

CUST. NAME: CARRIER CORPORATION
PROJECT NO.: CHILLER CONTROLLER STANDARDS
P.O. NUMBER:
DESCRIPTION: HX7+D412~15LCB1ISM 1115~1670 RLA
460V, 3ø, 60Hz, 1200~1500kVA
TYPE 1 ENCLOSURE W/ISM MODULE
UL LISTED

☒ FINAL

☐ PRELIMINARY

☐ FOR APPROVAL

Note: Final Engineering
and Manufacturing will
proceed upon receipt of
final approval

- ☐ NOT APPROVED AS NOTED – RESUBMIT DRAWINGS
FOR APPROVAL. DO NOT PROCEED WITH FINAL
ENGINEERING OR MANUFACTURING.
- ☐ APPROVED AS NOTED – PROCEED WITH FINAL
ENGINEERING AND MANUFACTURING.
- ☐ APPROVED AS SUBMITTED – PROCEED WITH FINAL
ENGINEERING AND MANUFACTURING.

APPROVAL BY:

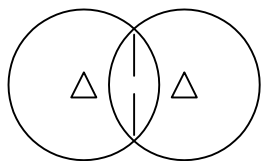
Initial

Date

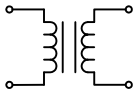
NO	DRAWING NO	REV	DRAWING DESCRIPTION
00	I808R700	0	DRAWING LIST
01	----	--	-----
02	I808R702	0	DRAWING LEGEND
03	----	--	-----
04	----	--	-----
05	I808R705	0	EQUIPMENT RATINGS
06	----	--	-----
07	----	--	-----
08	I808R708	0	THREE–LINE DIAGRAM
09	I808R709	0	MAIN CIRCUIT – AC IN/DC BUS
10	I808R710	0	MAIN CIRCUIT – DC BUS/AC OUT
11	----	--	-----
12	I808R712	0	MAIN CIRCUIT DETAIL – INVERTER
13	----	--	-----
14	----	--	-----
15	----	--	-----

NO	DRAWING NO	REV	DRAWING DESCRIPTION
16	----	--	-----
17	----	--	-----
18	I808R718	0	LOGIC INTERFACE CIRCUIT
19	----	--	-----
20	I808R720	0	CONTROL CIRCUIT
21	I808R721	0	CONTROL CIRCUIT – TEMPERATURE CONTROL
22	----	--	-----
23	----	--	-----
24	I808R724	0	ISM MODULE INTERFACE
25	----	--	-----
26	----	--	-----
27	----	--	-----
28	----	--	-----
29	I808R729	0	PCB INTERCONNECTIONS
30	I808R730	0	ENCLOSURE OUTLINE W/ZCT OPTION
31	I808R731	0	ENCLOSURE OUTLINE

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3										
2										
1										
0	03/27/14	FIRST ISSUE	EYANG	SE	RKR		CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER: I808R700	
REV	DATE	DESCRIPTION	BY	CHK	APPR					



POWER TRANSFORMER



CONTROL POWER OR
POTENTIAL TRANSFORMER



CURRENT TRANSFORMER



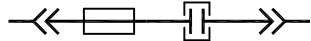
REACTOR



LIGHTNING ARRESTOR



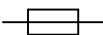
CIRCUIT BREAKER



FUSED VACUUM
DRAWOUT CONTACTOR



AIR CONTACTOR



FUSE



CAPACITOR



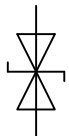
RESISTOR



DIODE



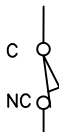
THYRISTOR



SURGE ABSORBER



INSULATED GATE
BIPOLAR TRANSISTOR (IGBT)



LIMIT SWITCH

DENOTES ACTUAL
CONTACT USED



CR1
12F

DEVICE NAME

N.O. CONTACT

DENOTES RELAY CAN BE FOUND
ON PAGE 12, COLUMN F



CR1
12F

N.C. CONTACT



IR
14K

OFF-TIME DELAY CONTACT N.C.



IR
14K

OFF-TIME DELAY CONTACT N.O.



IR1
14M

ON-TIME DELAY CONTACT N.C.



IR1
14M

ON-TIME DELAY CONTACT N.O.



IS
22S

THERMAL SWITCH N.C.



CR

RELAY COIL

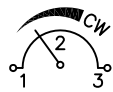
DEVICE LEGEND

NAME	
a	b 11B
a	b
a	b
a	b
a	b
MODEL #	

DENOTES b - CONTACT, USED ON
PAGE 11, COLUMN B

--- DENOTES CONTACTS UNAVAILABLE

a - DENOTES NORMALLY OPEN
b - DENOTES NORMALLY CLOSED



POTENTIOMETER



SELECTOR SWITCH



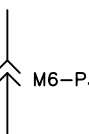
N.C. PUSH BUTTON



N.O. PUSH BUTTON

⊕ TB-10

CONTROL TERMINAL BLOCK



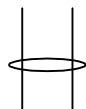
PLUG/CONNECTOR ASSEMBLY



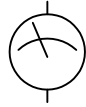
GROUND



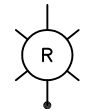
TWISTED WIRE



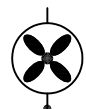
SHIELDED WIRE



METER



ILLUMINATED PUSH BUTTON
OR INDICATING LIGHT
(LETTER = COLOR)



COOLING FAN

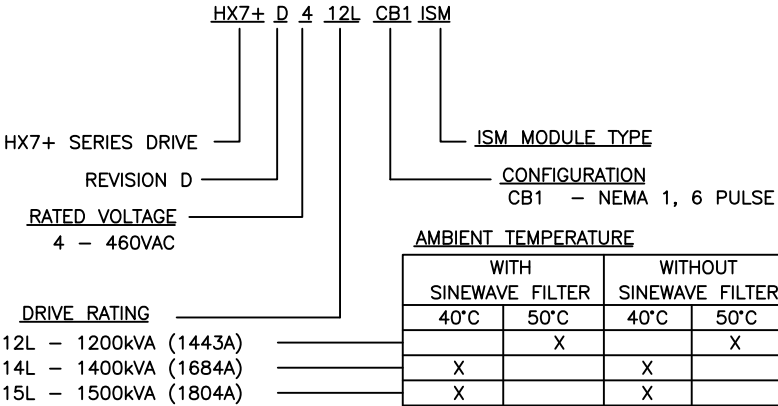
LEGEND

ACL AC LINE REACTOR
A/C AIR CONDITIONER
AM AMMETER
AS AMMETER SWITCH
ASD ADJUSTABLE SPEED DRIVE
CL CURRENT LIMITER
CPT CONTROL POWER TRANSFORMER
CT CURRENT TRANSFORMER
DBR DYNAMIC BRAKING RESISTOR
M AIR CONTACTOR
MCCB MOLDED CASE CIRCUIT BREAKER
MCP MOTOR CIRCUIT PROTECTOR
MOT MOTOR
OL THERMAL OVERLOAD
RFF RADIO FREQUENCY FILTER
VM VOLTMETER
VS VOLTMETER SWITCH
XFMR TRANSFORMER
ZCT GROUND FAULT CT

SYMBOL LEGEND

Ⓟ JUMPER
Ⓜ MECHANICAL INTERLOCK

HX7+ DRIVE MODEL NUMBER DEVELOPMENT



4					
3					
2					
1					
0	03/27/14	FIRST ISSUE	EY	SE	RKR
REV	DATE	DESCRIPTION	BY	CHK	APPR

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TITLE: DRAWING LEGEND - 1115~1670RLA 1200~1500kVA HX7+D 460VAC		REVISION: 0	SCALE:
CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER: 1808R702	

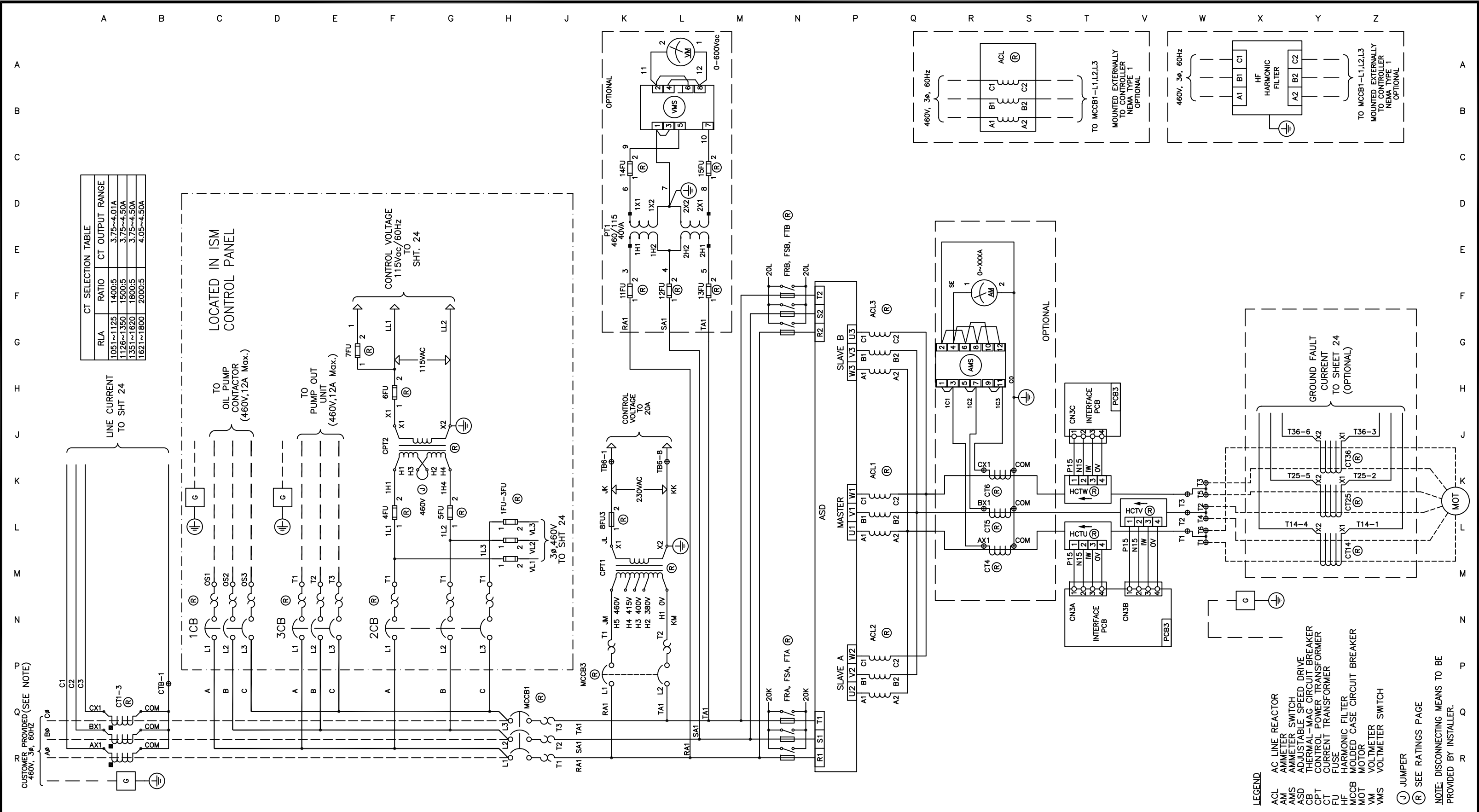
RLA/kVA RANGE	
RLA	kVA
1115~1336	1200
1337~1559	1400
1560~1670	1500

