

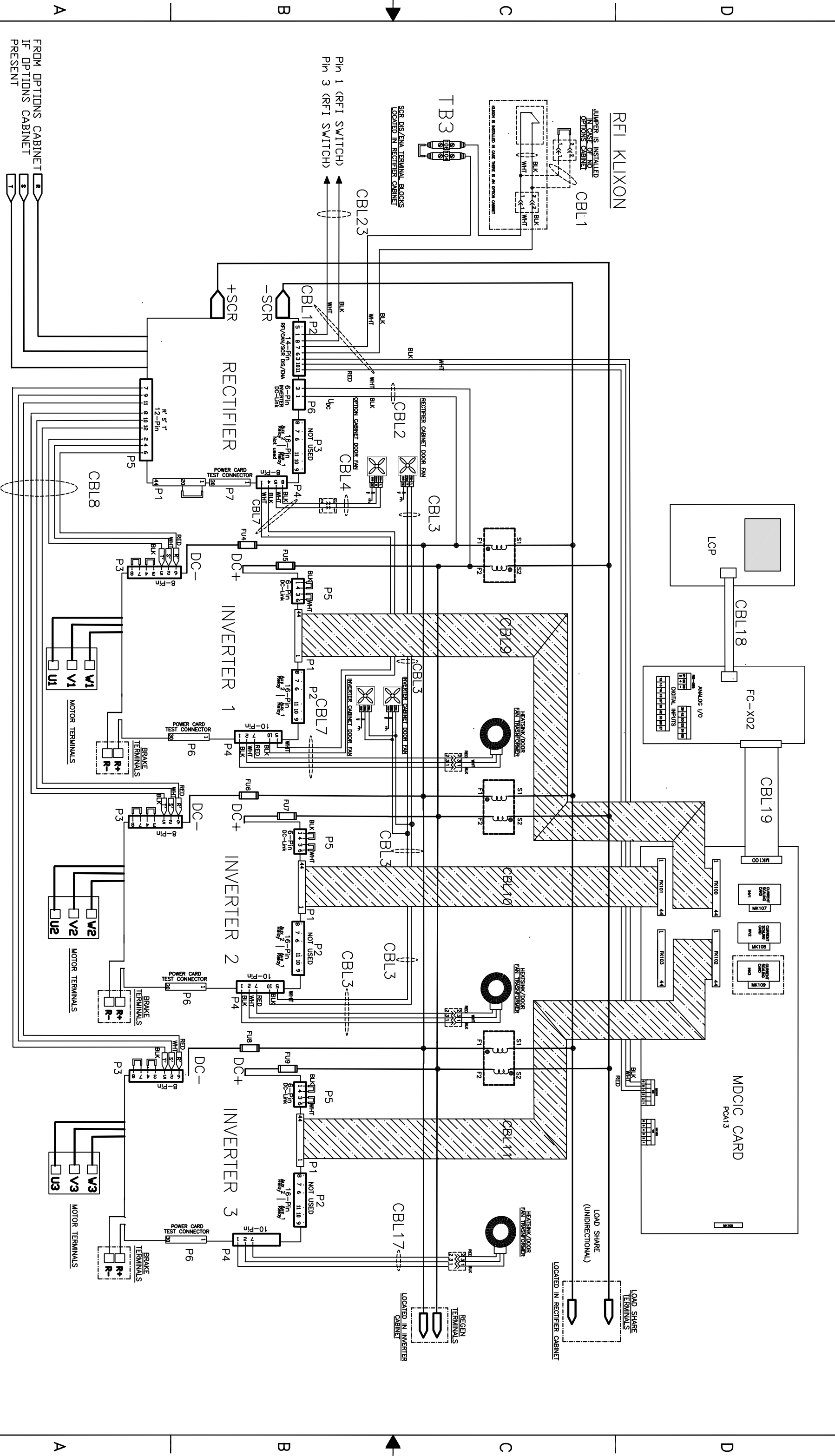
\*Note 1: Contactor coil connection without Emergency Stop

LOCATED IN OPTIONS CABINET: CB, DISCONNECT AND CONTACTOR

- NOTICE -  
 THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF DANFOS DRIVES AND THE INFORMATION ENGAGED THEREIN SHALL BE USED ONLY FOR RECORD AND REFERENCE PURPOSES. IT SHALL NOT BE REPRODUCED, COPIED, REPRODUCED, REPRODUCED, REPRODUCED OR IN ANY MANNER DISCLOSED TO ANYONE WITHOUT THE DIRECT WRITTEN PERMISSION OF DANFOS DRIVES, AND SHALL BE RETURNED UPON REQUEST.

DESIGNED BY/DATE: FBI 06/28/2007	CREATED BY/DATE: WRS APPROVAL BY/DATE:	TITLE: DWG. BLOCK DIAGRAMS, FT-1-F4 FRAME
APPROVAL:	CHK. APPROVAL BY/DATE:	SHEET: 1 OF 11
PROJECT SCALE:	DO FILE:	DRAWING NO.: 177R0048
ECNHP10008	ECN HP10008	REV.: F





F2 TOP LEVEL BLOCK DIAGRAM

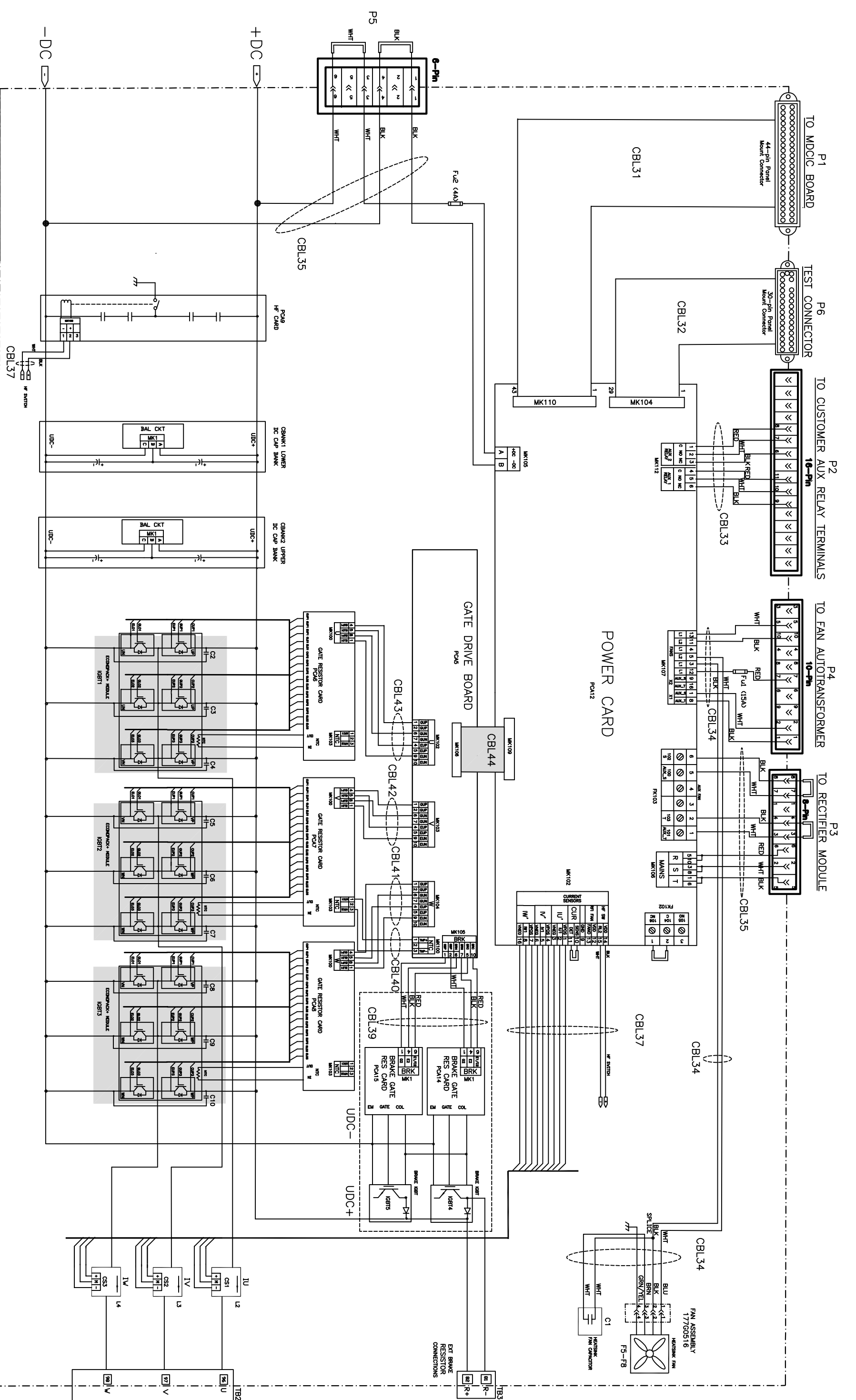
FROM OPTIONS CABINET  
IF OPTIONS CABINET  
PRESENT

