



Newburg, Missouri, USA  
 573-368-7399  
 machmotion.com

SALES ORDER No.: xxxxx

DRAWING No.: A3SY00-000

SUPPLY VOLTAGE: 240 VOLTS 60 Hz

PHASE:	-	3 PH (240V)
--------	---	-------------

FULL LOAD AMPS:	-	24.6 AMPS
-----------------	---	-----------

LARGEST LOAD:	-	9.7 AMPS
---------------	---	----------

MAX SPINDLE MOTOR SIZE:	-	2.2 KW
-------------------------	---	--------

MIN SUPPLY CIRCUIT CONDUCTOR:	-	25 AMPS
-------------------------------	---	---------

MAX SUPPLY CIRCUIT OCPD:	-	35 AMPS
--------------------------	---	---------

SHORT CIRCUIT CURRENT RATING: 5 kA @ 240 VOLTS MAX

AMBIENT TEMPERATURE RATING: 41° TO 104° F (5° TO 40° C)

THIS EQUIPMENT DOES PROVIDE SUPPLY CIRCUIT OVERCURRENT PROTECTION.

NUMBER OF PAGES 24

COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION: -	ALL RIGHTS RESERVED					DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXX	NAME: -	=	+
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO:	TITLE PAGE / COVER SHEET	PREV PAGE: <<--- PAGE:
								#	NEXT PAGE: --->>	02

# TABLE OF CONTENTS

PAGE	PAGE DESCRIPTION	LAST EDIT DATE	EDITED BY
01	TITLE PAGE / COVER SHEET	7/9/2020	JUSTIN R. WALZ
02	TABLE OF CONTENTS : /01 - /120	7/9/2020	JUSTIN R. WALZ
04	CHANGE SHEET INFORMATION	7/9/2020	JUSTIN R. WALZ
05	SYMBOL INFORMATION	7/9/2020	JUSTIN R. WALZ
06	WIRE INFORMATION	7/9/2020	JUSTIN R. WALZ
07	DEVICE/WIRE LABELING SCHEME	7/9/2020	JUSTIN R. WALZ
10	MAIN DISCONNECT	7/9/2020	JUSTIN R. WALZ
11	BELOW DISCONNECT - 3 PHASE POWER - CONTROL POWER	7/9/2020	JUSTIN R. WALZ
13	BELOW DISCONNECT - FAN - TRANSFORMER	1/17/2020	JUSTIN R. WALZ
14	BELOW DISCONNECT -24 VDC POWER SUPPLY	1/17/2020	JUSTIN R. WALZ
20	BELOW DISCONNECT - 24 VDC POWER - CIRCUIT BREAKERS	7/9/2020	JUSTIN R. WALZ
50	5000 DRV - X-AXIS DRIVE	7/9/2020	JUSTIN R. WALZ
51	5100 DRV - Y-AXIS DRIVE	7/9/2020	JUSTIN R. WALZ
52	5200 DRV - Z-AXIS DRIVE	7/9/2020	JUSTIN R. WALZ
56	5600 DRV - STEPPER DRIVE 1	7/9/2020	JUSTIN R. WALZ
57	5700 DRV - STEPPER DRIVE 2	7/9/2020	JUSTIN R. WALZ
60	6000 DRV- SPINDLE DRIVE	7/9/2020	JUSTIN R. WALZ
61	6000 DRV- SPINDLE DRIVE	1/17/2020	JUSTIN R. WALZ
65	6500 MDL- APOLLO III CONTROLLER ETHERNET CONNECTIONS	7/9/2020	JUSTIN R. WALZ
66	6500 MDL- APOLLO III CONTROLLER TERMINALS TB1	2/24/2020	JUSTIN R. WALZ
67	6500 MDL- APOLLO III CONTROLLER TERMINALS TB2	7/9/2020	JUSTIN R. WALZ
95	GROUNDING PE	1/17/2020	JUSTIN R. WALZ
99	9900 HMI - MAIN OPERATOR INTERFACE	7/9/2020	JUSTIN R. WALZ
120	IP ADDRESS LIST	7/9/2020	JUSTIN R. WALZ

COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION:	ALL RIGHTS RESERVED					DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXXX	NAME: -	=	+	PREV PAGE: <<<->> PAGE:
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO:	TABLE OF CONTENTS : /01 - /120	01	
									#	04	

## CHANGE HISTORY

NR.	DATE (MM/DD/YYYY)	EDITOR	CHANGE SPECIFICATION	ID	PAGES
000	07/09/2020	JUSTIN WALZ	INITIAL RELEASE		ALL
001					
002					
003					
004					
005					
006					
007					
008					
009					
010					
011					
012					
013					
014					
015					
016					
017					
018					

COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION:	ALL RIGHTS RESERVED	DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXXX	NAME: -	=	+					
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO:	CHANGE SHEET INFORMATION	PREV PAGE: <<< PAGE: 02	NEXT PAGE: >>> PAGE: 05
									#	04	

DESCRIPTION	NEMA SYMBOLS	IEC SYMBOLS	LETTER CODE TO IEC 617
NORMALLY OPEN CONTACTOR CONTACT	M	KM	KM - CONTACTOR
NORMALLY CLOSED CONTACTOR CONTACT	M	KM	KM - CONTACTOR
NORMALLY CLOSED AUXILIARY CONTACT	M	KM	KM - CONTACTOR
NORMALLY OPEN RELAY CONTACT	CR	KA	KA - RELAY
NORMALLY CLOSED RELAY CONTACT	CR	KA	KA - RELAY
NORMALLY OPEN DELAYED CLOSING CONTACT	T	KT	KT - TIME DELAY
NORMALLY CLOSED DELAYED OPENING CONTACT	T	KT	KT - TIME DELAY
NORMALLY OPEN DELAYED OPENING CONTACT	T	KT	KT - TIME DELAY
NORMALLY CLOSED DELAYED CLOSING CONTACT	T	KT	KT - TIME DELAY
NORMALLY OPEN PUSH BUTTON	PB	SB	SB - PUSH BUTTON
NORMALLY CLOSED PUSH BUTTON	PB	SB	SB - PUSH BUTTON
EMERGENCY STOP PUSH BUTTON	PB	SB	SB - PUSH BUTTON
NORMALLY OPEN LEVEL SWITCH	LVS	SL	SL - LEVEL SWITCH
NORMALLY OPEN PRESSURE SWITCH	PS	SP	SP - PRESSURE SWITCH
NORMALLY OPEN FLOW SWITCH	FS	SF	SF - FLOW SWITCH
NORMALLY OPEN TEMPERATURE SWITCH	TS	ST	ST - TEMPERATURE SWITCH
NORMALLY OPEN LIMIT SWITCH	LS	SQ	SQ - LIMIT SWITCH
NORMALLY CLOSED LIMIT SWITCH	LS	SQ	SQ - LIMIT SWITCH
PLUG	PLG	XP	XP - PLUG
SOCKET	PLG	XS	XS - SOCKET
PLUG AND SOCKET	PLG	XS	XS - PLUG AND SOCKET
CONTACTOR COIL	M	KM	KM - CONTACTOR
CONTROL RELAY COIL	CR	KA	KA - RELAY
SLOW OPERATING (ON DELAY) RELAY COIL	TR	KT	KT - TIMED RELAY
SLOW RELEASING (OFF DELAY) RELAY COIL	TR	KT	KT - TIMED RELAY
SOLENOID COIL	SOL	YV	YV - ELECTROMAGNETIC OPERATED VALVE
PROXIMITY SENSOR	PRX	SQ	SQ - PROXIMITY SWITCH

DESCRIPTION	NEMA SYMBOLS	IEC SYMBOLS	LETTER CODE TO IEC 617
PROXIMITY SENSOR	PRX	SQ	SQ - PHOTOEYE SWITCH
ISOLATOR/DISCONNECT SWITCH	KS	QS	QS - ISOLATOR/DISCONNECT DEVICE
FUSE	FU	FU	FU - FUSE
CIRCUIT BREAKER	CB	QF	QF - CIRCUIT BREAKER
WARNING HORN	HN	HA	HA - WARNING HORN
INDICATOR LAMP (PILOT LIGHT)	LT	HL	HL - INDICATOR LAMP
PUSH TO TEST INDICATOR LAMP (PILOT LIGHT)	LT	HL	HL - INDICATOR LAMP
FLUORESCENT LIGHT	LT	EL	EL - CABINET LIGHTING
SELECTOR SWITCH	SS	SA	SA - SELECTOR SWITCH
4 POSITION SELECTOR SWITCH	SS	SA	SA - SELECTOR SWITCH
MOTOR	MTR	M	M - MOTOR
ELECTROMAGNETIC BRAKE	BRK	YB	YB - ELECTROMAGNETIC BRAKE

- BQ - POSITION TRANSDUCER
- E - MISCELLANEOUS COMPONENTS
- EH - HEATING DEVICE
- FR - CURRENT PROTECTIVE DEVICE
- GS - SUPPLY DEVICE (POWER SUPPLY)
- HV - VENTILATOR
- XB - LINK
- XT - FUSED TERMINAL
- X1 - TERMINAL
- TA - CURRENT TRANSFORMER
- TC - CONTROL CIRCUIT TRANSFORMER
- TM - POWER TRANSFORMER
- TS - MAGNETIC STABILISER
- TV - VOLTAVE TRANSFORMER

WIRE COLOR CHART						
VOLTAGE	LINE SIDE OF MAIN DISCONNECT (ABOVE DISCONNECTING MEANS)		LOAD SIDE OF MAIN DISCONNECT (BELOW DISCONNECTING MEANS)		WIRES TO EXTERNAL ELECTRICAL ENCLOSURES (INTERLOCKING)	
	HOT CONDUCTOR	GROUNDING CURRENT CARRYING CONDUCTOR	HOT CONDUCTOR	GROUNDING CURRENT CARRYING CONDUCTOR	HOT CONDUCTOR	GROUNDING CURRENT CARRYING CONDUCTOR
241 - 575 VAC	BLACK / ORANGE TRACER/SLEEVE/TUBE		BLACK			
151 - 575 VDC			BLACK			
151 - 240 VAC			RED	WHITE		
0 - 150 VAC	ORANGE	WHITE/ ORANGE TRACER/SLEEVE/TUBE	RED	WHITE		
24 VDC (0 - 50)	BLUE / ORANGE TRACER/SLEEVE/TUBE	WHITE WITH BLUE TRACER & ORANGE TAPE	BLUE	WHITE/BLUE TRACER/SLEEVE/TUBE	ORANGE	ORANGE
GROUND	GREEN/ YELLOW TRACER					

