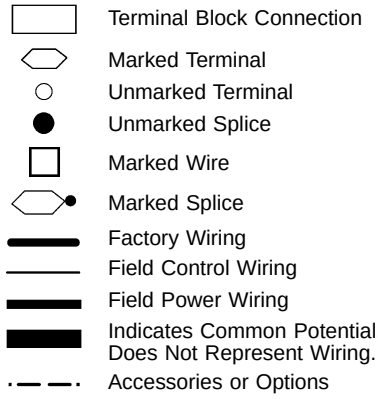
Wiring Diagrams

30GX DIAGRAM INDEX

50 Hz UNITS	60 Hz UNITS	TYPE	VOLTAGE	FIGURE NUMBER	LABEL DIAGRAM NO. 30GX
COMPRESSOR POWER WIRING					
080,090,105,106,115, 125,136,150,160,161,175	080,090,106,115, 125,136,151,161,176	Compressor Wiring	All	1	502386
205,225,226,250,265,281,301,325,350	206,226,251,265,281,301,325,350	XL Start	All	2	502995
205,225,226,250,265,281,301,325,350	206,226,251,265,281,301,325,350	Y-Delta	All	3	502997
CONTROL SCHEMATICS					
50 Hz UNITS	**60 Hz UNITS**	**TYPE**	**VOLTAGE**	**FIGURE NUMBER**	**LABEL DIAGRAM NO. 30GX**
080,090,105,106,115, 125,136,150,160,161,175	080,090,106,115, 125,136,151,161,176	Control Wiring	24	4	502388
080,090,105,106,115,125,136,150,160	080,090,106,115,125,136	Control Wiring	115,230	5	502389
160,161,175	151,161	Control Wiring	115,230	6	502387
—	176	Control Wiring	115,230	7	502390
205,225,226,250,265	206,226,251,265	Control Wiring	24	8	502397,502398
281,301,325,350	281,301,325,350	Control Wiring	24	9	503165,503166
205,225,226,250,265,281,301,325,350	206,226,251,265,281,301,325,350	Standard Fan	115,230	10	503134,503135
205,225,226,250	206,226	Static Fan	115,230	11	502401,502402
265	251,265	Static Fan	115,230	12	502403,502404
281,301,325,350	281,301,325,350	Static Fan	115,230	13	503154,503155
COMPONENT ARRANGEMENTS					
50 Hz UNITS	**60 Hz UNITS**	**TYPE**	**VOLTAGE**	**FIGURE NUMBER**	**LABEL DIAGRAM NO. 30GX**
080,090,105,106,115,125, 136,150,160,161,175	080,090,106,115, 125,136,151,161,176	Control Box	All	14	502391
205,225,226,250,265	206,226,251,265	Control Box	All	15	502405
281,301,325,350	281,301,325,350	Control Box	All	16	503112
205,225,226,250,265	206,226,251,265	Power Box	All	17	502406
281,301,325,350	281,301,325,350	Power Box	All	18	503001
FAN POWER WIRING					
50 Hz UNITS	**60 Hz UNITS**	**TYPE**	**VOLTAGE**	**FIGURE NUMBER**	**LABEL DIAGRAM NO. 30GX**
080,090,105,106,115, 125,136,150,160,161,175	080,090,106,115,125,136,151,161	All Fan Types	All	19	502384
—	176	All Fan Types	All	20	502385
205,225,226,250,265,281,301,325,350	206,226,251,265,281,301,325,350	Standard Fan	All	21	503133
205,225,226,250,265,281,301,325,350	206,226,251,265,281,301,325,350	Static Fan	All	22	503153

LEGEND AND NOTES FOR FIG. 1-22

ALR — Alarm
C — Contactor
CA — Compressor A1/A2 Contactor
CB — Compressor B1/B2 Contactor
CCN — Carrier Comfort Network
CH — Cooler Heater
CLHR — Cooler Heater Relay
COMM — Communications
COMP — Compressor
CPM — Compressor Protection Module
CR — Control Relay
CWFS — Chilled Water Flow Switch
CWP — Chilled Water Pump
CWPI — Chilled Water Pump Interlock
DGT — Discharge Gas Thermistor
DPT — Discharge Pressure Transducer
DSIO EXV — EXV Driver
DSIO HV — Relay Module, High Voltage
EPT — Economizer Pressure Transducer
EQUIP — Equipment
EXV — Electronic Expansion Valve
FC — Fan Contactor
FCB — Fan Circuit Breaker
FIOP — Factory-Installed Option
FM — Fan Motor
FR — Fan Relay
FU — Fuse
GFI-CO — Ground Fault Interrupter Convenience Outlet
GND — Ground
HPS — High-Pressure Switch
HSIO — Keyboard and Display Module
HTR — Heater
LDR — Loader
LID — Local Interface Device
LL — Liquid Level
LR — Loader Relay
LS — Level Switch
MAX — Maximum
MLC — Minimum Load Control
NEC — National Electric Code
OL — Overload
OP — Oil Pump
OPC — Oil Pump Contactor
OPT — Oil Pressure Transducer
PL — Plug Assembly
PS — Power Supply
PSIO — Processor Module
PWR — Power
RBPL — Relay Plug Assembly
S — Wye Start Contactor
SEC — Secondary
SN — Sensor (Toroid)
SPT — Suction Pressure Transducer
SW — Switch
T — Thermistor
TB — Terminal Block
TRAN — Transformer
XL — Across-the-Line Start
1M — Wye
2M — Delta



NOTES:

1. Standard fan motors thermally protected. Three-phase motors protected against primary single phasing conditions.
2. Replacement of original wires must be with type 105° C wire or its equivalent.
3. Numbers on the right side of label diagrams indicate the line location of applicable contacts. An underlined number signifies normally closed contacts: A plain number denotes normally open contacts. Line numbers are shown on the left side of the diagrams.
4. Factory wiring is in accordance with National Electrical Code (NEC, U.S.A.). Field modifications or additions must be in compliance with all applicable codes.
5. Wiring for main field power supply must be rated 75° C minimum. Use copper conductors for all units. Maximum incoming wiring size for each terminal block is 500 kcmil.
6. Power for control circuit should be supplied from a separate source through a field-supplied disconnect with 30 amps maximum protection for 115-volt control circuits and 15 amps maximum protection for 230-volt control circuit. Connect control circuit power to terminals 1 and 2 of TB4. Connect neutral side of supply to terminal 2 of TB4. Control circuit conductors for all units must be copper only.
7. Terminals 13 and 14 of TB2 are for field external interlock connection for remote ON-OFF and terminals 11 and 12 of TB2 for CWP interlock and CWFS. The contacts must be rated for dry circuit application capable of handling a 24 vac to 50 mA load. Remove jumper between 13 and 14 of TB2 if remote ON-OFF is installed.
8. Separate field supplied 115 v or 230 v power circuit. Terminals T3 and T4 of relay board are for control of chilled water pump starter. The maximum allowable load for each of these circuits is 125 va sealed.

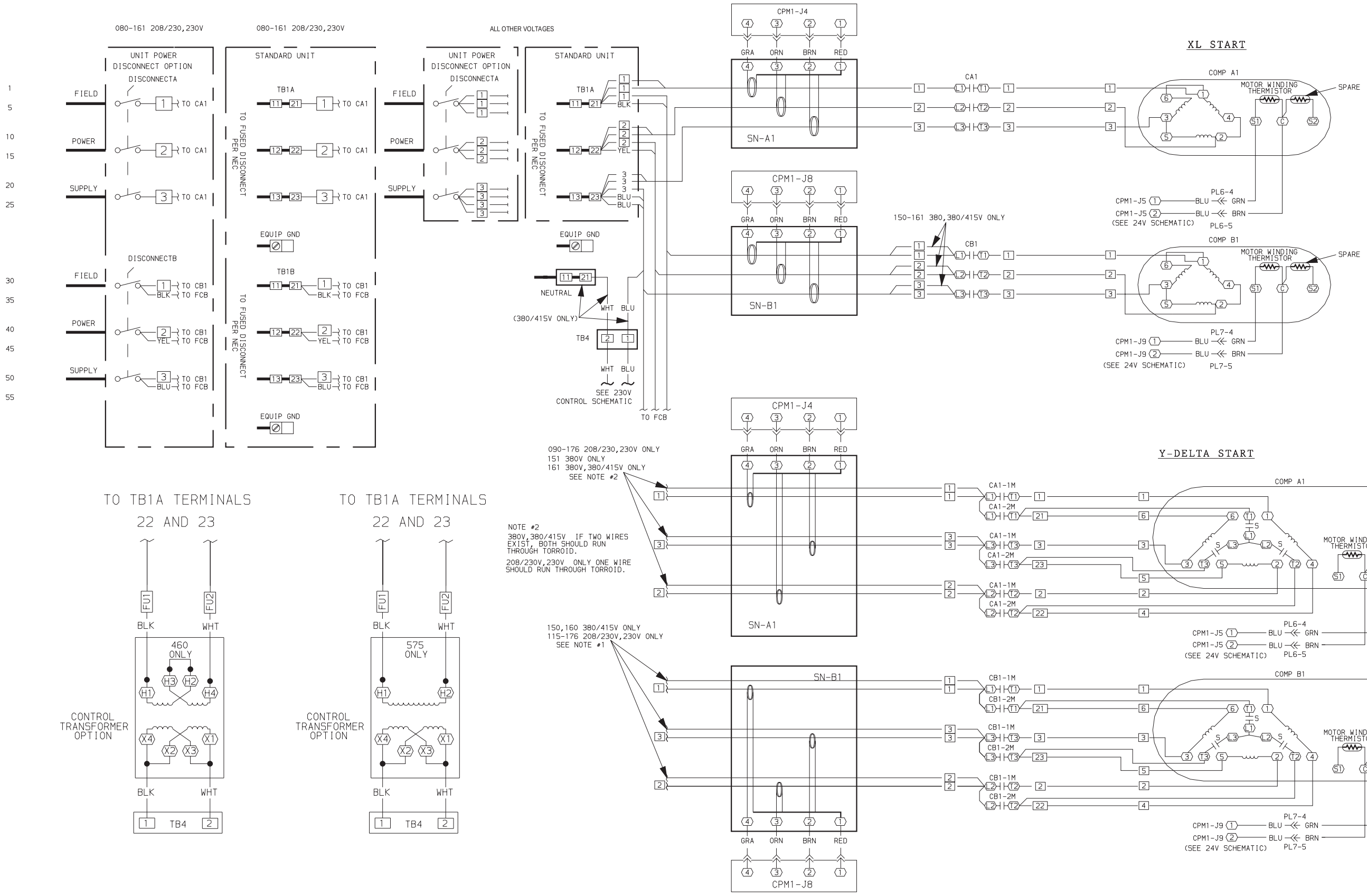


Fig. 1 — Compressor Power Wiring; 30GX080, 090, 105, 106, 115, 125, 136, 150, 160, 161, 175 — 50 Hz Units; 30GX080, 090, 106, 115, 125, 136, 151, 161, 176 — 60 Hz Units

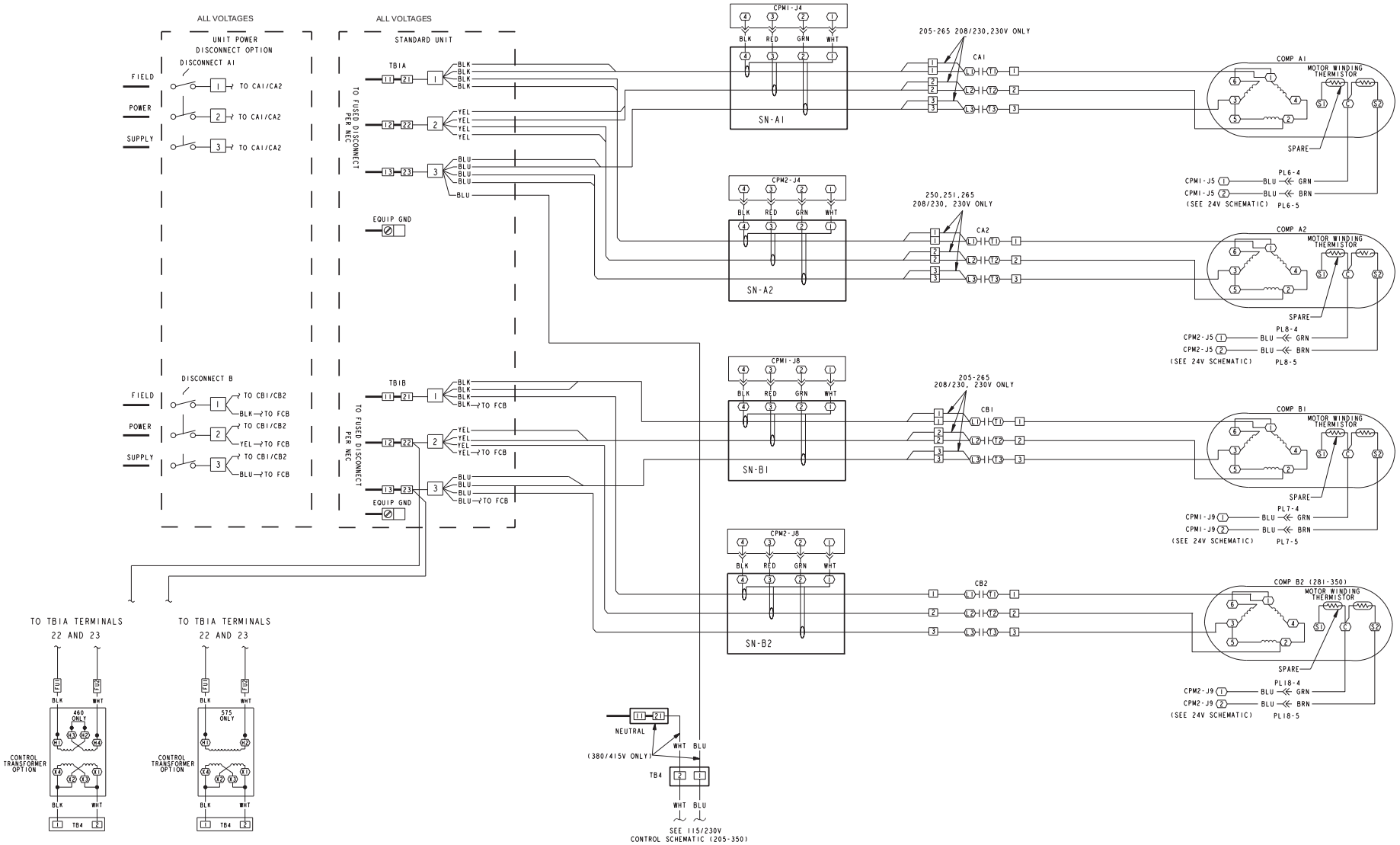


Fig. 2 — Compressor Power Wiring with XL Start; 30GX205, 225, 226, 250, 265, 281, 301, 325, 350 — 50 Hz Units; 30GX206, 226, 251, 265, 281, 301, 325, 350 — 60 Hz Units