RFI KLIXON  
JUMPER IS INSTALLED  
IN CASE OF NO  
OPTIONS CABINET

SCR DIS/ENA TERMINAL BLOCKS  
LOCATED IN RECTIFIER CABINET

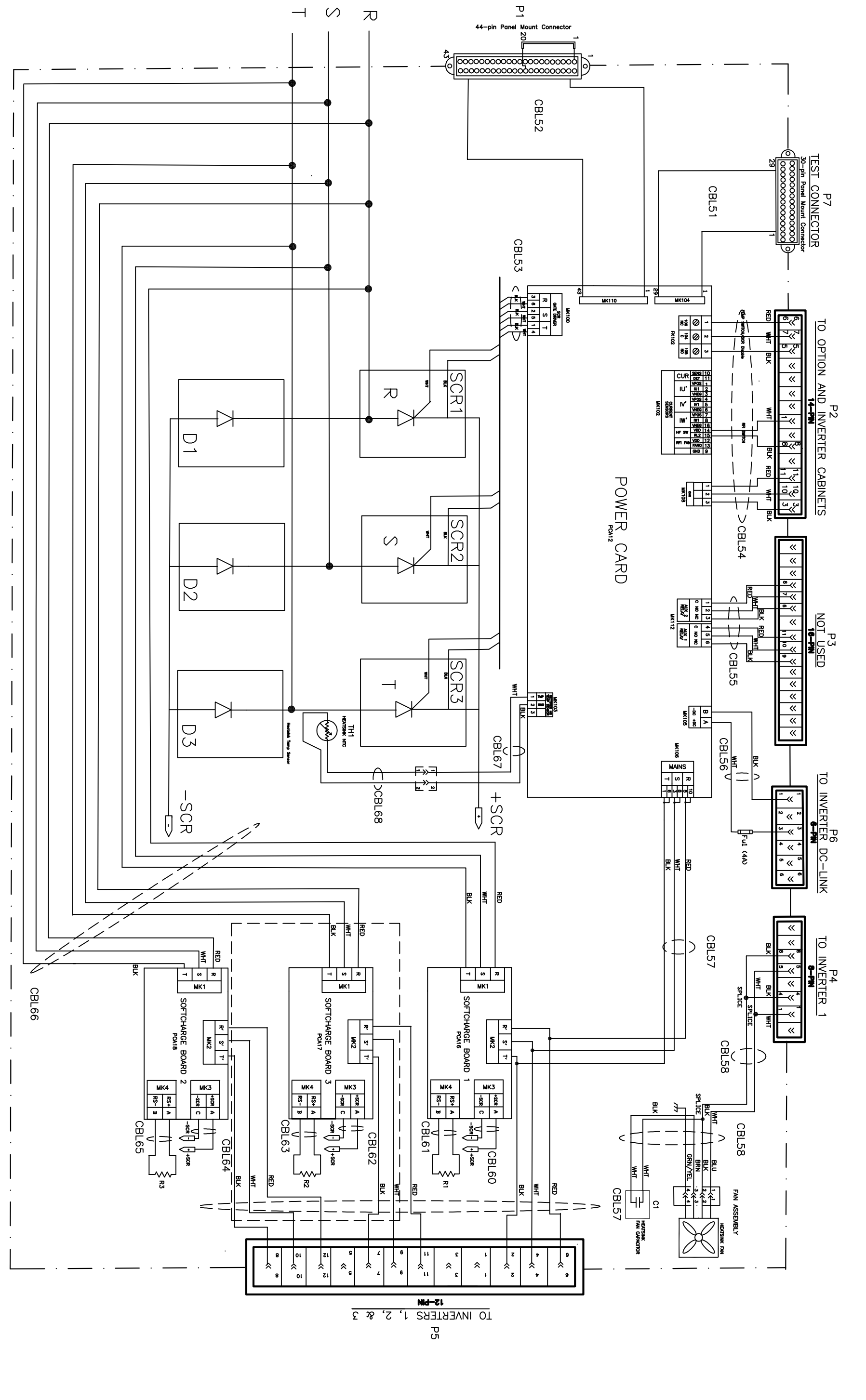
Pin 1 (RFI SWITCH)  
Pin 3 (RFI SWITCH)

UNIST ECRN NO.	ECNHP10008	ECRQ QAO ENTRY BY/DATE	PLDT SCALE	QAO FILE	TITLE
SHEET	3	OF	11	177R0048	DWG. BLOCK DIAGRAMS, F1-F4 FRAME
REV.	F				



# INVERTER MODULE BLOCK DIAGRAM

UNIST ECRK NO.	ECNHP10008	ECRQ QAO ENTRY BY/DATE	PLDT SCALE	QAO FILE	TITLE
SHEET	11	ISSUANCE NO.	17700048	REV.	F



RECTIFIER MODULE BLOCK DIAGRAM

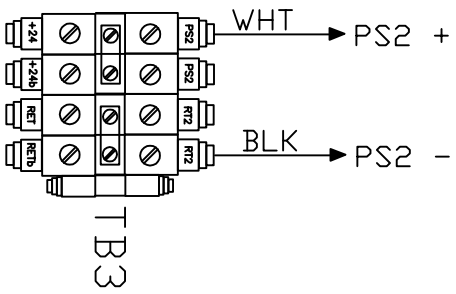
UNIST. EST. NO.	ECNHP10008	ECN. QAO ENTRY BY/DATE	PLT. SCALE	QAO FILE	TITLE
SHEET	11	ISSUANCE NO.	177R0048	REV.	F
					DWG. BLOCK DIAGRAMS, F1-F4 FRAME

4

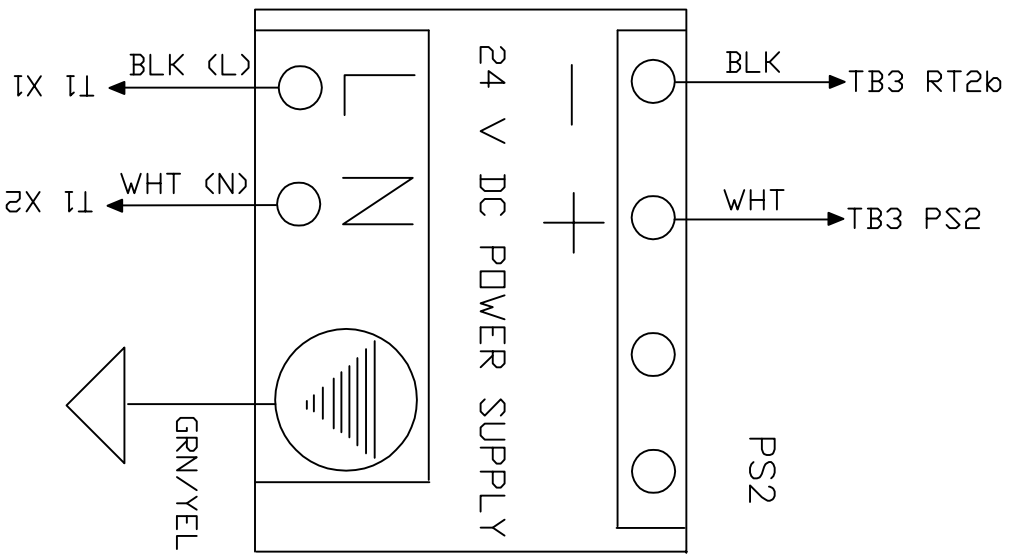
3

2

1



LOCATED IN RECTIFIER CABINET: CUSTOMER CONNECTION



LOCATED IN RECTIFIER CABINET: INTERNAL AND CUSTOMER POWER SUPPLIES

### 24V CUSTOMER POWER SUPPLY OPTION

LOCATED IN RECTIFIER CABINET: T1 (400VA TRANSFORMER) AND FU-DISC (FOUR-POLE FUSIBLE DISCONNECT)  
Note: Transformer wiring is the same for all line voltages.

CUSTOMER 24V SUPPLY OPTION BLOCK DIAGRAM

4

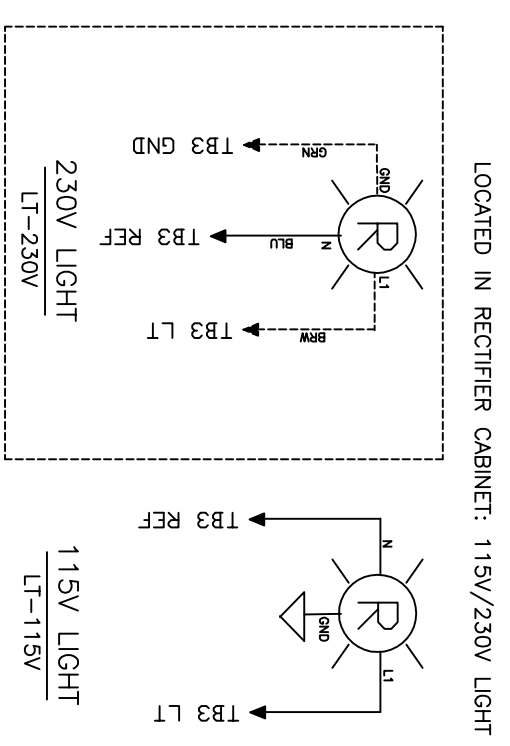
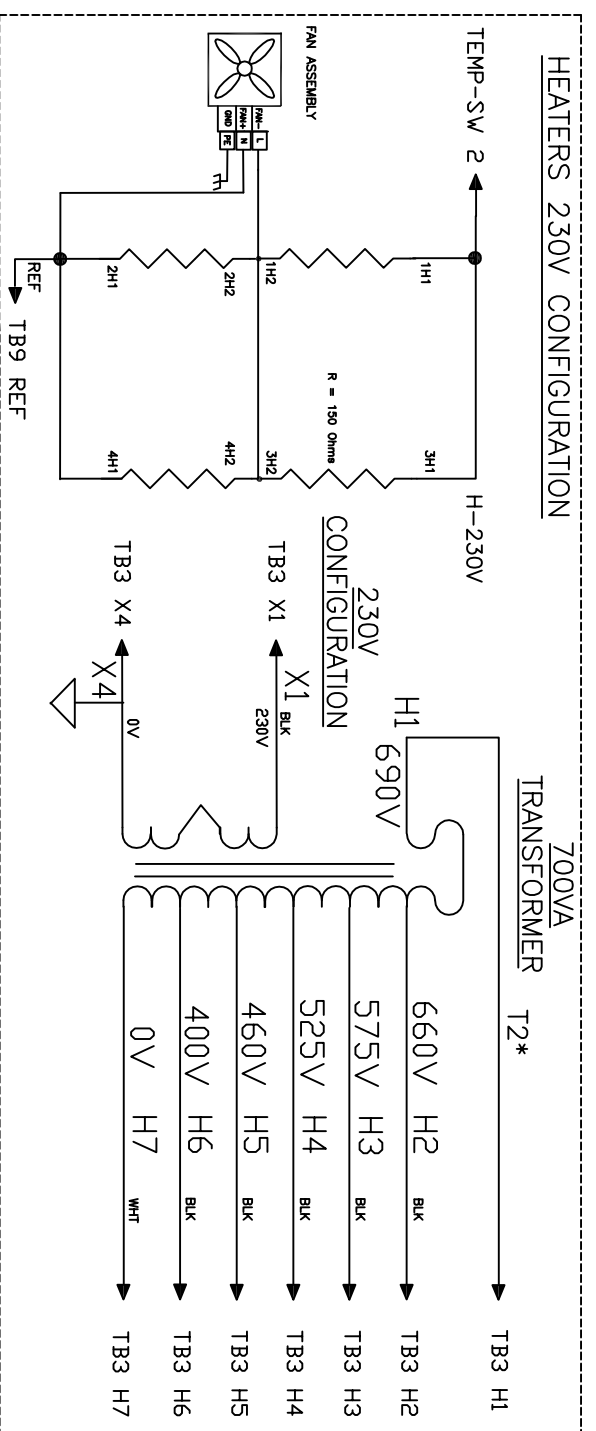
3

