ELECTRICAL INFORMATION

RCS-xxL-5EC	**rev. A1.00+**
RCS-xxL-8EC	**rev. A1.00+**
RCS-xxL-10EC	**rev. A1.00+**

Wood-Mizer	
Voltage	480VAC +4 / - 10%
Phase	3Ph
Frequency	60 Hz
FLA Machine	12A
FLA Largest Load	6.9A
Wiring Diagram	RCS-xxL-5EC
SCCR	100kA w/ 25A Class CC Fuses 5kA w/ Other Protection

1 Deck

Wood-Mizer	
Voltage	480VAC +4 / - 10%
Phase	3Ph
Frequency	60 Hz
FLA Machine	19A
FLA Largest Load	6.9A
Wiring Diagram	RCS-xxL-8EC
SCCR	100kA w/ 30A Class J or CC Fuses 5kA w/ Other Protection

2 Decks
1 Sweep

Wood-Mizer	
Voltage	480VAC +4 / - 10%
Phase	3Ph
Frequency	60 Hz
FLA Machine	23.5A
FLA Largest Load	6.9A
Wiring Diagram	RCS-xxL-10EC
SCCR	100kA w/ 35A Class J 5kA w/ Other Protection

2 Decks
2 Sweeps

This diagram represents all 3 combinations of an RCS system

Power 480VAC Customer Supplied

1/L1 1/L2 1/L3 PE

Q0 60 A

X0 TB1

12 AWG

X1 TB1

X1 TB3

DR

ENC

F1

480L1 BLK 10 AWG

480L2 BLK 10 AWG

480L3 BLK 10 AWG

107A BLK 14 AWG

108A BLK 14 AWG

108C BLK 14 AWG

Class CC 10A

U1/4.401
Deck 1 Sweep Drive

L1 L2 L3 PE1 PE2

T1/U T2/V T3/W

ACS180-04S-04A0-4

+FLD
Field Devices

W1
Driveflex
4x16
600V

107B 108B 108D Blk1 Blk2 Blk3 16 AWG

Grn/Yel 16 AWG

SH

Sweepdrive Motor
M1

U1 V1 W1 PE

M
3 ~

2HP
230/460V
6/3A
1767RPM
36.85:1 Gear

F2

480L1 BLK 10 AWG

480L2 BLK 10 AWG

480L3 BLK 10 AWG

114A BLK 14 AWG

115A BLK 14 AWG

115C BLK 14 AWG

Class CC 20A

U2/5.501
Deck 1 Rollers Drive

L1 L2 L3 PE1 PE2

T1/U T2/V T3/W

ACS180-04S-05A6-4

+FLD
Field Devices

W2
Driveflex
4x16
600V

114B 115B 115D Blk1 Blk2 Blk3 16 AWG

Grn/Yel 16 AWG

SH

Rollcase Motor
M2

U1 V1 W1 PE

M
3 ~

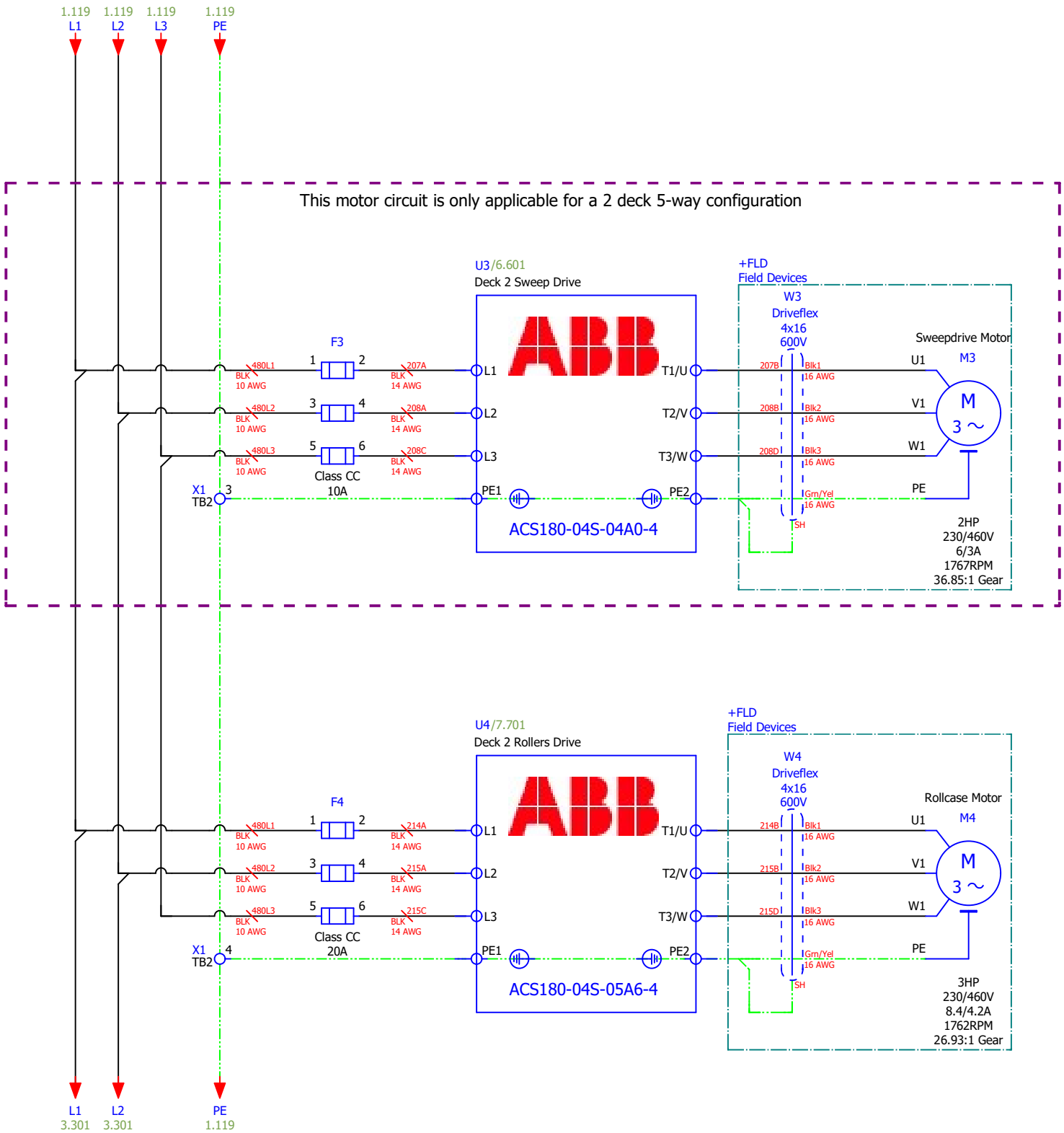
3HP
230/460V
8.4/4.2A
1762RPM
26.93:1 Gear

L1 2.203 L2 2.203 L3 2.203 PE 2.203 2.219 3.301 3.311 +OP/1.108

Wood-Mizer			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: Motors 1	
Created by:	SDC	Type: Schematic multi-line	
Prev. pg: +/D1	Page: +MAIN/1	Next pg: 2	Total Pgs: 64