WIRE COLOR CODE CHART	
WIRE COLOR	ABBREVIATION
BLACK	BK
BROWN	BN
RED	RD
ORANGE	OG
YELLOW	YE
GREEN	GN
BLUE	BU
VIOLET	VT
GRAY	GY
WHITE	WH
PINK	PK
GOLD	GD
TURQUOISE	TQ
SILVER	SR
GREEN WITH YELLOW TRACER	GNYE
BLACK WITH ORANGE TRACER	BKOG
BLUE WITH ORANGE TRACER	BUOG
WHITE WITH RED TRACER	WHRD
WHITE WITH ORANGE TRACER	WHOG
WHITE WITH BLUE TRACER	WHBU
WHITE WITH BLUE TRACER AND ORANGE TAPE (OR SHRINK TUBE)	WHBU+OG

CABLE SIZE CONVERSION TABLE		
METRIC	TO	AWG
0.5		20
0.75		18
1.0		16
1.5		14
2.5		12
4.0		10
6.0		8
10.0		6
16.0		4
25.0		2
35.0		1
50.0		0

NFPA 79 - 2015 EDITION	
Table 8.2.2.3 Minimum Size of Equipment Grounding Conductors and Bonding Jumpers	
Rating or Setting of Automatic Overcurrent Device in Circuit Ahead of the Equipment (Not Exceeding Amperes)	Copper Conductor Size (AWG or kcmil)
10	16
15	14
20	12
30	10
40	10
60	10
100	8
200	6
300	4
400	3
500	2
600	1
800	1/0
1000	2/0
1200	3/0
1600	4/0
2000	250
2500	350
3000	400
4000	500
5000	700
6000	800

NFPA 79 - 2015 EDITION				
Table 12.5.1 Conductor Ampacity Based on Copper Conductors with 60°C (140°F), 75°C (167°F), 90°C (194°F) Insulation in an Ambient Temperature of 30°C (86°F)				
Conductor Size (AWG)	Ampacity			
	60°C (140°F)	75°C (167°F)	90°C (194°F)	
30	-	0.5	0.5	
28	-	0.8	0.8	
26	-	1	1	
24	2	2	2	
22	3	3	3	
20	5	5	5	
18	7	7	14	
16	10	10	18	
14	20	20	25	
12	25	25	30	
10	30	35	40	
8	40	50	55	
6	55	65	75	
4	70	85	95	
3	85	100	110	
2	95	115	130	
1	110	130	150	
1/0	125	150	170	
2/0	145	175	195	
3/0	165	200	225	
4/0	195	230	260	
250	215	255	290	
300	240	285	320	
350	260	310	350	
400	280	335	380	
500	320	380	430	
600	355	420	475	
700	385	460	520	
750	400	475	535	
800	410	490	555	
900	435	520	585	
1000	455	545	615	

NFPA 79 - 2015 EDITION				
Table 12.5.5(a) Ambient Correction Factors				
For ambient temperatures other than 30°C (86°F), multiply the allowable ampacity by the appropriate factor shown below.				
Ambient Temperature (°C)	Correction Factor 60°C	Correction Factor 75°C	Correction Factor 90°C	
21-25	1.08	1.05	1.04	
26-30	1.00	1.00	1.00	
31-35	0.91	0.94	0.96	
36-40	0.82	0.88	0.91	
40-45	0.71	0.82	0.87	
46-50	0.58	0.75	0.82	
51-55	0.41	0.67	0.76	
56-60	-	0.58	0.71	
61-70	-	0.33	0.58	
71-80	-	-	0.41	

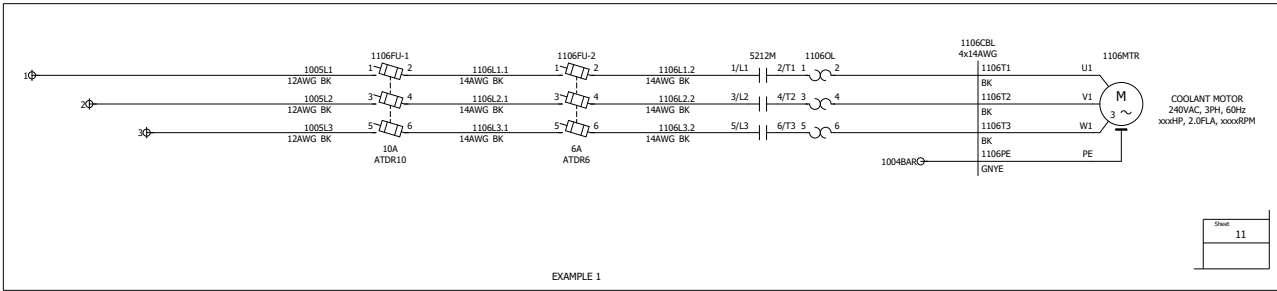
Notes:  
(1) Wire types listed in 12.3.1 shall be permitted to be used at the ampacities listed in this table.  
(2) The sources for the ampacities in this table are Table 310.15(B)(16) of NFPA 70.

COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION:	ALL RIGHTS RESERVED					DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXXX	NAME: -	=	+	
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO:	WIRE INFORMATION		
								#	PREV PAGE: <<--->	PAGE: 05	06
									NEXT PAGE: --->>	07	

**EXAMPLE 1**

IF DEVICES / WIRES ARE CONNECTED TO 3 PHASE LINES

1. DEVICES ARE IDENTIFIED BY THE ALPHA SUFFIX ACCORDING TO NEMA/NFPA COMBINED WITH THE SHEET NUMBER AND LINE REFERENCE AT WHICH THE DEVICE IS POSITIONED.
2. IF TWO OR MORE DEVICES WITH THE SAME PREFIX EXIST ON THE SAME LINE REFERENCE, THEN DEVICES ARE SUFFIXED -1, -2, -3...
3. WIRE NUMBERS ARE CONSTRUCTED FROM THE SHEET AND LINE NUMBER ON WHICH THEY OCCUR, WITH THE THREE PHASE IDENTIFIER L1, L2, L3 (OR T1, T2, T3) DEPENDING ON TERMINATION TO END DEVICE.

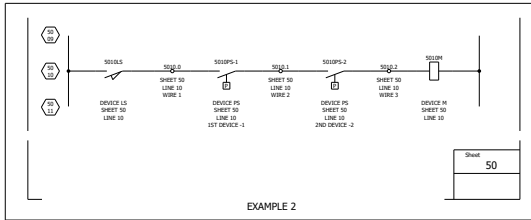


EXAMPLE 1

**EXAMPLE 2**

IF DEVICES / WIRES ARE NOT CONNECTED TO A PLC INPUT OR OUTPUT THEN:

1. DEVICES ARE IDENTIFIED BY THE ALPHA SUFFIX ACCORDING TO NEMA/NFPA COMBINED WITH THE SHEET NUMBER AND LINE REFERENCE AT WHICH THE DEVICE IS POSITIONED.
2. IF TWO OR MORE DEVICES WITH THE SAME PREFIX EXIST ON THE SAME LINE REFERENCE, THEN DEVICES ARE SUFFIXED -1, -2, -3...
3. WIRE NUMBERS ARE CONSTRUCTED FROM THE SHEET AND LINE NUMBER ON WHICH THEY OCCUR, WITH AN EXTRA DIGIT AFTER THIS RANGING FROM 1 TO 9 GOING FROM LEFT TO RIGHT.

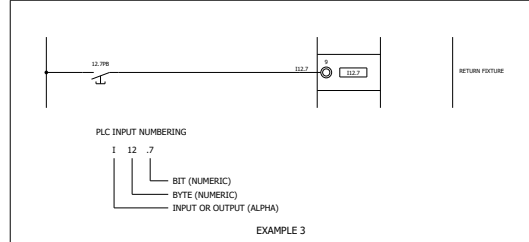


EXAMPLE 2

**EXAMPLE 3**

IF DEVICES / WIRES ARE CONNECTED TO A PLC INPUT OR OUTPUT THEN:

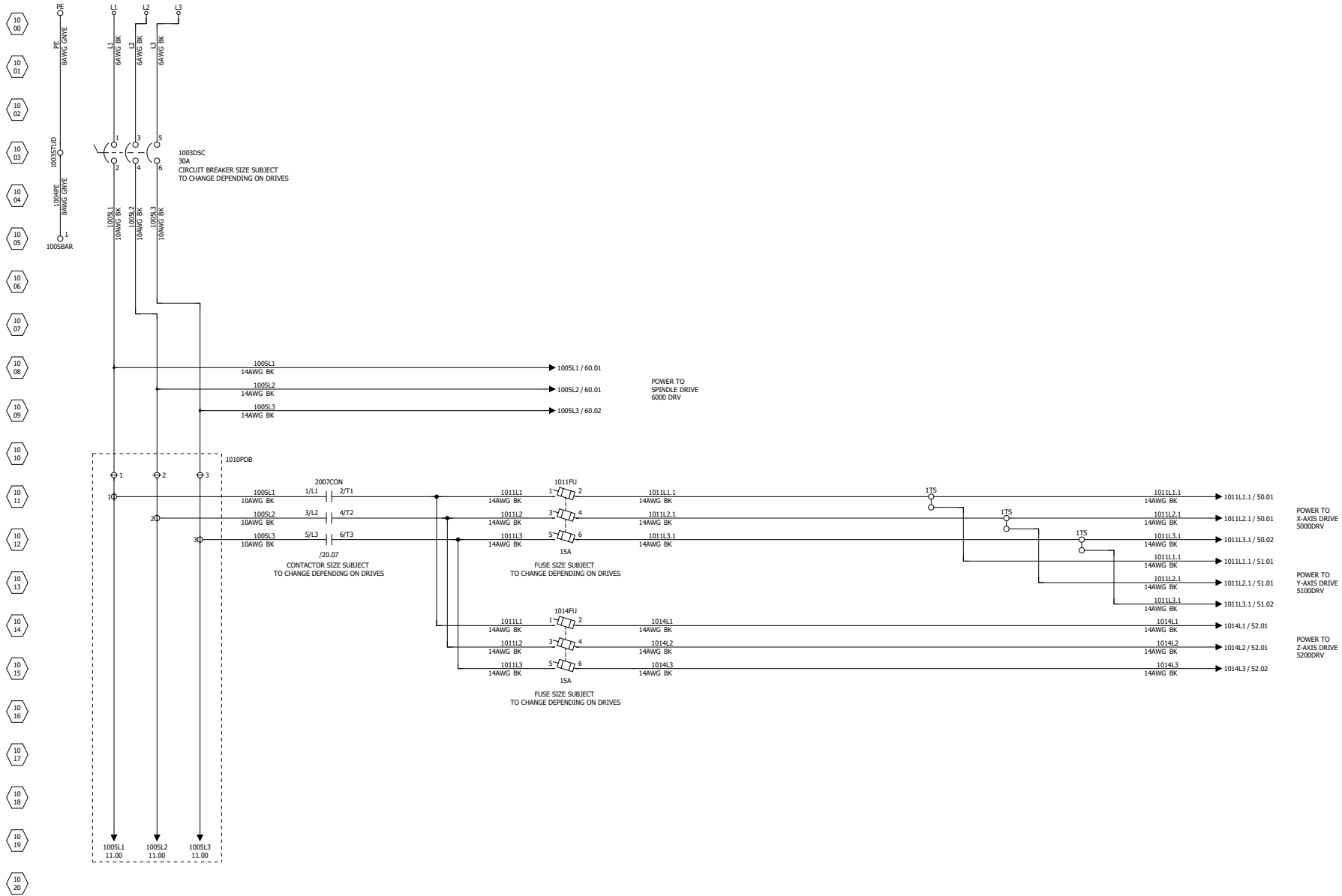
1. DEVICES ARE IDENTIFIED BY THE ALPHA SUFFIX ACCORDING TO NEMA/NFPA COMBINED WITH THE PLC ADDRESS TO WHICH IT IS CONNECTED. CONTACTS, AUX. CONTACTS FROM HARDWARE DEVICES ARE IDENTIFIED BY THE DEVICE DESIGNATION WHERE THE DEVICE IS WIRED.
2. WIRES ARE NUMBERED USING THE FULL PLC I/O ADDRESS OF THE INPUT OR OUTPUT TO WHICH THEY ARE CONNECTED.