2

1

UNIST. ECRN. NO.:	ECNHP10008	ECR. QAO DENTR. BY/DATE:		PLAT. SCALE:		QAO FILE:		TITLE:	DWG. BLOCK DIAGRAMS, FT-F4 FRAME
SHEET:	6	OF:	11	FORMER NO.:	177R0048	REV.:	F		

LOCATED IN RECTIFIER CABINET: 700VA TRANSFORMER AND HEATERS



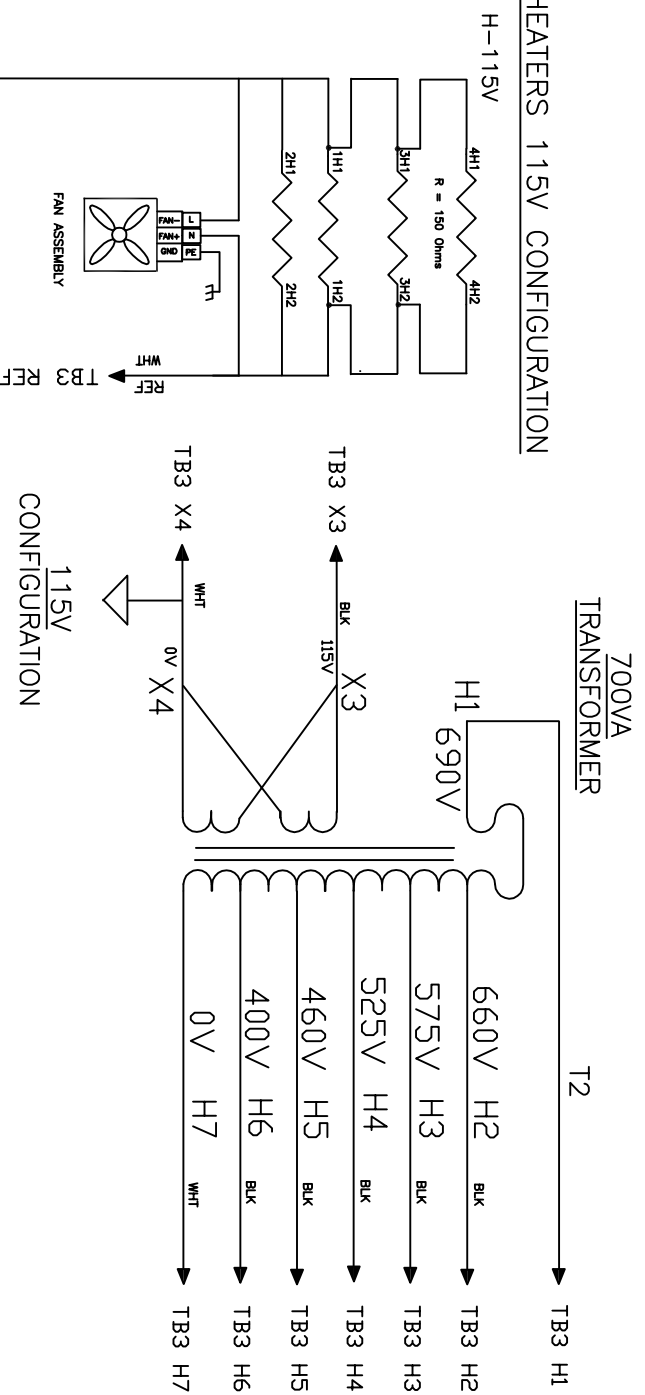
4

3

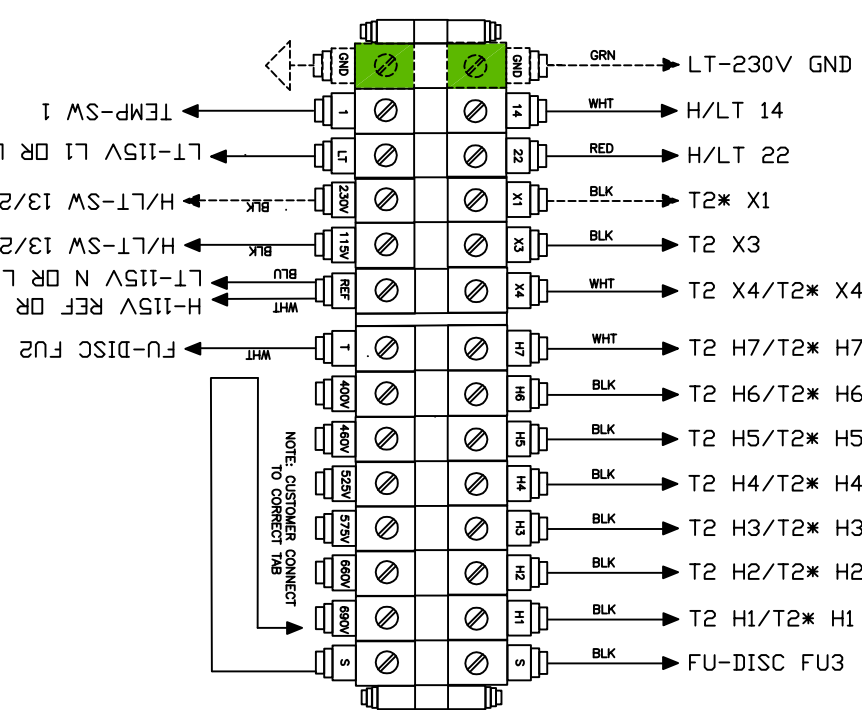
2

1

HEATERS 115V CONFIGURATION

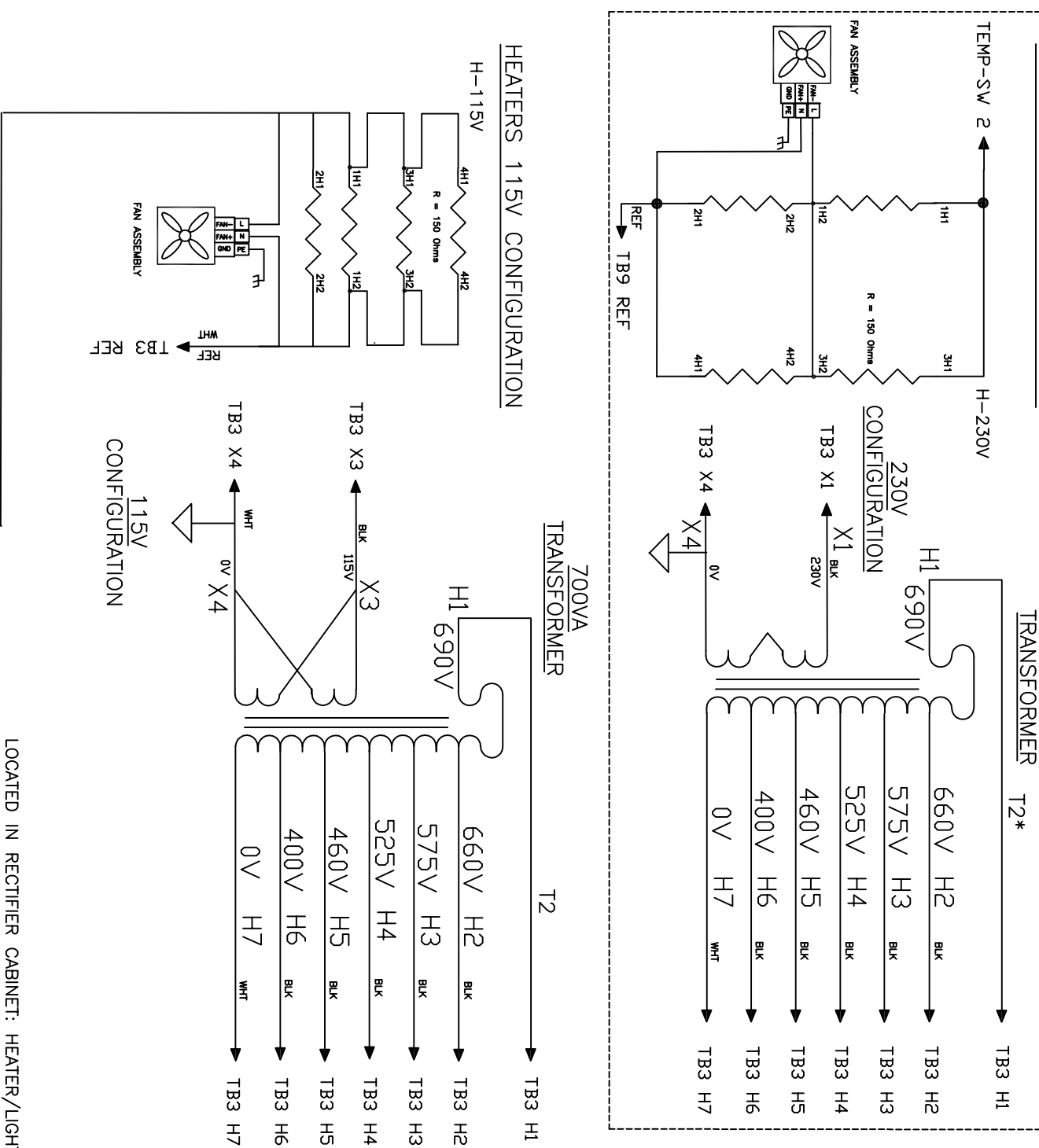


LOCATED IN RECTIFIER CABINET: TERMINAL BLOCKS

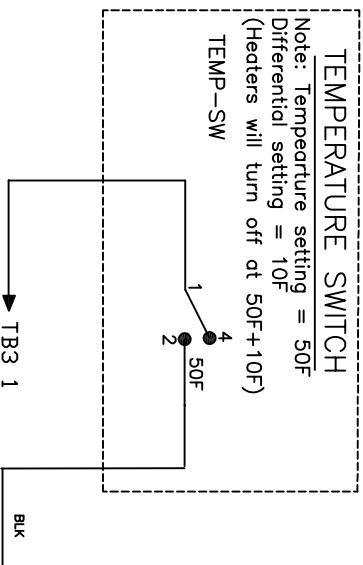


TB3

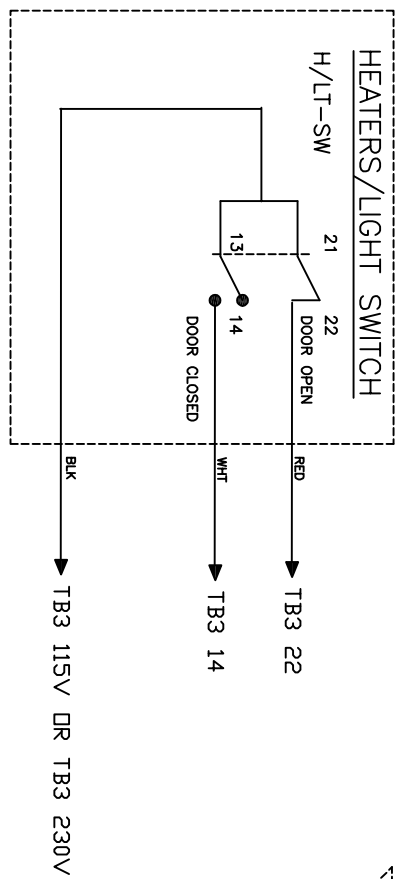
HEATERS 230V CONFIGURATION