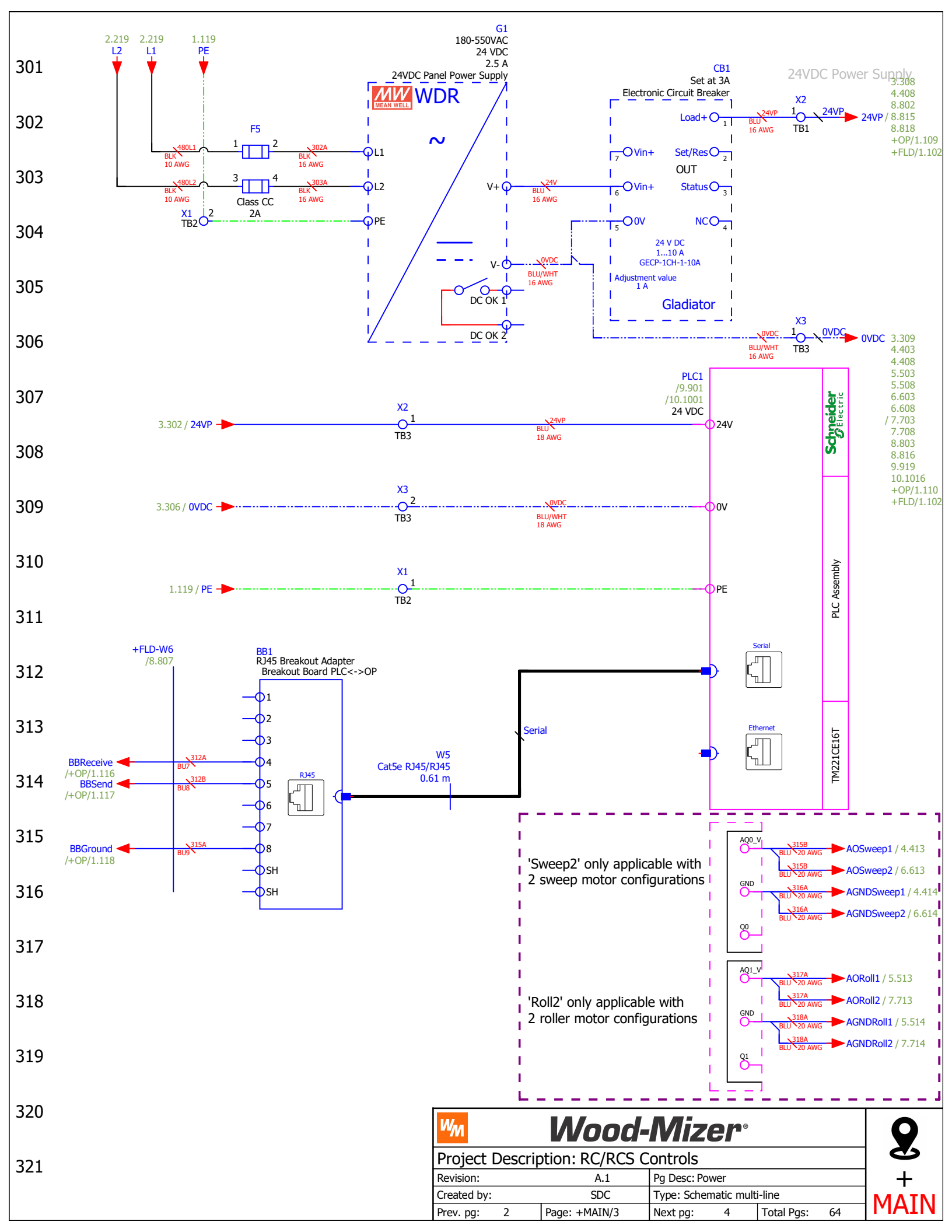
+
MAIN

This Page is Only Applicable for a 2 Deck Configuration



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: Motors 2	
Created by:	SDC	Type: Schematic multi-line	
Prev. pg: 1	Page: +MAIN/2	Next pg: 3	Total Pgs: 64

+MAIN

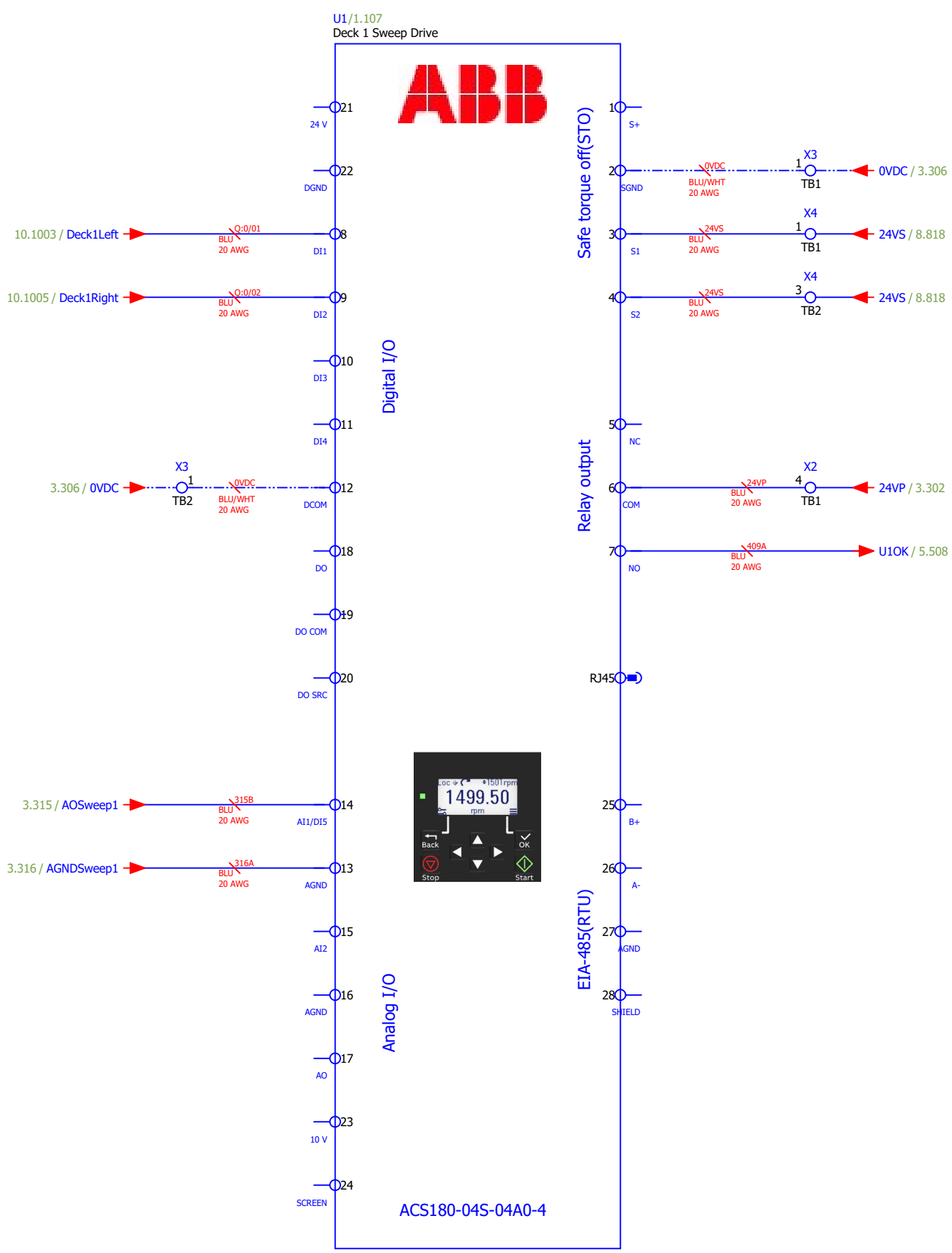


Wood-Mizer®

Project Description: RC/RCS Controls

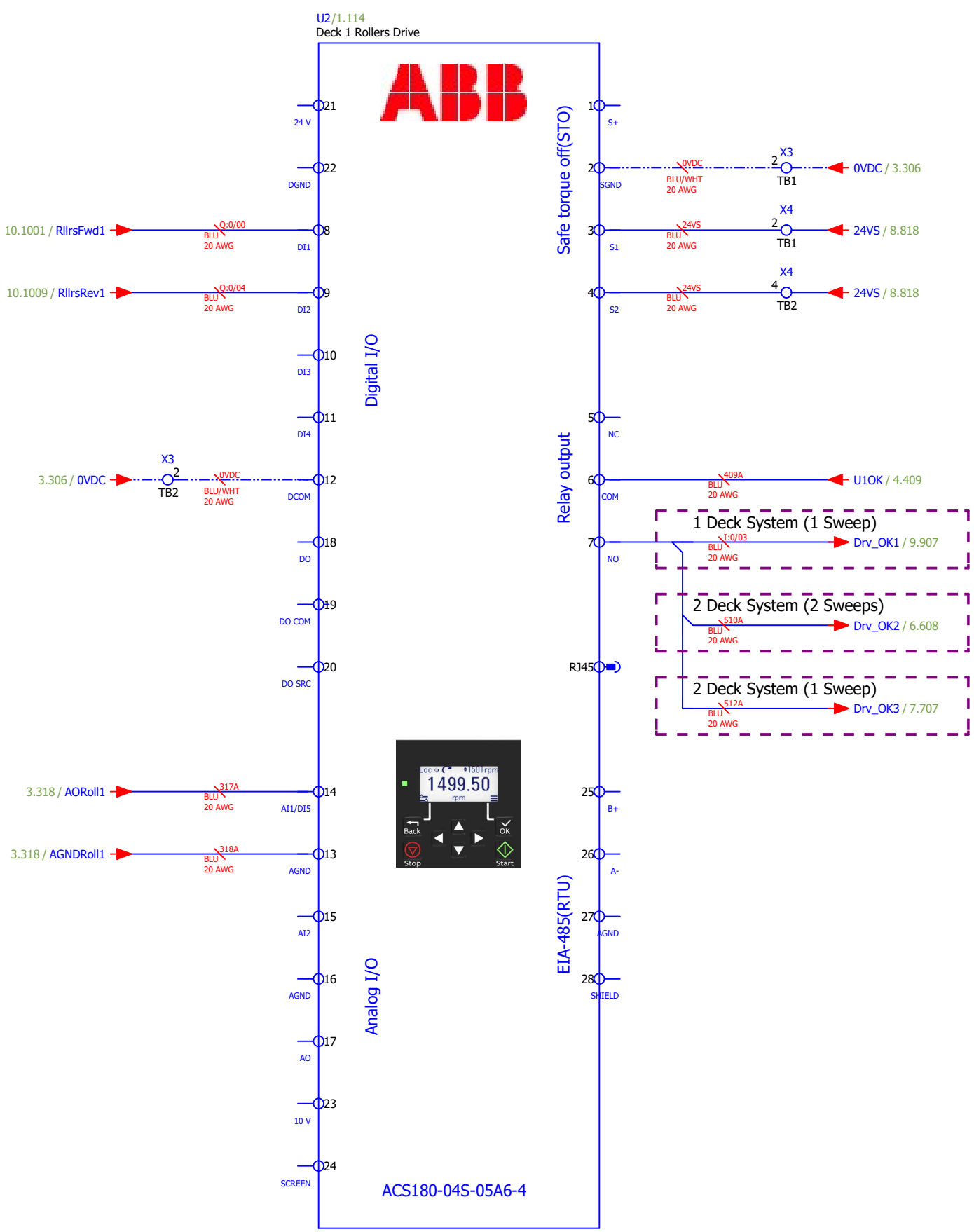
Revision:	A.1	Pg Desc: Power	
Created by:	SDC	Type: Schematic multi-line	
Prev. pg: 2	Page: +MAIN/3	Next pg: 4	Total Pgs: 64

