

BALDOR ELECTRIC COMPANY

5711 R.S. Boreham Jr. St.
 Fort Smith, AR 72901
 (479) 646-4711

Customer :KAMAN INDUSTRIAL TECHNOLOGIES
 Plant designation :BALDOR DRIVES CENTER
 Catalog number :CUSTOM

Manufacturer (Firm) :BALDOR ELECTRIC COMPANY

Spec. Number (TDB) :PN0018B27

Horsepower :20HP(3)

Voltage :460V

Package Group :CUSTOM

Created on : 09-13-2010 by : KIMTHOAI TRAN Highest Page No. : 25

Processed on : 01-21-2011 by : KTT No. of pages : 25

MATL:

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BALDOR ELECTRIC Co.

VR420-BC4

SCALE:

BY:

KTT

REVISED:

02-10-2011

FILE:

TDR:

580028

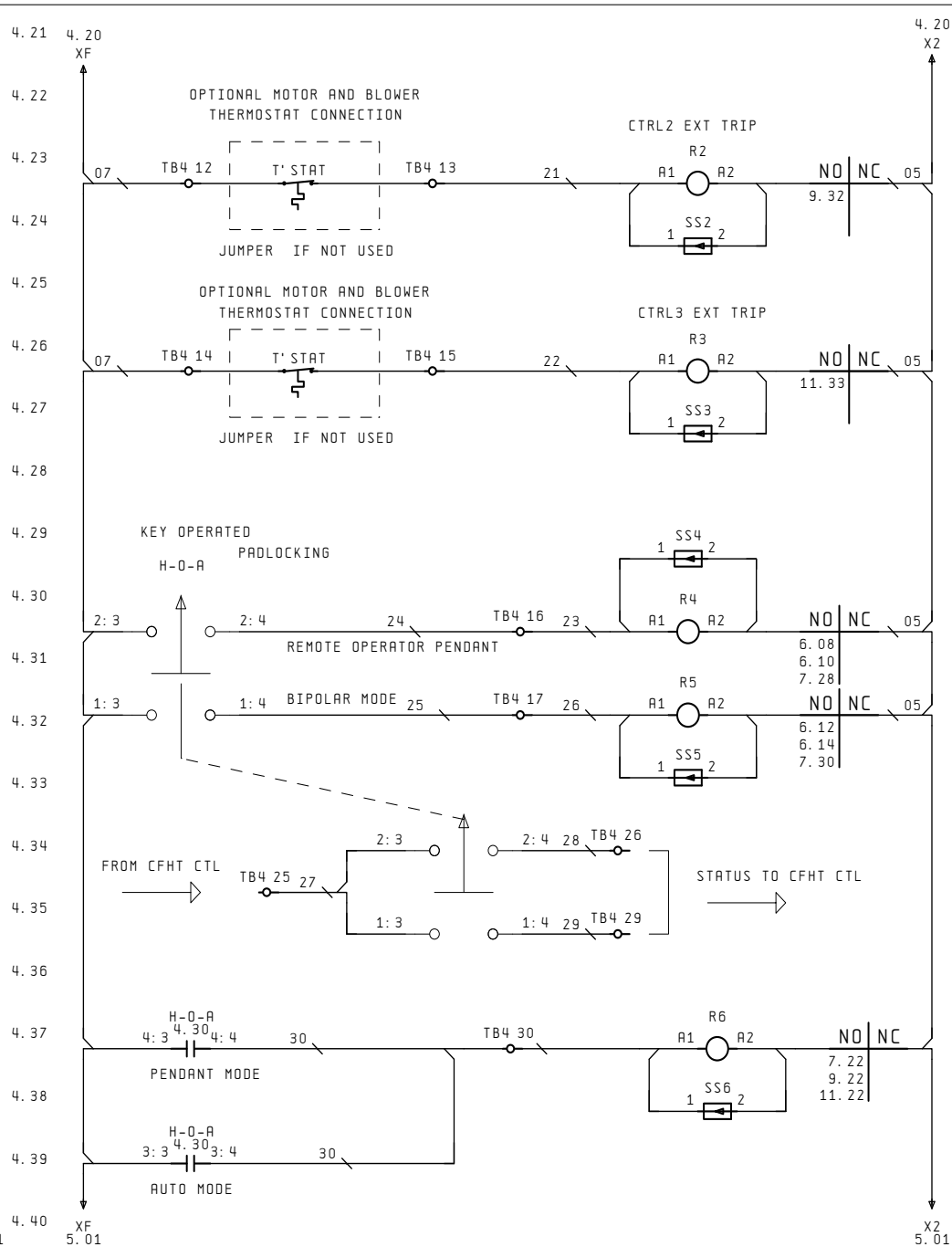
BALDOR COVER SHEET

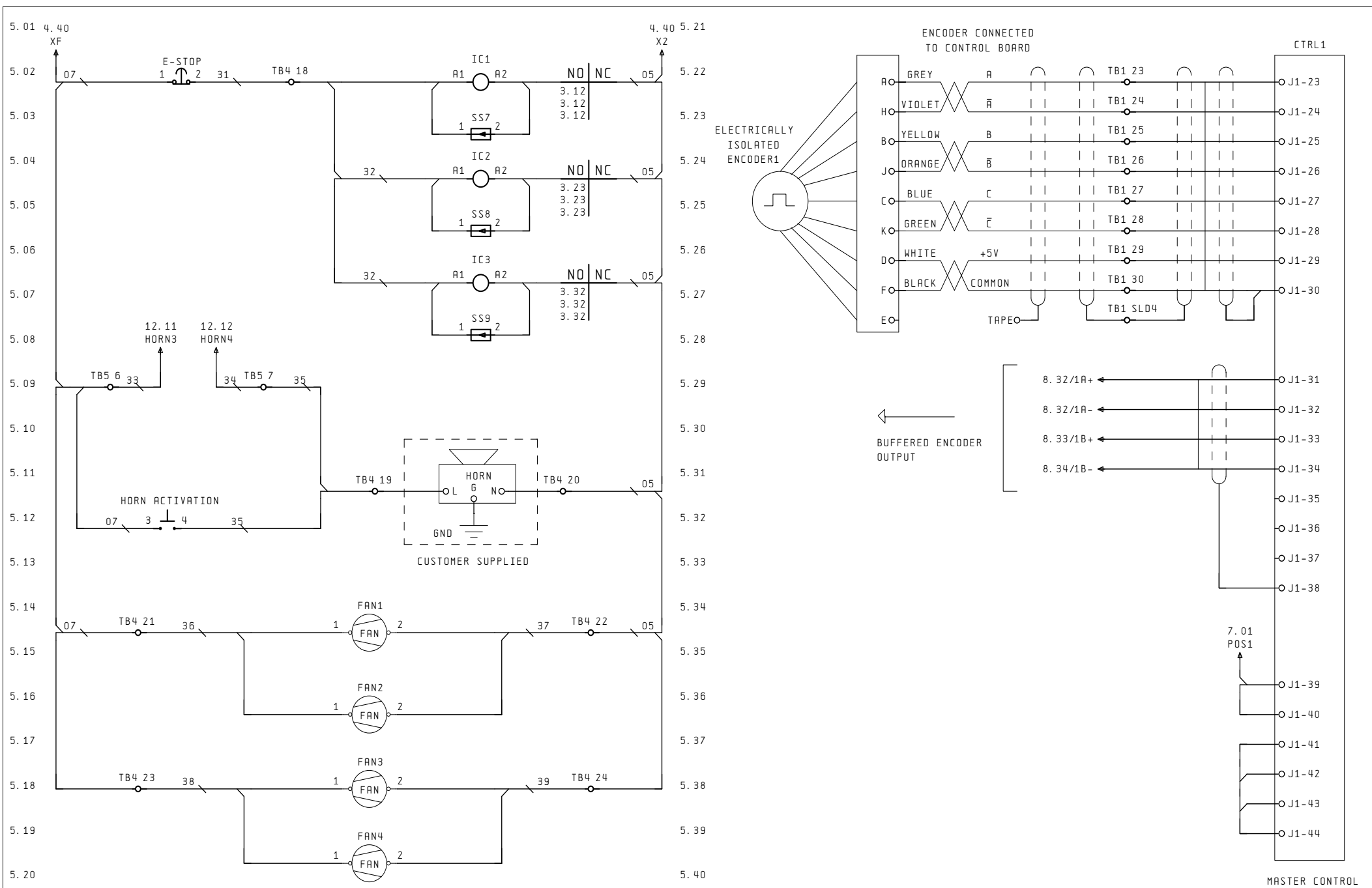
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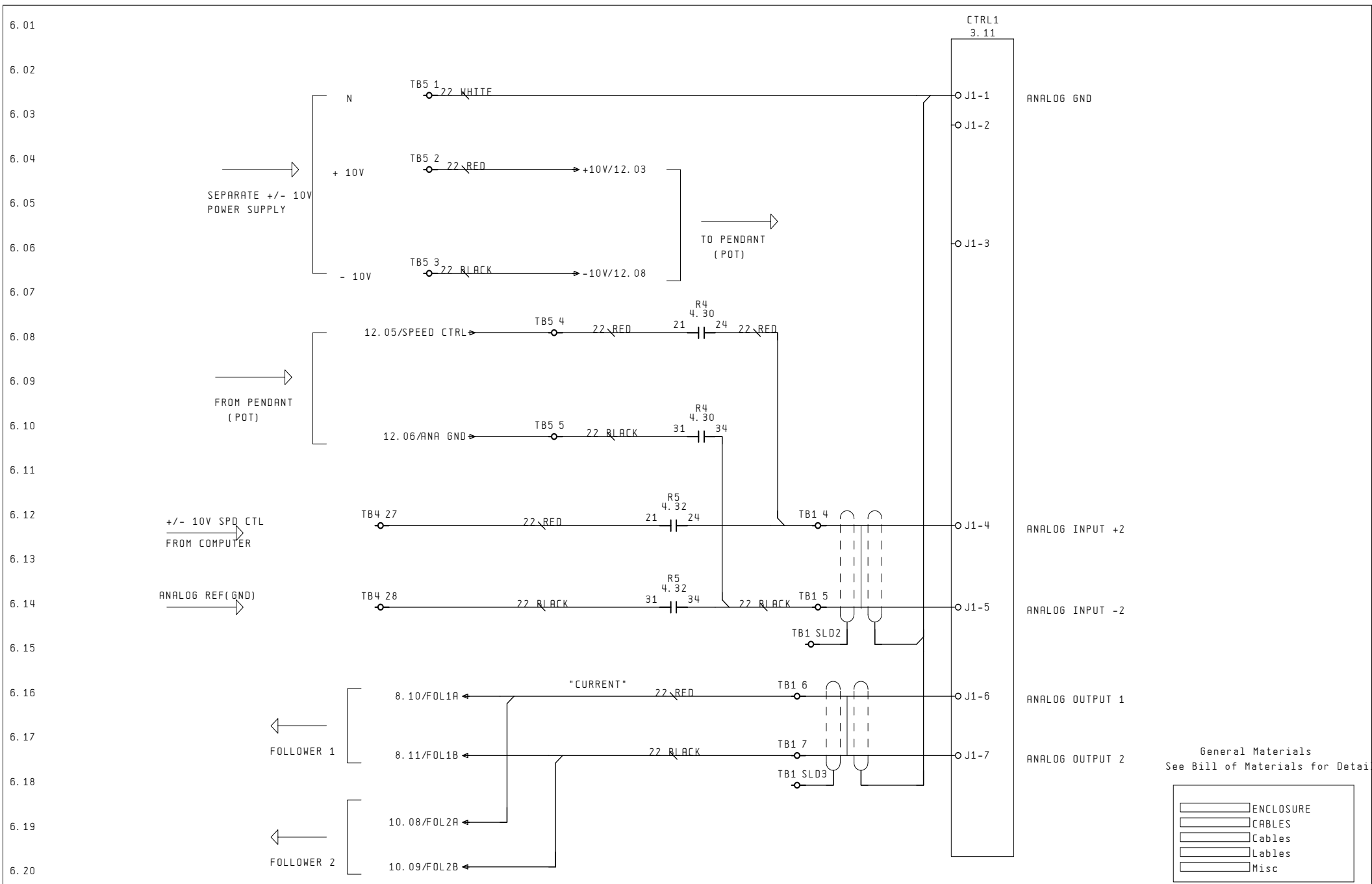
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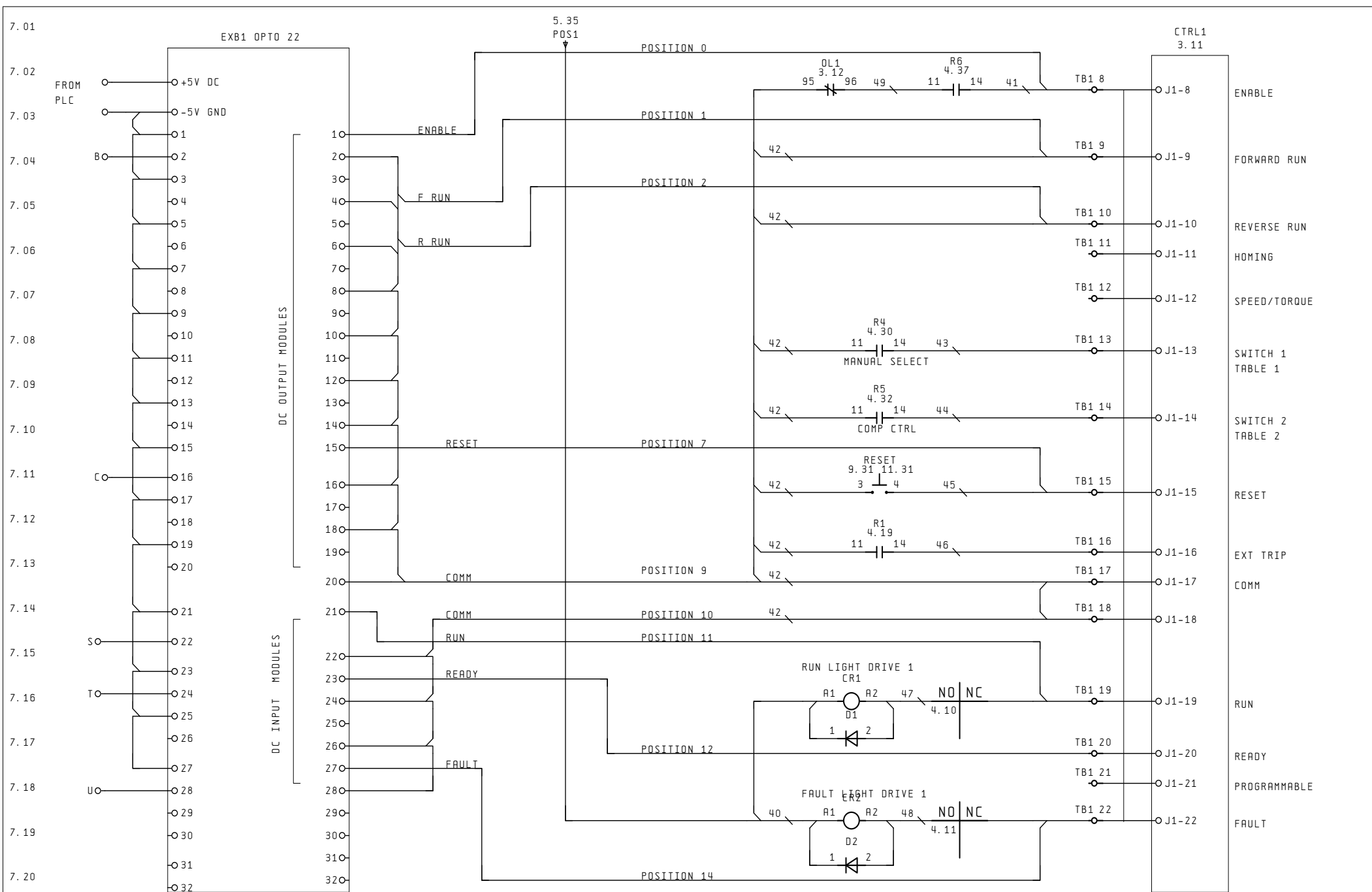
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Revision	B		Date	02-10-2011	BALDOR DRIVES CENTER	BALDOR ELECTRIC COMPANY 5711 R.S. BOREHAM JR. ST FORT SMITH, AR 72901	Table of contents	02-02-2011	
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			Spec.	PN0018B27					Pg. 2
			TDR #	580028	Engineer - KIM TRAN	Original		VR420-BC4	of 25

