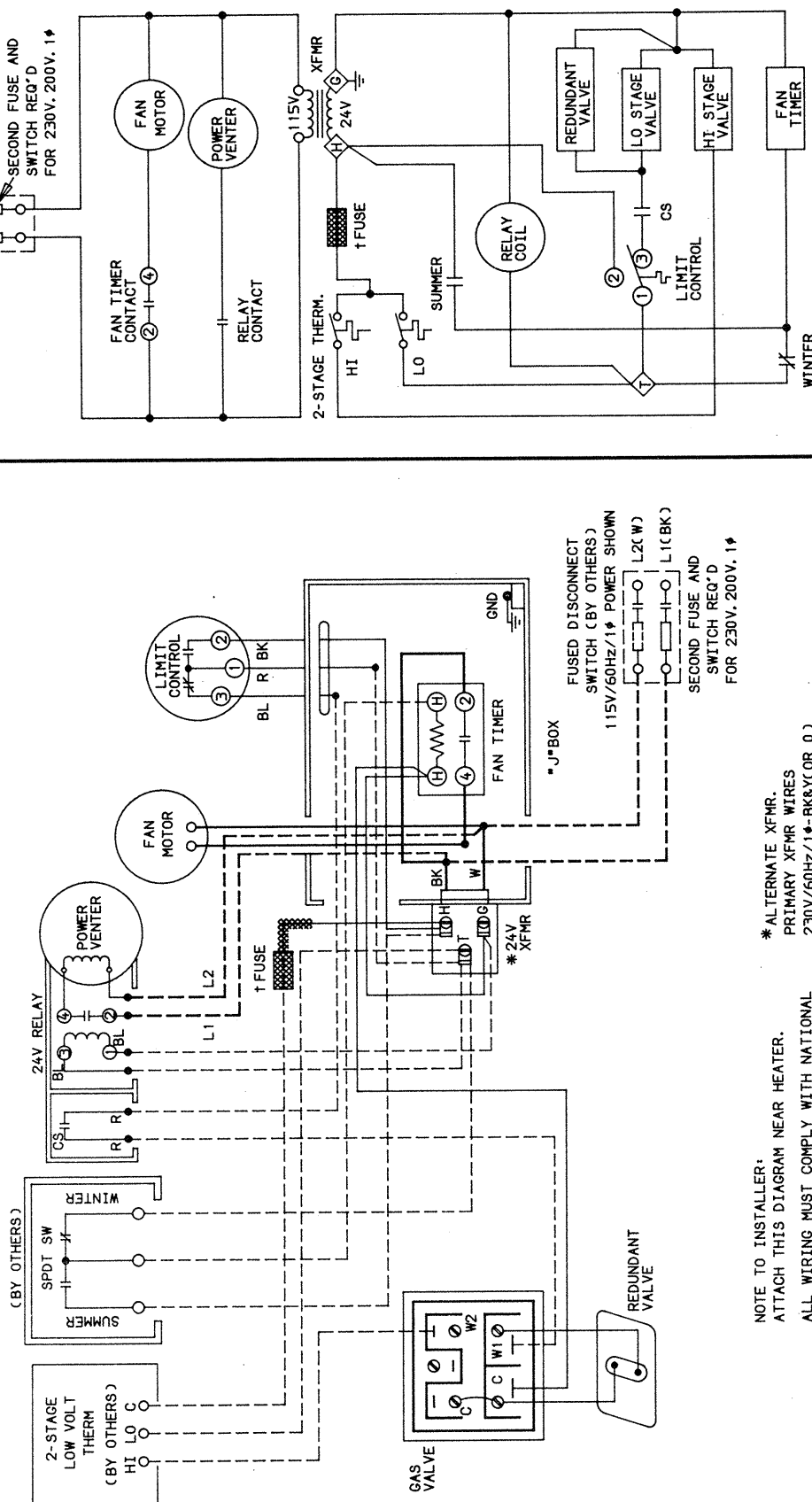


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FAN MOTOR	24V.
POWER VENTER	24V.
2-Stage Low Volt Therm	24V.
2-Stage Gas Valve	24V.
2-Stage Thermostat	24V.
2-Stage Winter Switch	24V.
2-Stage Summer Switch	24V.
2-Stage Limit Control	24V.
2-Stage Relay	24V.
2-Stage Fan Timer	24V.
2-Stage Redundant Valve	24V.
2-Stage Lo Stage Valve	24V.
2-Stage Hi Stage Valve	24V.
2-Stage Fan Timer	24V.

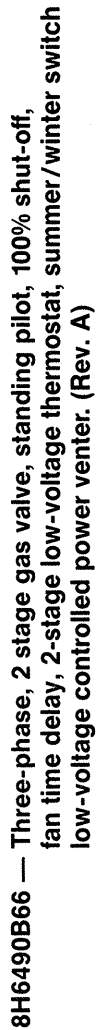


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&YCOR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B63 — Single-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, summer/winter switch low-voltage controlled power venter. (Rev. A)



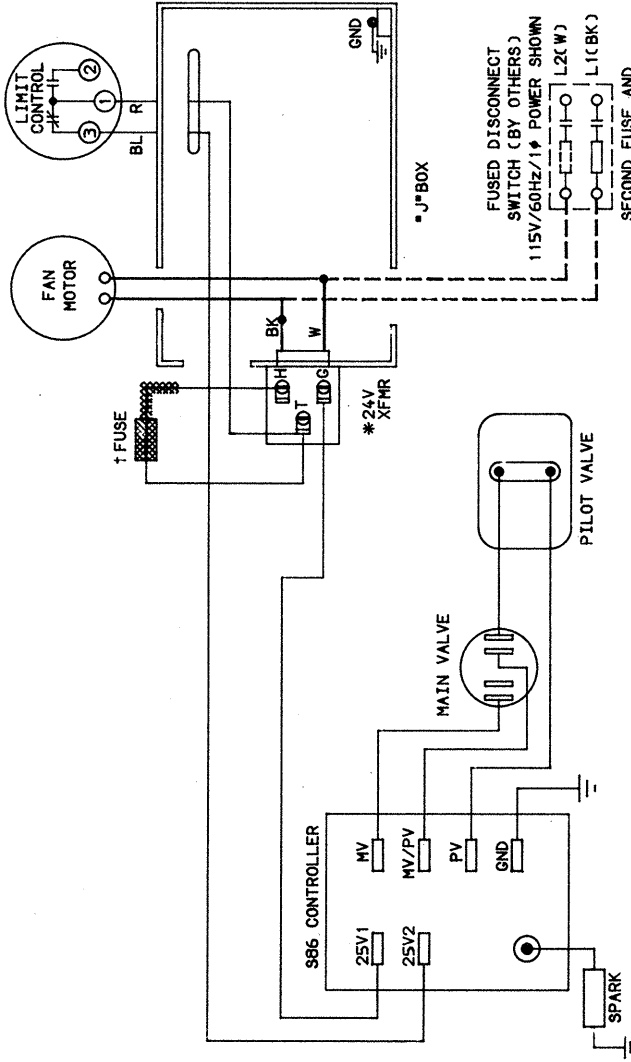


MODINE 6-441 WIRING DIAGRAM MODELS BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	---
WIRE NUT	---



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1φ-BK&Y(OR O)

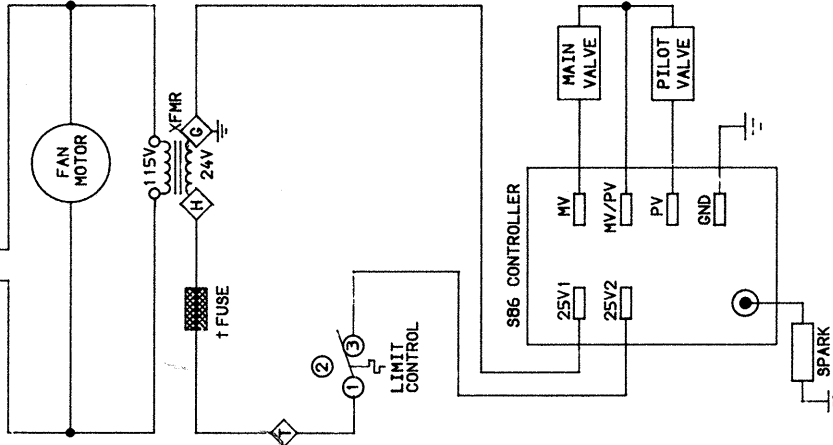
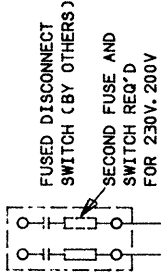
200V/60Hz/1φ-BK&R

WIRE NUT THE WIRE NOT USED

+ FOR CANADIAN UNITS ONLY

115V/60Hz/1φ POWER SHOWN

L1(BK) L2(W)



◇ INDICATES TRANSFORMER TERMINAL

+ FOR CANADIAN UNITS ONLY

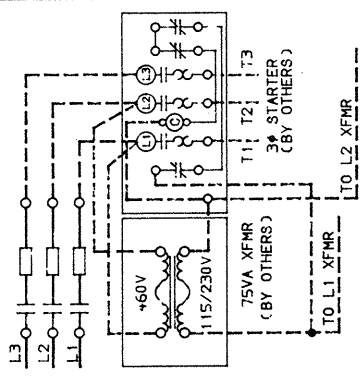
5H70081B29 — Single-phase, mechanical modulation, intermittent pilot ignition, non-100% (and 100%) shut-off. (Rev. F)



MODINE 6-441 WIRING DIAGRAM MODELS BA

FOR U.S. UNITS ONLY

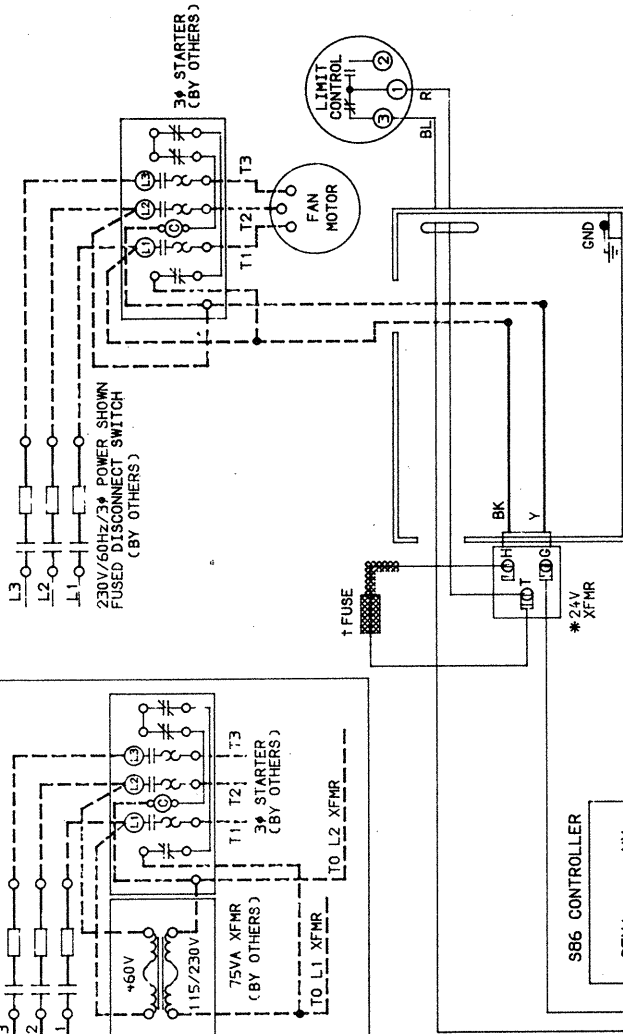
460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

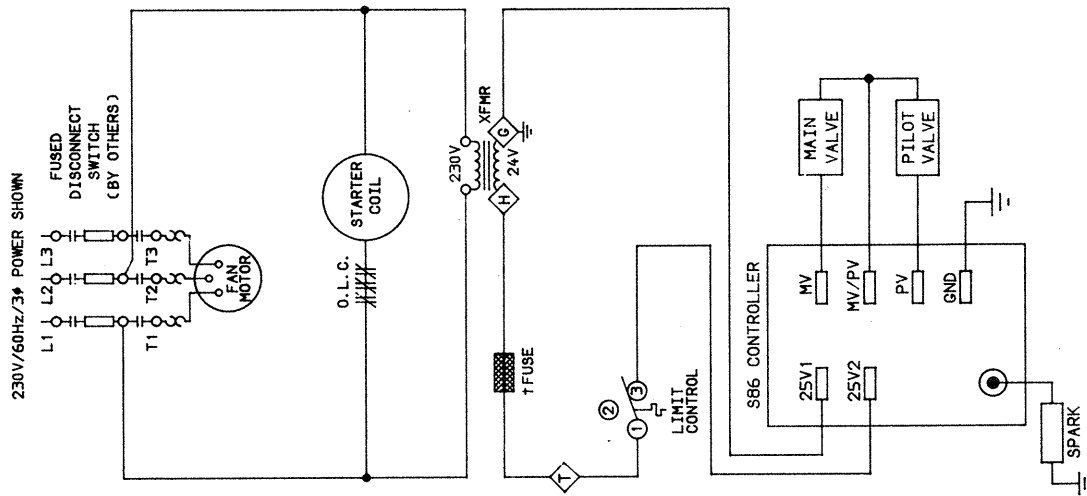
WIRING LEGEND	
FACTORY	SOLID LINE
FIELD	DASHED LINE
WIRE NUT	DOTTED LINE



* "J" BOX

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ BK&Y (OR 0)
200V/60Hz/1 ϕ BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

5H70081B29 — Three-phase, mechanical modulation, intermittent pilot ignition,
non-100% (and 100%) shut-off. (Rev. F)

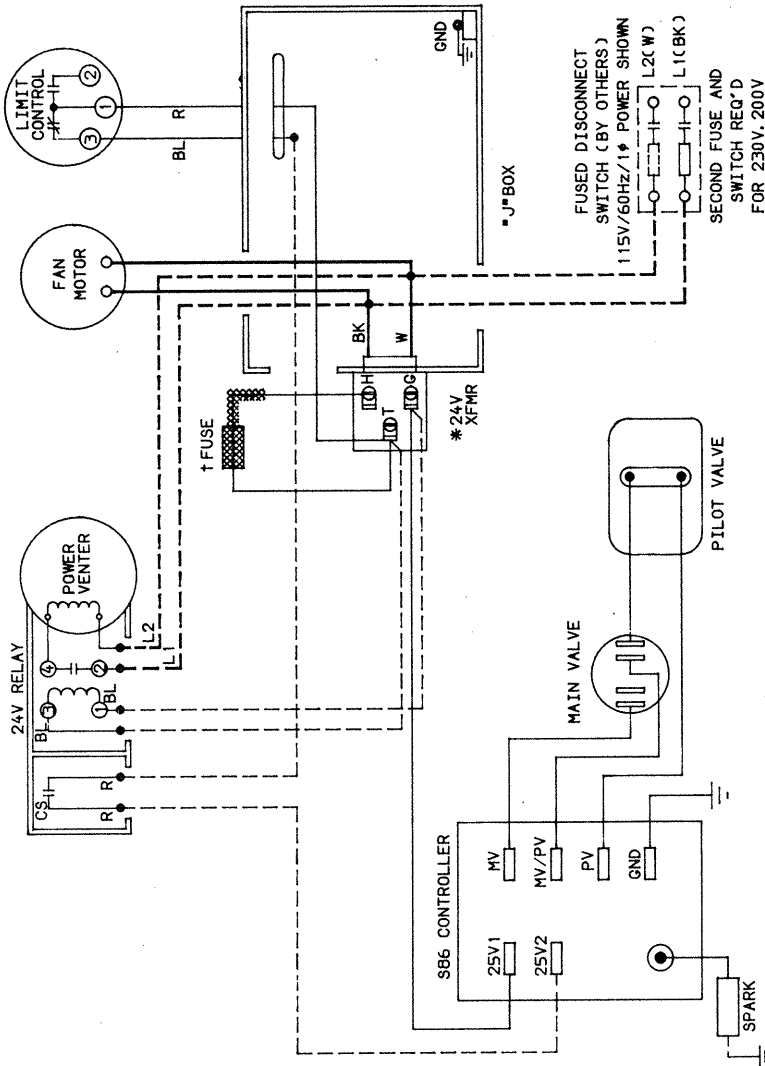


MODINE 6-441 WIRING DIAGRAM MODELS BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FAN MOTOR	24V.
POWER VENT	24V.
FIELD	---
WIRE NUT	---



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1φ-BK&Y(OR O)

200V/60Hz/1φ-BK&R

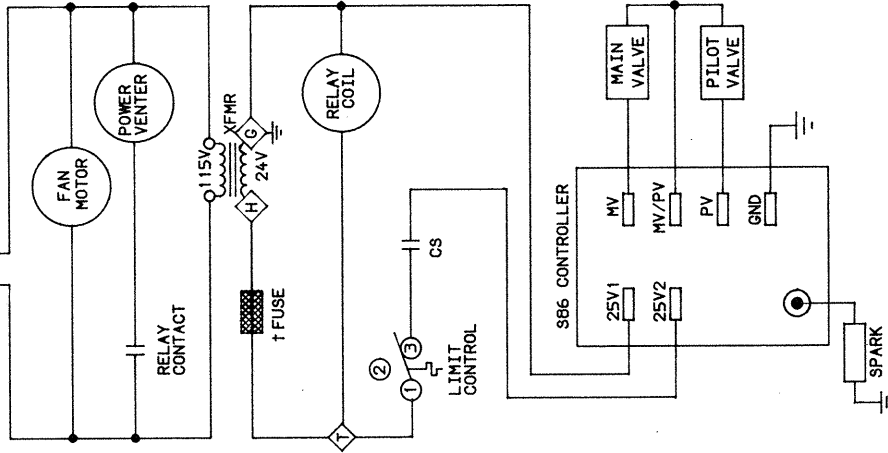
WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

115V/60Hz/1φ POWER SHOWN

L1(BK) L2(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
SECOND FUSE AND SWITCH REQ'D FOR 230V, 200V



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

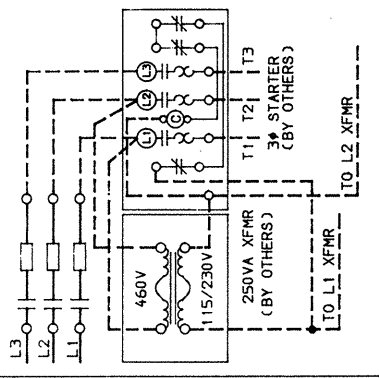
8H6490B79 — Single-phase, mechanical modulation, intermittent pilot ignition, non-100% (and 100%) shut-off, low-voltage controlled power vent. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS BA

FOR U.S. UNITS ONLY

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



24V RELAY

POWER VENTER

3 ϕ STARTER (BY OTHERS)

FAN MOTOR

LIMIT CONTROL

SPARK

PILOT VALVE

* J* BOX

* 24V XFMR

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1 ϕ BK&Y (OR 0)

200V/60Hz/1 ϕ BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

WIRING LEGEND

FACTORY FIELD WIRE NUT

LINE 24V

230V/60Hz/3 ϕ POWER SHOWN

FUSED DISCONNECT SWITCH (BY OTHERS)

L1 L2 L3

T1 T2 T3

FAN MOTOR

O.L.C.

STARTER COIL

RELAY CONTACT

POWER VENTER

1 FUSE

RELAY COIL

LIMIT CONTROL

CS

25V1

25V2

MV

MV/PV

PV

GND

SPARK

PILOT VALVE

INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

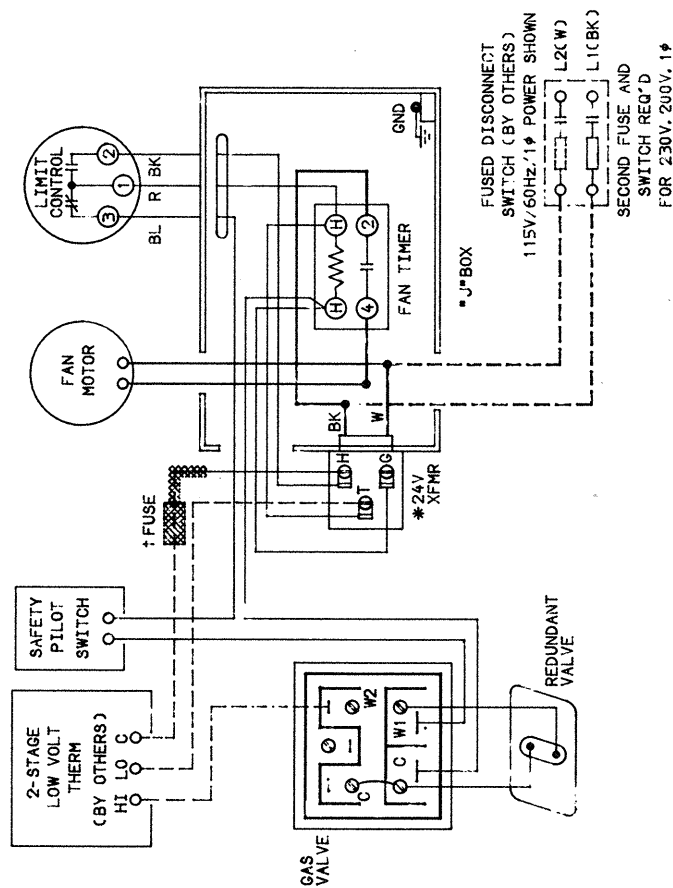
8H6490B80 — Three-phase, mechanical modulation, intermittent pilot ignition, non-100% (and 100%) shut-off, low-voltage controlled power venter. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

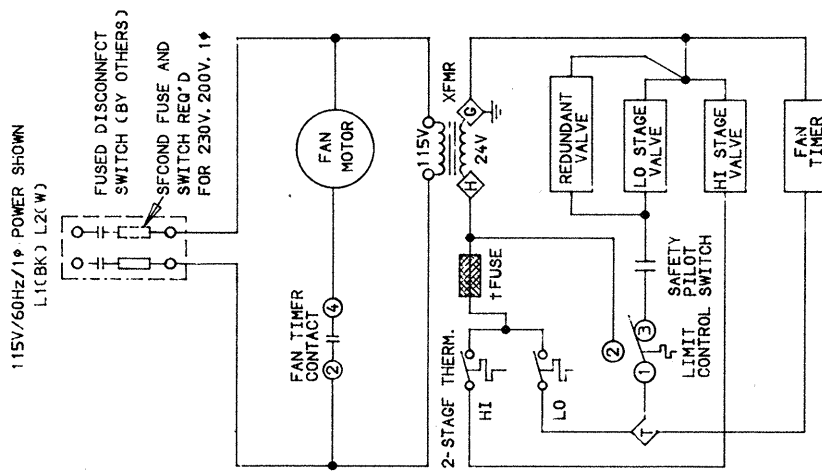
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	LINE <u>24V.</u> GROUND WHITE BROWN



**NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.**

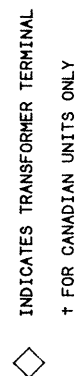
* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&Y(OR 0)
200V/60Hz/1Ø-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY



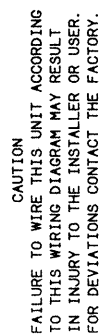
INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

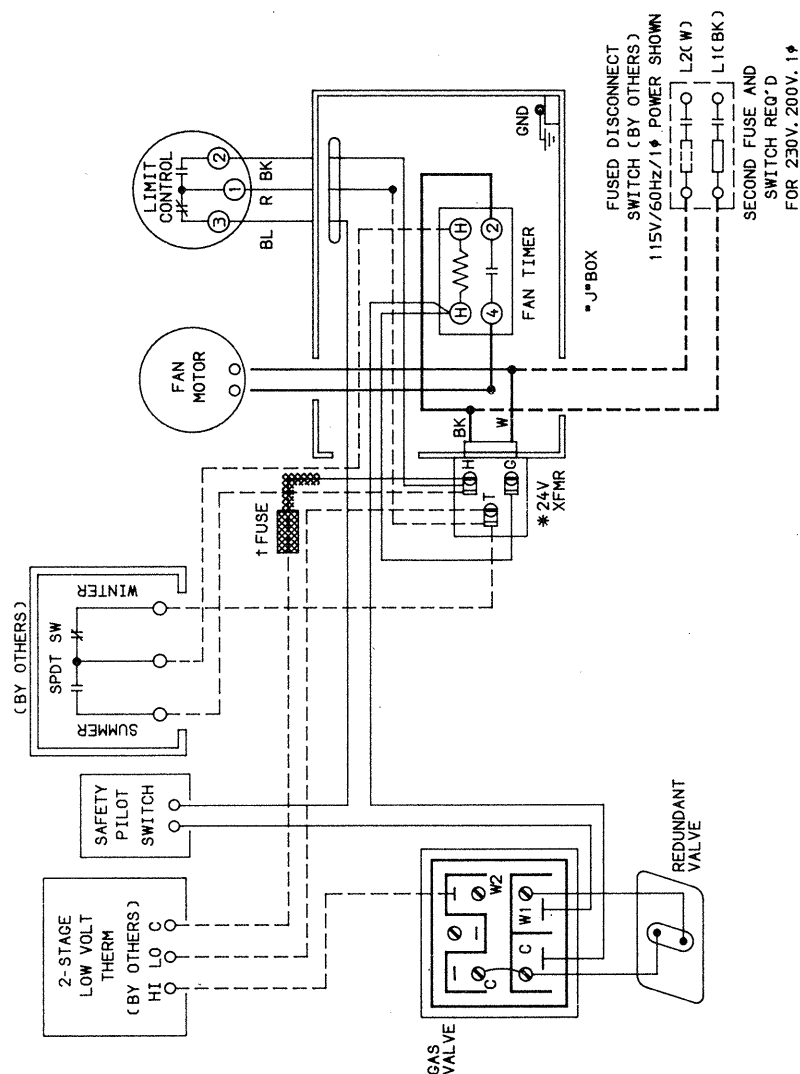
5H70081B30 — Single-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat. (Rev. D)



5H70081B30 — Three-phase, 2-stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat. (Rev. D)

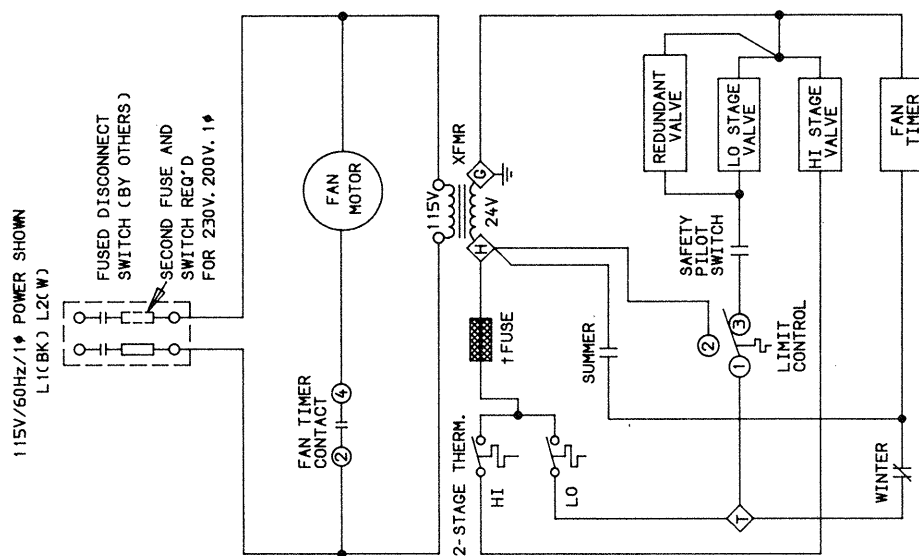


WIRING LEGEND	
FACTORY	LINE
FIELD	---
WIRE NUT	—●—



USE 105°C WIRE FOR REPLACEMENTS.