EXAMPLE 3

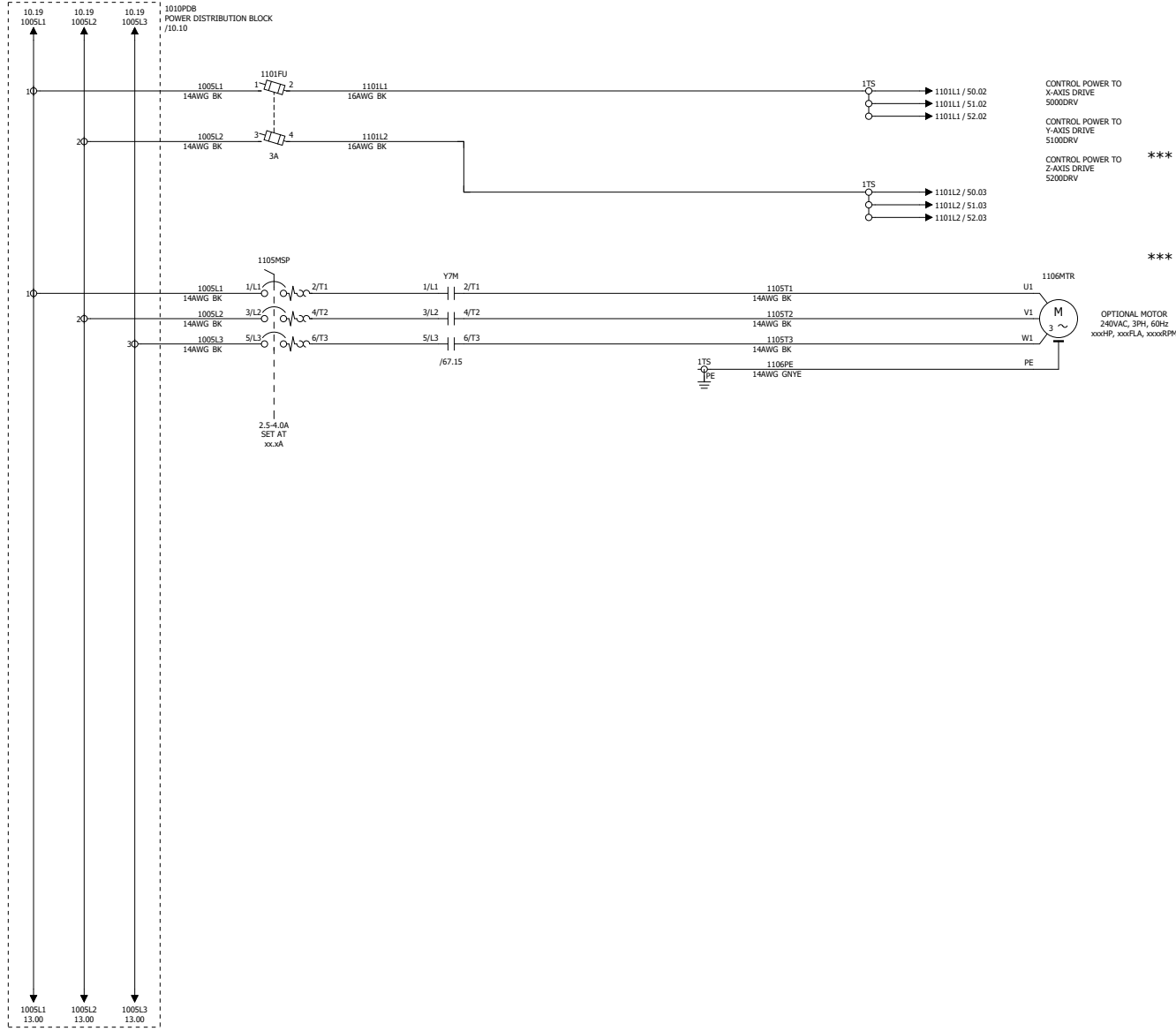
COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -		=		+									
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -		FACTORY: -		DEPT: -		OP. NO: -		STA. NO: -		SUPPLIER NO: XXXXX		DRAWING NO:		DEVICE/WIRE LABELING SCHEME		PREV PAGE: <<--- PAGE: 06	
																		NEXT PAGE: --->> PAGE: 10		07	

CUSTOMER SUPPLIED 3 PHASE POWER  
INCOMING: 3 PHASE + GROUND / 240 VAC / 60 Hz / 60 AMP



COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020	ALL RIGHTS RESERVED						DRAWING NO: A3SY00-000	NAME: -	=	+
DESIGNER: JUSTIN R. WALZ	REVISION:	LOC:	FACTORY:	DEPT:	OP. NO:	STA. NO:	SUPPLIER NO: XXXXXX	MAIN DISCONNECT	&	PREV PAGE: <<< 07	
APPROVER:							MACH. NAME:	DRAWING NO:	#	NEXT PAGE: >>> 11	

11 00  
11 01  
11 02  
11 03  
11 04  
11 05  
11 06  
11 07  
11 08  
11 09  
11 10  
11 11  
11 12  
11 13  
11 14  
11 15  
11 16  
11 17  
11 18  
11 19  
11 20



CONTROL POWER TO  
X-AXIS DRIVE  
5000DRV

CONTROL POWER TO  
Y-AXIS DRIVE  
51000DRV

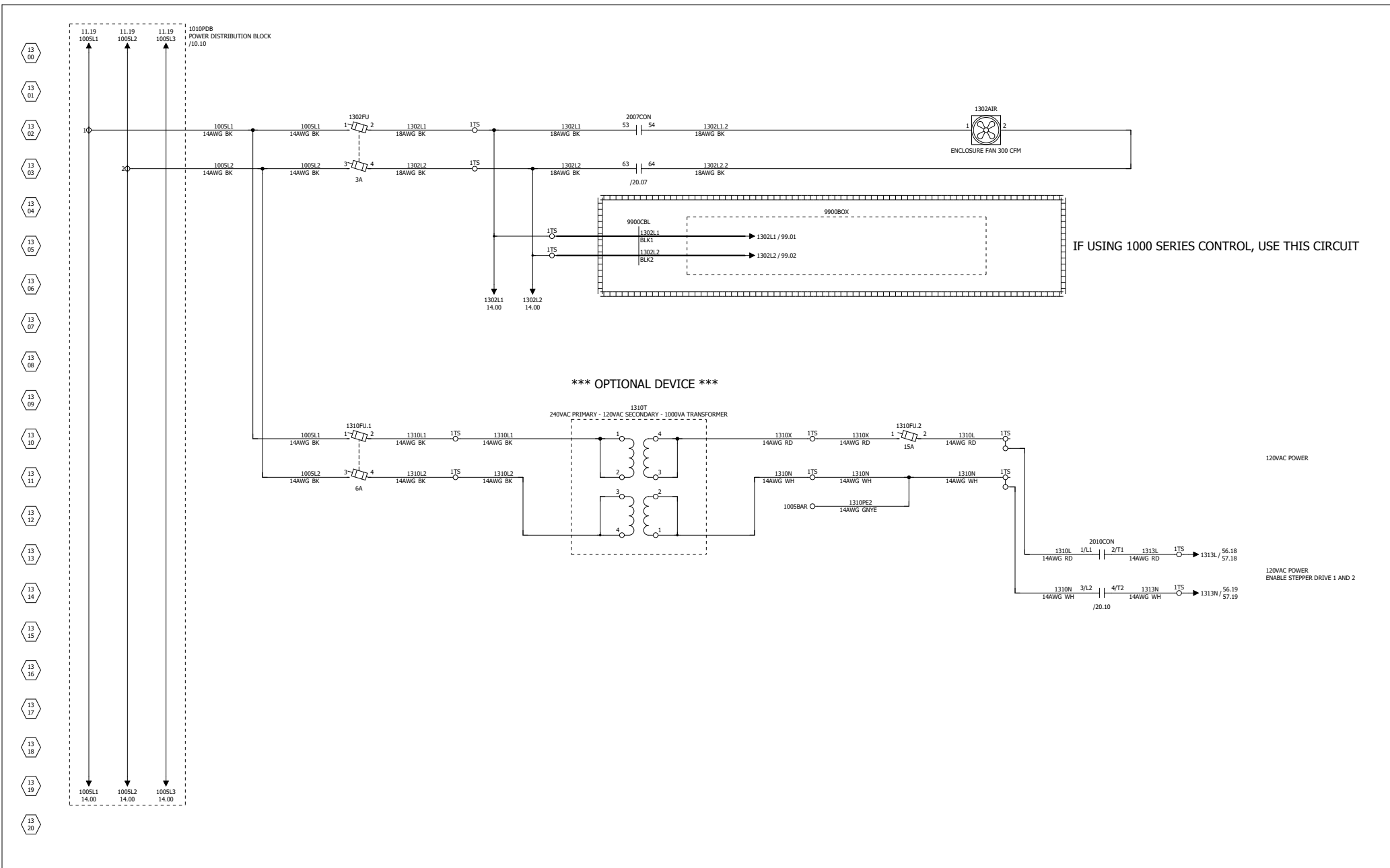
CONTROL POWER TO  
Z-AXIS DRIVE  
52000DRV

