YASKAWA AMERICA INC.
MOTOMAN ROBOTICS DIVISION

100 Automation Way
Miamisburg, Ohio 45342
Phone. 1-(937)-847-6200

Company / customer	
Project description	DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
Job number	196916-2
Manufacturer	YASKAWA AMERICA INC. MOTOMAN ROBOTICS DIVISION
Project name	196916-2
YMC WO#	
Responsible for project	JAY
Created on	3/4/2024
Number of pages	17

CHANGE RECORD

No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN SI UNITS.TOLERANCES BELOW APPLY EXCEPT FOR VENDOR DESIGNED PARTS AND ITEMS PRODUCED TO RECOGNIZED STANDARDS. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009

FILE NAME 196916-2
EPLAN VERSION 2023.0.3

DESIGNED	JAY	APPROVAL	JAY 5/15/2024
DRAWN	DGC 3/4/2024	APPROVAL	
CHECKED	BJG 5/15/2024	RELEASE	TNF 5/15/2024
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA
MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
TITLE PAGE

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	1 of 17

NEXT SHEET: 1A

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CHANGE RECORD

No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

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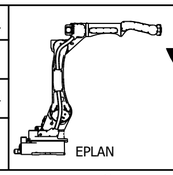


EPLAN

YASKAWA

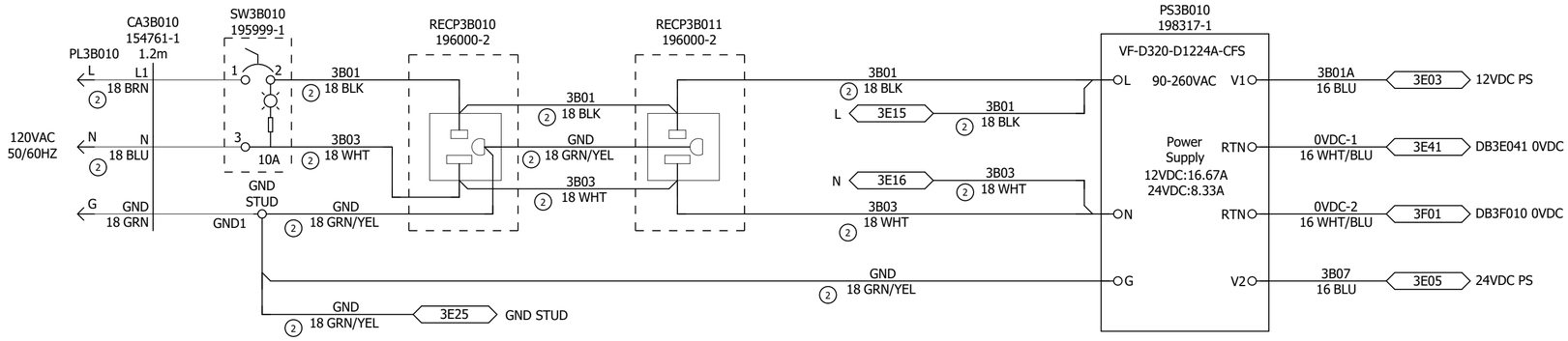
MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
TABLE OF CONTENTS

= +

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	1A of 17

NEXT SHEET:3B



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YASKAWA

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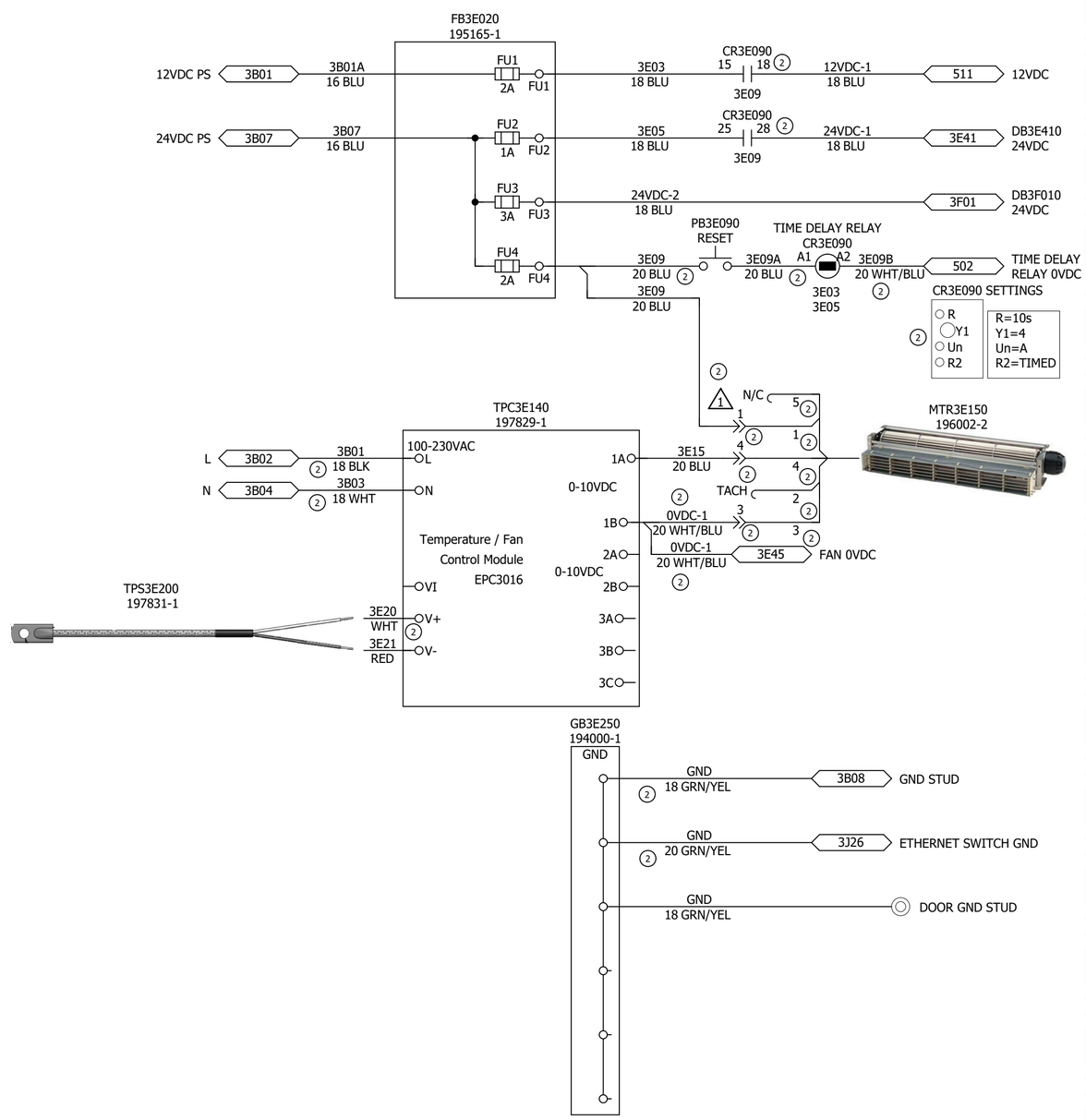
MIAMISBURG, OHIO 45342 USA (937) 847-6200

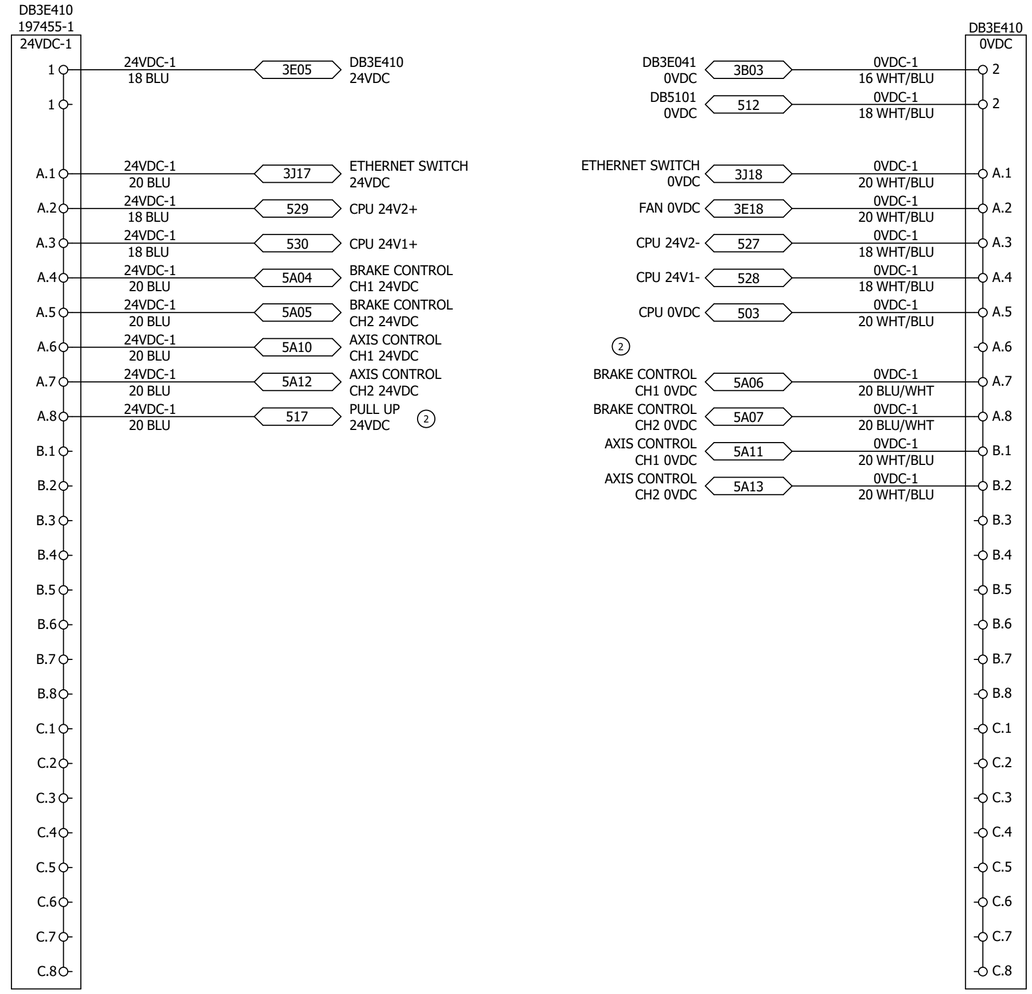
TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
120VAC POWER DISTRIBUTION