+MAIN



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: VFD Controls 1	
Created by:	GDB	Type: Schematic multi-line	
Prev. pg: 3	Page: +MAIN/4	Next pg: 5	Total Pgs: 64

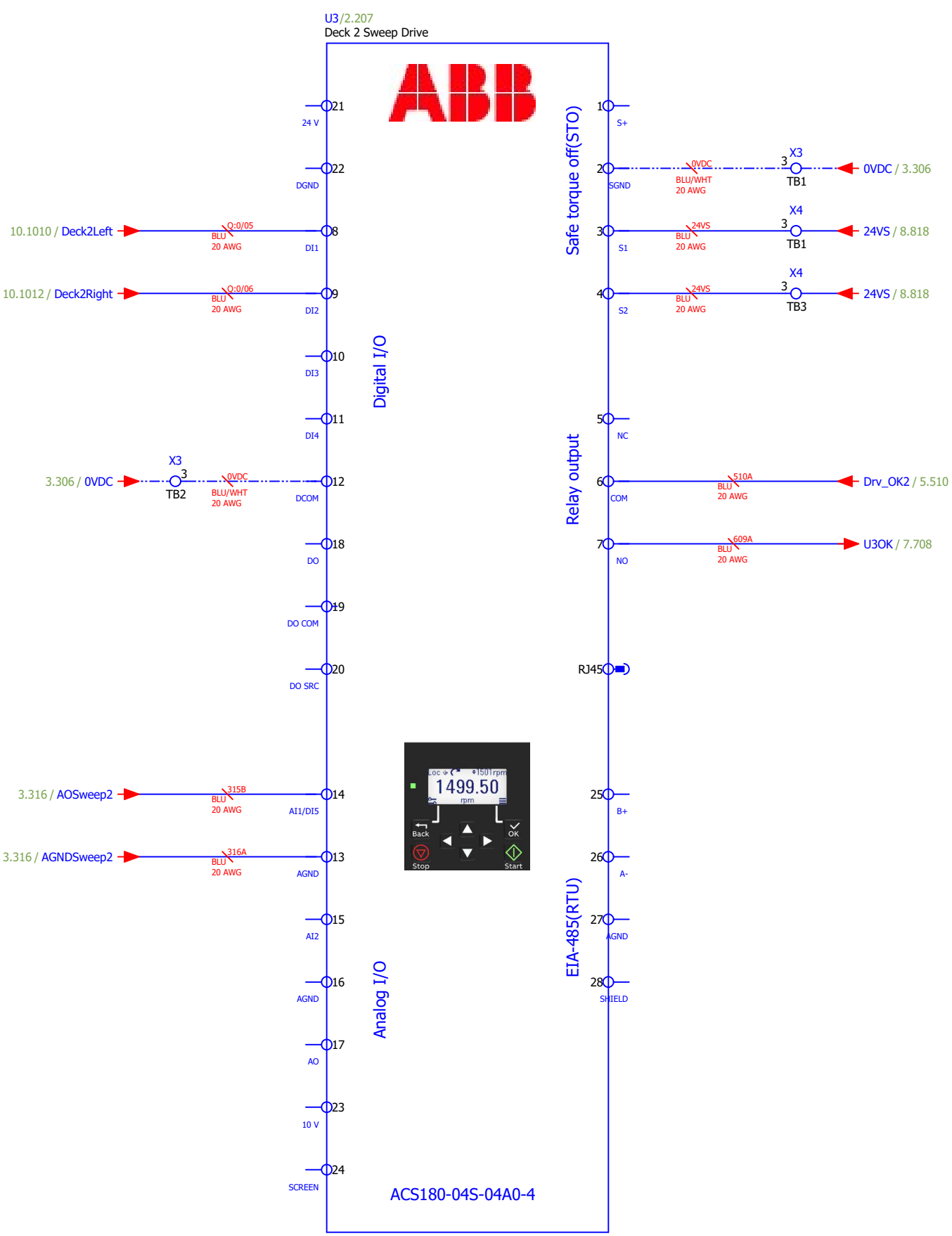
+MAIN



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: VFD Controls 2	
Created by:	GDB	Type: Schematic multi-line	
Prev. pg: 4	Page: +MAIN/5	Next pg: 6	Total Pgs: 64

+MAIN

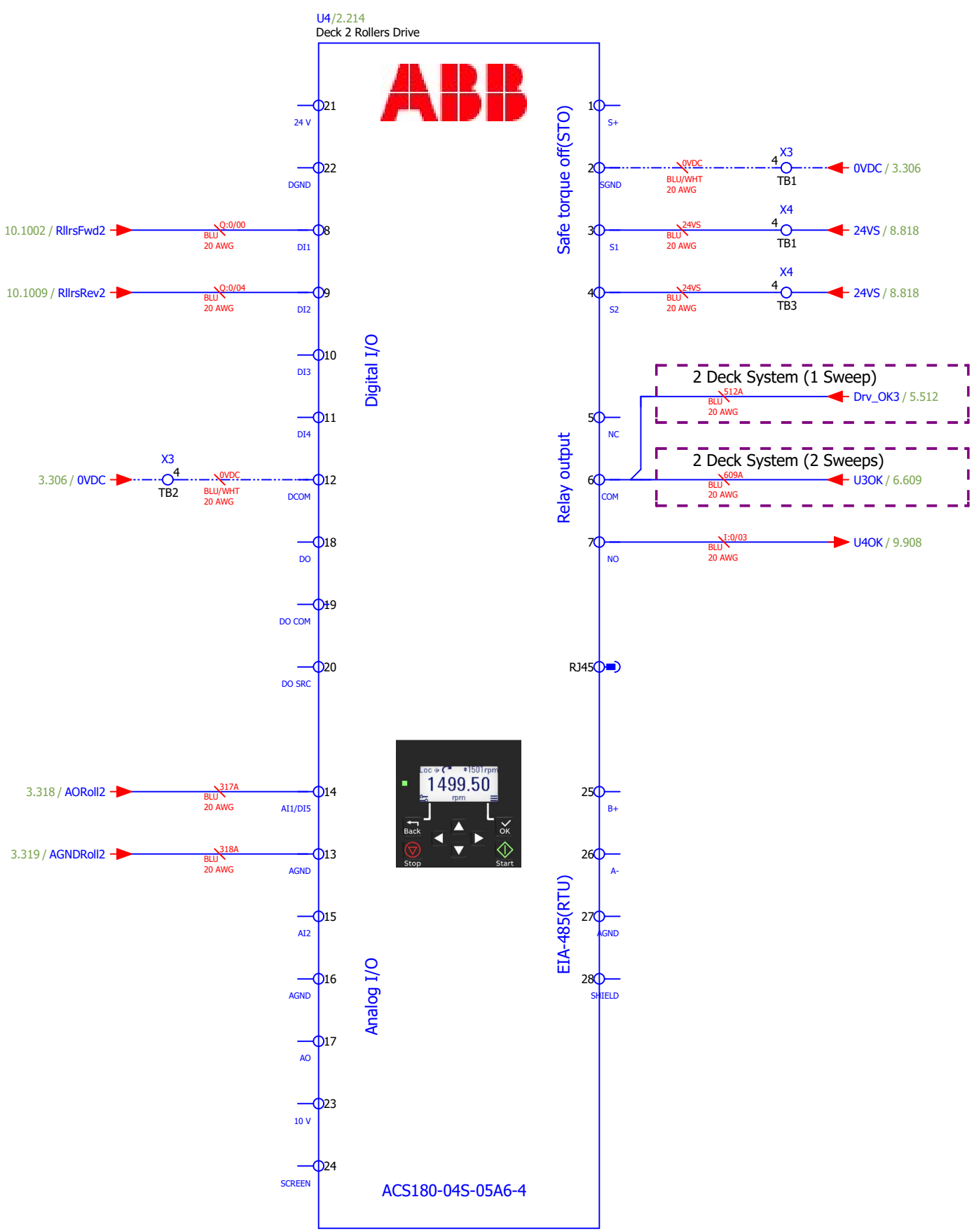
This page is only applicable for a 5-way or 2 deck 3-way configuration



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: VFD Controls 3	
Created by:	GDB	Type: Schematic multi-line	
Prev. pg: 5	Page: +MAIN/6	Next pg: 7	Total Pgs: 64