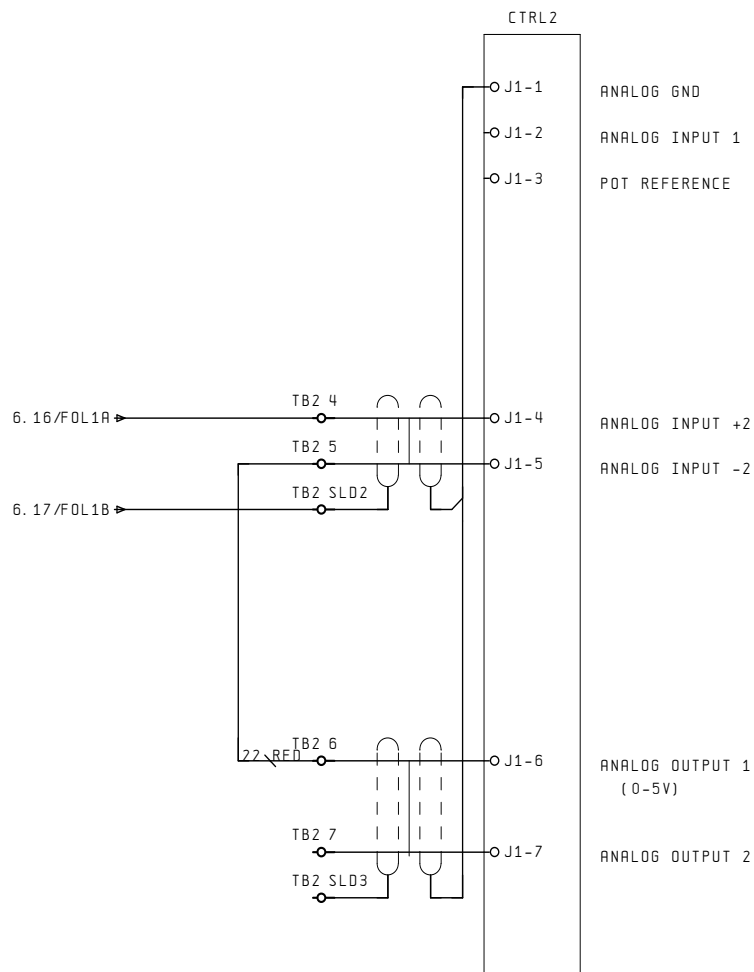
ELECTRICAL SCHEMATIC



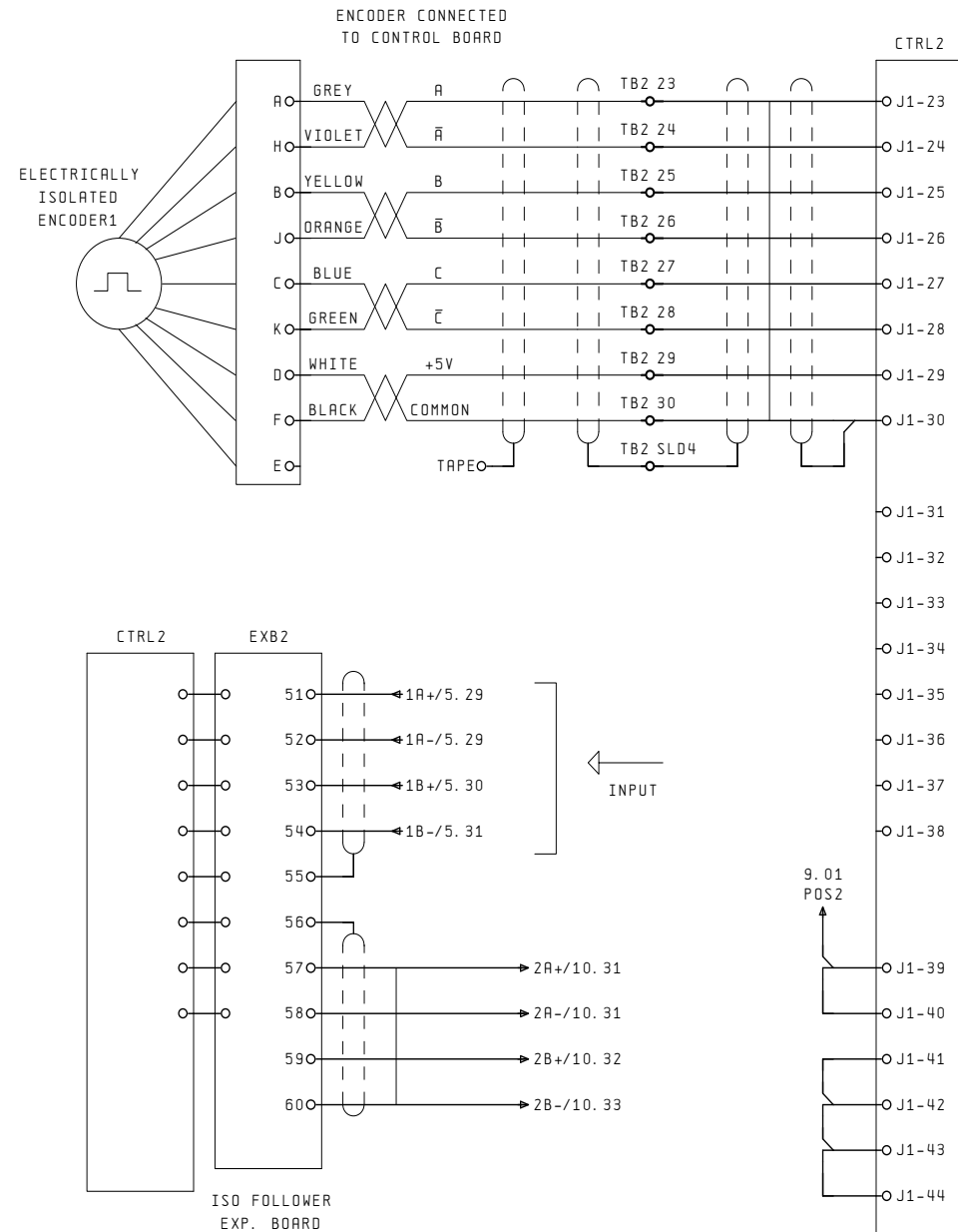




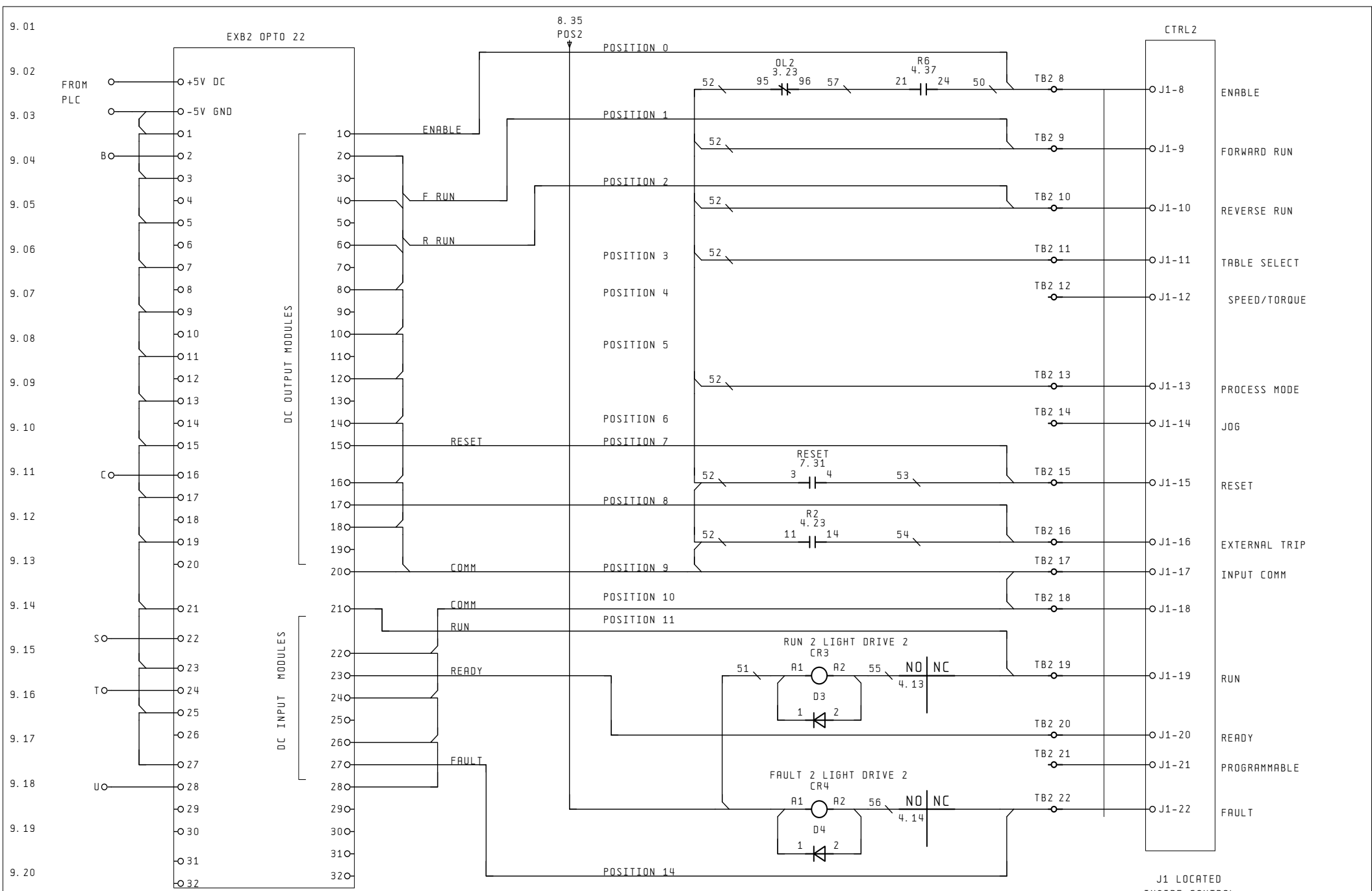
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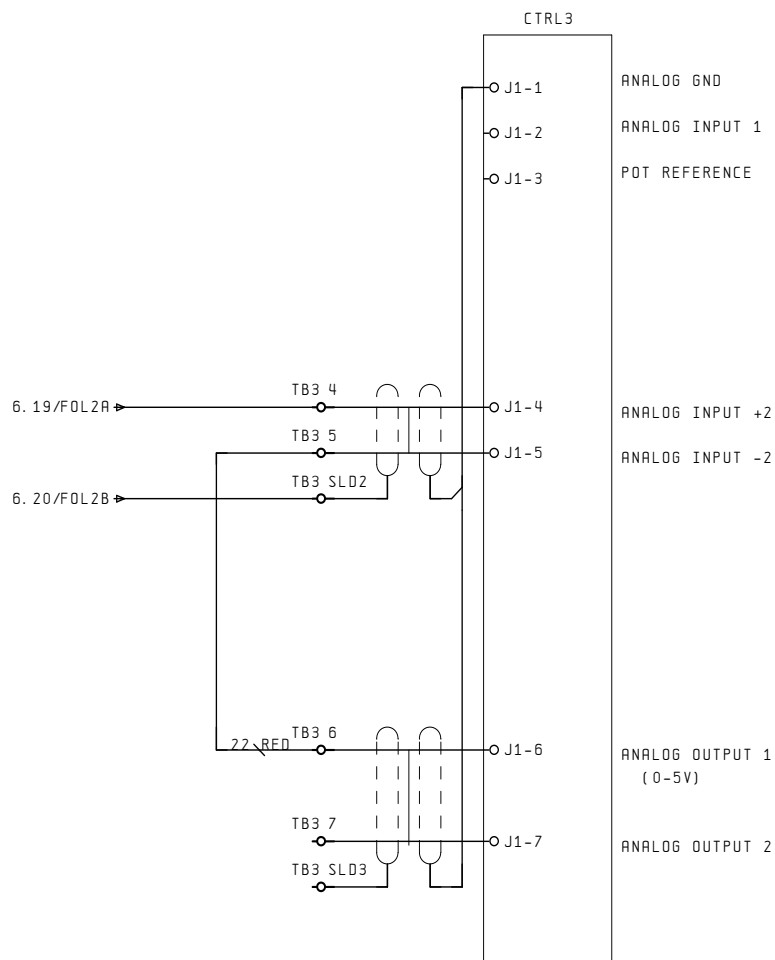
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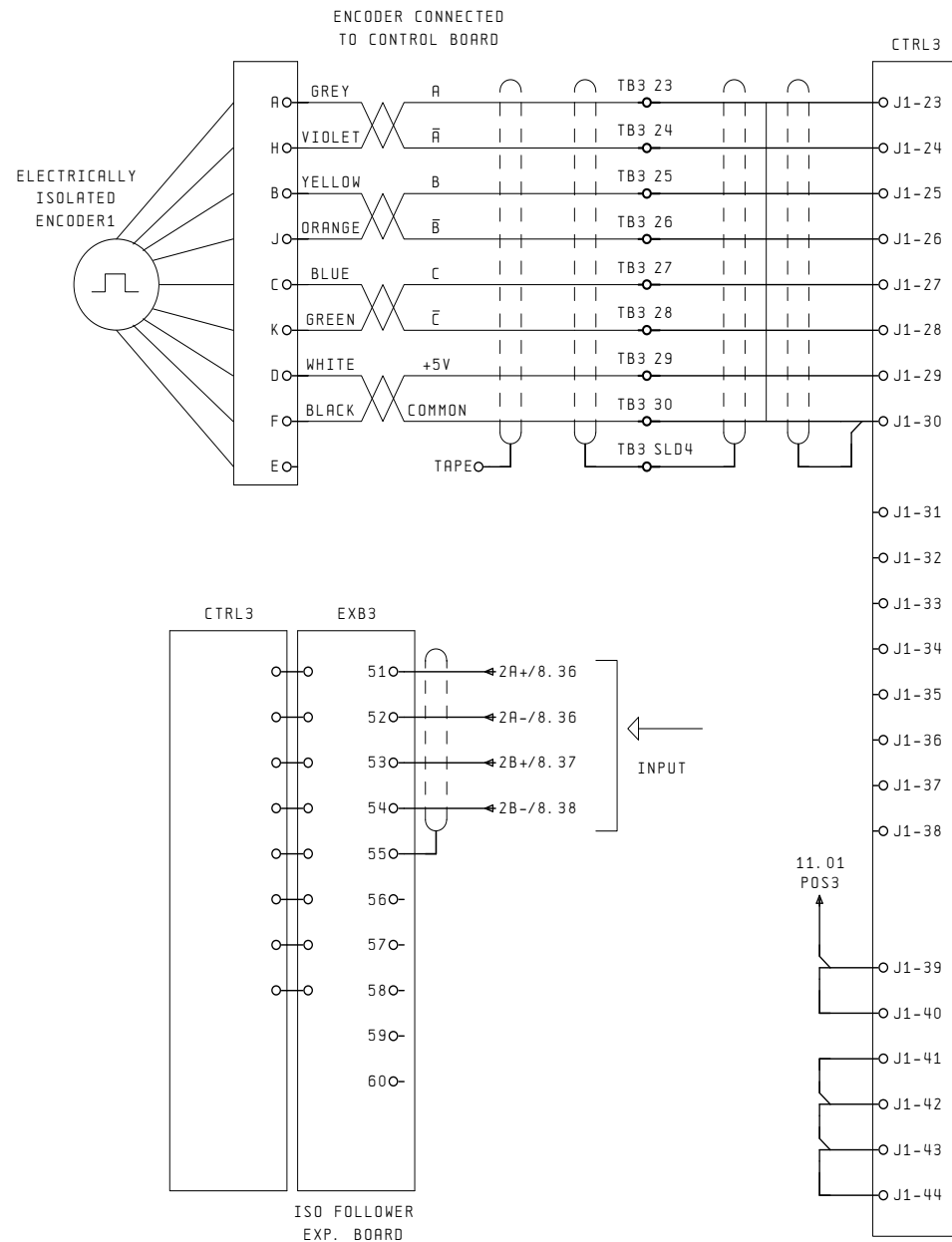
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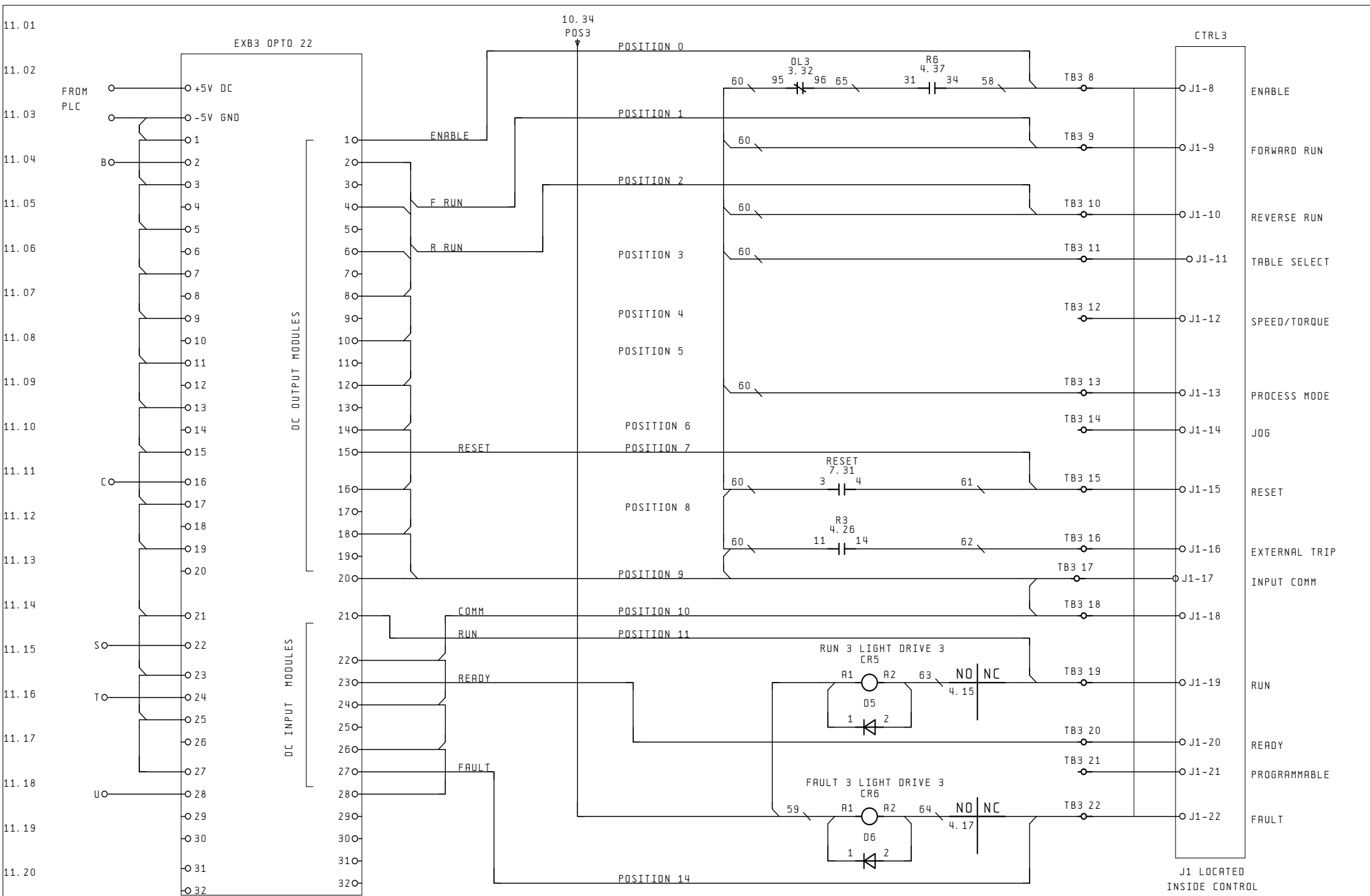


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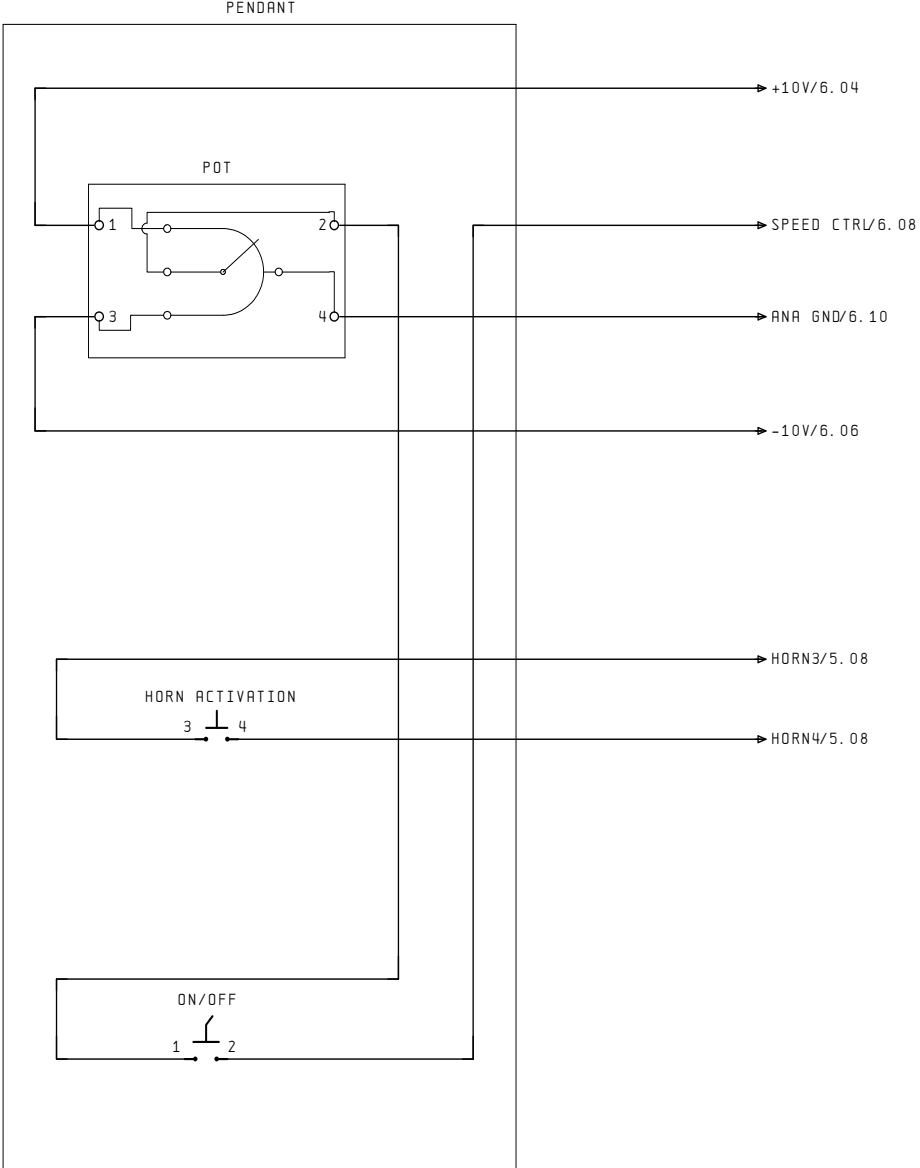
BALDOR ELECTRIC Co.