WIRE NUT THE WIRE NOT USED



◇ INDICATES TRANSFORMER TERMINAL

+ FOR CANADIAN UNITS ONLY

8H6490B67 — Single-phase, 2 stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, summer/winter



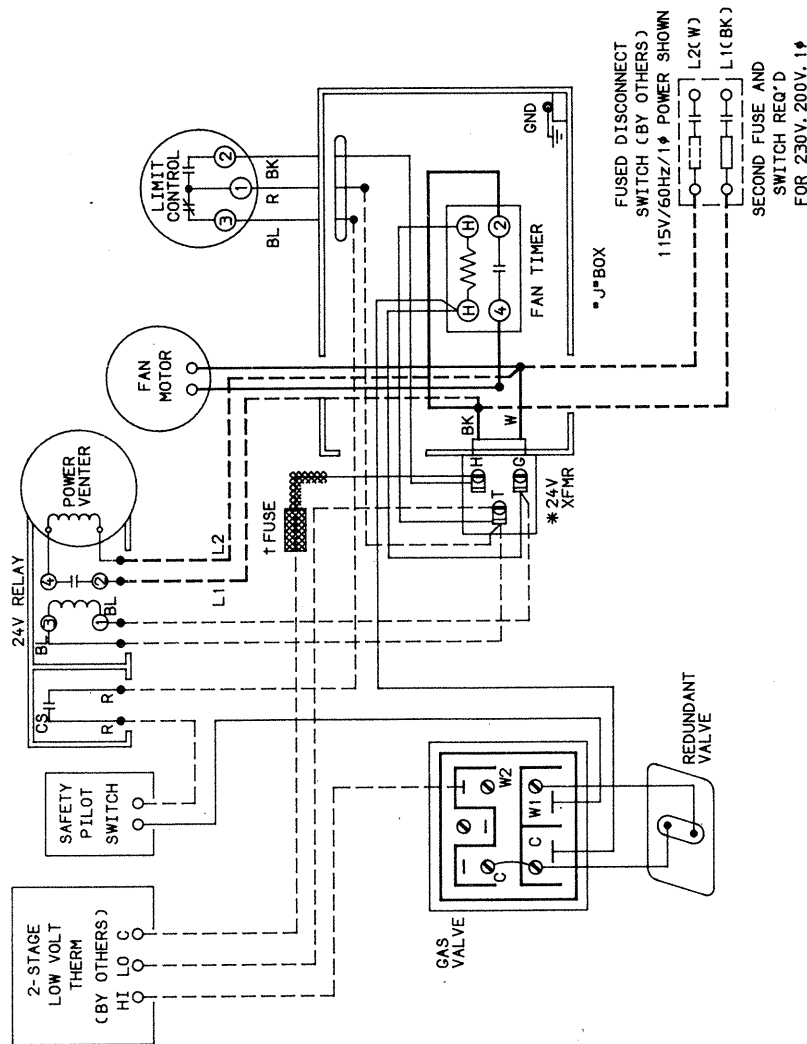


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FAN MOTOR	LINE
FACTORY FIELD WIRE NUT	24V.



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1φ-BK&YCOR 0)

200V/60Hz/1φ-BK&R

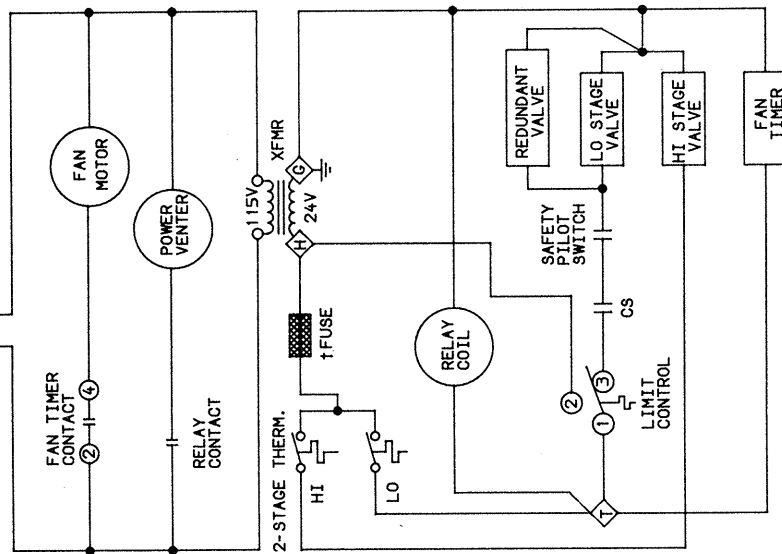
WIRE NUT THE WIRE NOT USED

†FOR CANADIAN UNITS ONLY

115V/60Hz/1φ POWER SHOWN

L1(BK) L2(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
SECOND FUSE AND SWITCH REQ'D FOR 230V, 200V, 1φ



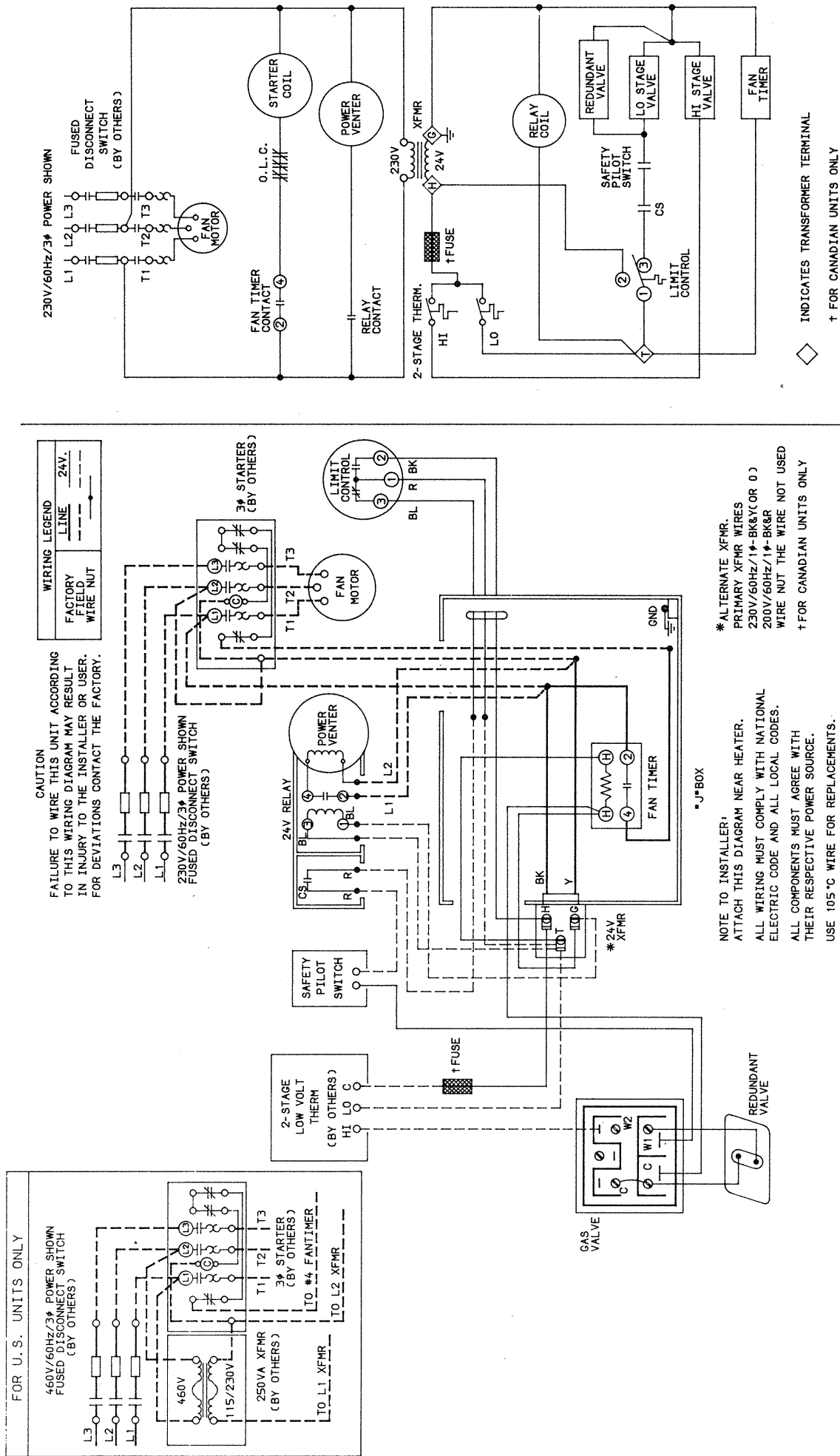
INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B68 — Single-phase, 2 stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, low-voltage controlled power venter. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



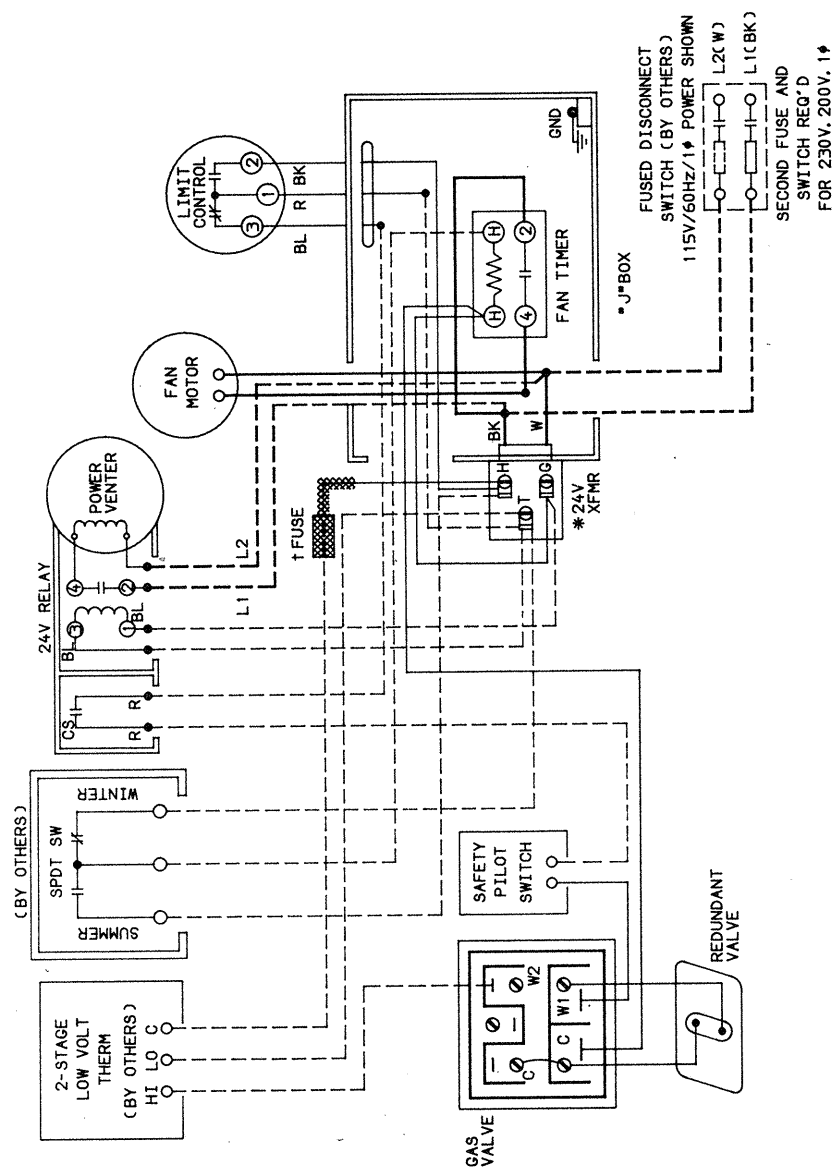
8H6490B71 — Three-phase, 2 stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, low-voltage controlled power venter. (Rev. A)



6-441 WIRING DIAGRAM MODELS PA, BA

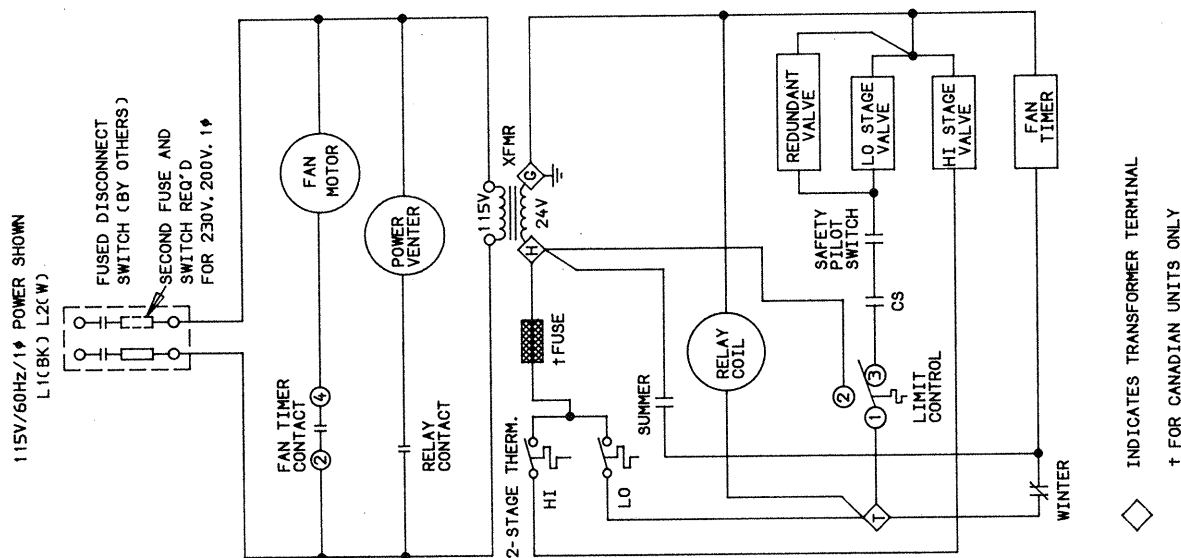
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE 24V.
FIELD	---
WIRE NUT	—●—



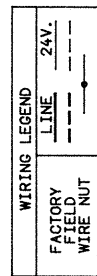
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&Y(COR 0)
200V/60Hz/1Ø-BK&R
WIRE NUT THE WIRE NOT USED
FOR CANADIAN UNITS ONLY

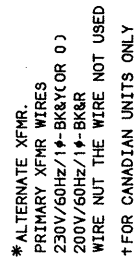


INDICATES TRANSFORMER TERMINAL
+ FOR CANADIAN UNITS ONLY

8H6490B69 — Single-phase, 2 stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, summer/winter switch, low-voltage controlled power vent. (Rev. A)



CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

◇ INDICATES TRANSFORMER TERMINAL
+ FOR CANADIAN UNITS ONLY

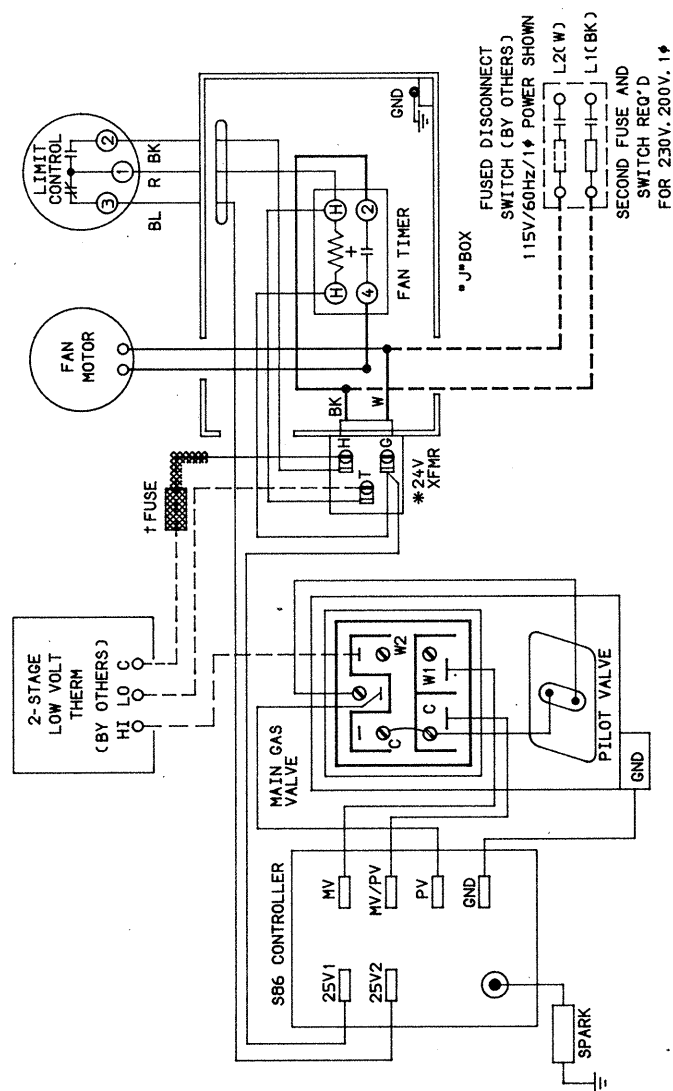
8H6490B72 — Three-phase, 2 stage gas valve, standing pilot, 100% shut-off, fan time delay, 2-stage low-voltage thermostat, summer/winter switch, low-voltage controlled power venter. (Rev. A)



MODINE
6-441 WIRING DIAGRAM MODELS PA, BA

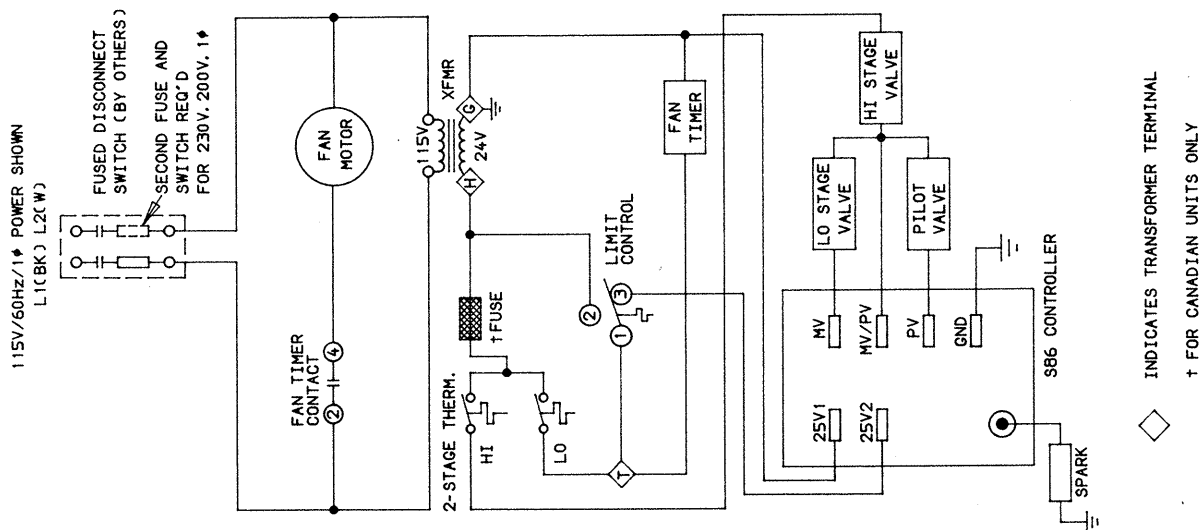
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE _____ 24V.
FIELD	--- ---
WIRE NUT	— ● —



ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

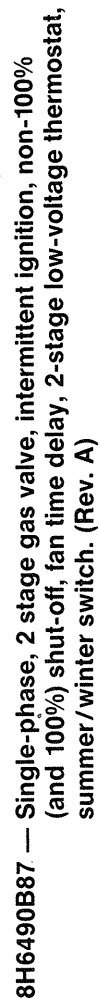
ALTERNATE AFMR.
PRIMARY XFMR WIRES
230V/60Hz/1- BK&Y(COR 0)
200V/60Hz/1- BK&R
WIRE NUT THE WIRE NOT USED
+FOR CANADIAN UNITS ONLY

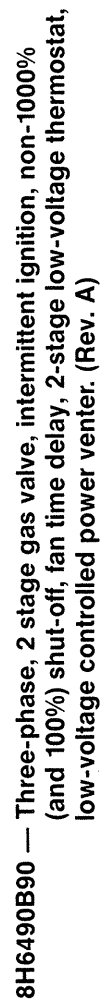


◇ INDICATES TRANSFORMER TERMINAL
+ FOR CANADIAN UNITS ONLY

5H70081B34 — Single-phase, 2-stage gas valve, intermittent ignition, non-100% (and 100%) shut-off, fan time delay, 2-stage low-voltage thermostat. (Rev. B)







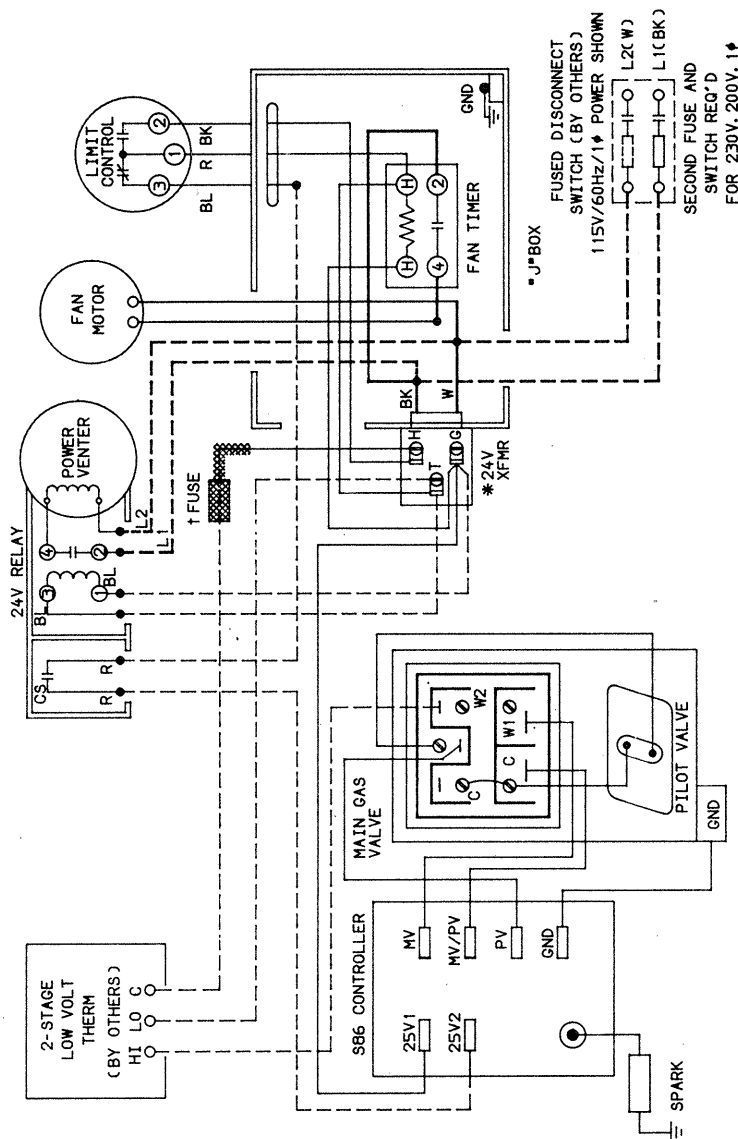


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

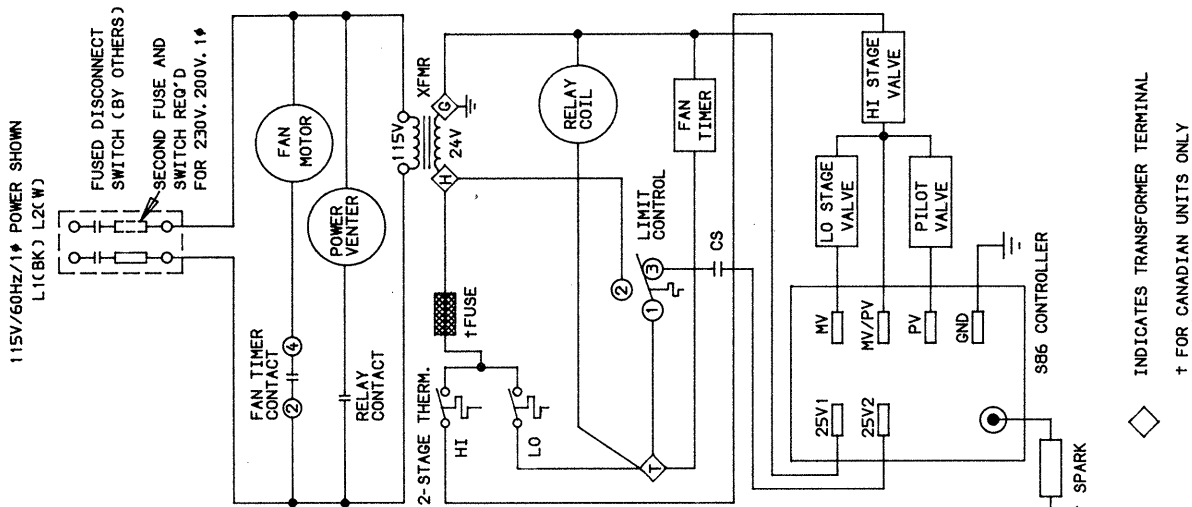
FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



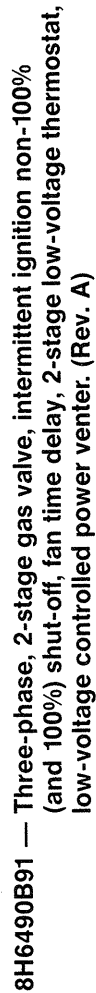
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(COR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY



◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B88 — Single-phase, 2 stage gas valve, intermittent ignition, non-100% (and 100%) shut-off, fan time delay, 2-stage low-voltage thermostat, low-voltage controlled power venter. (Rev. A)



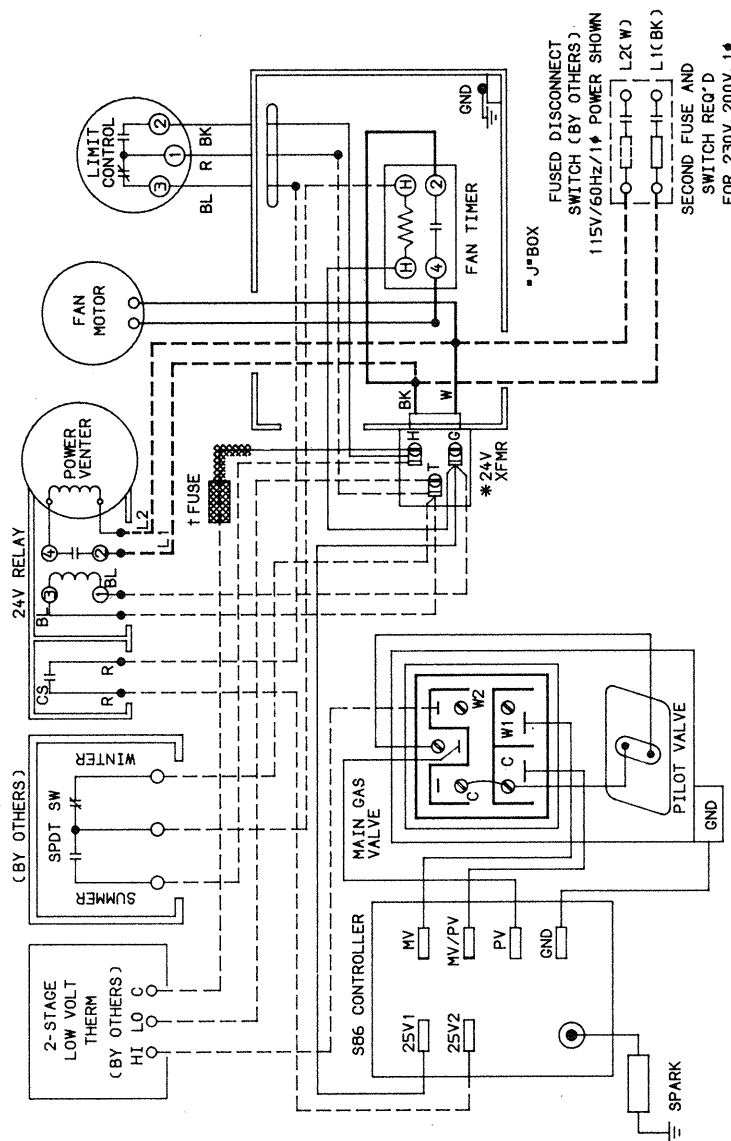


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	---
WIRE NUT	•



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105 °C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1φ-BK&YCOR 0)

