

Order No: _____ Customer: _____
 End User: _____
 Application: _____

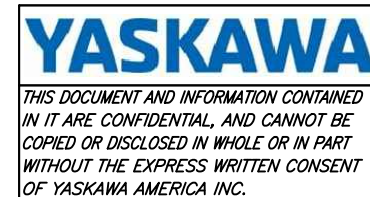
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9	CONTROL POWER CIRCUIT (6) – ANALOG INPUTS & OUTPUTS	
10	CONTROL POWER CIRCUIT (7) – CUSTOMER INPUTS AND OUTPUTS	
11	ELECTRICAL COMPONENT LIST	02

SECTION DESIGNATOR	NAME	DESCRIPTION
(IM)	▲ INDUCTION MOTOR	4160V 3φ 60Hz
		HP A RPM
(DISC)	▲ MAIN POWER DISCONNECT	2400V 3φ 60Hz
(CI)	▲ CONTROL INTERFACE	240V AC @ 1.5kVA
		120V AC @ 300VA
(XFMR)	TRANSFORMER CABINET	375kVA 2400V/1200V 60Hz
		2400V UNIT INPUT 60HZ
(CELL)	CELL CABINET	DRIVE: MV2UA6DA039E1ABB MV2UA6DA039E2ABB
		MODEL: MV2UA6DA039E1ABB MV2UA6DA039E2ABB
		300HP 39A
		4160V UNIT OUTPUT 60HZ
(CTRL)	CONTROL CABINET	240V AC / 120V AC
(SWG)	SWITCH GEAR UNIT	DISC. SWITCH: 400A, 5kV E-RATED FUSE: 80A, 5.5kV CONTACTOR: 400A. 7.2kV

SUMMARY OF NOTES:

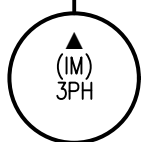
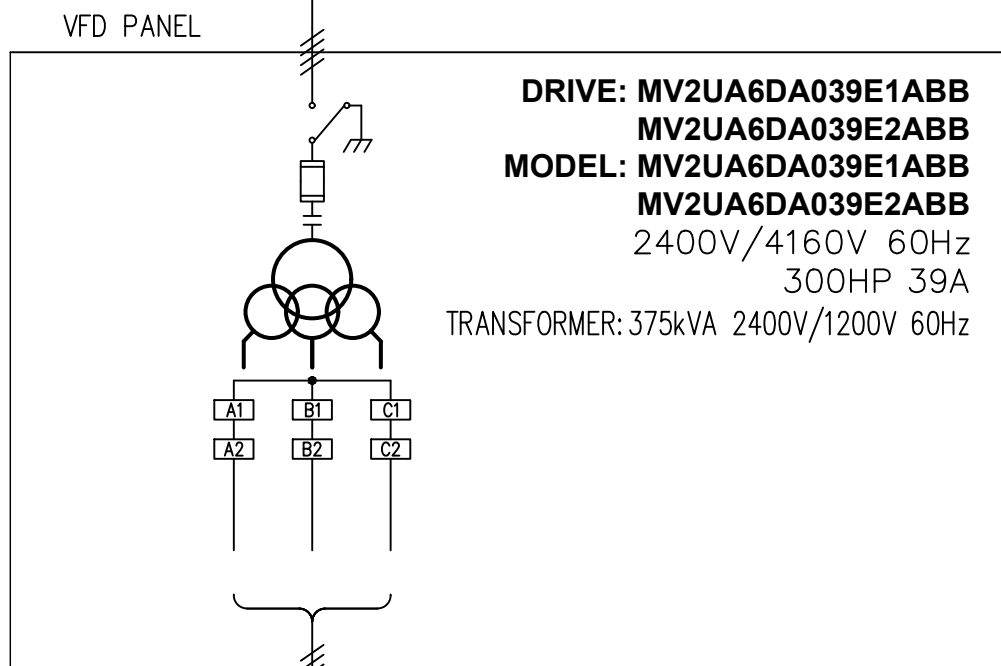
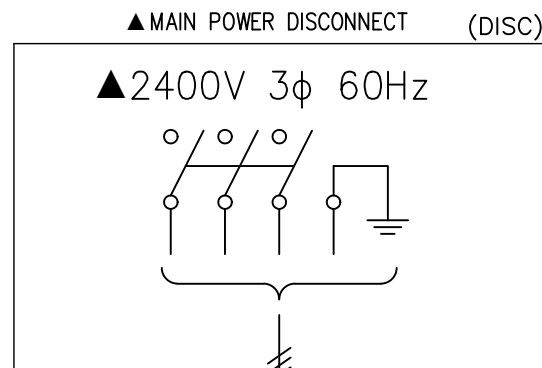
1. CLASS A GROUND RESISTANCE: BELOW 10 OHM \ll
2. CLASS D GROUND RESISTANCE: BELOW 100 OHM \pm
3. ▲ CUSTOMER TO PROVIDE/USE
4. SEE PAGE 48–54 FOR PARAMETER SETTING DETAILS
5. (#) ELECTRICAL COMPONENT LIST REFERENCE NUMBER

REV	DESCRIPTION	EC #	DRAWN BY	DATE
02	UPDATE FAN SD PART#, FIX PRG & PLS OPS, CORRECT FAN TO FAN FAULT PCB WIRING, DI-B DESCRIPTION, IN CONTACT REF LOCATION	8854	K.SCHMIDLING	08/01/18
01	NEW PS, CORRECTED CTRL VOLTAGE TERM BLKS, WPD ALARM TEXT, WPD ALARM TEXT, SG GND, & SG DOUBLE N/O SW CORRECTION	8067	C.JETT	01/17/18
00	INITIAL RELEASE	-	E.WEISPFENNING	11/01/16



DRAWN: E.WEISPFENNING	DATE: 11/01/16	TITLE: SCHEMATIC MV 300HP 39A W/ SG 240/120V
CHECKED: M.SEVILLA	DATE: 11/01/16	MATERIAL # N/A
TECH: -	DATE: -	SIZE B
APPROVED: B.SCHOWANSON	DATE: 11/01/16	REVISION 02
ORIGINAL DESIGN: E.WEISPFENNING	DATE: 10/11/16	PAGE 1 OF 11
		DRAWING #: DS.MV1K.N1.AD.10I.04