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ELECTRICAL SCHEMATIC-CONTROL 3



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ELECTRICAL SCHEMATIC-PENDANT

Bill of materials

WUP0001E 01.03.1994

Item designation	Amount	Designation	Type number	Manufacturer	Article number
ENCLOSURE	1	ENCL. 72"X72"X20" NEMA 12, CUSTOM	SPNFSD-727220-570	SCHAEFER'S	BE0012A58
MCP	6	LUGS, GE #TCAL18, 6 EA PER MCP, 3 EA PER PK	TCAL18	GENERAL ELECTRIC	CK0009A00
MCP	1	MCP GE SPECTRA RMS 150A	SELA36AI0150	GENERAL ELECTRIC	CK0022A00
MCCB1	1	SUSOL MCCB, 40A, 3POLE, 35KA, 480VAC	TD125NU-FTU-LL-40	LGIS	CK0023A28
MCCB2	1	SUSOL MCCB, 40A, 3POLE, 35KA, 480VAC	TD125NU-FTU-LL-40	LGIS	CK0023A28
MCCB3	1	SUSOL MCCB, 40A, 3POLE, 35KA, 480VAC	TD125NU-FTU-LL-40	LGIS	CK0023A28
MCP	1	6E RATING PLUG 450-1991A - 150A	SRPE150A150	GENERAL ELECTRIC	CK0024A02
D1	1	DIODE, 1000V, 1AMP, AXIAL, D041	99.02.3.000.00	FINDER	DI0001A08
D2	1	DIODE, 1000V, 1AMP, AXIAL, D041	99.02.3.000.00	FINDER	DI0001A08
D3	1	DIODE, 1000V, 1AMP, AXIAL, D041	99.02.3.000.00	FINDER	DI0001A08
D4	1	DIODE, 1000V, 1AMP, AXIAL, D041	99.02.3.000.00	FINDER	DI0001A08
D5	1	DIODE, 1000V, 1AMP, AXIAL, D041	99.02.3.000.00	FINDER	DI0001A08
D6	1	DIODE, 1000V, 1AMP, AXIAL, D041	99.02.3.000.00	FINDER	DI0001A08
FAULT1	1	FAULT PILOT LIGHT ASSEMBLY	DS0003A02	BALDOR	DS0003A02
FAULT2	1	FAULT PILOT LIGHT ASSEMBLY	DS0003A02	BALDOR	DS0003A02
FAULT3	1	FAULT PILOT LIGHT ASSEMBLY	DS0003A02	BALDOR	DS0003A02
POWERON	1	POWER ON PILOT LIGHT ASSEMBLY	DS0003A03	BALDOR	DS0003A03
RUN1	1	GREEN "RUN" PILOT LIGHT ASSEMBLY	DS0003A20	BALDOR	DS0003A20
RUN2	1	GREEN "RUN" PILOT LIGHT ASSEMBLY	DS0003A20	BALDOR	DS0003A20
RUN3	1	GREEN "RUN" PILOT LIGHT ASSEMBLY	DS0003A20	BALDOR	DS0003A20
EXB1	1	EXPANSION BOARD - RS232	EXB001A01	BALDOR	EB0043A00
EXB2	1	EXPANSION BOARD - RS232	EXB001A01	BALDOR	EB0043A00
EXB3	1	EXPANSION BOARD - RS232	EXB001A01	BALDOR	EB0043A00
EXB2	1	EXPANSION BOARD PULSE FOLLOWER	EXB005A01	BALDOR	EB0047A00
EXB3	1	EXPANSION BOARD PULSE FOLLOWER	EXB005A01	BALDOR	EB0047A00
EXB1OPT022	1	OPTO 22, 64PB16T, I/O RACK	64PB16T	OPTO 22	EB0403A00
EXB2OPT022	1	OPTO 22, 64PB16T, I/O RACK	64PB16T	OPTO 22	EB0403A00
EXB3OPT022	1	OPTO 22, 64PB16T, I/O RACK	64PB16T	OPTO 22	EB0403A00
FAN1	1	TUBEAXIAL FAN 171.4MM DIA, 235 CFM 115V W/CAP	MR2B3	COMAIR ROTRON	EF0001
FAN2	1	TUBEAXIAL FAN 171.4MM DIA, 235 CFM 115V W/CAP	MR2B3	COMAIR ROTRON	EF0001
FAN3	1	TUBEAXIAL FAN 171.4MM DIA, 235 CFM 115V W/CAP	MR2B3	COMAIR ROTRON	EF0001
FAN4	1	TUBEAXIAL FAN 171.4MM DIA, 235 CFM 115V W/CAP	MR2B3	COMAIR ROTRON	EF0001
PENDANT	1	PENDANT, SCHAEFER, FOUR HOLES TYPE 12	SPPEN-4-M-A61	SCHAEFER'S	EH0002B21
ENCLOSURE	1	FAN COVER, COVERS 6 EF0001 FANS, NEMA 12		UNDEFINED	EH0003A66
ENCLOSURE	2	EXHAUST GRILLE AND FILTER KIT	A-EXGR275	HOFFMAN	EH0008A00
ENCLOSURE	1	STEEL BACK PLATE 68 X 68	A-72P72	HOFFMAN	EH0017A18
MCP	1	HANDLE & OP MECH KIT/ SE,SF MCP/ROTARY TYPE	SEFHM2	GENERAL ELECTRIC	EH0032A00
MCP	1	BRACKET, MNTG FOR GE SE MCP 4 X 6 X4	EH0065A25	BALDOR	EH0065A25
ENCLOSURE	6	CASTER, WHEEL DIA 3 INCHES, LOAD 250LB	SUX73	GRAINGER	EH0458B92
F3	1	FUSE CLASS CC TD, 7A, 250V, FERRULE	FNM-7	BUSSMAN	FU0029A29
F1	1	FUSE CLASS CC TD, 5A 600V	FNQ-R-5	BUSSMAN	FU0030A00
F2	1	FUSE CLASS CC TD, 5A 600V	FNQ-R-5	BUSSMAN	FU0030A00
FAN1	1	FINGER GUARD FOR ROTRON FAN	550272	COMAIR ROTRON	HA1170A01
FAN2	1	FINGER GUARD FOR ROTRON FAN	550272	COMAIR ROTRON	HA1170A01
FAN3	1	FINGER GUARD FOR ROTRON FAN	550272	COMAIR ROTRON	HA1170A01
FAN4	1	FINGER GUARD FOR ROTRON FAN	550272	COMAIR ROTRON	HA1170A01
Misc	1	5-1/2" WIRE TIE	HW3207A01	BALDOR	HW3207A01
Misc	1	SPIRAL WIRE WRAP 3/8 INCH	T38F-C		HW3211A00
Misc	1	TIE MT, SM ADHESIVE BACK, 1"x1"	V6911432		HW3214A00
CTRL1	1	STANDARD HARMONIZED KEYPAD, BLACK, NEMA 4X		BALDOR	KP0022A07

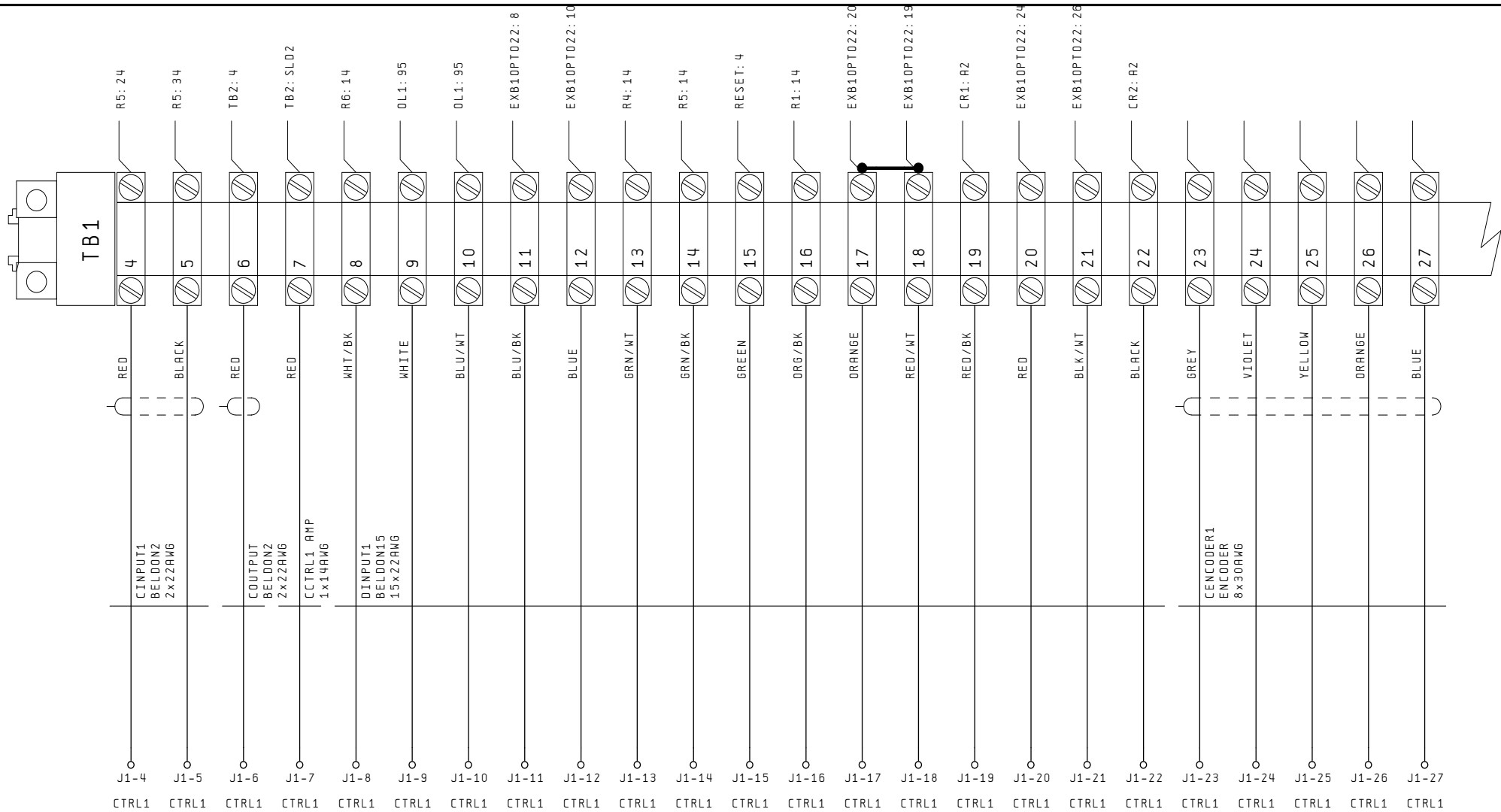
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			Editor	KIM TRAN					
			Spec.	PN0018B27					
			TDR #	580028	Engineer - KIM TRAN	Original		VR420-BC4	Pg. 13 of 25