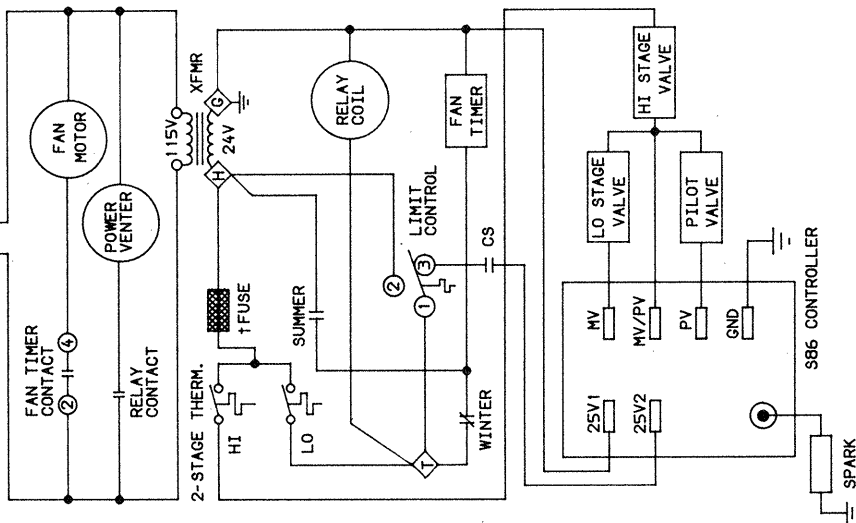
200V/60Hz/1φ-BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

115V/60Hz/1φ POWER SHOWN
L1(CBK) L2(W)

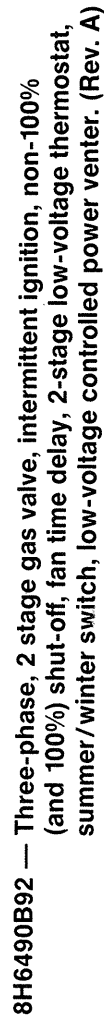
FUSED DISCONNECT
SWITCH (BY OTHERS)
SECOND FUSE AND
SWITCH REQ'D
FOR 230V, 200V, 1φ



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B89 — Single-phase, 2 stage gas valve, intermittent ignition, non-100% (and 100%) shut-off, fan time delay, 2-stage low-voltage thermostat, summer/winter switch, low-voltage controlled power venter. (Rev. A)

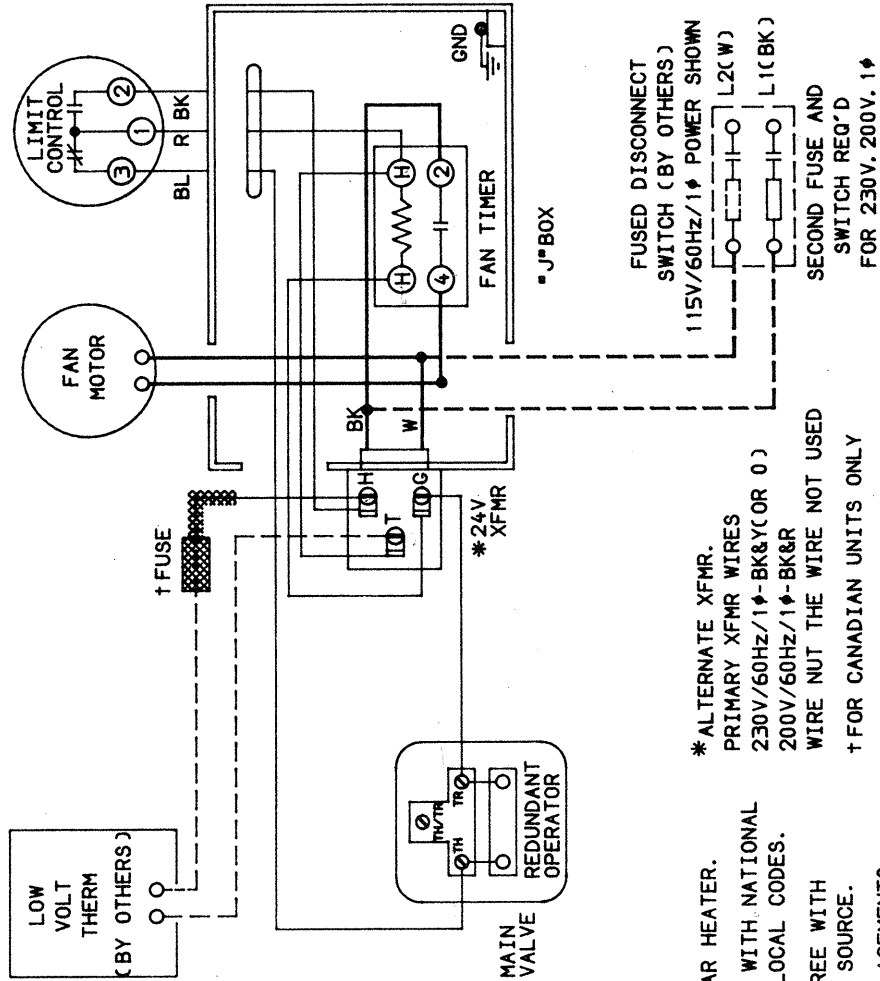




MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1Ø-BK&Y (OR 0)

200V/60Hz/1Ø-BK&R

WIRE NUT THE WIRE NOT USED

+ FOR CANADIAN UNITS ONLY

FUSED DISCONNECT SWITCH (BY OTHERS)

115V/60Hz/1Ø POWER SHOWN

L2(W)

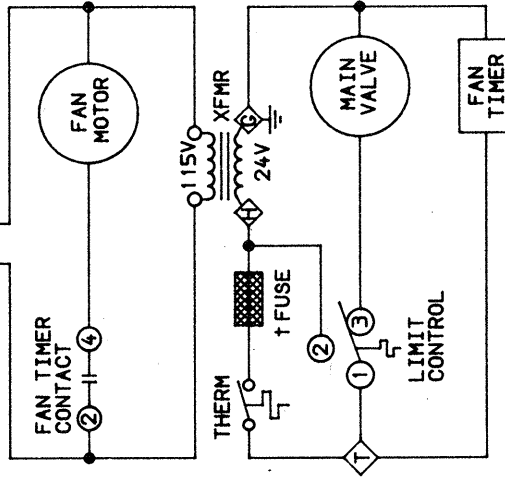
L1(BK)

SECOND FUSE AND SWITCH REQ'D

FOR 230V, 200V, 1Ø

115V/60Hz/1Ø POWER SHOWN
L1(BK) L2(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)
SECOND FUSE AND
SWITCH REQ'D
FOR 230V, 200V, 1Ø



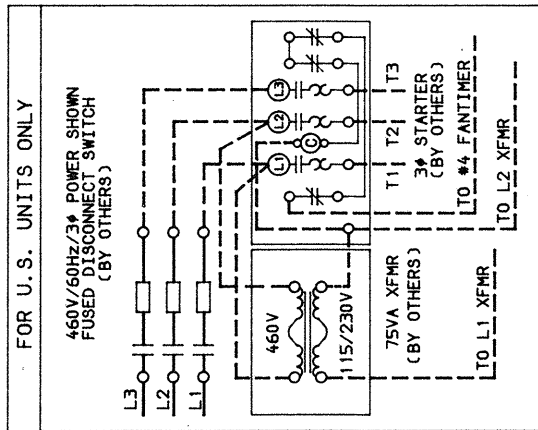
INDICATES TRANSFORMER TERMINAL

+ FOR CANADIAN UNITS ONLY

5H70081B37 — Single-phase, standing pilot, 100% shut-off, fan time delay, low-voltage thermostat. (Rev. B)

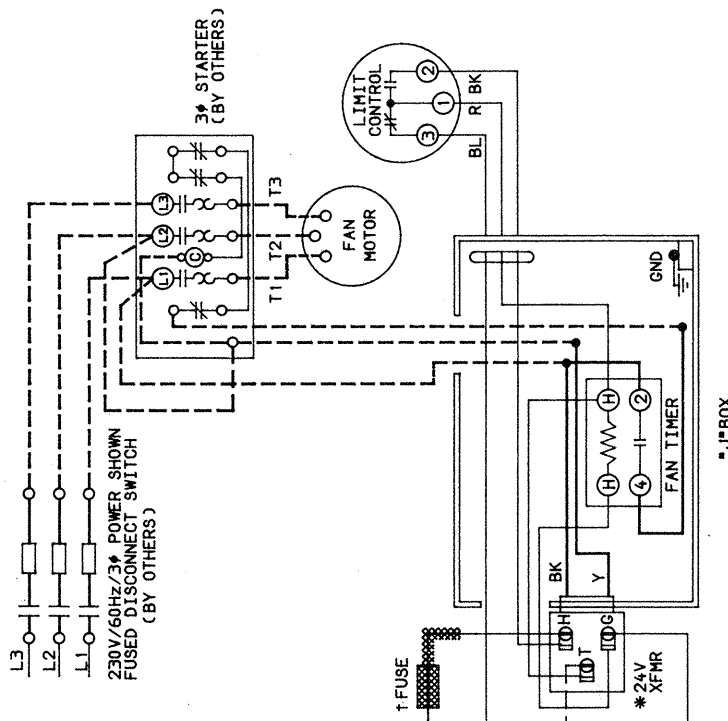


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



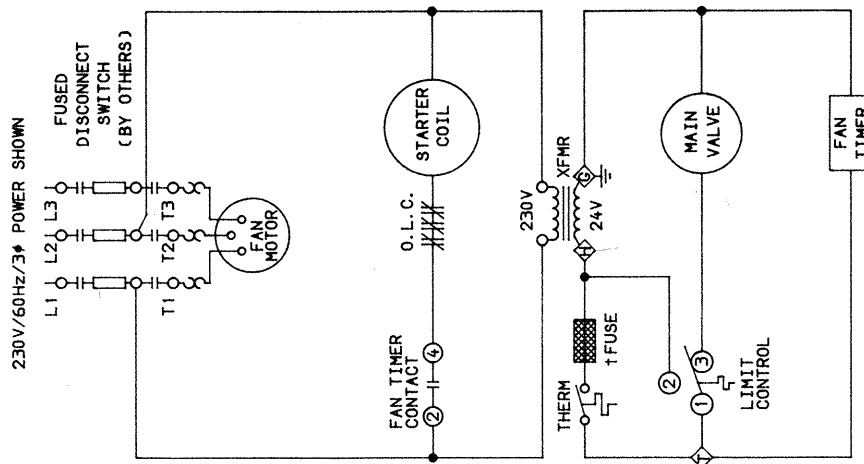
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(COR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

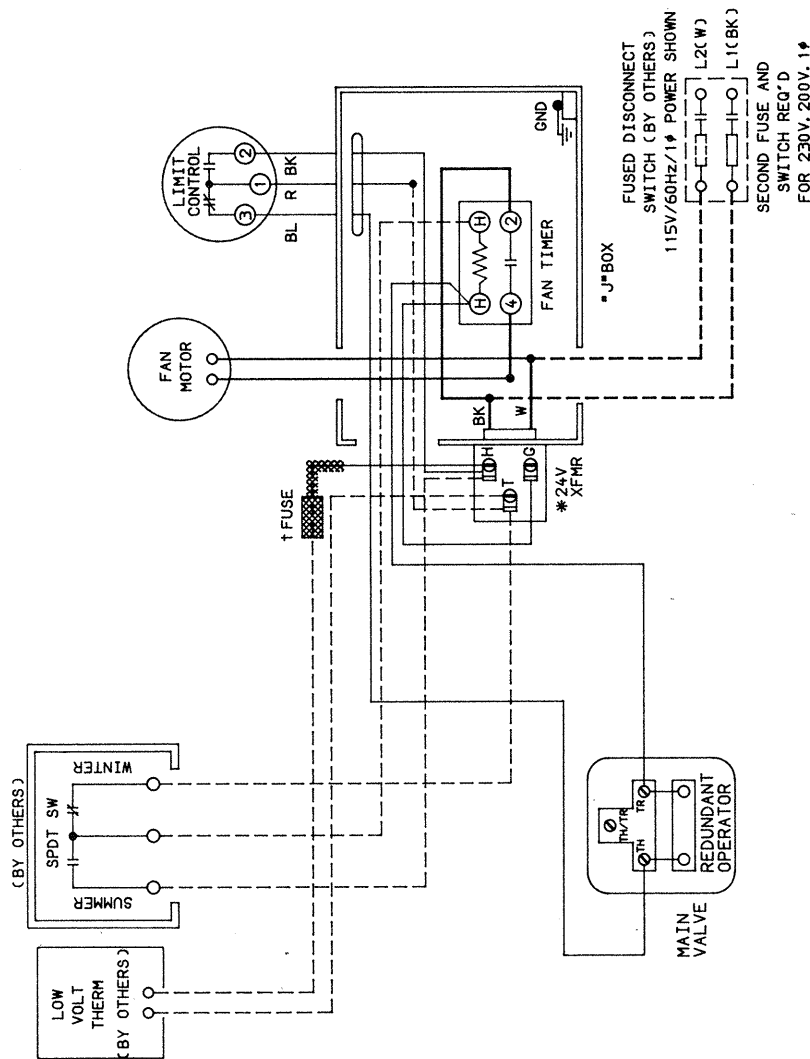


◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

5H70081B37 — Three-phase, standing pilot, 100% shut-off, fan time delay,
low-voltage thermostat. (Rev. B)

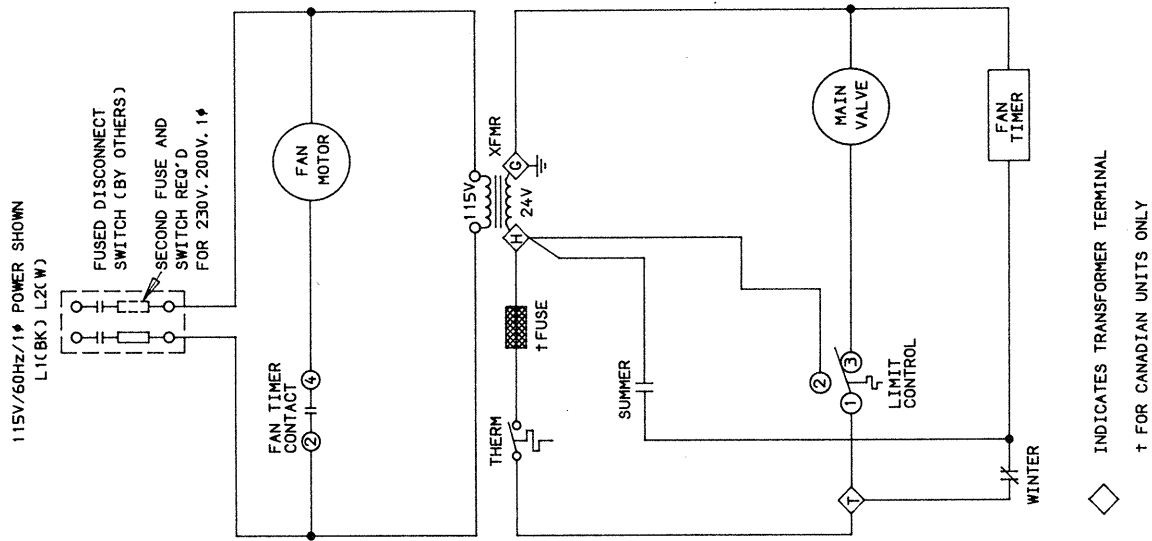
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1½-BK&Y(OR 0)
200V/60Hz/1½-BK&R
WIRE NUT THE WIRE NOT USED
†FOR CANADIAN UNITS ONLY

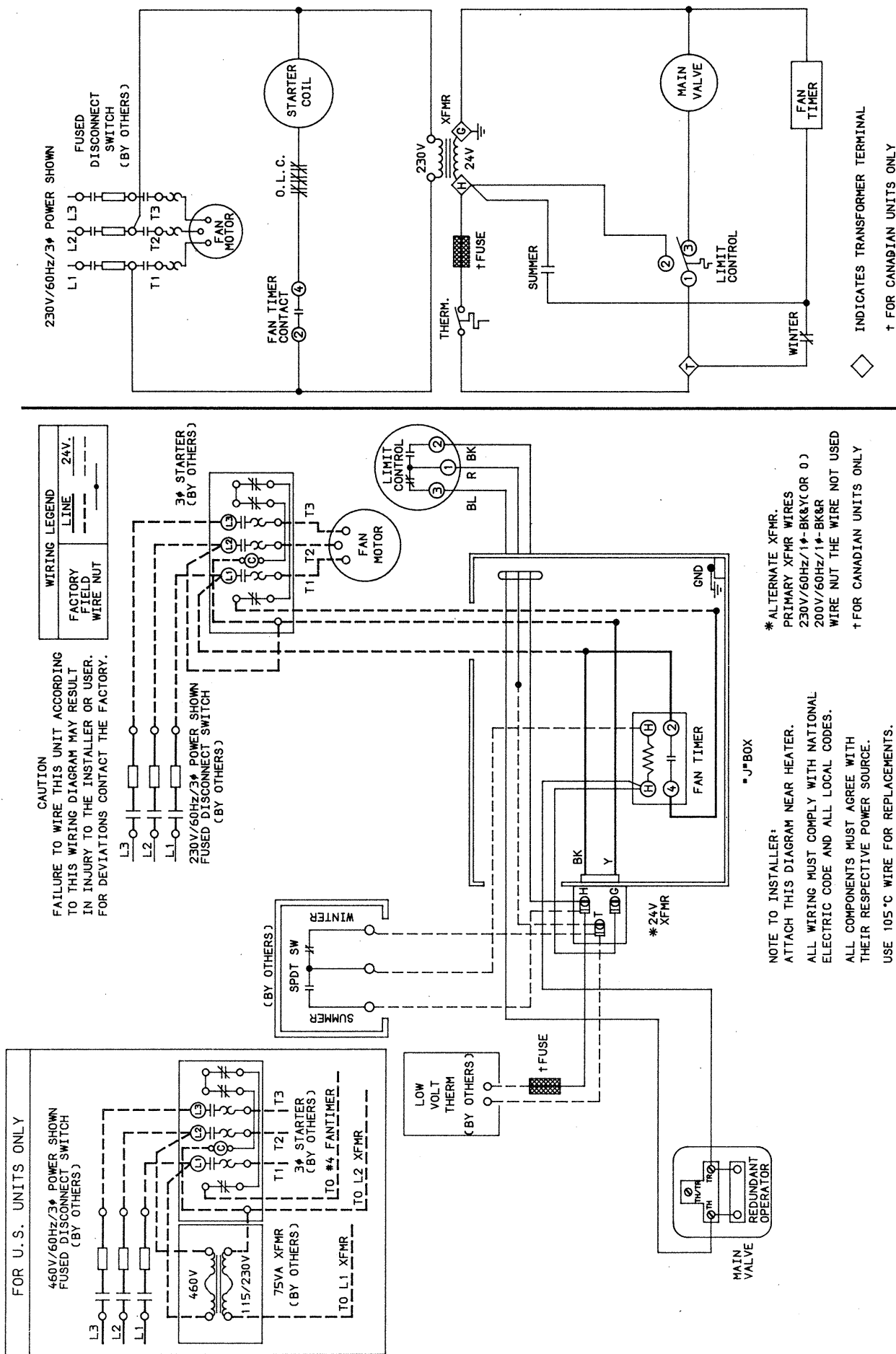


◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B99 — Single-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, summer/winter switch.



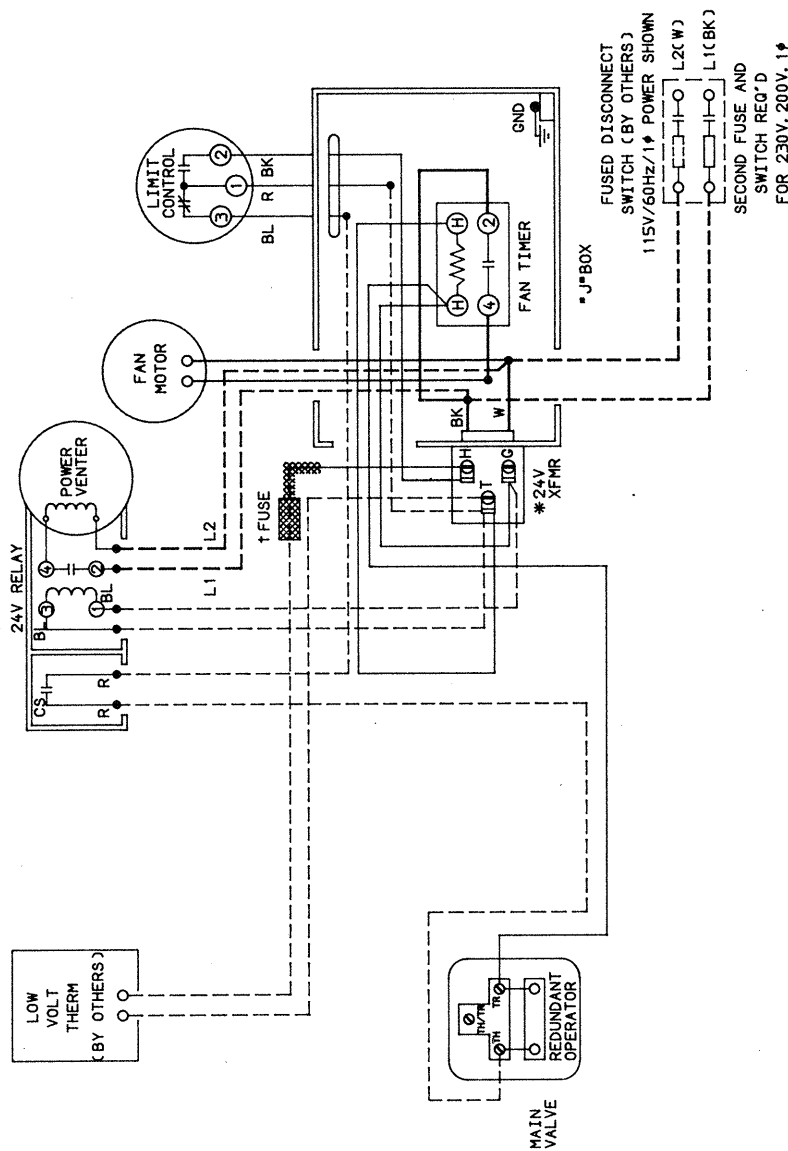
MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



8H6490B99 — Three-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	---
LINE	---
24V.	---



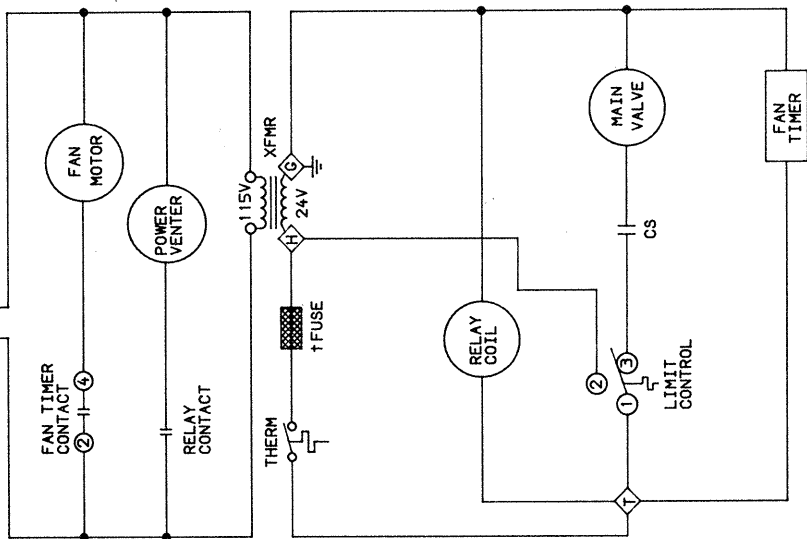
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&YCOR 0)
200V/60Hz/1φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

8H6490B100 — Single-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, low-voltage controlled
power venter.

115V/60Hz/1φ POWER SHOWN
L1(BK) L2(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)
SECOND FUSE AND
SWITCH REQ'D
FOR 230V, 200V, 1φ



◇ INDICATES TRANSFORMER TERMINAL

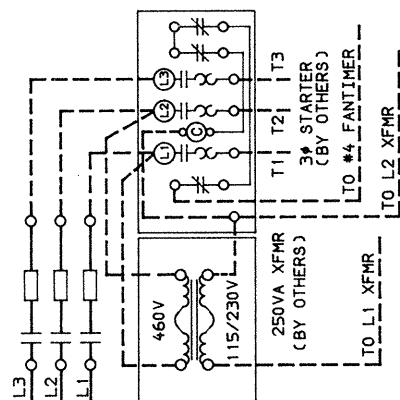
† FOR CANADIAN UNITS ONLY



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

FOR U.S. UNITS ONLY

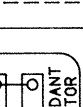
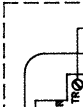
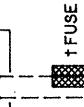
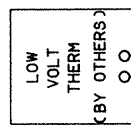
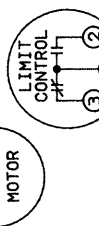
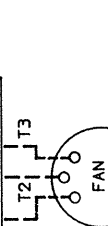
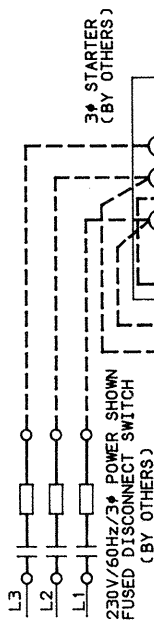
460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	24V.
FIELD	---
WIRE NUT	---



* J* BOX

NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1 ϕ -BK&Y OR 0)

200V/60Hz/1 ϕ -BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

230V/60Hz/3 ϕ POWER SHOWN

FUSED DISCONNECT SWITCH
(BY OTHERS)

L1 L2 L3

T1 T2 T3

FAN MOTOR

O.L.C.

STARTER COIL

POWER VENTER

RELAY CONTACT

THERM.