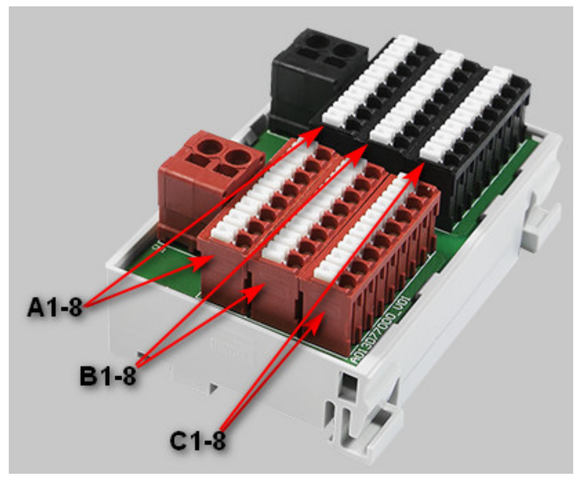
= +

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	3B of 17

NEXT SHEET:3E







NOTES:

1. USE CONNECTOR SUPPLIED W/MOTOR. PIN #. USE CRIMPER T50529 TO CRIMP PINS SUPPLIED W/ MOTOR.

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MIAMISBURG, OHIO 45342 USA (937) 847-6200

EPLAN

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
24VDC POWER DISTRIBUTION

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	3E of 17

NEXT SHEET: 3F

DB3F010
197455-1
24VDC-2

3F01	1	24VDC-2 18 BLU	3E07	DB3F010 24VDC
3F02	1			
3F03				
3F04	A.1			
3F05	A.2			
3F06	A.3			
3F07	A.4			
3F08	A.5			
3F09	A.6			
3F10	A.7			
3F11	A.8			
3F12	B.1			
3F13	B.2			
3F14	B.3			
3F15	B.4			
3F16	B.5			
3F17	B.6			
3F18	B.7			
3F19	B.8			
3F20	C.1			
3F21	C.2			
3F22	C.3			
3F23	C.4			
3F24	C.5			
3F25	C.6			
3F26	C.7			
3F27	C.8			

DB3F010
0VDC

DB3F010 0VDC	3B05	0VDC-2 16 WHT/BLU	2	3F41
			2	3F42
				3F43
			A.1	3F44
			A.2	3F45
			A.3	3F46
			A.4	3F47
			A.5	3F48
			A.6	3F49
			A.7	3F50
			A.8	3F51
			B.1	3F52
			B.2	3F53
			B.3	3F54
			B.4	3F55
			B.5	3F56
			B.6	3F57
			B.7	3F58
			B.8	3F59
			C.1	3F60
			C.2	3F61
			C.3	3F62
			C.4	3F63
			C.5	3F64
			C.6	3F65
			C.7	3F66
			C.8	3F67
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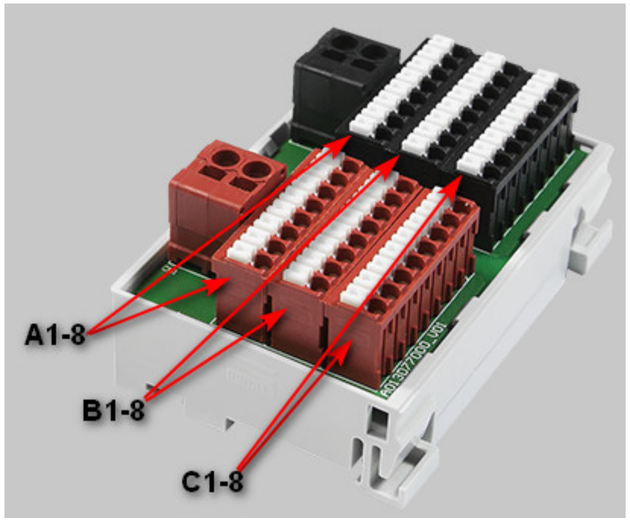

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YASKAWA

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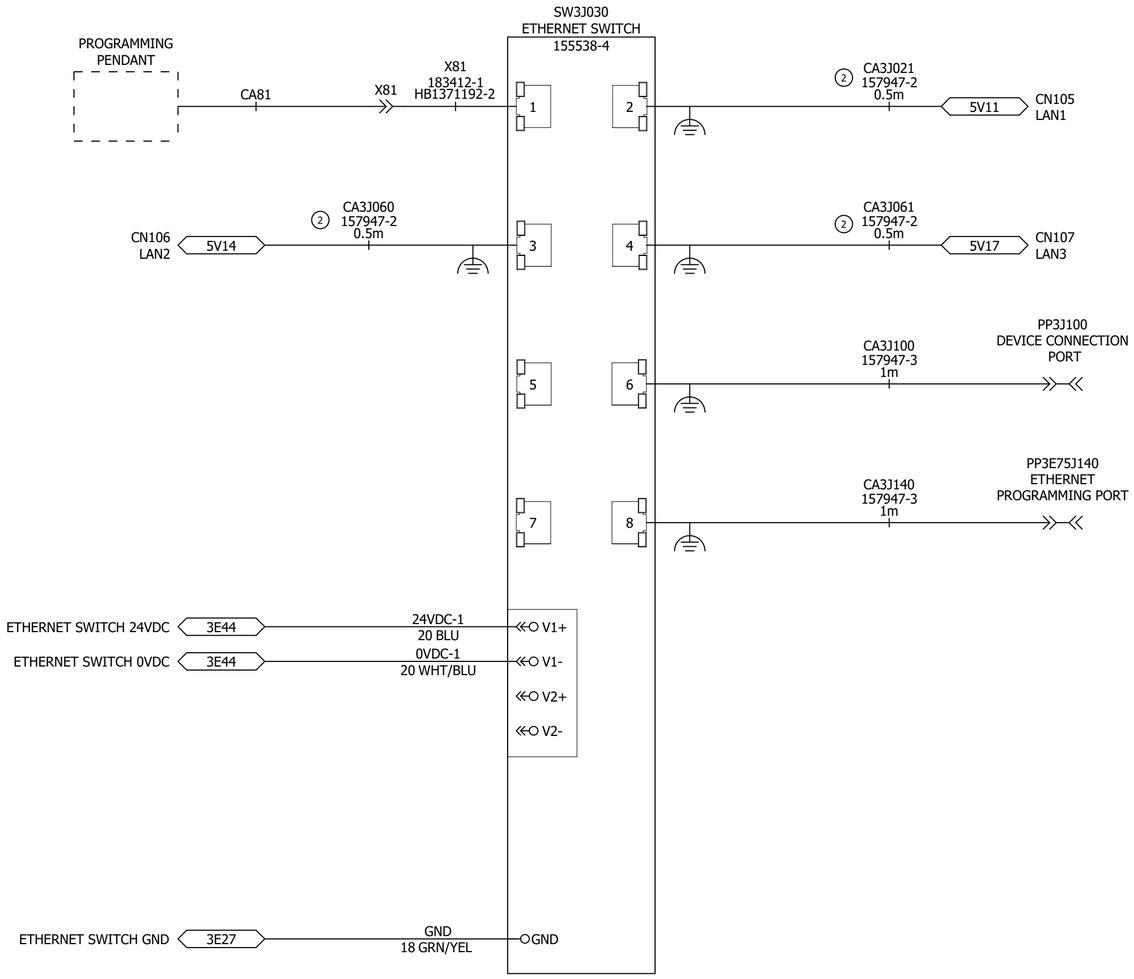
MIAMISBURG, OHIO 45342 USA (937) 847-6200

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
24VDC POWER DISTRIBUTION

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	196916-2	3F of 17

NEXT SHEET: 33



NOTES:

1. DENOTES RJ45 SHIELDED END OF CABLE.

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TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER NETWORK CONNECTIONS