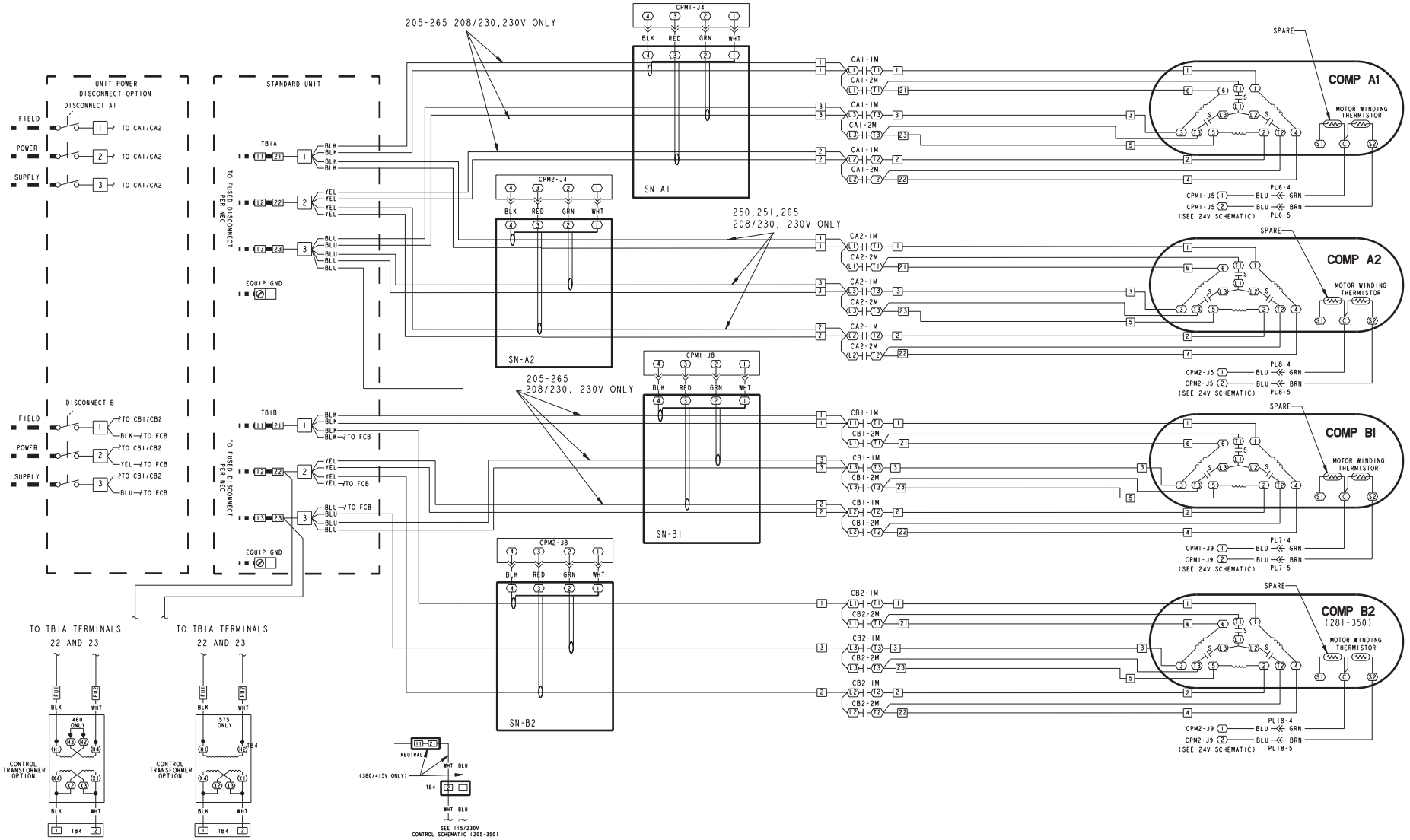


Fig. 3 — Compressor Power Wiring with Y-Delta Start; 30GX205, 225, 226, 250, 265, 281, 301, 325, 350 — 50 Hz Units; 30GX206, 226, 251, 265, 281, 301, 325, 350 — 60 Hz Units

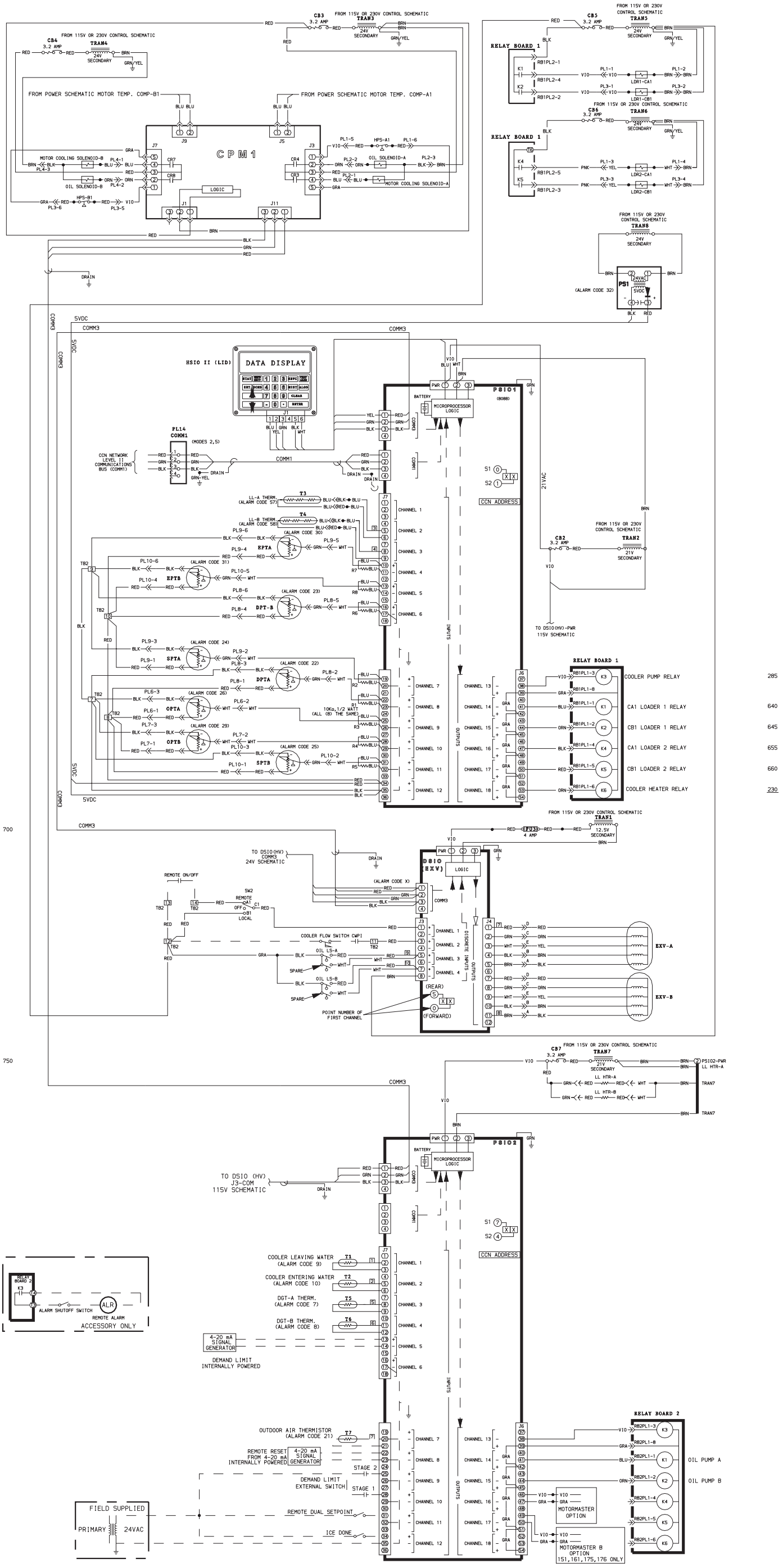


Fig. 4 — 24V Control Wiring; 30GX080, 090, 105, 106, 115, 125, 136, 150, 160, 161, 175 — 50 Hz Units; 30GX080, 090, 106, 115, 125, 136, 151, 161, 176 — 60 Hz Units

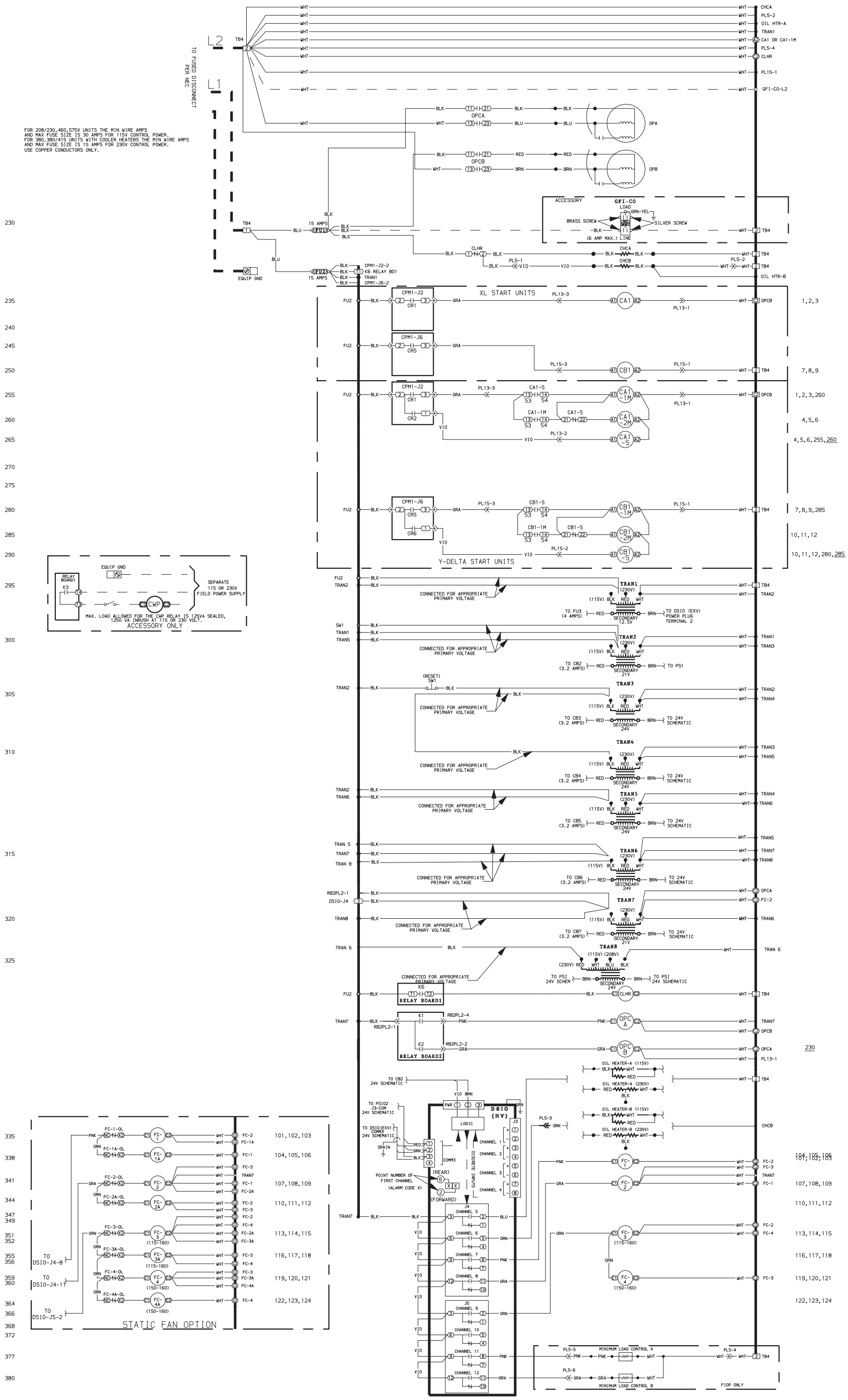


Fig. 5 — 115V, 230V Control Wiring; 30GX080, 090, 105, 106, 115, 125, 136, 150, 160 — 50 Hz Units; 30GX080, 090, 106, 115, 125, 136 — 60 Hz Units

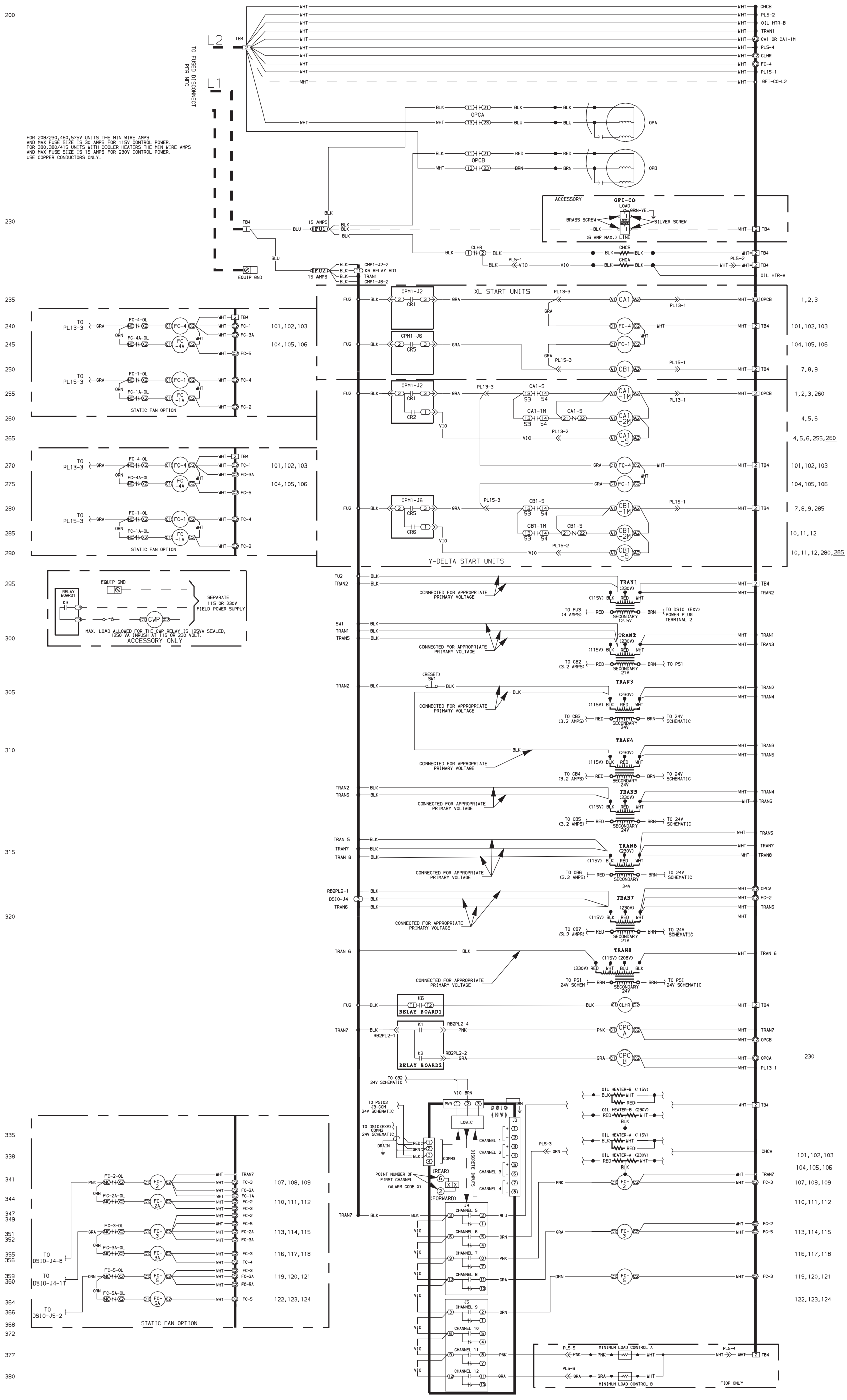


Fig. 6 — 115V, 230V Control Wiring; 30GX160, 161, 175 — 50 Hz Units; 30GX151, 161 — 60 Hz Units