XFMR

230V

24V

† FUSE

RELAY COIL

MAIN VALVE

CS

LIMIT CONTROL

FAN TIMER

◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

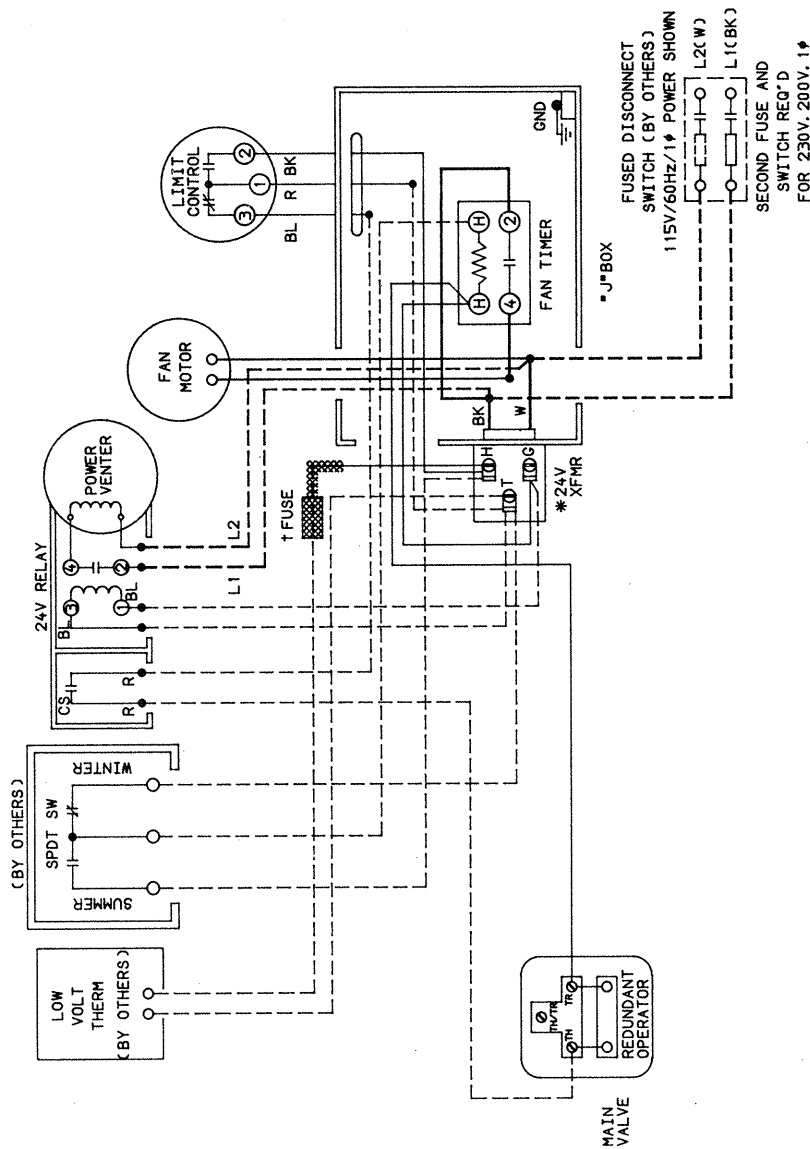
8H6490B100 — Three-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, low-voltage controlled
power venter.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	LINE	24V.
---	---	---
---	---	---
---	---	---

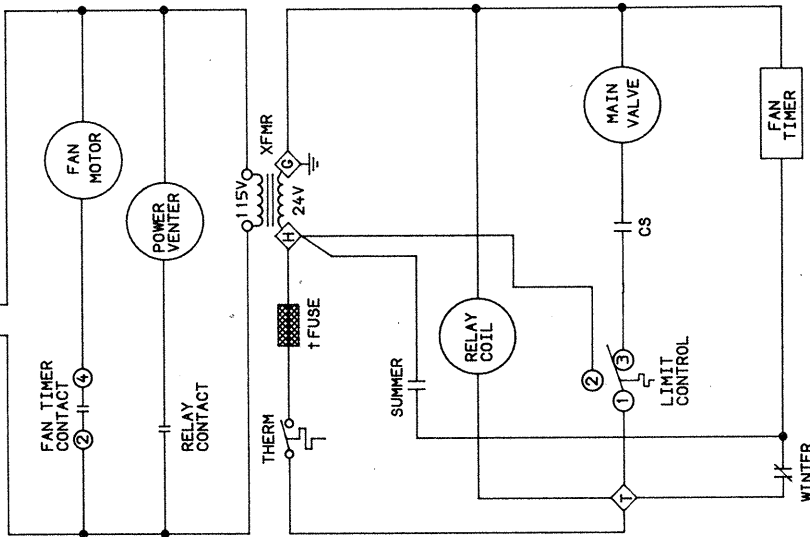


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&Y(OR 0)
200V/60Hz/1φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

115V/60Hz/1φ POWER SHOWN
L1(BK) L2(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)
SECOND FUSE AND
SWITCH REQ'D
FOR 230V. 200V. 1φ

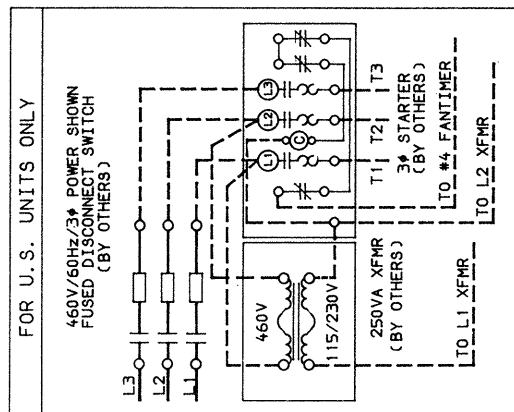


◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B101 — Single-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, summer/winter switch
low-voltage controlled power venter.

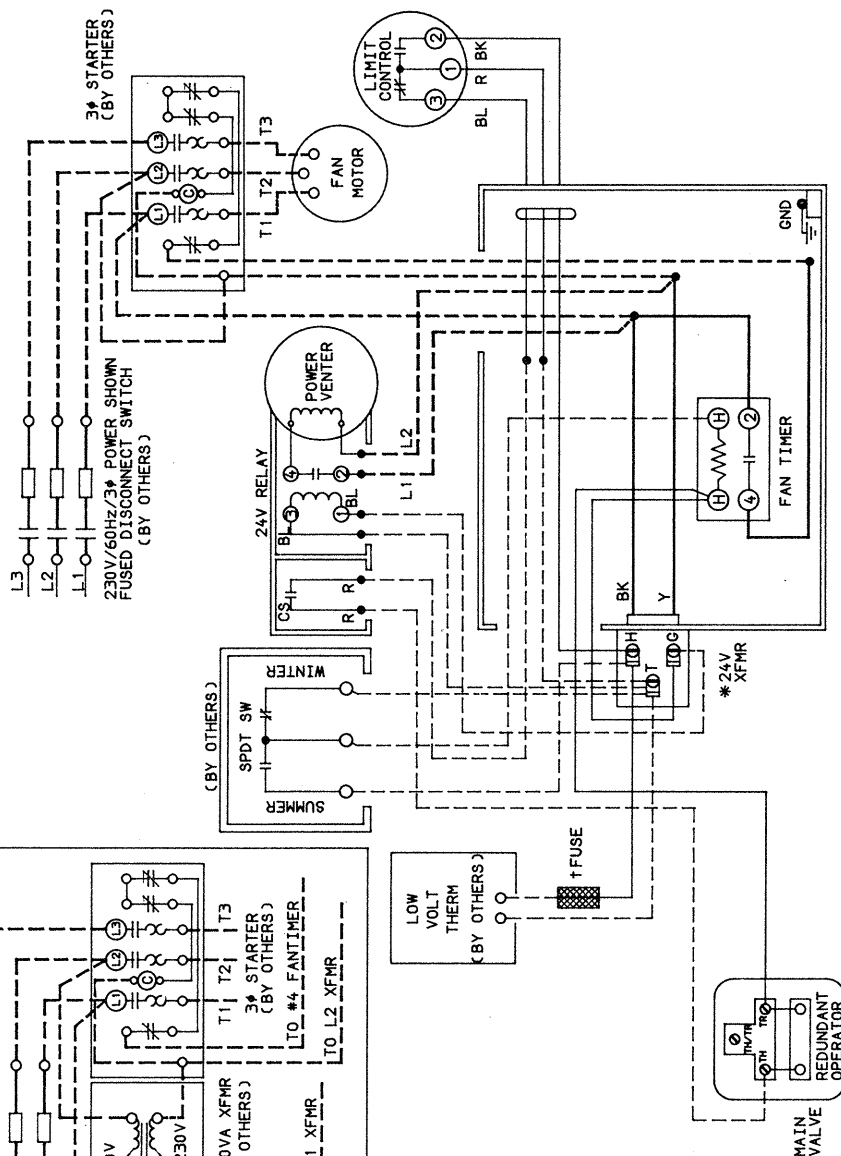


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



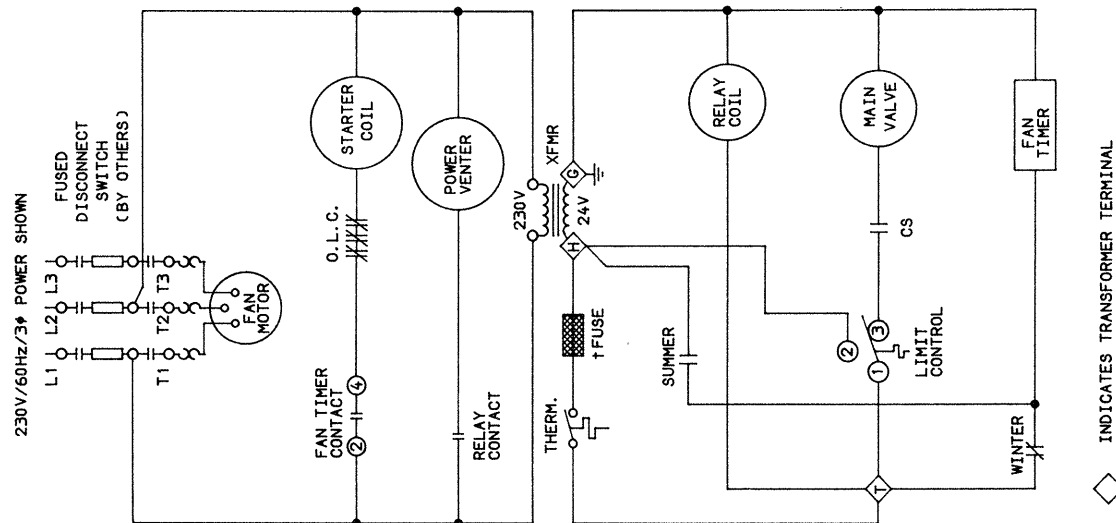
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	LINE	24V.
---	---	---
---	---	---



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1#-BK&(OR 0)
200V/60Hz/1#-BK&
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY



◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B101 — Three-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch low-voltage controlled power venter.

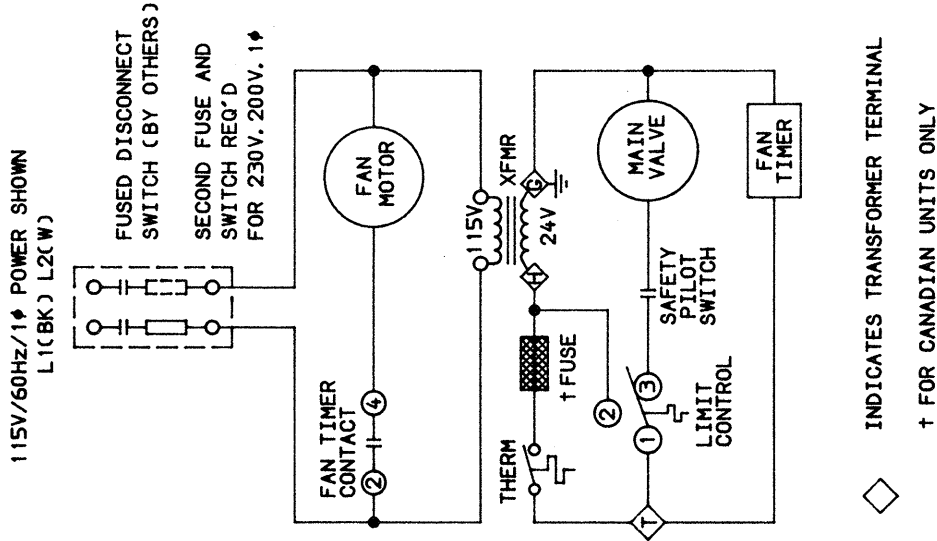
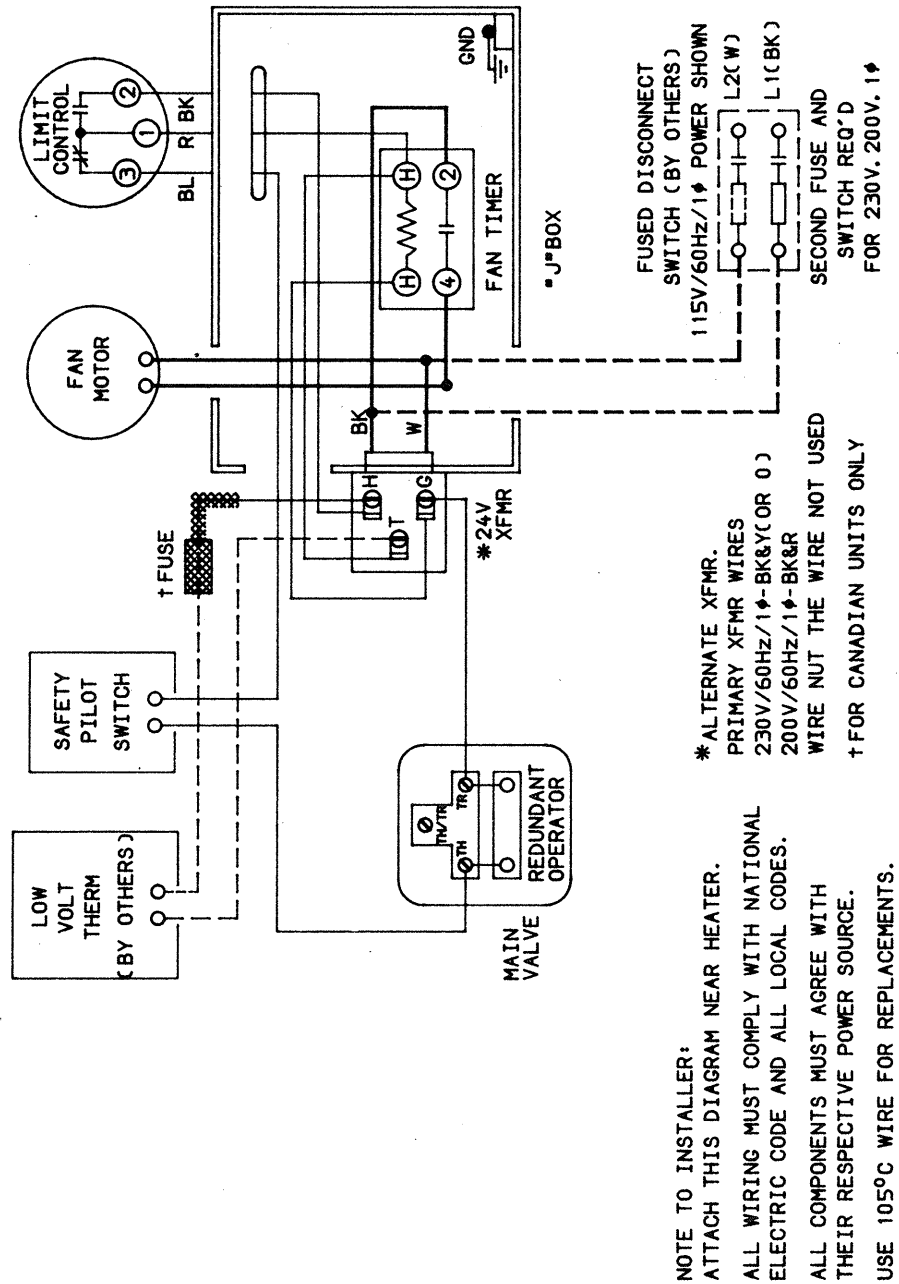


MODINE WIRING DIAGRAM

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

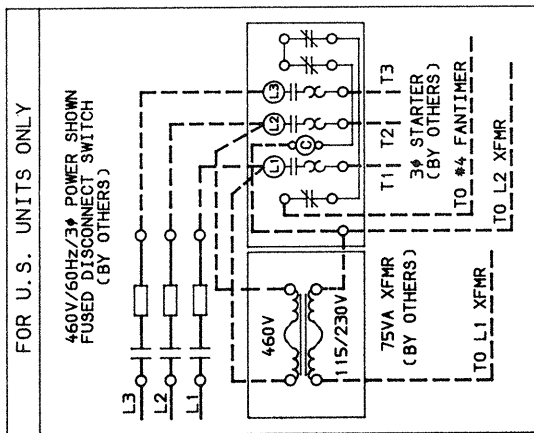
WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



5H70081B35 — Single-phase, standing pilot, 100% shut-off, fan time delay, low-voltage thermostat. (Rev. B)



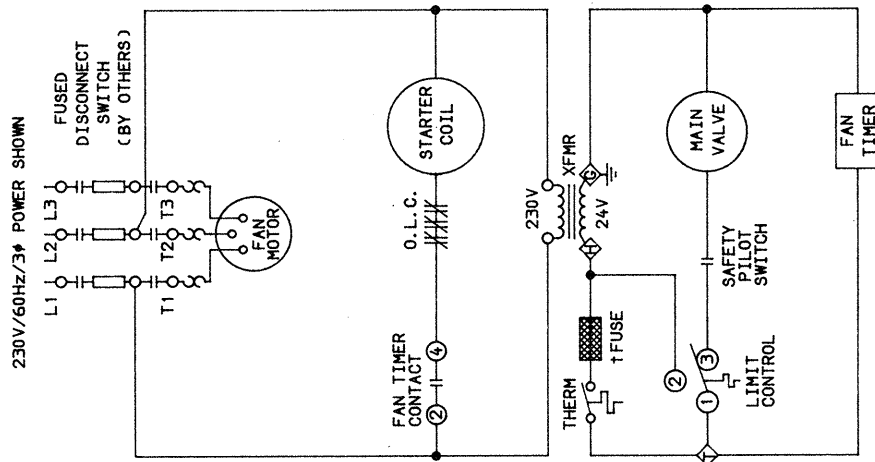
MODINE WIRING DIAGRAM



CAUTION

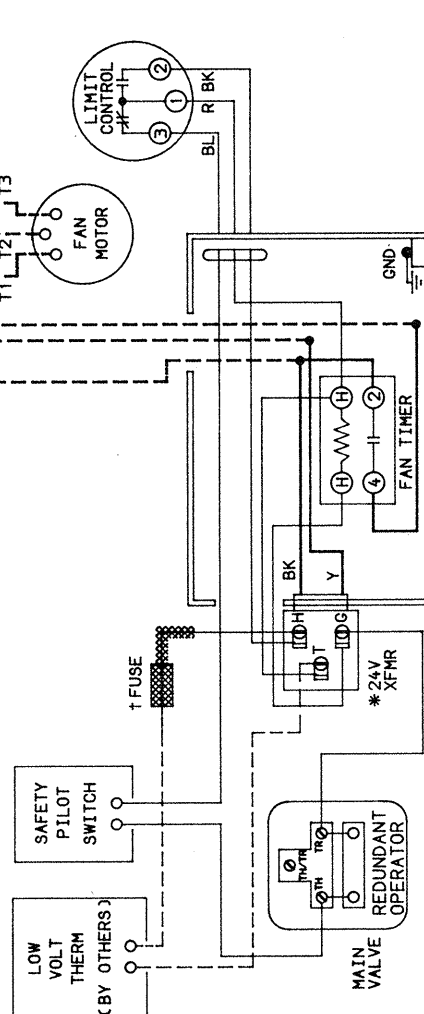
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	LINE 24V.
---	---
---	---



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY



* J*BOX

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(COR 0)

200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

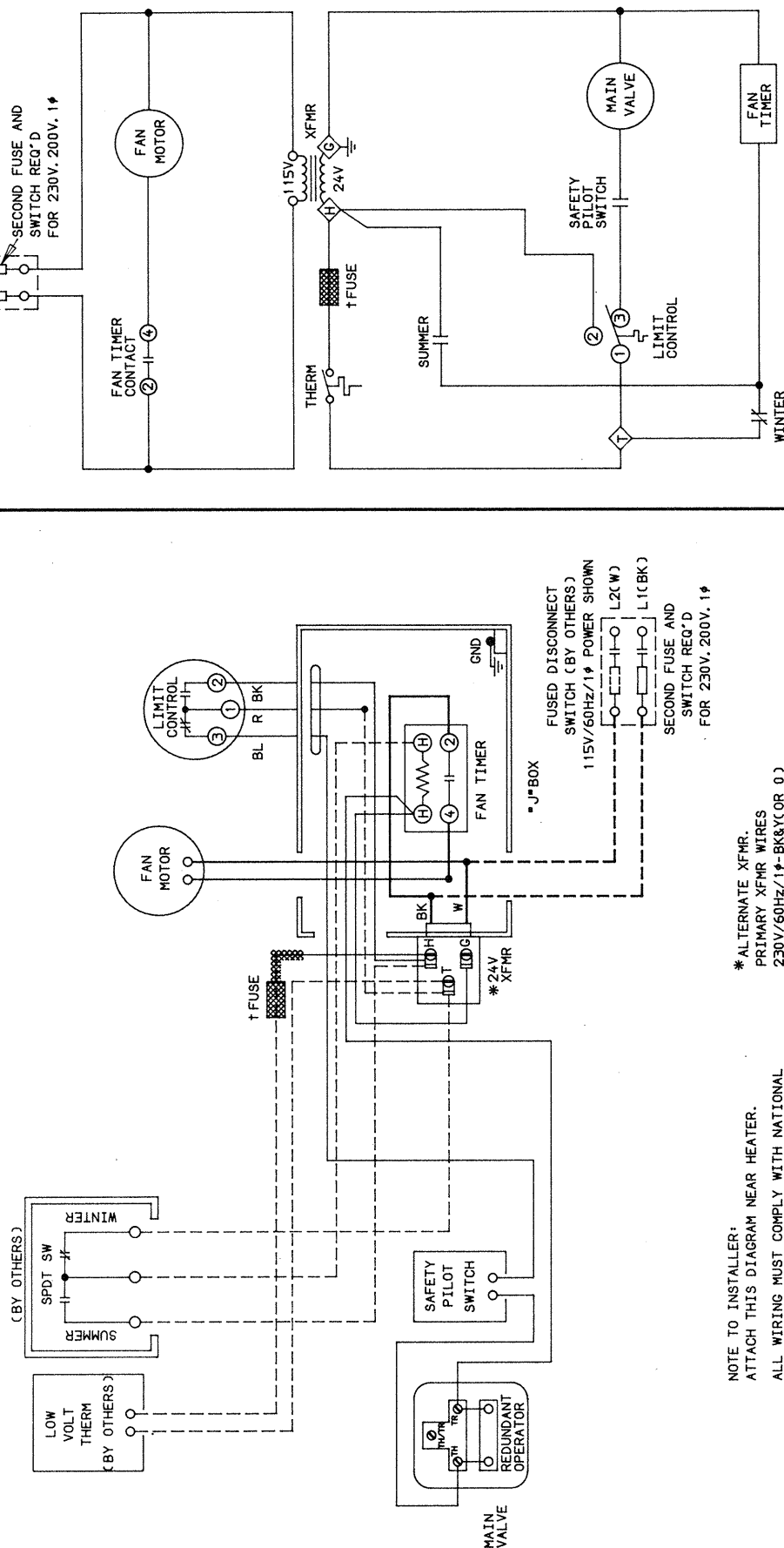
5H70081B35 — Three-phase, standing pilot, 100% shut-off, fan time delay,
low-voltage thermostat. (Rev. B)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---

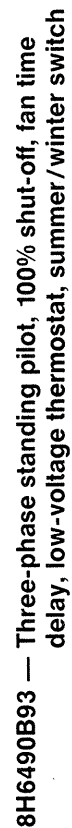


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

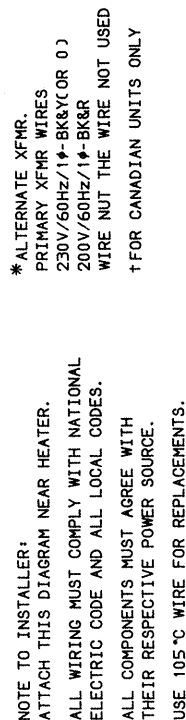
* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&Y(OR 0)
200V/60Hz/1φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
+ FOR CANADIAN UNITS ONLY

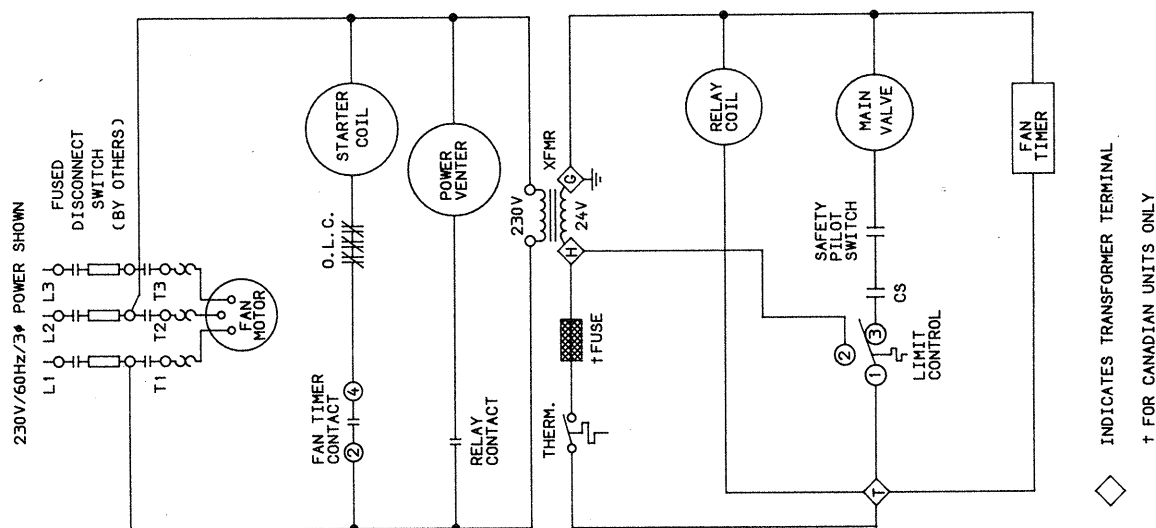
8H6490B93 — Single-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch.







8H6490B94 — Three-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, low-voltage controlled power venter.