ONE LINE DIAGRAM

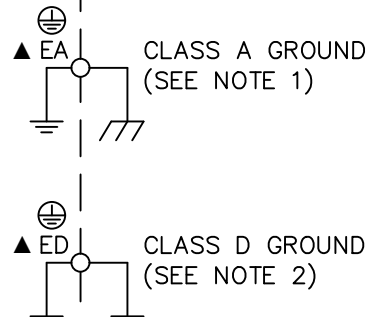
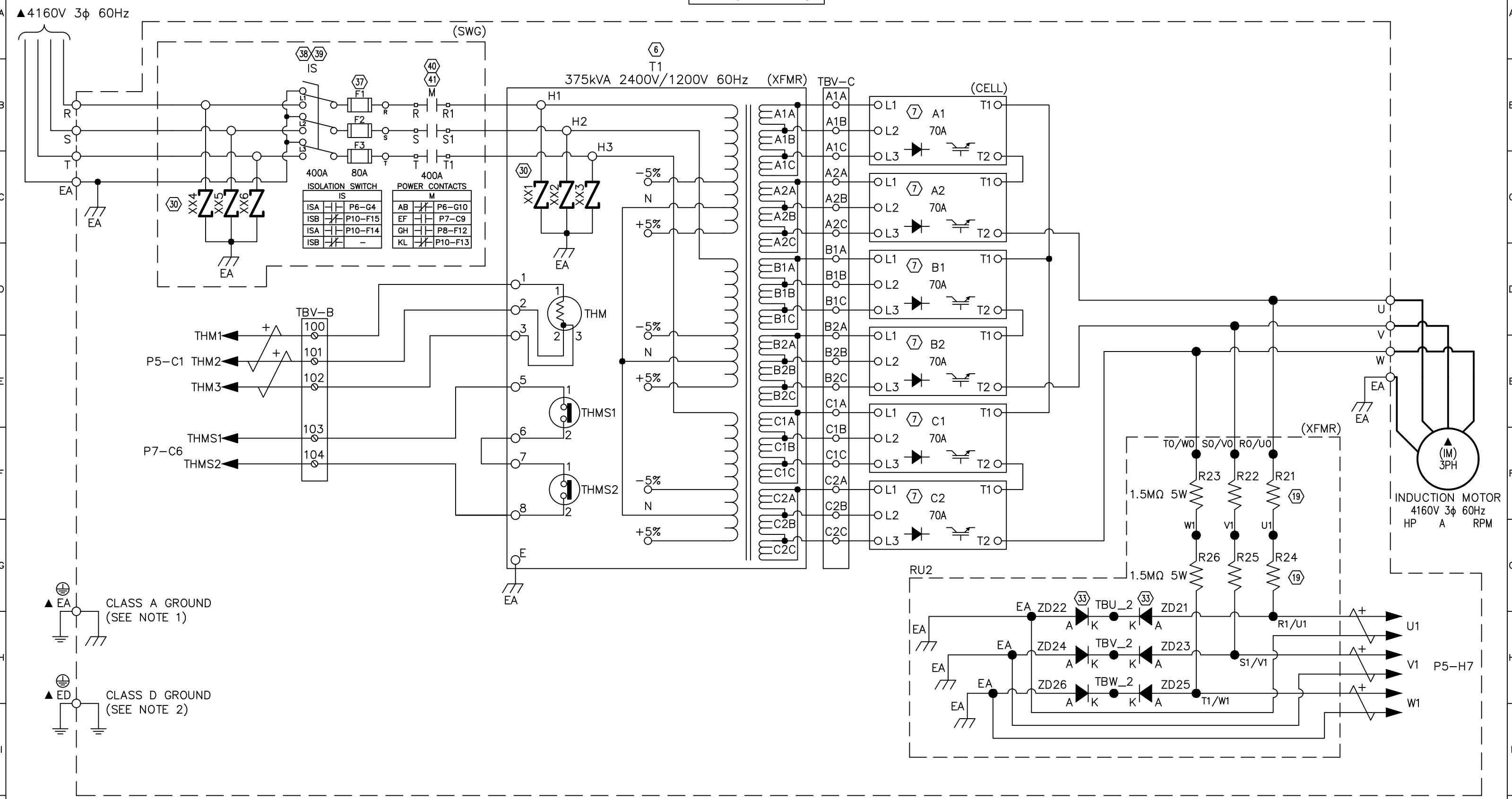


INDUCTION MOTOR
4160V 3φ 60Hz
HP A RPM

NOTES:
3. ▲ CUSTOMER TO PROVIDE/USE

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	TECH: -	DATE: -	SIZE B	REVISION 02	PAGE 2 OF 11
	APPROVED: B.SCHOWANSON	DATE: 11/01/16	DRAWING #: DS.MV1K.N1.AD.10I.04		
	ORIGINAL DESIGN: E.WEISPFENNING	DATE: 10/11/16			