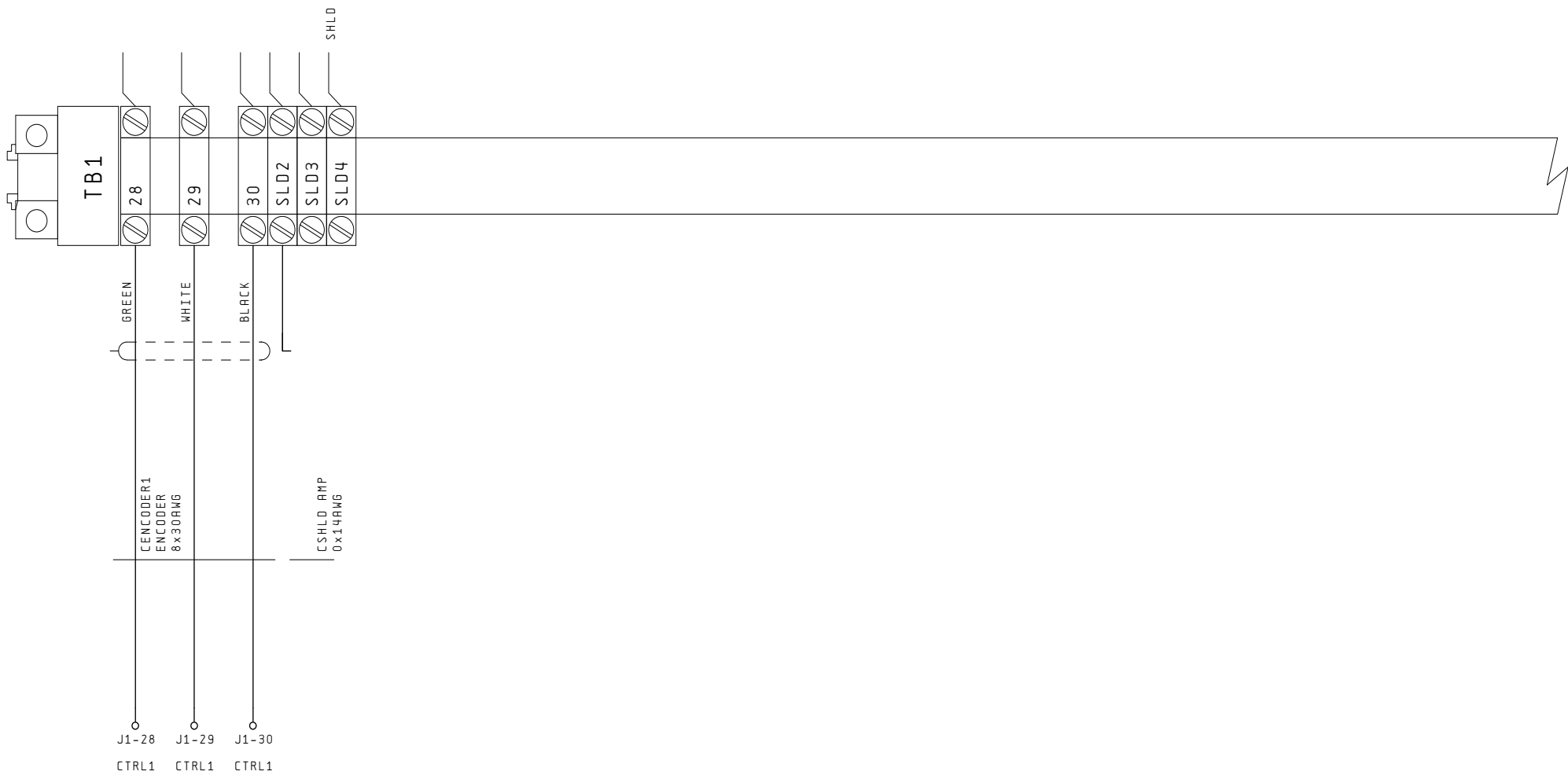
Bill of materials

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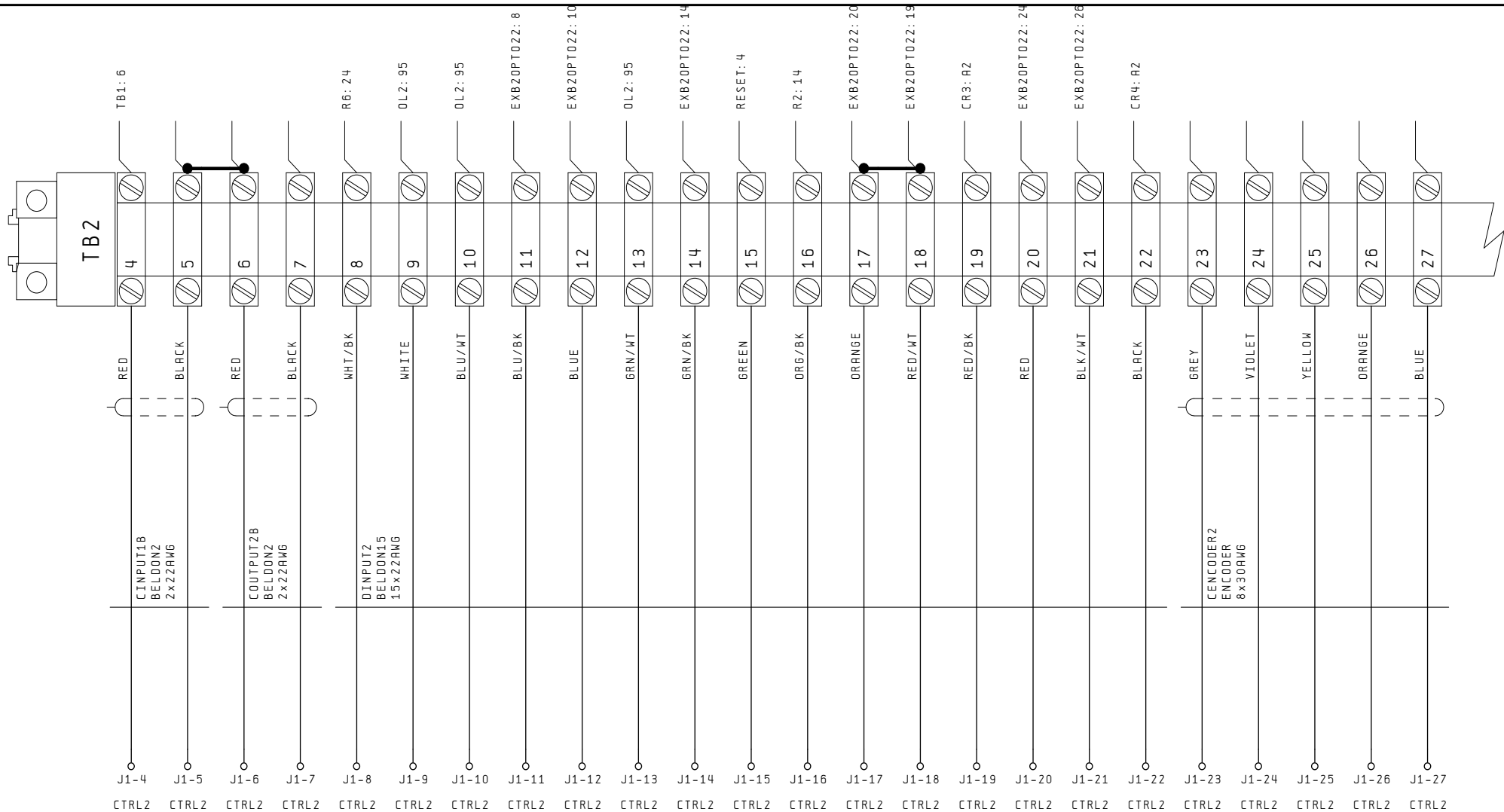
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CTRL2	1	STANDARD HARMONIZED KEYPAD, BLACK, NEMA 4X		BALDOR	KP0022A07
CTRL3	1	STANDARD HARMONIZED KEYPAD, BLACK, NEMA 4X		BALDOR	KP0022A07
Lables	1	LABEL, ADHESIVE, SET UP PROCEDURE	LB0002A00	BALDOR	LB0002A00
Lables	1	DOT MATRIX PRINT LABEL	LB1239		LB1231
Lables	1	BALDOR CONTROL PANEL	LB1232		LB1232
Lables	1	UL/CUL LABEL - ENCLOSED	5080201-S1844		LB1262A02
TB4	1	ENTRELEC TB LABEL SET (1-10)	LB9009A06	Entrelec	LB9009A06
TB5	1	ENTRELEC TB LABEL SET (1-10)	LB9009A06	Entrelec	LB9009A06
TB4	1	ENTRELEC TB LABEL SET (11-20)	LB9009A07	Entrelec	LB9009A07
TB4	1	ENTRELEC TB LABEL SET (21-30)	LB9009A08	Entrelec	LB9009A08
TB1	1	ENTRELEC TB LABEL SET (21-30)	LB9009A08	Entrelec	LB9009A08
TB2	1	ENTRELEC TB LABEL SET (21-30)	LB9009A08	Entrelec	LB9009A08
TB3	1	ENTRELEC TB LABEL SET (21-30)	LB9009A08	Entrelec	LB9009A08
FAN1	1	MOLDED PLUG AND CORD	CRD0015	LECTRON	LD5100A00
FAN2	1	MOLDED PLUG AND CORD	CRD0015	LECTRON	LD5100A00
FAN3	1	MOLDED PLUG AND CORD	CRD0015	LECTRON	LD5100A00
FAN4	1	MOLDED PLUG AND CORD	CRD0015	LECTRON	LD5100A00
CABLES	3	15 FT. KEYPAD CABLE ASM. SERIES 15H	CBLH046KP	BALDOR	LD5103A02
CABLES	3	CABLE ASSM 22-PIN TERMINAL BLOCK 52"	LD5104A01	BALDOR	LD5104A01
LR1B	1	LINE REACTOR, 480V, 35A, 3%Z	KLRUL35ATB	TCI	LR0013A06
LR2B	1	LINE REACTOR, 480V, 35A, 3%Z	KLRUL35ATB	TCI	LR0013A06
LR3B	1	LINE REACTOR, 480V, 35A, 3%Z	KLRUL35ATB	TCI	LR0013A06
LR1A	1	LR 1.25" 460V 3PH 35A 0.8MH 25HP	RL-03502	BALDOR	LR0039A02
LR2A	1	LR 1.25" 460V 3PH 35A 0.8MH 25HP	RL-03502	BALDOR	LR0039A02
LR3A	1	LR 1.25" 460V 3PH 35A 0.8MH 25HP	RL-03502	BALDOR	LR0039A02
CABLES	240	16 AWG UL 1015 WHITE	ML1300A16	BALDOR	ML1300A16
CABLES	240	16 AWG UL 1015 RED	ML1300C16	BALDOR	ML1300C16
CABLES	480	20 AWG UL 1015 BLUE	ML1300E20		ML1300E20
Cables	60	4 AWG THHN 600V BLACK	THHN-4BLK	CAROL	ML2700B04
Cables	600	10 AWG THHN 600V BLACK	THHN-10BLK	CAROL	ML2700B10
Cables	240	10 AWG, GREEN W/YEL STRIPE, 90C, UL	ML2755D10		ML2755D10
Cables	24	14 AWG, GREEN W/YEL STRIPE, 90C, UL	ML2755D14		ML2755D14
CABLES	240	CORD, UL2919-30V-80 DEG. C - ENCODER CABLE	9891		ML6017A01
CABLES	360	CORD, #22-4, 300V, SHIELDED (RD/WH/BLK/GR)#9940B			ML6022K20
CABLES	240	22-2 TWISTED PAIR, 22 AWG, SHIELDED 80C CABLE	82761		ML6032K02
Lables	1	DUMMY NAMEPLATE, DATA ONLY			NP0000PN
H-O-A	1	NAME PLATE HOLDER PLASTIC	P9ARTBS	GENERAL ELECTRIC	NP0828A00
HORNACTIVATION	1	NAME PLATE HOLDER PLASTIC	P9ARTBS	GENERAL ELECTRIC	NP0828A00
E-STOP	1	NAME PLATE HOLDER PLASTIC	P9ARTBS	GENERAL ELECTRIC	NP0828A00
PENDANT-ON/OFF	1	NAME PLATE HOLDER PLASTIC	P9ARTBS	GENERAL ELECTRIC	NP0828A00
PENDANT-HORNACTIVATION	1	NAME PLATE HOLDER PLASTIC	P9ARTBS	GENERAL ELECTRIC	NP0828A00
E-STOP	1	NAME PLATE INSERT 'EMERGENCY STOP'	NP0829A25	GENERAL ELECTRIC	NP0829A25
H-O-A	1	NAME PLATE INSERT BLANK	P9ACPBS	GENERAL ELECTRIC	NP0829A43
HORNACTIVATION	1	NAME PLATE INSERT BLANK	P9ACPBS	GENERAL ELECTRIC	NP0829A43
PENDANT-ON/OFF	1	NAME PLATE INSERT BLANK	P9ACPBS	GENERAL ELECTRIC	NP0829A43
PENDANT-HORNACTIVATION	1	NAME PLATE INSERT BLANK	P9ACPBS	GENERAL ELECTRIC	NP0829A43
CTRL1	3	BLANK NAMEPLATE 1"x 3", PHENOLIC MATERIAL	NP0876A79	BALDOR	NP0876A79
CTRL2	3	BLANK NAMEPLATE 1"x 3", PHENOLIC MATERIAL	NP0876A79	BALDOR	NP0876A79
CTRL3	3	BLANK NAMEPLATE 1"x 3", PHENOLIC MATERIAL	NP0876A79	BALDOR	NP0876A79
PENDANT-POT	1	BLANK NAMEPLATE 1"x 3", PHENOLIC MATERIAL	NP0876A79	BALDOR	NP0876A79

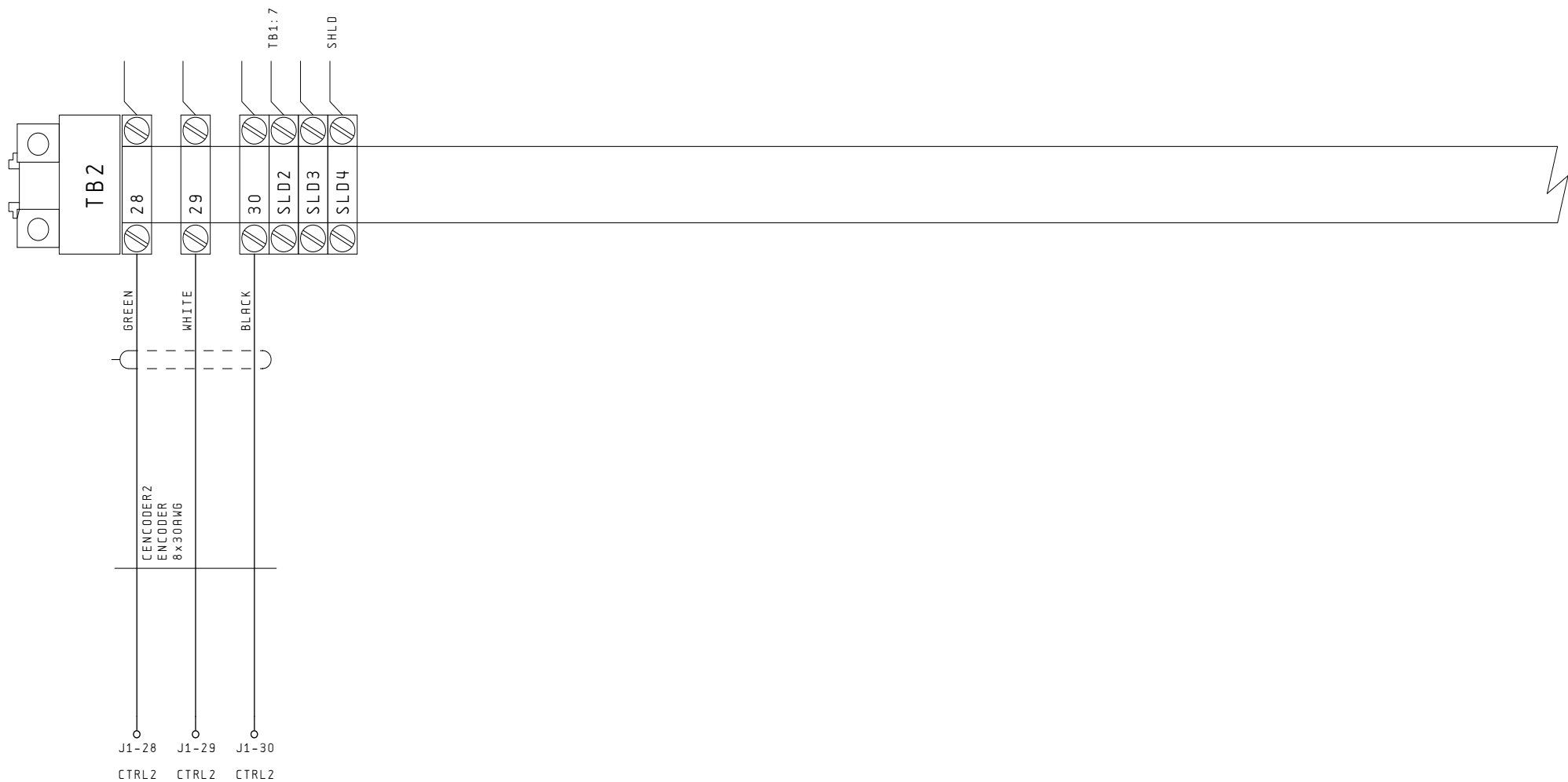
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		Spec.	PN0018B27		FORT SMITH, AR 72901			
		TDR #	580028	Engineer - KIM TRAN	Original		VR420-BC4	Pg. 14 of 25