LOCATED IN RECTIFIER CABINET: TEMPERATURE SWITCH



LOCATED IN RECTIFIER CABINET: HEATER/LIGHT SWITCH



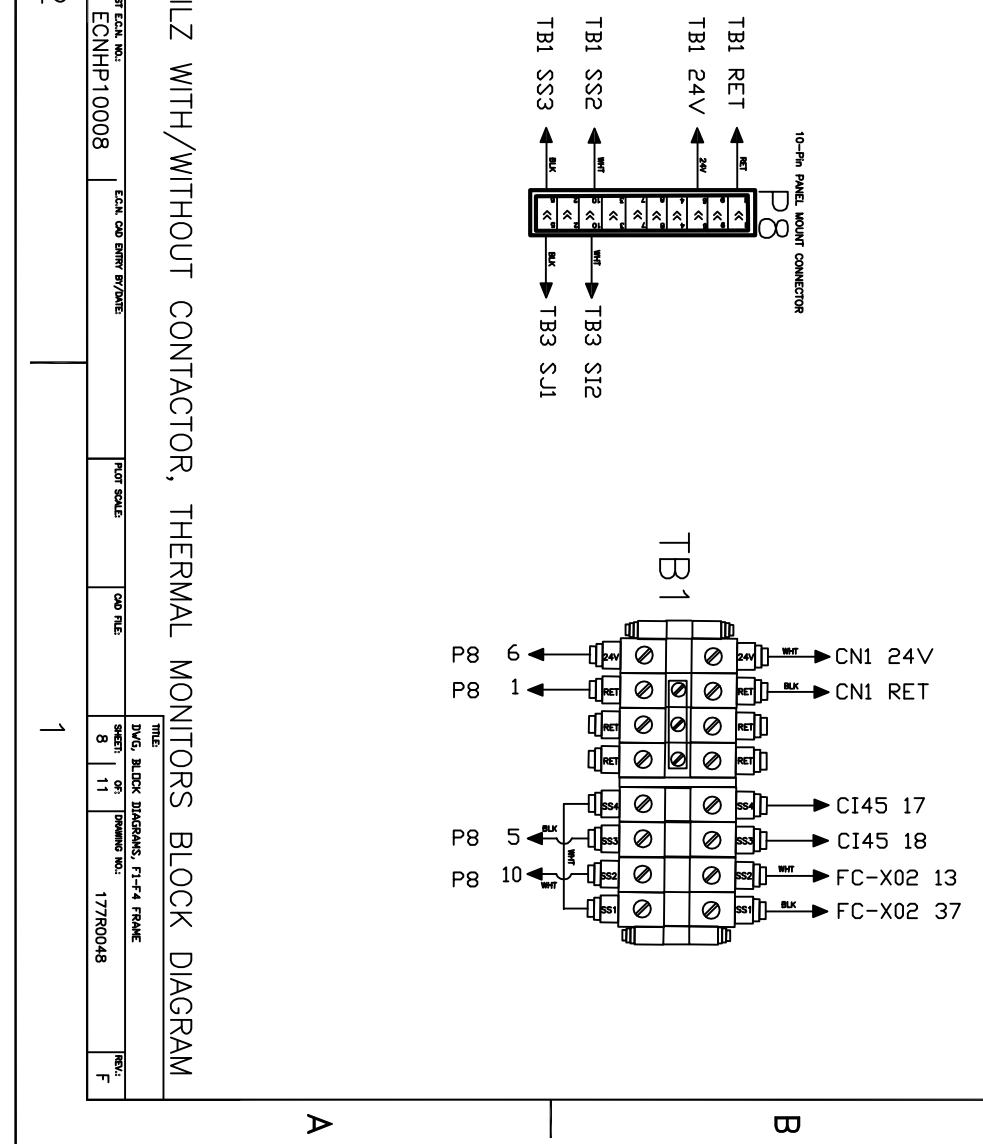
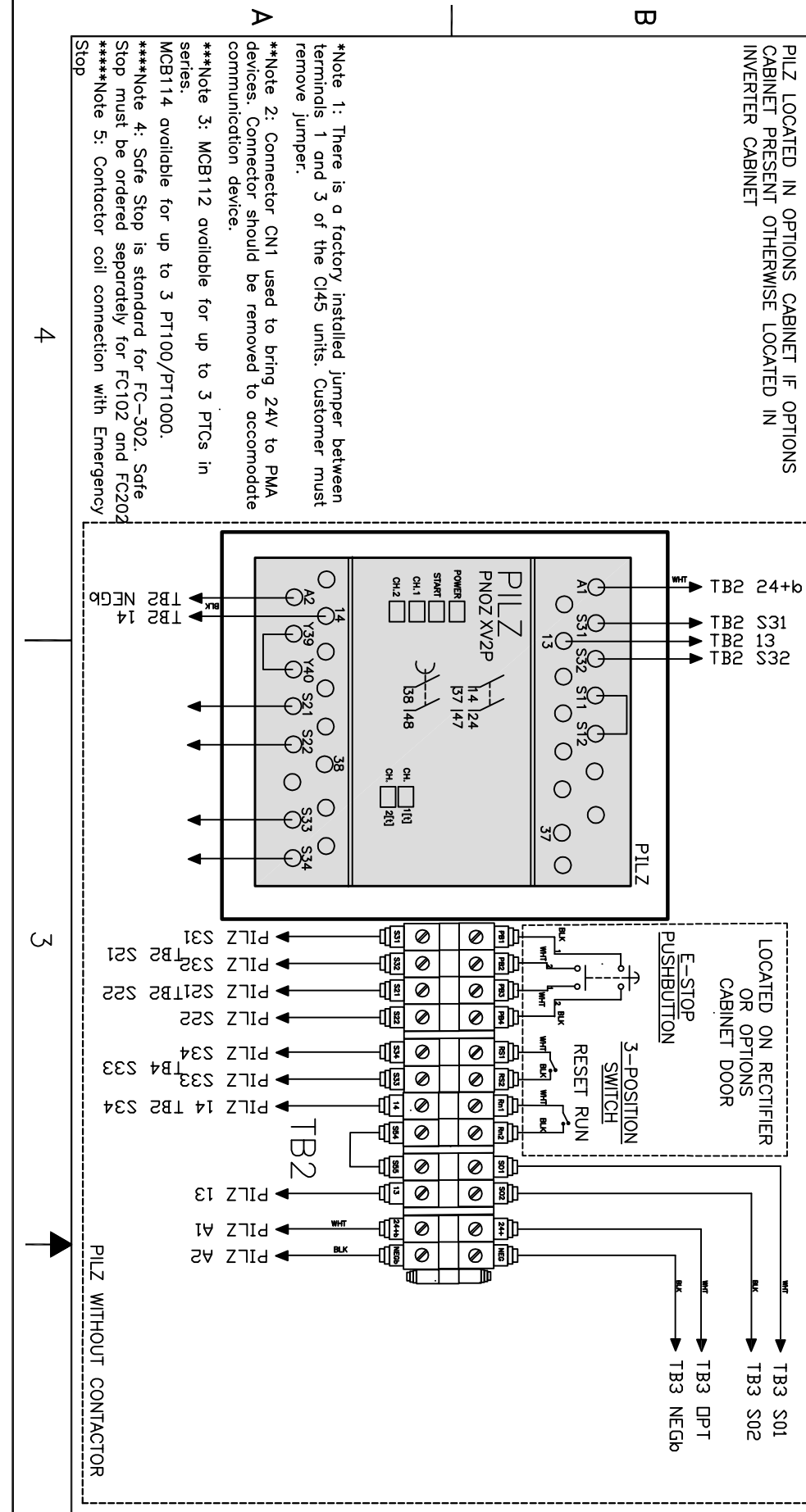
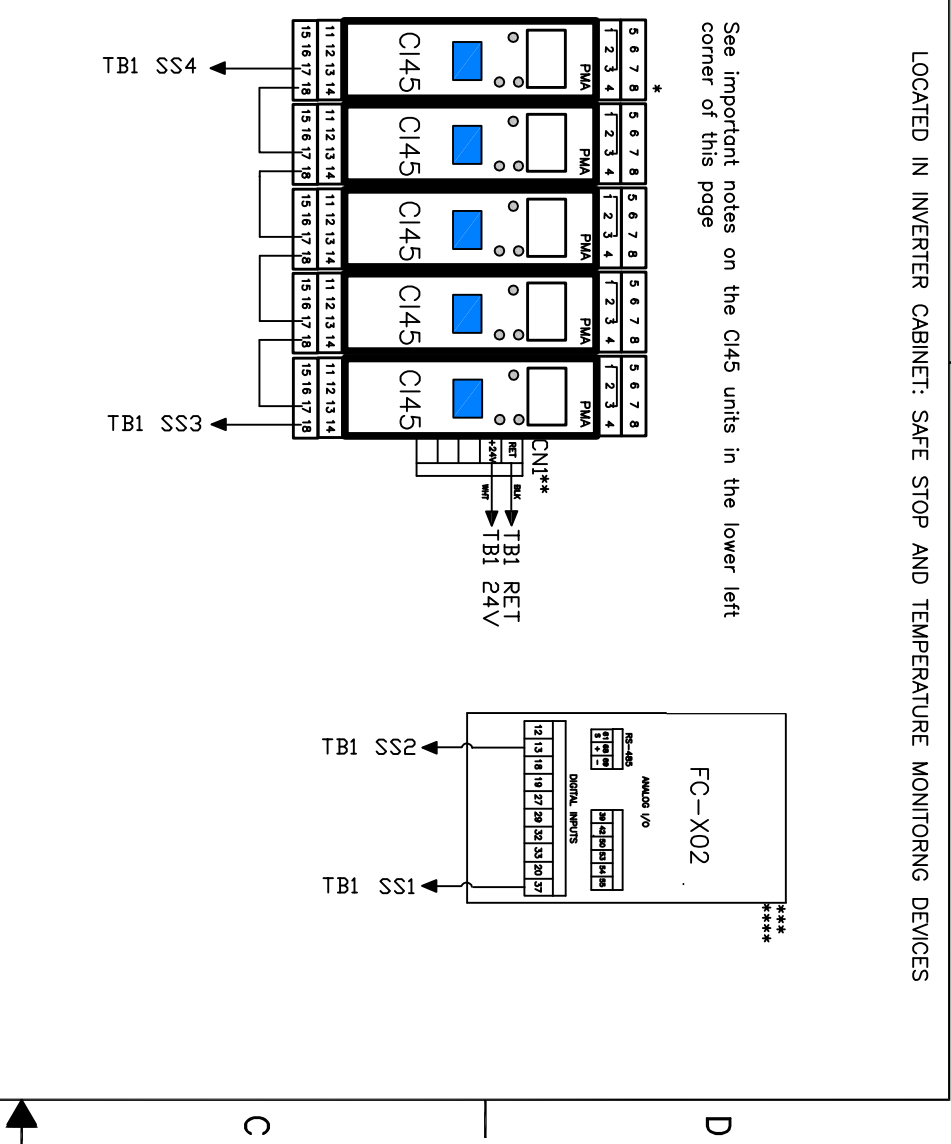
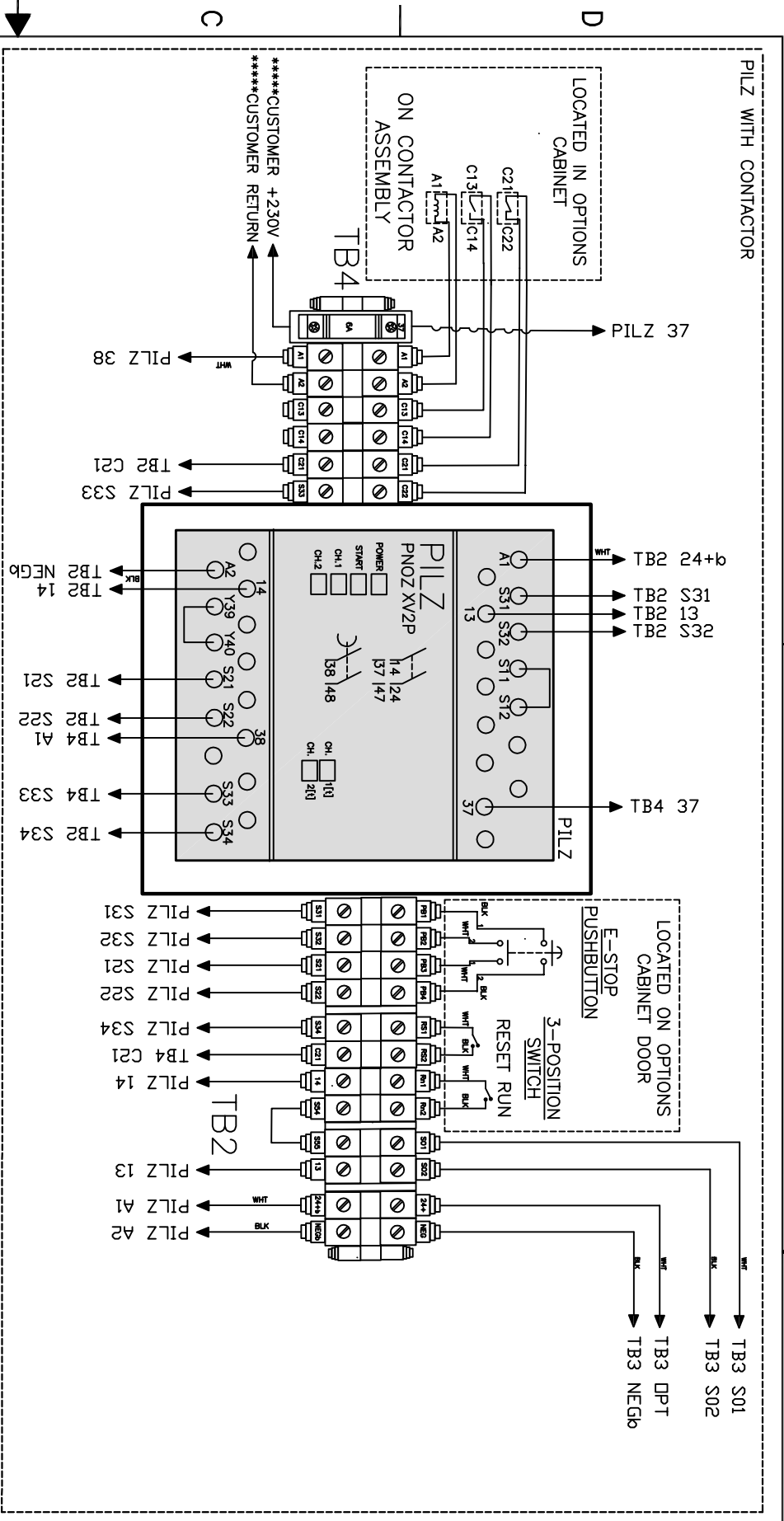
LIGHT AND HEATER OPTION BLOCK DIAGRAM

4

3

2

1



Note 1: There is a factory installed jumper between terminals 1 and 3 of the C145 units. Customer must remove jumper.

Note 2: Connector CN1 used to bring 24V to PMA devices. Connector should be removed to accommodate communication device.

Note 3: MCB112 available for up to 3 PTCs in series.

Note 4: MCB114 available for up to 3 PT100/PT1000.

Note 5: Safe Stop is standard for FC-302. Safe Stop must be ordered separately for FC102 and FC202.

Note 6: Contactor coil connection with Emergency Stop

Note 1: There is a factory installed jumper between terminals 1 and 3 of the C145 units. Customer must remove jumper.

Note 2: Connector CN1 used to bring 24V to PMA devices. Connector should be removed to accommodate communication device.

Note 3: MCB112 available for up to 3 PTCs in series.