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
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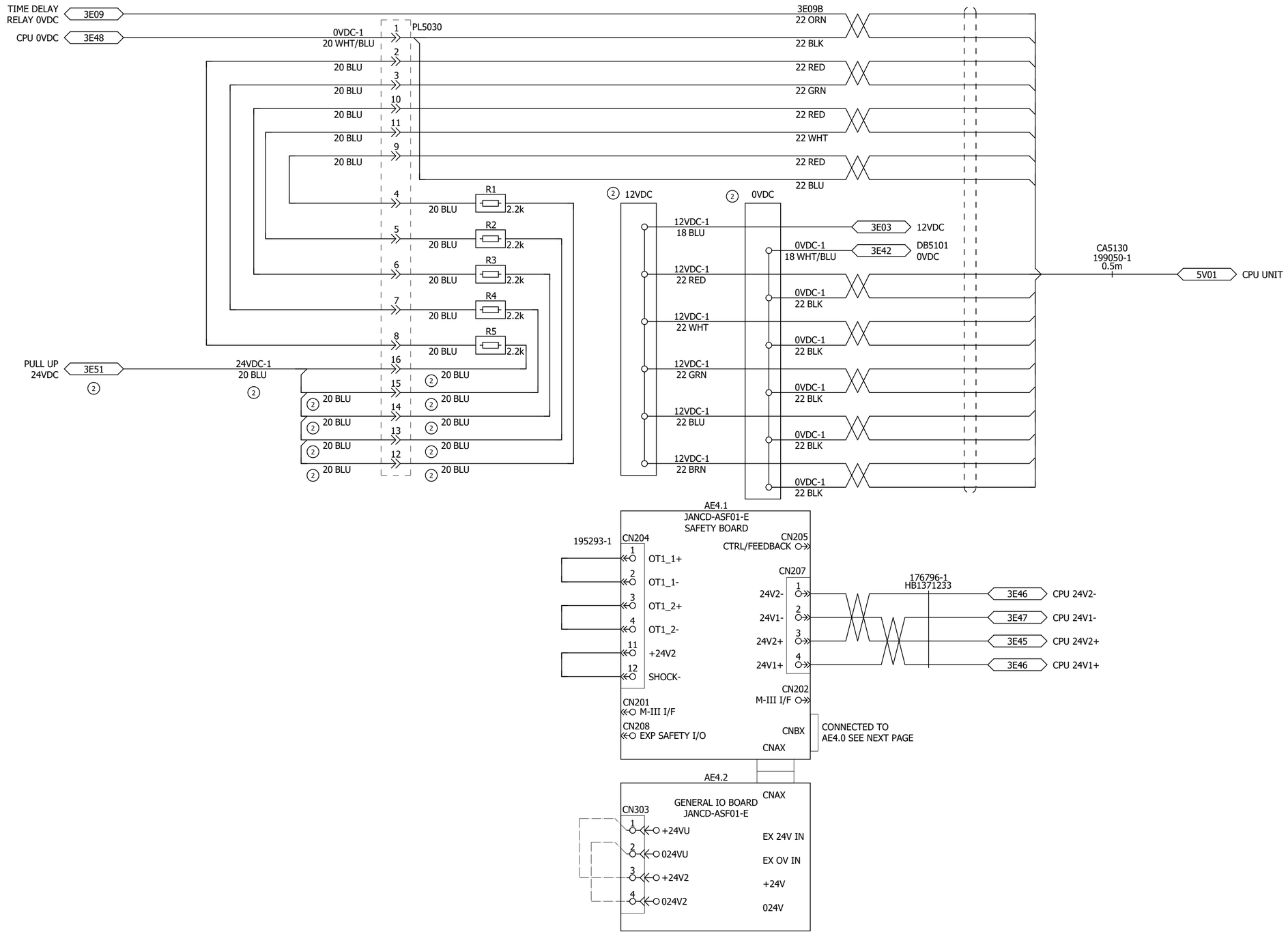
NEXT SHEET: 5



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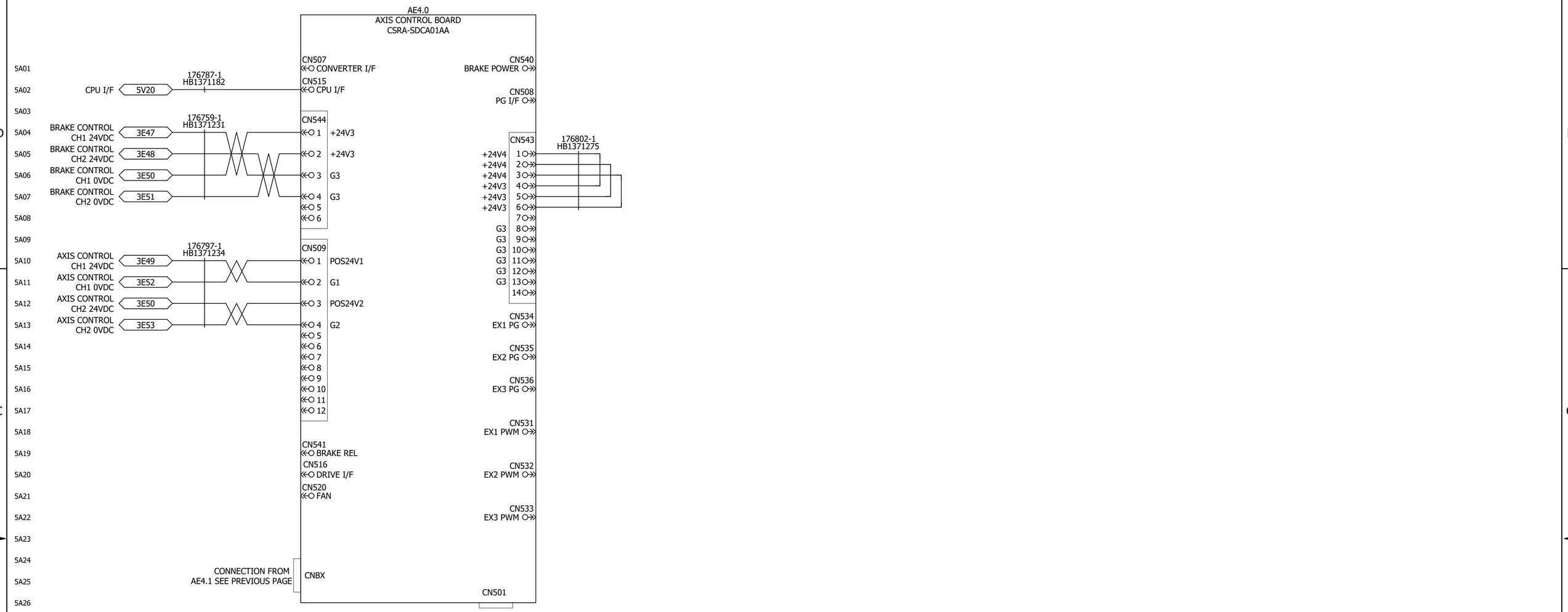
TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	196916-2	5 of 17

NEXT SHEET:5A



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TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER EXTERNAL AXIS CONNECTIONS