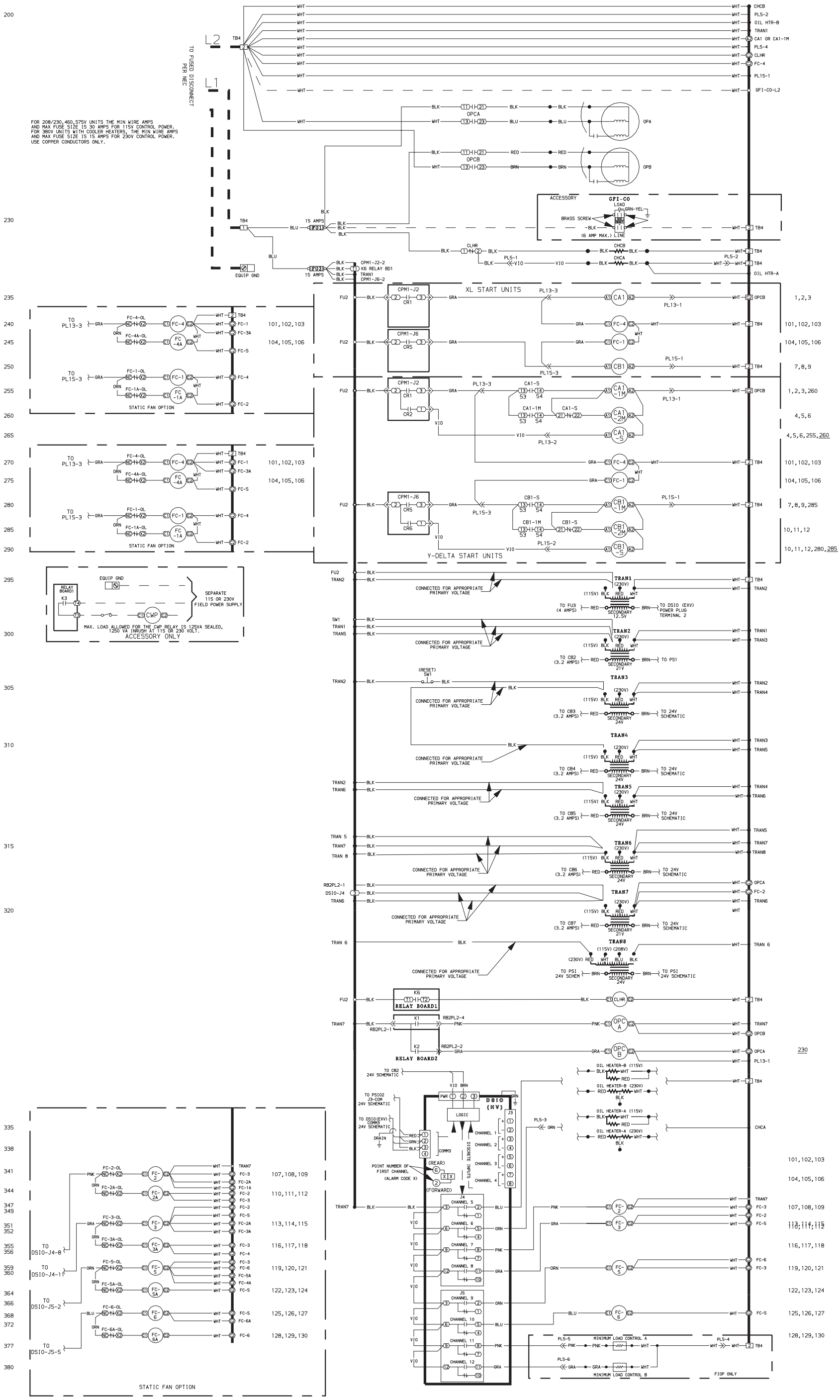


Fig. 7 — 115V, 230V Control Wiring; 30GX176 — 60 Hz Units

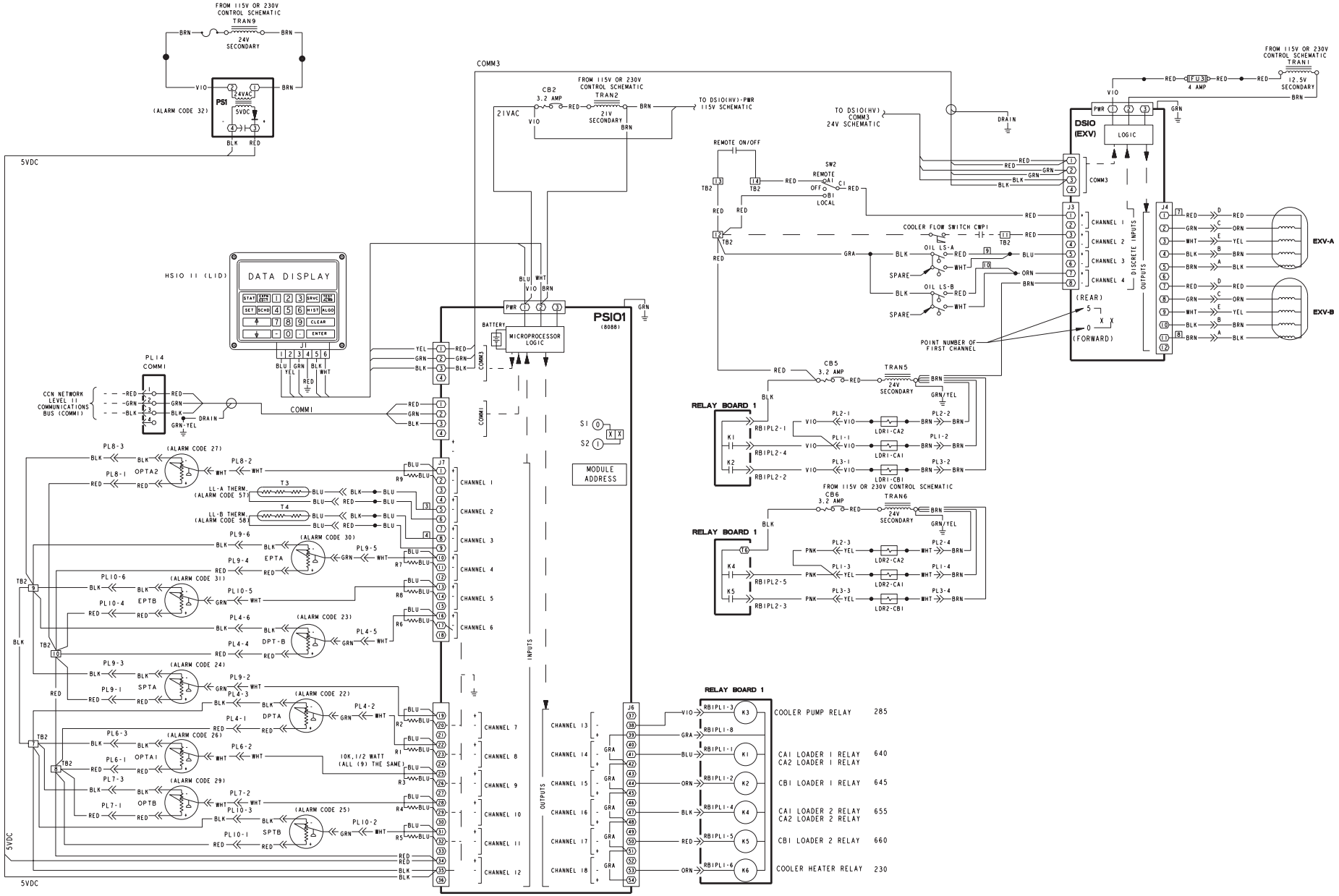


Fig. 8 — 24V Control Wiring; 30GX205, 225, 226, 250, 265 — 50 Hz Units; 30GX206, 226, 251, 265 — 60 Hz Units

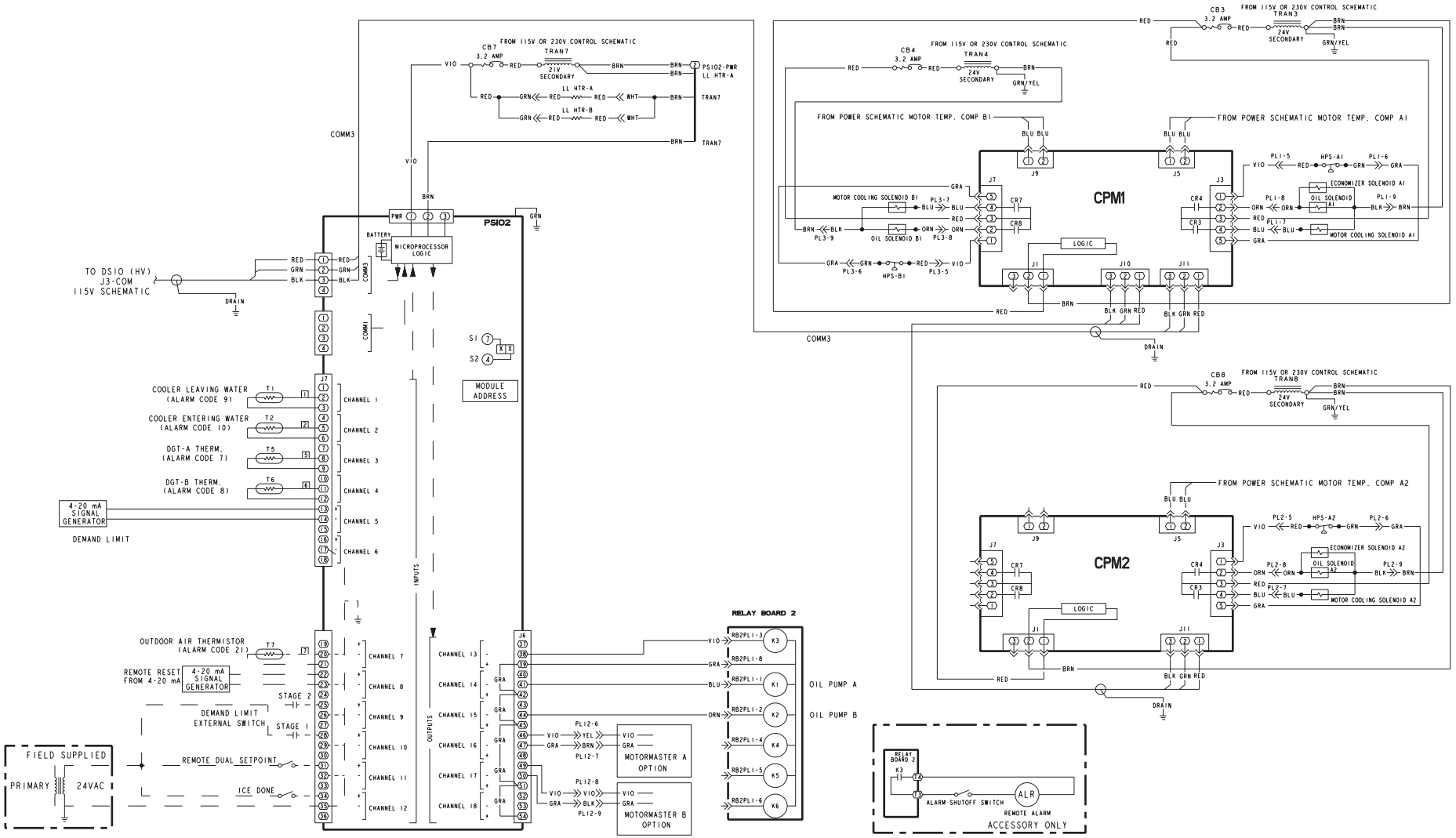


Fig. 8 — 24V Control Wiring; 30GX205, 225, 226, 250, 265 — 50 Hz Units; 30GX206, 226, 251, 265 — 60 Hz Units (cont)