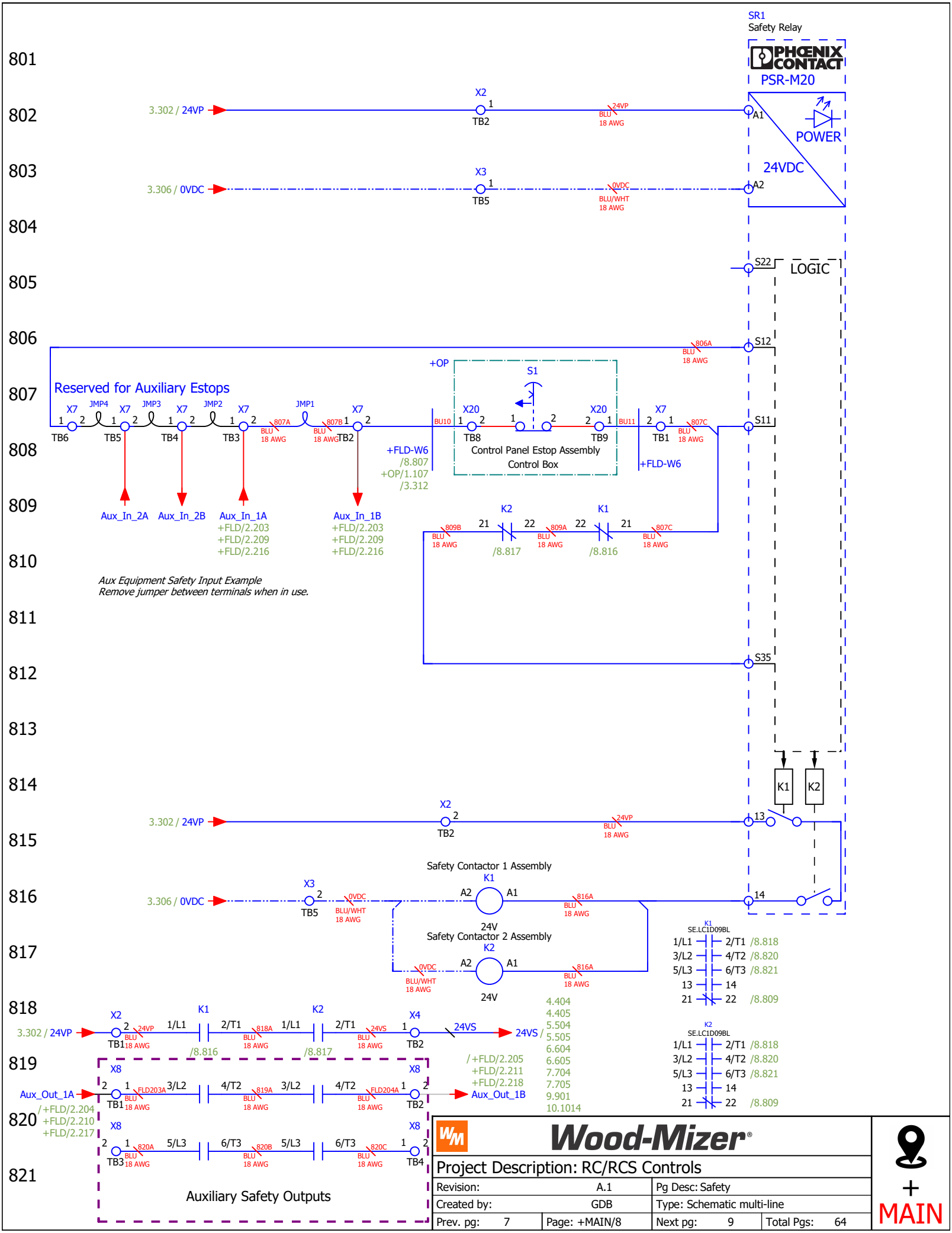
+MAIN

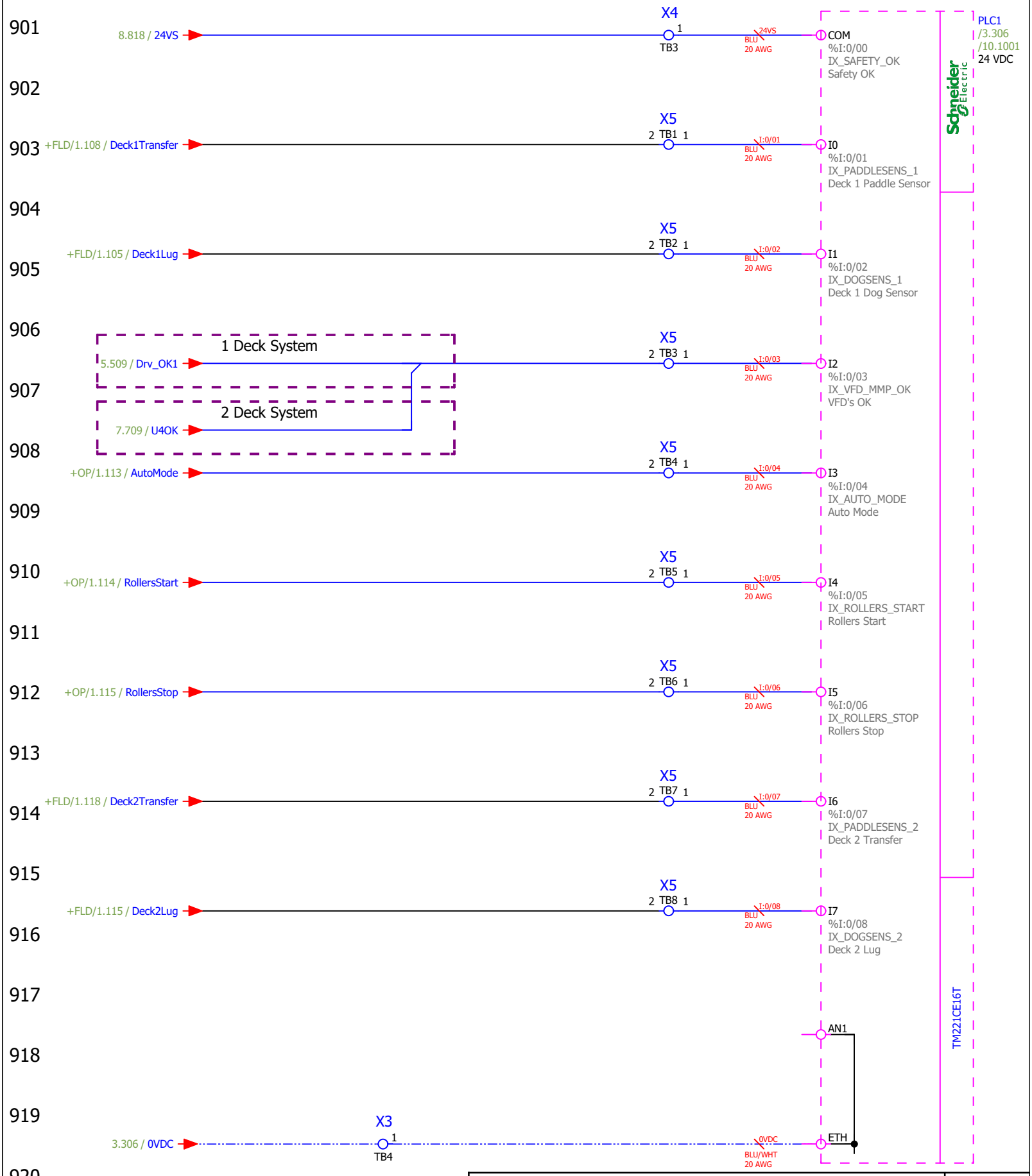
This Page is Only Applicable for a 2 Deck Configuration



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: VFD Controls 4	
Created by:	GDB	Type: Schematic multi-line	
Prev. pg: 6	Page: +MAIN/7	Next pg: 8	Total Pgs: 64