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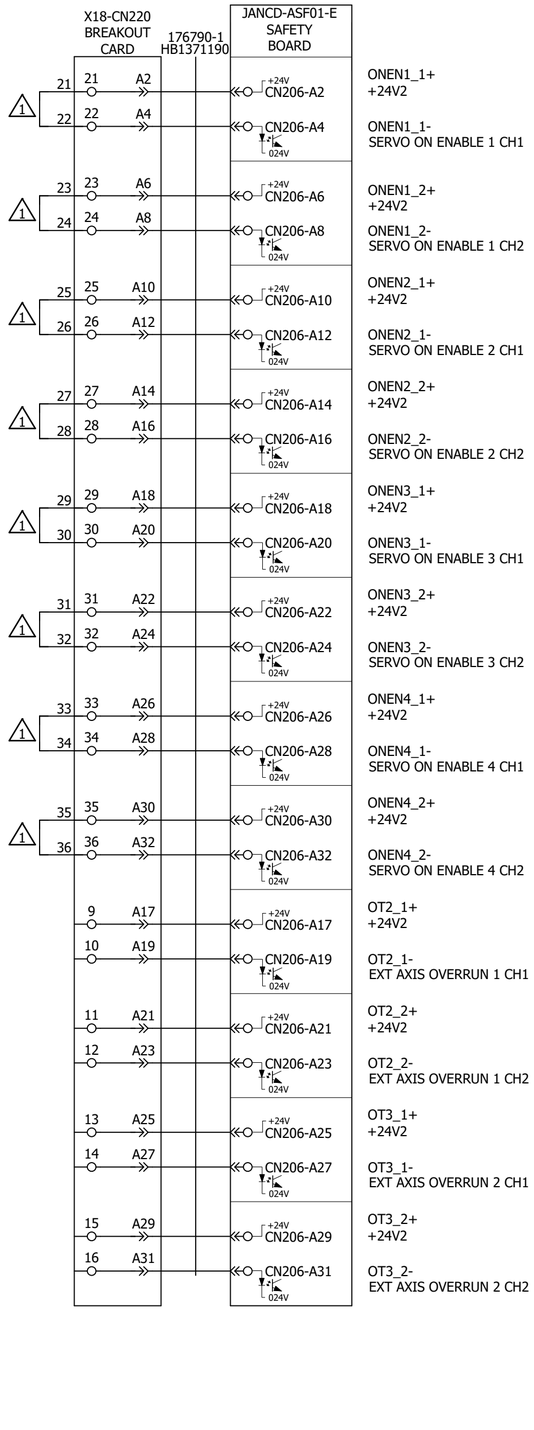
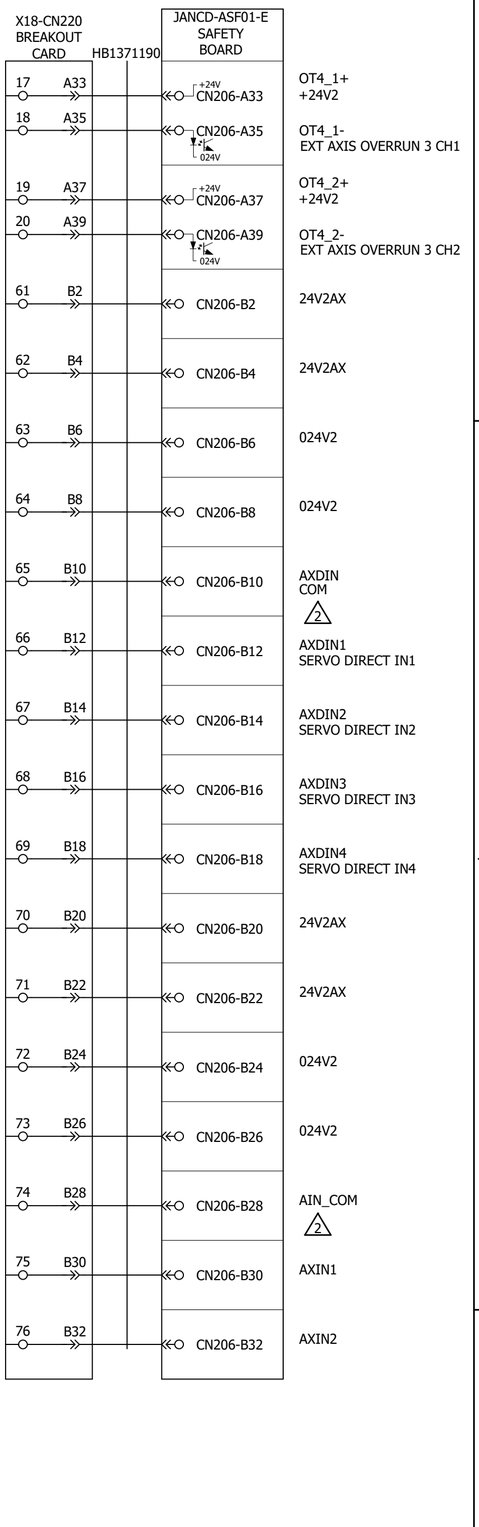
DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	5A of 17

NEXT SHEET:5E





NOTES:

1. REMOVE JUMPER TO USE THE SAFETY INPUT, SUB-ASSEMBLY TO ADD 20AWG BLU JUMPERS AT INITIAL BUILD.
2. AXDIN1 THRU AXDIN4 AND AXIN1 & AXIN2 ARE BI-DIRECTIONAL INPUTS. AXDIN1 THRU AXDIN4 SHARE AXDIN COM, AXIN1 & AXIN2 SHARE AIN_COM.
3. CN220 BREAKOUT CARD TERMINALS ARE RATED FOR 20-24 AWG WIRE SINGLE CONDUCTOR.

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TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER SAFETY I/O

= | +

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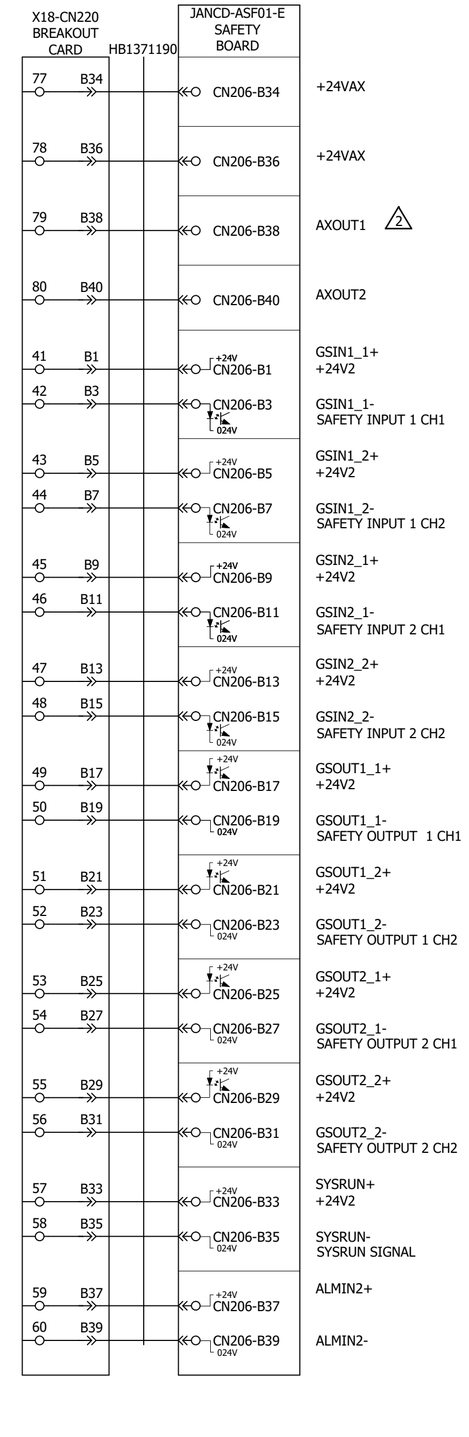
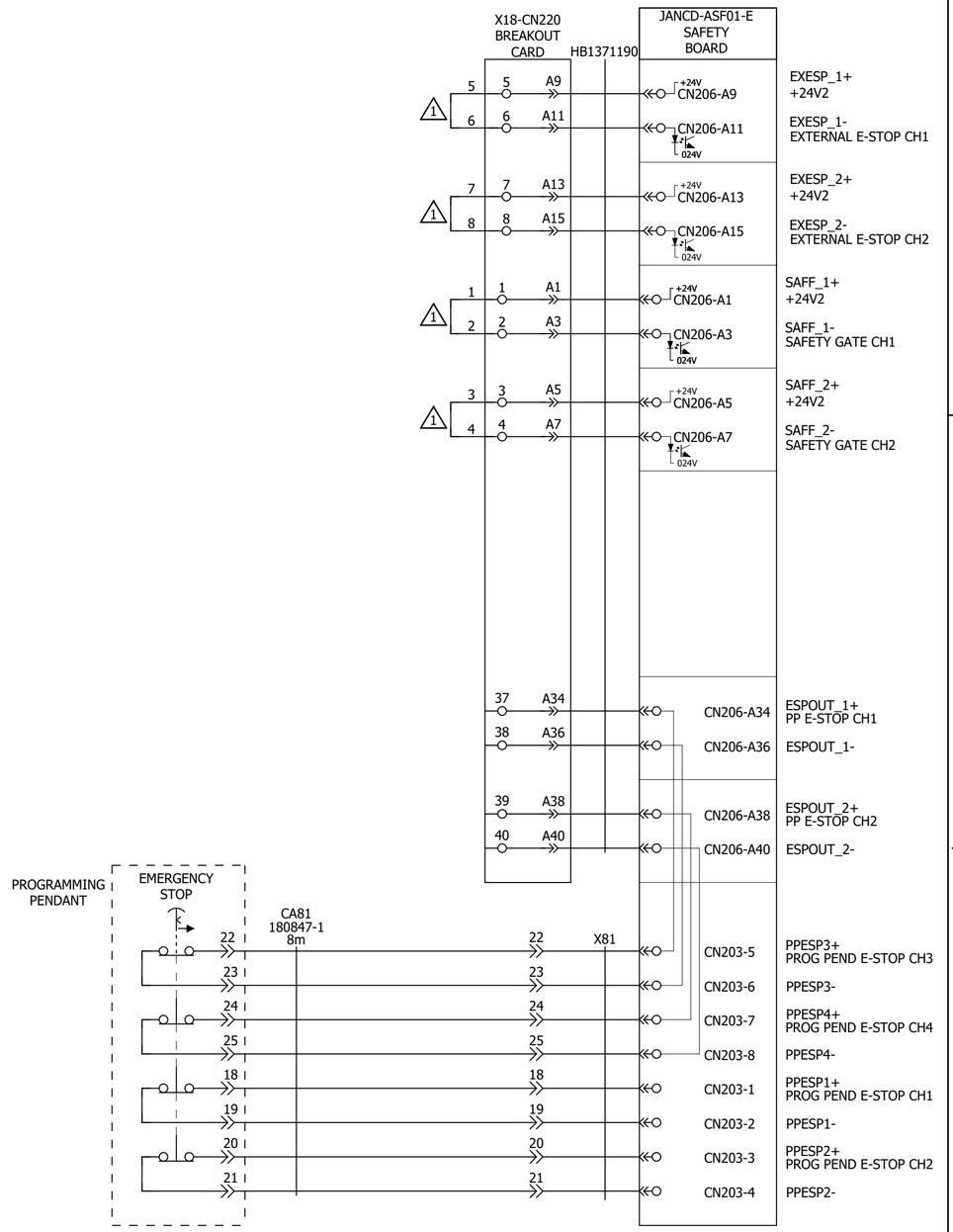
NEXT SHEET:5F





NOTES:

1. REMOVE JUMPER TO USE THE SAFETY INPUT.
2. AXOUT1 AND AXOUT2 ARE SINKING OUTPUTS.
3. CN220 BREAKOUT CARD TERMINALS ARE RATED FOR 20-24 AWG WIRE SINGLE CONDUCTOR.