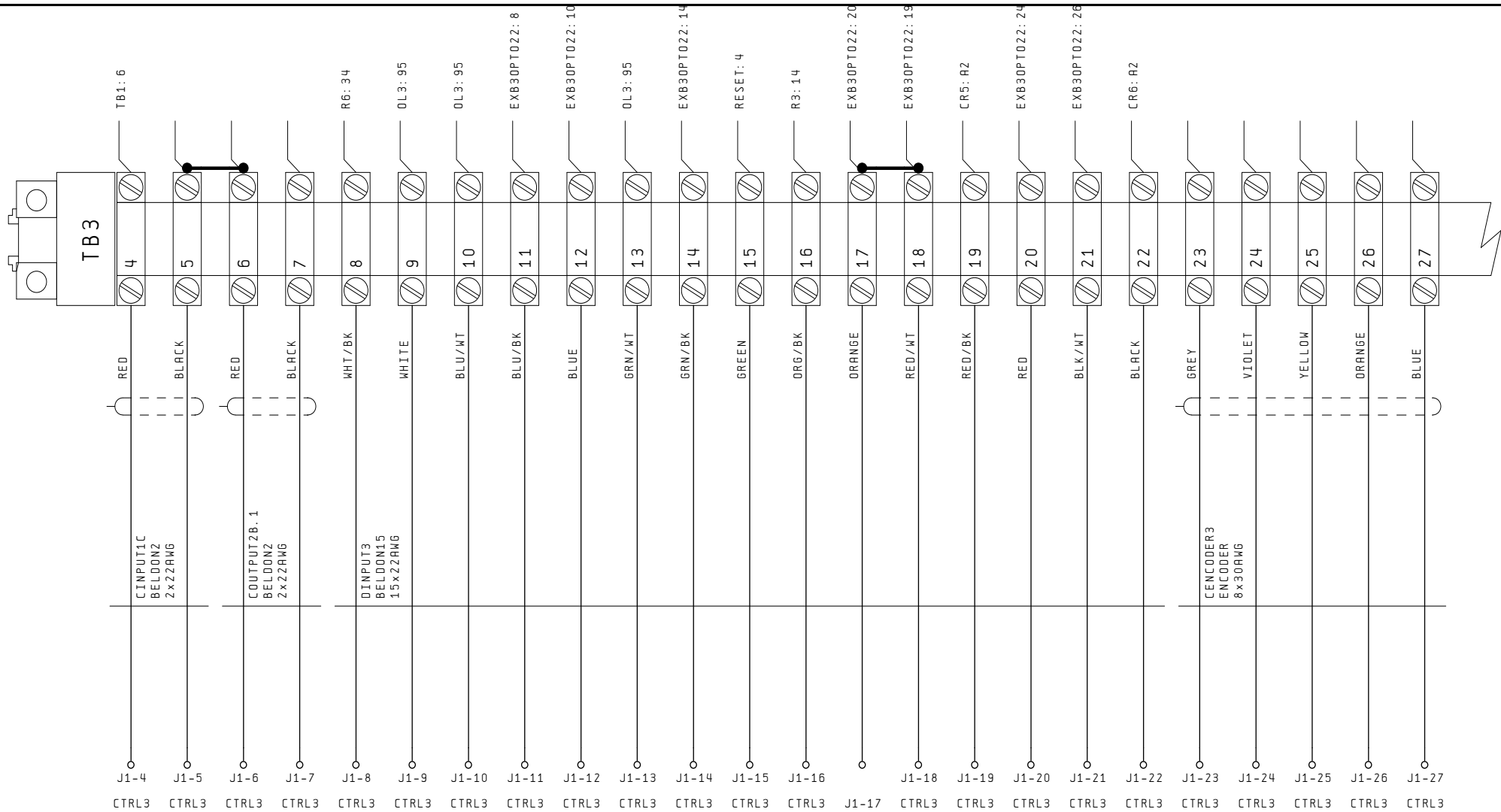


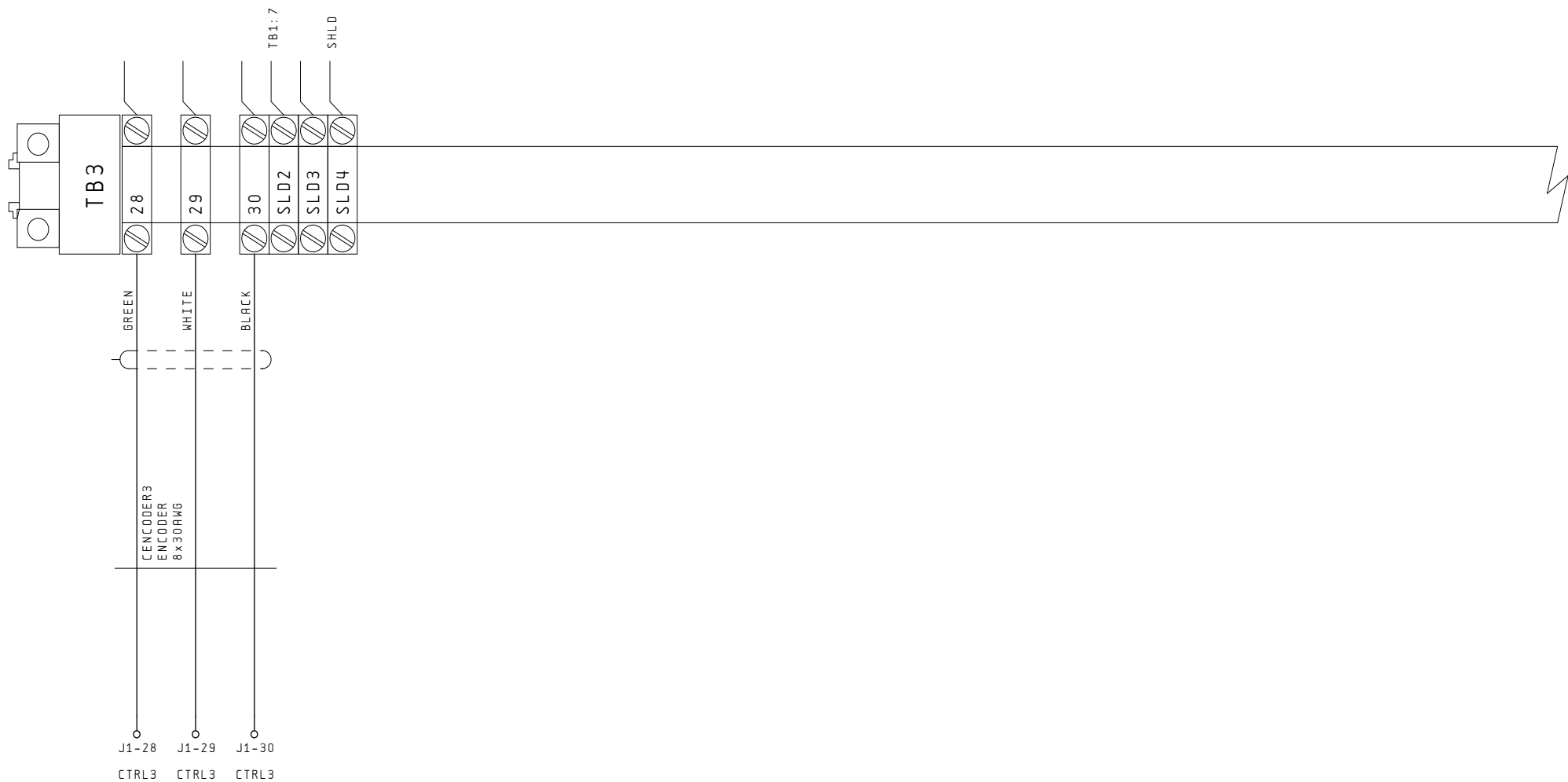
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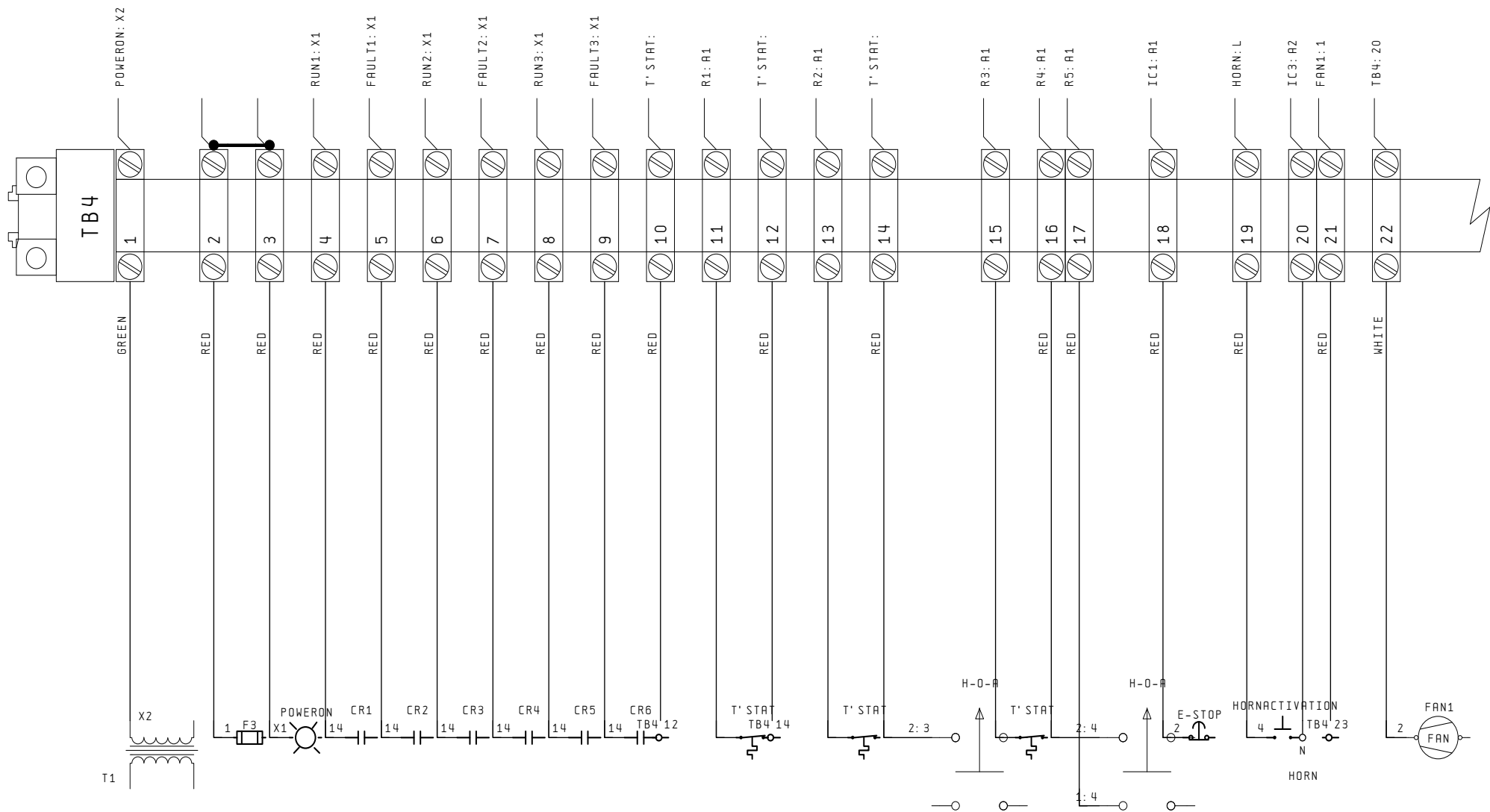


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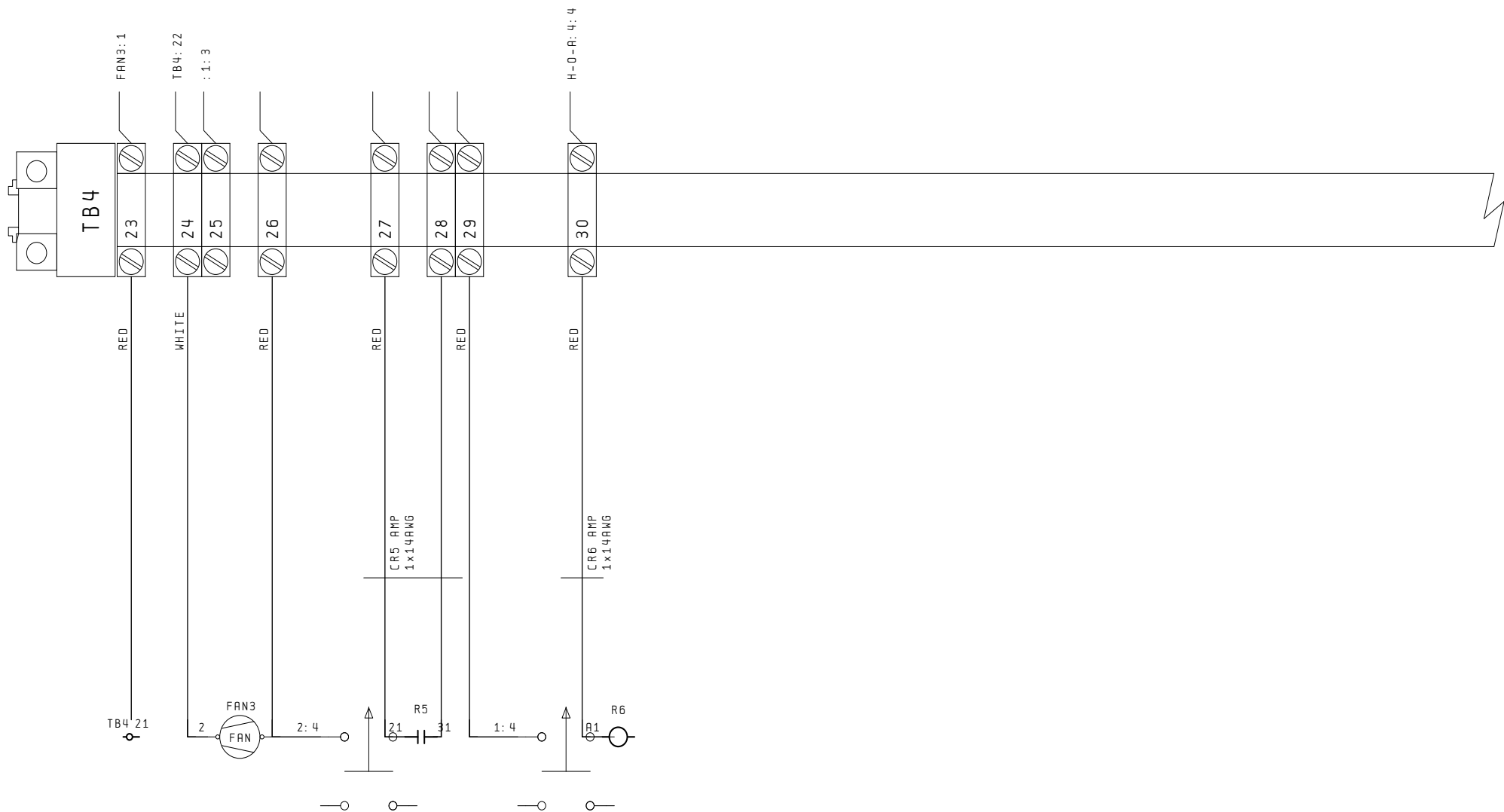




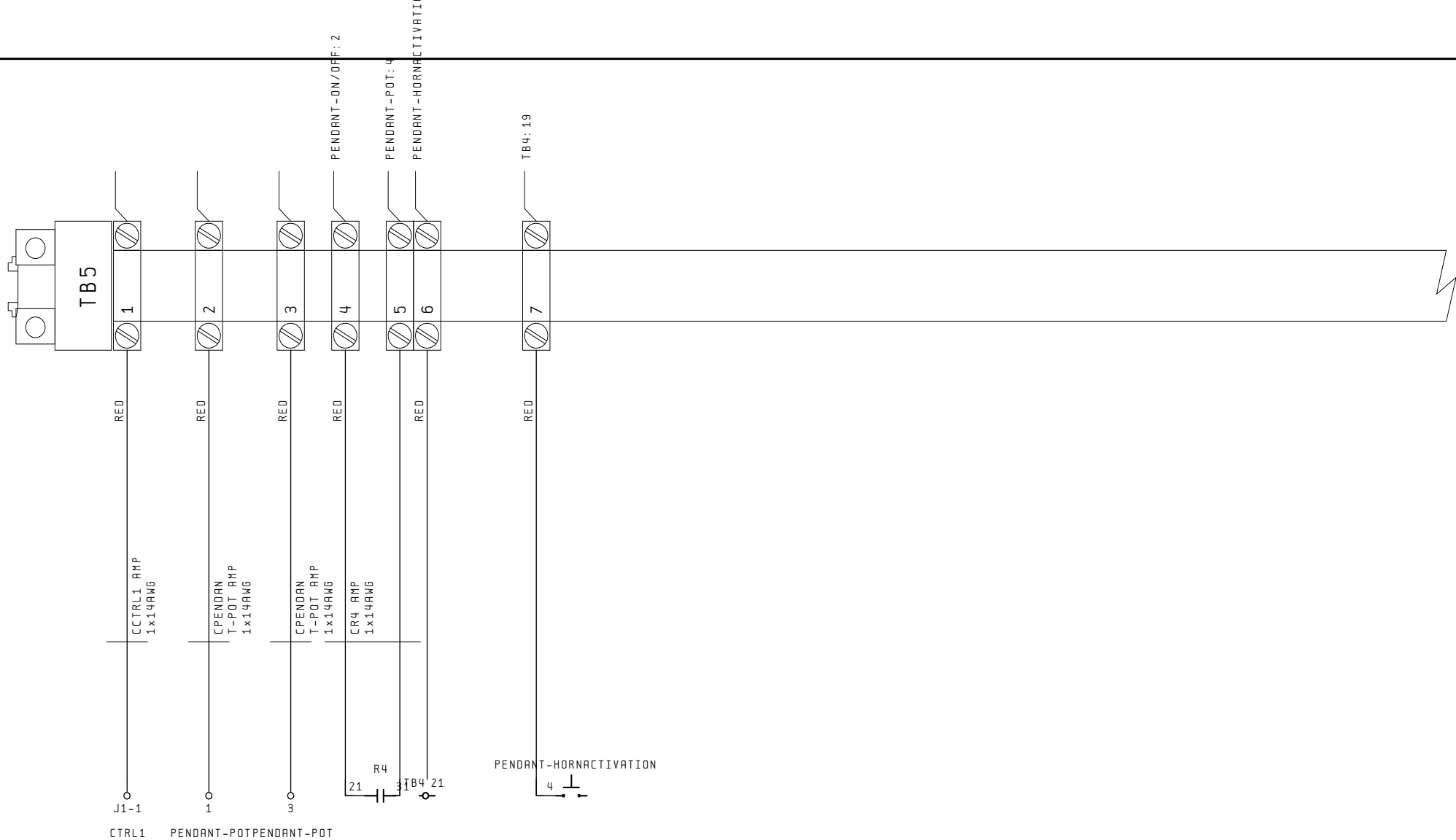
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Revision	B	Date	02-10-2011	BALDOR DRIVES CENTER	BALDOR ELECTRIC COMPANY	TB4	01-21-2011		
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BALDOR ELECTRIC				
WIRING LIST				Page 1
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
1		L1	MCP: L1	
3		L2	MCP: L2	
5		L3	MCP: L3	
7		L1	MCP: L2	
9		L2	MCP: L3	
11		GND: _1	MOV	
13		MOTOR: _1	OL1: 4	
15		MOTOR: _15	OL1: 5	
17		MOTOR: _29	OL1: 6	
19		GND: _1	MOTOR: _30	
21		CTRL1:	EXB1:	
23		MOTOR: _1	OL2: 4	
25		MOTOR: _15	OL2: 5	
27		MOTOR: _29	OL2: 6	
29		CTRL2:	EXB2:	
31		MOTOR: _1	OL3: 4	
33		MOTOR: _15	OL3: 5	
35		MOTOR: _29	OL3: 6	
37		CTRL3:	EXB3:	
39		F1: 2	T1: H1	
41		F2: 2	T1: H4	
43		F2: 2	T1: H1	
45		F3: 2	T1: X1	
47		T' STAT: _1	TB4: 10	
49		T' STAT: _2	TB4: 11	
51		T' STAT: _1	TB4: 12	
53		T' STAT: _2	TB4: 13	
55		T' STAT: _1	TB4: 14	
57		T' STAT: _2	TB4: 15	
59		R4: A1	SS4: 1	
61		HORN: L	TB4: 19	
63		HORN: N	TB4: 20	
65		CTRL1: J1-30	SHLD	
67		SHLD	TAPE	
69		SHLD	TB1: SLD4	
71		SHLD	TB1: SLD4	
73		CTRL1: J1-38	SHLD	
75		CTRL1: J1-39	CTRL1: J1-40	
77		CTRL1: J1-39	EXB1OPT022: +	
79		CTRL1: J1-41	CTRL1: J1-44	
81		CTRL1: J1-42	CTRL1: J1-44	
83		CTRL1: J1-43	CTRL1: J1-44	
85		PENDANT-ON/OFF: 2	TB5: 4	
87		PENDANT-POT: 4	TB5: 5	
89		SHLD	TB1: SLD3	
91		EXB1OPT022: -	EXB1OPT022: 1	
93		EXB1OPT022: 1	EXB1OPT022: 3	
95		EXB1OPT022: 3	EXB1OPT022: 5	
97		EXB1OPT022: 5	EXB1OPT022: 7	
99		EXB1OPT022: 7	EXB1OPT022: 9	
101		EXB1OPT022: 11	EXB1OPT022: 9	
103		EXB1OPT022: 11	EXB1OPT022: 13	
105		EXB1OPT022: 13	EXB1OPT022: 15	

BALDOR ELECTRIC				
WIRING LIST				Page 2
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
107		EXB10PT022: 15	EXB10PT022: 17	
109		EXB10PT022: 17	EXB10PT022: 19	
111		EXB10PT022: 19	EXB10PT022: 23	
113		EXB10PT022: 21	EXB10PT022: 23	
115		EXB10PT022: 23	EXB10PT022: 25	
117		EXB10PT022: 25	EXB10PT022: 27	
119		EXB10PT022: 27	EXB10PT022: 29	
121		EXB10PT022: 29	EXB10PT022: 31	
123		CTRL2: J1-1	SHLD	
125		SHLD	TB2: SLD2	
127		SHLD	TB2: SLD3	
129		CTRL2: J1-30	SHLD	
131		SHLD	TB2: SLD4	
133		SHLD	TB2: SLD4	
135		EXB2: 55	SHLD	
137		CTRL2: J1-39	CTRL2: J1-40	
139		CTRL2: J1-39	EXB20PT022: +	
141		CTRL2: J1-41	CTRL2: J1-42	
143		CTRL2: J1-42	CTRL2: J1-43	
145		CTRL2: J1-43	CTRL2: J1-44	
147		CR4: A1	EXB20PT022: +	
149		EXB20PT022: -	EXB20PT022: 1	
151		EXB20PT022: 1	EXB20PT022: 3	
153		EXB20PT022: 3	EXB20PT022: 5	
155		EXB20PT022: 5	EXB20PT022: 7	
157		EXB20PT022: 7	EXB20PT022: 9	
159		EXB20PT022: 11	EXB20PT022: 9	
161		EXB20PT022: 11	EXB20PT022: 13	
163		EXB20PT022: 13	EXB20PT022: 15	
165		EXB20PT022: 15	EXB20PT022: 17	
167		EXB20PT022: 17	EXB20PT022: 19	
169		EXB20PT022: 19	EXB20PT022: 23	
171		EXB20PT022: 21	EXB20PT022: 23	
173		EXB20PT022: 23	EXB20PT022: 25	
175		EXB20PT022: 25	EXB20PT022: 27	
177		EXB20PT022: 27	EXB20PT022: 29	
179		EXB20PT022: 29	EXB20PT022: 31	
181		CTRL3: J1-1	SHLD	
183		SHLD	TB3: SLD2	
185		SHLD	TB3: SLD3	
187		CTRL3: J1-30	SHLD	
189		SHLD	TB3: SLD4	
191		SHLD	TB3: SLD4	
193		EXB3: 55	SHLD	
195		CTRL3: J1-39	CTRL3: J1-40	
197		CTRL3: J1-39	EXB30PT022: +	
199		CTRL3: J1-41	CTRL3: J1-42	
201		CTRL3: J1-42	CTRL3: J1-43	
203		CTRL3: J1-43	CTRL3: J1-44	
205		EXB30PT022: -	EXB30PT022: 1	
207		EXB30PT022: 1	EXB30PT022: 3	
209		EXB30PT022: 3	EXB30PT022: 5	
211		EXB30PT022: 5	EXB30PT022: 7	