CT SELECTION TABLE		
RLA	RATIO	CT OUTPUT RANGE
1051~1125	1400:5	3.75~4.01A
1126~1350	1500:5	3.75~4.50A
1351~1620	1800:5	3.75~4.50A
1621~1800	2000:5	4.05~4.50A

(*) – OPTIONAL

PAGE	DEVICE	DESCRIPTION	1200kVA, 480V, 1443A, 1336RLA		1400kVA, 480V, 1684A, 1559RLA		1500kVA, 480V, 1804A, 1670RLA	
			TYPE	FORM RATING	TYPE	FORM RATING	TYPE	FORM RATING
8	MCCB1	CIRCUIT BREAKER	HRD63F200	600V, 1600A, 3P, 65KAIC@480V	HRD63F200	600V, 1800A, 3P, 65KAIC@480V	HRD63F200	600V, 1800A, 3P, 65KAIC@480V
	MCCB3	CPT1 PRIMARY CIRCUIT BRKR	ED62B020	600V, 20A, 2P, 25KAIC@480V	ED62B020	600V, 20A, 2P, 25KAIC@480V	ED62B020	600V, 20A, 2P, 25KAIC@480V
	8FU3	CPT1 SECONDARY FUSE	TRM 20	20A, 250V, TD, 10KAIC	TRM 20	20A, 250V, TD, 10KAIC	TRM 20	20A, 250V, TD, 10KAIC
	FRA,B~FTA,B	SEMICONDUCTOR FUSE	A060URD32TTI1250	600V, 1250A (X6)	A060URD32TTI1250	600V, 1250A (X6)	A060URD32TTI1250	600V, 1250A (X6)
	BF1	BLOWN FUSE INDICATOR	MS3V1-5BS	250V, 3A	MS3V1-5BS	250V, 3A	MS3V1-5BS	250V, 3A
	CPT1	CNTL. PWR. TRANSFORMER	GT-F852	380/400/415/460:230V, 3.3kVA	GT-F852	380/400/415/460:230V, 3.3kVA	GT-F852	380/400/415/460:230V, 3.3kVA
	ACL1~3	OUTPUT LINE REACTOR	KLR480BCB	480V, 480A, 1.5%	KLR600BCB	480V, 600A, 1.5%	KLR600BCB	480V, 600A, 1.5%
	HCTU~W	HALL CT	HAX-1500-S/SP11	1450A:4V	HAX-1600-S/SP11	1600A:4V	HAX-1800-S/SP11	1800A:4V
	1CB	OIL PUMP CIRCUIT BREAKER	HJL36015	480V, 15A	HJL36015	480V, 15A	HJL36015	480V, 15A
	2CB	CONTROL CIRCUIT BREAKER	HJL36015	600V, 15A	HJL36015	600V, 15A	HJL36015	600V, 15A
	3CB	PUMPOUT UNIT CIRCUIT BREAKER	HJL36015	480V, 15A	HJL36015	480V, 15A	HJL36015	480V, 15A
	CPT1	CNTL. PWR. TRANSFORMER	GT-F852	380/400/415/460:230V, 3.3kVA	GT-F852	380/400/415/460:230V, 3.3kVA	GT-F852	380/400/415/460:230V, 3.3kVA
	CPT2	CHILLER CNTL. PWR. TRANSFOMER	9070T3000D1	480V, 120V: 3kVA	9070T3000D1	480V, 120V: 3kVA	9070T3000D1	480V, 120V: 3kVA
	1~3FU	CNTL. PWR. FUSE.	ATM-5	600V, 5A	ATM-5	600V, 5A	ATM-5	600V, 5A
	4,5FU	CNTL. PWR. FUSE.	ATMR-15	600V, 15A	ATMR-15	600V, 15A	ATMR-15	600V, 15A
	6FU	CNTL. PWR. FUSE.	OTM-30	250V, 30A	OTM-30	250V, 30A	OTM-30	250V, 30A
	7FU	CNTL. PWR. FUSE.	OTM-10	250V, 10A	OTM-10	250V, 10A	OTM-10	250V, 10A
	CT1~3	LINE CURRENT TRANSFORMER	3P668-XXX	SEE TABLE	3P668-XXX	SEE TABLE	3P668-XXX	SEE TABLE
	(*) CT4~6	AMMETER CT	3P668-XXX	---	3P668-XXX	---	3P668-XXX	---
	(*) 11~13FU	PT PRIMARY FUSES	ATQR-2/10	600V, 0.2A	ATQR-2/10	600V, 0.2A	ATQR-2/10	600V, 0.2A
	(*) 14,15FU	PT SECONDARY FUSES	TRM-1/2	250V, 0.5A	TRM-1/2	250V, 0.5A	TRM-1/2	250V, 0.5A
9	MS1	SOFT START CONTACTOR	LC1F500U7	500A, 600V, 3P	LC1F500U7	500A, 600V, 3P	LC1F500U7	500A, 600V, 3P
	MS2	CAP DISCHARGE CONTACTOR	7001-5150-21	40A, 500VDC, 1P	7001-5150-21	40A, 500VDC, 1P	7001-5150-21	40A, 500VDC, 1P
	OHAMB	T-STAT 90°C FIXED N.C.	OHD3-90B	90°C	OHD3-90B	90°C	OHD3-90B	90°C
	OH1T~OH3T	T-STAT 75°C FIXED N.C.	OHD3-75B	75°C	OHD3-75B	75°C	OHD3-75B	75°C
	OH1B~OH3B	T-STAT 90°C FIXED N.C.	OHD3-90B	90°C	OHD3-90B	90°C	OHD3-90B	90°C
	THR1	HEATSINK THERMISTOR	590-32BP01-203	2KOHM @ 25 DEG C	590-32BP01-203	2KOHM @ 25 DEG C	590-32BP01-203	2KOHM @ 25 DEG C
	R1	SOFT START RESISTOR	WR33	0.67 OHM, 300W, 2S	WR33	0.67 OHM, 300W, 2S	WR33	0.67 OHM, 300W, 2S
	R2	CAP DISCHARGE RESISTOR	SXR2-500	500 OHM, 300W, 3S	SXR2-500	500 OHM, 300W, 3S	SXR2-500	500 OHM, 300W, 3S
	REC1A, M, B~6	DIODE PACK	DD260N16K	1600V, 260A (X18)	DD260N16K	1600V, 260A (X18)	DD260N16K	1600V, 260A (X18)
	SA1~SA3	SURGE SUPPRESSOR	B40K550	500V, 3000J	B40K550	500V, 3000J	B40K550	500V, 3000J
	DCL	DC LINK REACTOR	PC34180P101	1852A, .026mH	PC34180P111	2038A, .024mH	PC34180P121	2223A, .022mH
	9R1~9R4	RESISTOR	RS-10	30KOHM, 10W	RS-10	30KOHM, 10W	RS-10	30KOHM, 10W
	9C1	CAPACITOR	26F7502	4uF, 1500V	26F7502	4uF, 1500V	26F7502	4uF, 1500V
10~12	HCTA	HALL CT	NNE HEC-07A(AMO)	677A:4V	HEC-07A(AMO)	677A:4V	HEC-07A(AMO)	677A:4V
	CA	CAPACITOR	HCGF5AS2G123YQ	12kUF, 400VDC (4P/2S)	HCGF5AS2G123YQ	12kUF, 400VDC (4P/2S)	HCGF5AS2G123YQ	12kUF, 400VDC (4P/2S)
	FA	SEMICONDUCTOR FUSE	6,9URB000BS88	690V, 250A (X4)	6,9URB000BS88	690V, 250A (X4)	6,9URB000BS88	690V, 250A (X4)
	RA	CAP BALANCING RESISTOR	RS-10	50 KOHM, 10W (X8)	RS-10	50 KOHM, 10W (X8)	RS-10	50 KOHM, 10W (X8)
	FUP, FUN	SEMICONDUCTOR FUSE	6,9URD32TTF1000	690V, 1000A (X6)	6,9URD32TTF1000	690V, 1000A (X6)	6,9URD32TTF1000	690V, 1000A (X6)
	BF1	BLOWN FUSE INDICATOR	MS3V1-5BS	250V, 3A	MS3V1-5BS	250V, 3A	MS3V1-5BS	250V, 3A
	IGBT	IGBT	FZ600R12KE3	1200V, 600A (X18)	FZ600R12KE3	1200V, 600A (X18)	FZ600R12KE3	1200V, 600A (X18)
	PCB20~20B	SNUBBER CIRCUIT PCB	PC61910P117A	----	PC61910P117A	----	PC61910P117A	----
	RP, RN	RESISTOR	IRH100N	25 OHM, 100W	IRH100N	25 OHM, 100W	IRH100N	25 OHM, 100W
	RS1, 1A	RESISTOR	HPP/4-10R	10 OHM, 60W	HPP/4-10R	10 OHM, 60W	HPP/4-10R	10 OHM, 60W
18	EOI	OPERATOR INTERFACE	66663-V	----	66663-V	----	66663-V	----
	LL, RCH, FLX	CONTROL RELAY	RH4BUAC120V	120VAC, 10A	RH4BUAC120V	120VAC, 10A	RH4BUAC120V	120VAC, 10A
20	DS1	DOOR SWITCH	TABD311N-R	10A, 600V	TABD311N-R	10A, 600V	TABD311N-R	10A, 600V
	MST	TIMER, ON DELAY	GT5Y-2SN1A200	240VAC COIL, 0.1S-10M DELAY	GT5Y-2SN1A200	240VAC COIL, 0.1S-10M DELAY	GT5Y-2SN1A200	240VAC COIL, 0.1S-10M DELAY
	MSX	CONTROL RELAY	RR2P-U-AC240V	240VAC COIL, 7A	RR2P-U-AC240V	240VAC COIL, 7A	RR2P-U-AC240V	240VAC COIL, 7A
21	FAN1~3	HEAT SINK FAN	RH31M-4EK.2F.1R	230VAC, 50/60HZ	RH31M-4EK.2F.1R	230VAC, 50/60HZ	RH31M-4EK.2F.1R	230VAC, 50/60HZ
	C1~3	FAN RUN CAPACITOR	CMPS/X349U	350V, 4uF	CMPS/X349U	350V, 4uF	CMPS/X349U	350V, 4uF
	FAN11~13	INTERNAL FAN	148VK0281030	240VAC, 33W, 50/60HZ	148VK0281030	240VAC, 33W, 50/60HZ	148VK0281030	240VAC, 33W, 50/60HZ
	NK1~3	SURGE SUPPRESSOR	RFM25M224KD	250VAC, 0.22uF, 220 OHM	RFM25M224KD	250VAC, 0.22uF, 220 OHM	RFM25M224KD	250VAC, 0.22uF, 220 OHM
	FAN21~26	ENCLOSURE FAN	148VK0281030	240VAC, 33W, 50/60HZ	148VK0281030	240VAC, 33W, 50/60HZ	148VK0281030	240VAC, 33W, 50/60HZ
	NK4~5, 8~11	SURGE SUPPRESSOR	RFM25M224KD	250VAC, 0.22uF, 220 OHM	RFM25M224KD	250VAC, 0.22uF, 220 OHM	RFM25M224KD	250VAC, 0.22uF, 220 OHM
	TCC	CONTACTOR	LC1D09U7	240V COIL, 9A, 600V	LC1D09U7	240V COIL, 9A, 600V	LC1D09U7	240V COIL, 9A, 600V
	PS1	POWER SUPPLY	RS-25-15	5, +15, -15V, 25W	RS-25-15	5, +15, -15V, 25W	RS-25-15	5, +15, -15V, 25W
	20R1	RESISTOR	MR25R-5K11-F50	5.11KOHM, .25W	MR25R-5K11-F50	5.11KOHM, .25W	MR25R-5K11-F50	5.11KOHM, .25W
	VSR, STR	CONTROL RELAY	RH4BUAC120V	120VAC, 10A	RH4BUAC120V	120VAC, 10A	RH4BUAC120V	120VAC, 10A
24	HPR	CONTROL RELAY	RH4BUAC24V	24VAC, 10A	RH4BUAC24V	24VAC, 10A	RH4BUAC24V	24VAC, 10A
	24PL1~3	PILOT LIGHT	ZB5-AV3	120V:6V	ZB5-AV3	120V:6V	ZB5-AV3	120V:6V
29	PCB1	CONTROL BOARD	56000V	----	56000V	----	56000V	----
	PCB2~2B	GATE DRIVE BOARD	42755P4FX	----	42755P4FX	----	42755P4FX	----
	PCB3	INTERFACE BOARD	PC61910P120C	----	PC61910P120C	----	PC61910P120C	----
	PCB4~4E	G-E PROTECT CIRCUIT BOARD	38383C	----	38383C	----	38383C	----
	PCB5	TERMINAL BOARD	48570A	----	48570A	----	48570A	----
	PCB5A	JUMPER BOARD	50611A	----	50611A	----	50611A	----
	PCB11	SPEED SEARCH BOARD	55594A	----	55594A	----	55594A	----