\*\*\* OPTIONAL AXIS \*\*\*

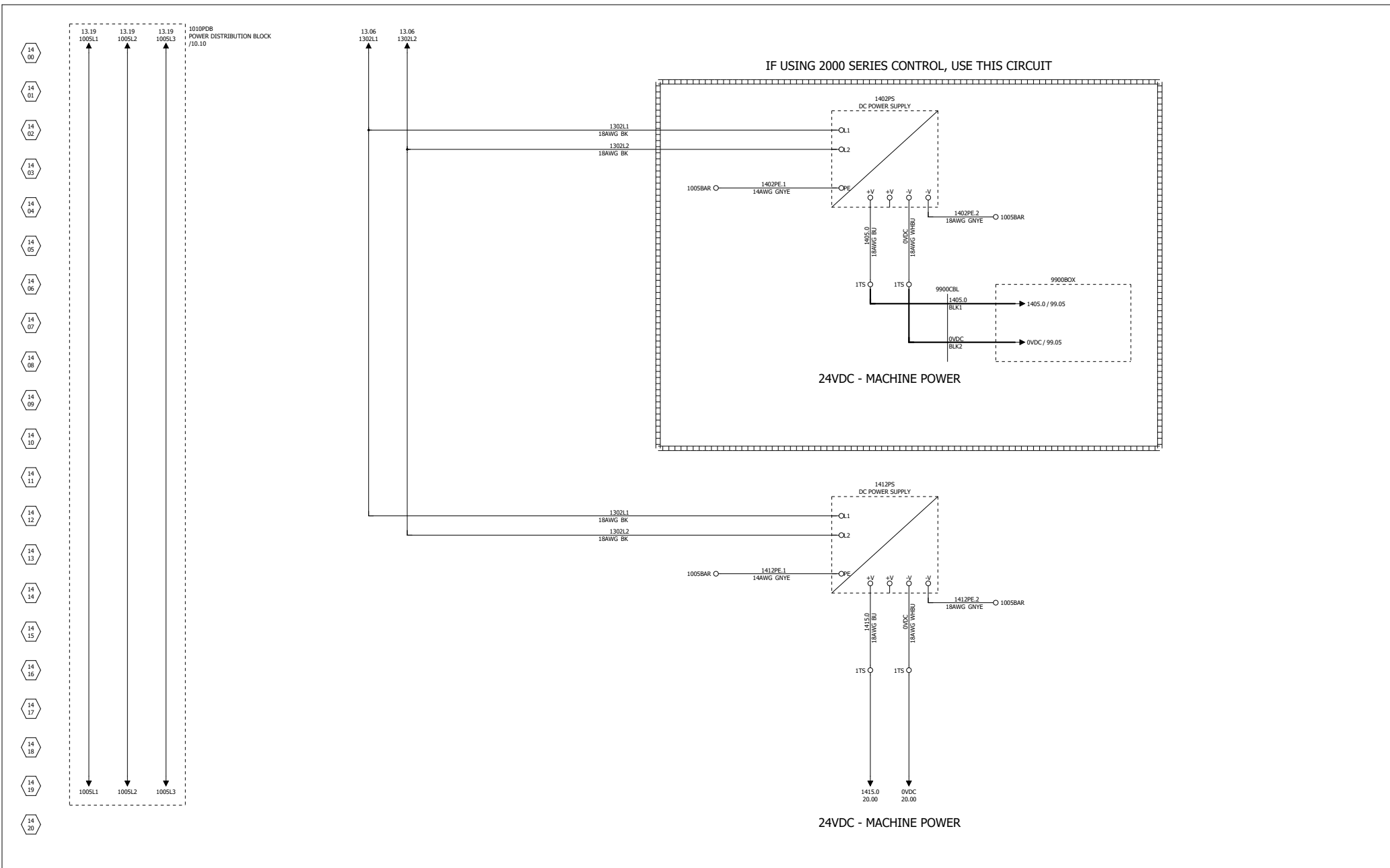
\*\*\* OPTIONAL MOTOR \*\*\*

COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -	
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -		FACTORY: -		DEPT: -	
				OP. NO: -		STA. NO: -		MACH. NAME: -	
						DRAWING NO: -		BELOW DISCONNECT - 3 PHASE POWER - CONTROL POWER	
								PREV PAGE: <<< PAGE: 10	
								NEXT PAGE: >>> PAGE: 13	

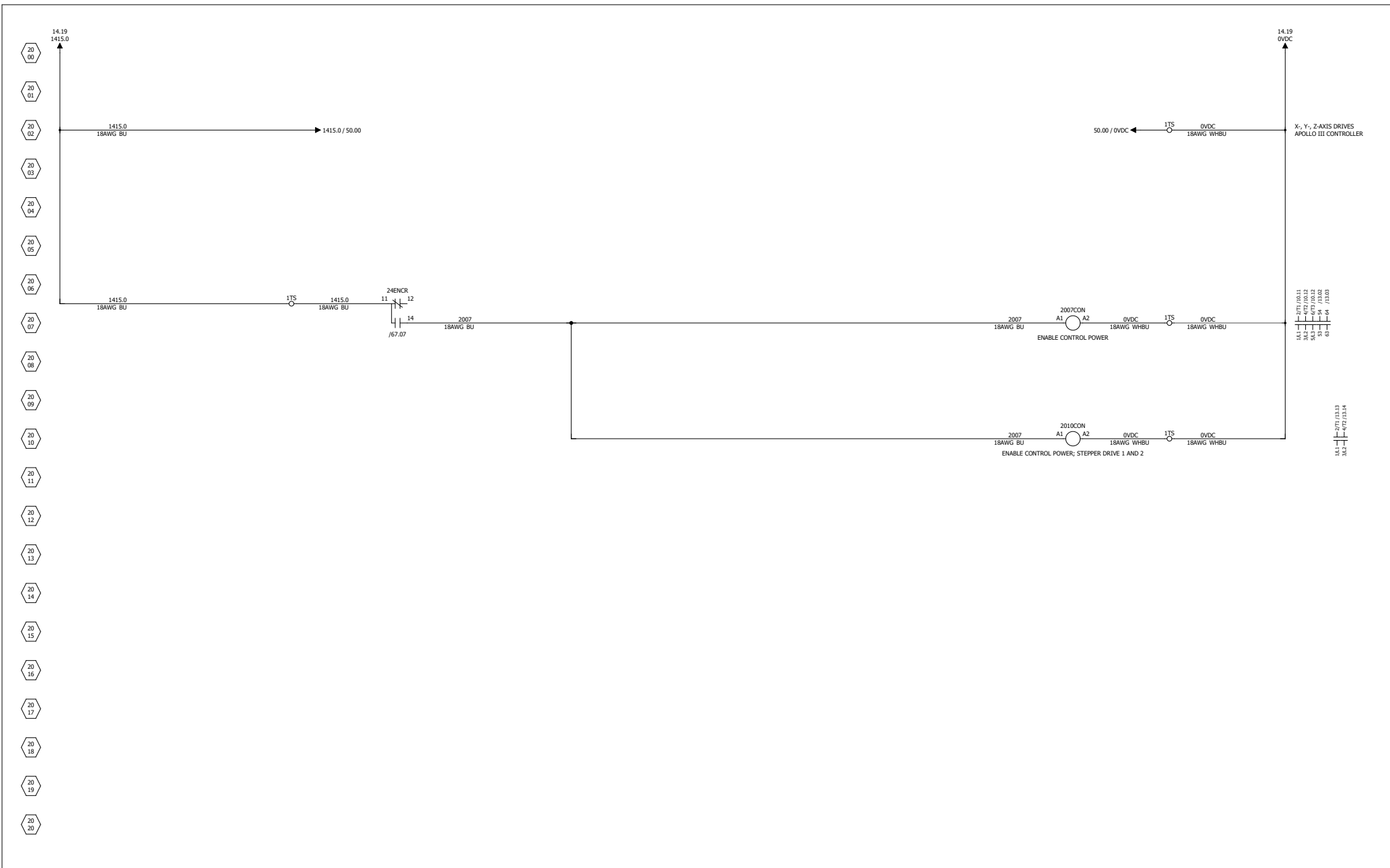




COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -	
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -		FACTORY: -		DEPT: -	
				OP. NO: -		STA. NO: -		SUPPLIER NO: XXXXX	
						MACH. NAME: -		DRAWING NO: -	
								BELOW DISCONNECT - FAN - TRANSFORMER	
								= +	
								PREV PAGE: <<< PAGE:	
								11	
								NEXT PAGE: >>>	
								14	



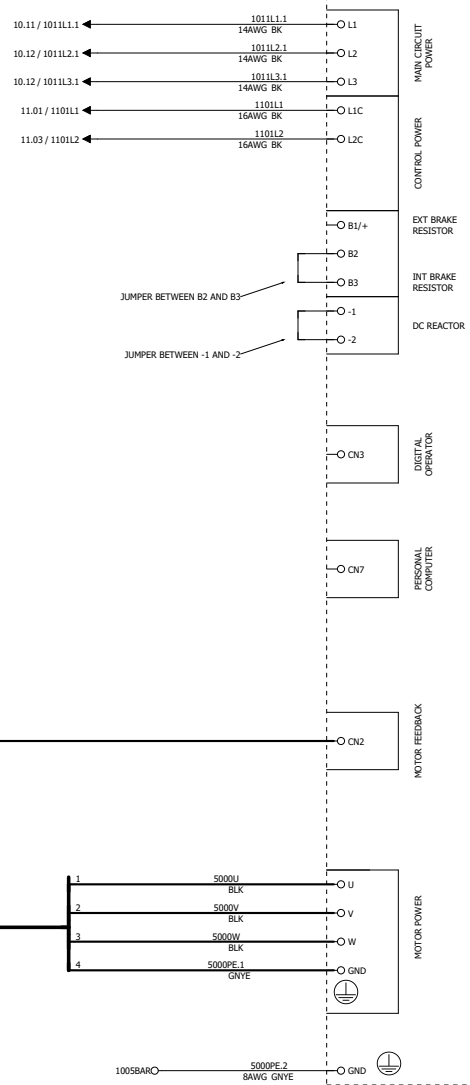
COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION:	ALL RIGHTS RESERVED					DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXX	NAME: -	=	+
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO:	BELOW DISCONNECT -24 VDC POWER SUPPLY	
								#	PREV PAGE: <<< PAGE: 13	NEXT PAGE: >>> PAGE: 20