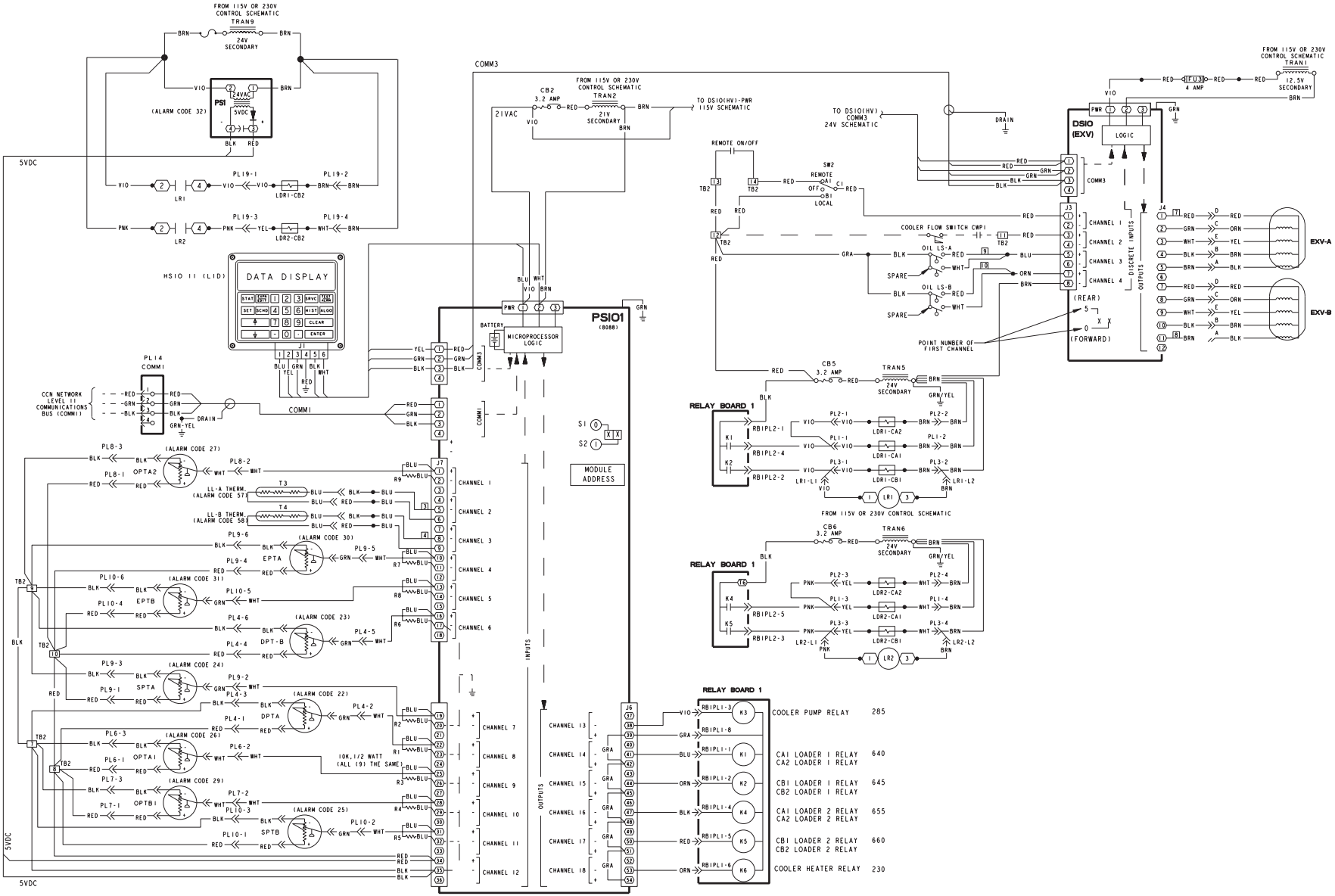


Fig. 9 — 24V Control Wiring; 30GX281, 301, 325, 350 — 50/60 Hz Units

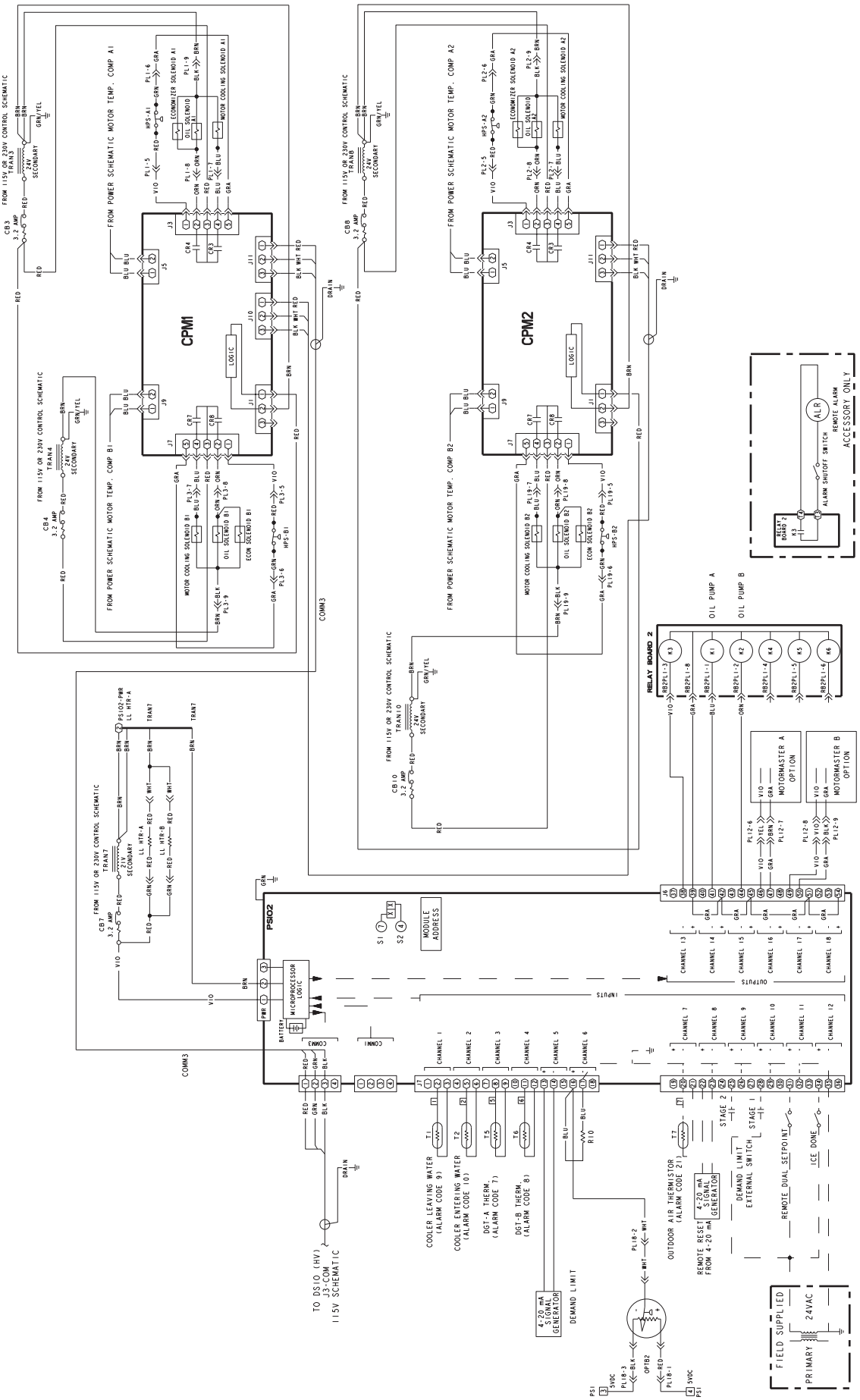


Fig. 9 — 24V Control Wiring; 30GX281, 301, 325, 350 — 50/60 Hz Units (cont)

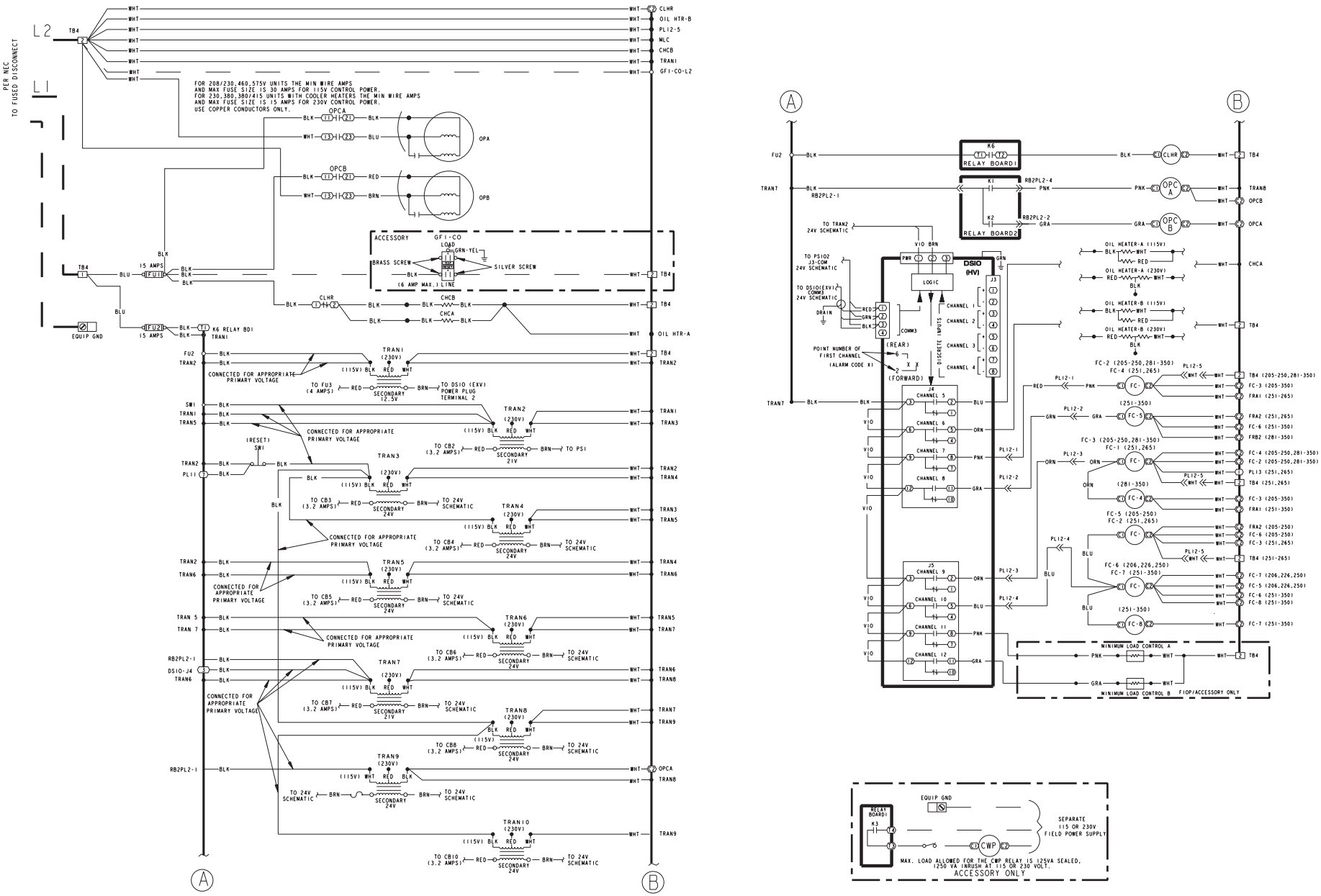


Fig. 10 — 115V, 230V Control Wiring for Standard Fan; 30GX205, 225, 226, 250, 265, 281, 301, 325, 350 — 50 Hz Units; 30GX206, 226, 251, 265, 281, 301, 325, 350 — 60 Hz Units

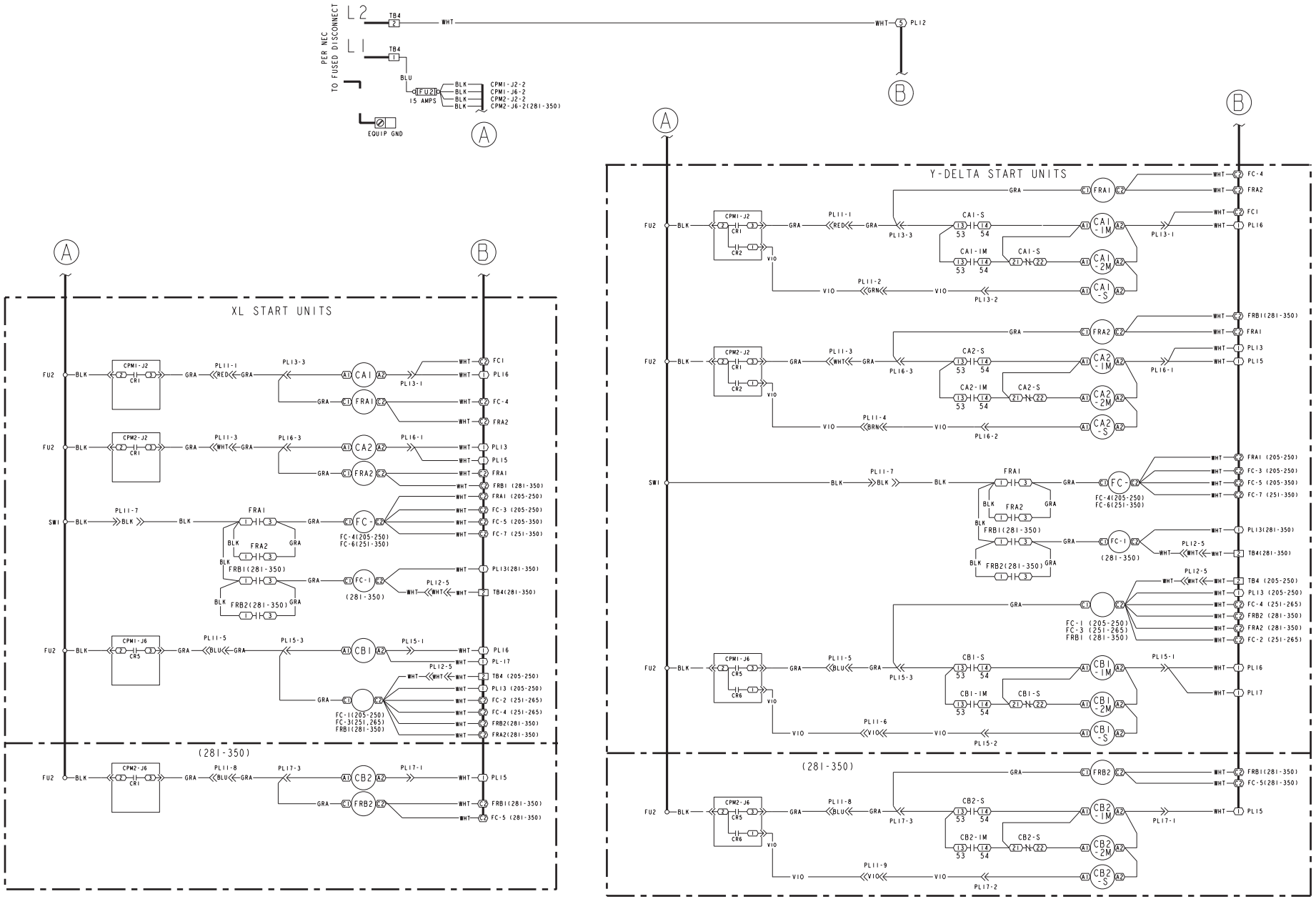


Fig. 10 — 115V, 230V Fan Control Wiring; 30GX205, 225, 226, 250, 265, 281, 301, 325, 350 — 50 Hz Units; 30GX206, 226, 251, 265, 281, 301, 325, 350 — 60 Hz Units (cont)

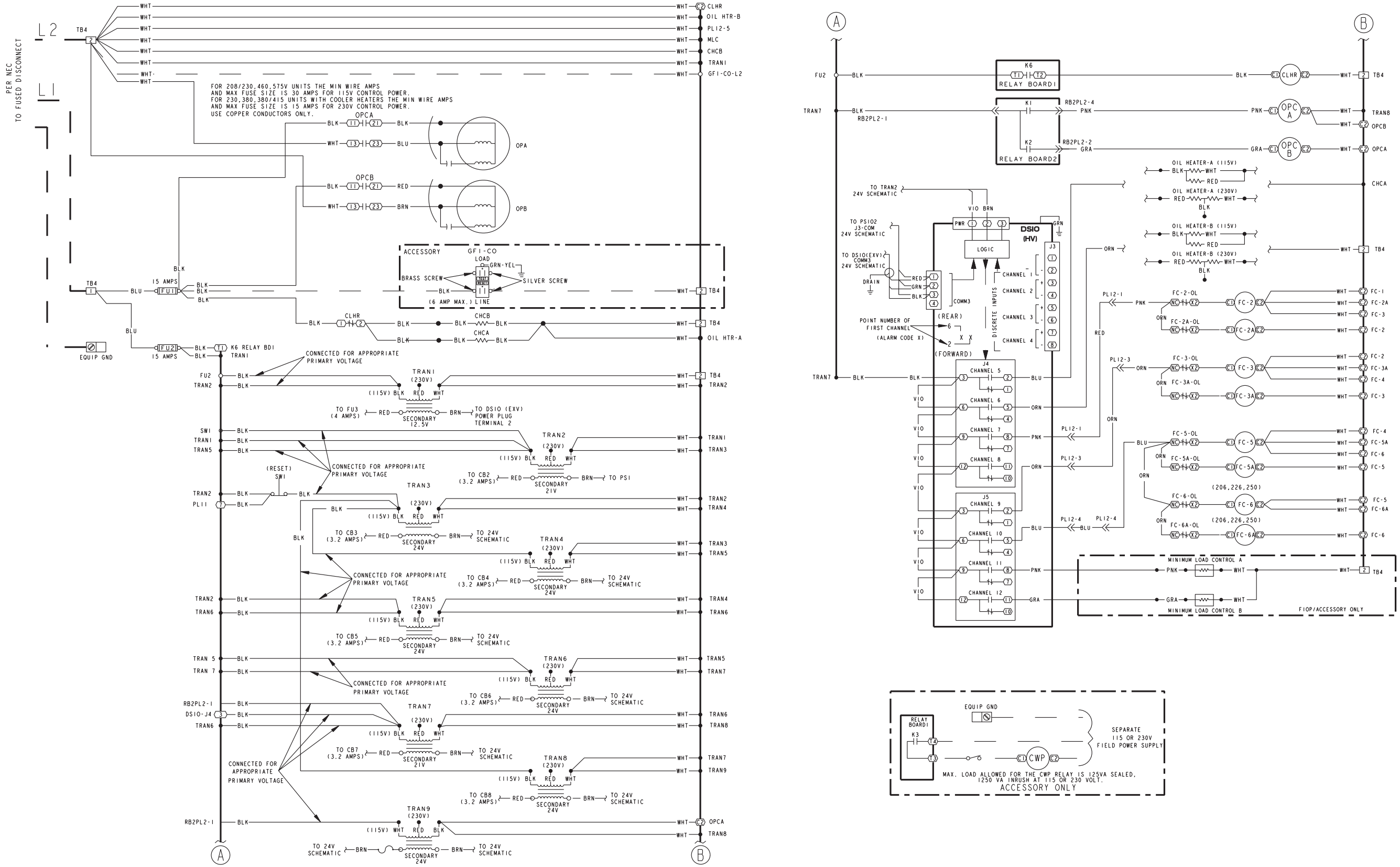


Fig. 11 — 115V, 230V Static Fan Control Wiring; 30GX205, 225, 226, 250 — 50 Hz Units; 30GX206, 226 — 60 Hz Units