MAIN POWER CIRCUIT

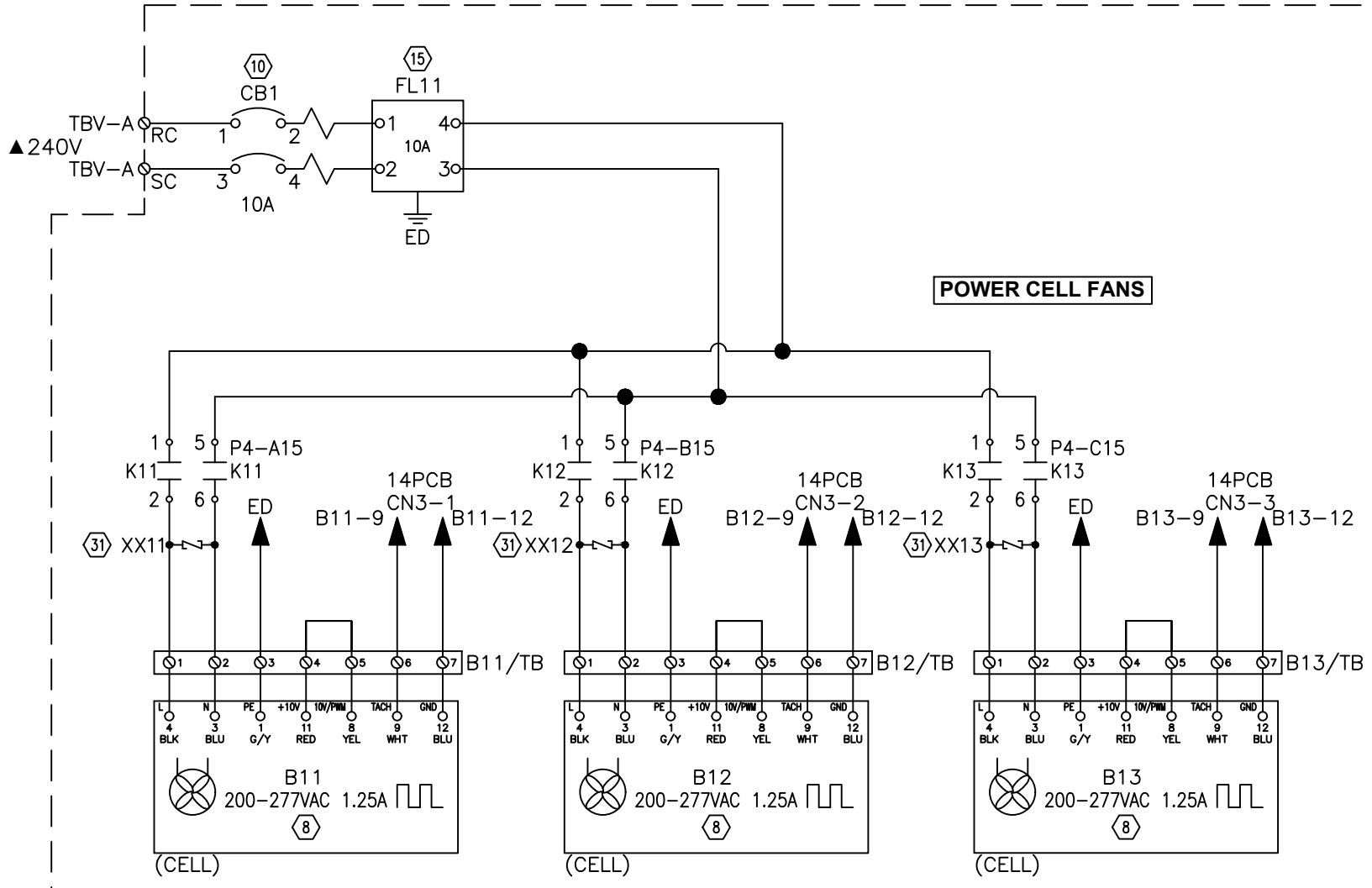


- NOTES:
 1. CLASS A GROUND RESISTANCE: BELOW 10 OHM
 2. CLASS D GROUND RESISTANCE: BELOW 100 OHM
 3. CUSTOMER TO PROVIDE/USE
 5. ELECTRICAL COMPONENT LIST REFERENCE NUMBER

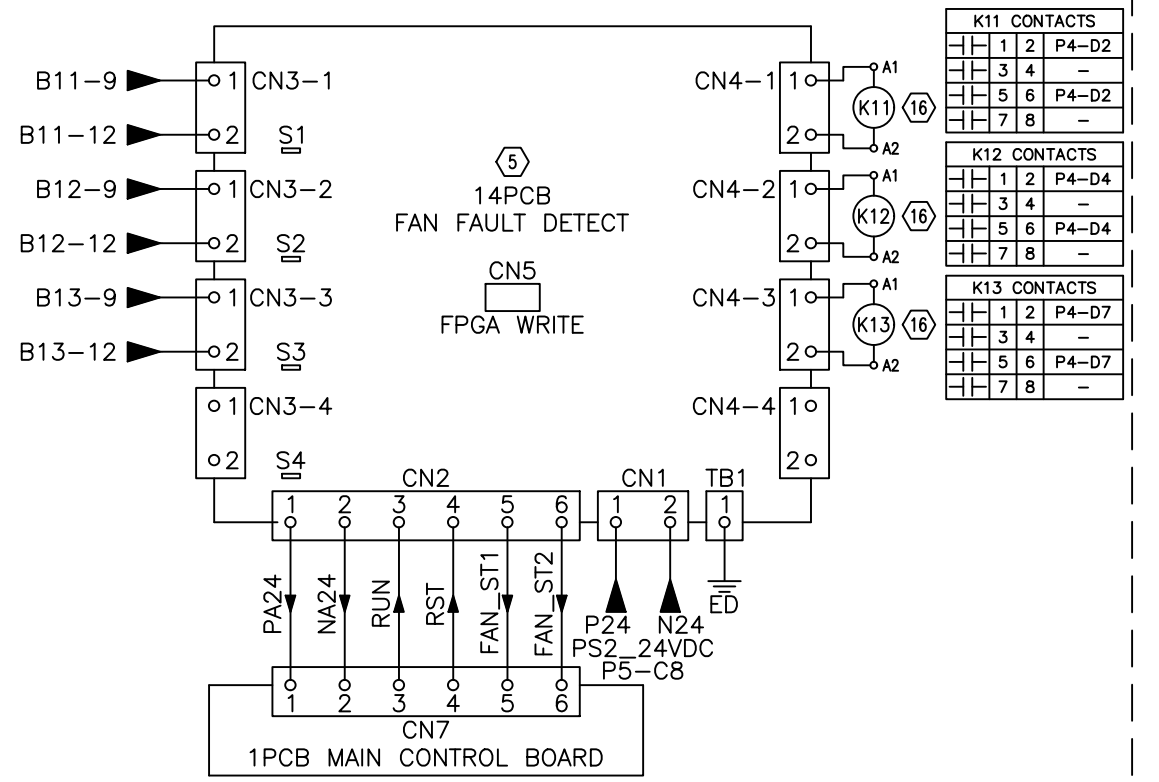
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TRANSFORMER & POWER CELL FANS