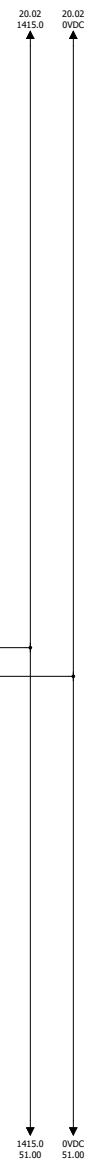
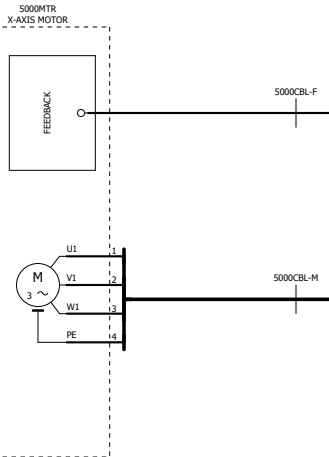
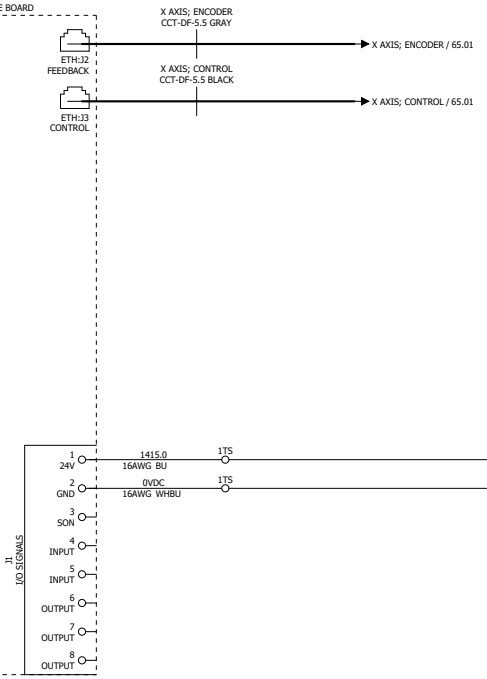
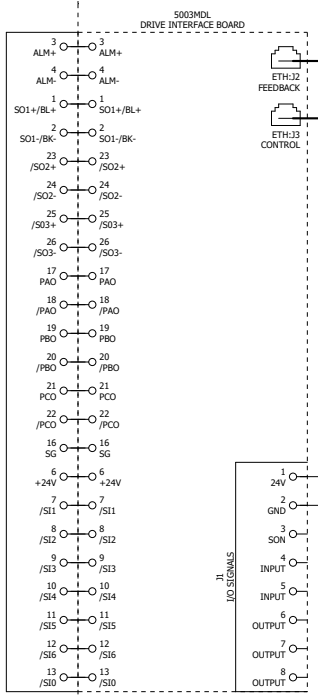
COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020	ALL RIGHTS RESERVED					DRAWING NO: A3SY00-000	NAME: -	=		+
DESIGNER: JUSTIN R. WALZ	REVISION:	LOC:	FACTORY:	DEPT:	OP. NO:	STA. NO:	SUPPLIER NO: XXXXX	BELOW DISCONNECT - 24 VDC POWER - CIRCUIT BREAKERS		PREV PAGE: <<--	PAGE: 14
APPROVER:	-	-	-	-	-	-	MACH. NAME:	DRAWING NO:	#	NEXT PAGE: -->>	50

5000DRV  
X-AXIS DRIVE

- 50 00
- 50 01
- 50 02
- 50 03
- 50 04
- 50 05
- 50 06
- 50 07
- 50 08
- 50 09
- 50 10
- 50 11
- 50 12
- 50 13
- 50 14
- 50 15
- 50 16
- 50 17
- 50 18
- 50 19
- 50 20

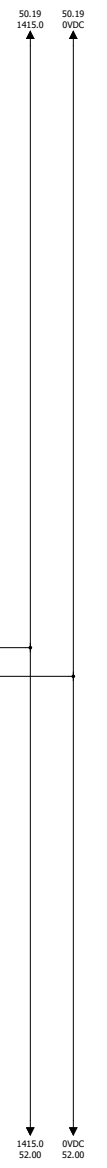
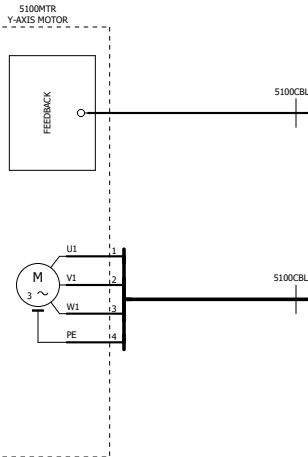
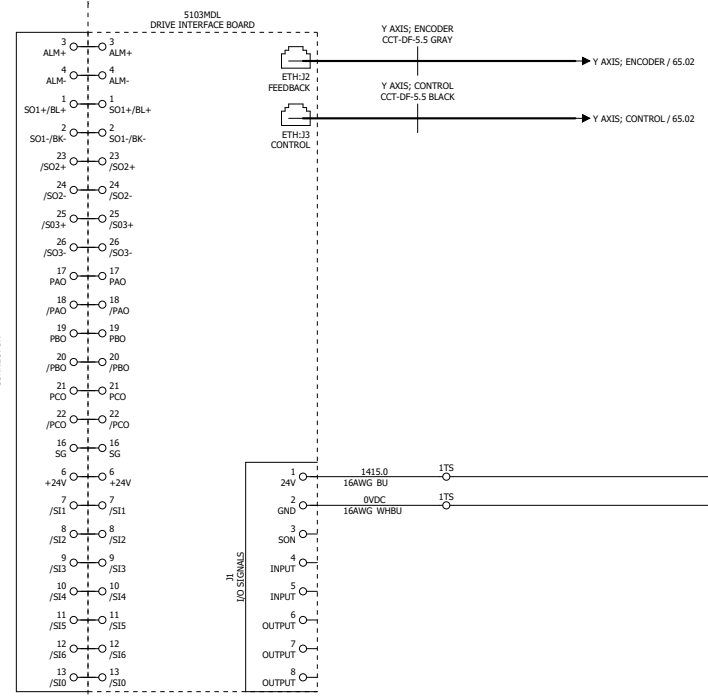
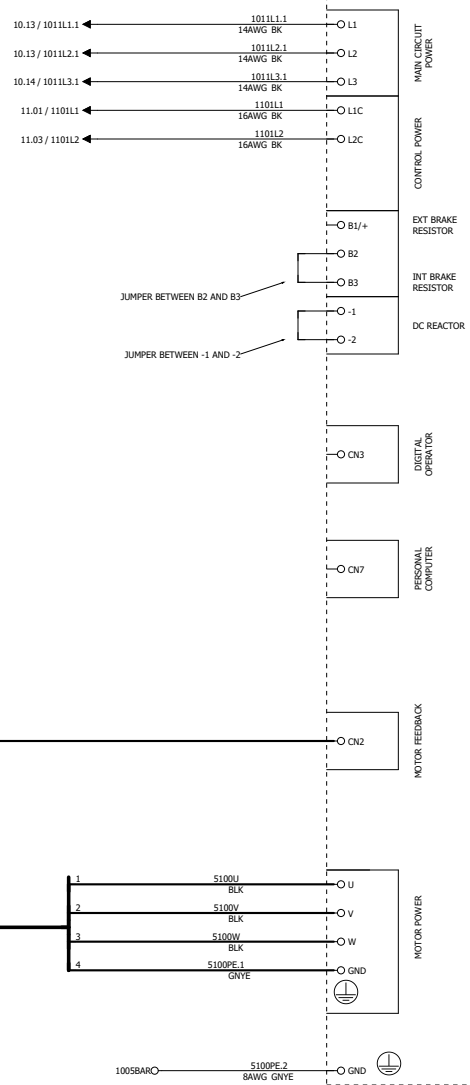