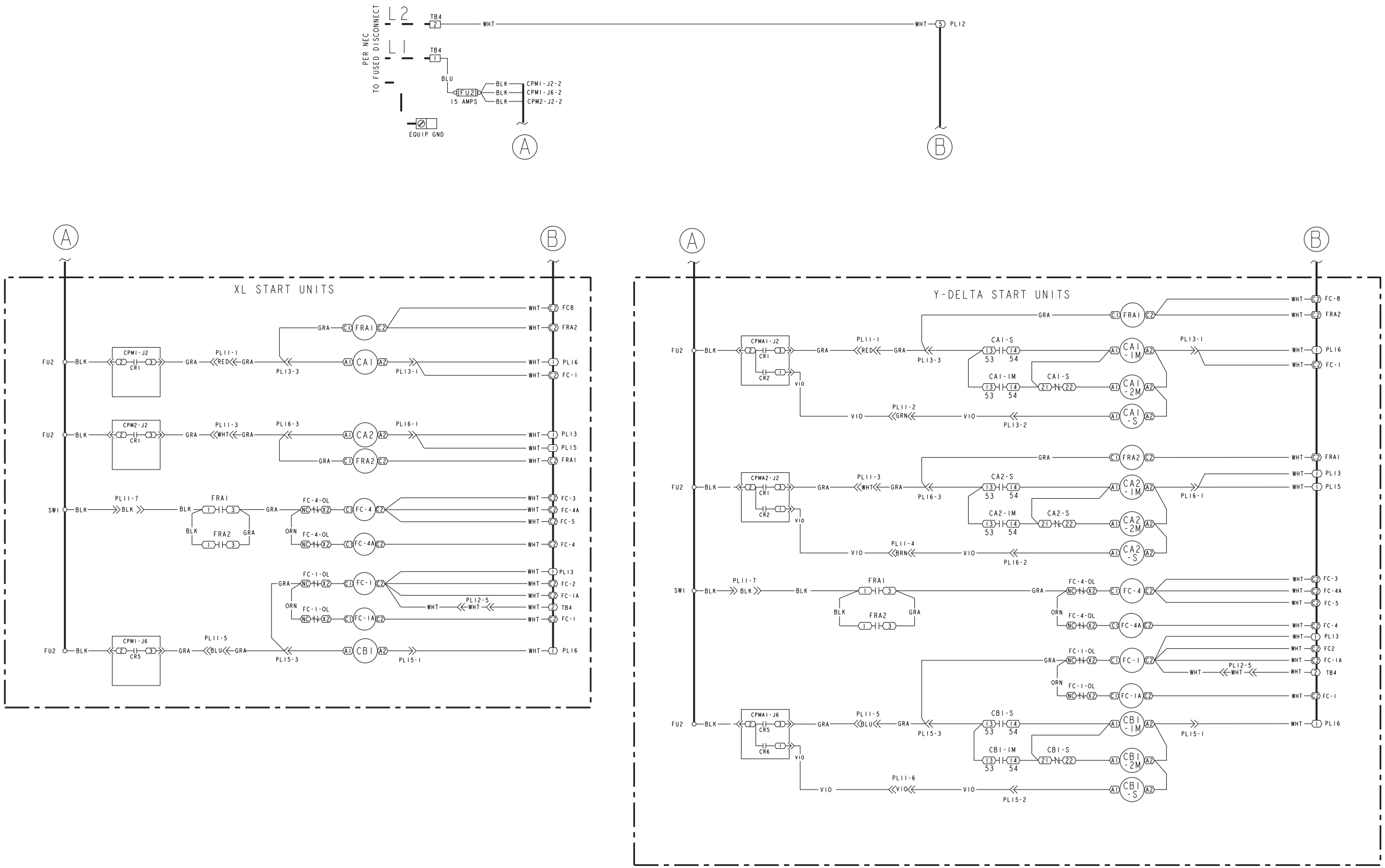


Fig. 11 — 115V, 230V Static Fan Control Wiring; 30GX205, 225, 226, 250 — 50 Hz Units; 30GX206, 226 — 60 Hz Units (cont)

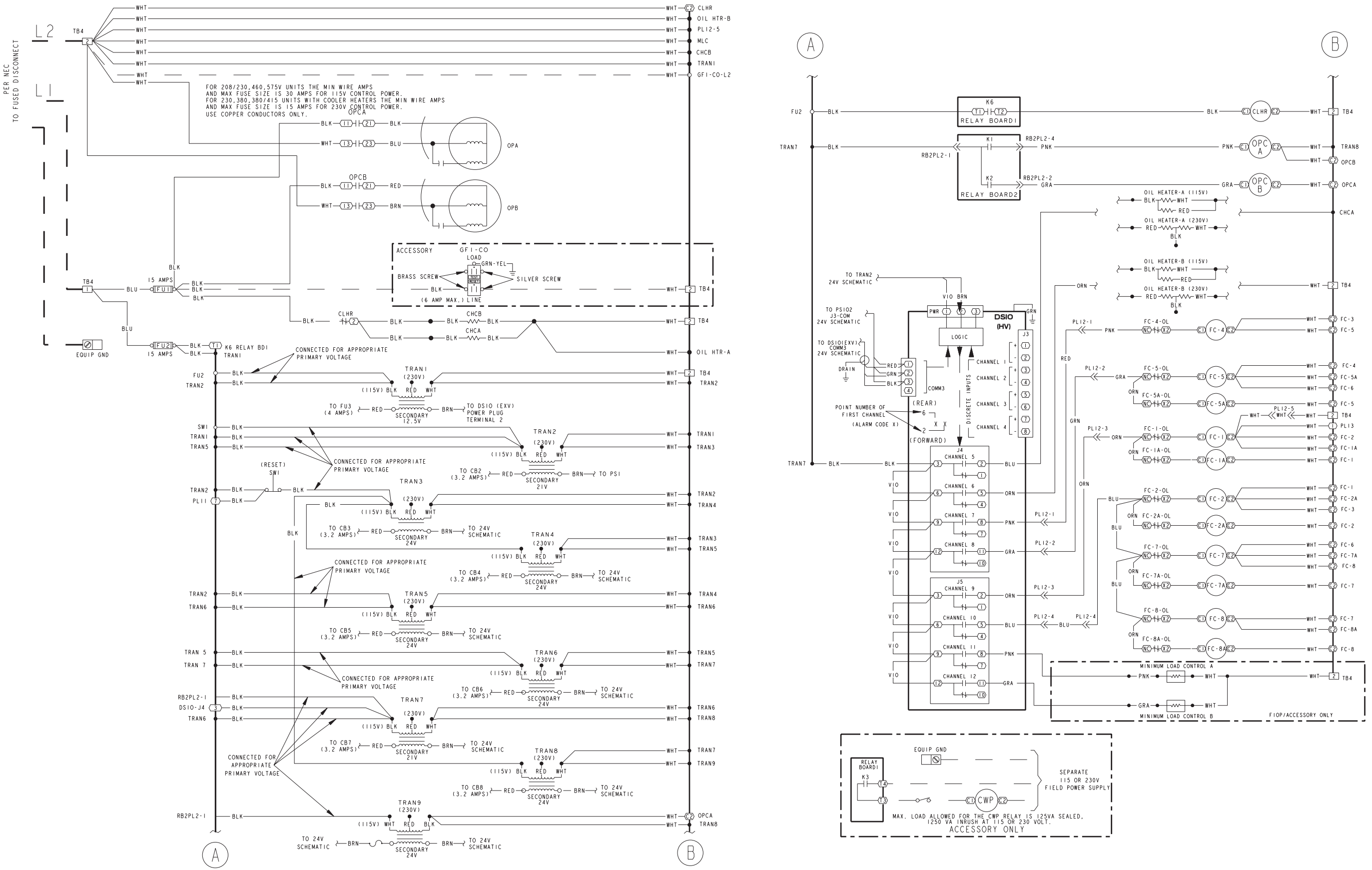


Fig. 12 — 115V, 230V Static Fan Control Wiring; 30GX265 — 50 Hz Units; 30GX251, 265 — 60 Hz Units

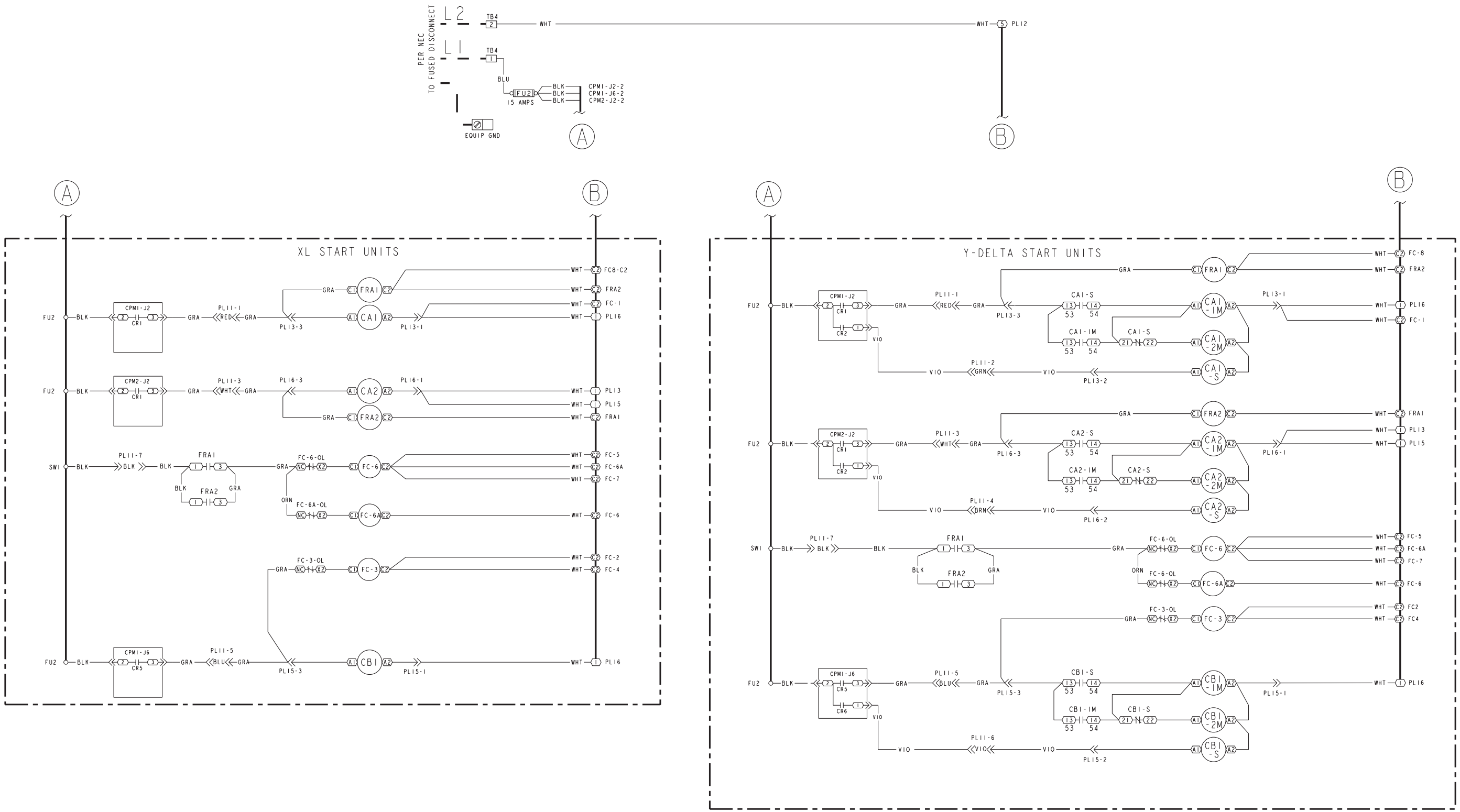


Fig. 12 — 115V, 230V Static Fan Control Wiring; 30GX265 — 50 Hz Units; 30GX251, 265 — 60 Hz Units (cont)

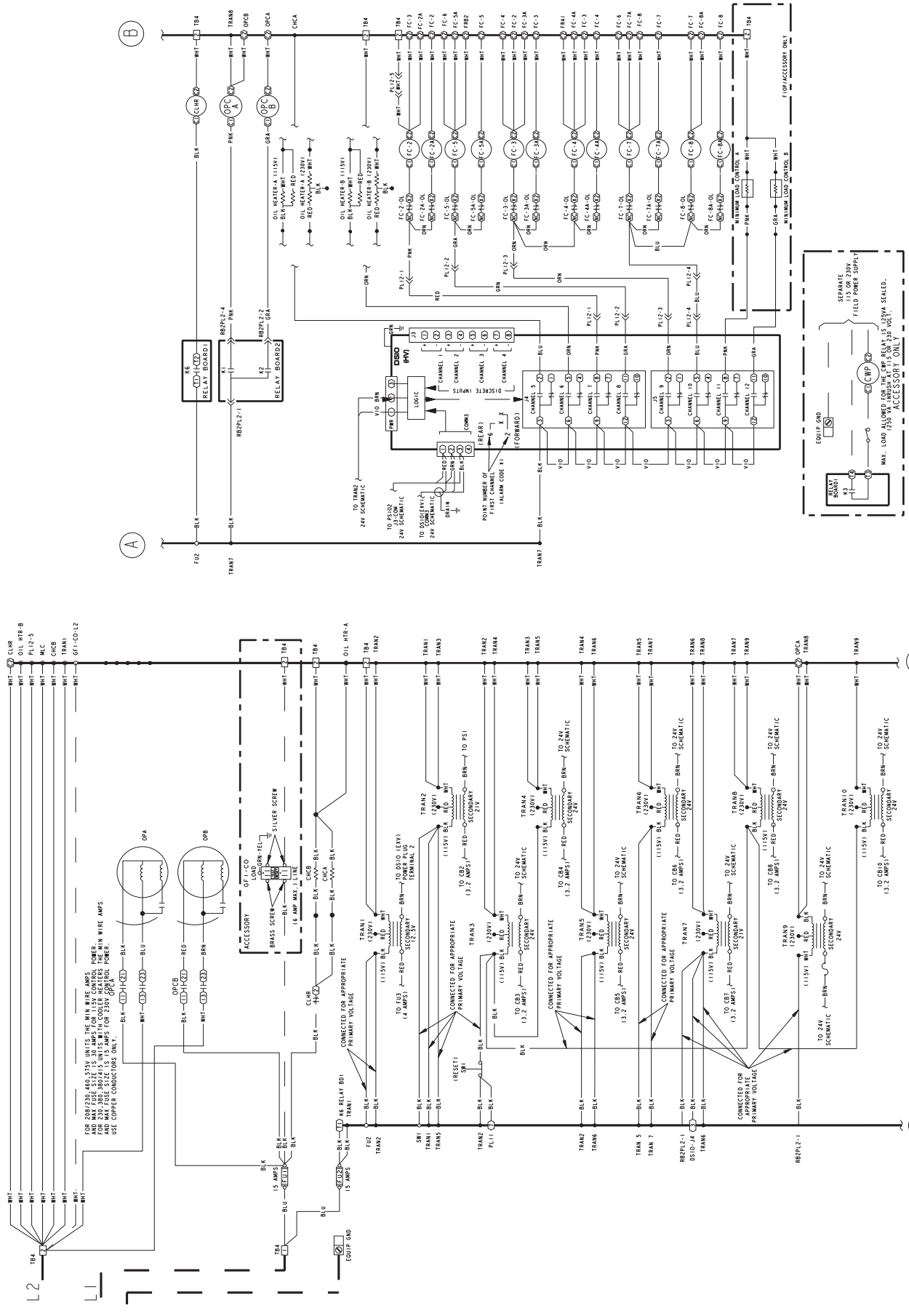


Fig. 13 — 115V, 230V Control Wiring for Static Fan; 30GX281, 301, 325, 350 — 50/60 Hz Units