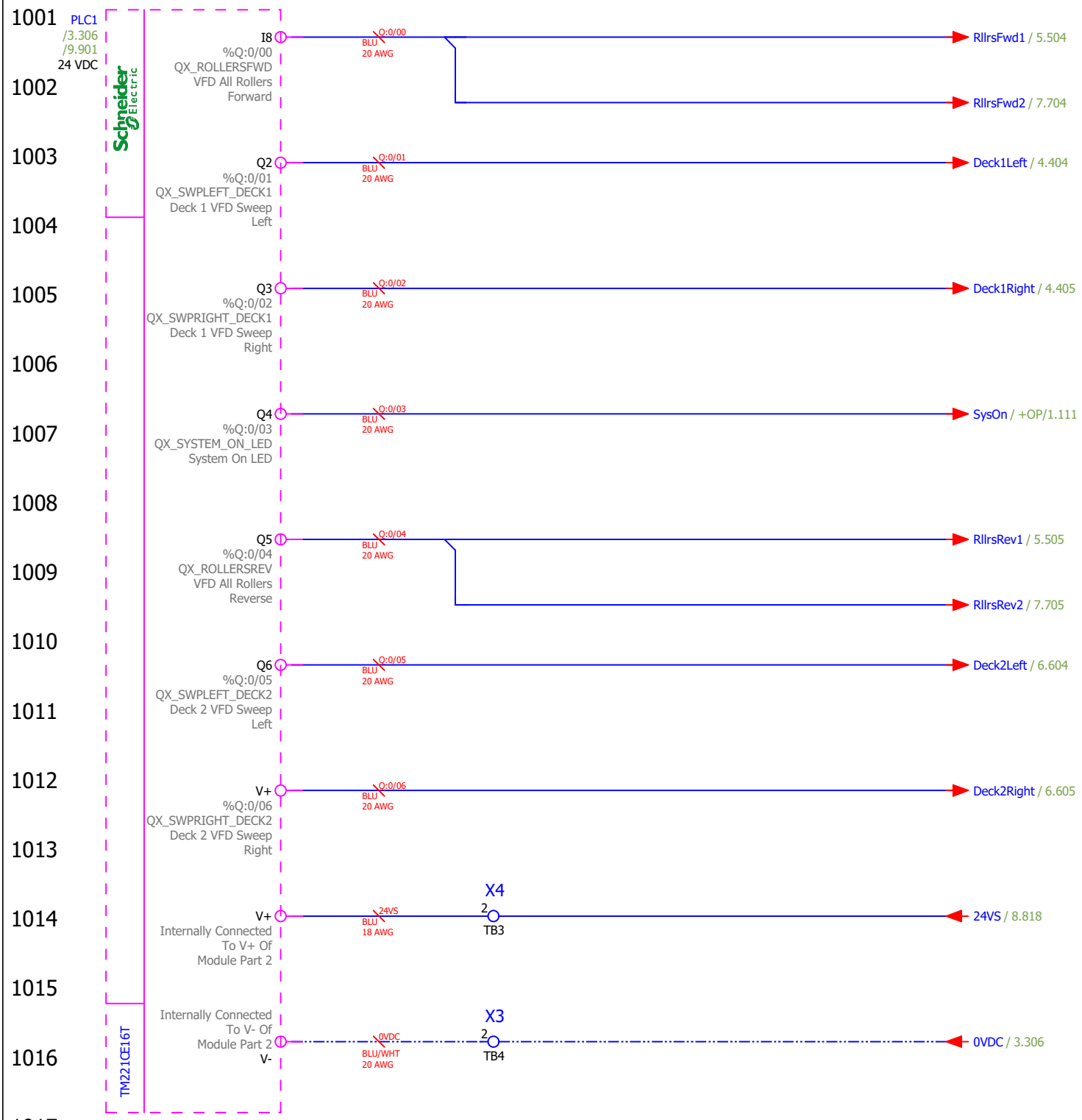
+MAIN


SR1
Safety Relay
PHOENIX CONTACT
PSR-M20
POWER
24VDC
A1
A2
LOGIC
S22
S12
S11
S35
3.302 / 24VP
3.306 / 0VDC
X2
X3
TB2
TB5
24VP
0VDC
BLU
BLU/WHT
18 AWG
806A
Reserved for Auxiliary Estops
X7
JMP4
JMP3
JMP2
JMP1
TB6
TB5
TB4
TB3
TB2
807A
807B
+OP
S1
X20
TB8
TB9
BU10
BU11
TB1
807C
+FLD-W6
/8.807
+OP/1.107
/3.312
Control Panel Estop Assembly
Control Box
Aux_In_2A
Aux_In_2B
Aux_In_1A
Aux_In_1B
+FLD/2.203
+FLD/2.209
+FLD/2.216
K2
K1
809B
809A
/8.817
/8.816
Aux Equipment Safety Input Example
Remove jumper between terminals when in use.
13
14
Safety Contactor 1 Assembly
Safety Contactor 2 Assembly
816A
24V
SE.LC1D09BL
1/L1
2/T1
/8.818
3/L2
4/T2
/8.820
5/L3
6/T3
/8.821
13
14
21
22
/8.809
X4
24VS
1/L1
2/T1
818A
/8.816
/8.817
4.404
4.405
5.504
5.505
6.604
6.605
7.704
7.705
9.901
10.1014
/+FLD/2.205
+FLD/2.211
+FLD/2.218
X8
Aux_Out_1A
Aux_Out_1B
/+FLD/2.204
+FLD/2.210
+FLD/2.217
FLD203A
FLD204A
3/L2
4/T2
819A
5/L3
6/T3
820A
820B
820C
Auxiliary Safety Outputs
Wood-Mizer
Project Description: RC/RCS Controls
Revision: A.1
Pg Desc: Safety
Created by: GDB
Type: Schematic multi-line
Prev. pg: 7
Page: +MAIN/8
Next pg: 9
Total Pgs: 64
+MAIN



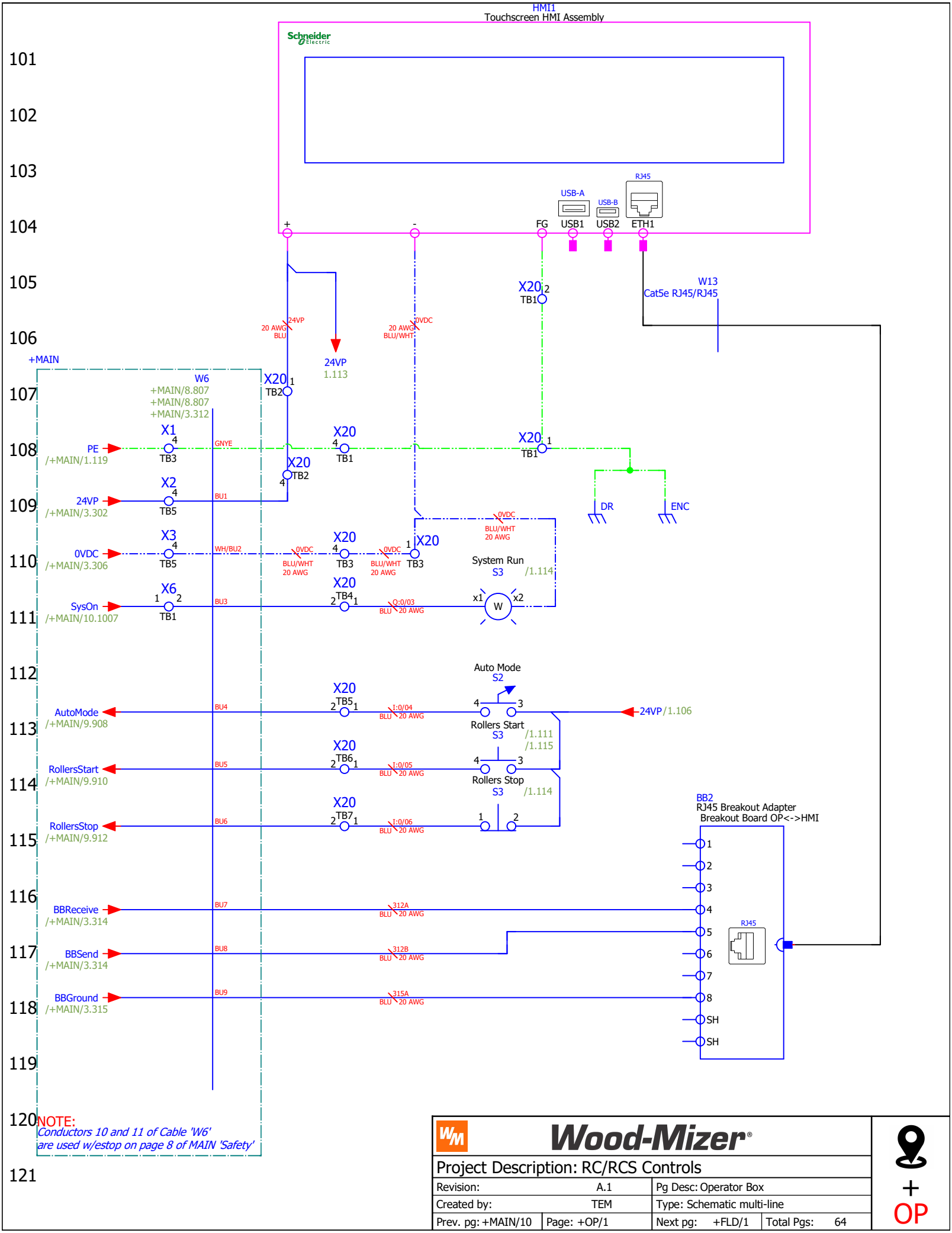
Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: PLC Inputs 1	
Created by:	GDB	Type: Schematic multi-line	
Prev. pg: 8	Page: +MAIN/9	Next pg: 10	Total Pgs: 64