CN1 I/O SIGNAL CONNECTOR  
CN2 MOTOR FEEDBACK  
CN3 DIGITAL OPERATOR  
CN7 PERSONAL COMPUTER



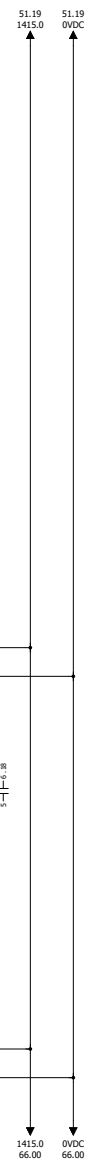
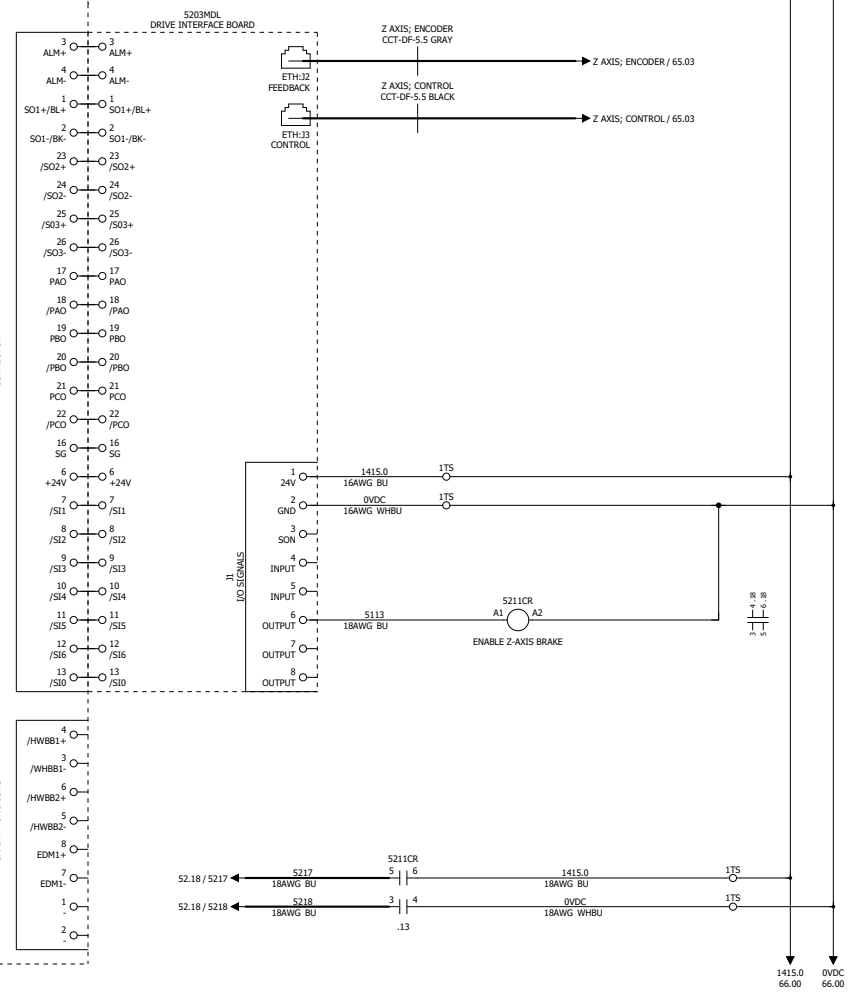
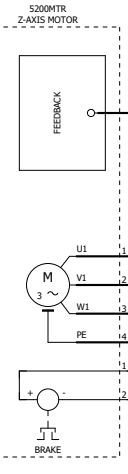
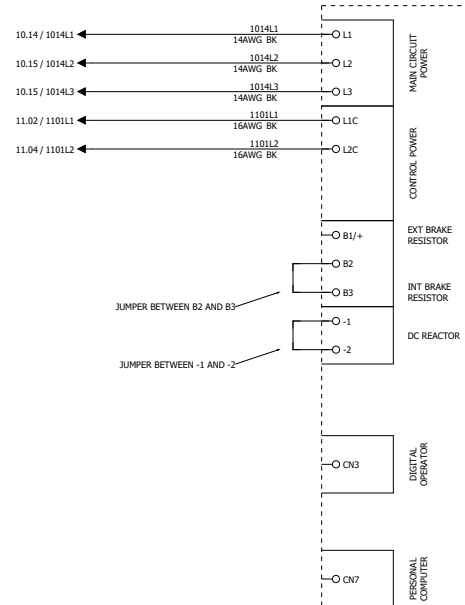
5100DRV  
Y-AXIS DRIVE

- S1 00
- S1 01
- S1 02
- S1 03
- S1 04
- S1 05
- S1 06
- S1 07
- S1 08
- S1 09
- S1 10
- S1 11
- S1 12
- S1 13
- S1 14
- S1 15
- S1 16
- S1 17
- S1 18
- S1 19
- S1 20



5200DRV  
Z-AXIS DRIVE

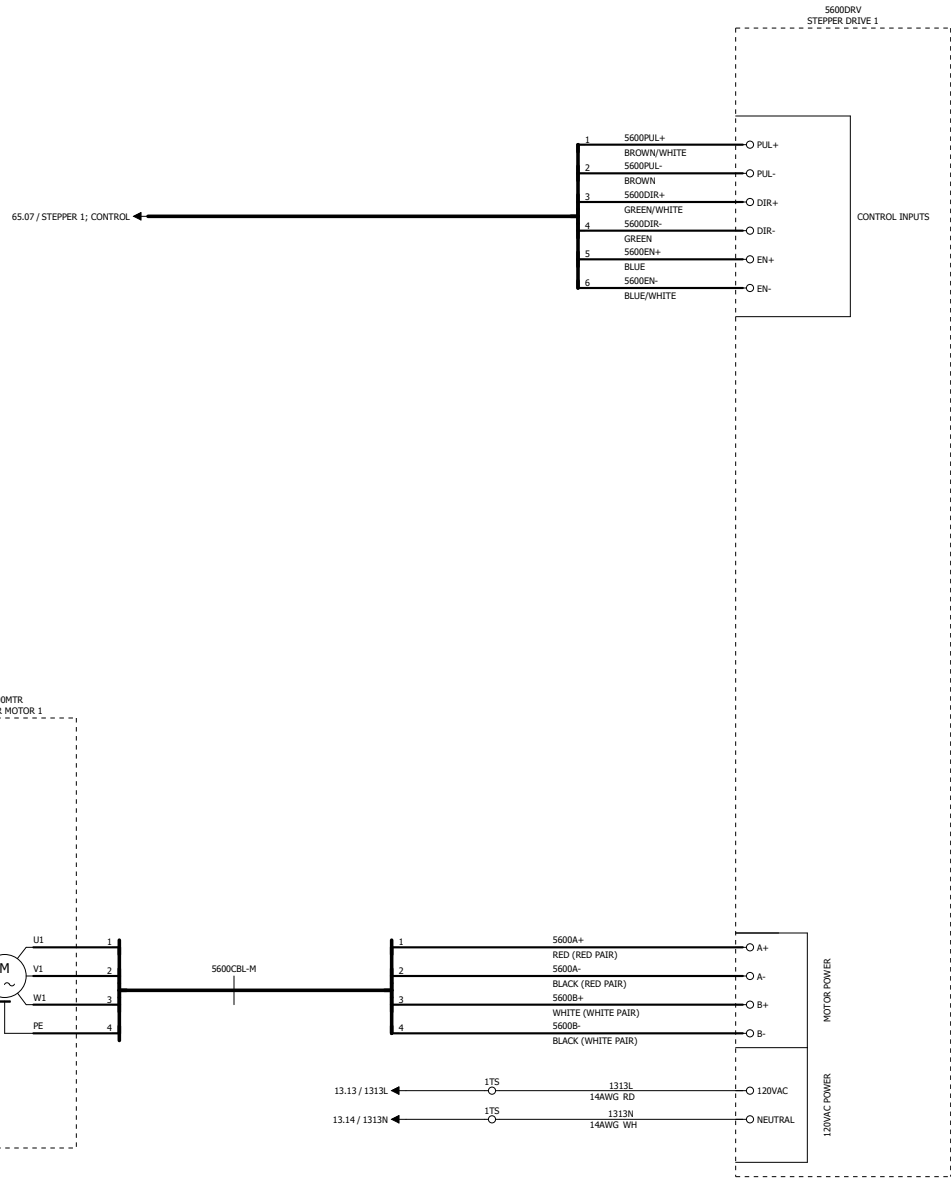
- S2 00
- S2 01
- S2 02
- S2 03
- S2 04
- S2 05
- S2 06
- S2 07
- S2 08
- S2 09
- S2 10
- S2 11
- S2 12
- S2 13
- S2 14
- S2 15
- S2 16
- S2 17
- S2 18
- S2 19
- S2 20



COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -		=		+	
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -		FACTORY: -		OP. NO.: -		STA. NO.: -		MACH. NAME: 5200 DRV - Z-AXIS DRIVE	
						SUPPLIER NO: XXXXX		DRAWING NO:		PREV PAGE: <<---		PAGE: 51	
										NEXT PAGE: --->>		56	

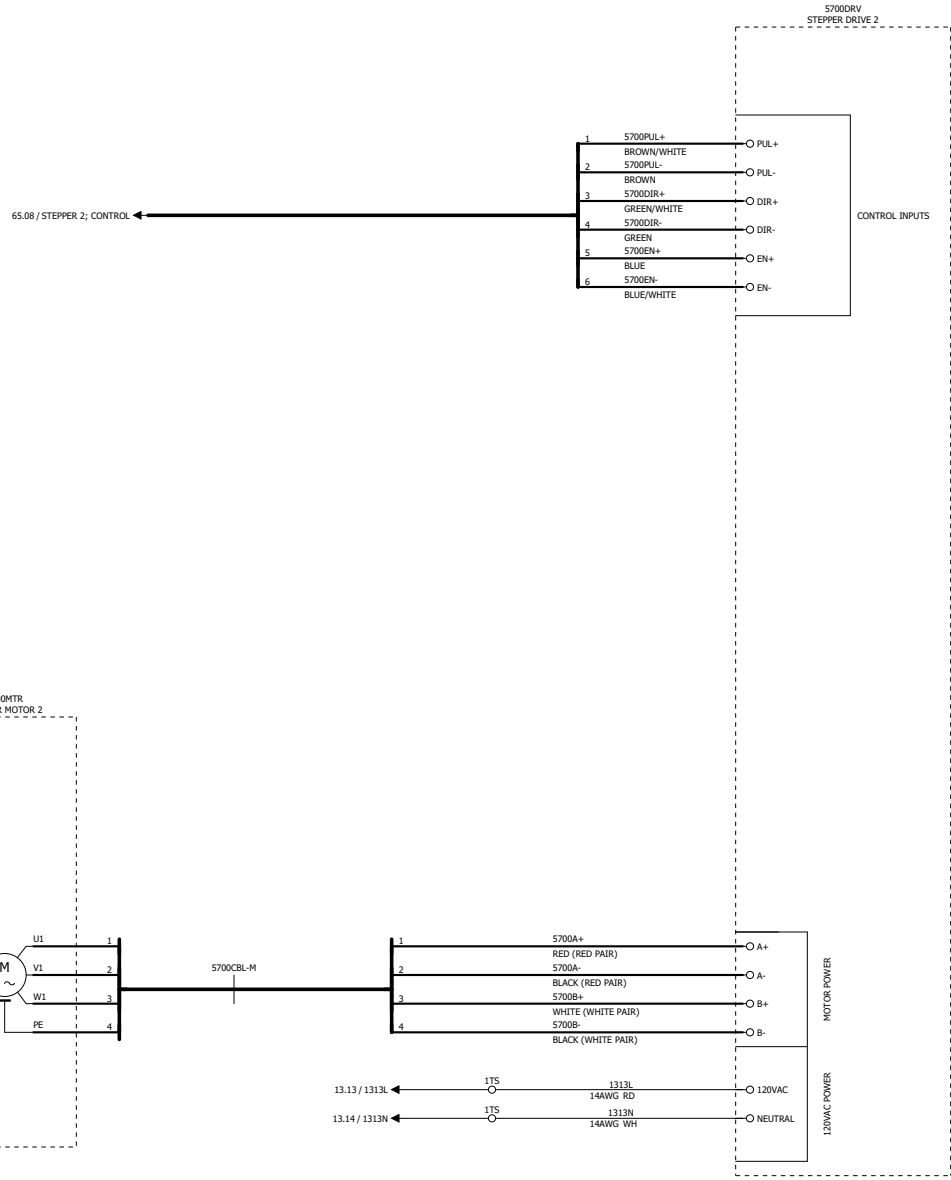
\*\*\* OPTIONAL AXIS \*\*\*

- 56 00
- 56 01
- 56 02
- 56 03
- 56 04
- 56 05
- 56 06
- 56 07
- 56 08
- 56 09
- 56 10
- 56 11
- 56 12
- 56 13
- 56 14
- 56 15
- 56 16
- 56 17
- 56 18
- 56 19
- 56 20



COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -		=		+	
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO: -	PREV PAGE: <<< 52		PAGE: 56
5600 DRV - STEPPER DRIVE 1										NEXT PAGE: >>> 57		#	

\*\*\* OPTIONAL AXIS \*\*\*



- 57 00
- 57 01
- 57 02
- 57 03
- 57 04
- 57 05
- 57 06
- 57 07
- 57 08
- 57 09
- 57 10
- 57 11
- 57 12
- 57 13
- 57 14
- 57 15
- 57 16
- 57 17
- 57 18
- 57 19
- 57 20

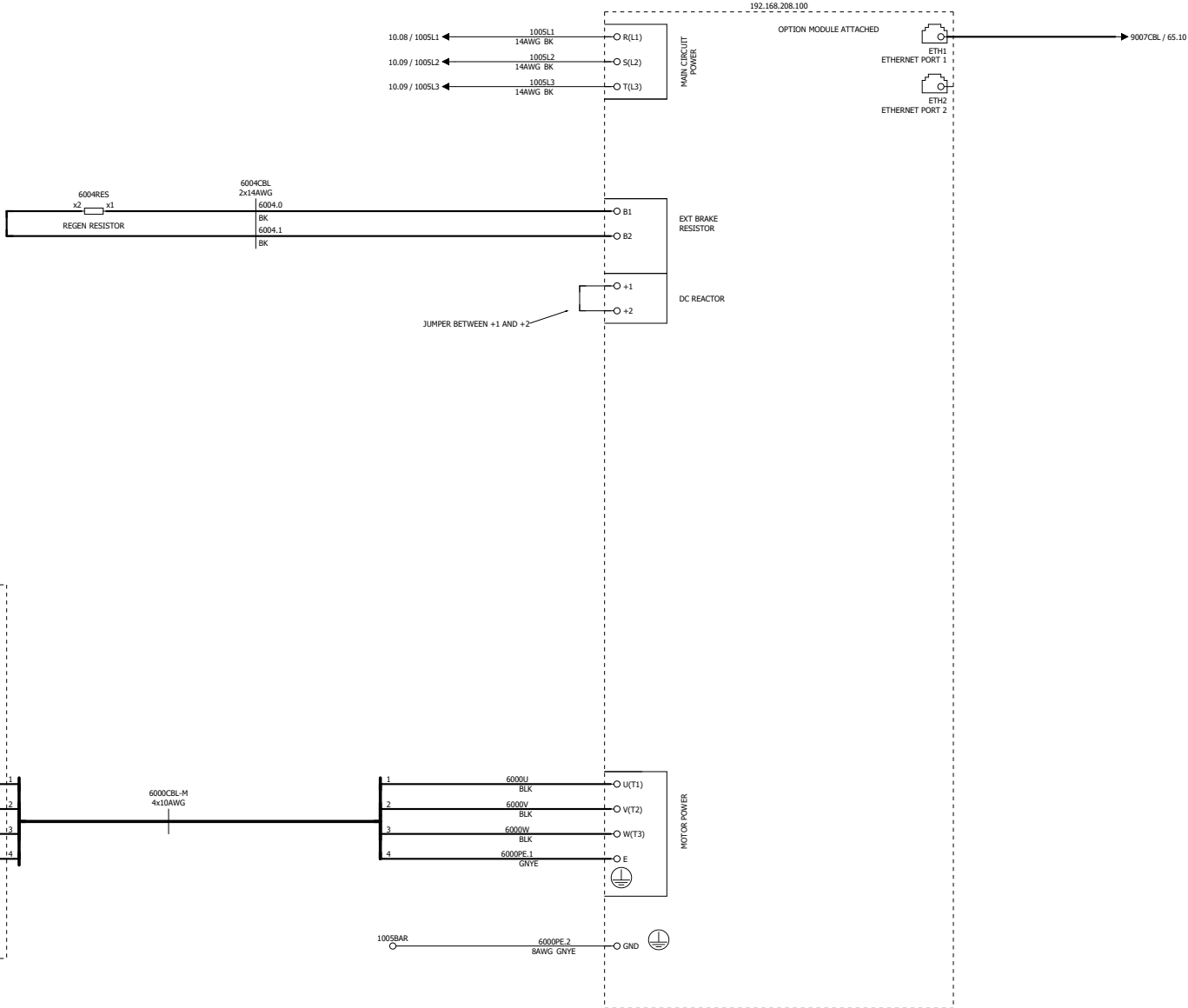
COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION:	ALL RIGHTS RESERVED						DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXXX	NAME: -	=	+
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO:	5700 DRV - STEPPER DRIVE 2		
									&	PREV PAGE: <<<-	PAGE: 56
									#	NEXT PAGE: ->>	60



6000DRV  
SPINDLE CONTROLLER

\*\*\* OPTIONAL AXIS \*\*\*

- 60 00
- 60 01
- 60 02
- 60 03
- 60 04
- 60 05
- 60 06
- 60 07
- 60 08
- 60 09
- 60 10
- 60 11
- 60 12
- 60 13
- 60 14
- 60 15
- 60 16
- 60 17
- 60 18
- 60 19
- 60 20

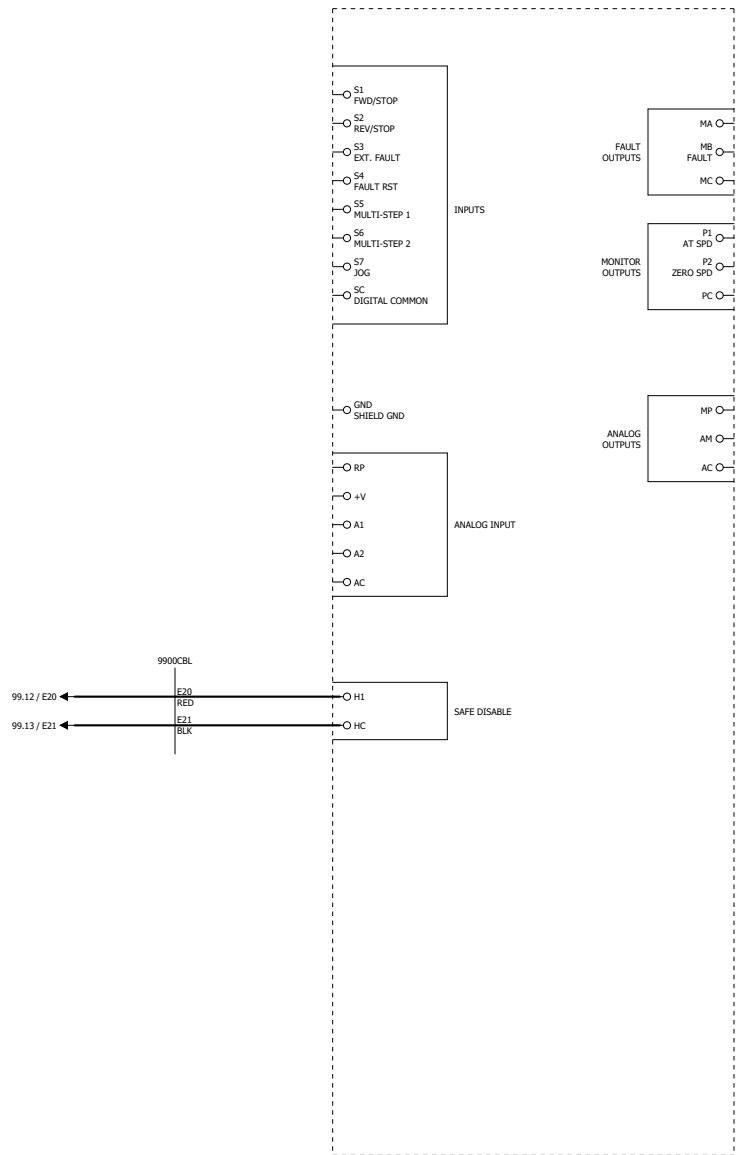


COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: 6000 DRV- SPINDLE DRIVE		= +	
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	MACH. NAME: -	DRAWING NO: -	PREV PAGE: <<->> PAGE: 57
										NEXT PAGE: ->>->> 61	

6000DRV  
SPINDLE CONTROLLER

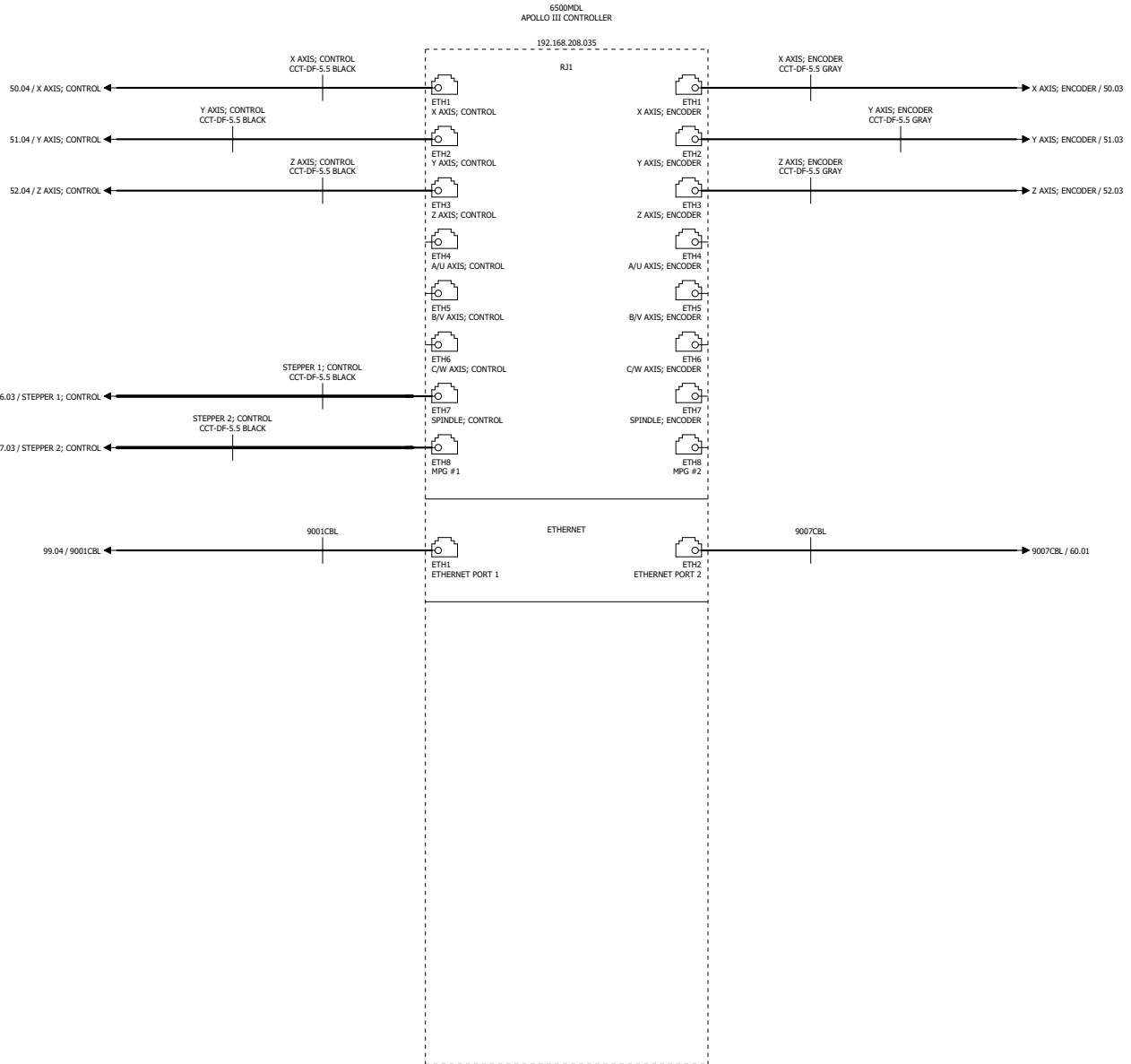
\*\*\* OPTIONAL AXIS \*\*\*

- 61 00
- 61 01
- 61 02
- 61 03
- 61 04
- 61 05
- 61 06
- 61 07
- 61 08
- 61 09
- 61 10
- 61 11
- 61 12
- 61 13
- 61 14
- 61 15
- 61 16
- 61 17
- 61 18
- 61 19
- 61 20

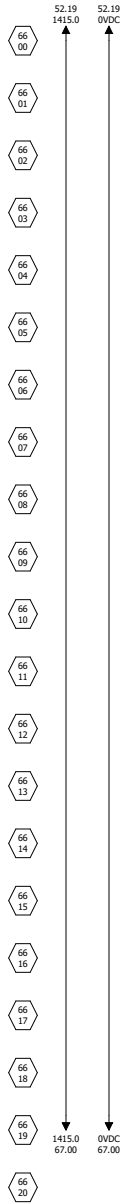


COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -		=		+			
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	SUPPLIER NO: XXXXX		PREV PAGE: <<<--		PAGE: 60		
								DRAWING NO:		6000 DRV- SPINDLE DRIVE		NEXT PAGE: -->>		65	
										#				61	

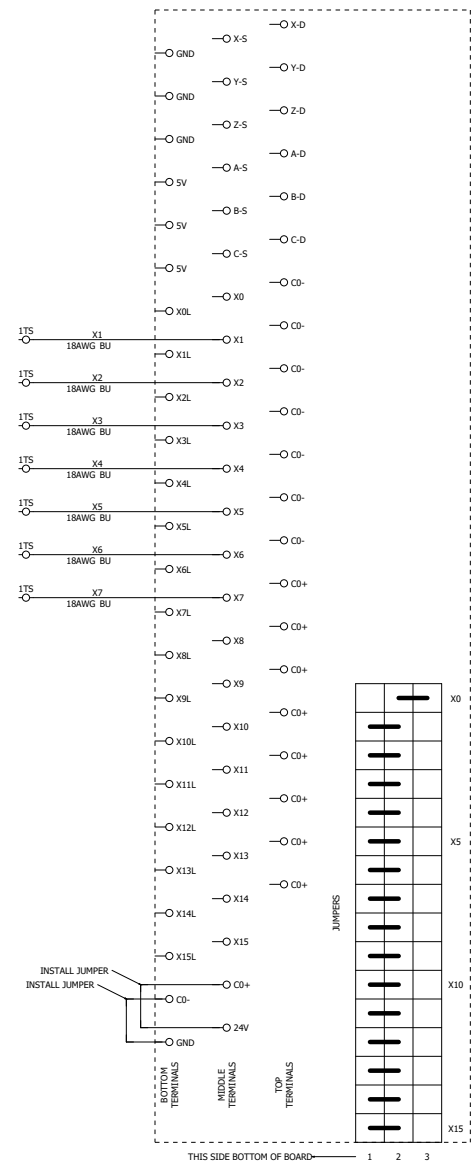
65 00  
65 01  
65 02  
65 03  
65 04  
65 05  
65 06  
65 07  
65 08  
65 09  
65 10  
65 11  
65 12  
65 13  
65 14  
65 15  
65 16  
65 17  
65 18  
65 19  
65 20



COMPANY: MACHMOTION NEWBURG, MISSOURI, USA	DATE: 7/8/2020 REVISION:	ALL RIGHTS RESERVED	DRAWING NO: A3SY00-000 SUPPLIER NO: XXXXXX	NAME: -	
DESIGNER: JUSTIN R. WALZ	APPROVER: -	LOC: -	FACTORY: -	DEPT: -	OP. NO: -
		STA. NO: -	MACH. NAME: -	DRAWING NO:	6500 MDL- APOLLO III CONTROLLER ETHERNET CONNECTIONS
				=	+
				&	PREV PAGE: <<< PAGE: 61
				#	NEXT PAGE: >>> PAGE: 66



6500MDL  
APOLLO III CONTROLLER



CONTROLLER INPUTS	
X0	RESERVED (NOT USED)
X1	UNUSED INPUT
X2	UNUSED INPUT
X3	UNUSED INPUT
X4	UNUSED INPUT
X5	UNUSED INPUT
X6	UNUSED INPUT
X7	UNUSED INPUT
X8	UNUSED INPUT
X9	UNUSED INPUT
X10	UNUSED INPUT
X11	UNUSED INPUT
X12	UNUSED INPUT
X13	UNUSED INPUT
X14	UNUSED INPUT
X15	UNUSED INPUT



95  
00

95  
01

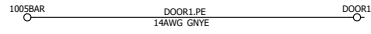
95  
02

95  
03

95  
04

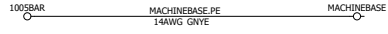
95  
05

95  
06



95  
07

95  
08



95  
09

95  
10

95  
11

95  
12

95  
13

95  
14

95  
15

95  
16

95  
17

95  
18

95  
19

95  
20

95  
50

95  
51

95  
52

95  
53

95  
54

95  
55

95  
56

95  
57

95  
58

95  
59

95  
60

95  
61

95  
62

95  
63

95  
64

95  
65

95  
66

95  
67

95  
68

95  
69

95  
70

COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED				DRAWING NO: A3SY00-000		NAME: -		=		+		
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -	FACTORY: -	DEPT: -	OP. NO: -	STA. NO: -	SUPPLIER NO: XXXXX		GROUNDING PE		PREV PAGE: <<---		PAGE: 67	
									MACH. NAME:		DRAWING NO:		NEXT PAGE: --->>		99	
															95	

99 00

99 01

99 02

99 03

99 04

99 05

99 06

99 07

99 08

99 09

99 10

99 11

99 12

99 13

99 14

99 15

99 16

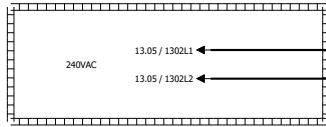
99 17

99 18

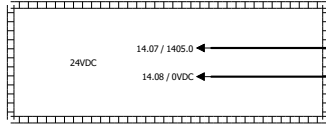
99 19

99 20

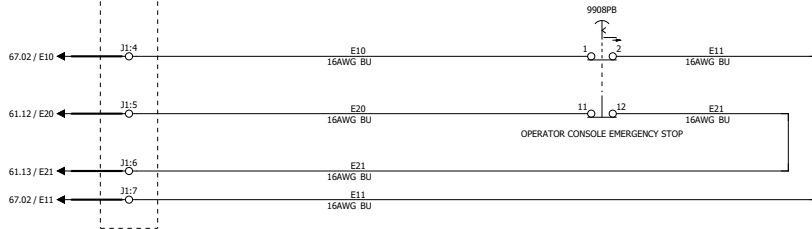
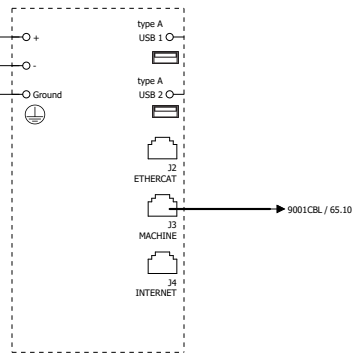
IF USING 1000 SERIES CONTROL, USE THIS CIRCUIT



IF USING 2000 SERIES CONTROL, USE THIS CIRCUIT



9900HMI  
MAIN OPERATOR CONSOLE  
192.168.208.010



COMPANY: MACHMOTION NEWBURG, MISSOURI, USA		DATE: 7/8/2020		ALL RIGHTS RESERVED		DRAWING NO: A3SY00-000		NAME: -		=		+									
DESIGNER: JUSTIN R. WALZ		APPROVER: -		LOC: -		FACTORY: -		DEPT: -		OP. NO: -		STA. NO: -		SUPPLIER NO: XXXXX		DRAWING NO:		9900 HMI - MAIN OPERATOR INTERFACE		PREV PAGE: <<< PAGE: 95	
																		NEXT PAGE: >>> PAGE: 120		99	

# IP Address Overview

Device tag	Device description	IP Address	Subnet Mask	Gateway	Profinet #	Profibus #
6000DRV	SPINDLE CONTROLLER	192.168.208.100	255.255.255.000	192.168.208.001		
6500MDL	APOLLO III CONTROLLER	192.168.208.035	255.255.255.000	192.168.208.001		
9900HMI	MAIN OPERATOR CONSOLE	192.168.208.010	255.255.255.000	192.168.208.001		