BALDOR ELECTRIC				
WIRING LIST				Page 3
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
213		EXB30PT022: 7	EXB30PT022: 9	
215		EXB30PT022: 11	EXB30PT022: 9	
217		EXB30PT022: 11	EXB30PT022: 13	
219		EXB30PT022: 13	EXB30PT022: 15	
221		EXB30PT022: 15	EXB30PT022: 17	
223		EXB30PT022: 17	EXB30PT022: 19	
225		EXB30PT022: 19	EXB30PT022: 23	
227		EXB30PT022: 21	EXB30PT022: 23	
229		EXB30PT022: 23	EXB30PT022: 25	
231		EXB30PT022: 25	EXB30PT022: 27	
233		EXB30PT022: 27	EXB30PT022: 29	
235		EXB30PT022: 29	EXB30PT022: 31	
237		PENDANT-ON/OFF: 1	PENDANT-POT: 2	
239		MCP: T1	PB1: L1	4 BLACK
241		MCP: T3	PB2: L3	4 BLUE
243		MCP: T2	PB1: L2	4 RED
245		MCCB3: 1	PB1: L1	10 BLACK
247		MCCB1: 1	PB1: L1	10 BLACK
249		IC1: 1	MCCB1: 4	10 BLACK
251		IC1: 2	LR1A: A1	10 BLACK
253		CTRL1: L1	LR1A: A2	10 BLACK
255		CTRL1: T1	LR1B: A1	10 BLACK
257		LR1B: A2	OL1: 1	10 BLACK
259		IC2: 1	MCCB2: 4	10 BLACK
261		IC2: 2	LR2A: A1	10 BLACK
263		CTRL2: L1	LR2A: A2	10 BLACK
265		CTRL2: T1	LR2B: A1	10 BLACK
267		LR2B: A2	OL2: 1	10 BLACK
269		IC3: 1	MCCB3: 4	10 BLACK
271		IC3: 2	LR3A: A1	10 BLACK
273		CTRL3: L1	LR3A: A2	10 BLACK
275		CTRL3: T1	LR3B: A1	10 BLACK
277		LR3B: A2	OL3: 1	10 BLACK
279		MCCB3: 3	PB2: L3	10 BLUE
281		MCCB1: 3	PB2: L3	10 BLUE
283		IC1: 5	MCCB1: 6	10 BLUE
285		IC1: 6	LR1A: C1	10 BLUE
287		CTRL1: L3	LR1A: C2	10 BLUE
289		CTRL1: T3	LR1B: C1	10 BLUE
291		LR1B: C2	OL1: 3	10 BLUE
293		IC2: 5	MCCB2: 6	10 BLUE
295		IC2: 6	LR2A: C1	10 BLUE
297		CTRL2: L3	LR2A: C2	10 BLUE
299		CTRL2: T3	LR2B: C1	10 BLUE
301		LR2B: C2	OL2: 3	10 BLUE
303		IC3: 5	MCCB3: 6	10 BLUE
305		IC3: 6	LR3A: C1	10 BLUE
307		CTRL3: L3	LR3A: C2	10 BLUE
309		CTRL3: T3	LR3B: C1	10 BLUE
311		LR3B: C2	OL3: 3	10 BLUE
313		CTRL3: GND	GND	10 GRN/YEL
315		CTRL1: GND	GND	10 GRN/YEL
317		CTRL1: GND	GND: _1	10 GRN/YEL

BALDOR ELECTRIC				
WIRING LIST				Page 4
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
319		CTRL2: GND	GND	10 GRN/YEL
321		CTRL2: GND	GND: _1	10 GRN/YEL
323		CTRL3: GND	GND: _1	10 GRN/YEL
325		G	GND: _1	10 GRN/YEL
327		MCCB3: 2	PB1: L2	10 RED
329		MCCB1: 2	PB1: L2	10 RED
331		IC1: 3	MCCB1: 5	10 RED
333		IC1: 4	LR1A: B1	10 RED
335		CTRL1: L2	LR1A: B2	10 RED
337		CTRL1: T2	LR1B: B1	10 RED
339		LR1B: B2	OL1: 2	10 RED
341		IC2: 3	MCCB2: 5	10 RED
343		IC2: 4	LR2A: B1	10 RED
345		CTRL2: L2	LR2A: B2	10 RED
347		CTRL2: T2	LR2B: B1	10 RED
349		LR2B: B2	OL2: 2	10 RED
351		IC3: 3	MCCB3: 5	10 RED
353		IC3: 4	LR3A: B1	10 RED
355		CTRL3: L2	LR3A: B2	10 RED
357		CTRL3: T2	LR3B: B1	10 RED
359		LR3B: B2	OL3: 2	10 RED
361	03	GND: _1	T1: X2	14 GREEN
363	03	T1: X2	TB4: 1	14 GREEN
365		MCP: T1	MOV: 1	16 MOVLEAD
367		MCP: T2	MOV: 2	16 MOVLEAD
369		MCP: T3	MOV: 3	16 MOVLEAD
371	01	F2: 1	MCP: T1	16 RED
373	02	F1: 1	MCP: T3	16 RED
375	04	F3: 1	TB4: 2	16 RED
377	07	POWERON: X1	TB4: 3	16 RED
379	07	CR1: 11	POWERON: X1	16 RED
381	07	CR1: 11	CR2: 11	16 RED
383	09	RUN1: X1	TB4: 4	16 RED
385	08	CR1: 14	TB4: 4	16 RED
387	07	CR2: 11	CR3: 11	16 RED
389	11	FAULT1: X1	TB4: 5	16 RED
391	10	CR2: 14	TB4: 5	16 RED
393	07	CR3: 11	CR4: 11	16 RED
395	13	RUN2: X1	TB4: 6	16 RED
397	12	CR3: 14	TB4: 6	16 RED
399	07	CR4: 11	CR5: 11	16 RED
401	15	FAULT2: X1	TB4: 7	16 RED
403	14	CR4: 14	TB4: 7	16 RED
405	07	CR5: 11	CR6: 11	16 RED
407	17	RUN3: X1	TB4: 8	16 RED
409	16	CR5: 14	TB4: 8	16 RED
411	19	FAULT3: X1	TB4: 9	16 RED
413	18	CR6: 14	TB4: 9	16 RED
415	07	TB4: 10	TB4: 12	16 RED
417	07	CR6: 11	TB4: 10	16 RED
419	20	R1: A1	TB4: 11	16 RED
421		R1: A1	SS1: 1	16 RED
423	07	TB4: 12	TB4: 14	16 RED

BALDOR ELECTRIC				
WIRING LIST				Page 5
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
425	21	R2: A1	TB4: 13	16 RED
427		R2: A1	SS2: 1	16 RED
429	07	H-0-A: 2: 3	TB4: 14	16 RED
431	22	R3: A1	TB4: 15	16 RED
433		R3: A1	SS3: 1	16 RED
435		H-0-A: 1: 3	H-0-A: 2: 3	16 RED
437		H-0-A: 1: 3	H-0-A: 4: 3	16 RED
439	23	R4: A1	TB4: 16	16 RED
441	24	H-0-A: 2: 4	TB4: 16	16 RED
443	26	R5: A1	TB4: 17	16 RED
445	25	H-0-A: 1: 4	TB4: 17	16 RED
447		R5: A1	SS5: 1	16 RED
449	28	: 2: 4	TB4: 26	16 RED
451	27	: 1: 3	TB4: 25	16 RED
453		: 2: 3	TB4: 25	16 RED
455	29	: 1: 4	TB4: 29	16 RED
457		H-0-A: 3: 3	H-0-A: 4: 3	16 RED
459	30	H-0-A: 3: 4	H-0-A: 4: 4	16 RED
461	30	H-0-A: 4: 4	TB4: 30	16 RED
463		R6: A1	SS6: 1	16 RED
465	07	E-STOP: 1	H-0-A: 3: 3	16 RED
467		IC1: A1	TB4: 18	16 RED
469	32	IC2: A1	TB4: 18	16 RED
471	31	E-STOP: 2	TB4: 18	16 RED
473		IC1: A1	SS7: 1	16 RED
475	32	IC2: A1	IC3: A1	16 RED
477		IC2: A1	SS8: 1	16 RED
479		IC3: A1	SS9: 1	16 RED
481	33	PENDANT-HORNACTIV	TB5: 6	16 RED
483	07	TB4: 21	TB5: 6	16 RED
485	07	HORNACTIVATION: 3	TB5: 6	16 RED
487	07	E-STOP: 1	TB5: 6	16 RED
489	35	TB4: 19	TB5: 7	16 RED
491	34	PENDANT-HORNACTIV	TB5: 7	16 RED
493	35	HORNACTIVATION: 4	TB4: 19	16 RED
495	36	FAN1: 1	TB4: 21	16 RED
497		FAN2: 1	TB4: 21	16 RED
499	07	TB4: 21	TB4: 23	16 RED
501	38	FAN3: 1	TB4: 23	16 RED
503		FAN4: 1	TB4: 23	16 RED
505	05	POWERON: X2	TB4: 1	16 WHITE
507	05	POWERON: X2	RUN1: X2	16 WHITE
509	05	FAULT1: X2	RUN1: X2	16 WHITE
511	05	FAULT1: X2	RUN2: X2	16 WHITE
513	05	FAULT2: X2	RUN2: X2	16 WHITE
515	05	FAULT2: X2	RUN3: X2	16 WHITE
517	05	FAULT3: X2	RUN3: X2	16 WHITE
519	05	FAULT3: X2	R1: A2	16 WHITE
521		R1: A2	SS1: 2	16 WHITE
523	05	R1: A2	R2: A2	16 WHITE
525		R2: A2	SS2: 2	16 WHITE
527	05	R2: A2	R3: A2	16 WHITE
529		R3: A2	SS3: 2	16 WHITE

BALDOR ELECTRIC				
WIRING LIST				Page 6
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
531	05	R3: A2	R4: A2	16 WHITE
533		R4: A2	SS4: 2	16 WHITE
535	05	R4: A2	R5: A2	16 WHITE
537	05	R5: A2	R6: A2	16 WHITE
539		R5: A2	SS5: 2	16 WHITE
541	05	IC1: A2	R6: A2	16 WHITE
543		R6: A2	SS6: 2	16 WHITE
545	05	IC1: A2	IC2: A2	16 WHITE
547		IC1: A2	SS7: 2	16 WHITE
549	05	IC2: A2	IC3: A2	16 WHITE
551		IC2: A2	SS8: 2	16 WHITE
553		IC3: A2	SS9: 2	16 WHITE
555	05	IC3: A2	TB4: 20	16 WHITE
557	05	TB4: 20	TB4: 22	16 WHITE
559		TB4: 22	TB4: 24	16 WHITE
561	37	FAN1: 2	TB4: 22	16 WHITE
563		FAN2: 2	TB4: 22	16 WHITE
565	39	FAN3: 2	TB4: 24	16 WHITE
567		FAN4: 2	TB4: 24	16 WHITE
569	40	CR2: A1	EXB10PT022: +	20 BLUE
571	49	OL1: 96	R6: 11	20 BLUE
573	41	R6: 14	TB1: 8	20 BLUE
575	42	OL1: 95	TB1: 9	20 BLUE
577	42	OL1: 95	TB1: 10	20 BLUE
579	42	OL1: 95	R4: 11	20 BLUE
581	43	R4: 14	TB1: 13	20 BLUE
583	42	OL1: 95	R5: 11	20 BLUE
585	44	R5: 14	TB1: 14	20 BLUE
587	42	OL1: 95	RESET: 3	20 BLUE
589	45	RESET: 4	TB1: 15	20 BLUE
591	42	OL1: 95	R1: 11	20 BLUE
593	40	CR1: A1	CR2: A1	20 BLUE
595		CR1: A1	D1: 1	20 BLUE
597		CR1: A2	D1: 2	20 BLUE
599	47	CR1: A2	TB1: 19	20 BLUE
601		CR2: A1	D2: 1	20 BLUE
603		CR2: A2	D2: 2	20 BLUE
605	48	CR2: A2	TB1: 22	20 BLUE
607	57	OL2: 96	R6: 21	20 BLUE
609	50	R6: 24	TB2: 8	20 BLUE
611	52	OL2: 95	TB2: 9	20 BLUE
613	52	OL2: 95	TB2: 10	20 BLUE
615	52	OL2: 95	TB2: 11	20 BLUE
617	52	OL2: 95	TB2: 13	20 BLUE
619	52	OL2: 95	RESET: 3	20 BLUE
621	52	R2: 11	RESET: 3	20 BLUE
623	53	RESET: 4	TB2: 15	20 BLUE
625	54	R2: 14	TB2: 16	20 BLUE
627	52	R2: 11	TB2: 17	20 BLUE
629	51	CR3: A1	CR4: A1	20 BLUE
631		CR3: A1	D3: 1	20 BLUE
633		CR3: A2	D3: 2	20 BLUE
635	55	CR3: A2	TB2: 19	20 BLUE

BALDOR ELECTRIC				
WIRING LIST				Page 7
Plant: BALDOR DRIVES CENTER			Date: 01-21-2011	
Drawing Number: VR420-C4		Catalog Number: CUSTOM		
No.	Wiring design.	From	To	AWG Size Color Code
637		CR4: A1	D4: 1	20 BLUE
639		CR4: A2	D4: 2	20 BLUE
641	56	CR4: A2	TB2: 22	20 BLUE
643	59	CR6: A1	EXB30PT022: +	20 BLUE
645	65	OL3: 96	R6: 31	20 BLUE
647	58	R6: 34	TB3: 8	20 BLUE
649	60	OL3: 95	TB3: 9	20 BLUE
651	60	OL3: 95	TB3: 10	20 BLUE
653	60	OL3: 95	TB3: 11	20 BLUE
655	60	OL3: 95	TB3: 13	20 BLUE
657	60	OL3: 95	RESET: 3	20 BLUE
659	60	R3: 11	RESET: 3	20 BLUE
661	61	RESET: 4	TB3: 15	20 BLUE
663	62	R3: 14	TB3: 16	20 BLUE
665	60	R3: 11	TB3: 17	20 BLUE
667	59	CR5: A1	CR6: A1	20 BLUE
669		CR5: A1	D5: 1	20 BLUE
671		CR5: A2	D5: 2	20 BLUE
673	63	CR5: A2	TB3: 19	20 BLUE
675		CR6: A1	D6: 1	20 BLUE
677		CR6: A2	D6: 2	20 BLUE
679	64	CR6: A2	TB3: 22	20 BLUE
681		OL1: 95	TB1: 17	20 ORANGE
683		EXB10PT022: 2	TB1: 8	20 WHT/BK
685		EXB20PT022: 2	TB2: 8	20 WHT/BK
687		EXB30PT022: 2	TB3: 8	20 WHT/BK
689		R5: 34	TB1: 5	22 BLACK
691		R4: 34	TB1: 5	22 BLACK
693		TB1: 7	TB2: SLD2	22 BLACK
695		TB1: 7	TB3: SLD2	22 BLACK
697		R5: 24	TB1: 4	22 RED
699		R4: 24	TB1: 4	22 RED
701		TB1: 6	TB2: 4	22 RED
703		TB1: 6	TB3: 4	22 RED
705		CTRL1: J1-1	SHLD	22 WHITE

Appendix A

Converter Section Parameter Values

Table A-1 Converter Section Parameter Block Values Level 1

Level 1 Blocks				
Block Title	Parameter	Adjustable Range	Factory Setting	User Setting
MISC	FACTORY SETTINGS	NO, YES	NO	
	LINE INDUCTOR		CALC	
	BUS CAPACITANCE	50 – 500%	100%	
	DAC SELECTION	AB BC CROSS AB CROSS DQ CONTRLR DQ CURRENTS IQ COMMAND IB AND IC Va AND Vb Ia AND Ib	AB BC CROSS	
SECURITY CONTROL	SECURITY STATE	OFF LOCAL SERIAL TOTAL	OFF	
	ACCESS TIMEOUT	0 – 600 SEC	0 SEC	
	ACCESS CODE	0 – 9999	9999	

Power Output Section Parameter Values (Version 3.20)**Table A-2 Power Output Parameter Block Values Level 1**

Level 1 Blocks					
Block Title	Parameter	P#	Adjustable Range	Factory Setting	User Setting
PRESET SPEEDS	PRESET SPEED #1	1001	0-MAX Speed	0 RPM	
	PRESET SPEED #2	1002	0-MAX Speed	0 RPM	
	PRESET SPEED #3	1003	0-MAX Speed	0 RPM	
	PRESET SPEED #4	1004	0-MAX Speed	0 RPM	
	PRESET SPEED #5	1005	0-MAX Speed	0 RPM	
	PRESET SPEED #6	1006	0-MAX Speed	0 RPM	
	PRESET SPEED #7	1007	0-MAX Speed	0 RPM	
	PRESET SPEED #8	1008	0-MAX Speed	0 RPM	
	PRESET SPEED #9	1009	0-MAX Speed	0 RPM	
	PRESET SPEED #10	1010	0-MAX Speed	0 RPM	
	PRESET SPEED #11	1011	0-MAX Speed	0 RPM	
	PRESET SPEED #12	1012	0-MAX Speed	0 RPM	
	PRESET SPEED #13	1013	0-MAX Speed	0 RPM	
	PRESET SPEED #14	1014	0-MAX Speed	0 RPM	
	PRESET SPEED #15	1015	0-MAX Speed	0 RPM	
ACCEL/DECEL RATE	ACCEL TIME #1	1101	0 to 3600.0 Seconds	3.0 SEC	
	DECEL TIME #1	1102	0 to 3600.0 Seconds	3.0 SEC	
	S-CURVE #1	1103	0-100%	0 %	
	ACCEL TIME #2	1104	0 to 3600.0 Seconds	3.0 SEC	
	DECEL TIME #2	1105	0 to 3600.0 Seconds	3.0 SEC	
	S-CURVE #2	1106	0-100%	0 %	
JOG SETTINGS	JOG SPEED	1201	0-MAX Speed	200 RPM	
	JOG ACCEL TIME	1202	0 to 3600.0 Seconds	3.0 SEC	
	JOG DECEL TIME	1203	0 to 3600.0 Seconds	3.0 SEC	
	JOG S-CURVE TIME	1204	0-100%	0 %	
KEYPAD SETUP	KEYPAD STOP KEY	1301	0– REMOTE OFF (Stop key inactive during remote or serial operation). 1– REMOTE ON (Stop key active during remote or serial operation).	REMOTE ON	
	KEYPAD STOP MODE	1302	0–COAST, 1–REGEN	REGEN	
	KEYPAD RUN FWD	1303	0–OFF, 1– ON	ON	
	KEYPAD RUN REV	1304	0–OFF, 1– ON	ON	
	KEYPAD JOG FWD	1305	0–OFF, 1– ON	ON	
	KEYPAD JOG REV	1306	0–OFF, 1– ON	ON	
	LOCAL HOT START	1307	0–OFF, 1– ON	OFF	