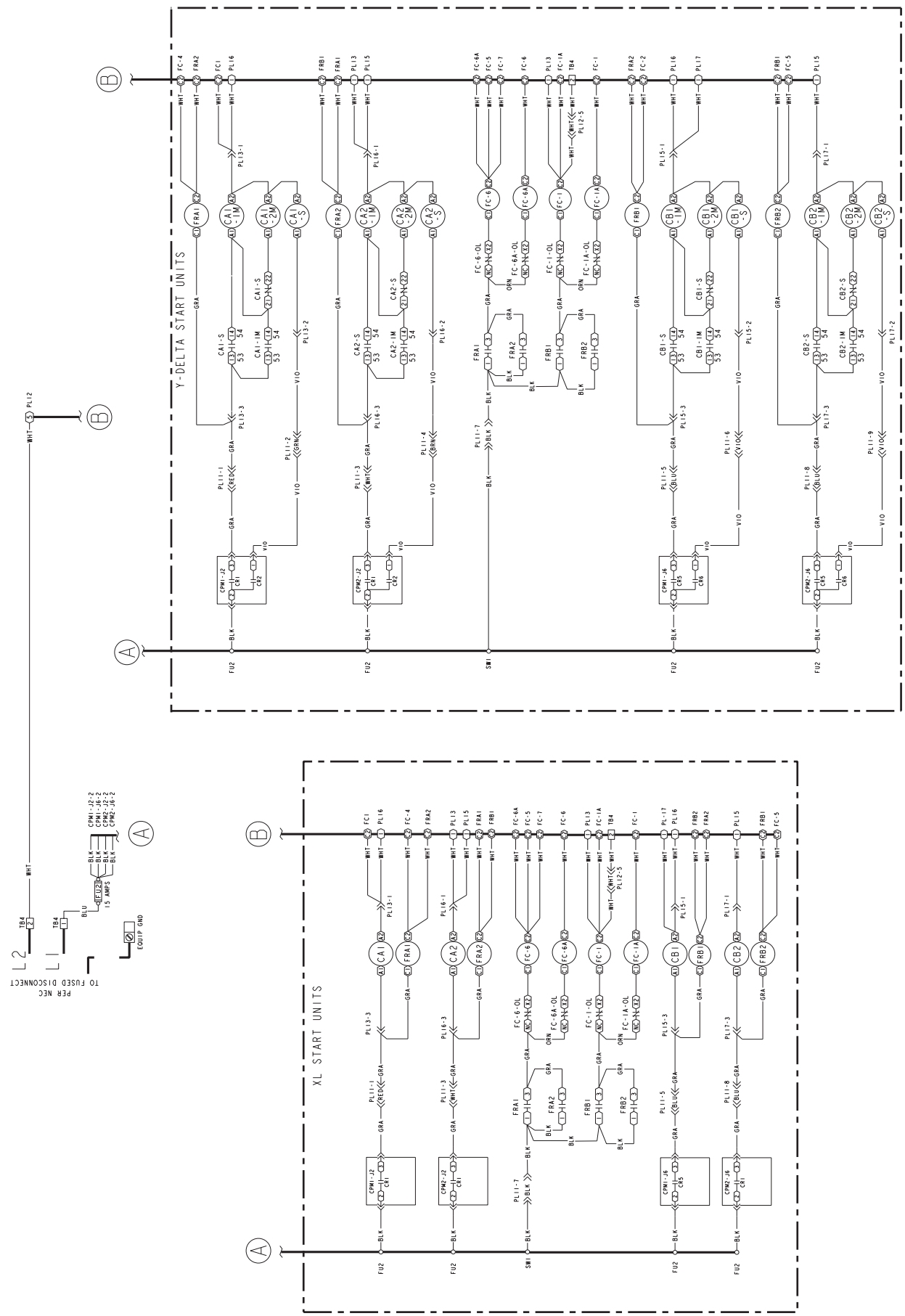


Fig. 13 — 115V, 230V Control Wiring for Static Fan; 30GX281, 301, 325, 350 — 50/60 Hz Units (cont)

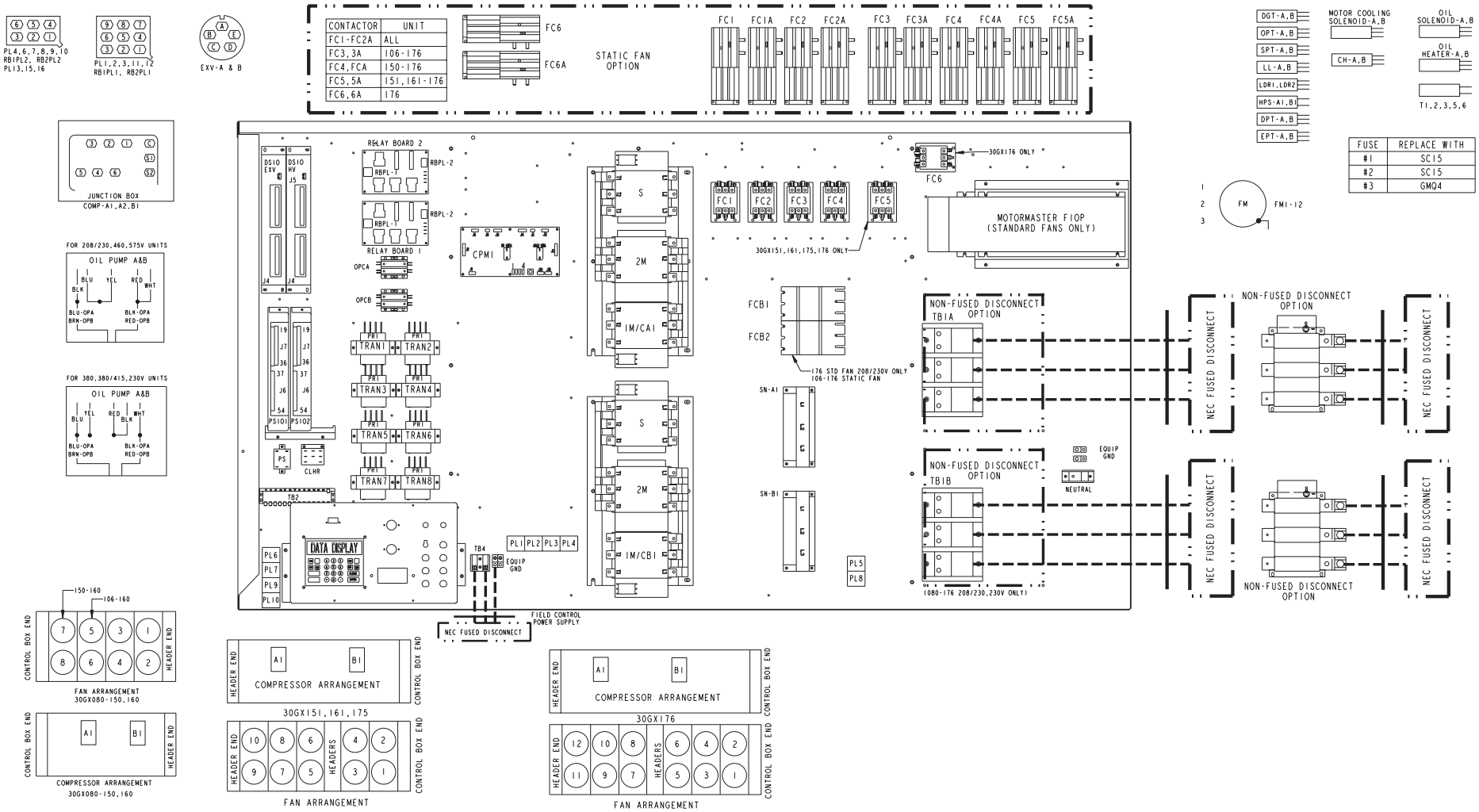


Fig. 14 — Component Arrangement (Control Box); 30GX080, 090, 105, 106, 115, 125, 136, 150, 160, 161, 175 — 50 Hz Units; 30GX080, 090, 106, 115, 125, 136, 151, 161, 176 — 60 Hz Units

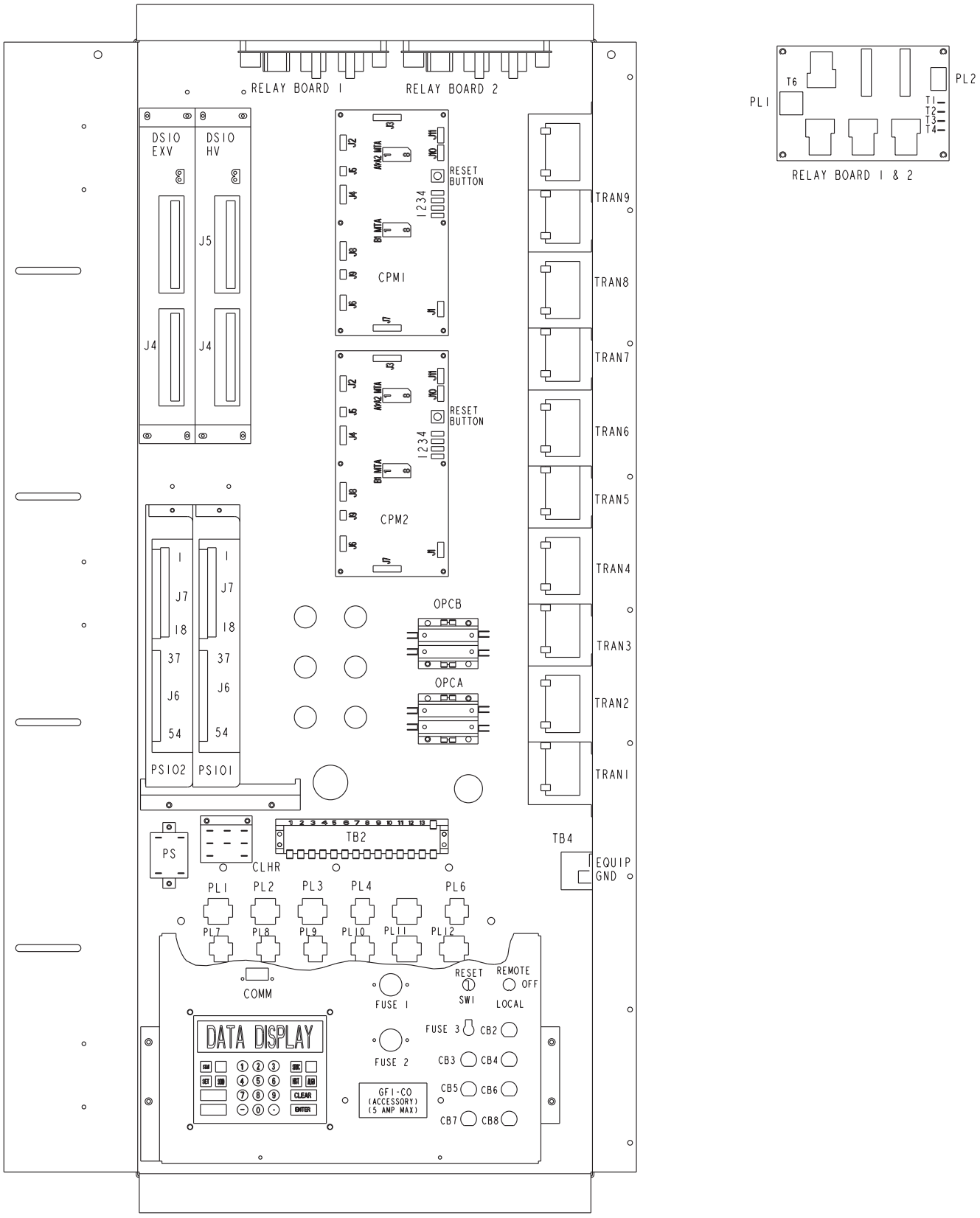


Fig. 15 — Component Arrangement (Control Box); 30GX205, 225, 226, 250, 265 — 50 Hz Units; 30GX206, 226, 251, 265 — 60 Hz Units

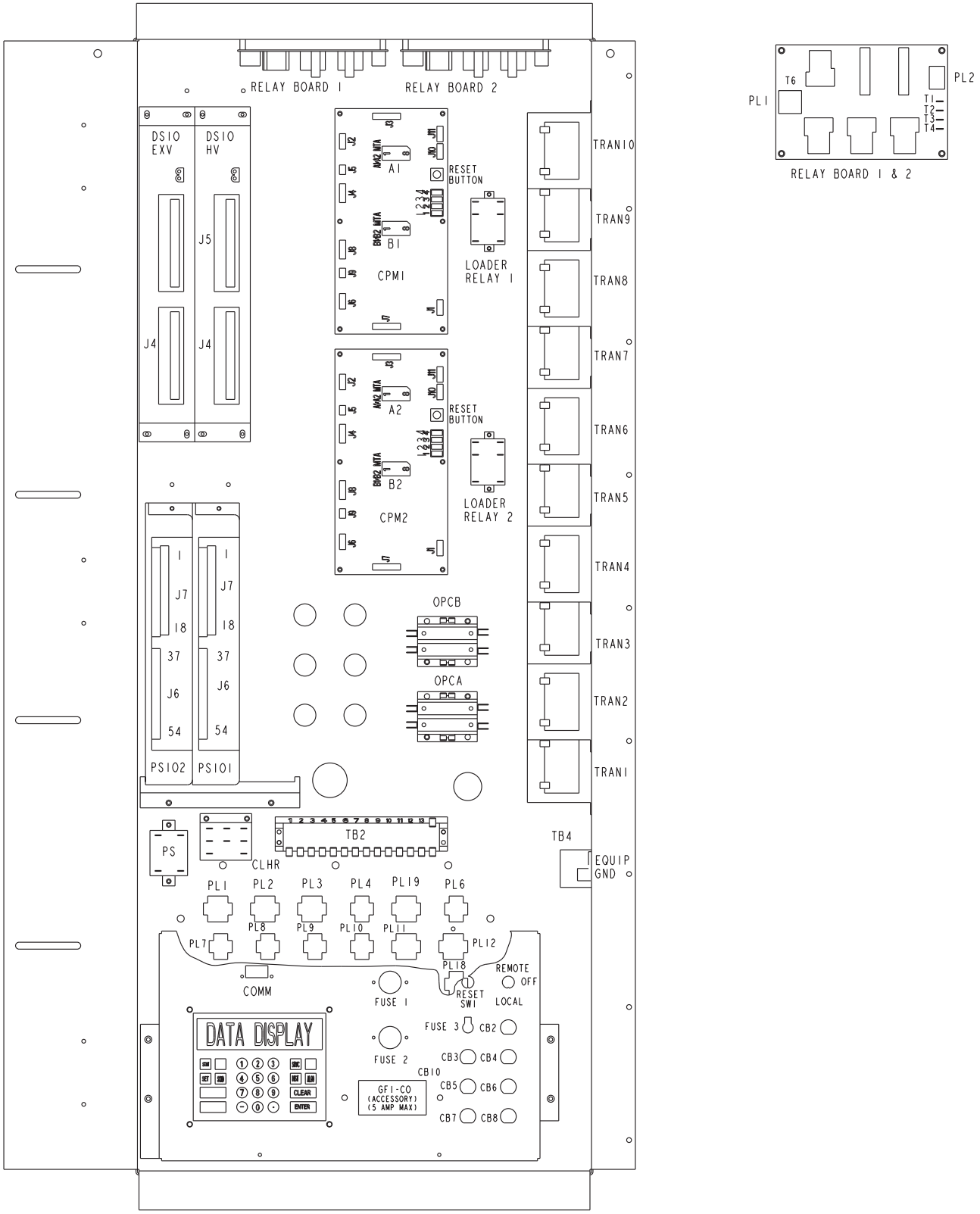


Fig. 16 — Component Arrangement (Control Box); 30GX281, 301, 325, 350 — 50/60 Hz Units