(CTRL) UNLESS OTHERWISE NOTED



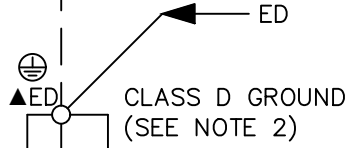
CONNECTIONS ARE ON THIS PAGE



K11 CONTACTS			
1	2	P4-D2	
3	4	-	
5	6	P4-D2	
7	8	-	

K12 CONTACTS			
1	2	P4-D4	
3	4	-	
5	6	P4-D4	
7	8	-	

K13 CONTACTS			
1	2	P4-D7	
3	4	-	
5	6	P4-D7	
7	8	-	

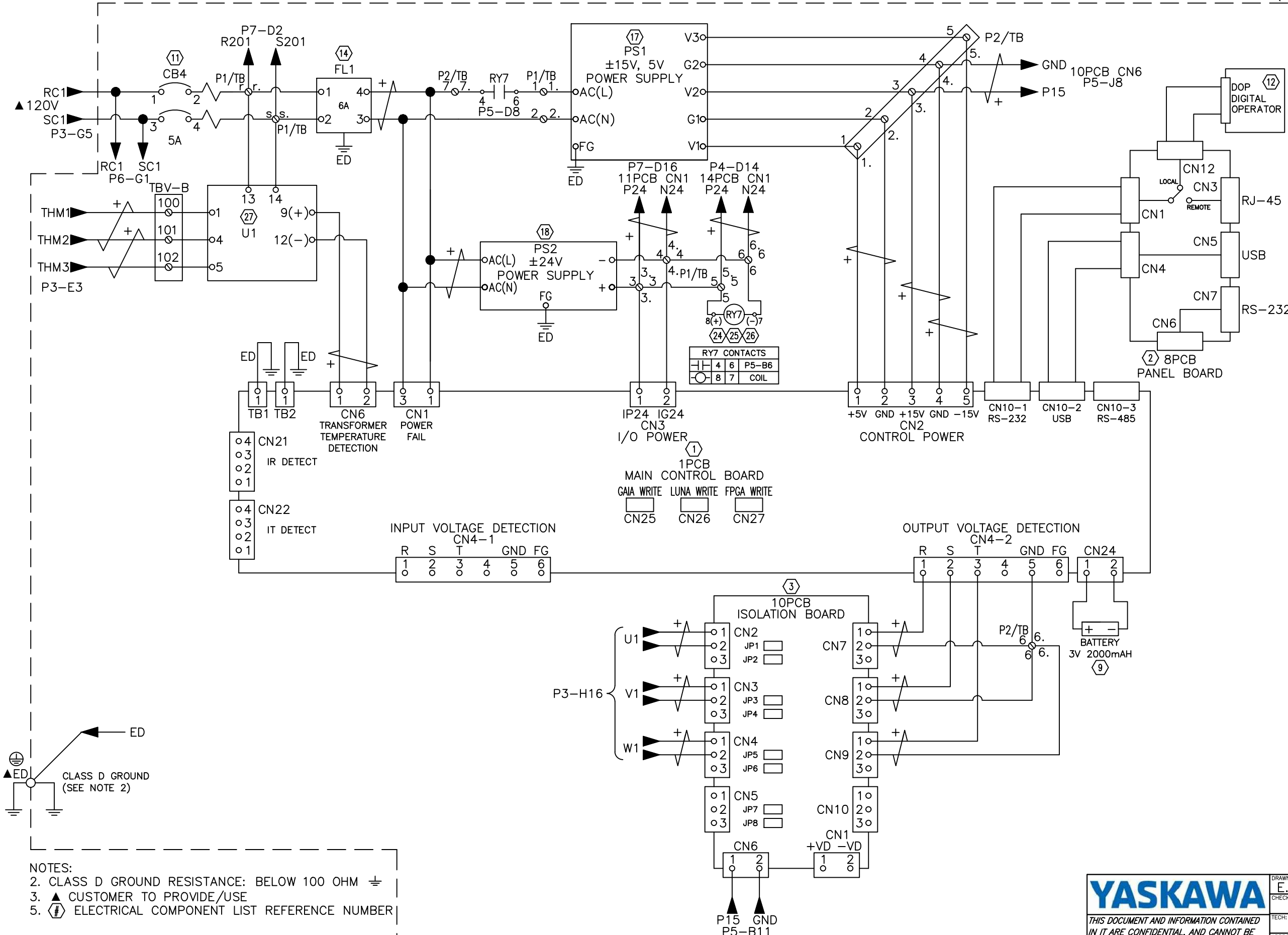


- NOTES:
 2. CLASS D GROUND RESISTANCE: BELOW 100 OHM \equiv
 3. ▲ CUSTOMER TO PROVIDE/USE
 5. # ELECTRICAL COMPONENT LIST REFERENCE NUMBER

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DC POWER DIST & MAIN CONTROL BOARD