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3									0	
2										
1										
0	03/27/14	FIRST ISSUE	EY	SE	RKR		CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER:	
REV	DATE	DESCRIPTION	BY	CHK	APPR				1808R705	

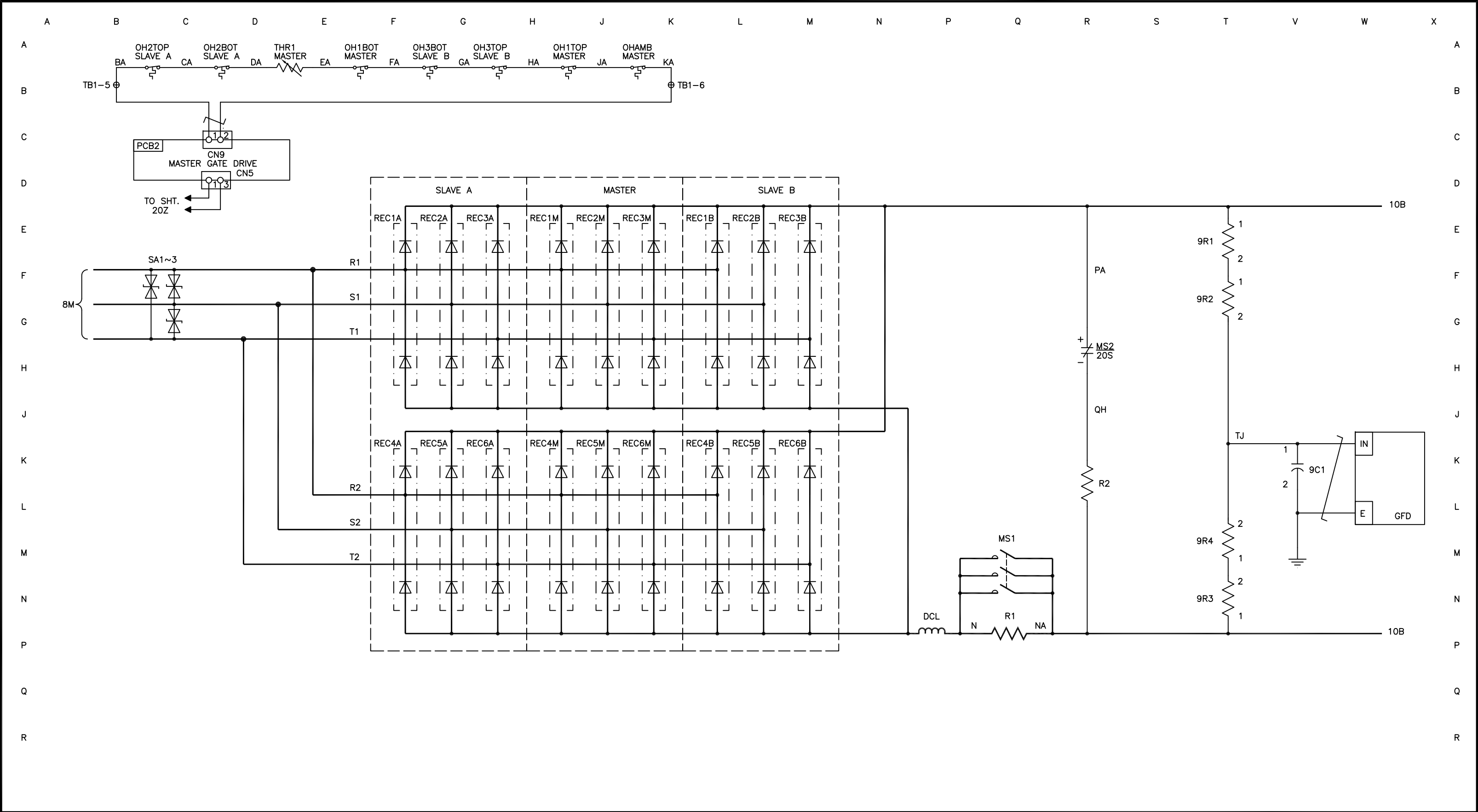


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0	03/27/14	FIRST ISSUE	EY	SE	RKR
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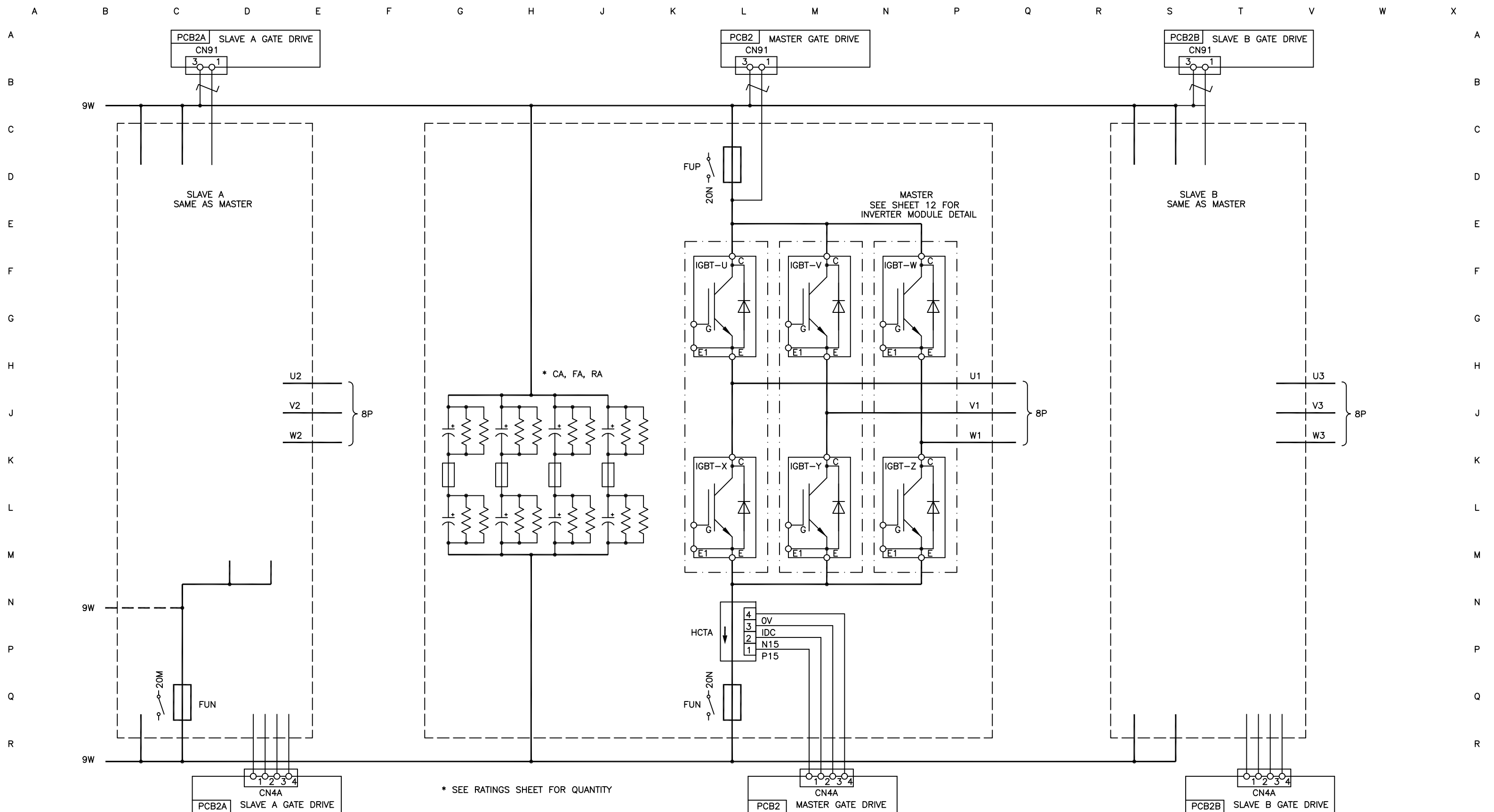
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MADE IN HOUSTON, TEXAS U.S.A.