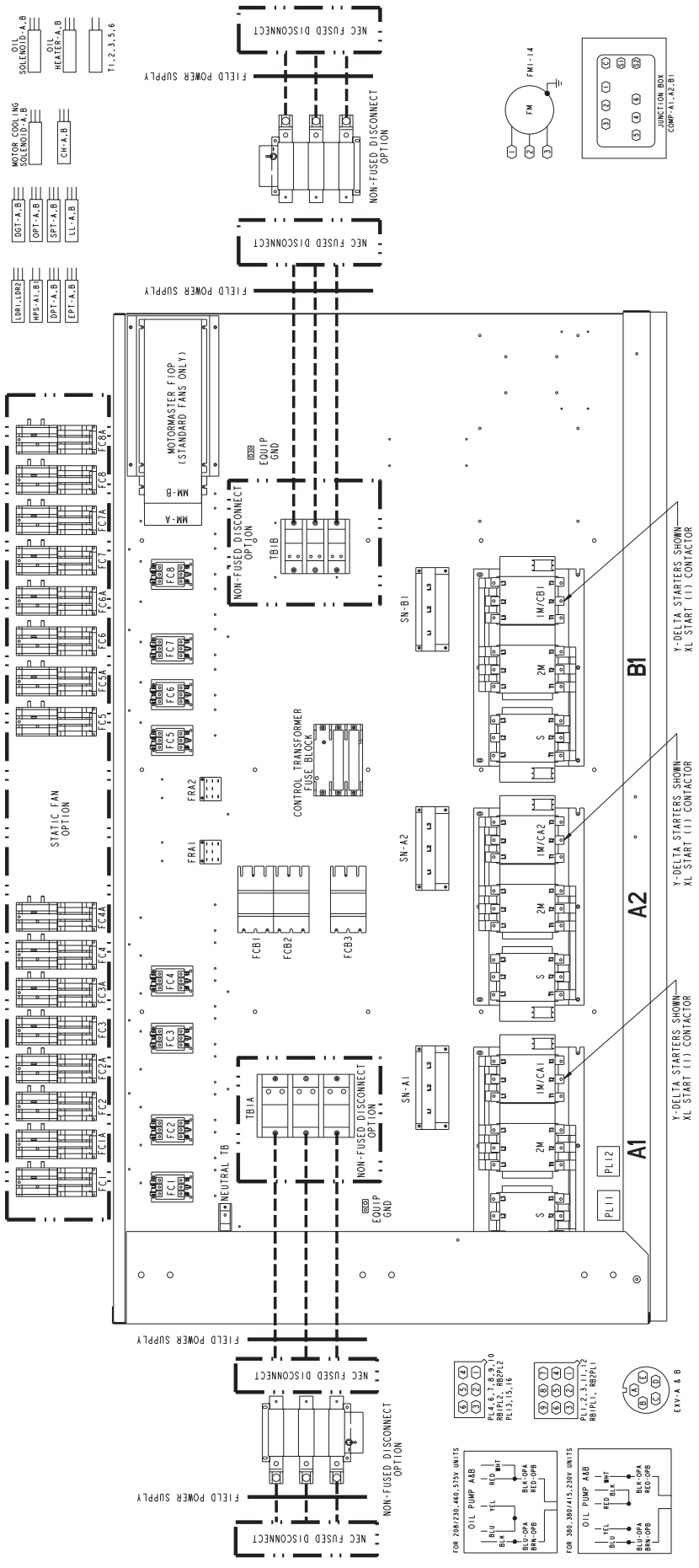


Fig. 17 — Component Arrangement (Power Box): 30GX205, 225, 226, 250, 265 — 50 Hz Units; 30GX206, 226, 251, 265 — 60 Hz Units

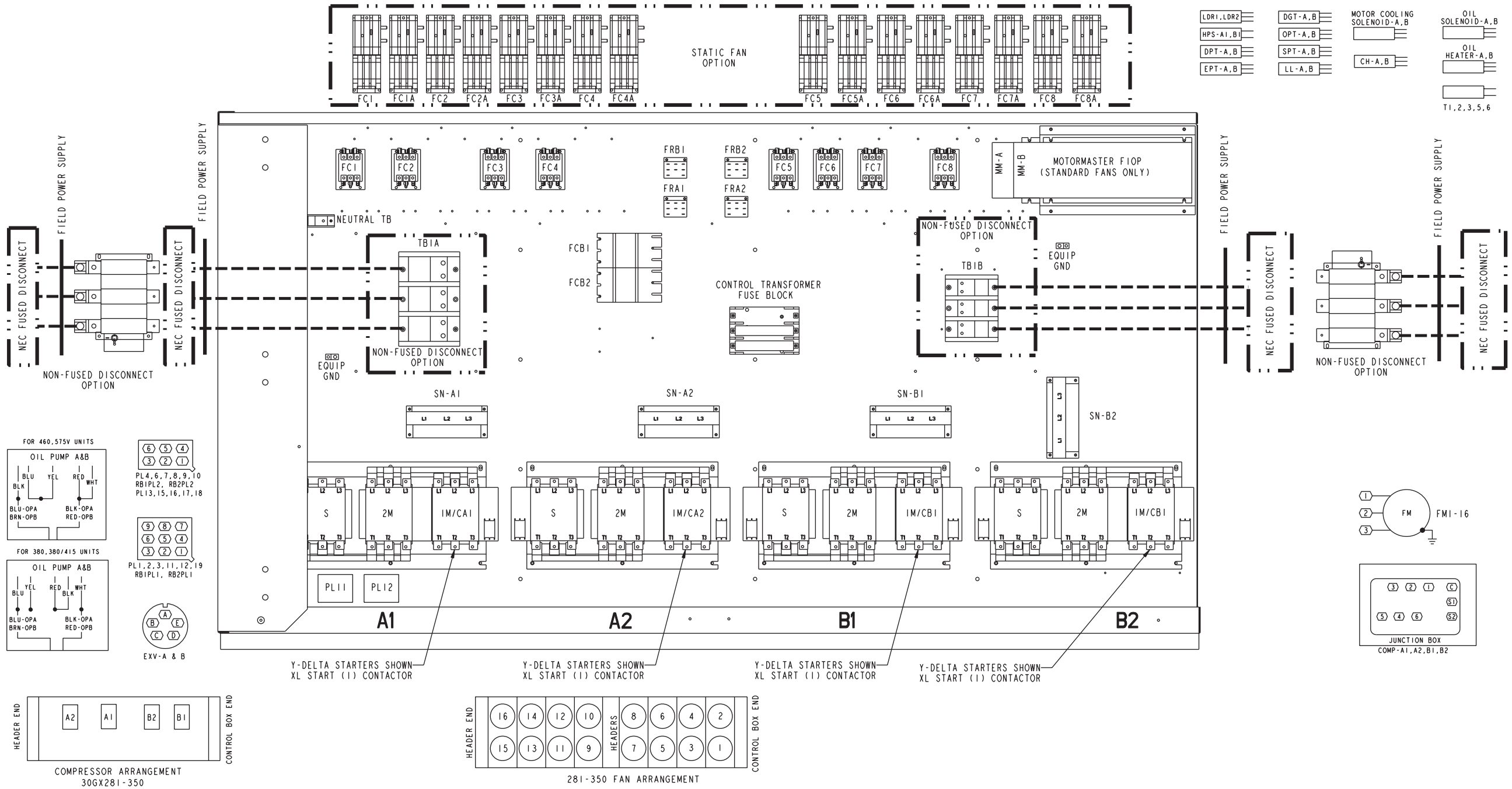
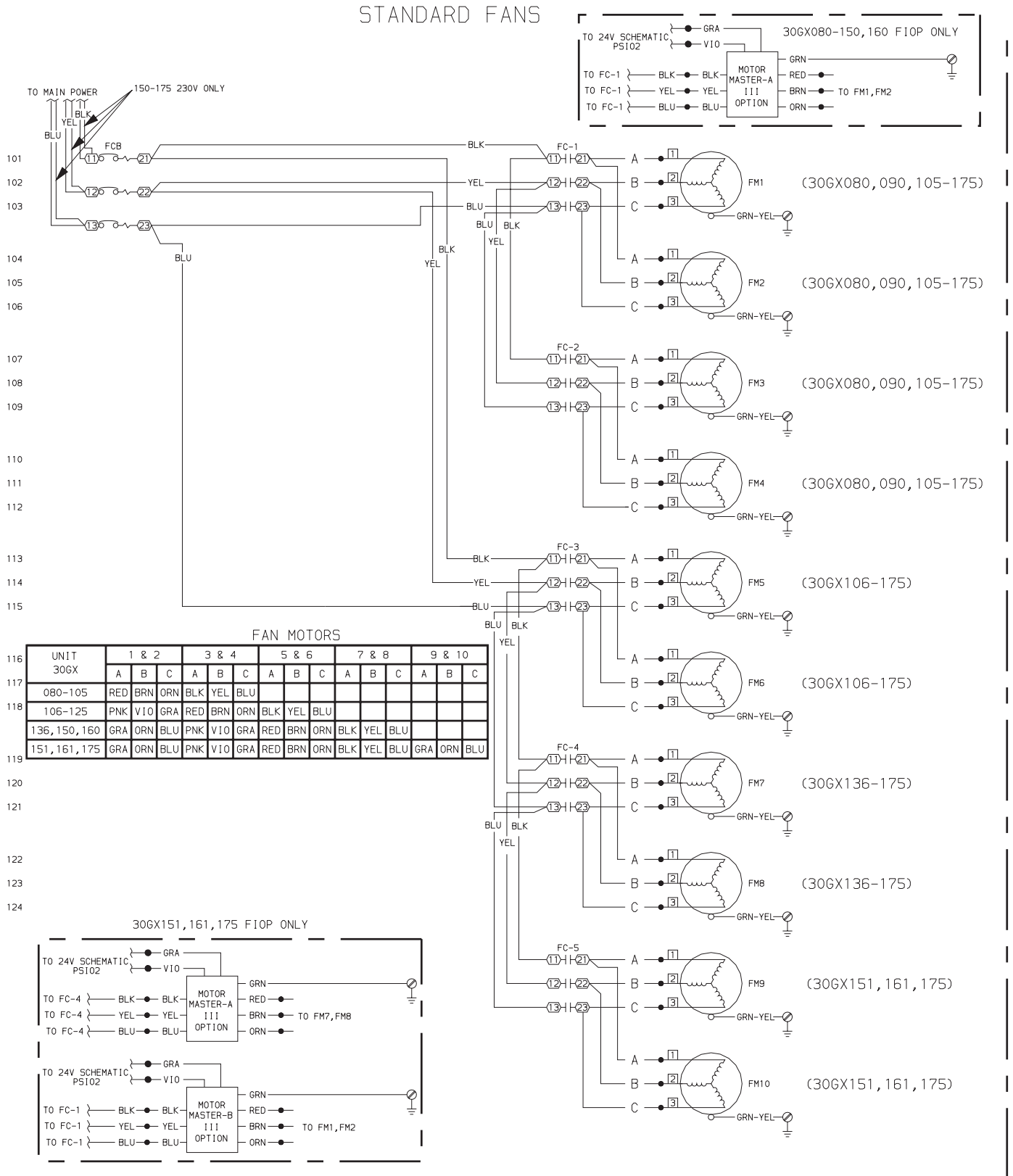


Fig. 18 — Component Arrangement (Power Box); 30GX281, 301, 325, 350 — 50/60 Hz Units

STANDARD FANS



FAN MOTORS

UNIT 30GX	1 & 2			3 & 4			5 & 6			7 & 8			9 & 10		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
080-105	RED	BRN	ORN	BLK	YEL	BLU									
106-125	PNK	VIO	GRA	RED	BRN	ORN	BLK	YEL	BLU						
136,150,160	GRA	ORN	BLU	PNK	VIO	GRA	RED	BRN	ORN	BLK	YEL	BLU			
151,161,175	GRA	ORN	BLU	PNK	VIO	GRA	RED	BRN	ORN	BLK	YEL	BLU	GRA	ORN	BLU

STATIC FAN OPTION

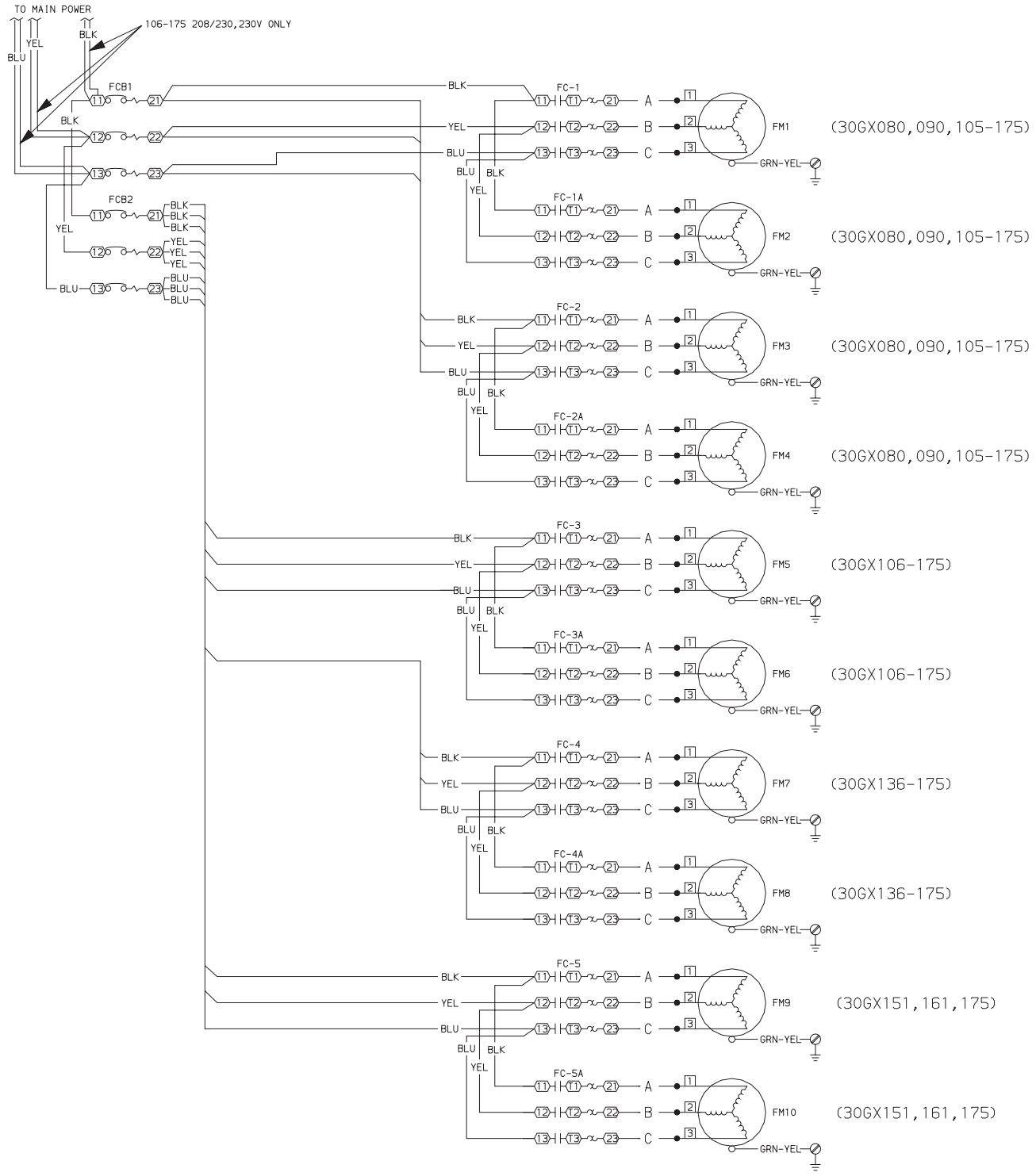


Fig. 19 — Fan Wiring; 30GX080, 090, 105, 106, 115, 125, 136, 150, 160, 161, 175 — 50 Hz Units; 30GX080, 090, 106, 115, 125, 136, 151, 161 — 60 Hz Units