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TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER SAFETY I/O

= +

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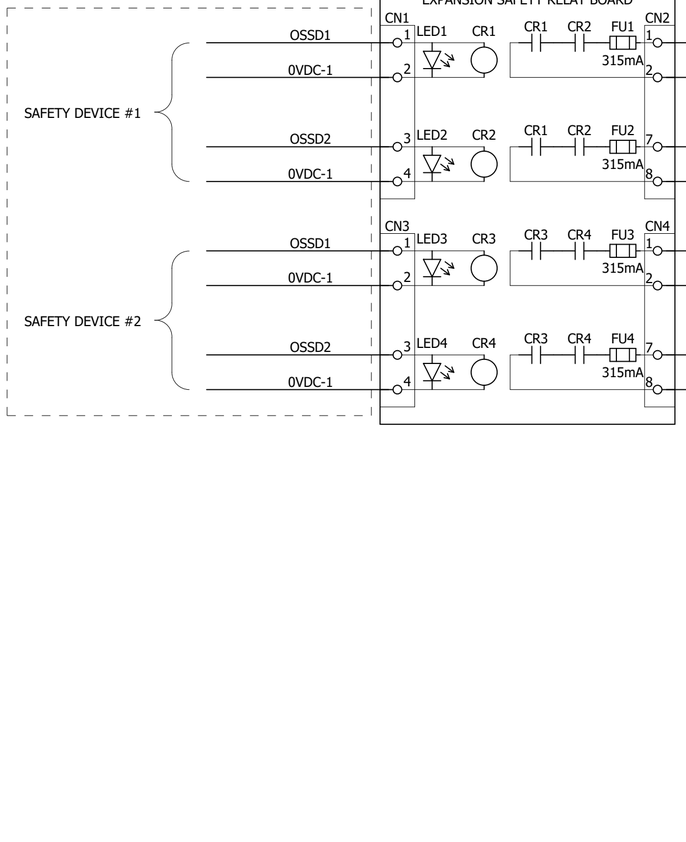
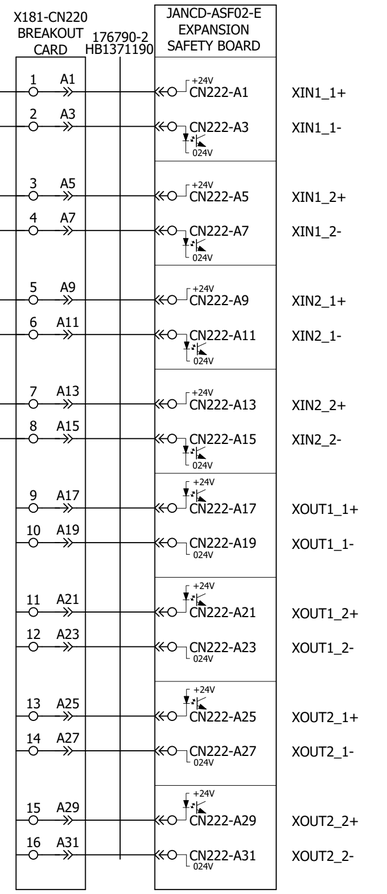
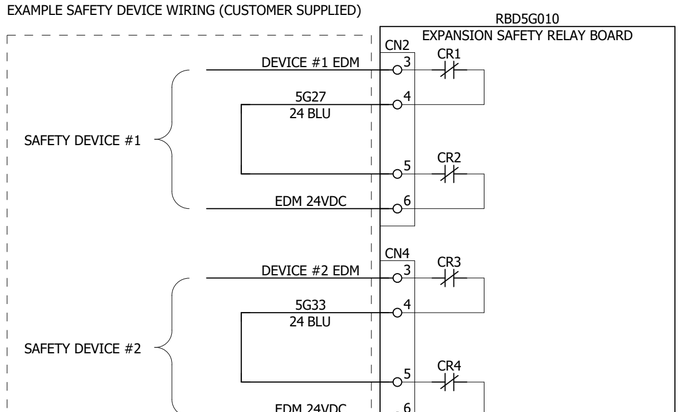
NEXT SHEET: 5G

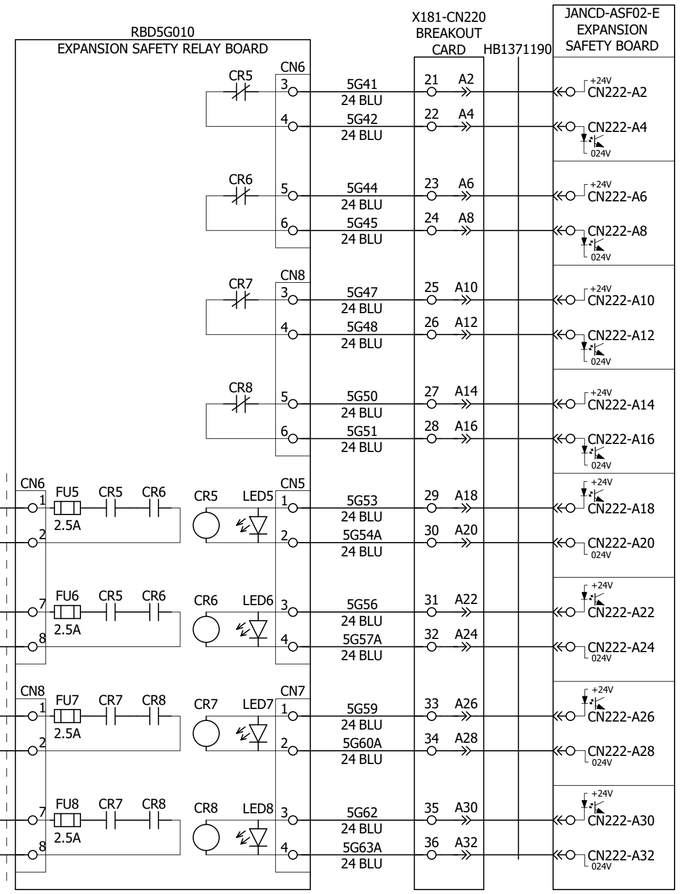
EXAMPLE SAFETY DEVICE WIRING (CUSTOMER SUPPLIED)



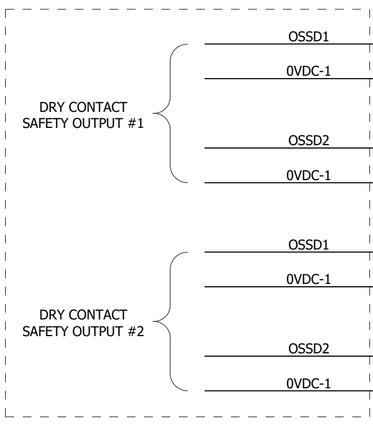


EXAMPLE SAFETY DEVICE WIRING (CUSTOMER SUPPLIED)





EXAMPLE SAFETY DEVICE WIRING (CUSTOMER SUPPLIED)



NOTES:

1. CN220 BREAKOUT CARD TERMINALS
   ARE RATED FOR 20-24 AWG WIRE SINGLE CONDUCTOR.

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0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN SI UNITS.TOLERANCES BELOW APPLY EXCEPT FOR VENDOR DESIGNED PARTS AND ITEMS PRODUCED TO RECOGNIZED STANDARDS. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009

FILE NAME 196916-2

EPLAN VERSION 2023.0.3

DESIGNED JAY		APPROVAL JAY 5/15/2024	
DRAWN DGC 3/4/2024		APPROVAL	
CHECKED BJG 5/15/2024		RELEASE TNF 5/15/2024	
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

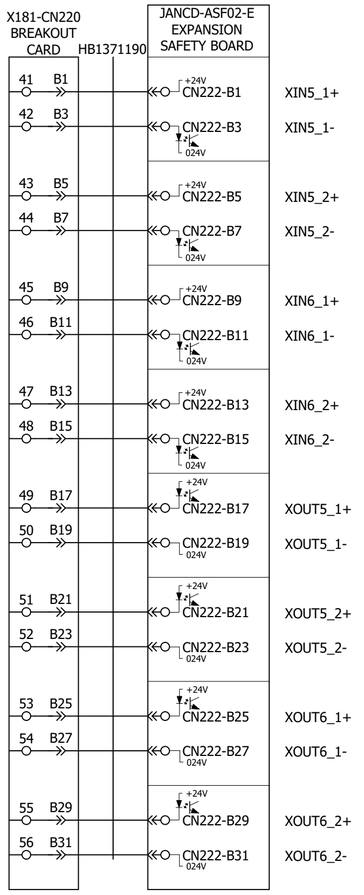
MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