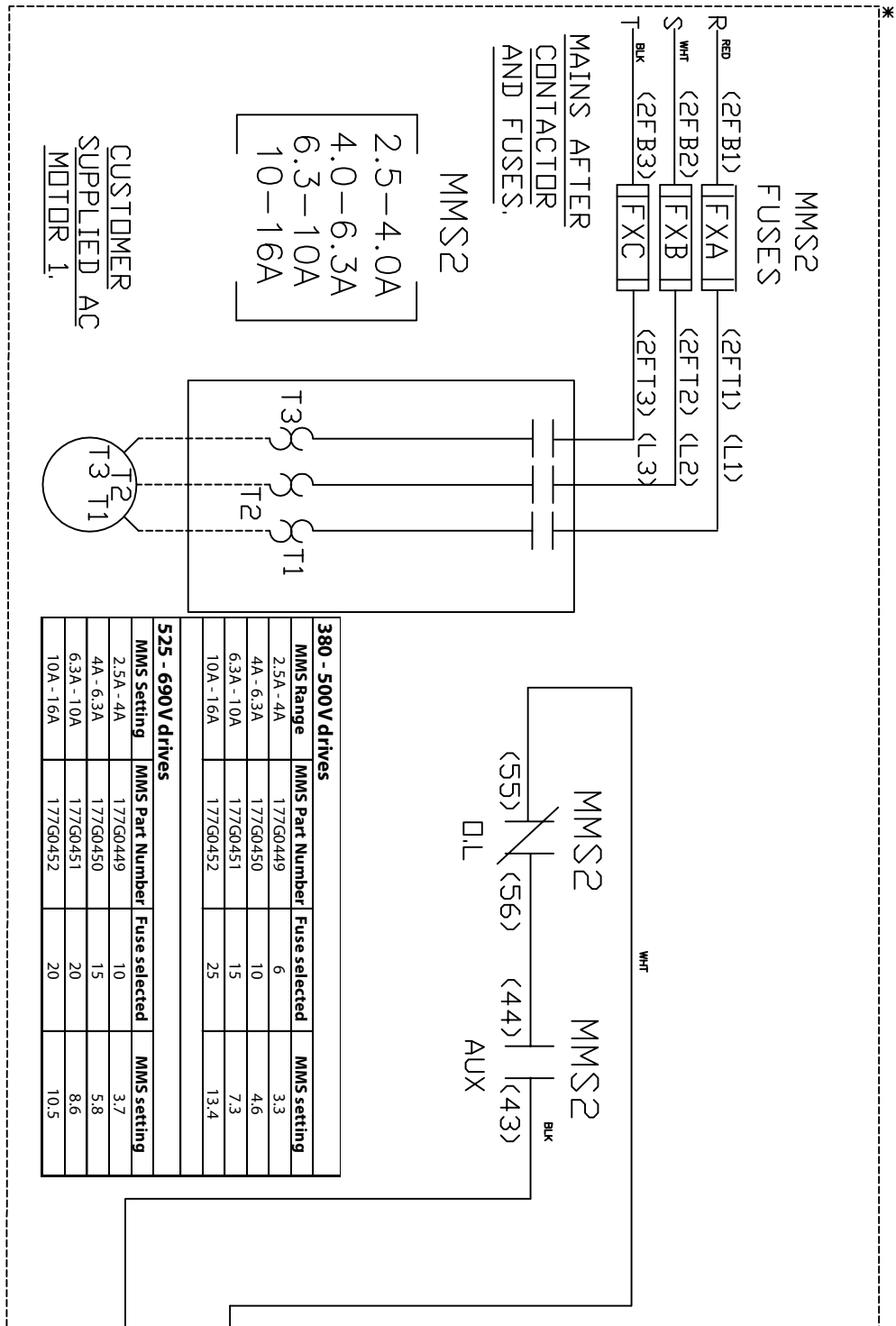
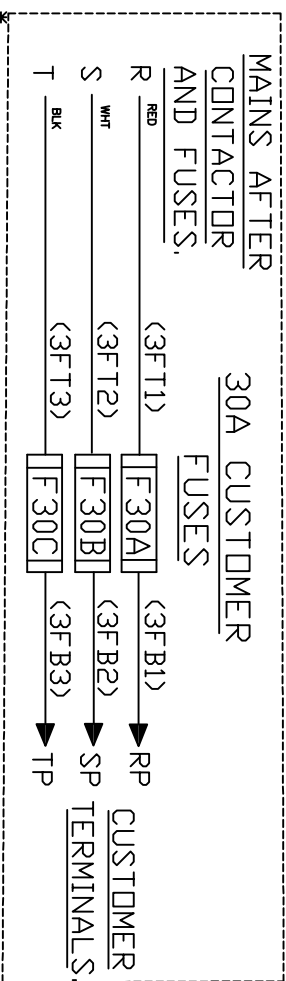
Note 4: MCB114 available for up to 3 PT100/PT1000.

Note 5: Safe Stop is standard for FC-302. Safe Stop must be ordered separately for FC102 and FC202.

Note 6: Contactor coil connection with Emergency Stop



LOCATED IN RECTIFIER CABINET: MANUAL MOTOR STARTERS AND 30A CUSTOMER FUSE OPTION



380 - 500V drives			
MMS Range	MMS Part Number	Fuse selected	MMS setting
2.5A-4A	177G0449	6	3.3
4A-6.3A	177G0450	10	4.6
6.3A-10A	177G0451	15	7.3
10A-16A	177G0452	25	13.4

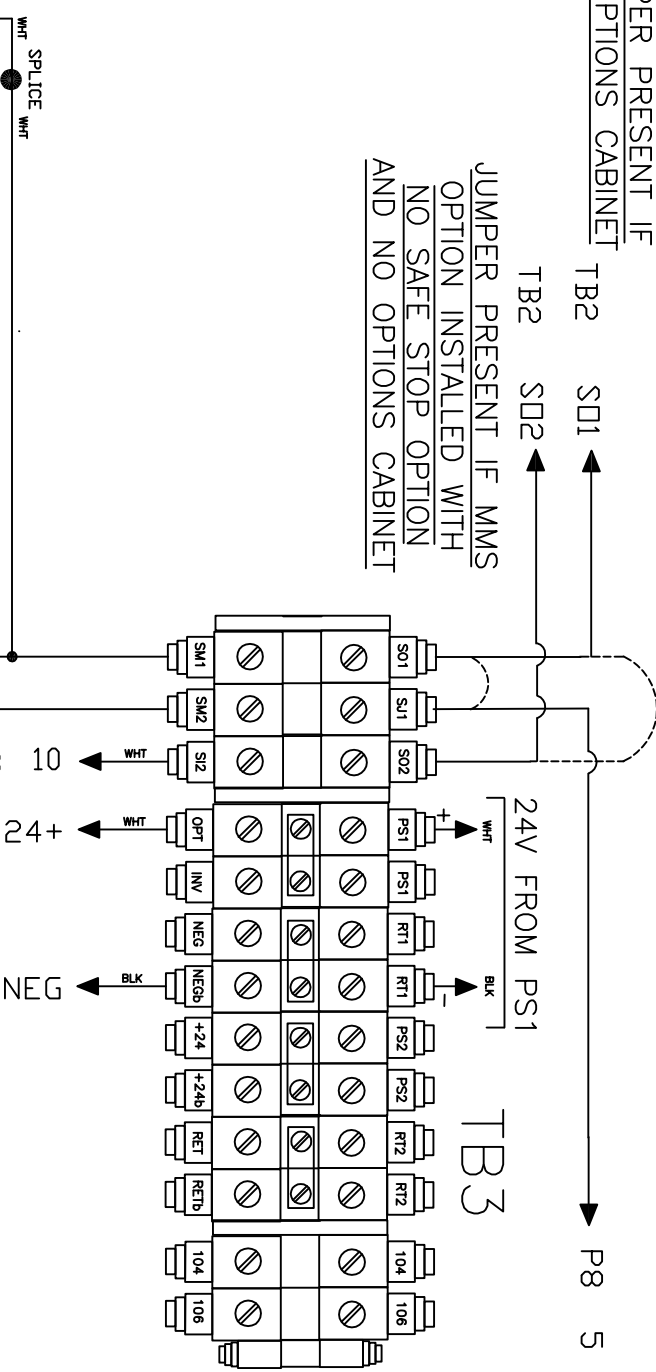
525 - 690V drives			
MMS Setting	MMS Part Number	Fuse selected	MMS setting
2.5A-4A	177G0449	10	3.7
4A-6.3A	177G0450	15	5.8
6.3A-10A	177G0451	20	8.6
10A-16A	177G0452	20	10.5

JUMPER PRESENT IF NO OPTIONS CABINET

JUMPER PRESENT IF MMS OPTION INSTALLED WITH NO SAFE STOP OPTION AND NO OPTIONS CABINET

JUMPER PRESENT IF NO MMS OPTION

JUMPER PRESENT IF NO MMS OPTION



CUSTOMER SUPPLIED AC MOTOR 2.