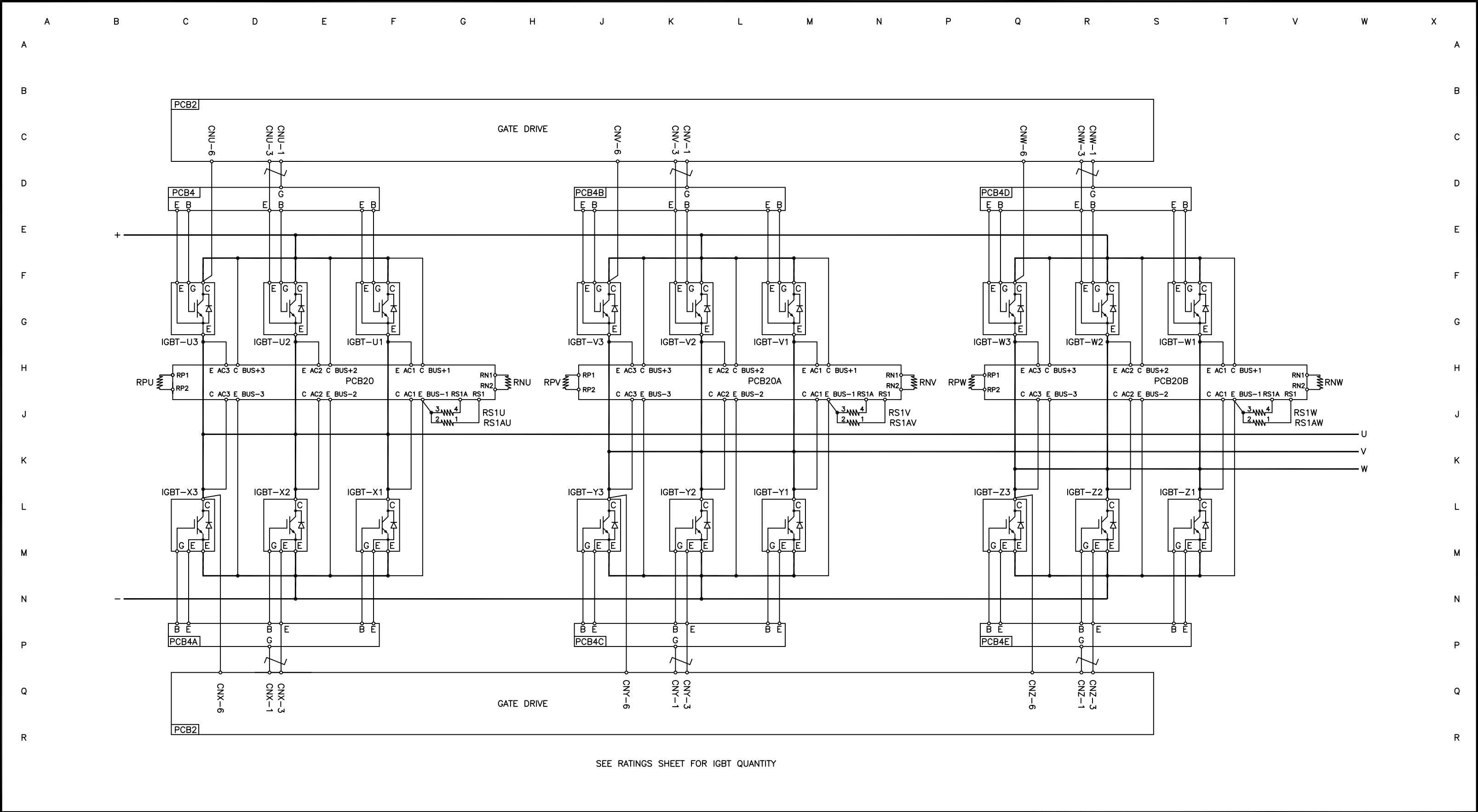
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TITLE: THREE-LINE DIAGRAM - 1115~1670RLA 1200~1500kVA HX7+D 460VAC		REVISION: 0	SCALE:
CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER: 1808R708	

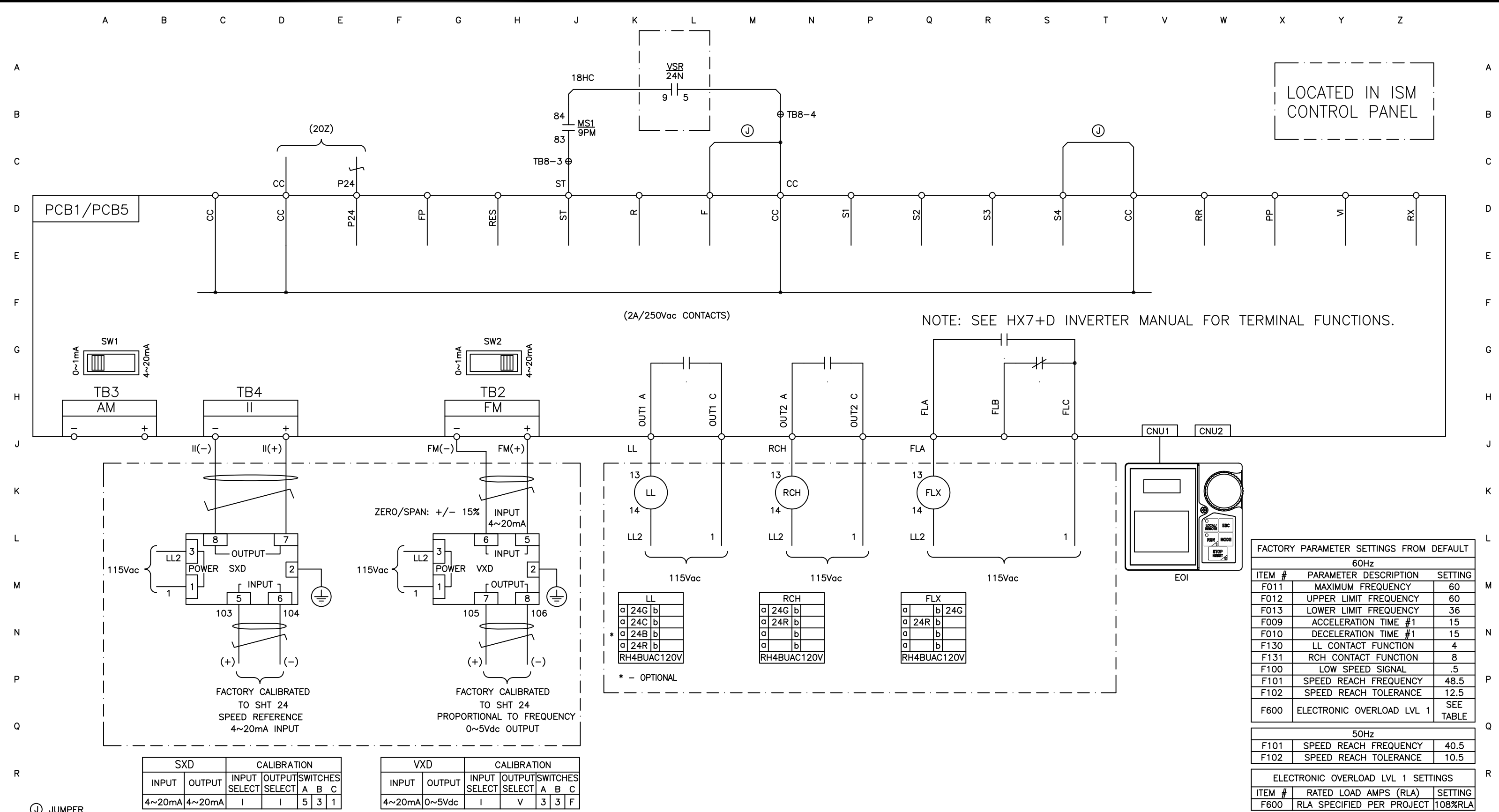


4						TOSHIBA TOSHIBA INTERNATIONAL CORPORATION MADE IN HOUSTON, TEXAS U.S.A. THIS MATERIAL IS THE EXCLUSIVE PROPERTY OF TOSHIBA INTERNATIONAL CORPORATION AND SHALL NOT BE REPRODUCED, USED, OR DISCLOSED TO OTHERS UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED.	TITLE: AC IN/DC BUS CIRCUIT – 1115~1670RLA 1200~1500kVA HX7+D 460VAC		REVISION: 0	SCALE:
3										
2										
1										
0	03/27/14	FIRST ISSUE	EY	SE	RKR		CUSTOMER:		PROJECT NUMBER:	DRAWING NUMBER: 1808R709
REV	DATE	DESCRIPTION	BY	CHK	APPR					