STANDARD FANS

STATIC FAN OPTION

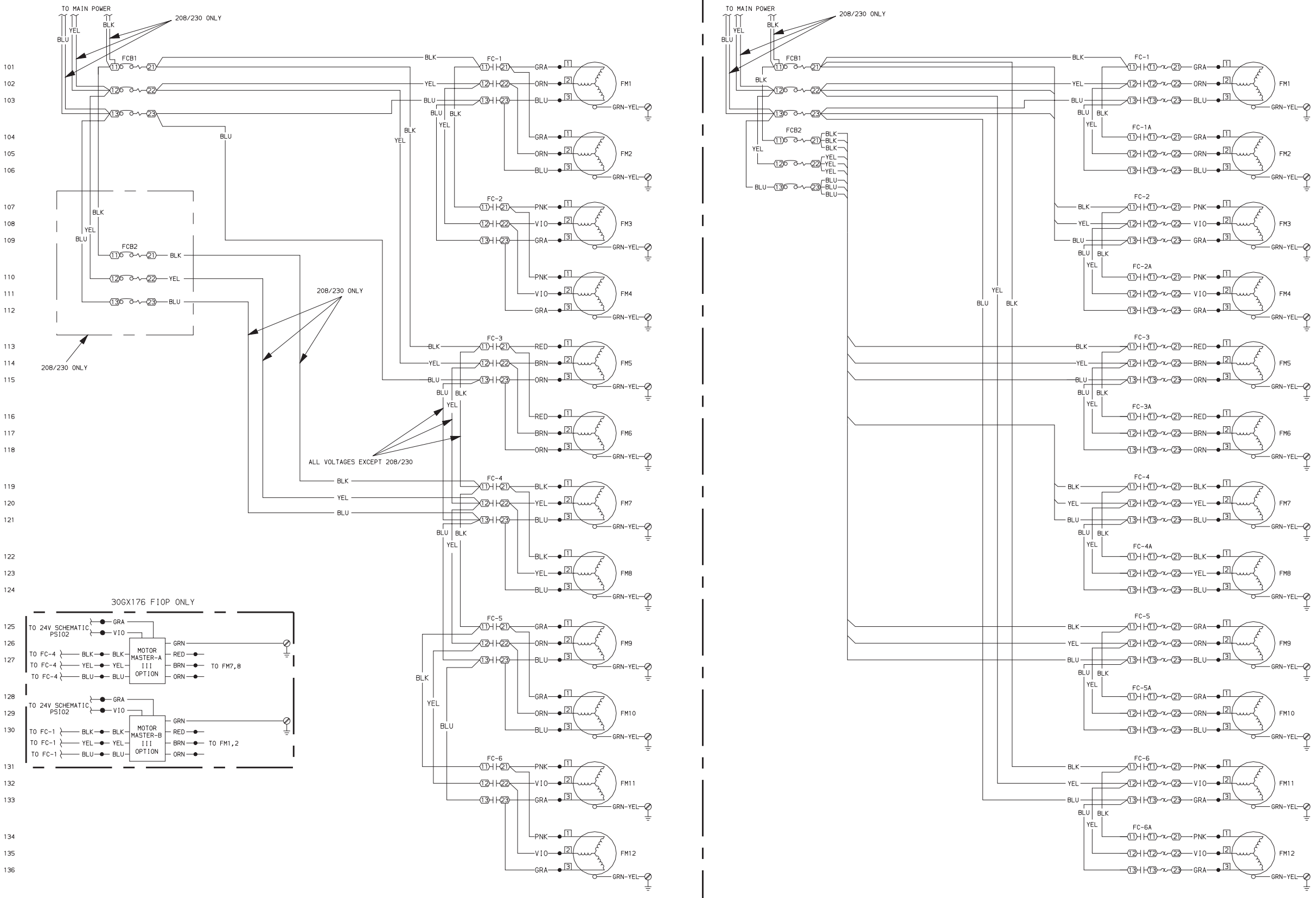
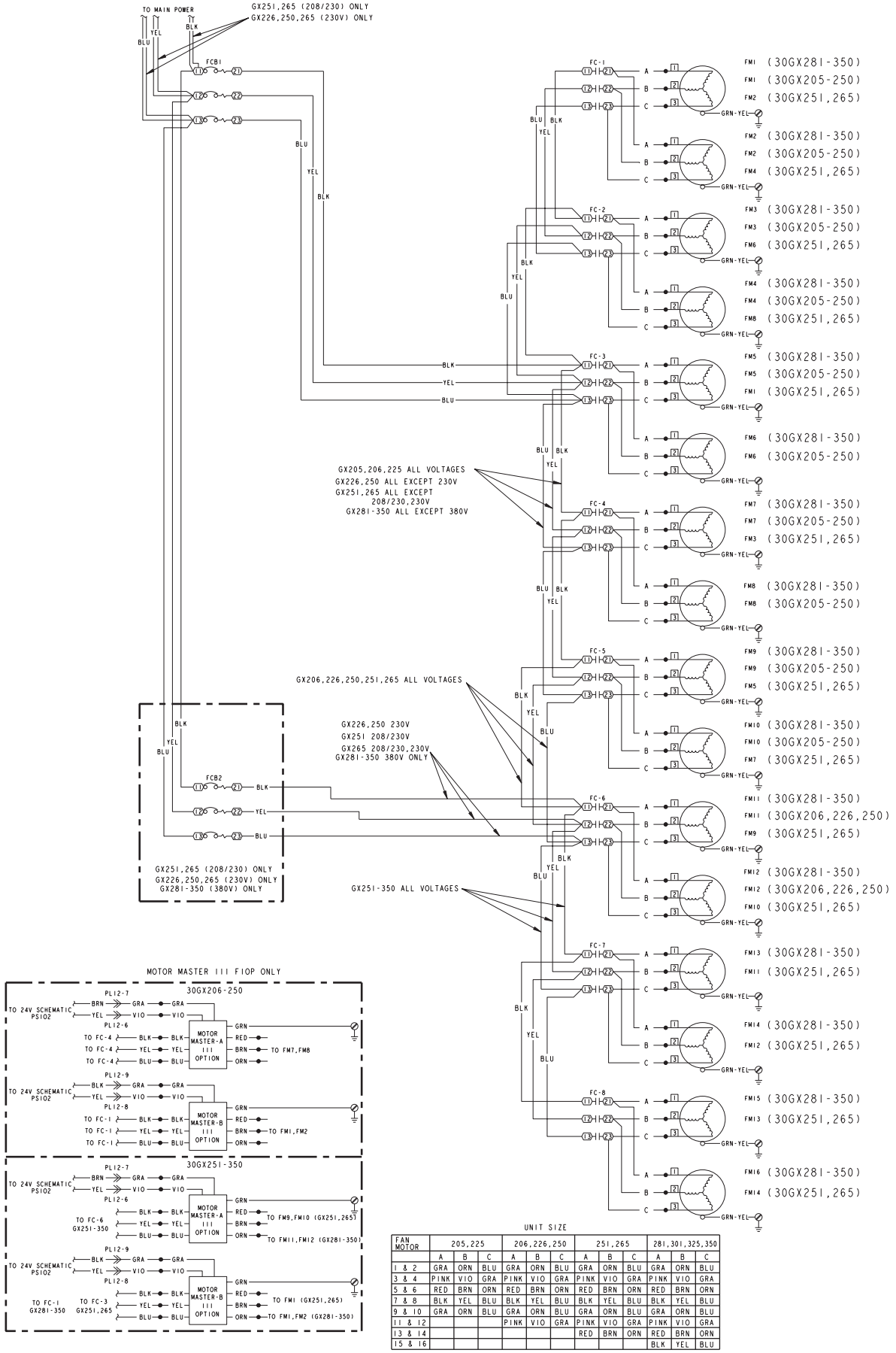


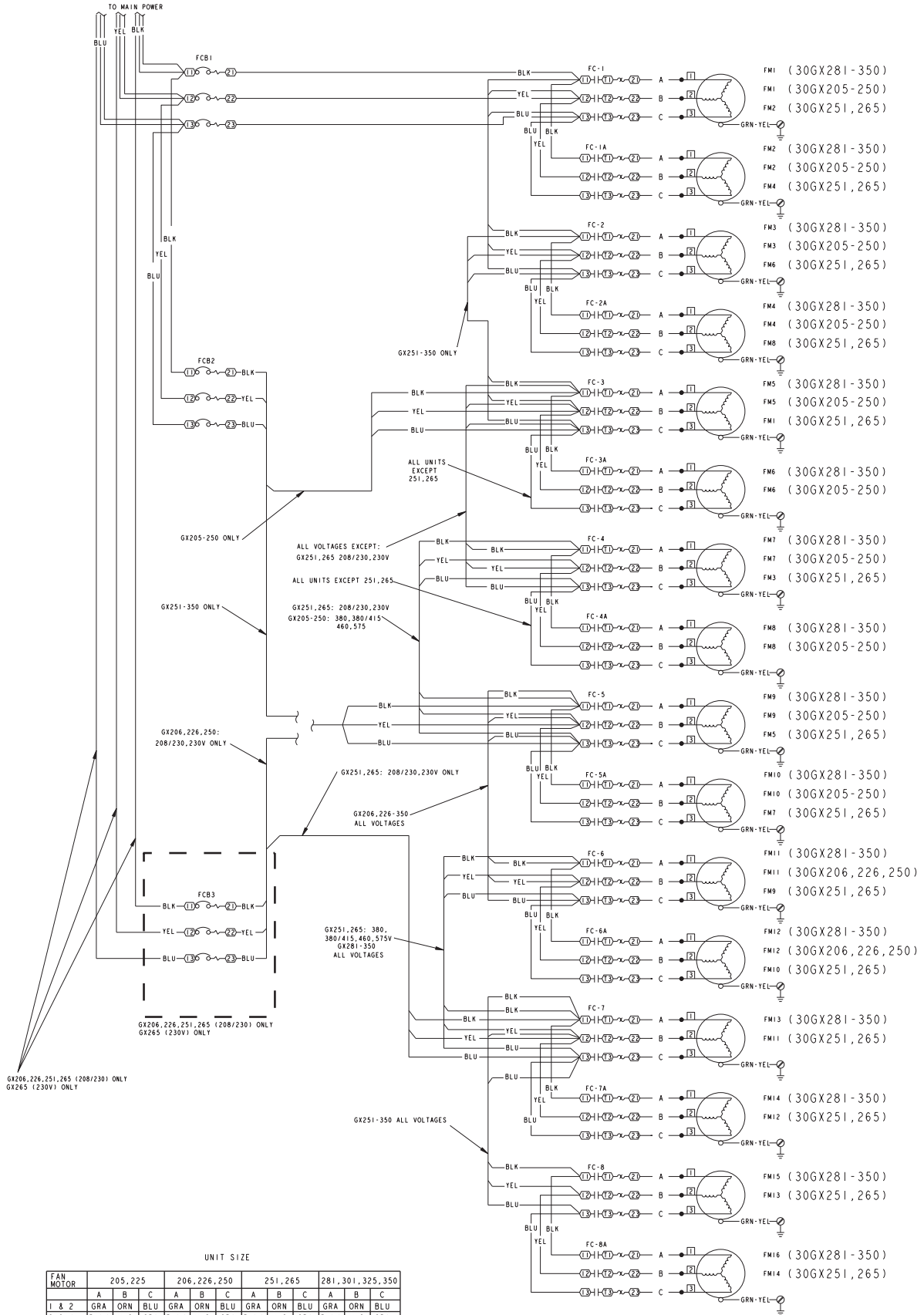
Fig. 20 — Fan Wiring; 30GX176 — 60 Hz Units



UNIT SIZE

FAN MOTOR	205,225			206,226,250			251,265			281,301,325,350		
	A	B	C	A	B	C	A	B	C	A	B	C
1 & 2	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU
3 & 4	PINK	VIO	GRA	PINK	VIO	GRA	PINK	VIO	GRA	PINK	VIO	GRA
5 & 6	RED	BRN	ORN	RED	BRN	ORN	RED	BRN	ORN	RED	BRN	ORN
7 & 8	BLK	YEL	BLU	BLK	YEL	BLU	BLK	YEL	BLU	BLK	YEL	BLU
9 & 10	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU
11 & 12				PINK	VIO	GRA	PINK	VIO	GRA	PINK	VIO	GRA
13 & 14							RED	BRN	ORN	RED	BRN	ORN
15 & 16										BLK	YEL	BLU

Fig. 21 — Fan Power Wiring; 30GX205, 225, 226, 250, 265, 281, 301, 325, 350 — 50 Hz Units; 30GX206, 226, 251, 265, 281, 301, 325, 350 — 60 Hz Units



UNIT SIZE

FAN MOTOR	205,225			206,226,250			251,265			281,301,325,350		
	A	B	C	A	B	C	A	B	C	A	B	C
1 & 2	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU
3 & 4	PINK	VIO	GRA	PINK	VIO	GRA	PINK	VIO	GRA	PINK	VIO	GRA
5 & 6	RED	BRN	ORN	RED	BRN	ORN	RED	BRN	ORN	RED	BRN	ORN
7 & 8	BLK	YEL	BLU	BLK	YEL	BLU	BLK	YEL	BLU	BLK	YEL	BLU
9 & 10	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU	GRA	ORN	BLU
11 & 12				PINK	VIO	GRA	PINK	VIO	GRA	PINK	VIO	GRA
13 & 14							RED	BRN	ORN	RED	BRN	ORN
15 & 16										BLK	YEL	BLU

Fig. 22 — Static Fan Power Wiring; 30GX205, 225, 226, 250, 265, 281, 301, 325, 350 — 50 Hz Units; 30GX206, 226, 251, 265, 281, 301, 325, 350 — 60 Hz Units