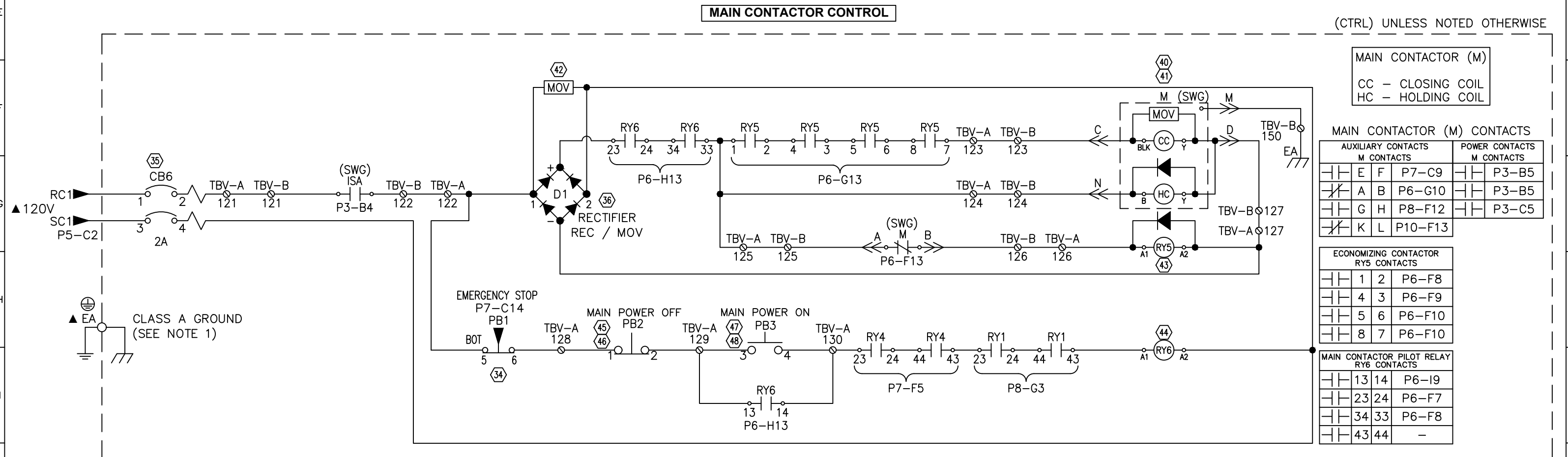
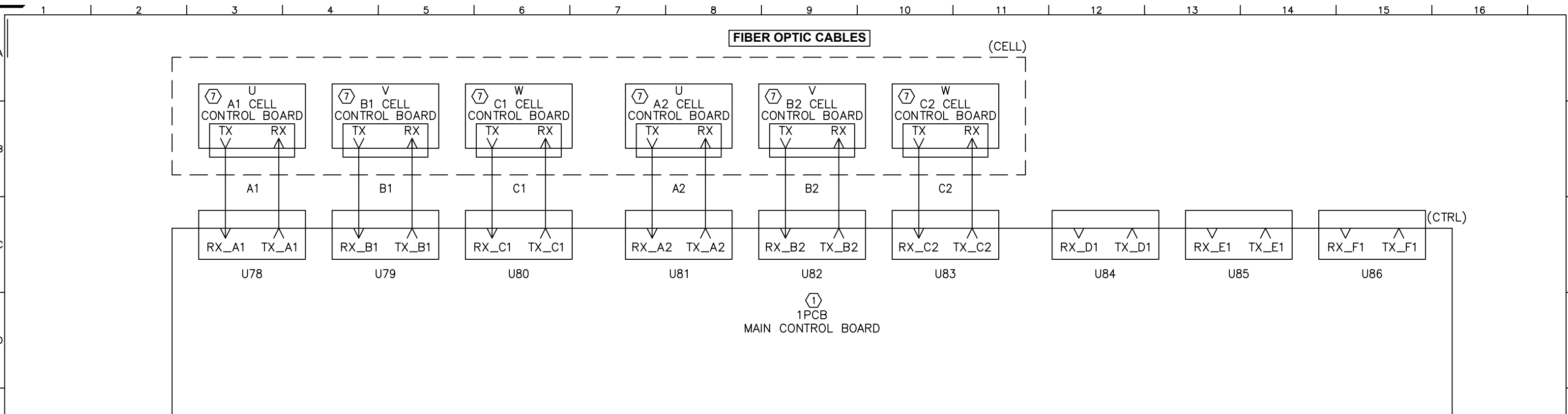
(CTRL)



- NOTES:
2. CLASS D GROUND RESISTANCE: BELOW 100 OHM \perp
 3. \blacktriangle CUSTOMER TO PROVIDE/USE
 5. $\#$ ELECTRICAL COMPONENT LIST REFERENCE NUMBER

YASKAWA	DRAWN: E.WEISPFENNING	DATE: 11/01/16	TITLE: SCHEMATIC MV
	CHECKED: M.SEVILLA	DATE: 11/01/16	300HP 39A
	TECH: -	DATE: -	MATERIAL # N/A
	APPROVED: B.SCHOWANSON	DATE: 11/01/16	SIZE B
	ORIGINAL DESIGN: E.WEISPFENNING	DATE: 10/11/16	REVISION 02
			PAGE 5 OF 11
			DRAWING #: DS.MV1K.N1.AD.10I.04

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MAIN CONTACTOR (M)
CC - CLOSING COIL
HC - HOLDING COIL

MAIN CONTACTOR (M) CONTACTS			
AUXILIARY CONTACTS M CONTACTS		POWER CONTACTS M CONTACTS	
	E F		P7-C9
	A B		P3-B5
	G H		P8-F12
	K L		P10-F13

ECONOMIZING CONTACTOR RY5 CONTACTS		
	1 2	P6-F8
	4 3	P6-F9
	5 6	P6-F10
	8 7	P6-F10

MAIN CONTACTOR PILOT RELAY RY6 CONTACTS		
	13 14	P6-F19
	23 24	P6-F7
	34 33	P6-F8
	43 44	-

- NOTES:
 1. CLASS A GROUND RESISTANCE: BELOW 10 OHM
 3. CUSTOMER TO PROVIDE/USE
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YASKAWA

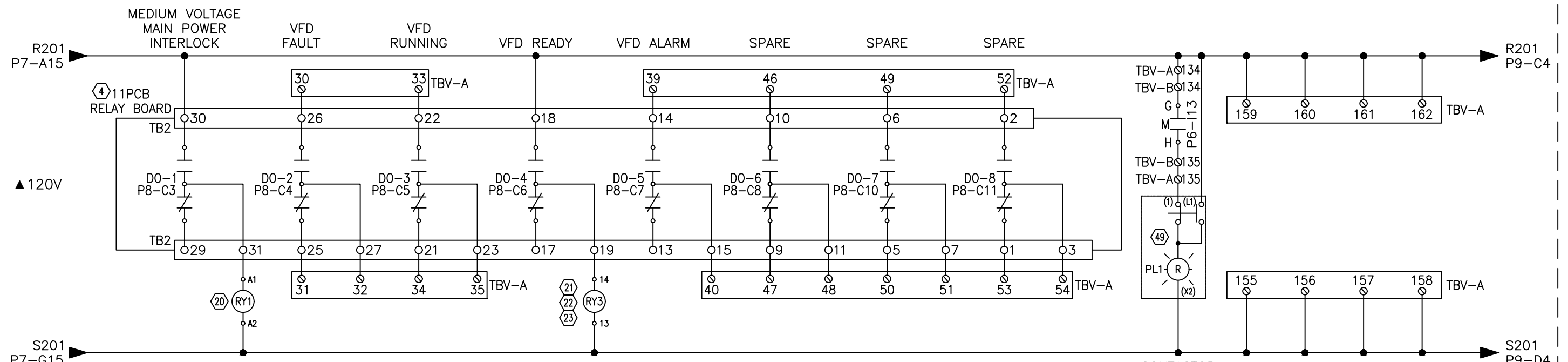
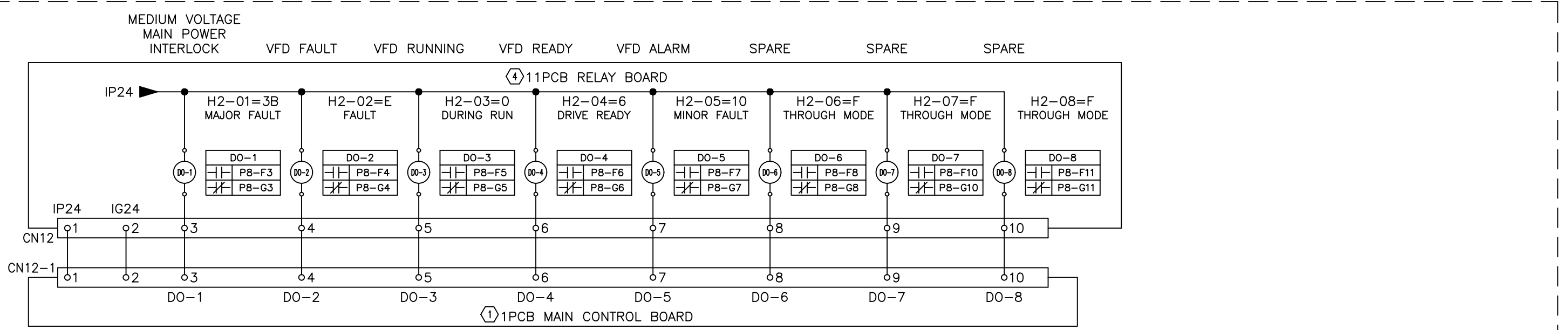
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CHECKED: M. SEVILLA	DATE: 11/01/16	W/ SG 240/120V
TECH: -	DATE: -	MATERIAL # N/A
APPROVED: B. SCHOWANSON	DATE: 11/01/16	SIZE: B
ORIGINAL DESIGN: E. WEISPFENNING	DATE: 10/11/16	REVISION: 02
		PAGE: 6 OF 11