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3										
2										
1										
0	03/27/14	FIRST ISSUE	EY	SE	RKR		CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER: 1808R712	
REV	DATE	DESCRIPTION	BY	CHK	APPR					



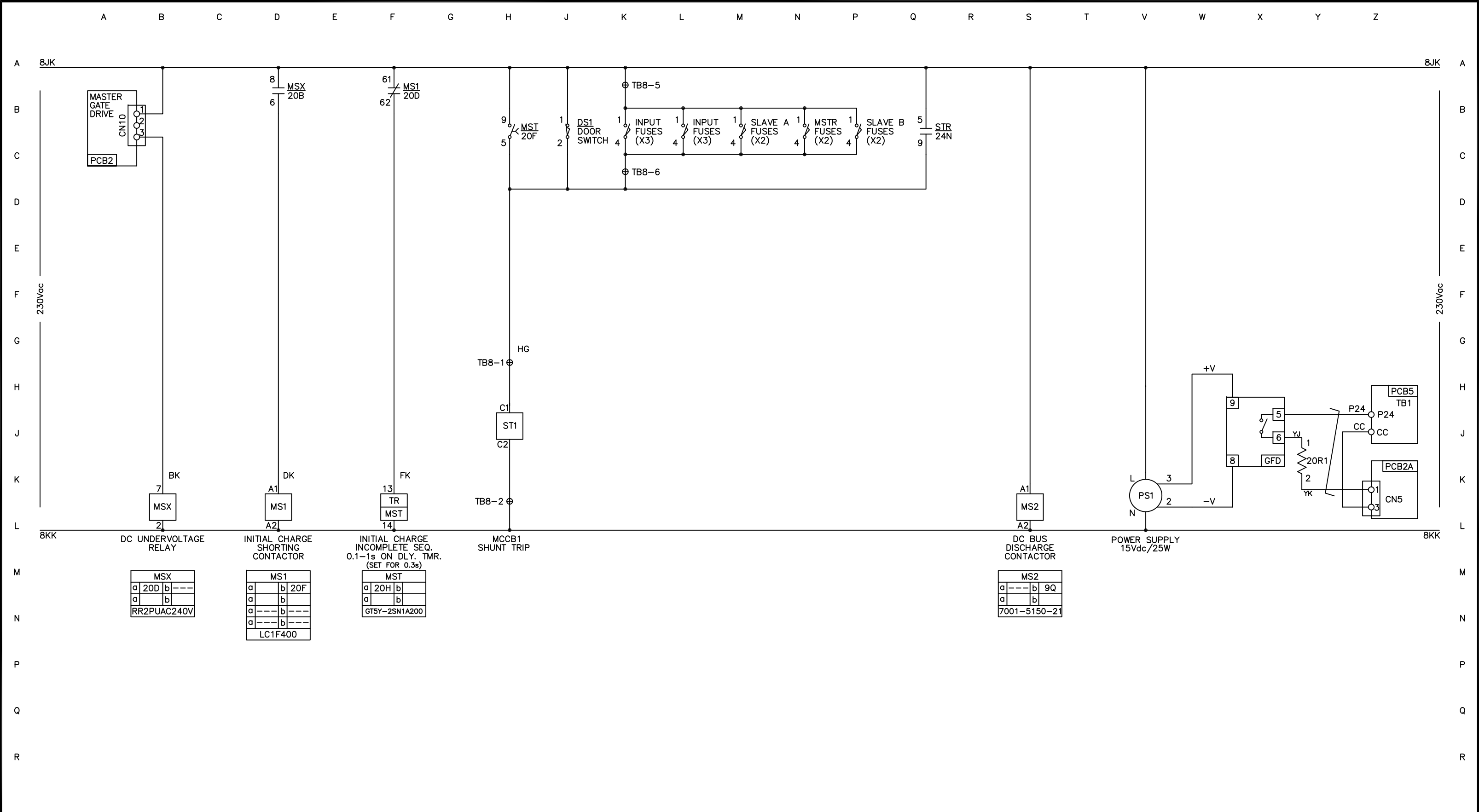
4					
3					
2					
1					
0	03/27/14	FIRST ISSUE	EY	SE	RKR
REV	DATE	DESCRIPTION	BY	CHK	APPR

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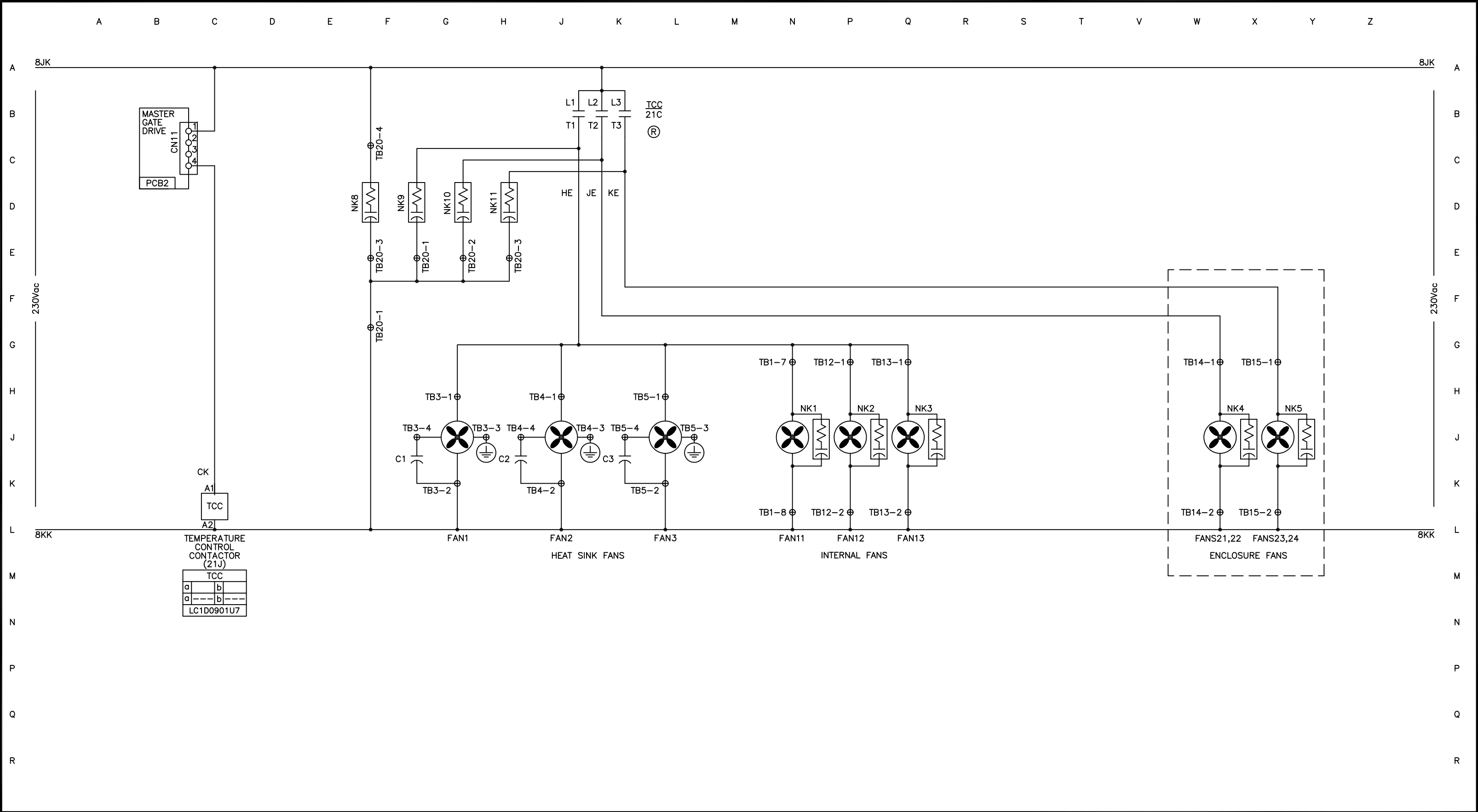
THIS MATERIAL IS THE EXCLUSIVE PROPERTY OF TOSHIBA INTERNATIONAL CORPORATION AND SHALL NOT BE REPRODUCED, USED, OR DISCLOSED TO OTHERS UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED.

TITLE: LOGIC INTERFACE CIRCUIT – 1115~1670RLA 1200~1500kVA HX7+D 460VAC	
CUSTOMER:	PROJECT NUMBER:

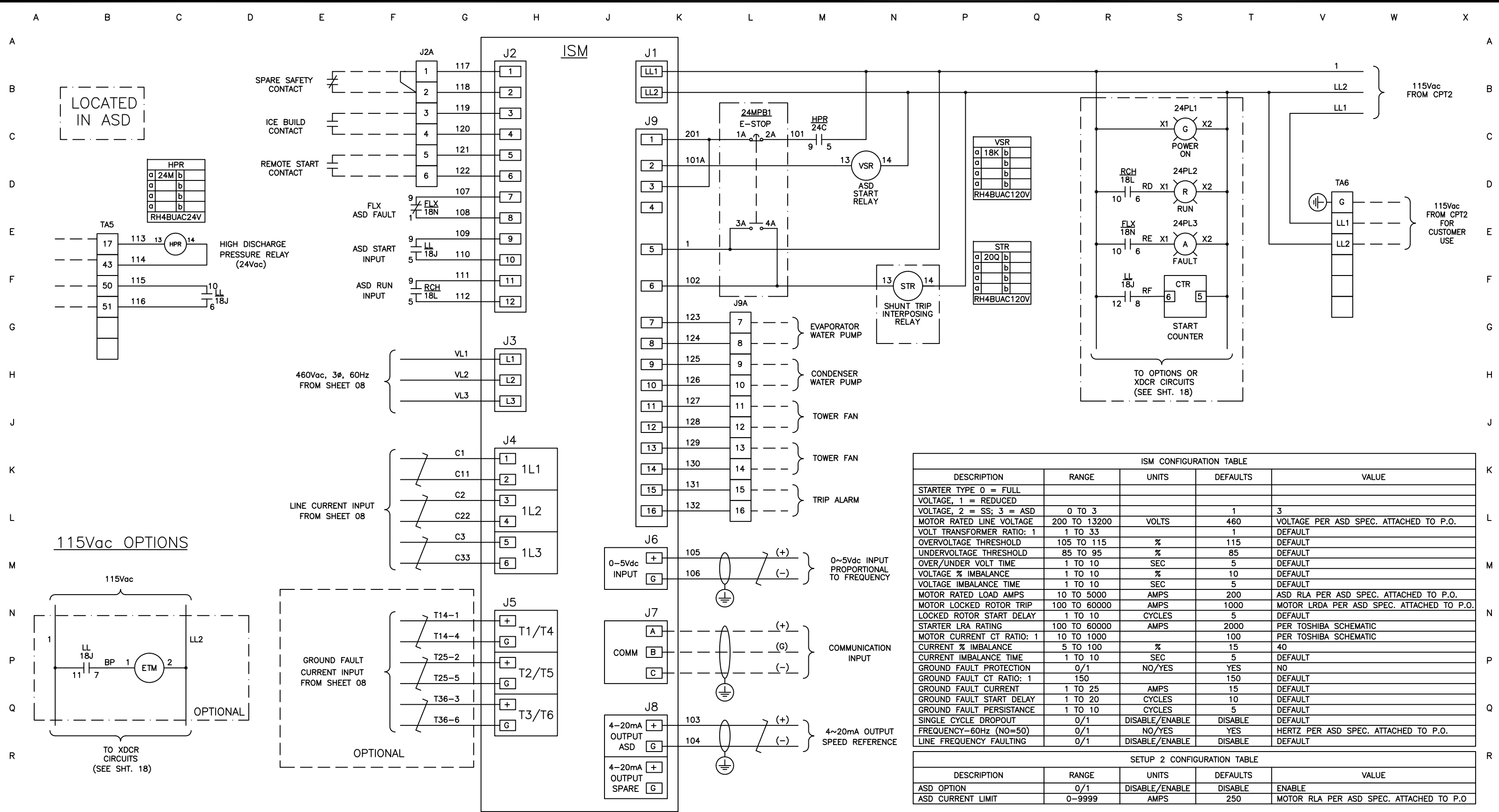
REVISION: 0	SCALE:
DRAWING NUMBER: 1808R718	



4						TOSHIBA TOSHIBA INTERNATIONAL CORPORATION MADE IN HOUSTON, TEXAS U.S.A. THIS MATERIAL IS THE EXCLUSIVE PROPERTY OF TOSHIBA INTERNATIONAL CORPORATION AND SHALL NOT BE REPRODUCED, USED, OR DISCLOSED TO OTHERS UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED.	TITLE: CONTROL CIRCUIT – 1115~1670RLA 1200~1500kVA HX7+D 460VAC		REVISION: 0	SCALE:
3										
2							DRAWING NUMBER: 1808R720			
1										
0	03/27/14	FIRST ISSUE	EY	SE	RKR		CUSTOMER:	PROJECT NUMBER:		
REV	DATE	DESCRIPTION	BY	CHK	APPR					



4						TOSHIBA TOSHIBA INTERNATIONAL CORPORATION MADE IN HOUSTON, TEXAS U.S.A. THIS MATERIAL IS THE EXCLUSIVE PROPERTY OF TOSHIBA INTERNATIONAL CORPORATION AND SHALL NOT BE REPRODUCED, USED, OR DISCLOSED TO OTHERS UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED.	TITLE: TEMP CONTROL CIRCUIT- 1115~1670RLA 1200~1500kVA HX7+D 460VAC		REVISION:	SCALE:
3					0					
2										
1										
0	03/27/14	FIRST ISSUE	EY	SE	RKR		CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER:	
REV	DATE	DESCRIPTION	BY	CHK	APPR			1808R721		



ISM CONFIGURATION TABLE				
DESCRIPTION	RANGE	UNITS	DEFAULTS	VALUE
STARTER TYPE 0 = FULL VOLTAGE, 1 = REDUCED				
VOLTAGE, 2 = SS; 3 = ASD	0 TO 3		1	3
MOTOR RATED LINE VOLTAGE	200 TO 13200	VOLTS	460	VOLTAGE PER ASD SPEC. ATTACHED TO P.O.
VOLT TRANSFORMER RATIO: 1	1 TO 33		1	DEFAULT
OVERVOLTAGE THRESHOLD	105 TO 115	%	115	DEFAULT
UNDERVOLTAGE THRESHOLD	85 TO 95	%	85	DEFAULT
OVER/UNDER VOLT TIME	1 TO 10	SEC	5	DEFAULT
VOLTAGE % IMBALANCE	1 TO 10	%	10	DEFAULT
VOLTAGE IMBALANCE TIME	1 TO 10	SEC	5	DEFAULT
MOTOR RATED LOAD AMPS	10 TO 5000	AMPS	200	ASD RLA PER ASD SPEC. ATTACHED TO P.O.
MOTOR LOCKED ROTOR TRIP	100 TO 60000	AMPS	1000	MOTOR LRDA PER ASD SPEC. ATTACHED TO P.O.
LOCKED ROTOR START DELAY	1 TO 10	CYCLES	5	DEFAULT
STARTER LRA RATING	100 TO 60000	AMPS	2000	PER TOSHIBA SCHEMATIC
MOTOR CURRENT CT RATIO: 1	10 TO 1000		100	PER TOSHIBA SCHEMATIC
CURRENT % IMBALANCE	5 TO 100	%	15	40
CURRENT IMBALANCE TIME	1 TO 10	SEC	5	DEFAULT
GROUND FAULT PROTECTION	0/1	NO/YES	YES	NO
GROUND FAULT CT RATIO: 1	150		150	DEFAULT
GROUND FAULT CURRENT	1 TO 25	AMPS	15	DEFAULT
GROUND FAULT START DELAY	1 TO 20	CYCLES	10	DEFAULT
GROUND FAULT PERSISTANCE	1 TO 10	CYCLES	5	DEFAULT
SINGLE CYCLE DROPOUT	0/1	DISABLE/ENABLE	DISABLE	DEFAULT
FREQUENCY-60Hz (NO=50)	0/1	NO/YES	YES	HERTZ PER ASD SPEC. ATTACHED TO P.O.
LINE FREQUENCY FAULTING	0/1	DISABLE/ENABLE	DISABLE	DEFAULT

SETUP 2 CONFIGURATION TABLE				
DESCRIPTION	RANGE	UNITS	DEFAULTS	VALUE
ASD OPTION	0/1	DISABLE/ENABLE	DISABLE	ENABLE
ASD CURRENT LIMIT	0-9999	AMPS	250	MOTOR RLA PER ASD SPEC. ATTACHED TO P.O.

4					
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0	03/27/14	FIRST ISSUE	EY	SE	RKR
REV	DATE	DESCRIPTION	BY	CHK	APPR

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TITLE: ISM MODULE INTERFACE - 1115~1670RLA 1200~1500kVA HX7+D 460VAC

CUSTOMER: PROJECT NUMBER: DRAWING NUMBER: 1808R724

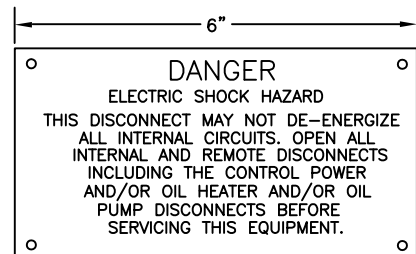
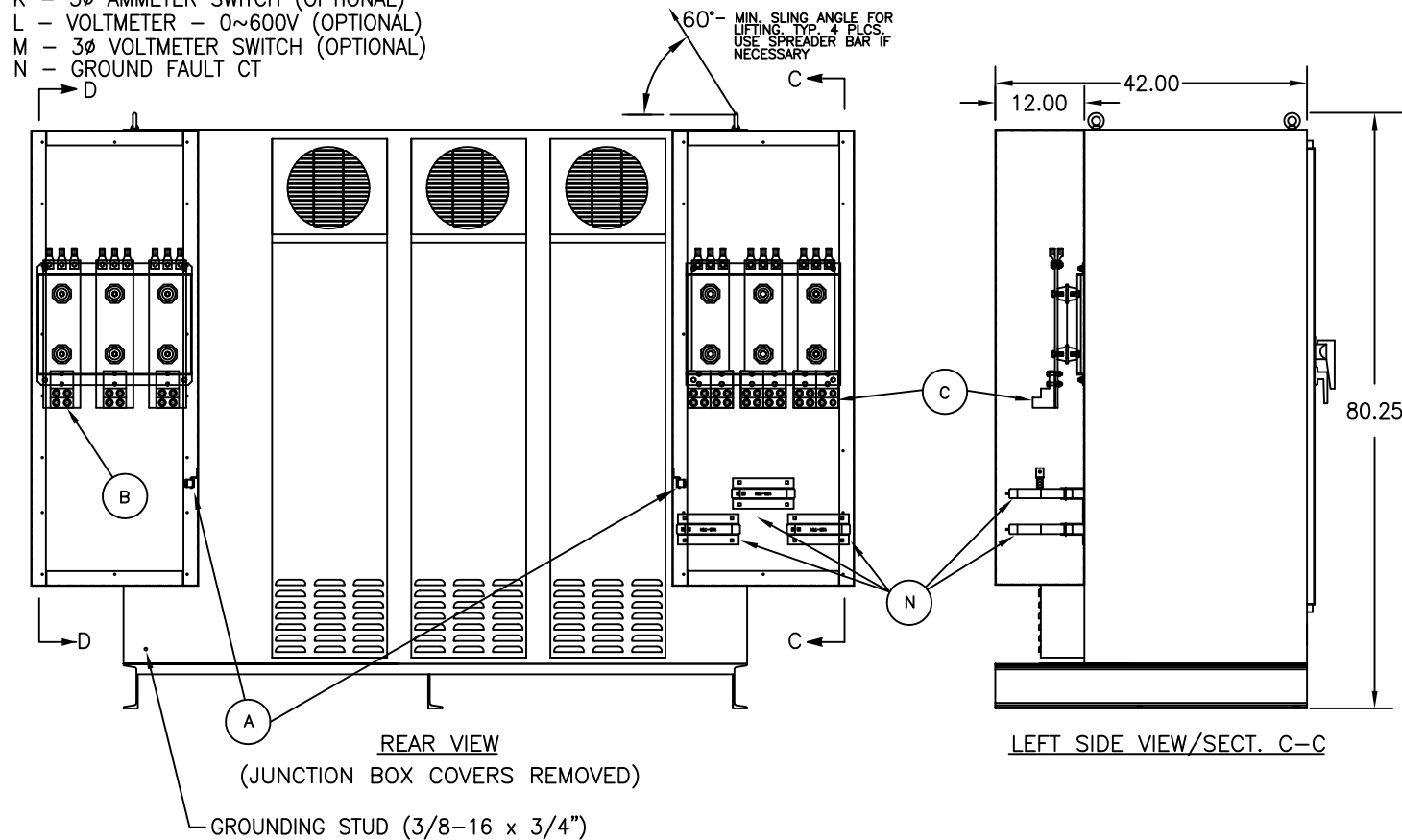
REVISION: 0 SCALE:

LEGEND

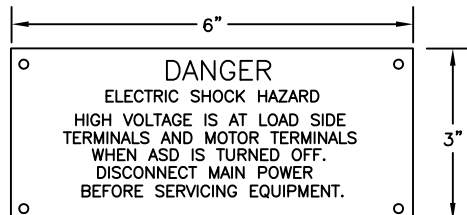
- A - GROUND LUG (1/0~350MCM)
B - INPUT TERMINATIONS PER PHASE
1200kVA: 4 x (1/0 ~ 750MCM)
1400, 1500kVA: 6 x (1/0~750MCM)
(75°C TYPES RHW, THHW, THW, THWN, XHHW)
C - OUTPUT TERMINATIONS PER PHASE
1200kVA: 4 x (1/0~750MCM)
1400, 1500kVA: 6 x (1/0~750MCM)
(75°C TYPES RHW, THHW, THW, THWN, XHHW)
D - GREEN PILOT LIGHT "POWER ON"
E - RED PILOT LIGHT "RUN"
F - AMBER PILOT LIGHT "FAULT"
G - PUSHBUTTON - "EMERGENCY STOP"
H - START COUNTER
I - ELAPSED TIME METER (OPTIONAL)
J - AMMETER - 0~XXA (OPTIONAL)
K - 3Ø AMMETER SWITCH (OPTIONAL)
L - VOLTMETER - 0~600V (OPTIONAL)
M - 3Ø VOLTMETER SWITCH (OPTIONAL)
N - GROUND FAULT CT

NOTES

- DIMENSIONS ARE IN INCHES.
- DIMENSIONS FOR REFERENCE ONLY.
- WEIGHT: APPROX. 4185lbs (1903kg)
- COLOR: GRAY
- INPUT/OUTPUT TERMINATION BENDING
SPACE IN ACCORDANCE WITH NEC TABLE 312.6(B)

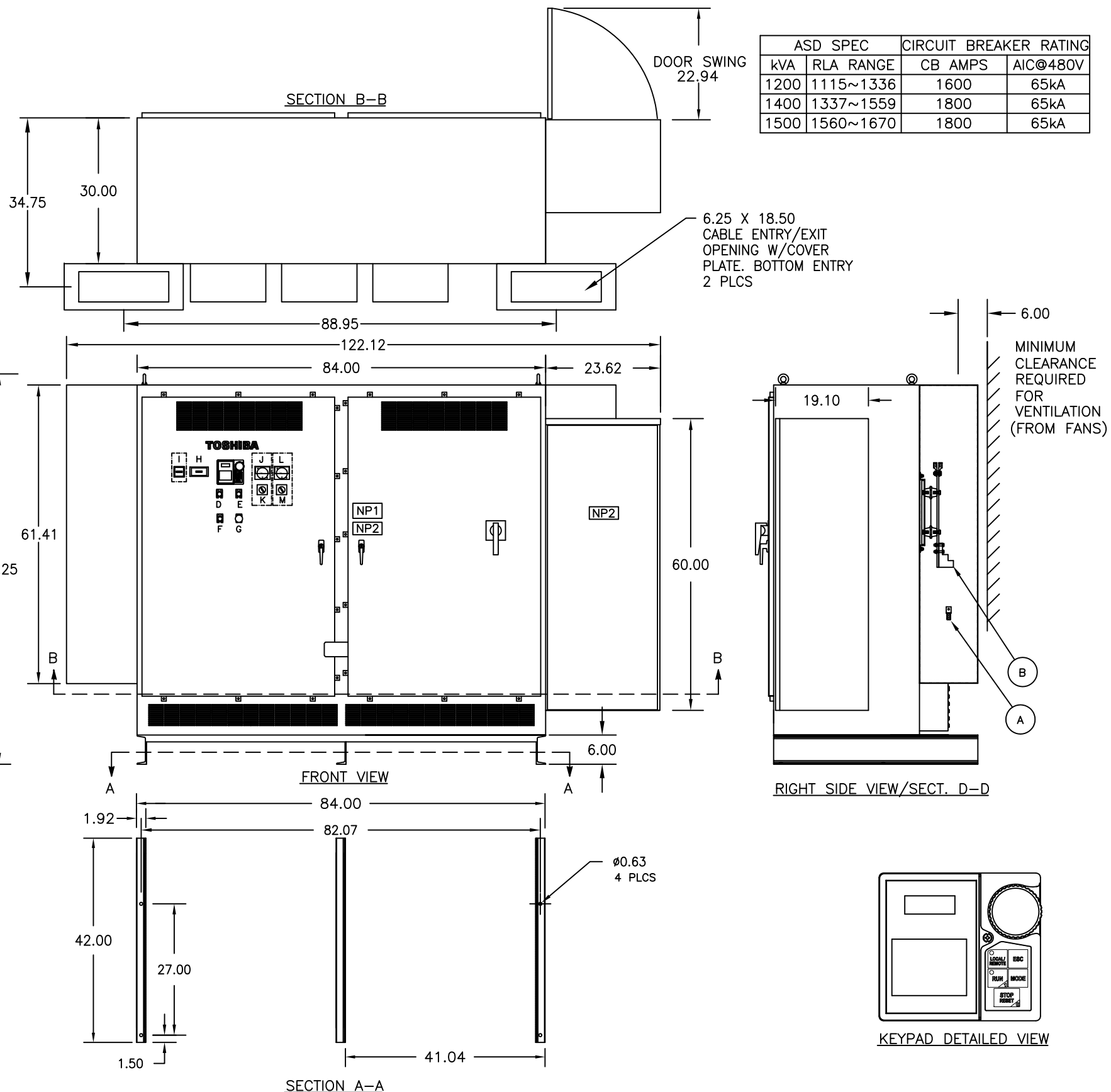


NAMEPLATE 1



NAMEPLATE 2

NOTE: NAMEPLATES TO BE RED WITH WHITE LETTERS. FIRST LINE TO BE 3/8". ALL OTHER LINES TO BE 3/16".



ASD SPEC			CIRCUIT BREAKER RATING	
kVA	RLA RANGE	CB AMPS	AIC@480V	
1200	1115~1336	1600	65kA	
1400	1337~1559	1800	65kA	
1500	1560~1670	1800	65kA	

4					
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2					
1					
0	03/27/14	FIRST ISSUE	EY	SE	RKR
REV	DATE	DESCRIPTION	BY	CHK	APPR

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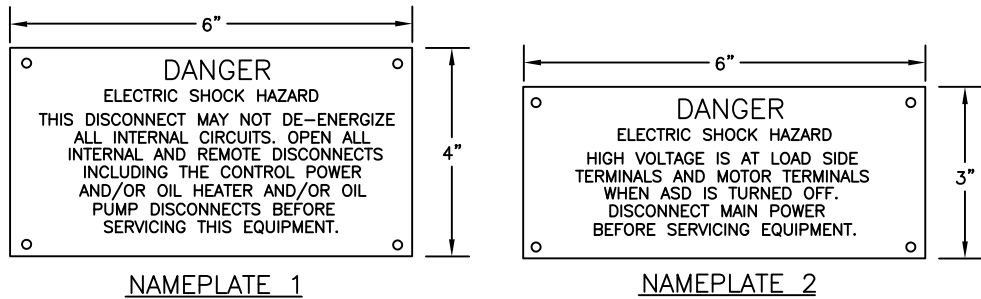
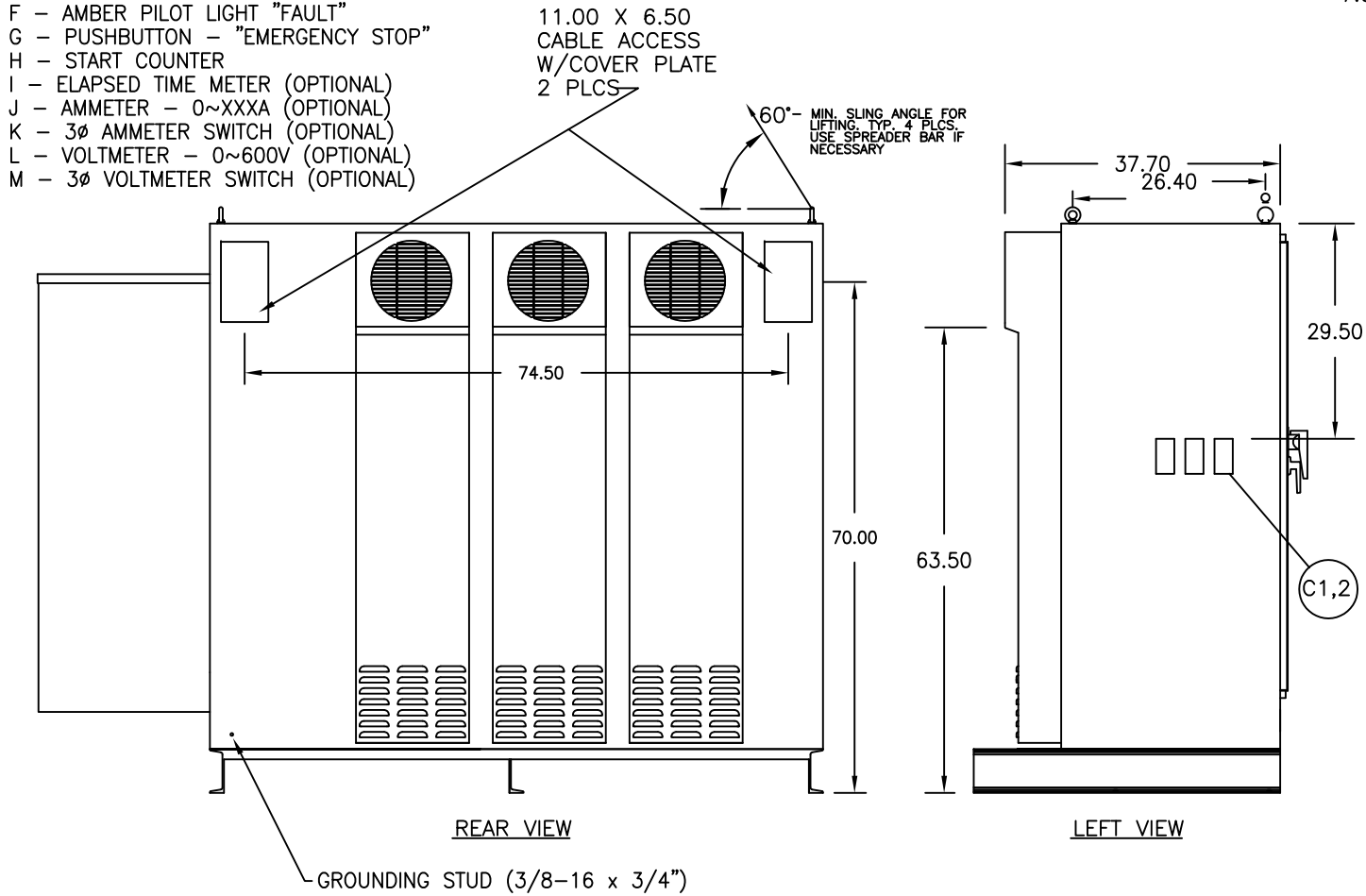
TITLE: ENCL OUTLINE, ZCT OPTION - 1115~1670RLA 1200~1500kVA HX7+D 460VAC		REVISION: 0	SCALE: 1.0=26.0
CUSTOMER:	PROJECT NUMBER:	DRAWING NUMBER: 1808R730	