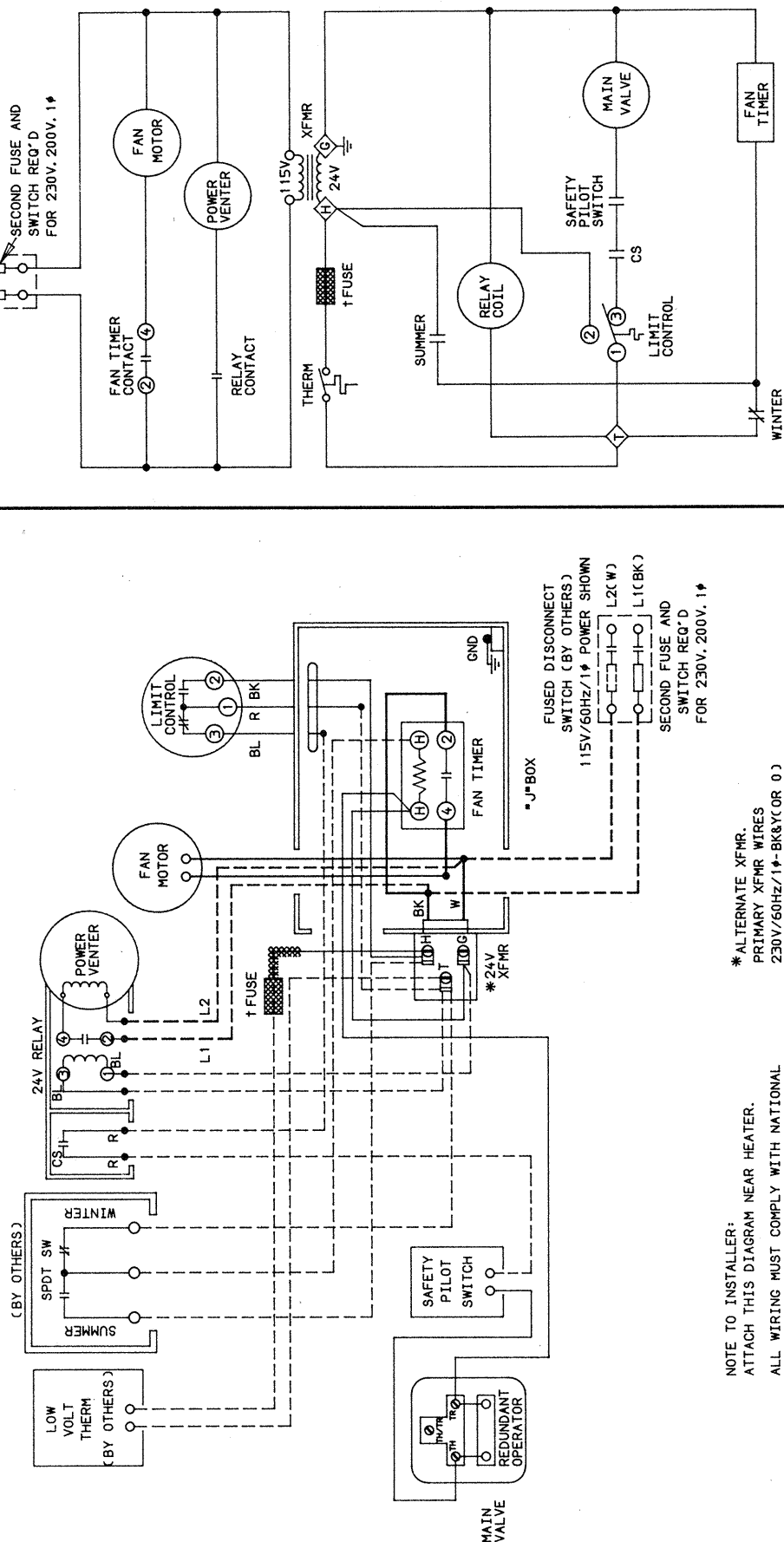


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	---
LINE	---
24V.	---



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1φ-BK&Y(OR 0)

200V/60Hz/1φ-BK&R

WIRE NUT THE WIRE NOT USED

†FOR CANADIAN UNITS ONLY

*J*BOX

FUSED DISCONNECT SWITCH (BY OTHERS)

115V/60Hz/1φ POWER SHOWN

L2(W)

L1(BK)

SECOND FUSE AND SWITCH REQ'D

FOR 230V, 200V, 1φ

◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

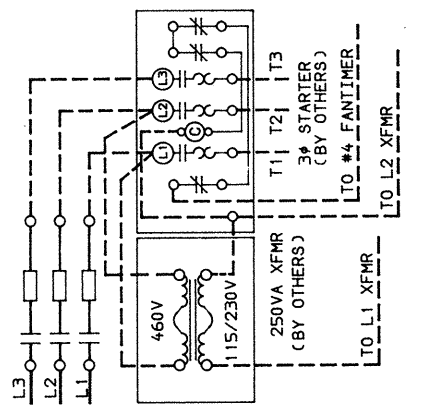
8H6490B95 — Single-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch low-voltage controlled power venter.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

FOR U.S. UNITS ONLY

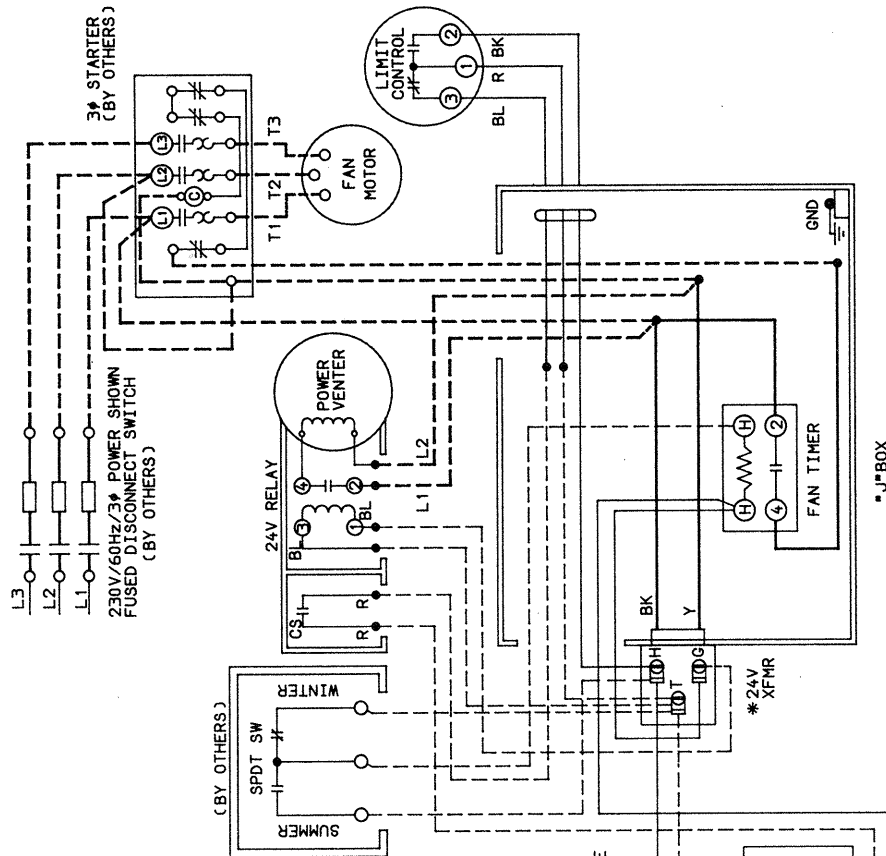
460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	24V.
FIELD	---
WIRE NUT	---



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

*J*BOX

*ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1 ϕ -BK&YCR 0)

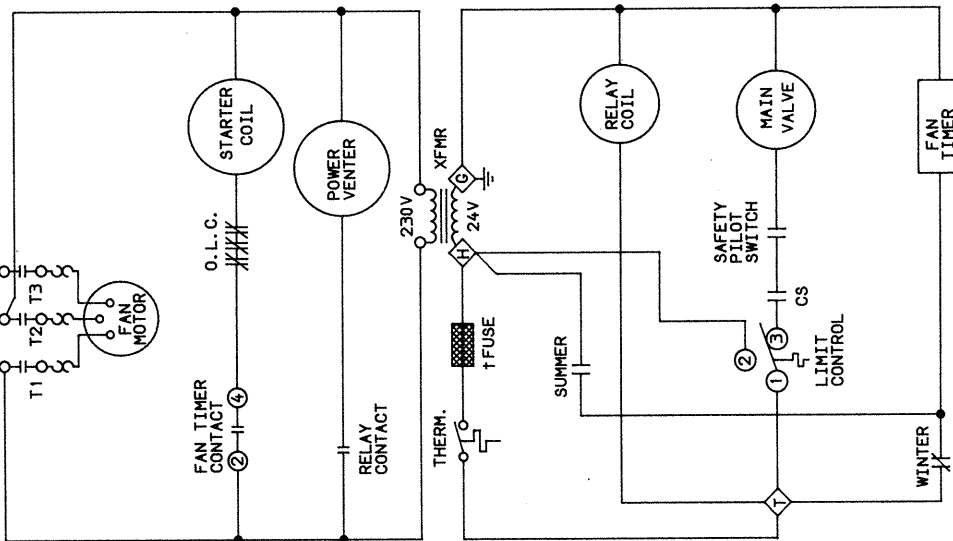
200V/60Hz/1 ϕ -BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

230V/60Hz/3 ϕ POWER SHOWN

FUSED
DISCONNECT
SWITCH
(BY OTHERS)



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

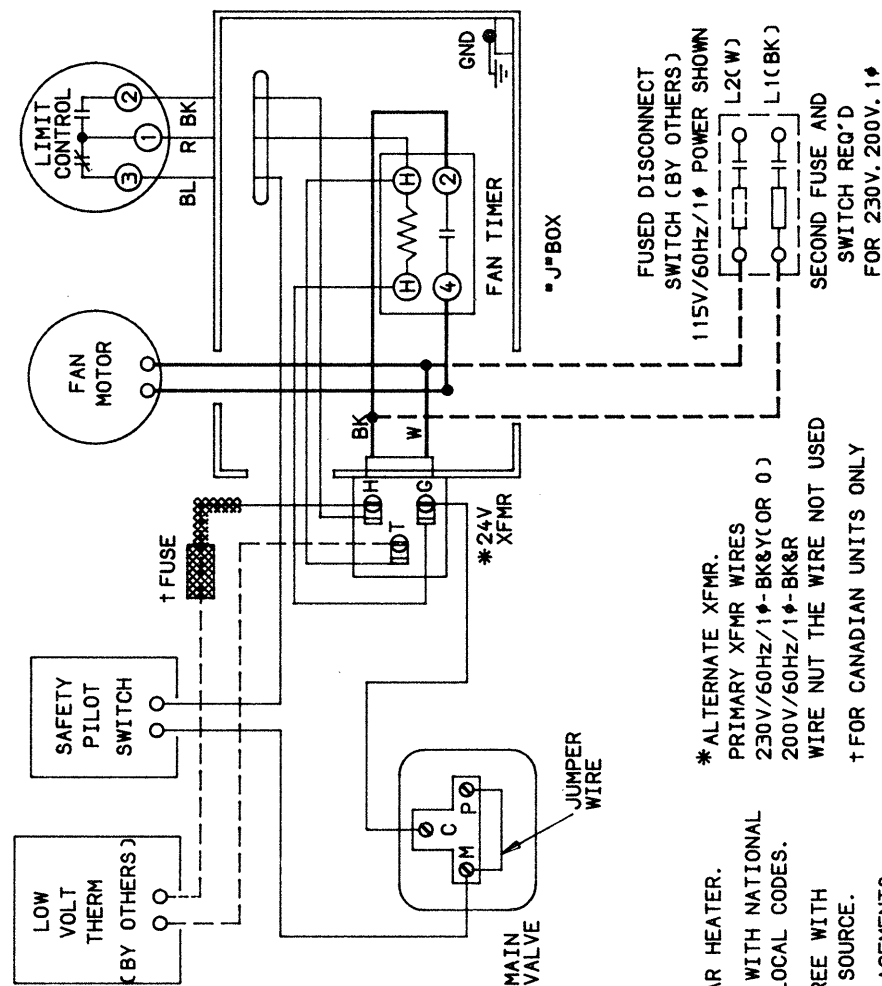
8H6490B95 — Three-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, summer/winter switch
low-voltage controlled power venter.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&Y(OR 0)
200V/60Hz/1φ-BK&R

WIRE NUT THE WIRE NOT USED

+ FOR CANADIAN UNITS ONLY

FUSED DISCONNECT
SWITCH (BY OTHERS)

115V/60Hz/1φ POWER SHOWN

L2(W)

L1(BK)

SECOND FUSE AND

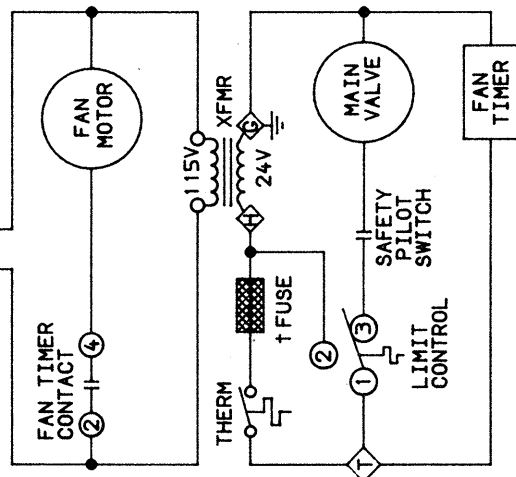
SWITCH REQ'D

FOR 230V, 200V, 1φ

115V/60Hz/1φ POWER SHOWN
L1(BK) L2(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)

SECOND FUSE AND
SWITCH REQ'D
FOR 230V, 200V, 1φ



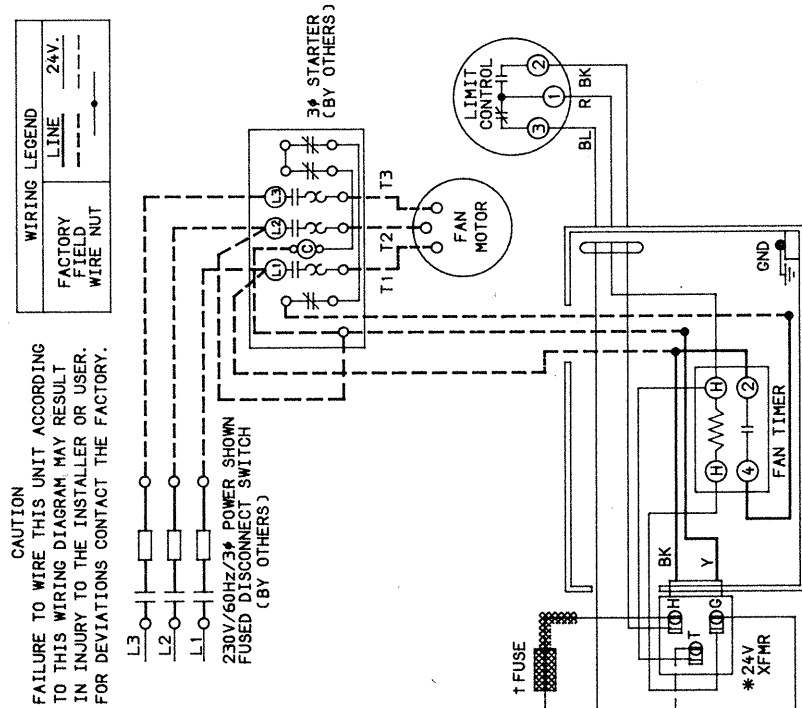
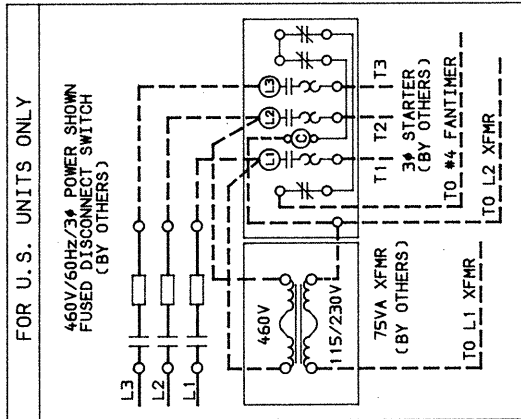
◇ INDICATES TRANSFORMER TERMINAL

+ FOR CANADIAN UNITS ONLY

5H70081B38 — Single-phase, standing pilot, 100% shut-off, fan time delay, low-voltage thermostat. (Rev. A)

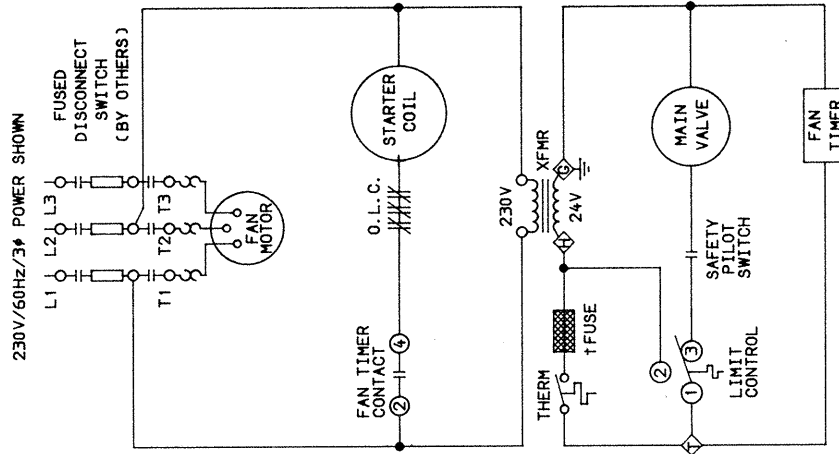


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(COR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
†FOR CANADIAN UNITS ONLY

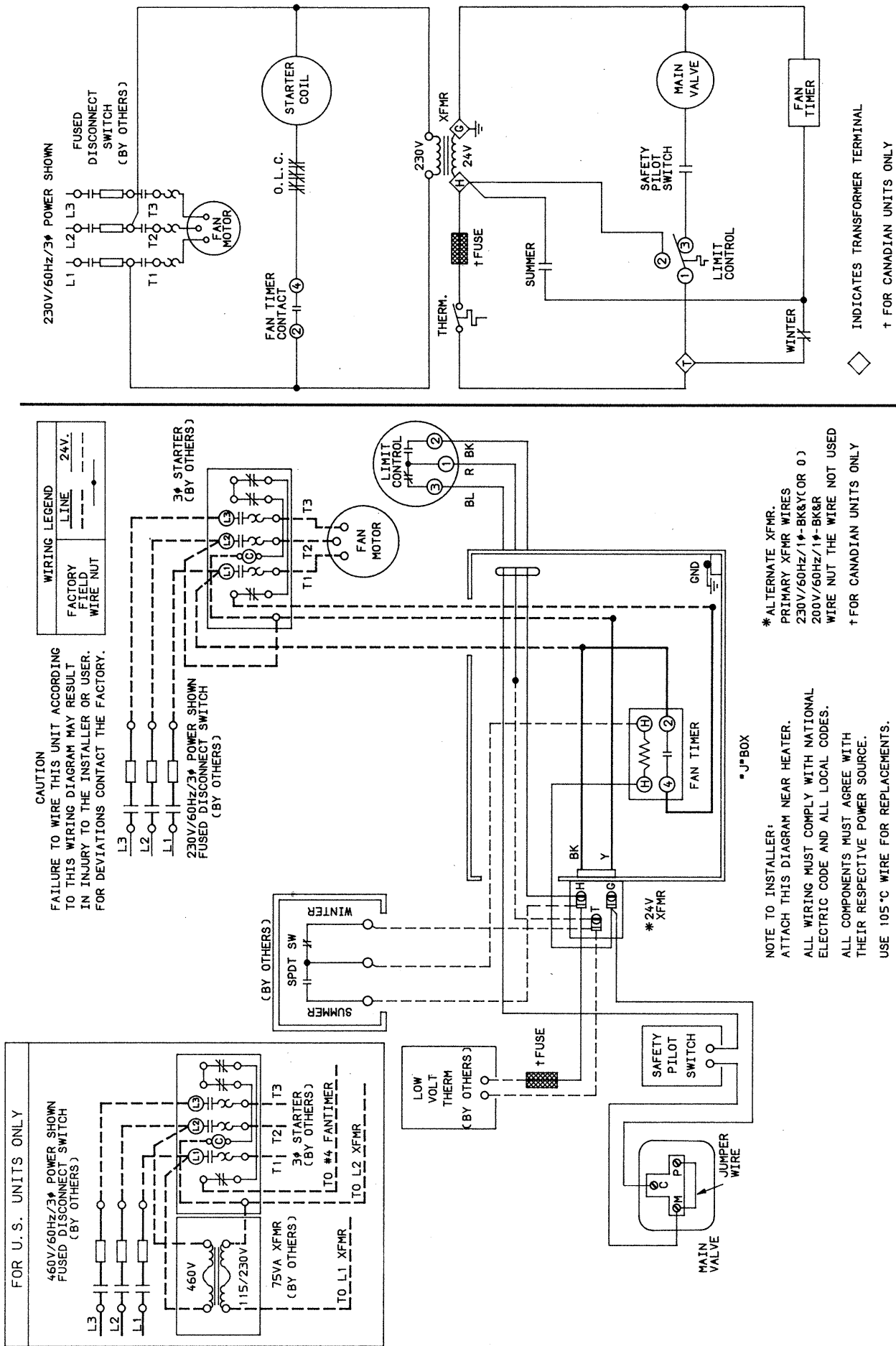


◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

5H70081B38 — Three-phase, standing pilot, 100% shut-off, fan time delay,
low-voltage thermostat. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



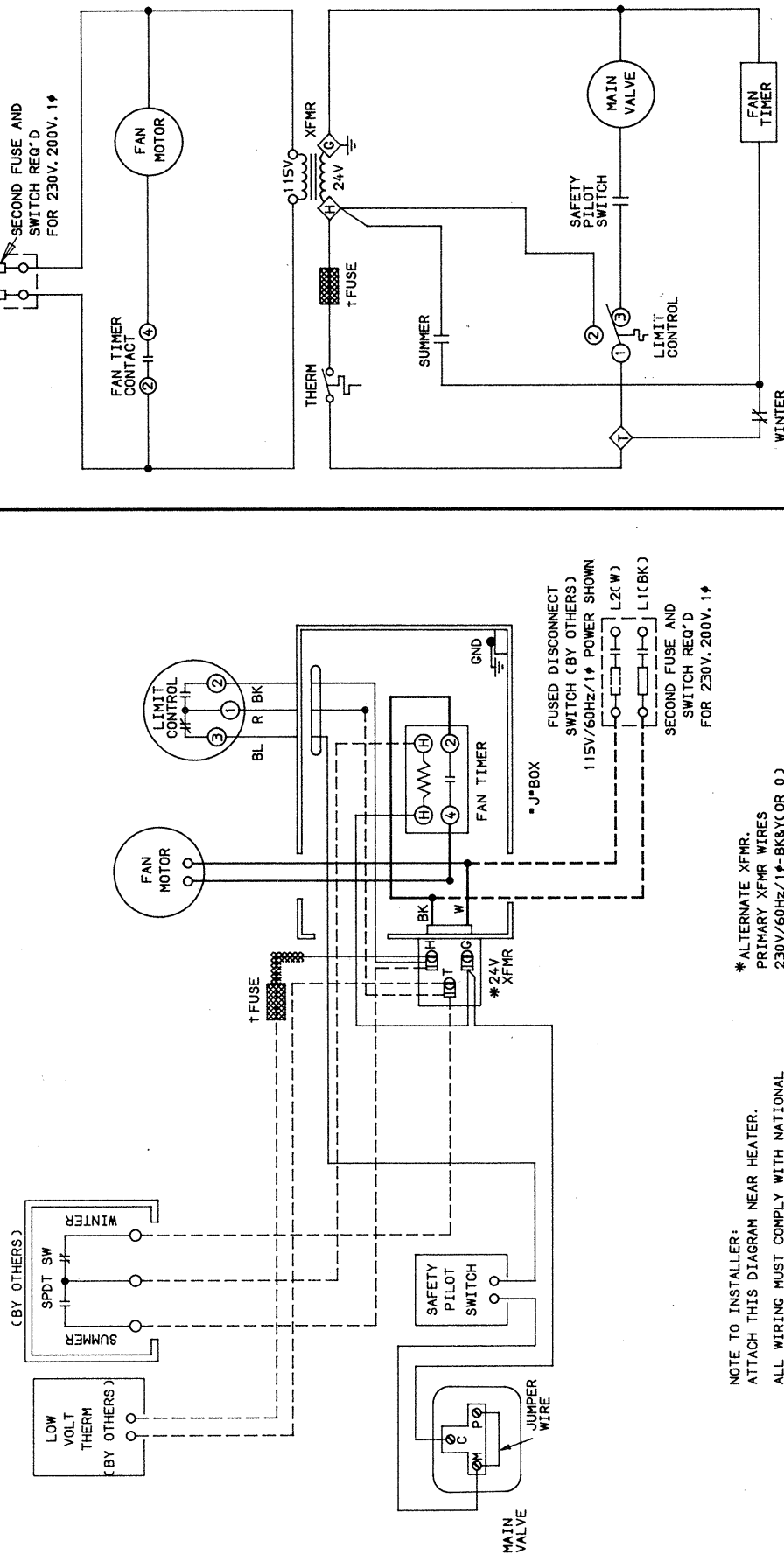
8H6490B102 — Three-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	---
WIRE NUT	•



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

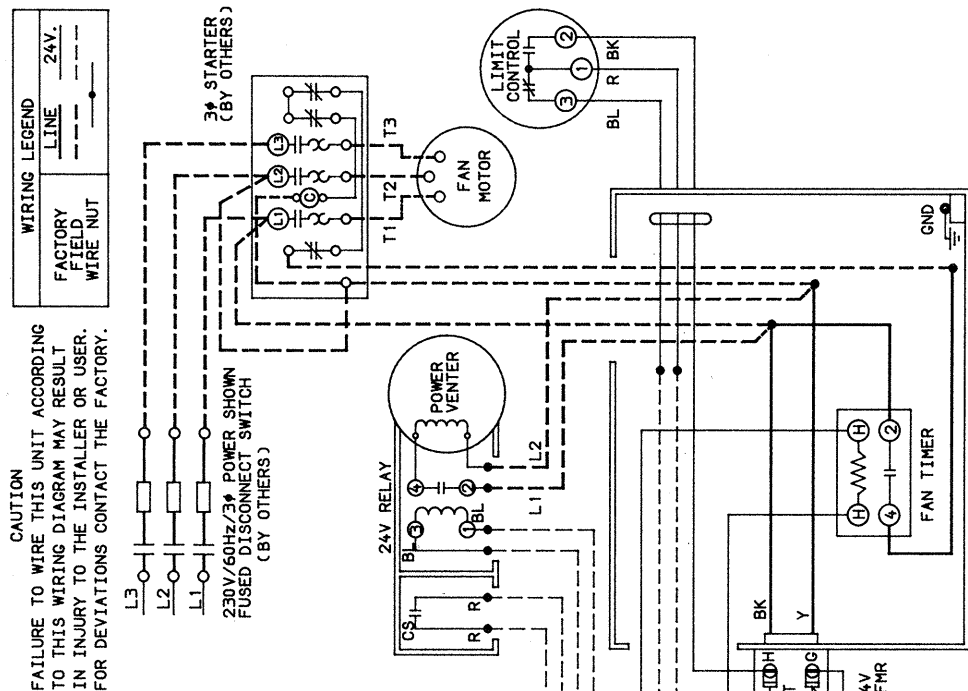
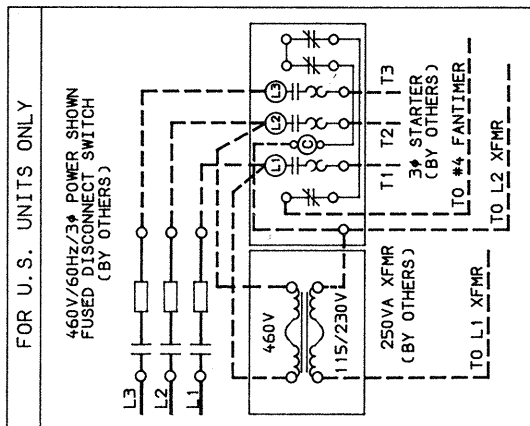
* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&Y(COR O)
200V/60Hz/1φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B102 — Single-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

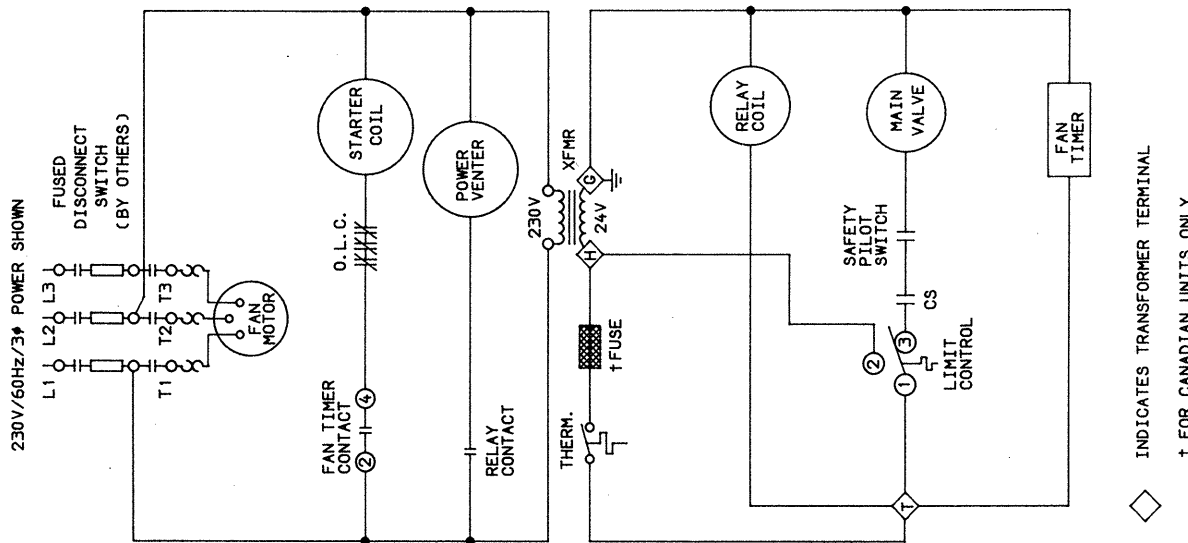
230V/60Hz/1 ϕ -BK&Y(OR 0)

200V/60Hz/1 ϕ -BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

8H6490B103 — Three-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, low-voltage controlled
power venter.