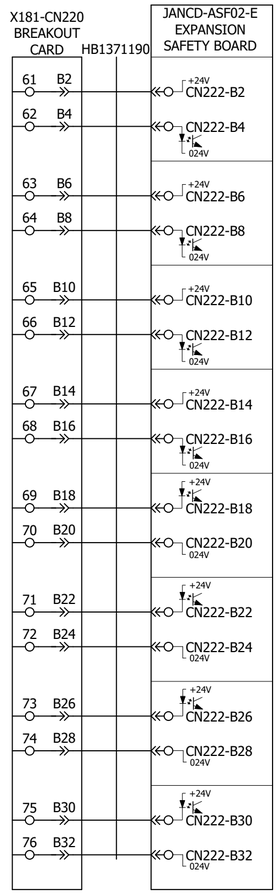
TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER EXPANSION SAFETY I/O

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	5G of 17

NEXT SHEET: 5H





NOTES:

1. CN220 BREAKOUT CARD TERMINALS
   ARE RATED FOR 20-24 AWG WIRE SINGLE CONDUCTOR.

CHANGE RECORD					
No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN SI UNITS.TOLERANCES BELOW APPLY EXCEPT FOR VENDOR DESIGNED PARTS AND ITEMS PRODUCED TO RECOGNIZED STANDARDS. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009

FILE NAME 196916-2
EPLAN VERSION 2023.0.3

DESIGNED JAY		APPROVAL JAY 5/15/2024	
DRAWN DGC 3/4/2024		APPROVAL	
CHECKED BJG 5/15/2024		RELEASE TNF 5/15/2024	
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

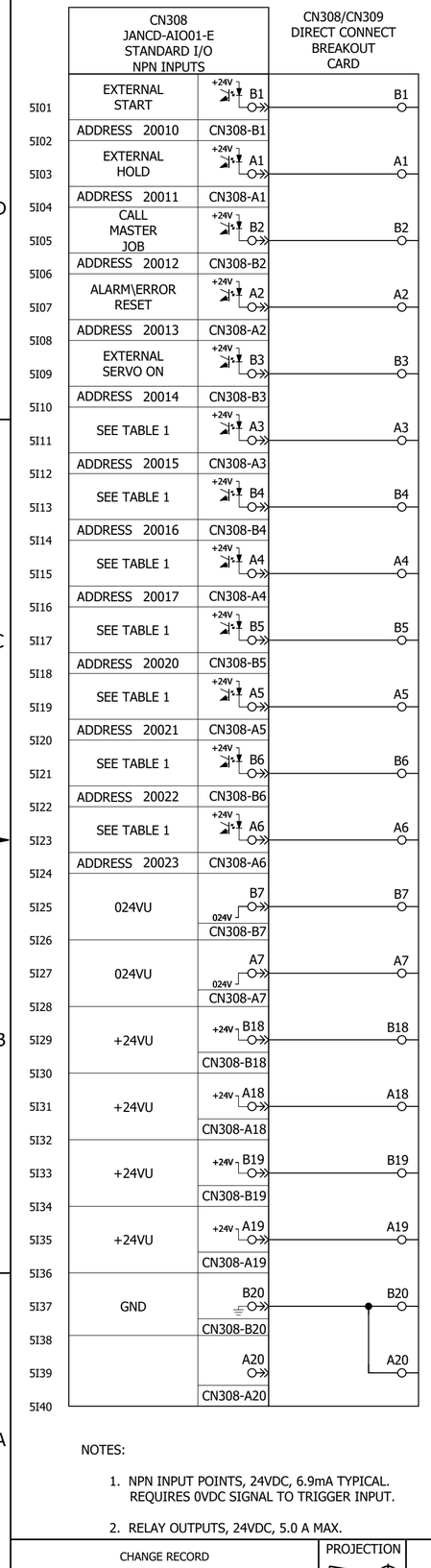
MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

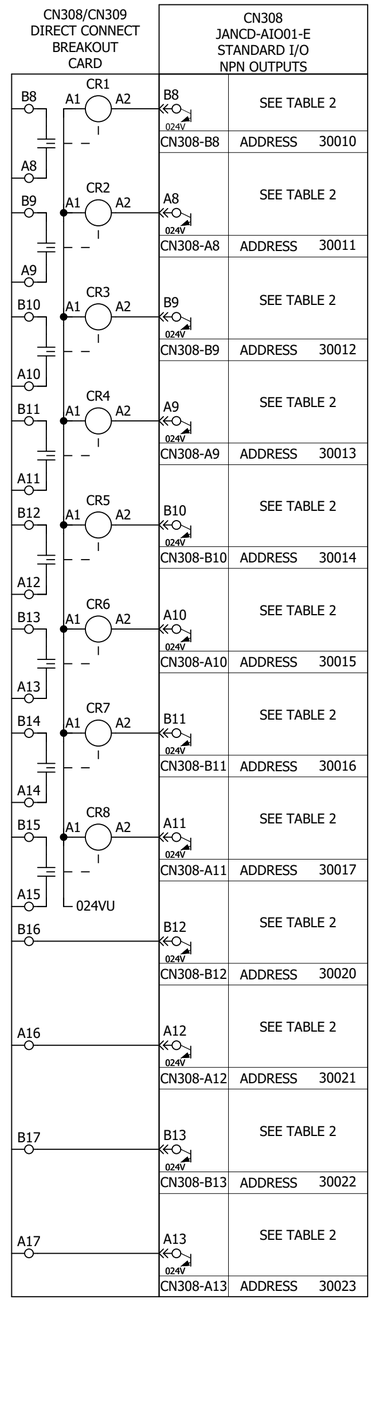
TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER EXPANSION SAFETY I/O

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	5H of 17

NEXT SHEET:51





Re-Allocation of Dedicated Inputs:

TABLE 1

External Input #	YEC Handling App:	YEC General Purpose App:	YEC Standard Arc Welding App:	"Simple Connect" Arc App: AR - Series W/ "Simple Connect"	"Simple Connect" Arc App: HC - Series W/ "Simple Connect"
20015	Play Mode Select			Air Presssure Sensor 1	Weld Current Sensor
20016	Teach Mode Select			Water Flow Sensor 1	Welder Alarm/Error 1
20017	Undefined			Water Flow Sensor 2	Air Pressure Sensor 1
20020	Interference 1 Entrance Prohibited			Gas Flow Sensor 1	Air Pressure Sensor 2
20021	Interference 2 Entrance Prohibited		Interference 10 Entrance Prohibited	Gas Flow Sensor 2	Water Flow Sensor 1
20022	Undefined	Work Prohibit		Gas Flow Sensor 3	Gas Flow Sensor 1
20023	Undefined	Undefined	Work Response	Gas Flow Sensor 4	Wire Present Sensor 1

Re-Allocation of Dedicated Outputs:

TABLE 2

External Output#:	YEC Handling App:	YEC General Purpose App:	YEC Standard Arc Welding App:	"Simple Connect" Arc App: AR-Series W/ "Simple Connect"	"Simple Connect" Arc App: HC-Series W/ "Simple Connect"
30010	Running			Wire Brake 1	Wire Brake 1
30011	Servos On			Wire Brake 2	Camera Door 1
30012	Top of Master Job			Wire Brake 3	Servo On/ Air On
30013	Alarm/Error Occurred			Wire Brake 4	Play Mode Selected
30014	Battery Alarm			Camera Door 1	Teach Mode Selected
30015	Remote Mode Selected			Camera Door 2	Arc On/Trigger
30016	Play Mode Selected			Camera Door 3	Wire Inch
30017	Teach Mode Selected			Camera Door 4	Wire Retract
30020	In Cube 1			Running	
30021	In Cube 2		In Cube 10 R2	Servo On	
30022	SOUT 120		Work Home Position	Alarm/Error	
30020	Intermediate Start (Sequence Cont.)			Robot(s) Home	

NOTES:

1. NPN INPUT POINTS, 24VDC, 6.9mA TYPICAL. REQUIRES 0VDC SIGNAL TO TRIGGER INPUT.
2. RELAY OUTPUTS, 24VDC, 5.0 A MAX.
3. CN308/309 BREAKOUT CARD TERMINALS ARE RATED FOR 24-16 AWG CONDUCTORS. TRADITIONAL INSULATION THICKNESS LIMITS WIRES TO A MAX OF TWO 20 AWG WIRES PER TERMINAL. THIN INSULATION THICKNESS WIRES ALLOW A MAX OF TWO 18 AWG WIRES PER TERMINAL.