DRAWING #: DS.MV1K.N1.AD.10I.04

DIGITAL OUTPUTS

(CTRL)



RY1 CONTACTS

11	12	-
23	24	P6-I11
33	34	-
43	44	P6-I12
51	52	-
A1	A2	COIL

RY3 CONTACTS

9	5	P10-F11
9	1	P10-G11
10	6	-
10	2	-
11	7	P7-F3
11	3	-
12	8	-
12	4	-
14	13	COIL

- NOTES:
- ▲ CUSTOMER TO PROVIDE/USE
 - SEE PAGE 48-54 FOR PARAMETER SETTING DETAILS
 - Ⓢ ELECTRICAL COMPONENT LIST REFERENCE NUMBER



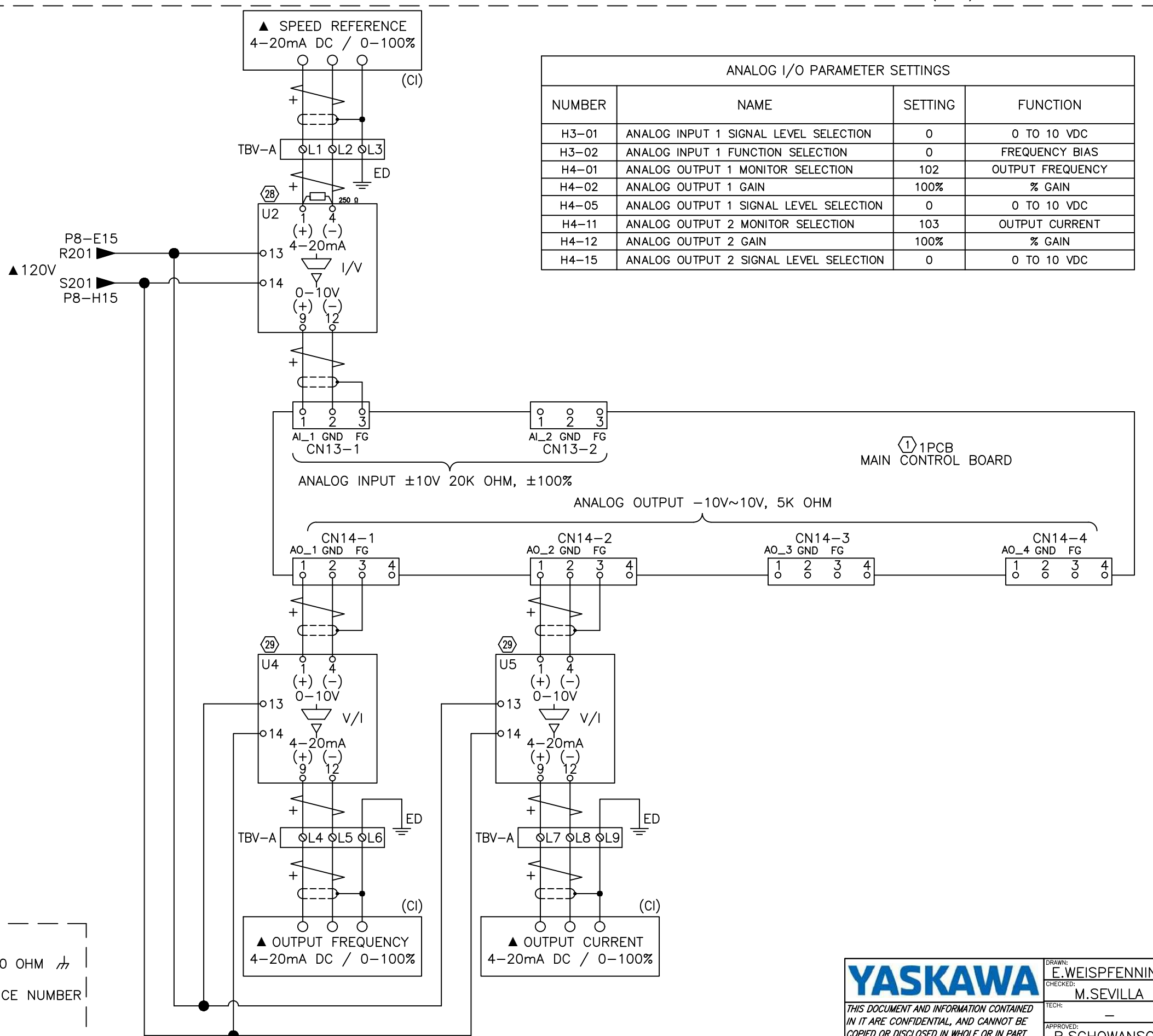
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		PAGE 8 OF 11
		DRAWING #: DS.MV1K.N1.AD.10I.04