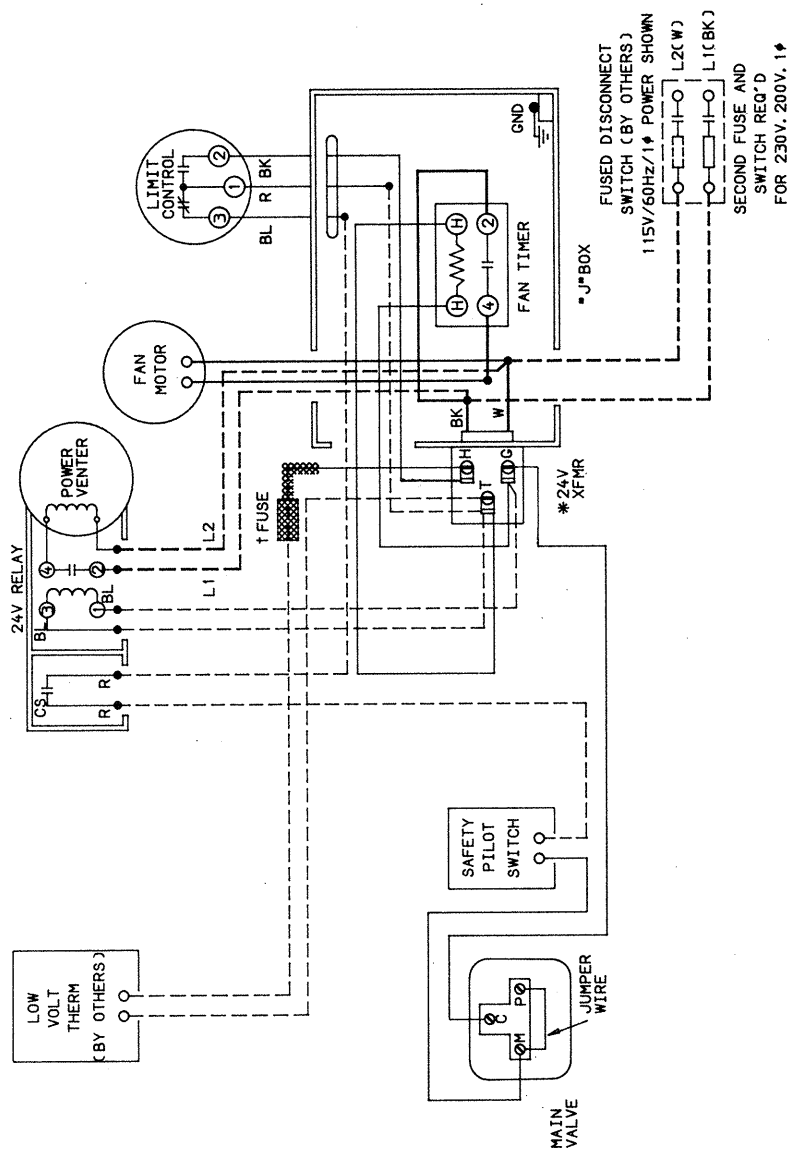




MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	---
WIRE NUT	•

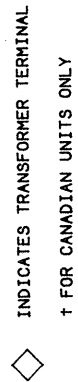


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&Y (OR 0)
200V/60Hz/1φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

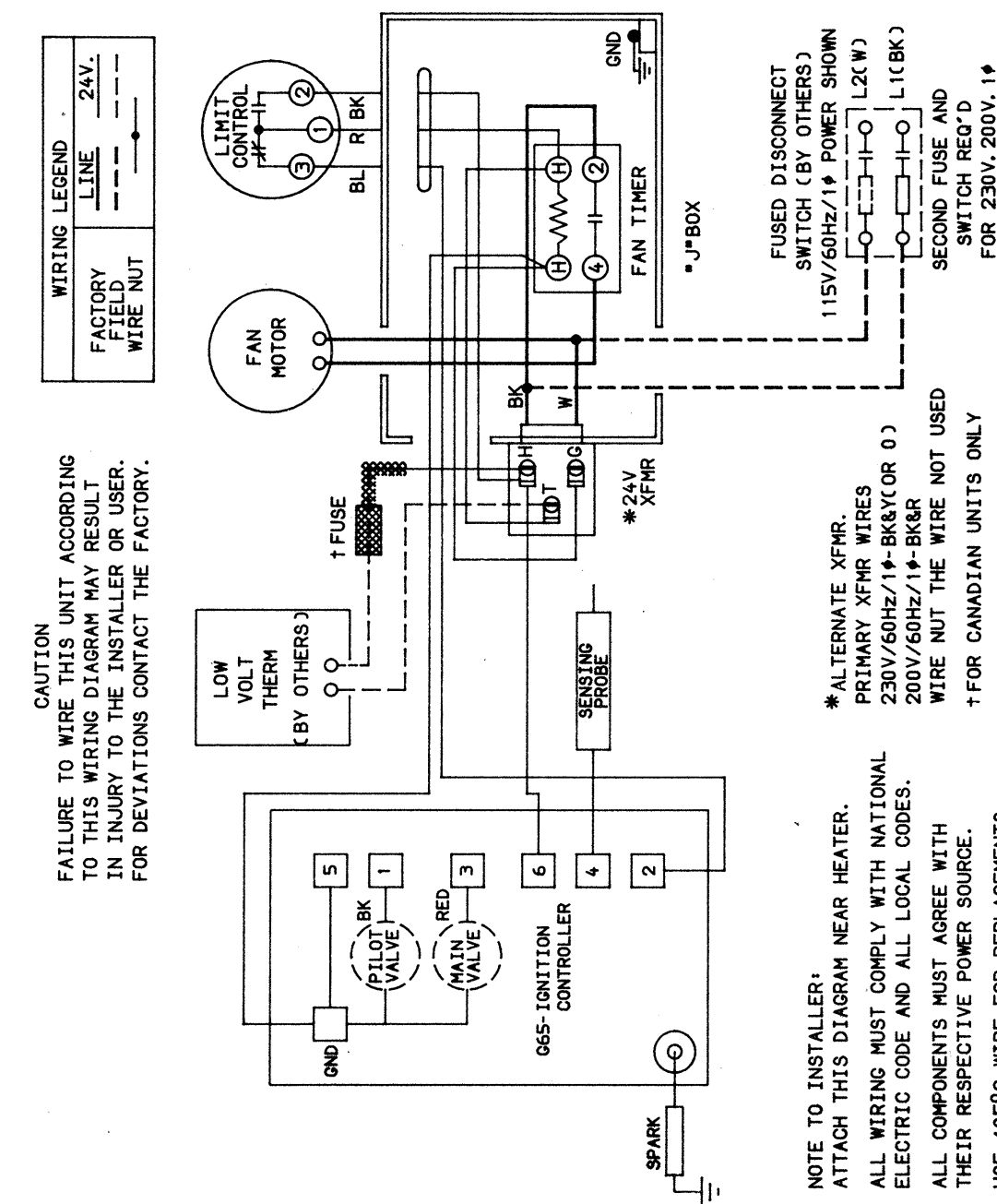
◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B103 — Single-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, low-voltage controlled power venter.



8H6490B104 — Three-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer /winter switch. low-voltage thermostat, controlled power venter.

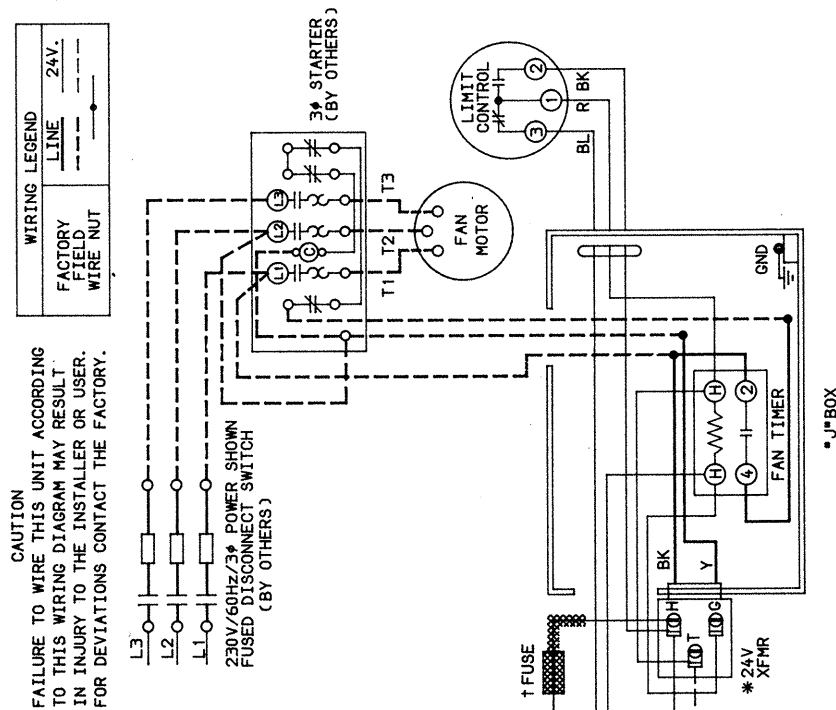
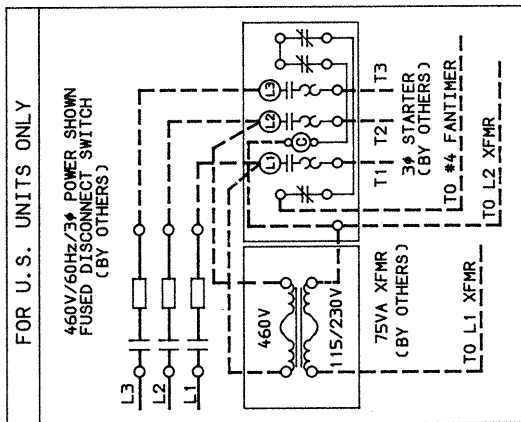




5H70081B32 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat. (Rev. B)

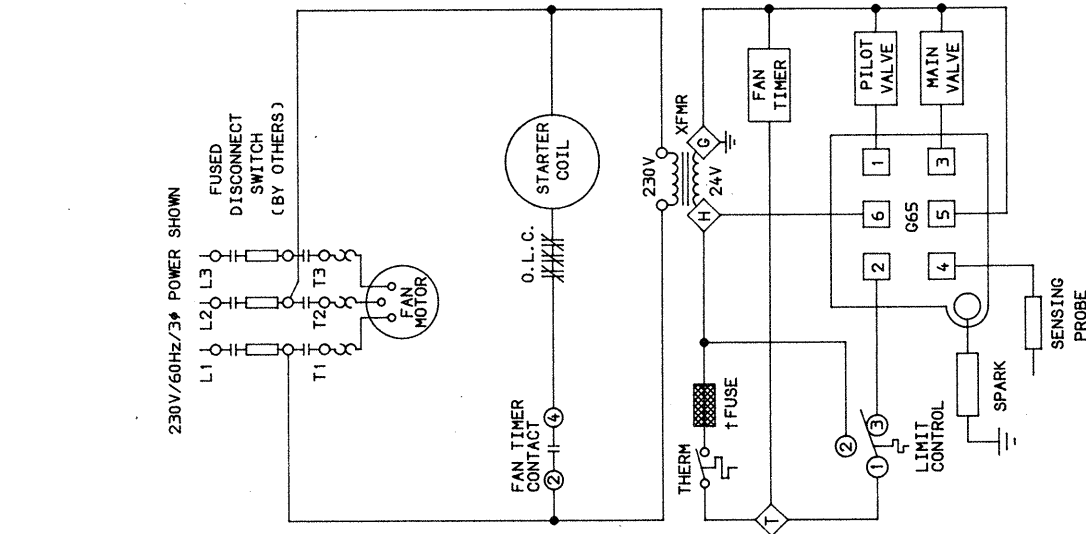


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(OR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

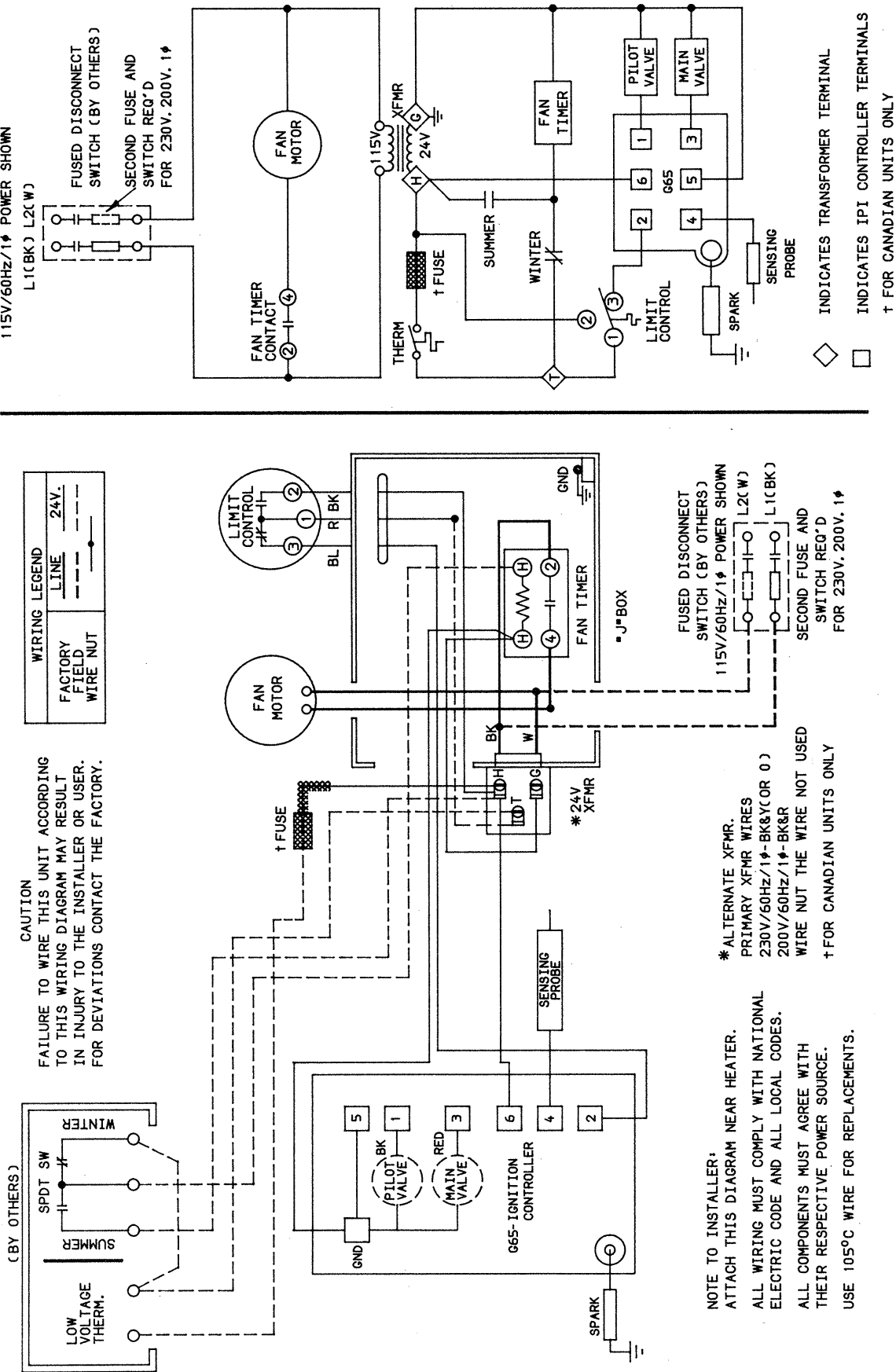


◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPT CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

5H70081B32 — Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat. (Rev. B)



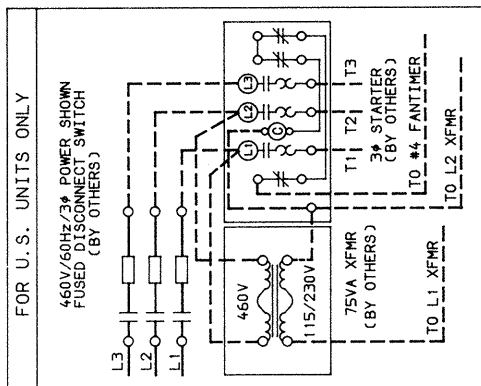
MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



8H6490B81 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, summer-winter switch. (Rev. A)



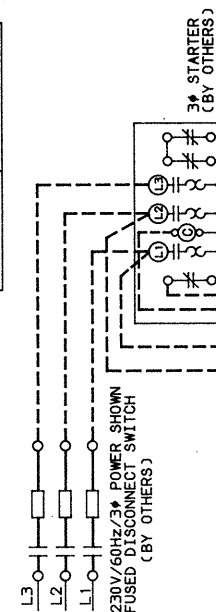
MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



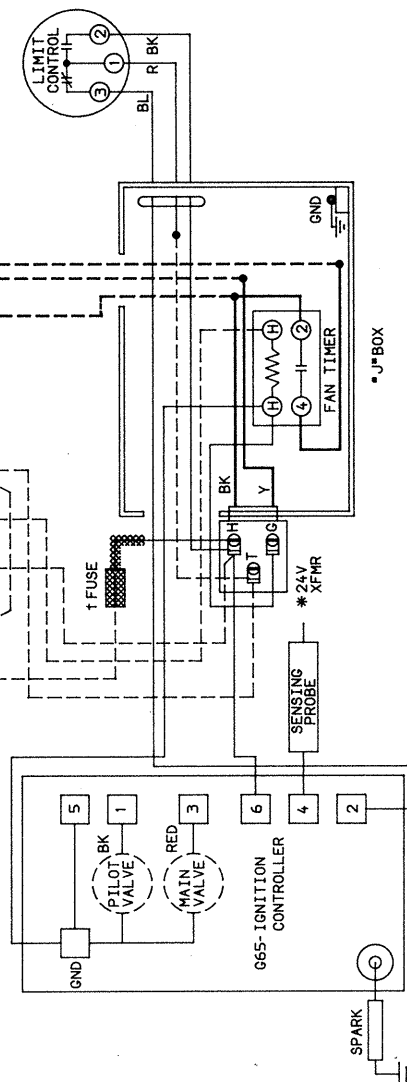
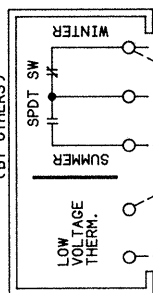
CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE	LINE
WIRE NUT	---



(BY OTHERS)



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

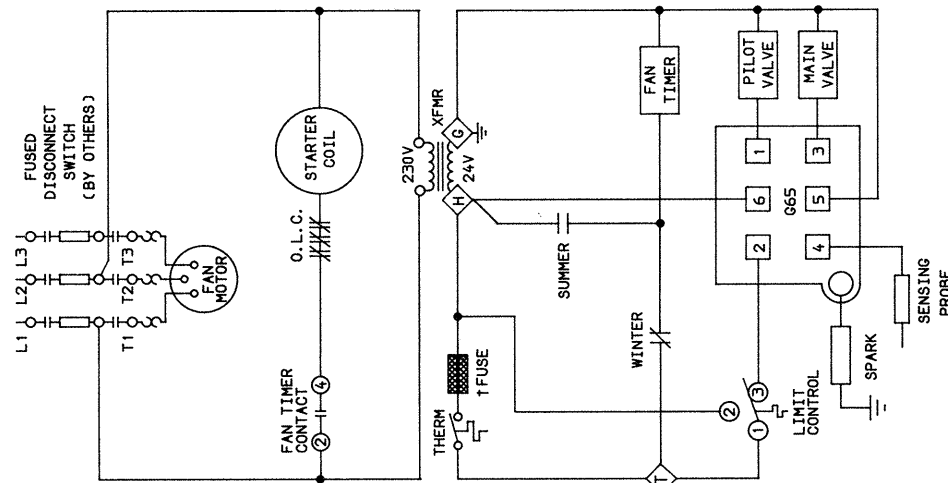
230V/60Hz/14-BK&Y OR 0

200V/60Hz/14-BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

230V/60Hz/3* POWER SHOWN



◇ INDICATES TRANSFORMER TERMINAL

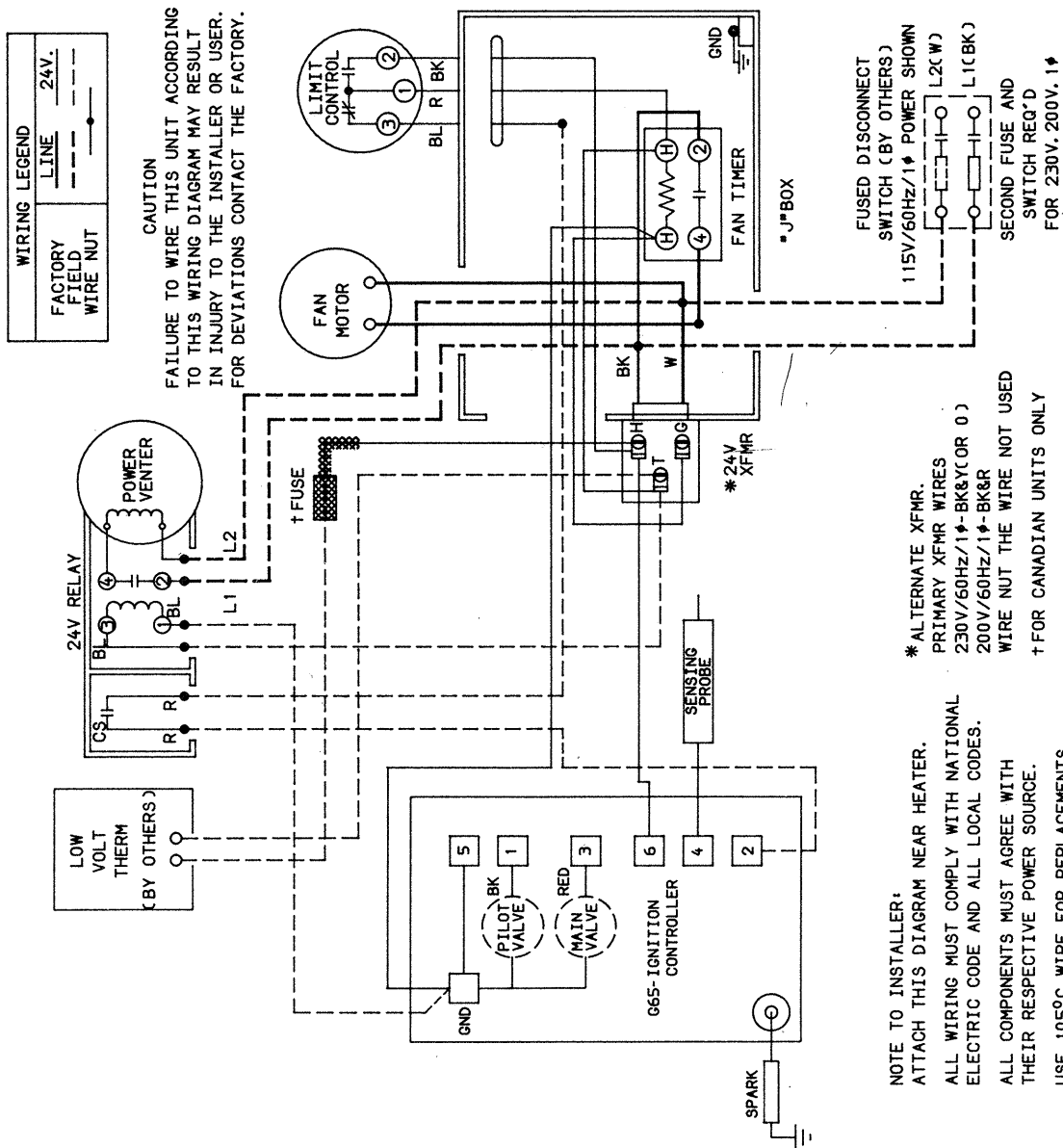
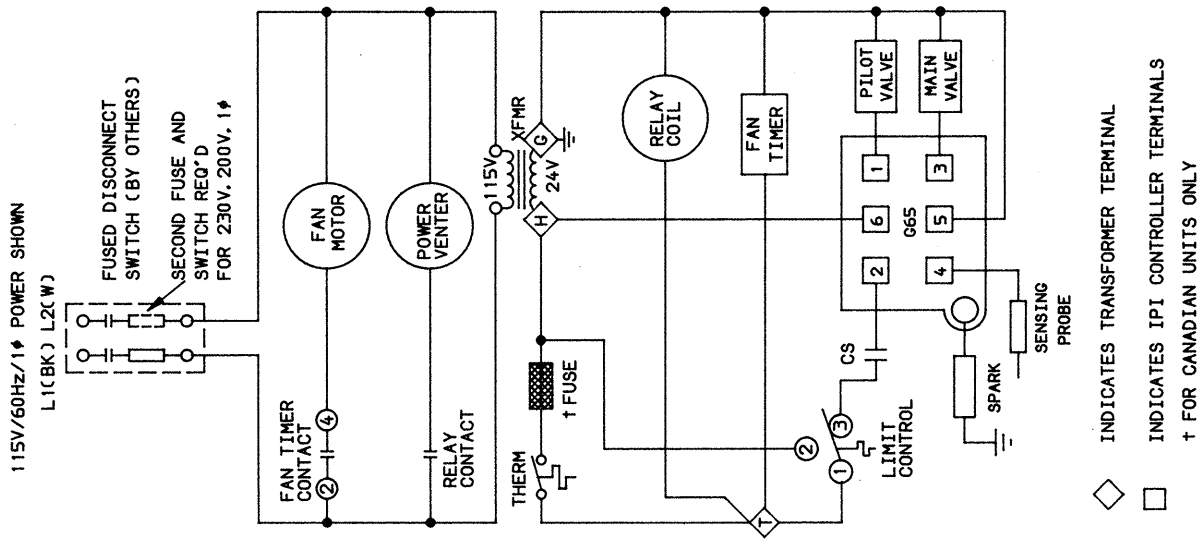
□ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY

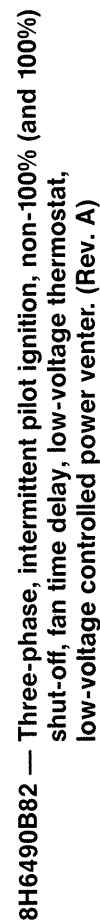
8H6490B81 — Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat, summer-winter switch. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

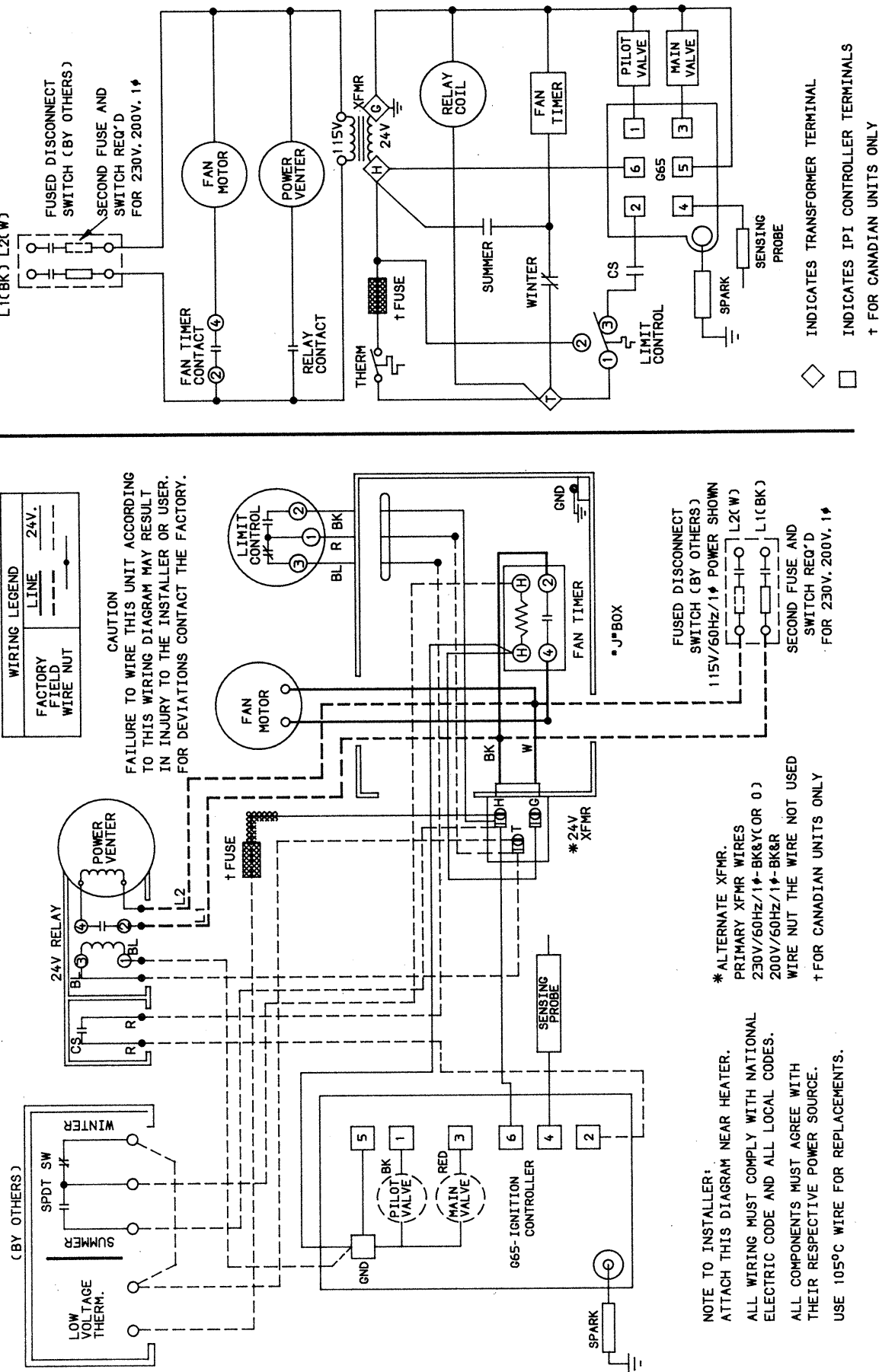


8H6490B82 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, low-voltage controlled power venter. (Rev. A)





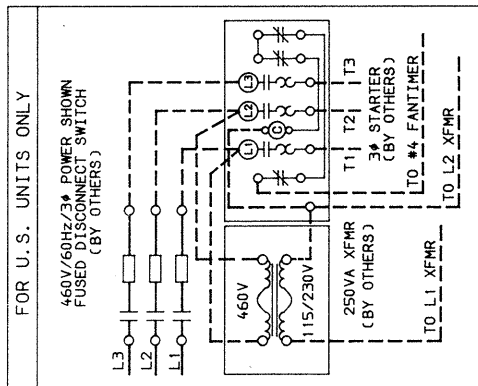
MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



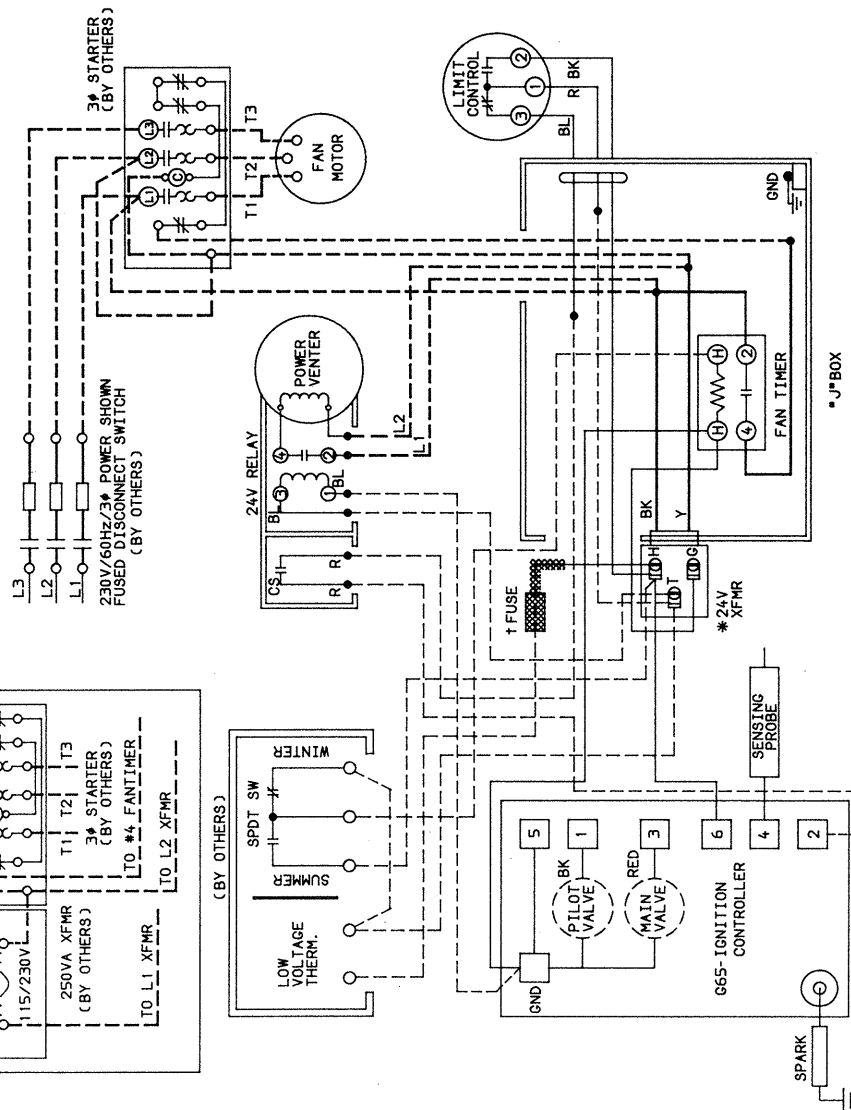
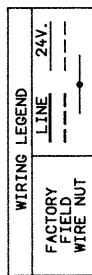
8H6490B83 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, summer-winter switch. low-voltage controlled power venter. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y OR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

8H6490B83 — Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat, summer-winter switch.
low-voltage controlled power venter. (Rev. A)



FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

The diagram illustrates the electrical wiring for a gas furnace. Key components and their connections include:

- Power Entry:** L1 (BK) and L2 (W) enter from the right, passing through a second fuse and a switch. They connect to a 24V XFMR and a *J* BOX.
- Limit Control:** A circular component with terminals 1, 2, and 3. It is connected to the power lines and the fan motor.
- Fan Motor:** A circular component connected to the limit control and the 24V XFMR.
- Fan Timer:** A component with terminals 1, 2, 3, and 4, connected to the fan motor and the power lines.
- Gas Valve Assembly:** Includes the MAIN GAS VALVE, S86 CONTROLLER, and PILOT VALVE. The S86 CONTROLLER has terminals MV, MV/PV, PV, and GND. The PILOT VALVE has a GND connection.
- Thermistors and Switches:** TH/TR, TR, and TH are connected to the gas valve assembly. A LOW VOLT THERM (BY OTHERS) is connected to the power lines.
- Fuses:** A FUSE is connected to the power lines. A 24V XFMR is connected to the fan motor.
- Grounding:** GND connections are shown for the power lines, the fan motor, the gas valve assembly, and the spark.

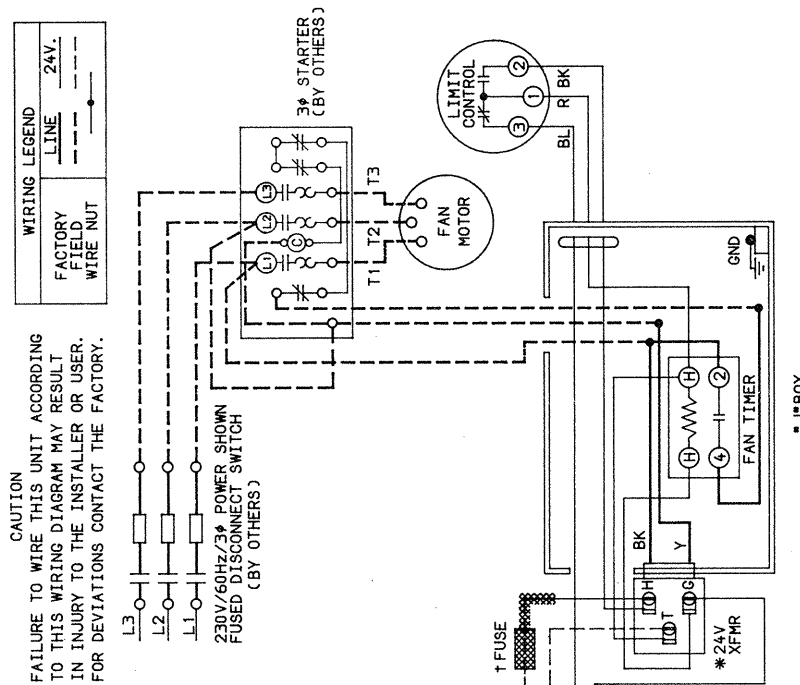
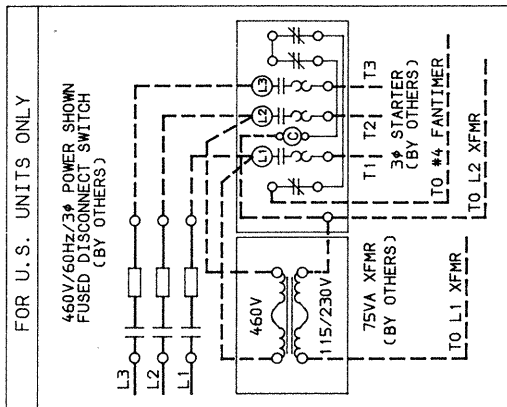
†FOR CANADIAN UNITS ONLY



5H70081B33 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat. (Rev. B)

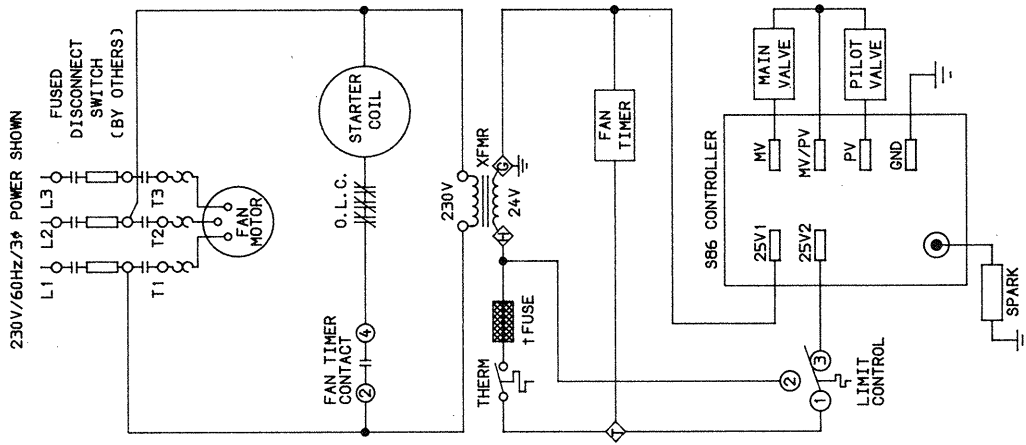


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ BK&Y OR 0
200V/60Hz/1 ϕ BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY



INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

5H70081B33 — Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat. (Rev. B)

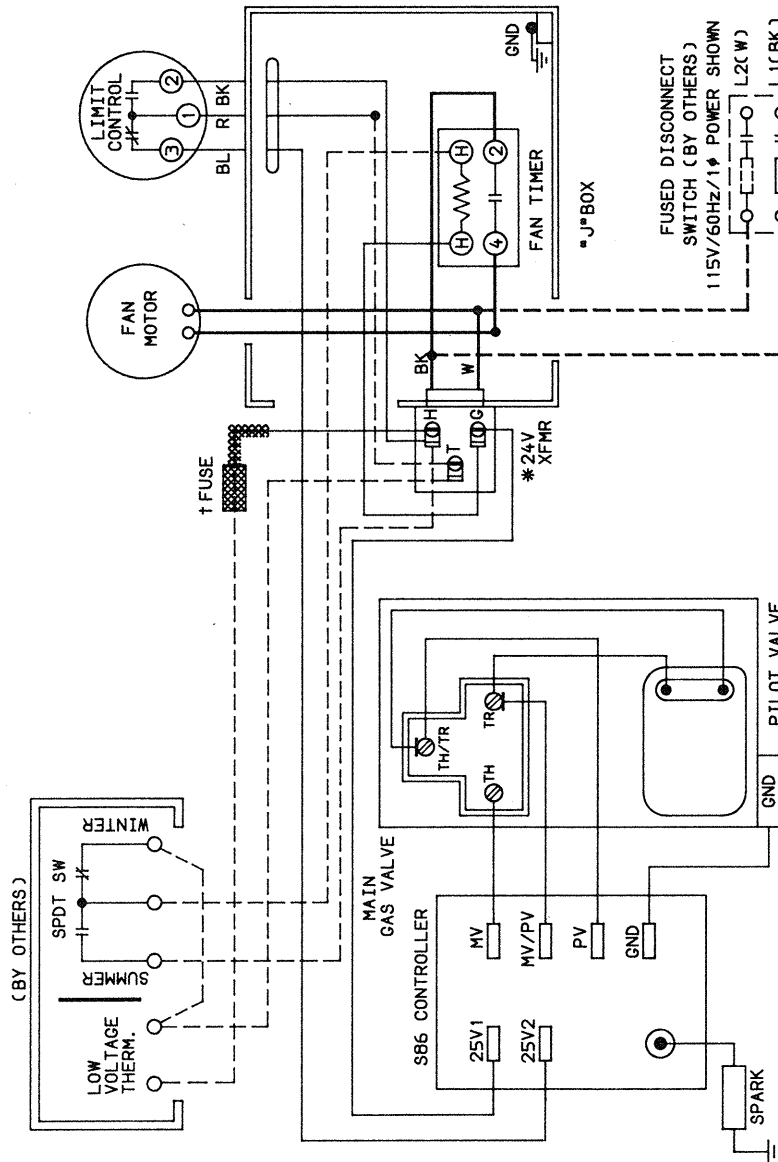


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	—
LINE	---
24V.	---



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1ϕ-BK&Y(OR 0)

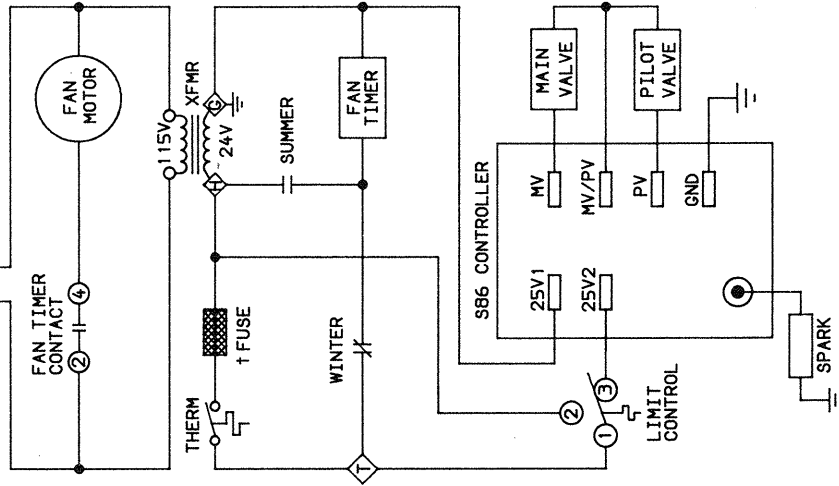
200V/60Hz/1ϕ-BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

115V/60Hz/1ϕ POWER SHOWN
L1(BK) L2(W)

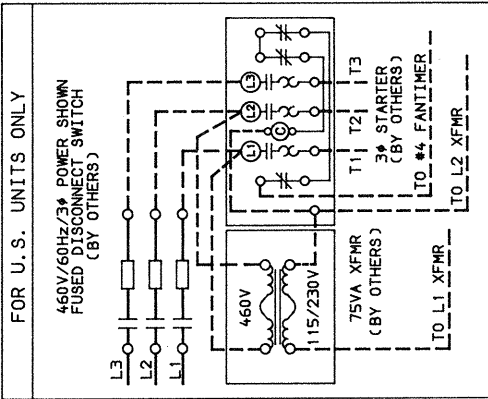
FUSED DISCONNECT
SWITCH (BY OTHERS)
SECOND FUSE AND
SWITCH REQ'D
FOR 230V, 200V, 1ϕ



◇ INDICATES TRANSFORMER TERMINAL

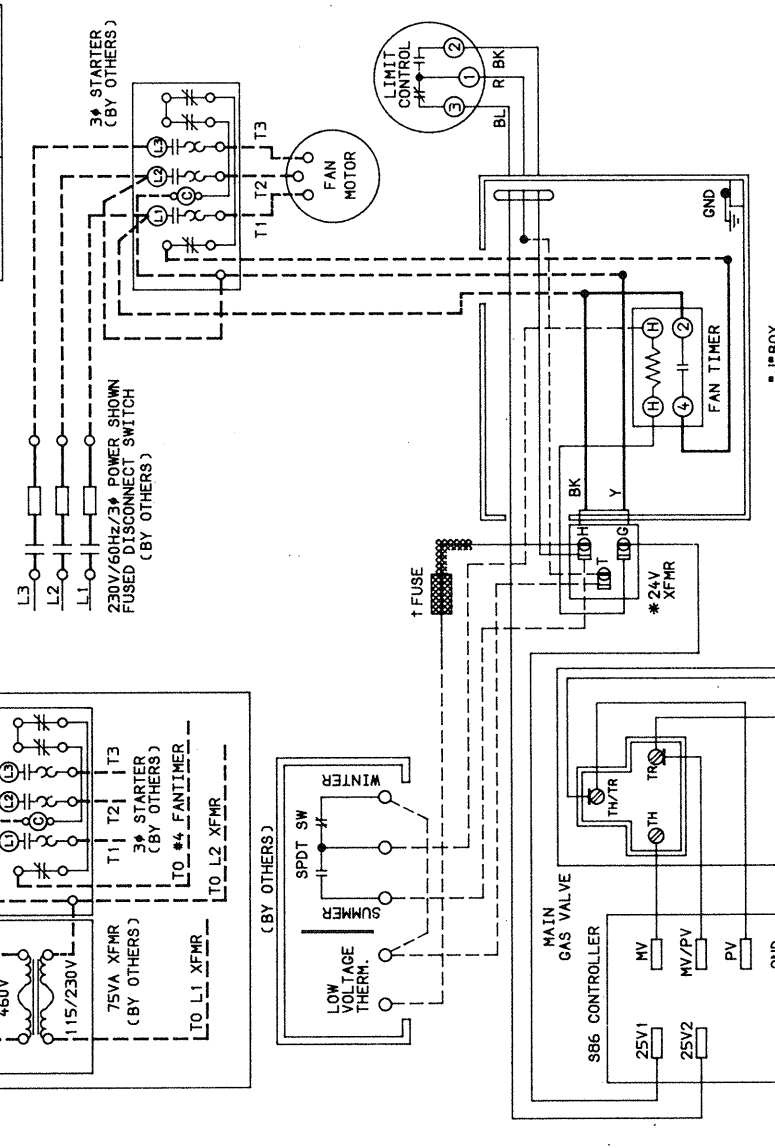
† FOR CANADIAN UNITS ONLY

8H6490B84 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, summer/winter switch. (Rev. A)



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ BK&Y (OR 0)
200V/60Hz/1 ϕ BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B84 — Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat, summer / winter switch. (Rev. A)

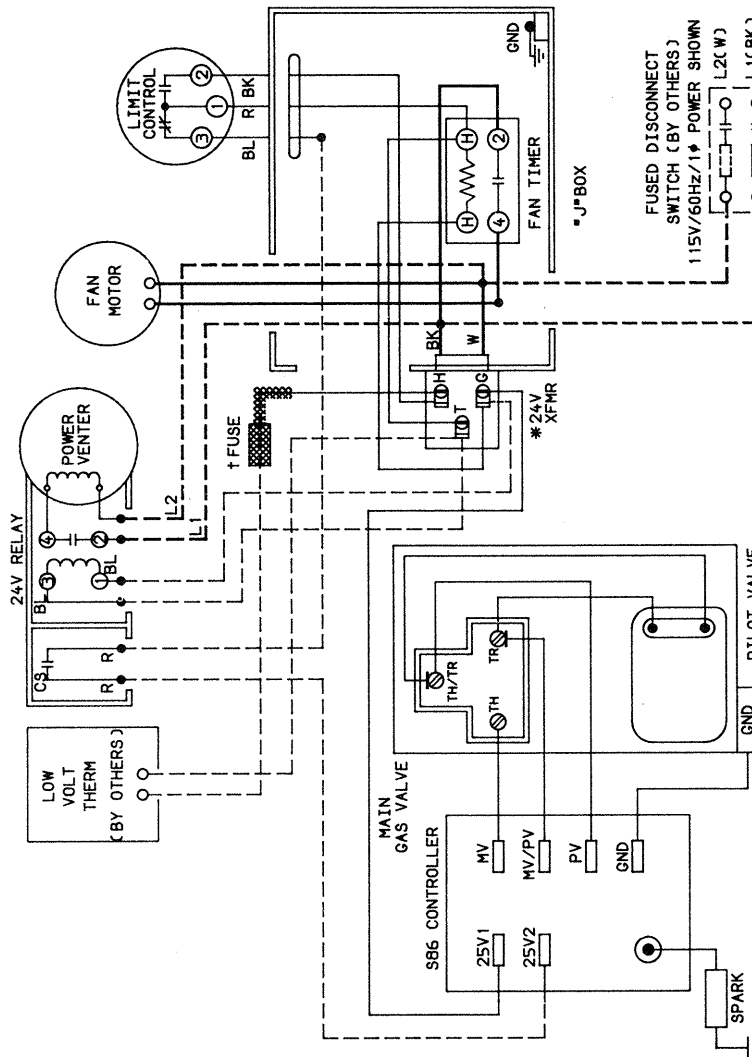


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	---
WIRE NUT	---



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL

ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH

THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1 ϕ -BK&Y(OR 0)

200V/60Hz/1 ϕ -BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

115V/60Hz/1 ϕ POWER SHOWN

L1(BK) L2(W)

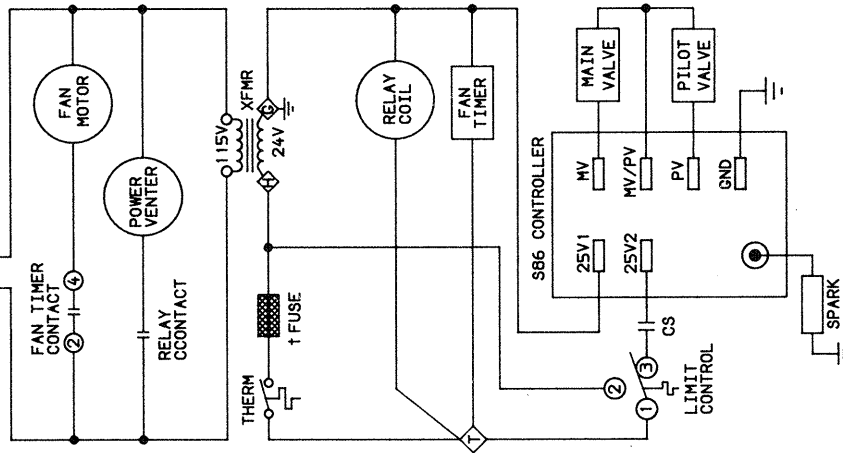
FUSED DISCONNECT

SWITCH (BY OTHERS)

SECOND FUSE AND

SWITCH REQ'D

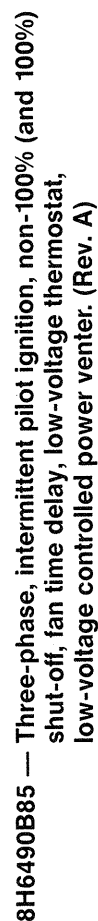
FOR 230V, 200V, 1 ϕ



◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B85 — Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, low-voltage controlled power venter. (Rev. A)



*ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&Y(OR 0)
200V/60Hz/1Ø-BK&R
WIRE NUT THE WIRE NOT USED
FOR CANADIAN UNITS ONLY

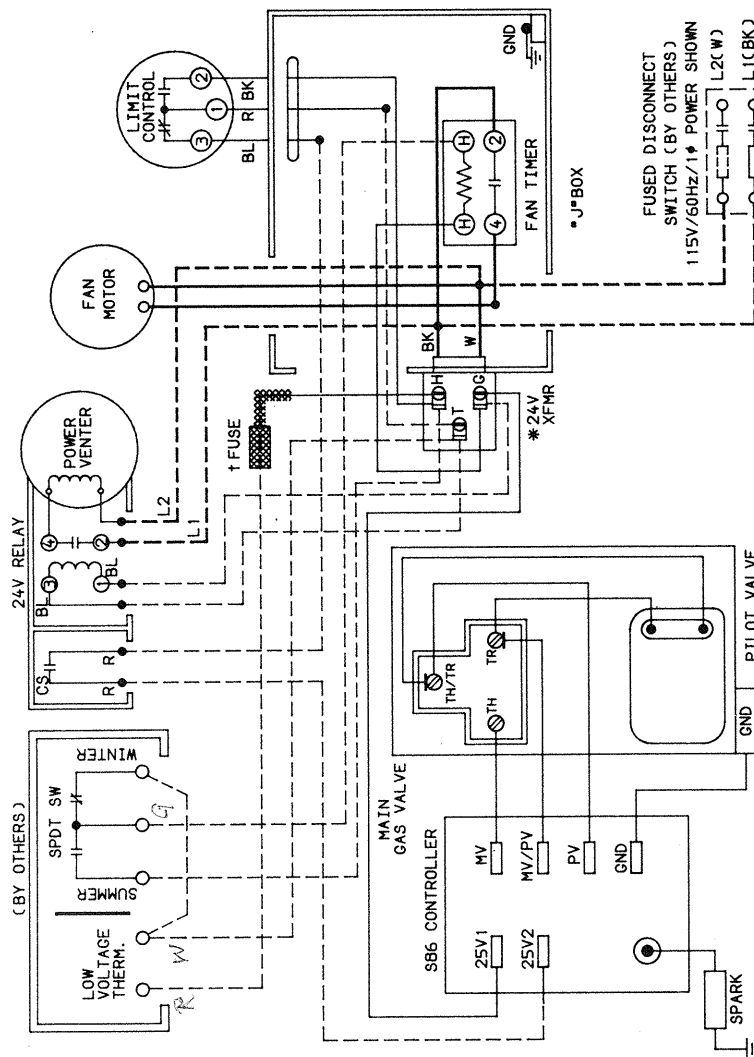
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

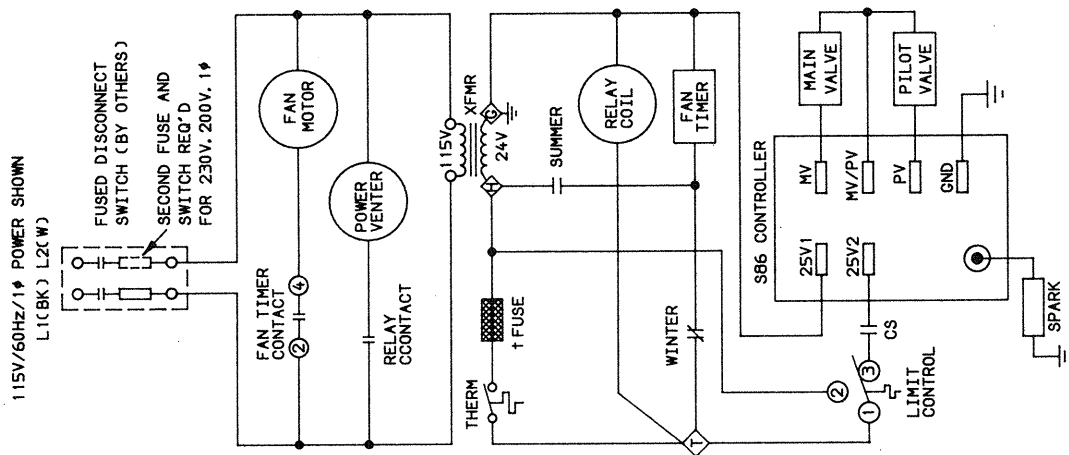
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(OR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

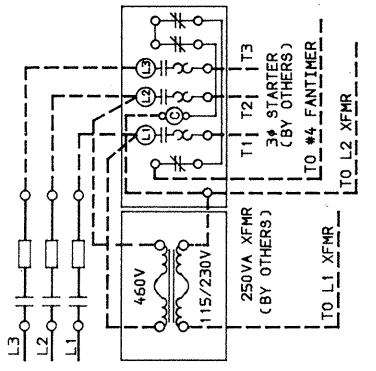


◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B86 — Single-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat,
summer/winter switch, low-voltage controlled power venter. (Rev. A)

FOR U.S. UNITS ONLY

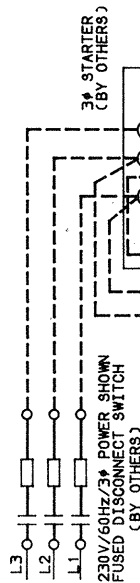
460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	SOLID LINE
FIELD	DASHED LINE
WIRE NUT	DOTTED LINE



230V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)

24V RELAY

LOW VOLTAGE THERM.