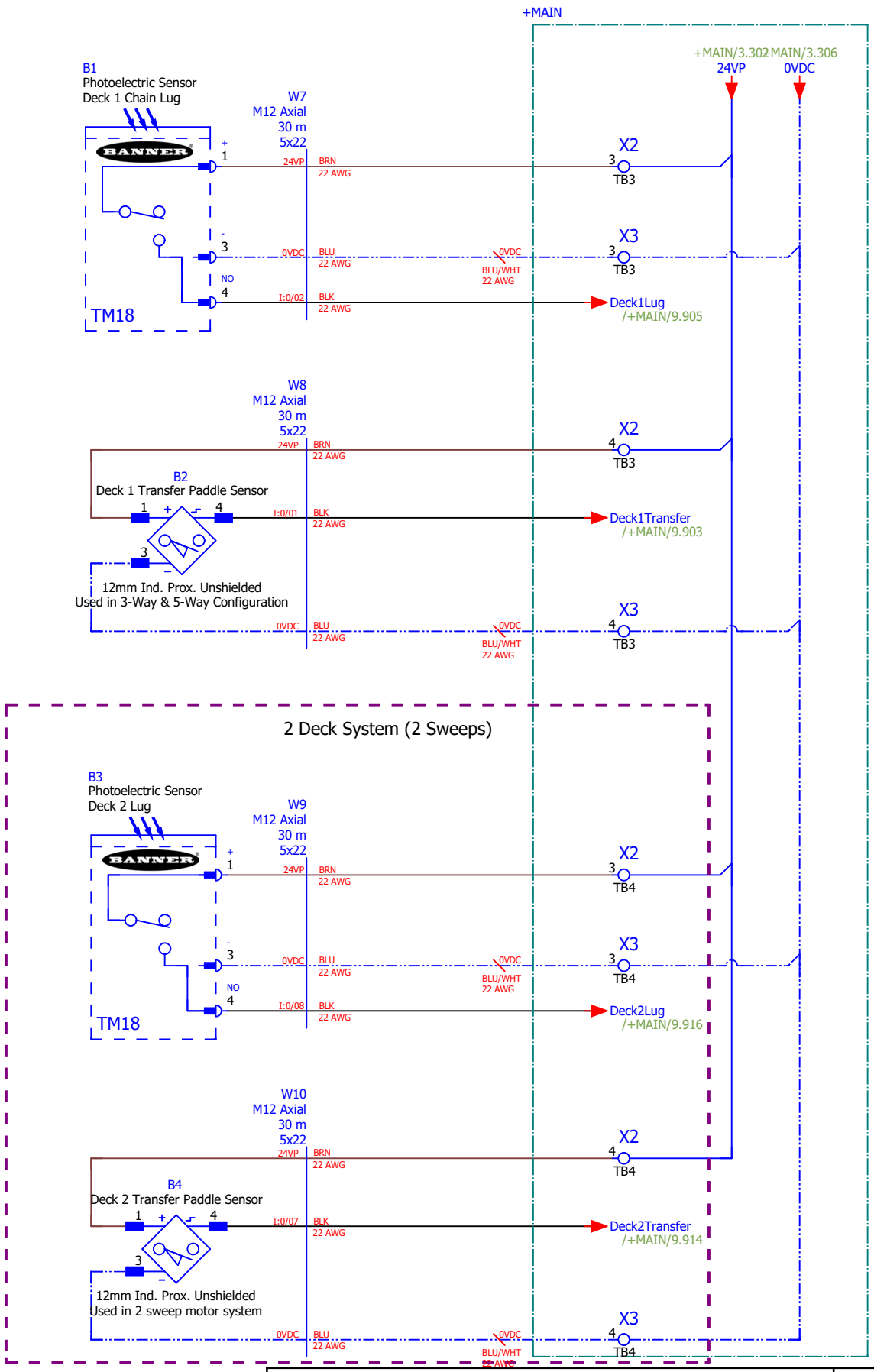
+MAIN



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: PLC Outputs 1	
Created by:	GDB	Type: Schematic multi-line	
Prev. pg: 9	Page: +MAIN/10	Next pg: +OP/1	Total Pgs: 64

+MAIN

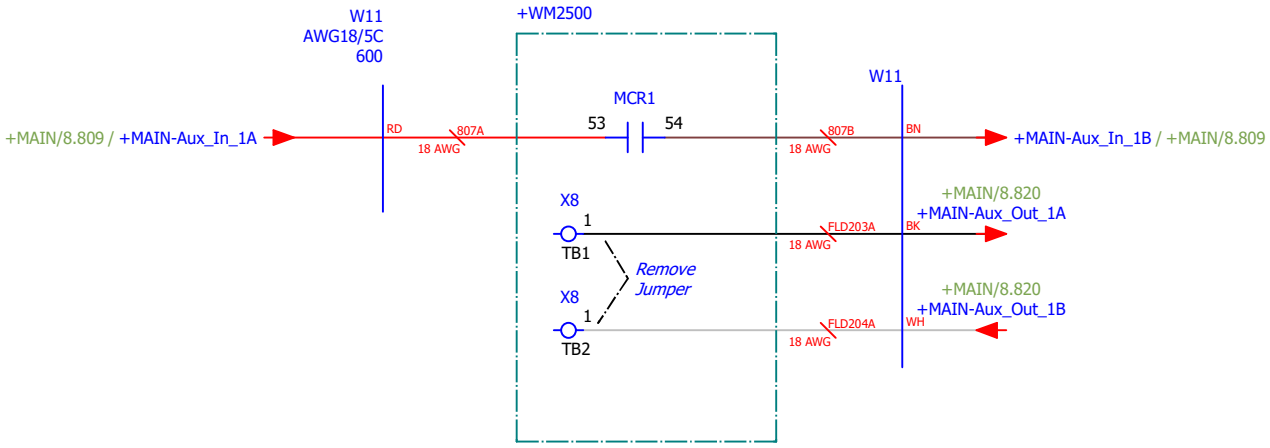

HMI1
Touchscreen HMI Assembly
Schneider Electric
RJ45
USB-A
USB-B
+
-
FG
USB1
USB2
ETH1
W13
Cat5e RJ45/RJ45
X20 2
TB1
20 AWG BLU
24VP
0VDC
20 AWG BLU/WHT
24VP
1.113
+MAIN
W6
+MAIN/8.807
+MAIN/8.807
+MAIN/3.312
X20 1
TB2
X1 4
TB3
PE
/+MAIN/1.119
GNYE
X20 4
TB1
X20 1
TB1
X20 4
TB2
X2 4
TB5
24VP
/+MAIN/3.302
BU1
DR
ENC
X3 4
TB5
0VDC
/+MAIN/3.306
WH/BU2
0VDC
BLU/WHT
20 AWG
X20 4
TB3
0VDC
BLU/WHT
20 AWG
X20 1
TB3
0VDC
BLU/WHT
20 AWG
System Run
S3
/1.114
X6 1 2
TB1
SysOn
/+MAIN/10.1007
BU3
X20 2
TB4 1
Q:0/03
BLU
20 AWG
x1
W
x2
Auto Mode
S2
X20 2
TB5 1
I:0/04
BLU
20 AWG
4
3
24VP/1.106
AutoMode
/+MAIN/9.908
BU4
Rollers Start
S3
/1.111
/1.115
X20 2
TB6 1
I:0/05
BLU
20 AWG
RollersStart
/+MAIN/9.910
BU5
Rollers Stop
S3
/1.114
X20 2
TB7 1
I:0/06
BLU
20 AWG
RollersStop
/+MAIN/9.912
BU6
BB2
RJ45 Breakout Adapter
Breakout Board OP<->HMI
1
2
3
4
5
6
7
8
SH
SH
RJ45
BBReceive
/+MAIN/3.314
BU7
312A
BLU
20 AWG
BBSend
/+MAIN/3.314
BU8
312B
BLU
20 AWG
BBGround
/+MAIN/3.315
BU9
315A
BLU
20 AWG
NOTE:
Conductors 10 and 11 of Cable 'W6'
are used w/estop on page 8 of MAIN 'Safety'
Wood-Mizer
Project Description: RC/RCS Controls
Revision: A.1
Pg Desc: Operator Box
Created by: TEM
Type: Schematic multi-line
Prev. pg: +MAIN/10
Page: +OP/1
Next pg: +FLD/1
Total Pgs: 64
+
OP



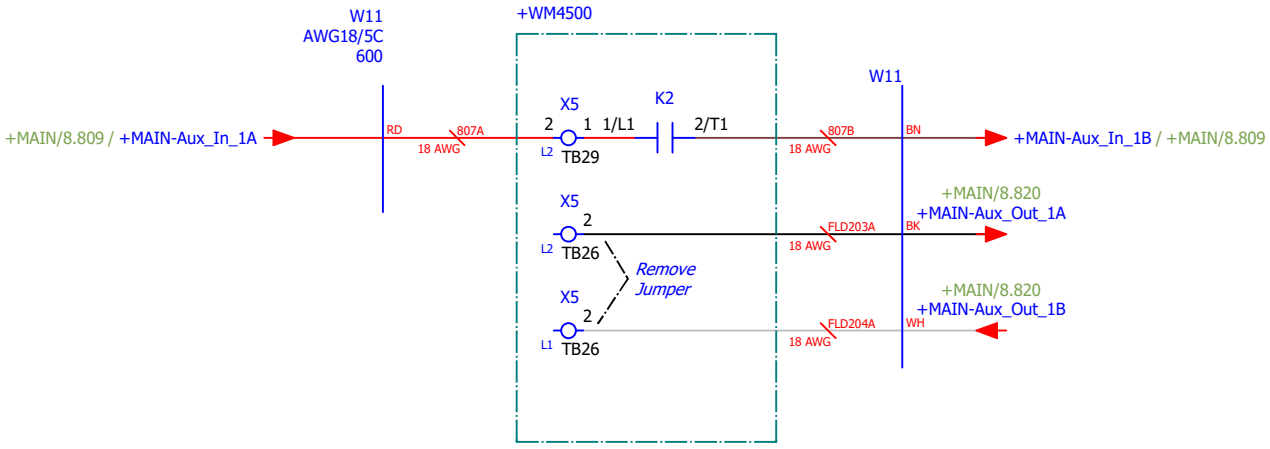
Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision:	A.1	Pg Desc: Sensors	
Created by:	SDC	Type: Schematic multi-line	
Prev. pg: +OP/1	Page: +FLD/1	Next pg: 2	Total Pgs: 64