ANALOG INPUTS & OUTPUTS

(CTRL) UNLESS OTHERWISE NOTED

ANALOG I/O PARAMETER SETTINGS			
NUMBER	NAME	SETTING	FUNCTION
H3-01	ANALOG INPUT 1 SIGNAL LEVEL SELECTION	0	0 TO 10 VDC
H3-02	ANALOG INPUT 1 FUNCTION SELECTION	0	FREQUENCY BIAS
H4-01	ANALOG OUTPUT 1 MONITOR SELECTION	102	OUTPUT FREQUENCY
H4-02	ANALOG OUTPUT 1 GAIN	100%	% GAIN
H4-05	ANALOG OUTPUT 1 SIGNAL LEVEL SELECTION	0	0 TO 10 VDC
H4-11	ANALOG OUTPUT 2 MONITOR SELECTION	103	OUTPUT CURRENT
H4-12	ANALOG OUTPUT 2 GAIN	100%	% GAIN
H4-15	ANALOG OUTPUT 2 SIGNAL LEVEL SELECTION	0	0 TO 10 VDC



- NOTES:
- CLASS D GROUND RESISTANCE: BELOW 100 OHM ∇
 - ▲ CUSTOMER TO PROVIDE/USE
 - ⚡ ELECTRICAL COMPONENT LIST REFERENCE NUMBER

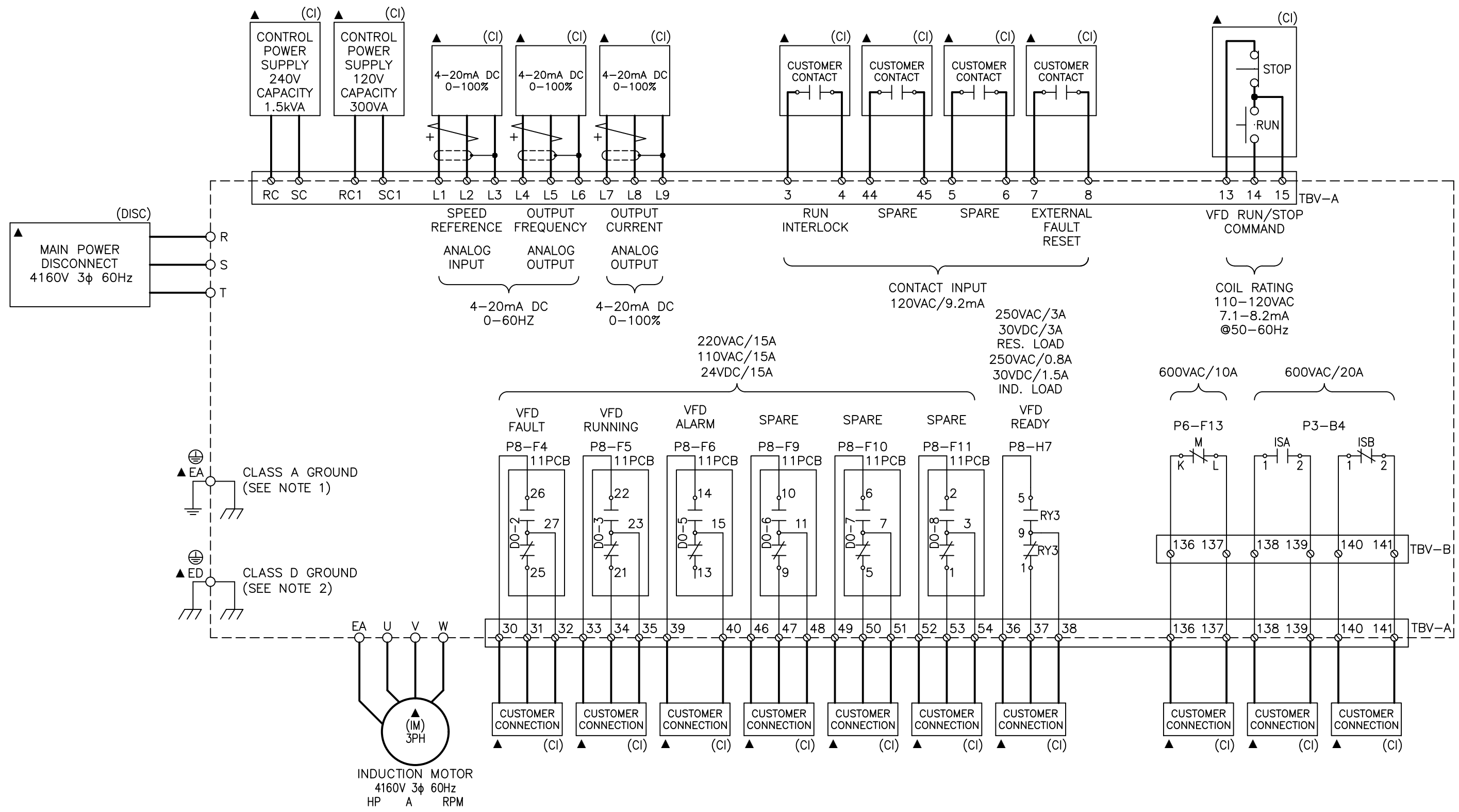
YASKAWA

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CHECKED: M.SEVILLA	DATE: 11/01/16	W/ SG 240/120V
TECH: -	DATE: -	MATERIAL # N/A
APPROVED: B.SCHOWANSON	DATE: 11/01/16	SIZE B
ORIGINAL DESIGN: E.WEISPFENNING	DATE: 10/11/16	REVISION 02
		PAGE 9 OF 11

DRAWING #: DS.MV1K.N1.AD.10I.04

CUSTOMER INPUTS AND OUTPUTS




- NOTES:
 1. CLASS A GROUND RESISTANCE: BELOW 10 OHM ⚡
 2. CLASS D GROUND RESISTANCE: BELOW 100 OHM ⚡
 3. ▲ CUSTOMER TO PROVIDE/USE