SPDT SW

WINTER

SUMMER

1 FUSE

24V XFMR

24V FAN TIMER

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

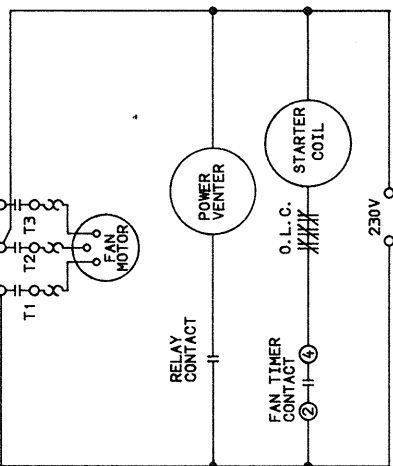
24V



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

230V/60Hz/3 ϕ POWER SHOWN

L1 L2 L3
FUSED
DISCONNECT
SWITCH
(BY OTHERS)



RELAY CONTACT

POWER VENTER

FAN TIMER CONTACT

O.L.C.

STARTER COIL

230V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

THERM

1 FUSE

SUMMER

WINTER

RELAY COIL

FAN TIMER

230V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

24V

886 CONTROLLER

25V1

25V2

MV

MV/PV

PV

GND

MAIN VALVE

PILOT VALVE

SPARK

LIMIT CONTROL

CS

2

1

2

1

2

1

2

1

2

1

2

1

2

1

* ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1 ϕ -BK&YCOR 0

200V/60Hz/1 ϕ -BK&R

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL

ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH

THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY



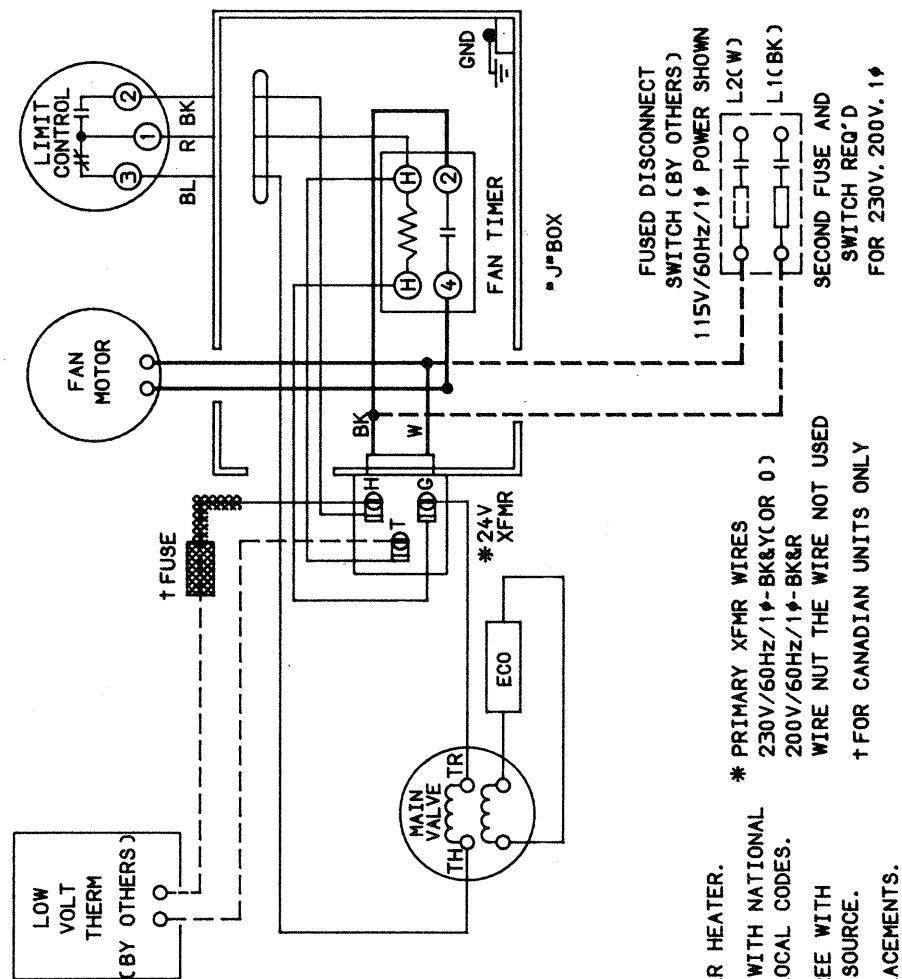
8H6490B86 — Three-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, summer/winter switch, low-voltage controlled power venter. (Rev. A)



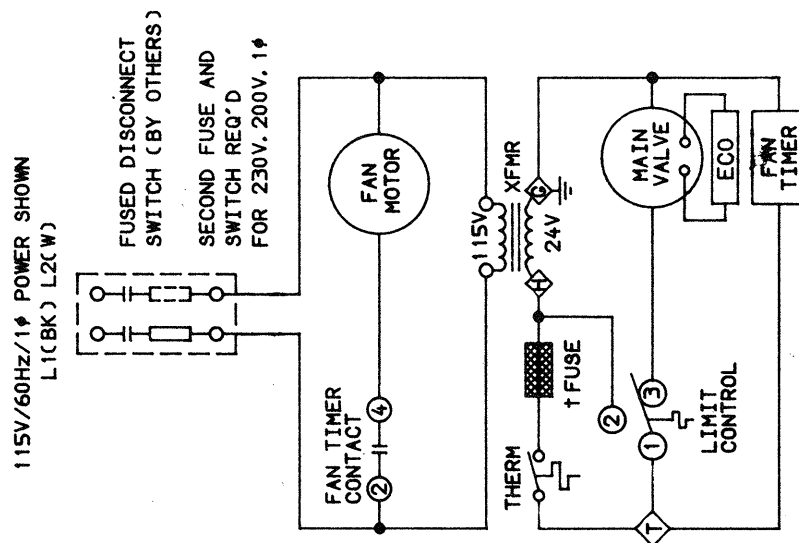
MODINE WIRING DIAGRAM

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.



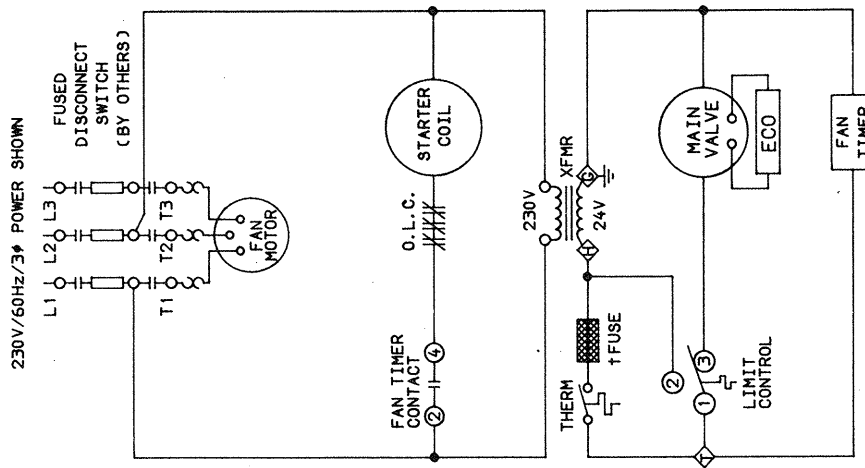
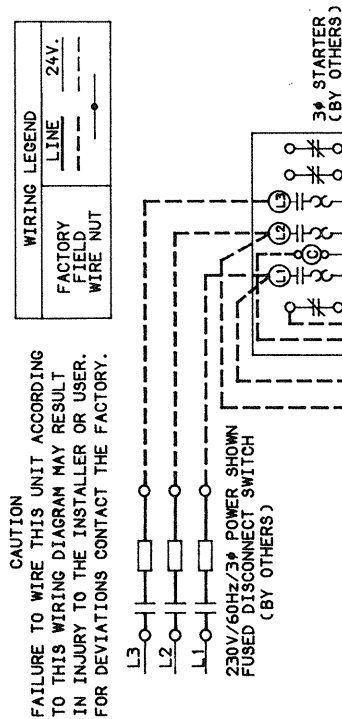
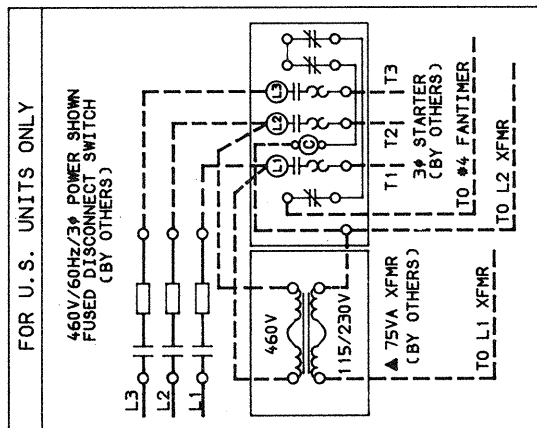
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.



◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

5H70081B39 — Single-phase, standing pilot, 100% shut-off, fan time delay, low-voltage thermostat.

MODINE WIRING DIAGRAM



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

*** PRIMARY XFMR WIRES**
230V/60Hz/1Φ-BK&YCOR 0)
200V/60Hz/1Φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

▲ TRANSFORMER NOT REQUIRED WITH
230V/3Φ POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

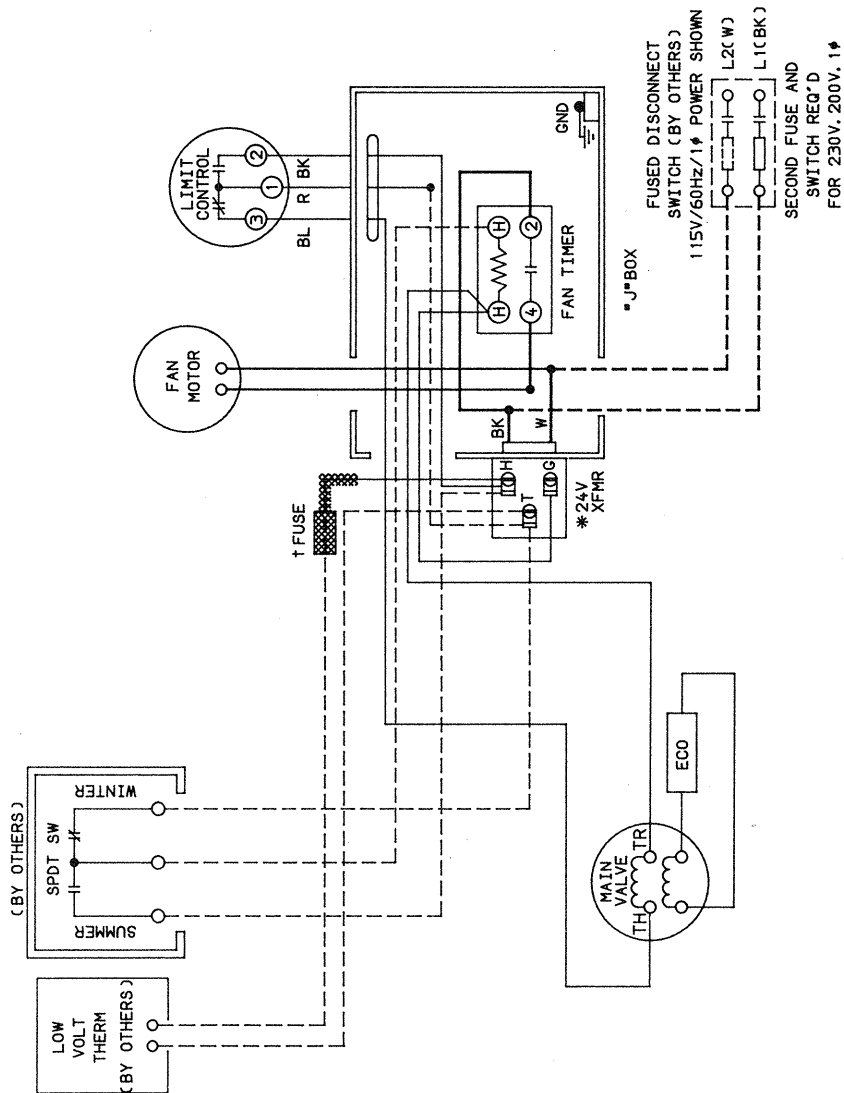
5H70081B39 — Three-phase, standing pilot, 100% shut-off, fan time delay, low-voltage thermostat.



MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

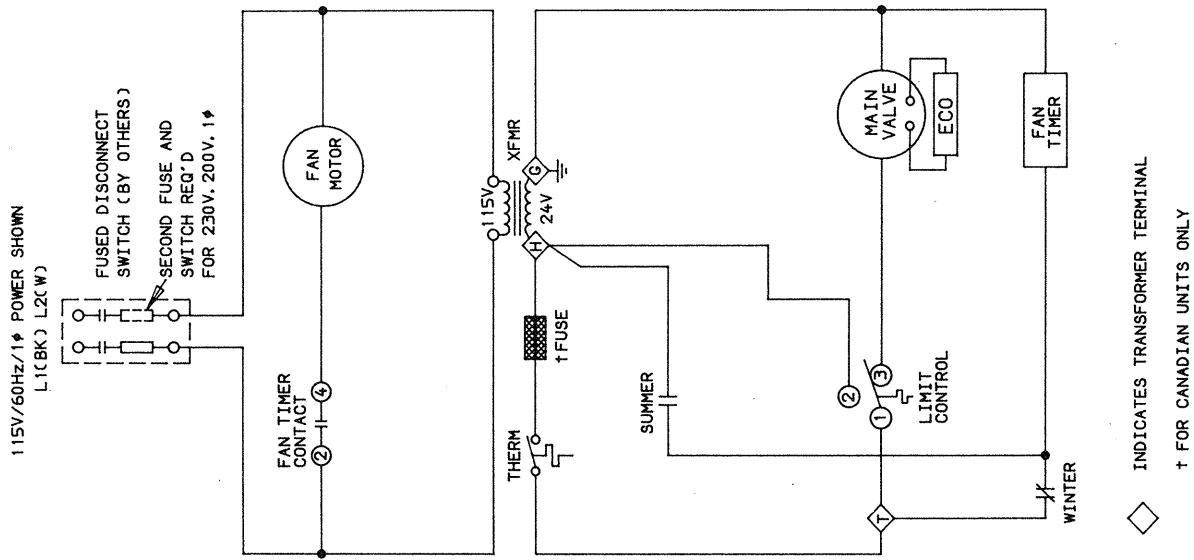
WIRING LEGEND		
FACTORY	LINE	24V.
FIELD	---	---
WIRE NUT	---	---

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1φ-BK&Y OR 0)
200V/60Hz/1φ-BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY



◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B105 — Single-phase standing pilot, 100% shut-off, fan time
delay, low-voltage thermostat, summer/winter switch.



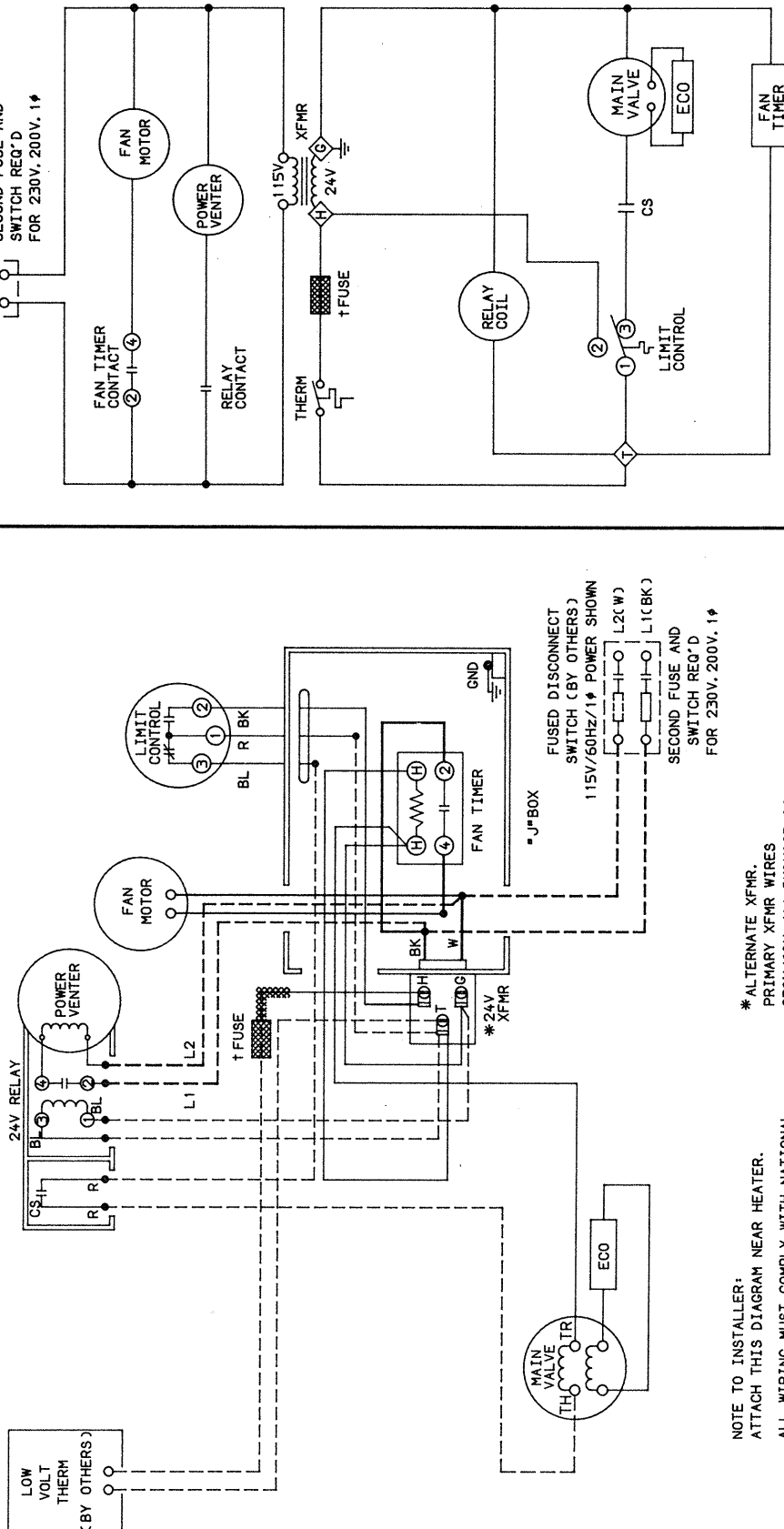


MODINE 6-441 WIRING DIAGRAM MODELS PA, BA

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	---
LINE	---
24V.	---



◇ INDICATES TRANSFORMER TERMINAL

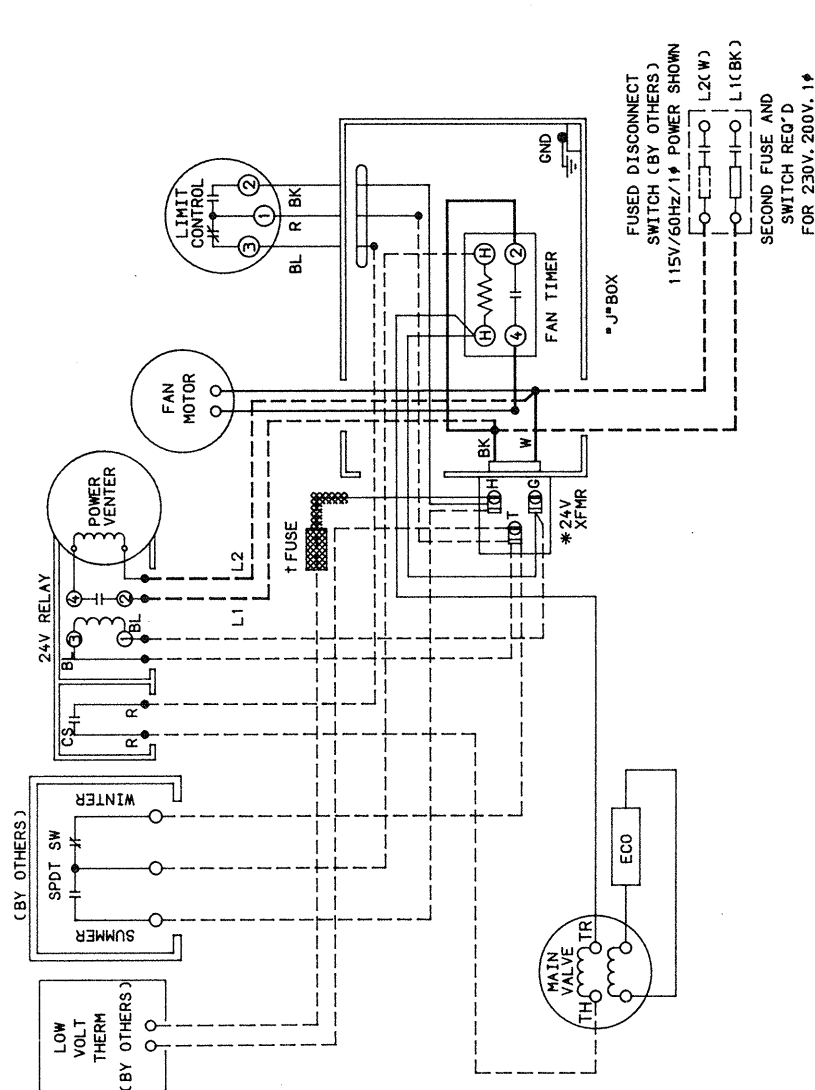
† FOR CANADIAN UNITS ONLY

8H6490B106 — Single-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, low-voltage controlled power venter.





CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

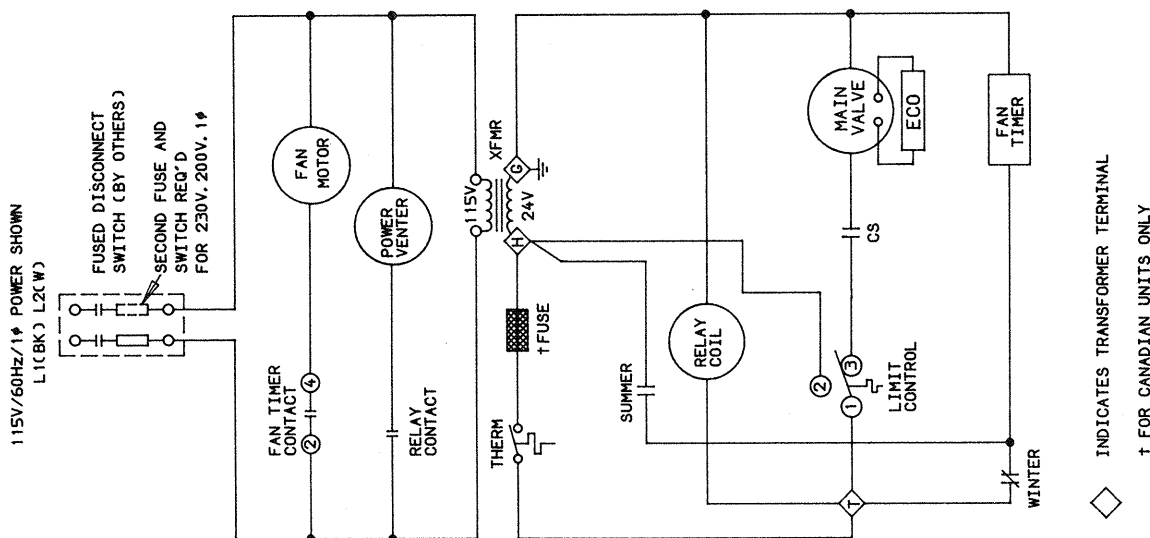


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(CR 0)
200V/60Hz/1 ϕ -BK&R
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

USE 105°C WIRE FOR REPLACEMENTS.

8H6490B107 — Single-phase standing pilot, 100% shut-off, fan time delay, low-voltage thermostat, summer/winter switch low-voltage controlled power venter.



INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