LEGEND

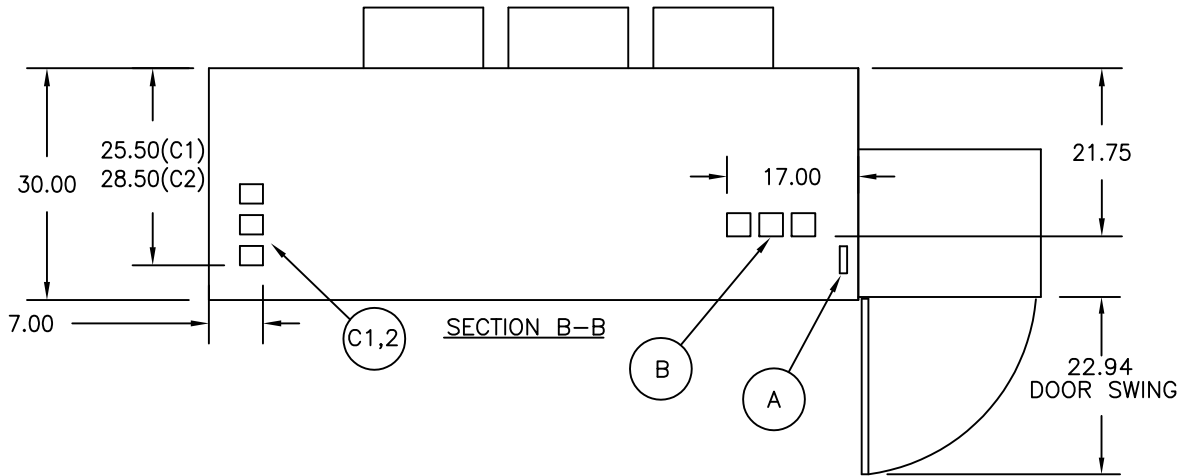
- A - GROUND LUG (1/0~350MCM)
B - INPUT TERMINATIONS PER PHASE
1200kVA: 4 x (1/0~750MCM)
1400, 1500kVA: 6 x (1/0~750MCM)
(75°C TYPES RHW, THHW, THW, THWN, XHHW)
C - OUTPUT TERMINATIONS PER PHASE
1200kVA: 4 x (1/0~750MCM)
1400, 1500kVA - 6 x (1/0~750MCM)
(75°C TYPES RHW, THHW, THW, THWN, XHHW)
D - GREEN PILOT LIGHT "POWER ON"
E - RED PILOT LIGHT "RUN"
F - AMBER PILOT LIGHT "FAULT"
G - PUSHBUTTON - "EMERGENCY STOP"
H - START COUNTER
I - ELAPSED TIME METER (OPTIONAL)
J - AMMETER - 0~XXXX (OPTIONAL)
K - 3Ø AMMETER SWITCH (OPTIONAL)
L - VOLTMETER - 0~600V (OPTIONAL)
M - 3Ø VOLTMETER SWITCH (OPTIONAL)

NOTES

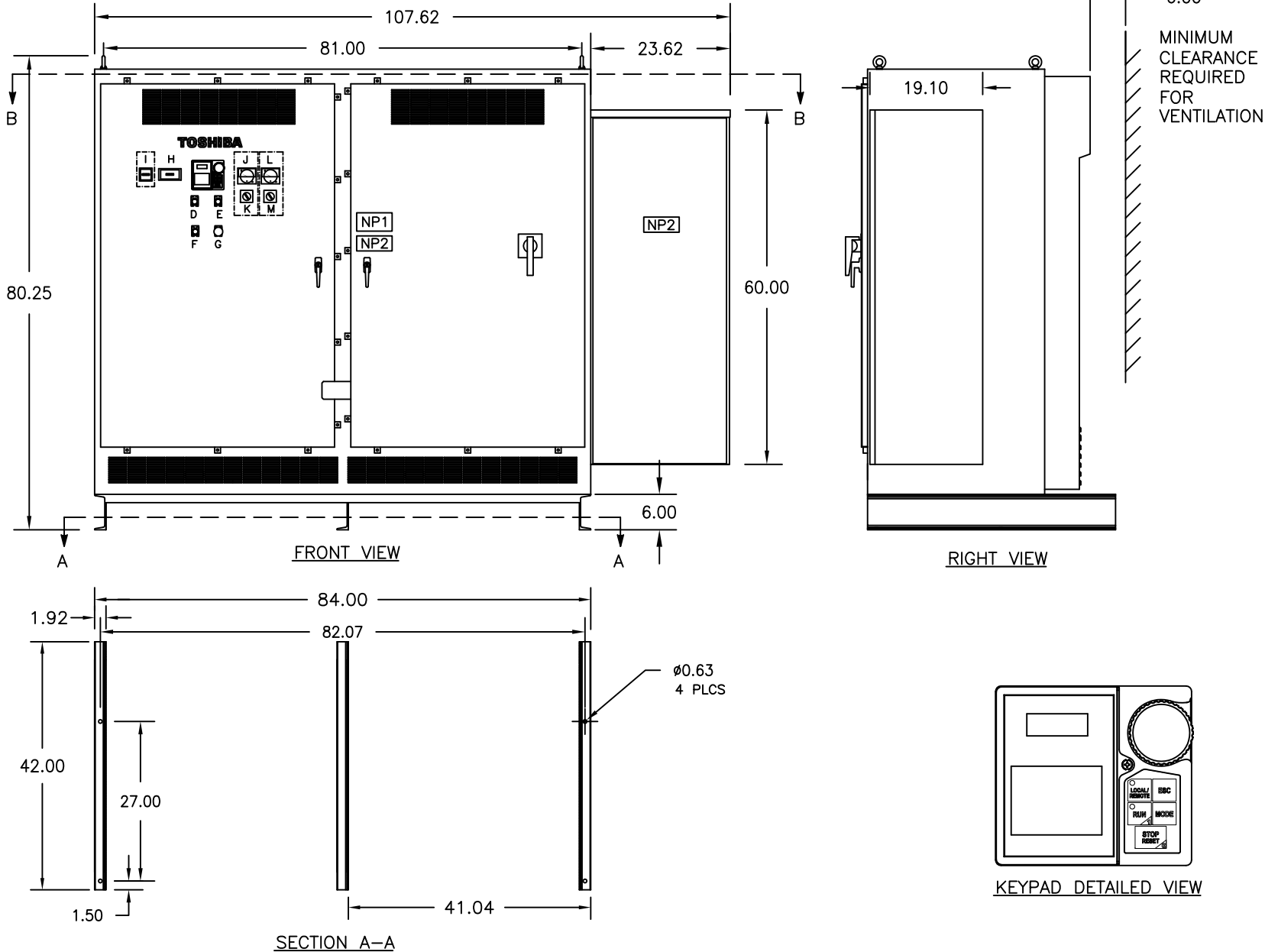
- DIMENSIONS ARE IN INCHES.
- DIMENSIONS FOR REFERENCE ONLY.
- WEIGHT: APPROX. 3850lbs (1750kg)
- COLOR: GRAY
- INPUT/OUTPUT TERMINATION BENDING
SPACE IN ACCORDANCE WITH NEC TABLE 312.6(B)



NOTE: NAMEPLATES TO BE RED WITH WHITE LETTERS. FIRST
LINE TO BE 3/8". ALL OTHER LINES TO BE 3/16".



ASD SPEC		CIRCUIT BREAKER RATING	
kVA	RLA RANGE	CB AMPS	AIC@480V
1200	1115~1336	1600	65kA
1400	1337~1559	1800	65kA
1500	1560~1670	1800	65kA



4					
3					
2					
1					
0	03/27/14	FIRST ISSUE	EY	SE	RKR
REV	DATE	DESCRIPTION	BY	CHK	APPR

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TITLE:
ENCLOSURE OUTLINE-N1 - 1115~1670RLA
1200~1500kVA HX7+D 460VAC

CUSTOMER:

PROJECT NUMBER:

REVISION:

0

SCALE:

1.0=26.0

DRAWING NUMBER:

1808R731