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ELECTRICAL COMPONENT LIST

#	REFERENCE DESIGNATOR(S)	YASKAWA PART #	DESCRIPTION	MANUFACTURER	MANUFACTURER PART #
1	1PCB	100-064-008	MAIN CONTROL BOARD	YASKAWA	100-064-008
2	8PCB	100-064-011	PANEL BOARD-DIGITAL OP	YASKAWA	100-064-011
3	10PCB	100-064-429	VOLTAGE ISOLATION BOARD	YASKAWA	100-064-429
4	11PCB	100-088-860	RELAY BOARD (120V)	YASKAWA	100-088-860
5	14PCB	100-243-858	FAN CONTROL BOARD	YASKAWA	100-243-858
6	TI	UPT000400	TRANSFORMER, MV, 375KVA, 2400V/1200V	HITRAN	ZI0524-00
7	A1-C2	100-203-903	POWER CELL 70A	YASKAWA	100-203-903
8	B11-B13	UFN000227	FAN 200-277VAC 1PH 1.25A	EBM PABST	S3G250-BC54-12
9	BATTERY	UBA000110	BATTERY 3V 2000MAH	PANASONIC	CR6L-CN014S
10	CB1	300-034-598	CIRCUIT BREAKER 480V 2P 10A	EATON	FAZ-D10/2-RT
11	CB4	300-034-597	CIRCUIT BREAKER 480V 2P 5A	EATON	FAZ-D5/2-RT
12	DOP	100-142-915	DIGITAL OPERATOR	YASKAWA	100-142-915
13	DS1-DS5	USW000540	SWITCH DOOR LIMIT 10A SPDT	YAMATAKE	BZ-2RQ1-T4-J
14	FL1	UFI000322	FILTER 250VAC/DC 6A	TDK	RSEN-2006
15	FL11	UFI000323	FILTER 250VAC/DC 10A	TDK	RSEN-2010
16	K11-K13	100-107-264KD	RELAY 3PST 6A 24VDC 4NO	FUJI ELECTRONICS	SK06L-E10
17	PS1	UPS000242	POWER SUPPLY 200V +5/+15VDC	COSEL	LDC30F-2-SNC
18	PS2	300-034-595	POWER SUPPLY 200V 24V	COSEL	PBA50F-24-C
19	R21-R26	300-034-607	RESISTOR 15KV 5W 1.5MΩ 5%	CADDOCK	MG745-1.5M-0.5
20	RY1, RY4	UMC000239	CONTACTOR 3NO 2NC	mitsubishi	SR-T5SA AC100V 3A2B
21	RY2, RY3	URY000353	RELAY 110-120VAC 3A 4PDT	IDEC	RU42S-CR-A110
22	RY2, RY3	URY000330	RELAY BASE 250V 6A	IDEC	SY4S-05DN
23	RY2, RY3	URY000331	RELAY HOLD DOWN CLIP	IDEC	SFA-502
24	RY7	URY000329	RELAY, SPST-NO, 24VDC COIL	OMRON	G3H-203SLN-VD
25	RY7	URY000164	SOCKET, RELAY, 2P, OMRON	OMRON	PTF08A-E
26	RY7	999ZZZ-0611	PYC-A1 OMRON RELAY CLIP	OMRON	PYC-A1

#	REFERENCE DESIGNATOR(S)	YASKAWA PART #	DESCRIPTION	MANUFACTURER	MANUFACTURER PART #
27	U1	300-034-591	TRANSMITTER RTD-200 TO+650C/0-10VDC	M SYSTEMS CO LTD	M2RS-44-M2/UL
28	U2	300-034-592	TRANSMITTER SIGNAL 4-20MA/0-10VDC	M SYSTEMS CO LTD	M2VS-A4-M2/UL
29	U4, U5	300-034-593	TRANSMITTER SIGNAL 0-10VDC/4-20MA	M SYSTEMS CO LTD	M2VS-4A-M2/UL
30	XX1-XX6	UXX000024	SURGE ARRESTORS 3KV	COOPER POWER SYSTEMS	URT03040D1C1A1A
31	XX11-XX13	C--003634	SUPPRESSOR COIL 500VAC	NIPPON CHEMI-CON	RFM2H104KD
32	XX51	TXX302	SURGE ABSORBER	NIPPON CHEMI-CON	DCR2-10A25C
33	ZD21-ZD26	300-032-291	ZENER DIODE 12V 31.2MA 3W	ON SEMICONDUCTOR	1N5927BRLG
34	PB1	USW000791	PUSHBUTTON,MUSH,TWIST RELEASE	AB-ROCKWELL	800T-FXT6A5
35	CB6	UCB001172	CIRCUIT BREAKER 480V 2P 2A	EATON	FAZ-D2/2-RT
36	D1	USD000165	DIODE BRIDGE 25A	VISHAY	26MB80A
37	F1-F3	UFU000347	FUSE MV ERATED 80A CLIP	MERSEN	A055F1D0R0-80E
38	IS	USW000547	DISCONNECT SW 5KV 400A CLIP FUSE	AB-ROCKWELL	1503S-4C
39	IS	USW000551	DISCONNECT HANDLE 5KV 400A	AB-ROCKWELL	1503-HM1
40	M	UMC000236	CONTACTOR 7.2KV 400A 110VDC	AB-ROCKWELL	1502-V4DBDA-1
41	M	UWH-0018	HARNESS 400A 120V VACUUM CNTR	ROCKWELL AUTOMATION	1503-WHE4D
42	MOV	UXX000017	MOV 150VAC 20MM	AB-ROCKWELL	LTFV150LA20BP
43	RY5	UMC000232	CONTACTOR 12A 110VDC W/DIODE	AB-ROCKWELL	100-C12ED400
44	RY6	URY000355	RELAY 10A 110VAC 4NO	AB-ROCKWELL	700-CF400D
45	PB2	05P00013-0044	RED STANDARD OPERATOR	EATON	10250T102
46	PB2	05P00013-0110	CONTACT BLOCK,C-H,1N.C.	EATON	10250T51
47	PB3	05P00013-0078	PUSH BUTTON, GREEN	EATON	10250T103
48	PB3	05P00013-0109	CONTACT BLOCK,C-H,1N.O.	EATON	10250T53
49	PL1	USD000144	PILOT LIGHT,LED,PTT,RED,221LRP06	EATON	10250T221LRP06

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