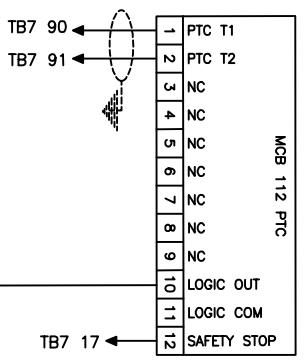
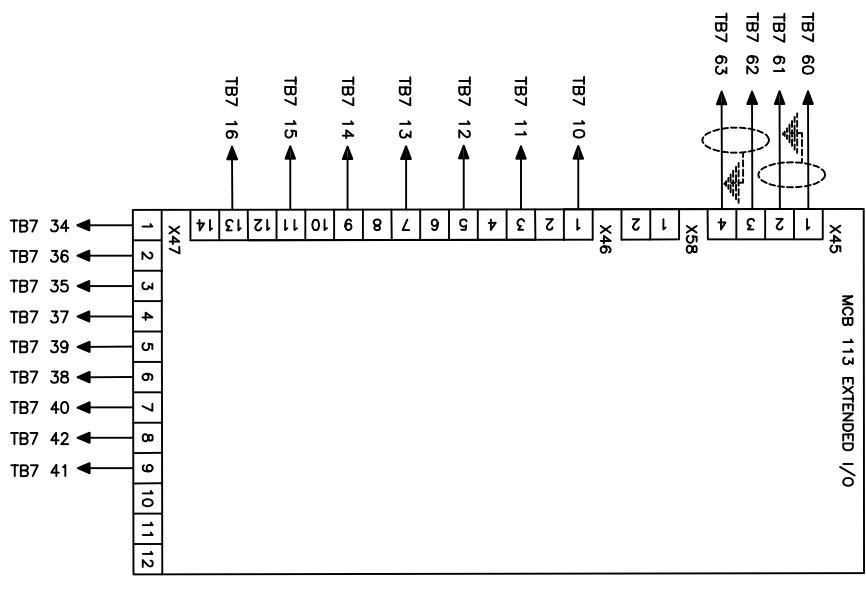
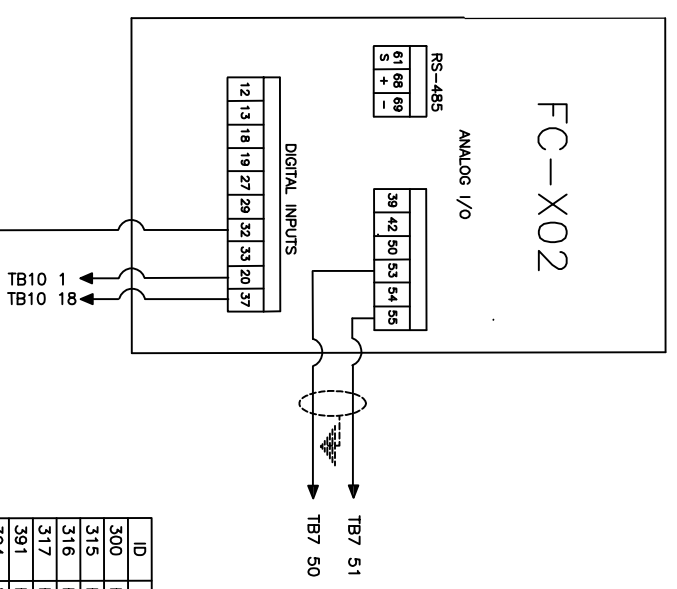
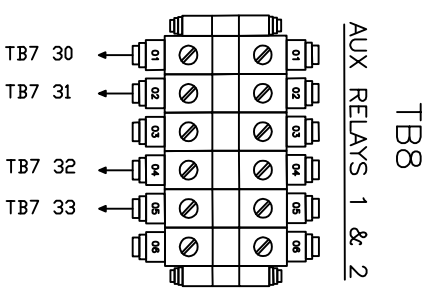
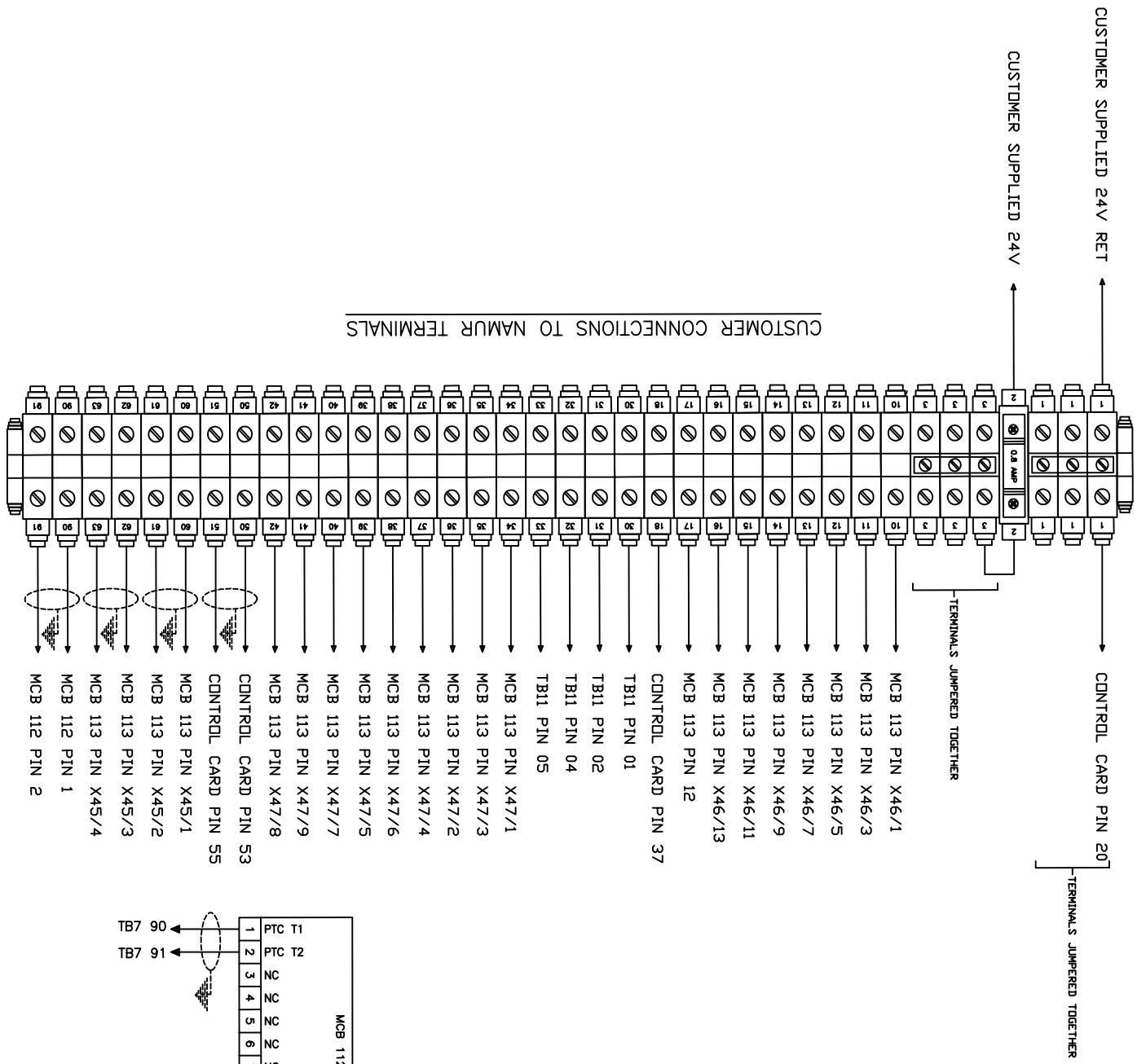
MMS1  
2.5-4.0A  
4.0-6.3A  
6.3-10A  
10-16A

\*Note 1: There are only two combinations: Two manual motor starters or one manual motor starter and the 30A customer fuse terminals.