+FLD

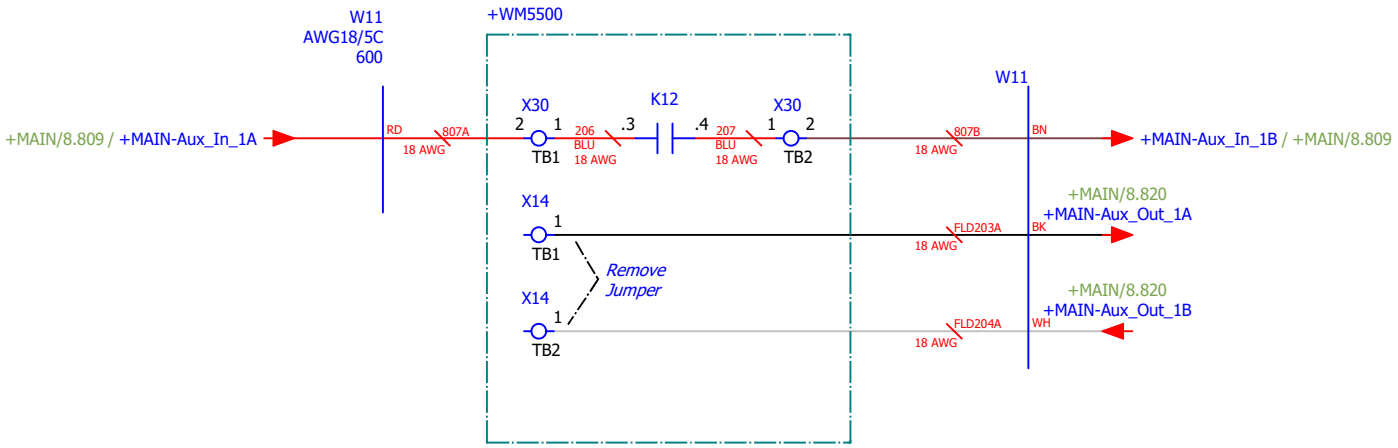
WM2500



WM4500



WM5500



Wood-Mizer®			
Project Description: RC/RCS Controls			
Revision: A.1		Pg Desc: WMX500 Safety	
Created by: GDB		Type: Schematic multi-line	
Prev. pg: 1	Page: +FLD/2	Next pg: +DOC/E1	Total Pgs: 64

+
FLD

Wood-Mizer Parts List

Device Tag	LOC	Function	Manufacturer	Wood-Mizer Part Number	Description	Qty.	X-Ref
BB1	**MAIN**	Breakout Board PLC<->OP	Winford Engineering	121604	Adapter, Din-Rail RJ45 Breakout Shielded Jack	1	+MAIN/3.312
CB1	**MAIN**	Electronic Circuit Breaker	Automation Direct	127477	Electronic Circuit Brkr, 12/24V 1-10A	1	+MAIN/3.302
F1	**MAIN**	Motor 1 Fuse Assembly	Schneider Electric	052380	Fuse Holder, 3P Class CC Screw Clamp	1	+MAIN/1.108
F1	**MAIN**	=	Littelfuse	051957	Fuse, 10A 600V Class CC Delay	3	+MAIN/1.108
F2	**MAIN**	Motor 2 Fuse Assembly	Schneider Electric	052380	Fuse Holder, 3P Class CC Screw Clamp	1	+MAIN/1.115
F2	**MAIN**	=	Littelfuse	052691	Fuse, 20A 600V Class CC Delay	3	+MAIN/1.115
F3	**MAIN**	Motor 3 Fuse Assembly	Schneider Electric	052380	Fuse Holder, 3P Class CC Screw Clamp	1	+MAIN/2.208
F3	**MAIN**	=	Littelfuse	051957	Fuse, 10A 600V Class CC Delay	3	+MAIN/2.208
F4	**MAIN**	Motor 4 Fuse Assembly	Schneider Electric	052380	Fuse Holder, 3P Class CC Screw Clamp	1	+MAIN/2.215
F4	**MAIN**	=	Littelfuse	052691	Fuse, 20A 600V Class CC Delay	3	+MAIN/2.215
F5	**MAIN**	Power Supply Fuse Assembly	Schneider Electric	052512	Fuse Holder, 2P Class CC Screw Clamp	1	+MAIN/3.303
F5	**MAIN**	=	Littelfuse	052446	Fuse, 2A 600V KLDR Class CC	2	+MAIN/3.303
G1	**MAIN**	24VDC Panel Power Supply	MeanWell	121307	Power Supply, 24VDC 60W 180-550V 1Ph	1	+MAIN/3.301
K1	**MAIN**	Safety Contactor 1 Assembly	Schneider Electric	024890	Contactor, 9A 3P 24VDC Coil	1	+MAIN/8.816
K1	**MAIN**	=	Schneider Electric	078518	Contactor, LC1D09-65A Safety Cover	1	+MAIN/8.816
K2	**MAIN**	Safety Contactor 2 Assembly	Schneider Electric	024890	Contactor, 9A 3P 24VDC Coil	1	+MAIN/8.817
K2	**MAIN**	=	Schneider Electric	078518	Contactor, LC1D09-65A Safety Cover	1	+MAIN/8.817
PLC1	**MAIN**	PLC Assembly	Schneider Electric	121599	Controller M221 16 IO transistor PNP Ethernet	3	+MAIN/3.306;+MAIN/9.901;+MA
PLC1	**MAIN**	=	Schneider Electric	121600	Cartridge M221 - 2 analog voltage outputs - I/O extension	1	+MAIN/3.306
PLC1	**MAIN**	=	Wood-Mizer	121612	PLC Assy, RCS Conveyors	1	+MAIN/3.306
Q0	**MAIN**	Main Power Disconnect Assembly	ABB	114066	Switch, Disc. 3p, 60A, UL98, w/o handle/shaft	1	+MAIN/1.105
Q0	**MAIN**	=	ABB	050907-1	Handle, Disconnect Red/Yel Pistol Grip	1	+MAIN/1.105
SR1	**MAIN**	Safety Relay	Phoenix Contact	121606	Safety relays	1	+MAIN/8.801
U1	**MAIN**	Deck 1 Sweep Drive Assembly	ABB	121597	AC Drive, 2HP 480V ACS180	2	+MAIN/1.107;+MAIN/4.401
U1	**MAIN**	=	Wood-Mizer	121597-1	AC Drive Assy, RCS Sweep 480V	1	+MAIN/4.401
U2	**MAIN**	Deck 1 Rollers Drive Assembly	ABB	121598	AC Drive, 3HP 480V ACS180	2	+MAIN/1.114;+MAIN/5.501
U2	**MAIN**	=	Wood-Mizer	121598-1	AC Drive Assy, RCS Roller 480V	1	+MAIN/5.501
U3	**MAIN**	Deck 2 Sweep Drive Assembly	ABB	121597	AC Drive, 2HP 480V ACS180	2	+MAIN/2.207;+MAIN/6.601
U3	**MAIN**	=	Wood-Mizer	121597-1	AC Drive Assy, RCS Sweep 480V	1	+MAIN/6.601
U4	**MAIN**	Deck 2 Rollers Drive Assembly	ABB	121598	AC Drive, 3HP 480V ACS180	2	+MAIN/2.214;+MAIN/7.701
U4	**MAIN**	=	Wood-Mizer	121598-1	AC Drive Assy, RCS Roller 480V	1	+MAIN/7.701