Table A-2 Power Output Parameter Block Values Level 1 Continued

Level 1 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
INPUT	OPERATING MODE	1401	1- KEYPAD 2- STANDARD RUN 3- 15SPD 4- 3SPD ANA 2WIRE 5- 3SPD ANA 3WIRE 6- SERIAL 7- BIPOLAR 8- PROCESS MODE 9- EPOT -2WIRE 10- EPOT -3WIRE	KEYPAD	BIPOLAR (Master)
	COMMAND SELECT	1402	0- POTENTIOMETER 1- +/-10 VOLTS 2- +/-5 VOLTS 3- 4 To 20 mA 4- 10V W/TORQ FF 5- EXB PULSE FOL 6- 5VOLT EXB 7- 10 VOLT EXB 8- 4-20mA EXB 9- 3-15 PSI EXB 10- TACHOMETER EXB 11- SERIAL 12- NONE	+/-10 VOLTS	
	ANA CMD INVERSE	1403	0-OFF, 1- ON	OFF	
	ANA CMD OFFSET	1404	-20.0 TO +20.0% (where $\pm 0.5V = \pm 20\%$)	0.0 %	
	ANA 2 DEADBAND	1405	0-10.00 V	0.00 V	
	ANA 1 CUR LIMIT	1406	0-OFF, 1- ON	OFF	
OUTPUT	OPTO OUTPUT #1	1501	0- READY 1- ZERO SPEED 2- AT SPEED 3- OVERLOAD	READY	RUN
	OPTO OUTPUT #2	1502	4- KEYPAD CONTROL 5- AT SET SPEED 6- FAULT 7- FOLLOWING ERR	ZERO SPEED	
	OPTO OUTPUT #3	1503	8- MOTR DIRECTION 9- DRIVE ON 10- CMD DIRECTION 11- AT POSITION	AT SPEED	
	OPTO OUTPUT #4	1504	12- OVER TEMP WARN 13- PROCESS ERROR 14- DRIVE RUN 15- SERIAL	FAULT	
	ZERO SPD SET PT	1505	1-MAX Speed	200 RPM	
	AT SPEED BAND	1506	1-1000 RPM	100 RPM	
	SET SPEED	1507	0-MAX Speed	Rated Motor Speed	

Table A-2 Power Output Parameter Block Values Level 1 Continued

Level 1 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
OUTPUT (Continued)	ANALOG OUT #1	1508	0- ABS SPEED 1- ABS TORQUE 2- SPEED COMMAND 3- PWM VOLTAGE 4- FLUX CURRENT 5- CMD FLUX CUR 6- LOAD CURRENT 7- CMD LOAD CUR 8- MOTOR CURRENT 9- LOAD COMPONENT 10- QUAD VOLTAGE 11- DIRECT VOLTAGE	ABS SPEED	LOAD CURRENT
	ANALOG OUT #2	1509	12- AC VOLTAGE 13- BUS VOLTAGE 14- TORQUE 15- POWER 16- VELOCITY 17- OVERLOAD 18- PH2 CURRENT 19- PH3 CURRENT 20- PROCESS FDBK 21- SETPOINT CMD 22- POSITION 23- SERIAL	MOTOR CURRENT	LOAD CURRENT
	ANALOG #1 SCALE	1510	10 - 100%	100%	
	ANALOG #2 SCALE	1511	10 - 100%	100%	
	POSITION BAND	1512	1-32767 CNTS	CALC	
VECTOR CONTROL	CTRL BASE SPEED	1601	1-MAX Speed	CALC	
	FEEDBACK FILTER	1602	0-7	CALC	
	FEEDBACK ALIGN	1603	0-REVERSE, 1-FORWARD	FORWARD	
	CURRENT PROP GAIN	1604	0-1000	CALC	
	CURRENT INT GAIN	1605	0-400 Hz	150 Hz	
	SPEED PROP GAIN	1606	0-1000	10	
	SPEED INT GAIN	1607	0-9.99 Hz	1.00 Hz	
	SPEED DIFF GAIN	1608	0-100	0	
	POSITION GAIN	1609	0-9999	CALC	
	SLIP FREQUENCY	1610	0-20.00 Hz	CALC	
	STATOR R1	1611	0-65.635	CALC	
	STATOR X2	1612	0-65.635	CALC	
	PROP GAIN #1	1613	0-65635	15000	
	INT GAIN #1	1614	0-65635	5000	
LEVEL 2 BLOCK	ENTERS LEVEL 2 MENU - See Table A-3.				
PRESS ENTER FOR PROGRAMMING EXIT	Exit programming mode and return to display mode.				

Table A-3 Power Output Parameter Block Values Level 2

Level 2 Blocks					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
OUTPUT LIMITS	OPERATING ZONE	2001	1-STD CONST TQ 2-STD VAR TQ 3-QUIET CONST TQ 4-QUIET VAR TQ	STD CONST TQ	
	MIN OUTPUT SPEED	2002	0-MAX Speed RPM	0 RPM	
	MAX OUTPUT SPEED	2003	0-30000 RPM	Rated Motor Speed	
	PK CURRENT LIMIT	2004	0-PEAK RATED CURRENT	PK Control Rating	
	PWM FREQUENCY	2005	1.0-5.0 KHZ (Standard) 1.0-16.0 KHZ (Quiet)	2.5 KHZ	
	CUR RATE LIMIT	2006	0.001-10.000 SEC	0.004 SEC	
CUSTOM UNITS	DECIMAL PLACES	2101	0-5	5	
	VALUE AT SPEED	2102	0-65535 / 0-65535	00000/ 01000 RPM	
	UNITS OF MEASURE	2103	Selection of 9 Character Sets	-	
PROTECTION	OVERLOAD	2201	0-FOLDBACK, 1-FAULT	FOLDBACK	
	EXTERNAL TRIP	2202	0-OFF, 1- ON	OFF	ON
	LOCAL ENABLE INP	2203	0-OFF, 1- ON	OFF	
	FOLLOWING ERROR	2204	0-OFF, 1- ON	OFF	
	TORQUE PROVING	2205	0-OFF, 1- ON	OFF	
MISCELLANEOUS	RESTART AUTO/MAN	2301	0-MANUAL, 1-AUTOMATIC	MANUAL	
	RESTART FAULT/HR	2302	0-10	0	
	RESTART DELAY	2303	0-120 SECONDS	0 SEC	
	FACTORY SETTINGS	2304	0-NO, 1-YES	NO	
	HOMING SPEED	2305	0-MAX Speed	100 RPM	
	HOMING OFFSET	2306	0-65535 Encoder Counts	1024 CNTS	
SECURITY CONTROL	SECURITY STATE	2401	0-OFF 1-LOCAL SECURITY 2-SERIAL SECURITY 3-TOTAL SECURITY	OFF	
	ACCESS TIMEOUT	2402	0-600 SEC	0 SEC	
	ACCESS CODE	2403	0-9999	9999	
MOTOR DATA	MOTOR VOLTAGE	2501	150-999 VOLTS	Factory Set	
	MOTOR RATED AMPS	2502	0-999.9	Factory Set	
	MOTOR RATED SPD	2503	0-32767 RPM	1750 RPM	
	MOTOR RATED FREQ	2504	0-500.0 Hz	60.0 Hz	
	MOTOR MAG AMPS	2505	0-0.54 AMPS	CALC	
	ENCODER COUNTS	2506	0-65535 CNTS	1024 PPR	
	RESOLVER SPEEDS	2507	0 to 10	1 SPEED	
	CALC PRESETS	2508	0-NO, 1-YES	NO	

Table A-3 Power Output Parameter Block Values Level 2 Continued

Level 2 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
BRAKE ADJUST	RESISTOR OHMS	2601	0-250.0 Ohms	Factory Set	
	RESISTOR WATTS	2602	0-360.00 Watts	Factory Set	
	DC BRAKE CURRENT	2603	0-100%	0	
PROCESS CONTROL	PROCESS FEEDBACK	2701	0- POTENTIOMETER 1- +/-10VOLTS 2- +/-5 VOLTS 3- 4 To 20mA 4- 5V EXB 5- 10V EXB 6- 4-20mA EXB 7- 3-15 PSI EXB 8- TACHOMETER EXB 9- NONE	NONE	
	PROCESS INVERSE	2702	0-OFF, 1- ON	OFF	
	SETPOINT SOURCE	2703	0- POTENTIOMETER 1- +/-10VOLTS 2- +/-5 VOLTS 3- 4 To 20mA 4- 5V EXB 5- 10V EXB 6- 4-20mA EXB 7- 3-15 PSI EXB 8- TACHOMETER EXB 9- NONE 10- SETPOINT CMD	SETPOINT CMD	
	SETPOINT COMMAND	2704	-100.0% to +100.0%	0.0 %	
	SET PT ADJ LIMIT	2705	0-100.0%	10.0 %	
	PROCESS ERR TOL	2706	1-100%	10 %	
	PROCESS PROP GAIN	2707	0-2000	0	
	PROCESS INT GAIN	2708	0-9.99 HZ	0.00 HZ	
	PROCESS DIFF GAIN	2709	0-1000	0	
	FOLLOW I:O RATIO	2710	(1-65535) : (1-20)	1:1	
	FOLLOW I:O OUT	2711	1-65535 : 1-65535	1:1	
	MASTER ENCODER	2712	50-65535	1024 PPR	

Table A-3 Power Output Parameter Block Values Level 2 Continued

Level 2 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
COMMUNICATIONS	PROTOCOL	2801	0-RS-232 ASCII, 1-RS-485 ASCII, 2-RS-232 BBP, 3-RS-485 BBP	RS-232 BBP	
	BAUD RATE	2802	0-9600, 1-19.2KB, 2-38.4KB, 3-57.6KB, 4-115.2KB, 5-230.4KB, 6-460.8KB, 7-921.6KB	9600	
	DRIVE ADDRESS	2803	0 - 31	0	
AUTO-TUNING	CALC PRESETS	2508	0-NO, 1-YES	NO	
	CMD OFFSET TRM Measures and trims out offset voltage at Analog Input #2 (J1-4 & J1-5).	AU1	-	-	
	CUR LOOP COMP Measures current response while running motor at one half the rated motor current.	AU2	-	-	
	STATOR R1 Measures stator resistance	AU3	-	-	
	FLUX CUR SETTING Sets the Motor Mag Amps.	AU4	-	-	
	FEEDBACK TESTS Checks the Master Encoder and Feedback Align values.	AU5	-	-	
	SLIP FREQ TEST Measures motor Slip Frequency during motor acceleration/deceleration at repeated intervals.	AU6	-	-	
	SPD CNTRLR CALC Measures the motor current to acceleration ratio during motor rotation. This procedure adjusts the Speed INT Gain and Speed PROP Gain parameters.	AU7	-	-	
LEVEL 1 BLOCK	Enters Level 1 Menu - See Table A-2.				
PRESS ENTER FOR PROGRAMMING EXIT	Exit programming mode and return to display mode.				

Power Output Section Parameter Values (Version 3.20)**Table A-2 Power Output Parameter Block Values Level 1**

Level 1 Blocks					
Block Title	Parameter	P#	Adjustable Range	Factory Setting	User Setting
PRESET SPEEDS	PRESET SPEED #1	1001	0-MAX Speed	0 RPM	
	PRESET SPEED #2	1002	0-MAX Speed	0 RPM	
	PRESET SPEED #3	1003	0-MAX Speed	0 RPM	
	PRESET SPEED #4	1004	0-MAX Speed	0 RPM	
	PRESET SPEED #5	1005	0-MAX Speed	0 RPM	
	PRESET SPEED #6	1006	0-MAX Speed	0 RPM	
	PRESET SPEED #7	1007	0-MAX Speed	0 RPM	
	PRESET SPEED #8	1008	0-MAX Speed	0 RPM	
	PRESET SPEED #9	1009	0-MAX Speed	0 RPM	
	PRESET SPEED #10	1010	0-MAX Speed	0 RPM	
	PRESET SPEED #11	1011	0-MAX Speed	0 RPM	
	PRESET SPEED #12	1012	0-MAX Speed	0 RPM	
	PRESET SPEED #13	1013	0-MAX Speed	0 RPM	
	PRESET SPEED #14	1014	0-MAX Speed	0 RPM	
	PRESET SPEED #15	1015	0-MAX Speed	0 RPM	
ACCEL/DECEL RATE	ACCEL TIME #1	1101	0 to 3600.0 Seconds	3.0 SEC	
	DECEL TIME #1	1102	0 to 3600.0 Seconds	3.0 SEC	
	S-CURVE #1	1103	0-100%	0 %	
	ACCEL TIME #2	1104	0 to 3600.0 Seconds	3.0 SEC	
	DECEL TIME #2	1105	0 to 3600.0 Seconds	3.0 SEC	
	S-CURVE #2	1106	0-100%	0 %	
JOG SETTINGS	JOG SPEED	1201	0-MAX Speed	200 RPM	
	JOG ACCEL TIME	1202	0 to 3600.0 Seconds	3.0 SEC	
	JOG DECEL TIME	1203	0 to 3600.0 Seconds	3.0 SEC	
	JOG S-CURVE TIME	1204	0-100%	0 %	
KEYPAD SETUP	KEYPAD STOP KEY	1301	0– REMOTE OFF (Stop key inactive during remote or serial operation). 1– REMOTE ON (Stop key active during remote or serial operation).	REMOTE ON	
	KEYPAD STOP MODE	1302	0–COAST, 1–REGEN	REGEN	
	KEYPAD RUN FWD	1303	0–OFF, 1– ON	ON	
	KEYPAD RUN REV	1304	0–OFF, 1– ON	ON	
	KEYPAD JOG FWD	1305	0–OFF, 1– ON	ON	
	KEYPAD JOG REV	1306	0–OFF, 1– ON	ON	
	LOCAL HOT START	1307	0–OFF, 1– ON	OFF	

Table A-2 Power Output Parameter Block Values Level 1 Continued

Level 1 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
INPUT	OPERATING MODE	1401	1- KEYPAD 2- STANDARD RUN 3- 15SPD 4- 3SPD ANA 2WIRE 5- 3SPD ANA 3WIRE 6- SERIAL 7- BIPOLAR 8- PROCESS MODE 9- EPOT -2WIRE 10- EPOT -3WIRE	KEYPAD	Process Mode (Follower 1)
	COMMAND SELECT	1402	0- POTENTIOMETER 1- +/-10 VOLTS 2- +/-5 VOLTS 3- 4 To 20 mA 4- 10V W/TORQ FF 5- EXB PULSE FOL 6- 5VOLT EXB 7- 10 VOLT EXB 8- 4-20mA EXB 9- 3-15 PSI EXB 10- TACHOMETER EXB 11- SERIAL 12- NONE	+/-10 VOLTS	EXB Pulse Fol
	ANA CMD INVERSE	1403	0-OFF, 1- ON	OFF	
	ANA CMD OFFSET	1404	-20.0 TO +20.0% (where $\pm 0.5V = \pm 20\%$)	0.0 %	
	ANA 2 DEADBAND	1405	0-10.00 V	0.00 V	
	ANA 1 CUR LIMIT	1406	0-OFF, 1- ON	OFF	
OUTPUT	OPTO OUTPUT #1	1501	0- READY 1- ZERO SPEED 2- AT SPEED 3- OVERLOAD	READY	RUN
	OPTO OUTPUT #2	1502	4- KEYPAD CONTROL 5- AT SET SPEED 6- FAULT 7- FOLLOWING ERR	ZERO SPEED	
	OPTO OUTPUT #3	1503	8- MOTR DIRECTION 9- DRIVE ON 10- CMD DIRECTION 11- AT POSITION	AT SPEED	
	OPTO OUTPUT #4	1504	12- OVER TEMP WARN 13- PROCESS ERROR 14- DRIVE RUN 15- SERIAL	FAULT	
	ZERO SPD SET PT	1505	1-MAX Speed	200 RPM	
	AT SPEED BAND	1506	1-1000 RPM	100 RPM	
	SET SPEED	1507	0-MAX Speed	Rated Motor Speed	

Table A-2 Power Output Parameter Block Values Level 1 Continued

Level 1 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
OUTPUT (Continued)	ANALOG OUT #1	1508	0- ABS SPEED 1- ABS TORQUE 2- SPEED COMMAND 3- PWM VOLTAGE 4- FLUX CURRENT 5- CMD FLUX CUR 6- LOAD CURRENT 7- CMD LOAD CUR 8- MOTOR CURRENT 9- LOAD COMPONENT 10- QUAD VOLTAGE 11- DIRECT VOLTAGE	ABS SPEED	LOAD CURRENT
	ANALOG OUT #2	1509	12- AC VOLTAGE 13- BUS VOLTAGE 14- TORQUE 15- POWER 16- VELOCITY 17- OVERLOAD 18- PH2 CURRENT 19- PH3 CURRENT 20- PROCESS FDBK 21- SETPOINT CMD 22- POSITION 23- SERIAL	MOTOR CURRENT	
	ANALOG #1 SCALE	1510	10 - 100%	100%	
	ANALOG #2 SCALE	1511	10 - 100%	100%	
	POSITION BAND	1512	1-32767 CNTS	CALC	
VECTOR CONTROL	CTRL BASE SPEED	1601	1-MAX Speed	CALC	
	FEEDBACK FILTER	1602	0-7	CALC	
	FEEDBACK ALIGN	1603	0-REVERSE, 1-FORWARD	FORWARD	
	CURRENT PROP GAIN	1604	0-1000	CALC	
	CURRENT INT GAIN	1605	0-400 Hz	150 Hz	
	SPEED PROP GAIN	1606	0-1000	10	
	SPEED INT GAIN	1607	0-9.99 Hz	1.00 Hz	
	SPEED DIFF GAIN	1608	0-100	0	
	POSITION GAIN	1609	0-9999	CALC	
	SLIP FREQUENCY	1610	0-20.00 Hz	CALC	
	STATOR R1	1611	0-65.635	CALC	
	STATOR X2	1612	0-65.635	CALC	
	PROP GAIN #1	1613	0-65635	15000	
	INT GAIN #1	1614	0-65635	5000	
LEVEL 2 BLOCK	ENTERS LEVEL 2 MENU - See Table A-3.				
PRESS ENTER FOR PROGRAMMING EXIT	Exit programming mode and return to display mode.				