MANUAL MOTOR STARTERS/30A CUSTOMER FUSE TERMINAL BLOCK DIAGRAM

LOCATED IN INVERTER CABINET: NAMUR TERMINALS, CONTROL CARD, MCB 112, MCB 113

### TB7 NAMUR TERMINALS



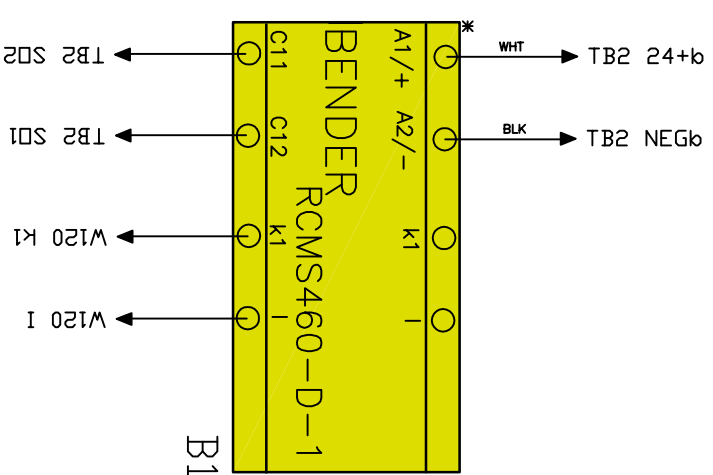
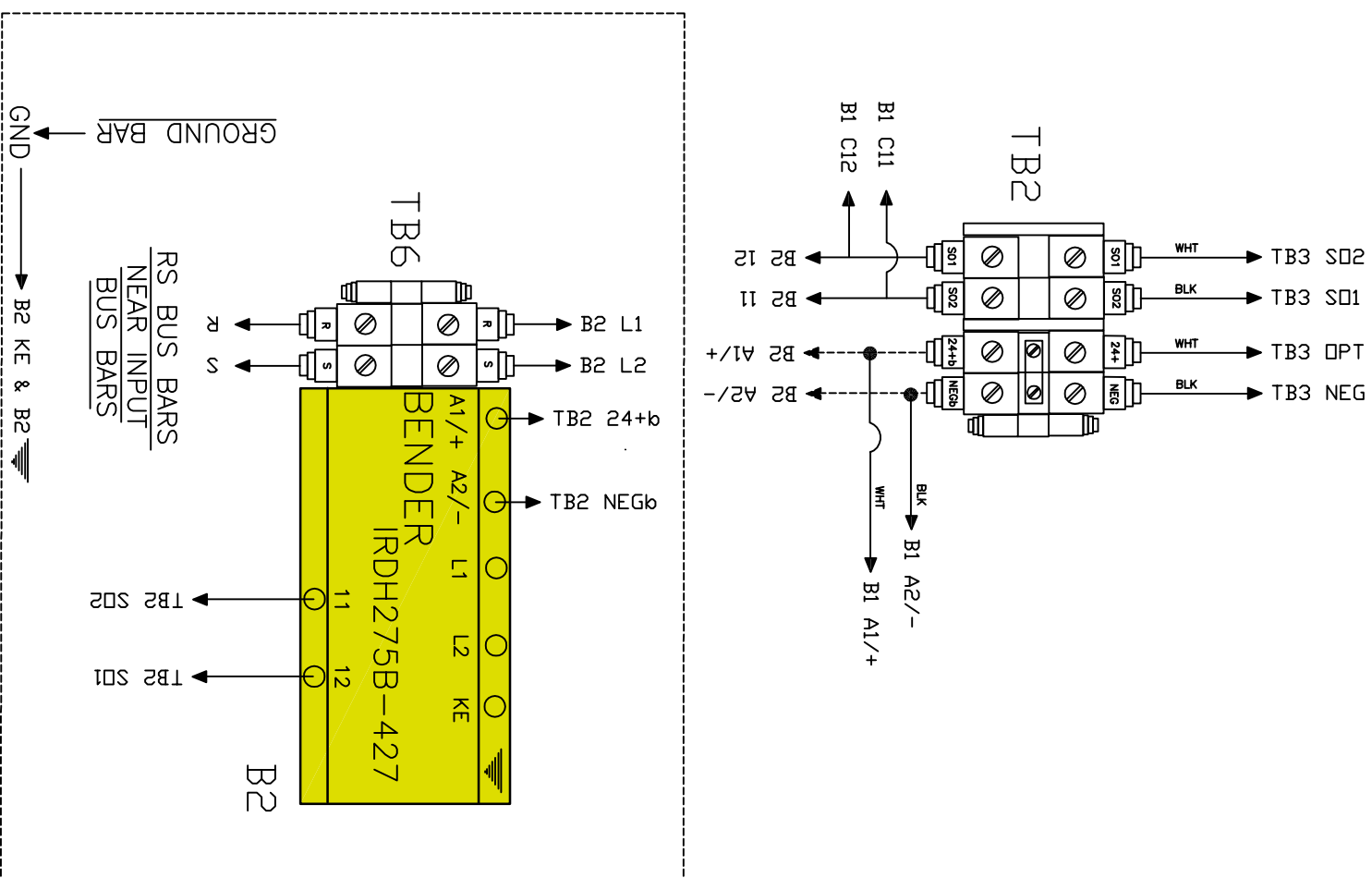
ID	NAME	Setup 1	Setup 2	Setup 3	Setup 4
300	Reference Range	Min - Max	Min - Max	Min - Max	Min - Max
315	Reference Resource 1	Analog Input 53	Analog Input 53	Analog Input 53	Analog Input 53
316	Reference Resource 2	Digital pot:meter	Digital pot:meter	Digital pot:meter	Digital pot:meter
317	Reference Resource 3	No function	No function	No function	No function
391	Ramp Time	5	5	5	5
394	Minimum Limit	0	0	0	0
410	Motor Speed Direction	Both Directions	Both Directions	Both Directions	Both Directions
511	Terminal 19 Digital Input	No Operation	No Operation	No Operation	No Operation
512	Terminal 27 Digital Input	No Operation	No Operation	No Operation	No Operation
513	Terminal 29 Digital Input	No Operation	No Operation	No Operation	No Operation
514	Terminal 32 Digital Input	PTC Card 1	PTC Card 1	PTC Card 1	PTC Card 1
519	Terminal 37 Safe Stop	PTC & Safe Stop Alarm	PTC & Safe Stop Alarm	PTC & Safe Stop Alarm	PTC & Safe Stop Alarm
520	Terminal X46/1 Digital Input	Start	Latched Start	Latched Start	Latched Start
521	Terminal X46/3 Digital Input	Stop Inverse	Stop Inverse	Stop Inverse	Stop Inverse
522	Terminal X46/5 Digital Input	DigIPot Increase	DigIPot Increase	DigIPot Increase	DigIPot Increase
523	Terminal X46/7 Digital Input	DigIPot Decrease	DigIPot Decrease	DigIPot Decrease	DigIPot Decrease
524	Terminal X46/9 Digital Input	Reset	Reset	Reset	Reset
525	Terminal X46/11 Digital Input	Coast Inverse	Coast Inverse	Coast Inverse	Coast Inverse
526	Terminal X46/13 Digital Input	Reversing	Reversing	Reversing	Reversing
540.0	Function Relay	Drive Ready	Drive Ready	Drive Ready	Drive Ready
540.1	Function Relay	VLT Running	VLT Running	VLT Running	VLT Running
540.2	Function Relay	Alarm	Alarm	Alarm	Alarm
540.3	Function Relay	Reverse	Reverse	Reverse	Reverse
540.4	Function Relay	Run on ref/no warn	Run on ref/no warn	Run on ref/no warn	Run on ref/no warn
612	Terminal 53 Low Current	4	4	4	4
670	Terminal X45/1 Output	Output frequency	Output frequency	Output frequency	Output frequency
680	Terminal X45/3 Output	Motor current	Motor current	Motor current	Motor current

CUSTOMER CONNECTIONS TO NAMUR TERMINALS

## NAMUR TERMINALS OPTION BLOCK DIAGRAM

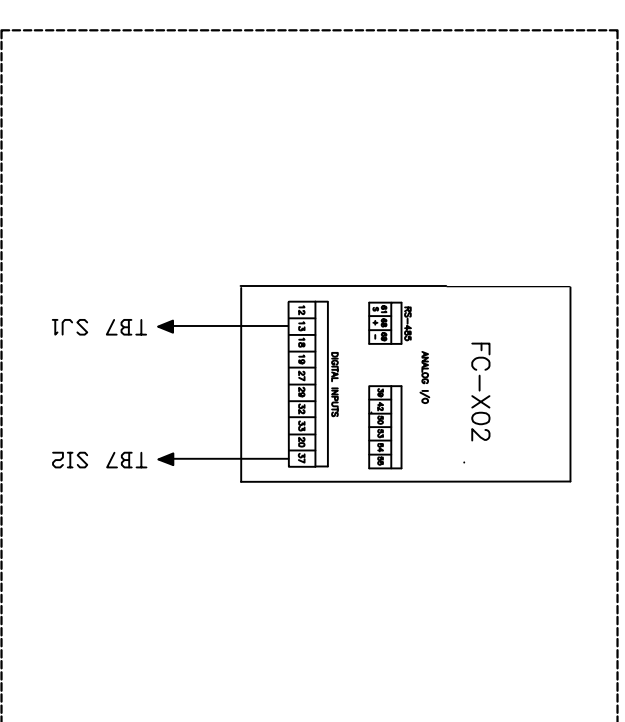
UNIST ELEM. NO.:	ELEM. QAO DNAME BY/DATE	PLOT SCALE:	QAO FILE:	TITLE:
ECHNHP10008				DWG. BLOCK DIAGRAMS, F1-FA FRAME
SHEET 10	OF 11	DRAWING NO.:	17780048	REV. F

LOCATED IN OPTION CABINET: INSULATION MONITORING DEVICES (BENDER)

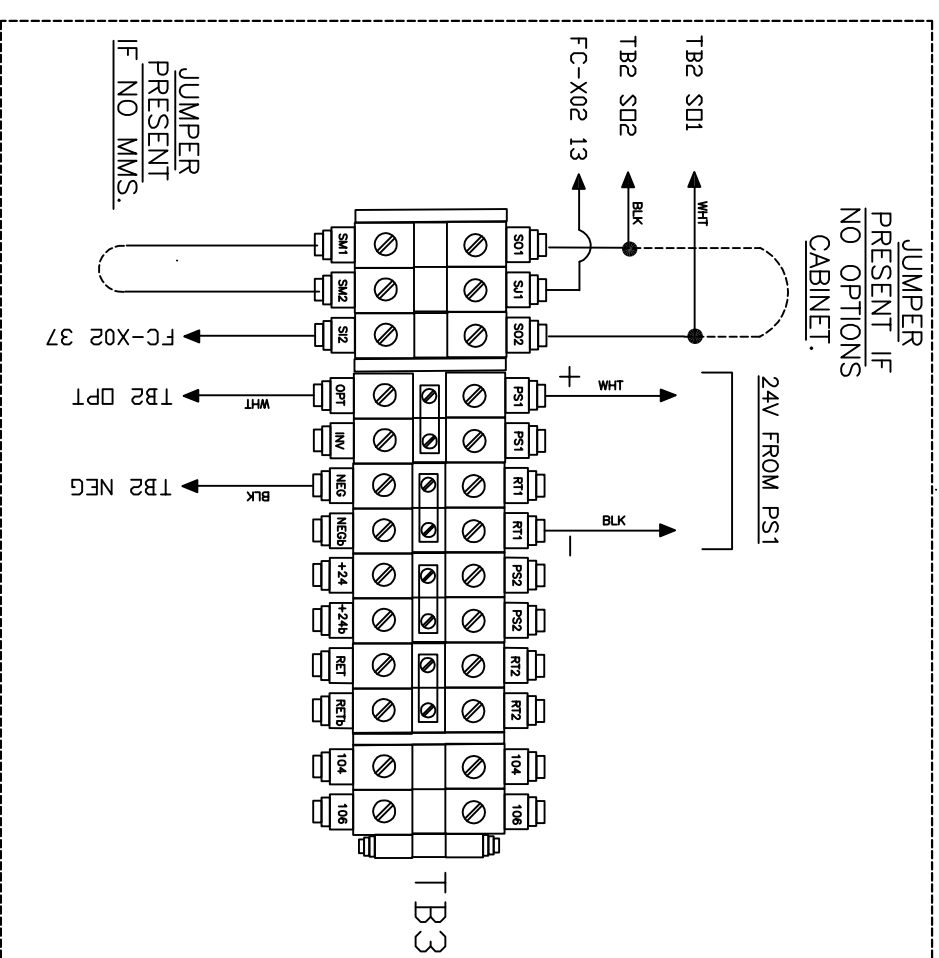


\*Note: W120 required for use with Bender RCMS460-D-1. W120 should be installed on mains cables R, S, and T near the input bus bars. W120 not supplied by Danfoss

LOCATED IN INVERTER CABINET: SAFE STOP



LOCATED IN RECTIFIER CABINET



IRM/RCD OPTION BLOCK DIAGRAM

UNIST EXAM NO:	ECONHP10008	EXAM QAO DINTP BY/DNBS	PLOT SCALE:	FBI 11/29/2007	QAO FILE:	TIME:	DWG. BLOCK DIAGRAMS, FI-F4 FRAME
SHEET:	11	OF:	11	ISSUE NO.:	177R0048	REV.:	F