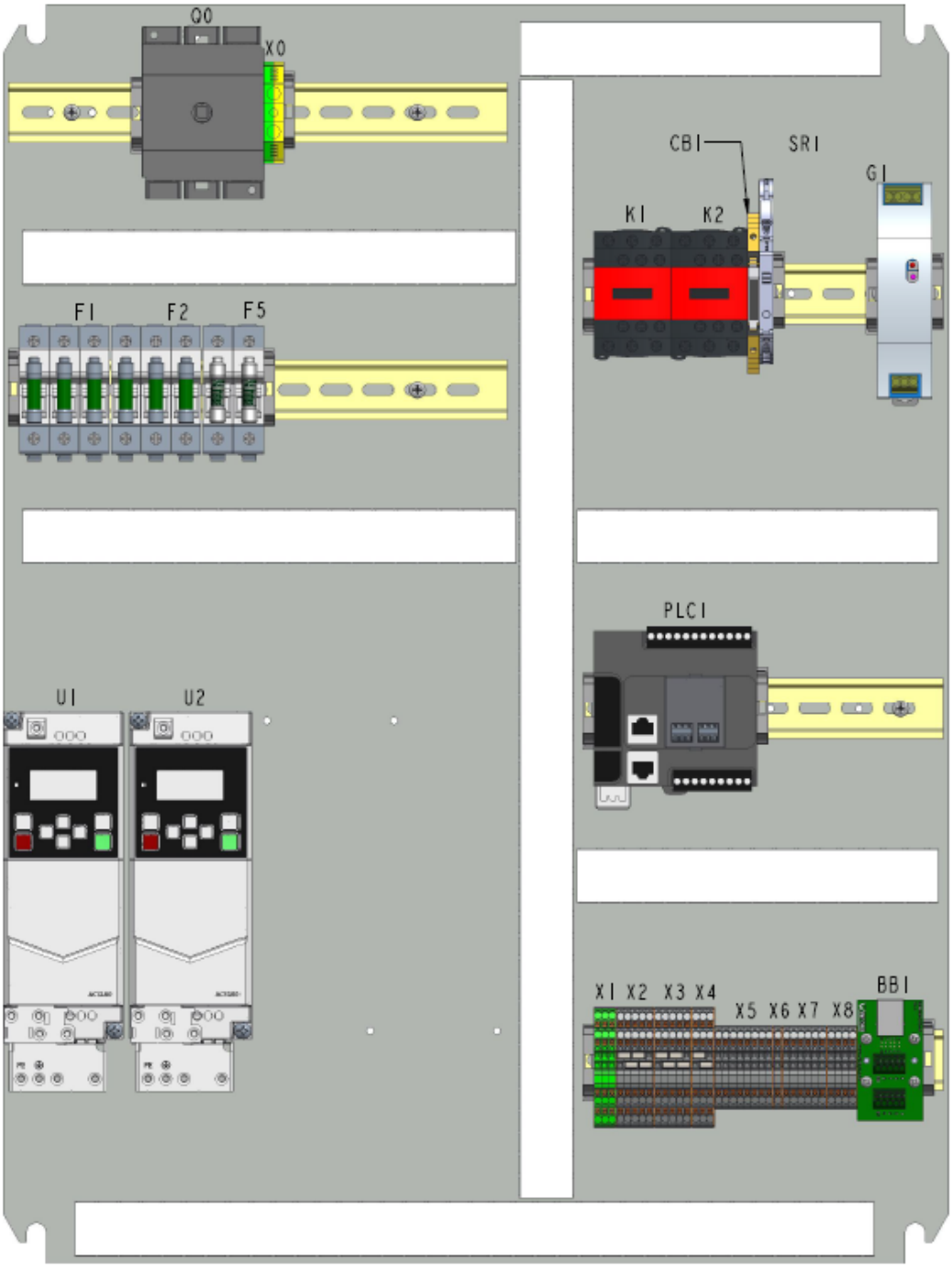
Wood-Mizer Parts List

Device Tag	LOC	Function	Manufacturer	Wood-Mizer Part Number	Description	Qty.	X-Ref
BB2	**OP**	Breakout Board OP<->HMI	Winford Engineering	121604	Adapter, Din-Rail RJ45 Breakout Shielded Jack	1	+OP/1.115
HMI1	**OP**	Touchscreen HMI Assembly	Schneider Electric	068596	HMI, 4.3" Color STO Modbus	1	+OP/1
HMI1	**OP**	=	Wood-Mizer	121616	HMI Assy, RCS Conveyors	1	+OP/1
S1	**OP**	Control Panel Estop Assembly	Schneider Electric	068942	Pushbutton Head, 22mm E-Stop Push-Pull	1	+MAIN/8.808
S1	**OP**	=	Schneider Electric	068950	Collar, Mount 1NC ZB5	1	+MAIN/8.808
S2	**OP**	Auto/Manual Mode Assembly	Schneider Electric	121603	Selector Switch, 2 pos. mntnd 30mm	1	+OP/1.113
S2	**OP**	=	Schneider Electric	068952	Collar, Mount 1NO ZB5	1	+OP/1.113
S3	**OP**	Rollers Start/Stop Assembly	Schneider Electric	068909	Push-Button, Grn/Red Flush Illuminated	1	+OP/1.114
S3	**OP**	=	Schneider Electric	068920	Contact Block, NO ZB5	1	+OP/1.114
S3	**OP**	=	Schneider Electric	068912	Light Module, White ZB5	1	+OP/1.114
S3	**OP**	=	Schneider Electric	068950	Collar, Mount 1NC ZB5	1	+OP/1.114

Wood-Mizer Parts List

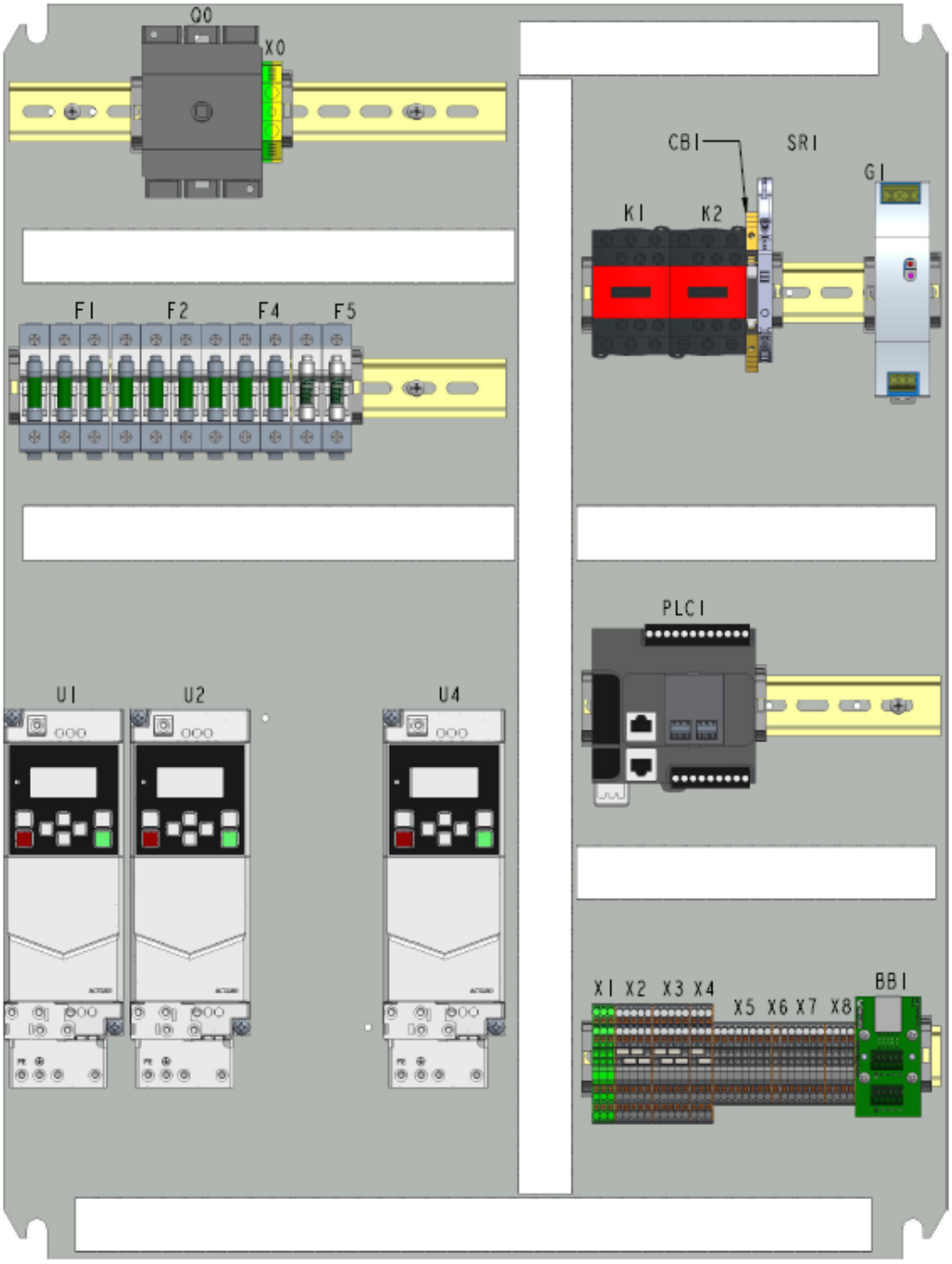
Device Tag	LOC	Function	Manufacturer	Wood-Mizer Part Number	Description	Qty.	X-Ref
B1	**FLD**	Photoelectric Sensor Deck 1 Chain Lug	Banner Engineering	121613	Sensor, 18mm; 5.5m range, reflective photo	1	+FLD/1.103
B2	**FLD**	Deck 1 Transfer Paddle Sensor	Automation Direct	051439	Sensor, Ind Prox M12 PNP NS Ex	1	+FLD/1.108
B3	**FLD**	Photoelectric Sensor Deck 2 Lug	Banner Engineering	121613	Sensor, 18mm; 5.5m range, reflective photo	1	+FLD/1.113
B4	**FLD**	Deck 2 Transfer Paddle Sensor	Automation Direct	051439	Sensor, Ind Prox M12 PNP NS Ex	1	+FLD/1.118
M1	**FLD**	Sweepdrive Motor	SEW Eurodrive	142990	Gearmotor, 36.85:1, 2HP	1	+MAIN/1.108
M2	**FLD**	Rollcase Motor	SEW Eurodrive	145760	Gearmotor, 26.93:1, 3HP	1	+MAIN/1.115
M3	**FLD**	Sweepdrive Motor	SEW Eurodrive	142990	Gearmotor, 36.85:1, 2HP	1	+MAIN/2.208
M4	**FLD**	Rollcase Motor	SEW Eurodrive	145760	Gearmotor, 26.93:1, 3HP	1	+MAIN/2.215

Insert Assembly, RCS 2 Drives
RCS-xxL-5EC



Insert Assembly, RCS 3 Drives

RCS-xxL-8EC



Insert Assembly, RCS 4 Drives
RCS-xxL-10EC