CHANGE RECORD

No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN SI UNITS.TOLERANCES BELOW APPLY EXCEPT FOR VENDOR DESIGNED PARTS AND ITEMS PRODUCED TO RECOGNIZED STANDARDS. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009

FILE NAME 196916-2

EPLAN VERSION 2023.0.3

DESIGNED JAY		APPROVAL JAY 5/15/2024	
DRAWN DGC 3/4/2024		APPROVAL	
CHECKED BJG 5/15/2024		RELEASE TNF 5/15/2024	
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

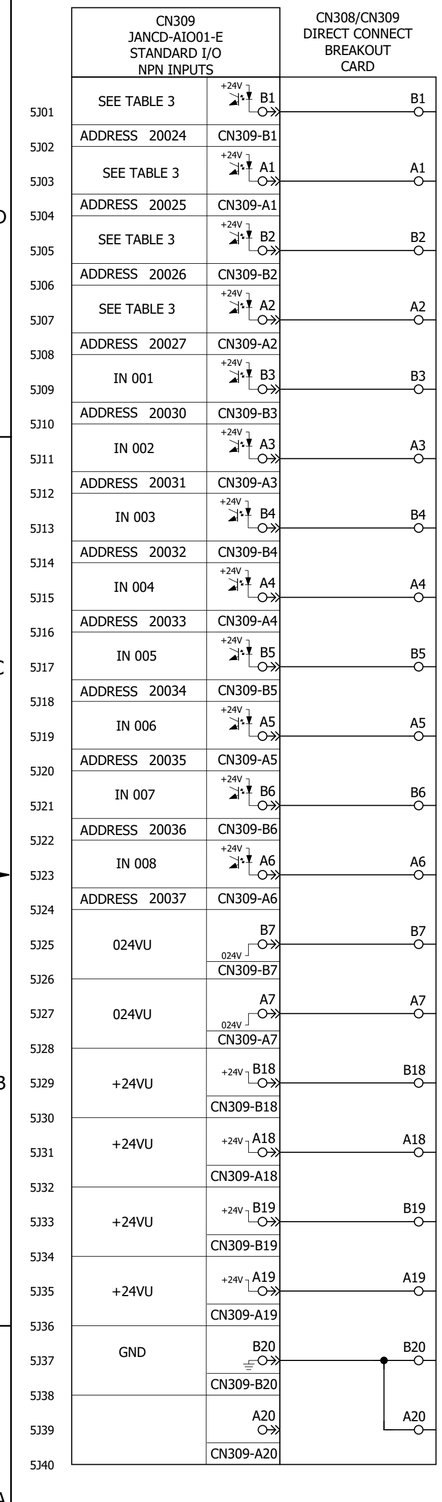
MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

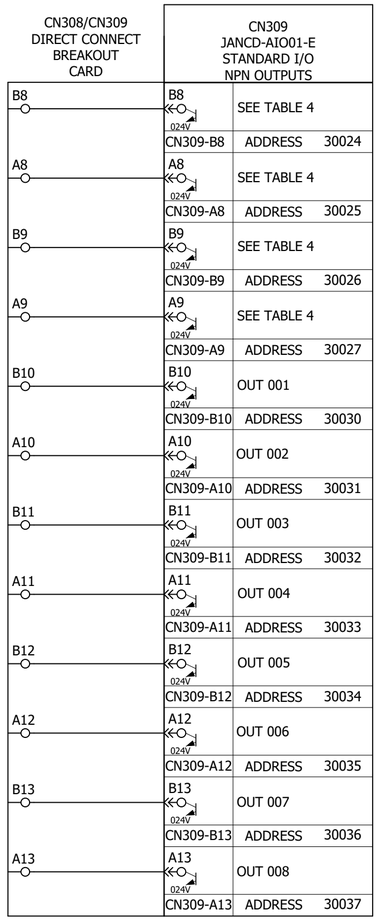
TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER STANDARD I/O

= +

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	196916-2	5I of 17

NEXT SHEET: 5J





Re-Allocation of Dedicated Inputs: TABLE 3

External Output#:	YEC Handling App:	YEC General Purpose App:	YEC Standard Arc Welding App:	"Simple Connect" Arc App: AR-Series "Simple Connect"	"Simple Connect" Arc App: HC-Series "Simple Connect"
20024	Undefined	Interference 3 Entrance Prohibited	Undefined	Wire Shortage 1	Direct Teach "MOVE"
20025	Undefined	Interference 4 Entrance Prohibited	Undefined	Wire Shortage 2	Direct Teach "TEACH"
20026	Undefined		Weaving Prohibit	Wire Shortage 3	Direct Teach "TOOL"
20027	Air Pressure Low	Undefined	Sensing Prohibit	Wire Shortage 4	Spare/Unused

Re-Allocation of Dedicated Outputs: TABLE 4

External Output#:	YEC Handling App:	YEC General Purpose App:	YEC Standard Arc Welding App:	"Simple Connect" Arc App: AR-Series "Simple Connect"	"Simple Connect" Arc App: HC-Series "Simple Connect"
30024	Undefined	In Cube 3	Gas Shortage	R1 Search/Detect	Direct Teach "Teach" LED
30025	Undefined	In Cube 4	Wire Shortage	R2 Search Detect	33% Light
30026	Undefined	Work Instruction	Wire Sticking	R3 Search Detect	66% Light
30027	Undefined		Arc Shortage	R4 Search Detect	R1 Search Detect

NOTES:

1. NPN INPUT POINTS, 24VDC, 6.9mA TYPICAL. REQUIRES 0VDC SIGNAL TO TRIGGER INPUT.
2. NPN (TRANSISTOR) OUTPUTS, 24VDC, 50 mA MAX.
3. CN308/309 BREAKOUT CARD TERMINALS ARE RATED FOR 24-16 AWG CONDUCTORS. TRADITIONAL INSULATION THICKNESS LIMITS WIRES TO A MAX OF TWO 20 AWG WIRES PER TERMINAL. THIN INSULATION THICKNESS WIRES ALLOW A MAX OF TWO 18 AWG WIRES PER TERMINAL.

CHANGE RECORD

No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING

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FILE NAME 196916-2
EPLAN VERSION 2023.0.3

DESIGNED JAY		APPROVAL JAY	5/15/2024
DRAWN DGC	3/4/2024	APPROVAL	
CHECKED BJG	5/15/2024	RELEASE TNF	5/15/2024
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

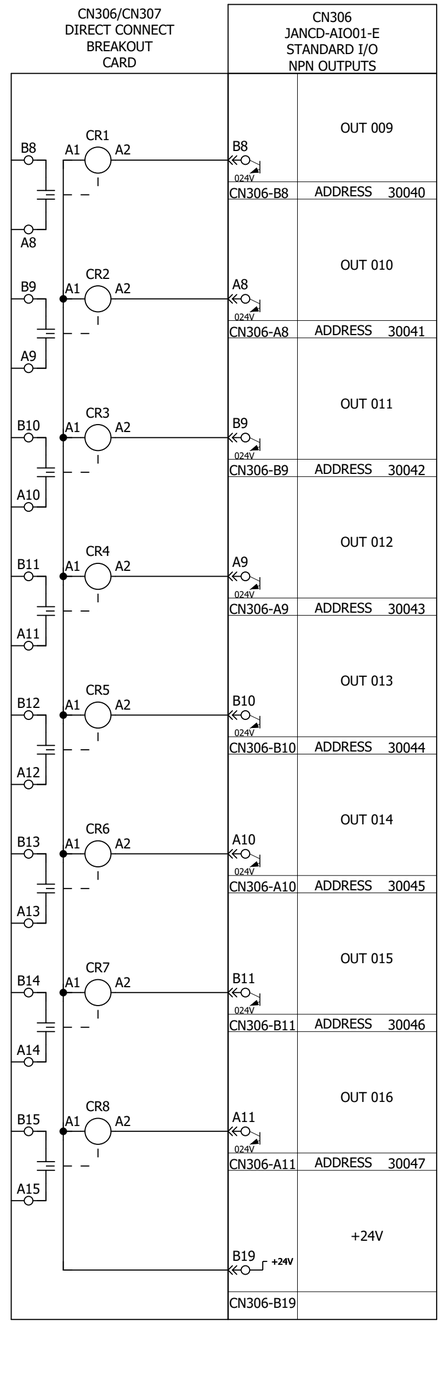
TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER STANDARD I/O

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	196916-2	5J of 17

NEXT SHEET: 5K

	CN306 JANCD-AIO01-E STANDARD I/O NPN INPUTS		CN306/CN307 DIRECT CONNECT BREAKOUT CARD
5K01	IN 009	+24V B1	B1
	ADDRESS 20040	CN306-B1	
5K02			
5K03	IN 010	+24V A1	A1
5K04	ADDRESS 20041	CN306-A1	
5K05	IN 011	+24V B2	B2
5K06	ADDRESS 20042	CN306-B2	
5K07	IN 012	+24V A2	A2
5K08	ADDRESS 20043	CN306-A2	
5K09	IN 013	+24V B3	B3
5K10	ADDRESS 20044	CN306-B3	
5K11	IN 014	+24V A3	A3
5K12	ADDRESS 20045	CN306-A3	
5K13	IN 015	+24V B4	B4
5K14	ADDRESS 20046	CN306-B4	
5K15	IN 016	+24V A4	A4
5K16	ADDRESS 20047	CN306-A4	
5K17	024VU	B7	B7
5K18		024V CN306-B7	
5K19	024VU	A7	A7
5K20		024V CN306-A7	
5K21	+24VU	+24V B18	B18
5K22		CN306-B18	
5K23	+24VU	+24V A18	A18
5K24		CN306-A18	
5K25	+24VU	+24V A19	A19
5K26		CN306-A19	
5K27	GND	B20	B20
5K28		CN306-B20	
5K29		A20	A20
5K30		CN306-A20	
5K31			
5K32			
5K33	+24V2	1	
5K34		CN304-1	
5K35	024V2	2	
5K36		CN304-2	
5K37	+24VU	3	
5K38		CN304-3	
5K39	024VU	4	
5K40		CN304-4	



NOTES:

1. NPN INPUT POINTS, 24VDC, 6.9mA TYPICAL. REQUIRES 0VDC SIGNAL TO TRIGGER INPUT.
2. **RELAY OUTPUTS, 24VDC, 5.0 A MAX.**
3. CN306/307 BREAKOUT CARD TERMINALS ARE RATED FOR 24-16 AWG CONDUCTORS. TRADITIONAL INSULATION THICKNESS LIMITS WIRES TO A MAX OF TWO 20 AWG WIRES PER TERMINAL. THIN INSULATION THICKNESS WIRES ALLOW A MAX OF TWO 18 AWG WIRES PER TERMINAL.