Table A-3 Power Output Parameter Block Values Level 2

Level 2 Blocks					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
OUTPUT LIMITS	OPERATING ZONE	2001	1-STD CONST TQ 2-STD VAR TQ 3-QUIET CONST TQ 4-QUIET VAR TQ	STD CONST TQ	
	MIN OUTPUT SPEED	2002	0-MAX Speed RPM	0 RPM	
	MAX OUTPUT SPEED	2003	0-30000 RPM	Rated Motor Speed	
	PK CURRENT LIMIT	2004	0-PEAK RATED CURRENT	PK Control Rating	
	PWM FREQUENCY	2005	1.0-5.0 KHZ (Standard) 1.0-16.0 KHZ (Quiet)	2.5 KHZ	
	CUR RATE LIMIT	2006	0.001-10.000 SEC	0.004 SEC	
CUSTOM UNITS	DECIMAL PLACES	2101	0-5	5	
	VALUE AT SPEED	2102	0-65535 / 0-65535	00000/ 01000 RPM	
	UNITS OF MEASURE	2103	Selection of 9 Character Sets	-	
PROTECTION	OVERLOAD	2201	0-FOLDBACK, 1-FAULT	FOLDBACK	
	EXTERNAL TRIP	2202	0-OFF, 1- ON	OFF	ON
	LOCAL ENABLE INP	2203	0-OFF, 1- ON	OFF	
	FOLLOWING ERROR	2204	0-OFF, 1- ON	OFF	
	TORQUE PROVING	2205	0-OFF, 1- ON	OFF	
MISCELLANEOUS	RESTART AUTO/MAN	2301	0-MANUAL, 1-AUTOMATIC	MANUAL	
	RESTART FAULT/HR	2302	0-10	0	
	RESTART DELAY	2303	0-120 SECONDS	0 SEC	
	FACTORY SETTINGS	2304	0-NO, 1-YES	NO	
	HOMING SPEED	2305	0-MAX Speed	100 RPM	
	HOMING OFFSET	2306	0-65535 Encoder Counts	1024 CNTS	
SECURITY CONTROL	SECURITY STATE	2401	0-OFF 1-LOCAL SECURITY 2-SERIAL SECURITY 3-TOTAL SECURITY	OFF	
	ACCESS TIMEOUT	2402	0-600 SEC	0 SEC	
	ACCESS CODE	2403	0-9999	9999	
MOTOR DATA	MOTOR VOLTAGE	2501	150-999 VOLTS	Factory Set	
	MOTOR RATED AMPS	2502	0-999.9	Factory Set	
	MOTOR RATED SPD	2503	0-32767 RPM	1750 RPM	
	MOTOR RATED FREQ	2504	0-500.0 Hz	60.0 Hz	
	MOTOR MAG AMPS	2505	0-0.54 AMPS	CALC	
	ENCODER COUNTS	2506	0-65535 CNTS	1024 PPR	
	RESOLVER SPEEDS	2507	0 to 10	1 SPEED	
	CALC PRESETS	2508	0-NO, 1-YES	NO	

Table A-3 Power Output Parameter Block Values Level 2 Continued

Level 2 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
BRAKE ADJUST	RESISTOR OHMS	2601	0-250.0 Ohms	Factory Set	
	RESISTOR WATTS	2602	0-360.00 Watts	Factory Set	
	DC BRAKE CURRENT	2603	0-100%	0	
PROCESS CONTROL	PROCESS FEEDBACK	2701	0- POTENTIOMETER 1- +/-10VOLTS 2- +/-5 VOLTS 3- 4 To 20mA 4- 5V EXB 5- 10V EXB 6- 4-20mA EXB 7- 3-15 PSI EXB 8- TACHOMETER EXB 9- NONE	NONE	+/- 5 VOLTS
	PROCESS INVERSE	2702	0-OFF, 1- ON	OFF	
	SETPOINT SOURCE	2703	0- POTENTIOMETER 1- +/-10VOLTS 2- +/-5 VOLTS 3- 4 To 20mA 4- 5V EXB 5- 10V EXB 6- 4-20mA EXB 7- 3-15 PSI EXB 8- TACHOMETER EXB 9- NONE 10- SETPOINT CMD	SETPOINT CMD	NONE
	SETPOINT COMMAND	2704	-100.0% to +100.0%	0.0 %	
	SET PT ADJ LIMIT	2705	0-100.0%	10.0 %	
	PROCESS ERR TOL	2706	1-100%	10 %	
	PROCESS PROP GAIN	2707	0-2000	0	
	PROCESS INT GAIN	2708	0-9.99 HZ	0.00 HZ	
	PROCESS DIFF GAIN	2709	0-1000	0	
	FOLLOW I:O RATIO	2710	(1-65535) : (1-20)	1:1	
	FOLLOW I:O OUT	2711	1-65535 : 1-65535	1:1	
	MASTER ENCODER	2712	50-65535	1024 PPR	

Table A-3 Power Output Parameter Block Values Level 2 Continued

Level 2 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
COMMUNICATIONS	PROTOCOL	2801	0-RS-232 ASCII, 1-RS-485 ASCII, 2-RS-232 BBP, 3-RS-485 BBP	RS-232 BBP	
	BAUD RATE	2802	0-9600, 1-19.2KB, 2-38.4KB, 3-57.6KB, 4-115.2KB, 5-230.4KB, 6-460.8KB, 7-921.6KB	9600	
	DRIVE ADDRESS	2803	0 - 31	0	
AUTO-TUNING	CALC PRESETS	2508	0-NO, 1-YES	NO	
	CMD OFFSET TRM Measures and trims out offset voltage at Analog Input #2 (J1-4 & J1-5).	AU1	-	-	
	CUR LOOP COMP Measures current response while running motor at one half the rated motor current.	AU2	-	-	
	STATOR R1 Measures stator resistance	AU3	-	-	
	FLUX CUR SETTING Sets the Motor Mag Amps.	AU4	-	-	
	FEEDBACK TESTS Checks the Master Encoder and Feedback Align values.	AU5	-	-	
	SLIP FREQ TEST Measures motor Slip Frequency during motor acceleration/deceleration at repeated intervals.	AU6	-	-	
	SPD CNTRLR CALC Measures the motor current to acceleration ratio during motor rotation. This procedure adjusts the Speed INT Gain and Speed PROP Gain parameters.	AU7		-	
LEVEL 1 BLOCK	Enters Level 1 Menu - See Table A-2.				
PRESS ENTER FOR PROGRAMMING EXIT	Exit programming mode and return to display mode.				

Power Output Section Parameter Values (Version 3.20)**Table A-2 Power Output Parameter Block Values Level 1**

Level 1 Blocks					
Block Title	Parameter	P#	Adjustable Range	Factory Setting	User Setting
PRESET SPEEDS	PRESET SPEED #1	1001	0-MAX Speed	0 RPM	
	PRESET SPEED #2	1002	0-MAX Speed	0 RPM	
	PRESET SPEED #3	1003	0-MAX Speed	0 RPM	
	PRESET SPEED #4	1004	0-MAX Speed	0 RPM	
	PRESET SPEED #5	1005	0-MAX Speed	0 RPM	
	PRESET SPEED #6	1006	0-MAX Speed	0 RPM	
	PRESET SPEED #7	1007	0-MAX Speed	0 RPM	
	PRESET SPEED #8	1008	0-MAX Speed	0 RPM	
	PRESET SPEED #9	1009	0-MAX Speed	0 RPM	
	PRESET SPEED #10	1010	0-MAX Speed	0 RPM	
	PRESET SPEED #11	1011	0-MAX Speed	0 RPM	
	PRESET SPEED #12	1012	0-MAX Speed	0 RPM	
	PRESET SPEED #13	1013	0-MAX Speed	0 RPM	
	PRESET SPEED #14	1014	0-MAX Speed	0 RPM	
	PRESET SPEED #15	1015	0-MAX Speed	0 RPM	
ACCEL/DECEL RATE	ACCEL TIME #1	1101	0 to 3600.0 Seconds	3.0 SEC	
	DECEL TIME #1	1102	0 to 3600.0 Seconds	3.0 SEC	
	S-CURVE #1	1103	0-100%	0 %	
	ACCEL TIME #2	1104	0 to 3600.0 Seconds	3.0 SEC	
	DECEL TIME #2	1105	0 to 3600.0 Seconds	3.0 SEC	
	S-CURVE #2	1106	0-100%	0 %	
JOG SETTINGS	JOG SPEED	1201	0-MAX Speed	200 RPM	
	JOG ACCEL TIME	1202	0 to 3600.0 Seconds	3.0 SEC	
	JOG DECEL TIME	1203	0 to 3600.0 Seconds	3.0 SEC	
	JOG S-CURVE TIME	1204	0-100%	0 %	
KEYPAD SETUP	KEYPAD STOP KEY	1301	0– REMOTE OFF (Stop key inactive during remote or serial operation). 1– REMOTE ON (Stop key active during remote or serial operation).	REMOTE ON	
	KEYPAD STOP MODE	1302	0–COAST, 1–REGEN	REGEN	
	KEYPAD RUN FWD	1303	0–OFF, 1– ON	ON	
	KEYPAD RUN REV	1304	0–OFF, 1– ON	ON	
	KEYPAD JOG FWD	1305	0–OFF, 1– ON	ON	
	KEYPAD JOG REV	1306	0–OFF, 1– ON	ON	
	LOCAL HOT START	1307	0–OFF, 1– ON	OFF	

Table A-2 Power Output Parameter Block Values Level 1 Continued

Level 1 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
INPUT	OPERATING MODE	1401	1- KEYPAD 2- STANDARD RUN 3- 15SPD 4- 3SPD ANA 2WIRE 5- 3SPD ANA 3WIRE 6- SERIAL 7- BIPOLAR 8- PROCESS MODE 9- EPOT -2WIRE 10- EPOT -3WIRE	KEYPAD	Process Mode (Follower 2)
	COMMAND SELECT	1402	0- POTENTIOMETER 1- +/-10 VOLTS 2- +/-5 VOLTS 3- 4 To 20 mA 4- 10V W/TORQ FF 5- EXB PULSE FOL 6- 5VOLT EXB 7- 10 VOLT EXB 8- 4-20mA EXB 9- 3-15 PSI EXB 10- TACHOMETER EXB 11- SERIAL 12- NONE	+/-10 VOLTS	EXB Pulse Fol
	ANA CMD INVERSE	1403	0-OFF, 1- ON	OFF	
	ANA CMD OFFSET	1404	-20.0 TO +20.0% (where $\pm 0.5V = \pm 20\%$)	0.0 %	
	ANA 2 DEADBAND	1405	0-10.00 V	0.00 V	
	ANA 1 CUR LIMIT	1406	0-OFF, 1- ON	OFF	
OUTPUT	OPTO OUTPUT #1	1501	0- READY 1- ZERO SPEED 2- AT SPEED 3- OVERLOAD	READY	RUN
	OPTO OUTPUT #2	1502	4- KEYPAD CONTROL 5- AT SET SPEED 6- FAULT 7- FOLLOWING ERR 8- MOTR DIRECTION	ZERO SPEED	
	OPTO OUTPUT #3	1503	9- DRIVE ON 10- CMD DIRECTION 11- AT POSITION 12- OVER TEMP WARN	AT SPEED	
	OPTO OUTPUT #4	1504	13- PROCESS ERROR 14- DRIVE RUN 15- SERIAL	FAULT	
	ZERO SPD SET PT	1505	1-MAX Speed	200 RPM	
	AT SPEED BAND	1506	1-1000 RPM	100 RPM	
	SET SPEED	1507	0-MAX Speed	Rated Motor Speed	

Table A-2 Power Output Parameter Block Values Level 1 Continued

Level 1 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
OUTPUT (Continued)	ANALOG OUT #1	1508	0- ABS SPEED 1- ABS TORQUE 2- SPEED COMMAND 3- PWM VOLTAGE 4- FLUX CURRENT 5- CMD FLUX CUR 6- LOAD CURRENT 7- CMD LOAD CUR 8- MOTOR CURRENT 9- LOAD COMPONENT 10- QUAD VOLTAGE 11- DIRECT VOLTAGE	ABS SPEED	LOAD CURRENT
	ANALOG OUT #2	1509	12- AC VOLTAGE 13- BUS VOLTAGE 14- TORQUE 15- POWER 16- VELOCITY 17- OVERLOAD 18- PH2 CURRENT 19- PH3 CURRENT 20- PROCESS FDBK 21- SETPOINT CMD 22- POSITION 23- SERIAL	MOTOR CURRENT	
	ANALOG #1 SCALE	1510	10 - 100%	100%	
	ANALOG #2 SCALE	1511	10 - 100%	100%	
	POSITION BAND	1512	1-32767 CNTS	CALC	
VECTOR CONTROL	CTRL BASE SPEED	1601	1-MAX Speed	CALC	
	FEEDBACK FILTER	1602	0-7	CALC	
	FEEDBACK ALIGN	1603	0-REVERSE, 1-FORWARD	FORWARD	
	CURRENT PROP GAIN	1604	0-1000	CALC	
	CURRENT INT GAIN	1605	0-400 Hz	150 Hz	
	SPEED PROP GAIN	1606	0-1000	10	
	SPEED INT GAIN	1607	0-9.99 Hz	1.00 Hz	
	SPEED DIFF GAIN	1608	0-100	0	
	POSITION GAIN	1609	0-9999	CALC	
	SLIP FREQUENCY	1610	0-20.00 Hz	CALC	
	STATOR R1	1611	0-65.635	CALC	
	STATOR X2	1612	0-65.635	CALC	
	PROP GAIN #1	1613	0-65635	15000	
	INT GAIN #1	1614	0-65635	5000	
LEVEL 2 BLOCK	ENTERS LEVEL 2 MENU - See Table A-3.				
PRESS ENTER FOR PROGRAMMING EXIT	Exit programming mode and return to display mode.				

Table A-3 Power Output Parameter Block Values Level 2

Level 2 Blocks					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
OUTPUT LIMITS	OPERATING ZONE	2001	1-STD CONST TQ 2-STD VAR TQ 3-QUIET CONST TQ 4-QUIET VAR TQ	STD CONST TQ	
	MIN OUTPUT SPEED	2002	0-MAX Speed RPM	0 RPM	
	MAX OUTPUT SPEED	2003	0-30000 RPM	Rated Motor Speed	
	PK CURRENT LIMIT	2004	0-PEAK RATED CURRENT	PK Control Rating	
	PWM FREQUENCY	2005	1.0-5.0 KHZ (Standard) 1.0-16.0 KHZ (Quiet)	2.5 KHZ	
	CUR RATE LIMIT	2006	0.001-10.000 SEC	0.004 SEC	
CUSTOM UNITS	DECIMAL PLACES	2101	0-5	5	
	VALUE AT SPEED	2102	0-65535 / 0-65535	00000/ 01000 RPM	
	UNITS OF MEASURE	2103	Selection of 9 Character Sets	-	
PROTECTION	OVERLOAD	2201	0-FOLDBACK, 1-FAULT	FOLDBACK	
	EXTERNAL TRIP	2202	0-OFF, 1- ON	OFF	ON
	LOCAL ENABLE INP	2203	0-OFF, 1- ON	OFF	
	FOLLOWING ERROR	2204	0-OFF, 1- ON	OFF	
	TORQUE PROVING	2205	0-OFF, 1- ON	OFF	
MISCELLANEOUS	RESTART AUTO/MAN	2301	0-MANUAL, 1-AUTOMATIC	MANUAL	
	RESTART FAULT/HR	2302	0-10	0	
	RESTART DELAY	2303	0-120 SECONDS	0 SEC	
	FACTORY SETTINGS	2304	0-NO, 1-YES	NO	
	HOMING SPEED	2305	0-MAX Speed	100 RPM	
	HOMING OFFSET	2306	0-65535 Encoder Counts	1024 CNTS	
SECURITY CONTROL	SECURITY STATE	2401	0-OFF 1-LOCAL SECURITY 2-SERIAL SECURITY 3-TOTAL SECURITY	OFF	
	ACCESS TIMEOUT	2402	0-600 SEC	0 SEC	
	ACCESS CODE	2403	0-9999	9999	
MOTOR DATA	MOTOR VOLTAGE	2501	150-999 VOLTS	Factory Set	
	MOTOR RATED AMPS	2502	0-999.9	Factory Set	
	MOTOR RATED SPD	2503	0-32767 RPM	1750 RPM	
	MOTOR RATED FREQ	2504	0-500.0 Hz	60.0 Hz	
	MOTOR MAG AMPS	2505	0-0.54 AMPS	CALC	
	ENCODER COUNTS	2506	0-65535 CNTS	1024 PPR	
	RESOLVER SPEEDS	2507	0 to 10	1 SPEED	
	CALC PRESETS	2508	0-NO, 1-YES	NO	

Table A-3 Power Output Parameter Block Values Level 2 Continued

Level 2 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
BRAKE ADJUST	RESISTOR OHMS	2601	0-250.0 Ohms	Factory Set	
	RESISTOR WATTS	2602	0-360.00 Watts	Factory Set	
	DC BRAKE CURRENT	2603	0-100%	0	
PROCESS CONTROL	PROCESS FEEDBACK	2701	0- POTENTIOMETER 1- +/-10VOLTS 2- +/-5 VOLTS 3- 4 To 20mA 4- 5V EXB 5- 10V EXB 6- 4-20mA EXB 7- 3-15 PSI EXB 8- TACHOMETER EXB 9- NONE	NONE	+/-5 VOLT
	PROCESS INVERSE	2702	0-OFF, 1- ON	OFF	
	SETPOINT SOURCE	2703	0- POTENTIOMETER 1- +/-10VOLTS 2- +/-5 VOLTS 3- 4 To 20mA 4- 5V EXB 5- 10V EXB 6- 4-20mA EXB 7- 3-15 PSI EXB 8- TACHOMETER EXB 9- NONE 10- SETPOINT CMD	SETPOINT CMD	NONE
	SETPOINT COMMAND	2704	-100.0% to +100.0%	0.0 %	
	SET PT ADJ LIMIT	2705	0-100.0%	10.0 %	
	PROCESS ERR TOL	2706	1-100%	10 %	
	PROCESS PROP GAIN	2707	0-2000	0	
	PROCESS INT GAIN	2708	0-9.99 HZ	0.00 HZ	
	PROCESS DIFF GAIN	2709	0-1000	0	
	FOLLOW I:O RATIO	2710	(1-65535) : (1-20)	1:1	
	FOLLOW I:O OUT	2711	1-65535 : 1-65535	1:1	
	MASTER ENCODER	2712	50-65535	1024 PPR	

Table A-3 Power Output Parameter Block Values Level 2 Continued

Level 2 Blocks - Continued					
Block Title	Parameter	P#	Adjustable Range	Factory	User Setting
COMMUNICATIONS	PROTOCOL	2801	0-RS-232 ASCII, 1-RS-485 ASCII, 2-RS-232 BBP, 3-RS-485 BBP	RS-232 BBP	
	BAUD RATE	2802	0-9600, 1-19.2KB, 2-38.4KB, 3-57.6KB, 4-115.2KB, 5-230.4KB, 6-460.8KB, 7-921.6KB	9600	
	DRIVE ADDRESS	2803	0 - 31	0	
AUTO-TUNING	CALC PRESETS	2508	0-NO, 1-YES	NO	
	CMD OFFSET TRM Measures and trims out offset voltage at Analog Input #2 (J1-4 & J1-5).	AU1	-	-	
	CUR LOOP COMP Measures current response while running motor at one half the rated motor current.	AU2	-	-	
	STATOR R1 Measures stator resistance	AU3	-	-	
	FLUX CUR SETTING Sets the Motor Mag Amps.	AU4	-	-	
	FEEDBACK TESTS Checks the Master Encoder and Feedback Align values.	AU5	-	-	
	SLIP FREQ TEST Measures motor Slip Frequency during motor acceleration/deceleration at repeated intervals.	AU6	-	-	
	SPD CNTRLR CALC Measures the motor current to acceleration ratio during motor rotation. This procedure adjusts the Speed INT Gain and Speed PROP Gain parameters.	AU7		-	
LEVEL 1 BLOCK	Enters Level 1 Menu - See Table A-2.				
PRESS ENTER FOR PROGRAMMING EXIT	Exit programming mode and return to display mode.				