CHANGE RECORD					
No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN SI UNITS.TOLERANCES BELOW APPLY EXCEPT FOR VENDOR DESIGNED PARTS AND ITEMS PRODUCED TO RECOGNIZED STANDARDS. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009

FILE NAME 196916-2
EPLAN VERSION 2023.0.3

DESIGNED	JAY	APPROVAL	JAY 5/15/2024
DRAWN	DGC 3/4/2024	APPROVAL	
CHECKED	BJG 5/15/2024	RELEASE	TNF 5/15/2024
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER STANDARD I/O

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	5K of 17

NEXT SHEET: 5L

	CN307 JANCD-AIO01-E STANDARD I/O NPN INPUTS		CN306/CN307 DIRECT CONNECT BREAKOUT CARD
5L01	IN 017	+24V B1	B1
5L02	ADDRESS 20050	CN307-B1	
5L03	IN 018	+24V A1	A1
5L04	ADDRESS 20051	CN307-A1	
5L05	IN 019	+24V B2	B2
5L06	ADDRESS 20052	CN307-B2	
5L07	IN 020	+24V A2	A2
5L08	ADDRESS 20053	CN307-A2	
5L09	IN 021	+24V B3	B3
5L10	ADDRESS 20054	CN307-B3	
5L11	IN 022	+24V A3	A3
5L12	ADDRESS 20055	CN307-A3	
5L13	IN 023	+24V B4	B4
5L14	ADDRESS 20056	CN307-B4	
5L15	IN 024	+24V A4	A4
5L16	ADDRESS 20057	CN307-A4	
5L17	024VU	B7	B7
5L18		024V CN307-B7	
5L19	024VU	A7	A7
5L20		024V CN307-A7	
5L21	+24VU	+24V B18	B18
5L22		CN307-B18	
5L23	+24VU	+24V A18	A18
5L24		CN307-A18	
5L25	+24VU	+24V A19	A19
5L26		CN307-A19	
5L27	GND	B20	B20
5L28		CN307-B20	
5L29		A20	A20
5L30		CN307-A20	

	CN306/CN307 DIRECT CONNECT BREAKOUT CARD	CN307 JANCD-AIO01-E STANDARD I/O RELAY OUTPUTS		
5L41	B8	CN307-B8		
5L42		B8	OUT 017	
5L43	A8	A8		
5L44		CN307-A8	ADDRESS	30050
5L45	B9	CN307-B9		
5L46		B9	OUT 018	
5L47	A9	A9		
5L48		CN307-A9	ADDRESS	30051
5L49	B10	CN307-B10		
5L50		B10	OUT 019	
5L51	A10	A10		
5L52		CN307-A10	ADDRESS	30052
5L53	B11	CN307-B11		
5L54		B11	OUT 020	
5L55	A11	A11		
5L56		CN307-A11	ADDRESS	30053
5L57	B12	CN307-B12		
5L58		B12	OUT 021	
5L59	A12	A12		
5L60		CN307-A12	ADDRESS	30054
5L61	B13	CN307-B13		
5L62		B13	OUT 022	
5L63	A13	A13		
5L64		CN307-A13	ADDRESS	30055
5L65	B14	CN307-B14		
5L66		B14	OUT 023	
5L67	A14	A14		
5L68		CN307-A14	ADDRESS	30056
5L69	B15	CN307-B15		
5L70		B15	OUT 024	
5L71	A15	A15		
5L72		CN307-A15	ADDRESS	30057

5L73 5L74 5L75 5L76 5L77 5L78 5L79 5L80

NOTES:

1. NPN INPUT POINTS, 24VDC, 6.9mA TYPICAL. REQUIRES 0VDC SIGNAL TO TRIGGER INPUT.
2. RELAY OUTPUTS, 24VDC, 500 mA MAX.
3. CN306/307 BREAKOUT CARD TERMINALS ARE RATED FOR 24-16 AWG CONDUCTORS. TRADITIONAL INSULATION THICKNESS LIMITS WIRES TO A MAX OF TWO 20 AWG WIRES PER TERMINAL. THIN INSULATION THICKNESS WIRES ALLOW A MAX OF TWO 18 AWG WIRES PER TERMINAL.

CHANGE RECORD

No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING
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FILE NAME 196916-2
EPLAN VERSION 2023.0.3

DESIGNED	JAY	APPROVAL	JAY 5/15/2024
DRAWN	DGC 3/4/2024	APPROVAL	
CHECKED	BJG 5/15/2024	RELEASE	TNF 5/15/2024
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

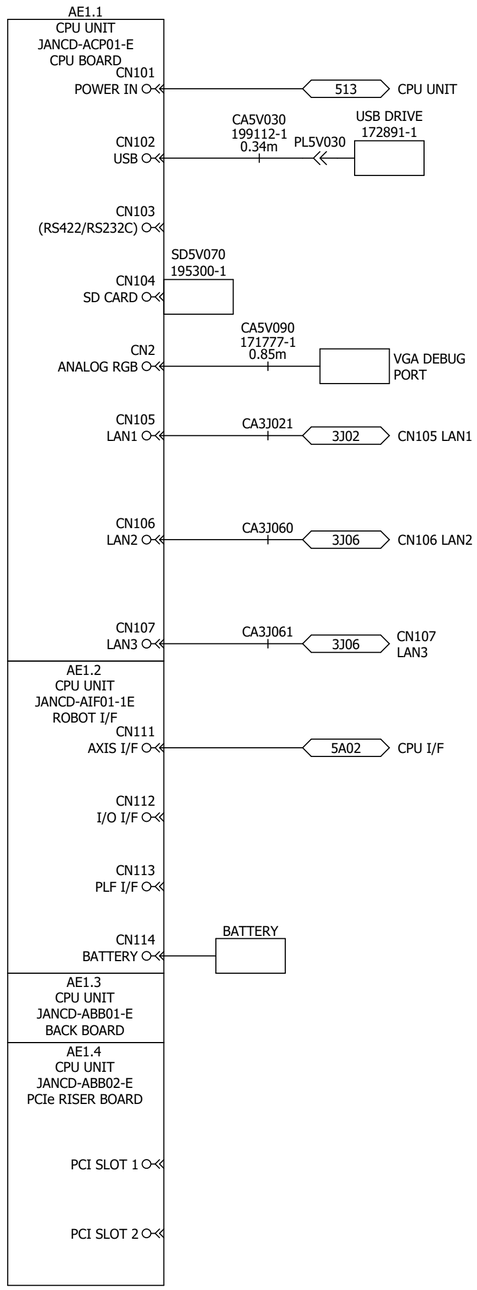
MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER STANDARD I/O

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	5L of 17

NEXT SHEET:5V



5V01 5V02 5V03 5V04 5V05 5V06 5V07 5V08 5V09 5V10 5V11 5V12 5V13 5V14 5V15 5V16 5V17 5V18 5V19 5V20 5V21 5V22 5V23 5V24 5V25 5V26 5V27 5V28 5V29 5V30 5V31 5V32 5V33 5V34 5V35 5V36 5V37 5V38 5V39 5V40

5V41 5V42 5V43 5V44 5V45 5V46 5V47 5V48 5V49 5V50 5V51 5V52 5V53 5V54 5V55 5V56 5V57 5V58 5V59 5V60 5V61 5V62 5V63 5V64 5V65 5V66 5V67 5V68 5V69 5V70 5V71 5V72 5V73 5V74 5V75 5V76 5V77 5V78 5V79 5V80

NOTES:

1. SIMPLE CONNECT FILES THUMBDRIVE. DO NOT REMOVE.

CHANGE RECORD					
No	E.C.N.	DATE	No	E.C.N.	DATE
2	01084	11/11/2024			
1	00490	5/13/2024			

PROJECTION

DECIMAL
0. ± 1.0
0.0 ± 0.4
0.00 ± 0.12
0.000 ±0.012
ANGLES ±30'

METRIC
DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN SI UNITS.TOLERANCES BELOW APPLY EXCEPT FOR VENDOR DESIGNED PARTS AND ITEMS PRODUCED TO RECOGNIZED STANDARDS. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009

FILE NAME 196916-2
EPLAN VERSION 2023.0.3

DESIGNED JAY		APPROVAL JAY	5/15/2024
DRAWN DGC	3/4/2024	APPROVAL	
CHECKED BJG	5/15/2024	RELEASE TNF	5/15/2024
MATERIAL	FINISH	MASS	DEPT. PSG

EPLAN

YASKAWA

MOTOMAN ROBOTICS DIVISION
MIAMISBURG, OHIO 45342 USA (937) 847-6200

TITLE DIAGRAM,TESTEVALDEV,ENCLOSURE,W/SAFETY IO + ETHERNET SWITCH
SES CONTROLLER NETWORK CARD CONNECTIONS

=	+

DWG SIZE	DWG REV	SCALE	DWG NO	SHEET
A2	2	N/A	*196916-2*	5V of 17

NEXT SHEET: