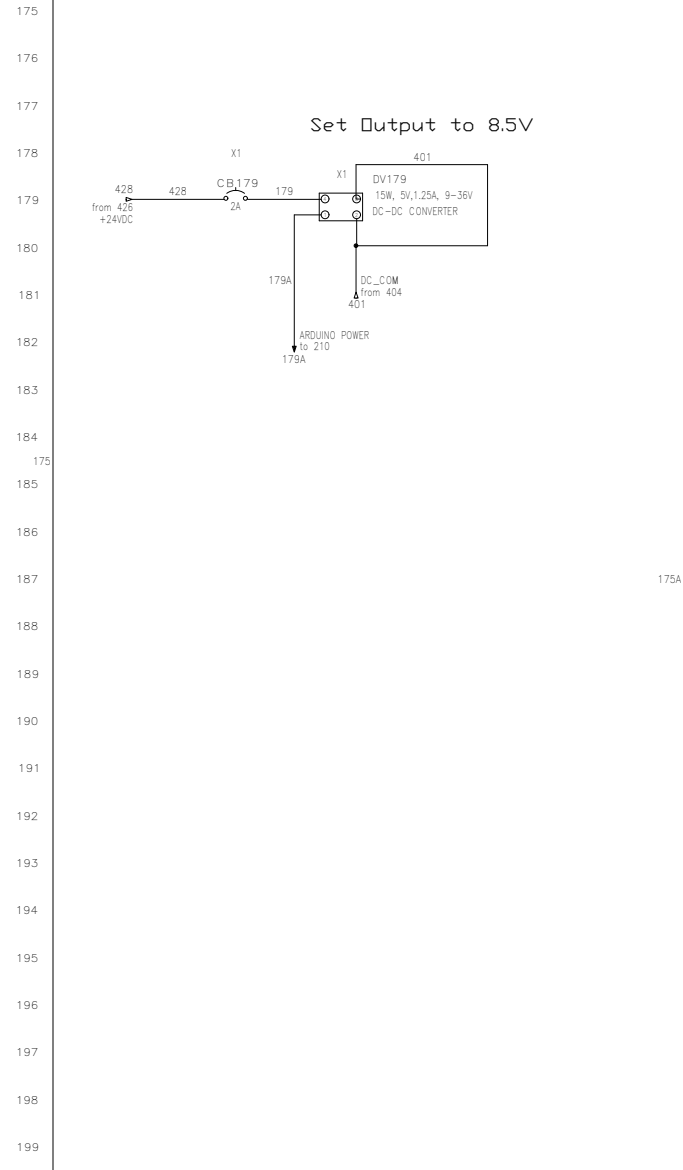


The diagram illustrates the 12VDC power system wiring. Key components and connections include:

- Vehicle Battery (150V):** Connected to the main supply via a disconnect switch (X1, 150A).
- Main Supply (12VDC):** Connected to the DC-DC converter (DV160, 480W, 24V/20A).
- DC-DC Converter:** Converts 12V to 24V. The output (24V) is connected to terminal blocks (42B).
- Water Valve (512):** Connected to the 24V output via a water valve (512).
- Foot Switch (343):** Connected to the 24V output via a foot switch (343).
- Power Source (405):** Connected to the DC_COM line via a power source (405).



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DWG TITLE			

Orchard Spayer Control
Version 1.1

ENGINEER <i>ERB</i>	CHECKED BY
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SCALE No Scale	DATE 06/21/2023
DWG NO	

SHEET NO
1 OF 9



NO.	DATE	REVISION	DWG NO.
DWG TITLE			DWG DATE

Orchard Sprayer Controls
Version 1.1

ENGINEER <i>ERB</i>	CHECKED BY
JOB NO	<i>ERB</i>
SCALE No Scale	DATE 06/21/2023
DWG NO	

0207

3 OF 9

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ENGINEER <i>ERB</i>	CHECKED BY
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SCALE No Scale	DATE 06/21/2023
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5 OF 9

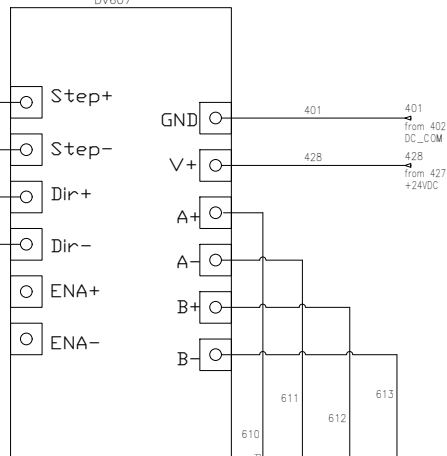
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Dip Switches
8 - On
7 - On
6 - On
5 - Off
4 - Off
3 - Off
2 - On
1 - On
SV I/O - On (Top of Drive)

X1
PITCH AXIS
STEPPER DRIVER

DV607



Identify Both Ends of Motor Cable with RED Shrink Wrap

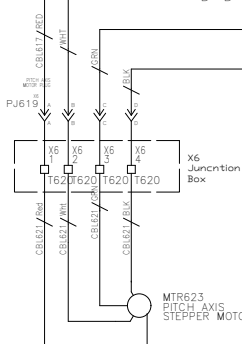
PITCH AXIS MOTOR PLUG X1 PL616

A A

B B

C C

D D



MTR623
PITCH AXIS
STEPPER MOTOR

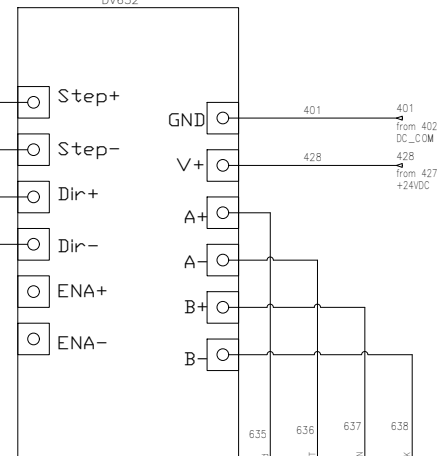
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Dip Switches
8 - On
7 - On
6 - On
5 - Off
4 - Off
3 - Off
2 - On
1 - On
SV I/O - On (Top of Drive)

X1
YAW AXIS
STEPPER DRIVER

DV632



Identify Both Ends of Motor Cable with BLUE Shrink Wrap

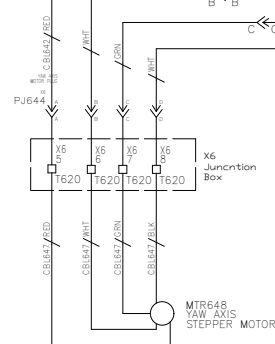
YAW AXIS MOTOR PLUG X1 PL641

A A

B B

C C

D D

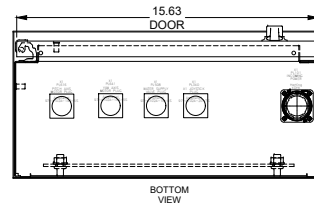
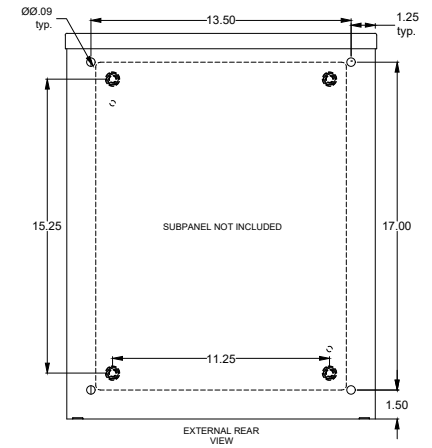
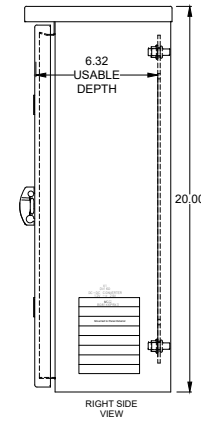
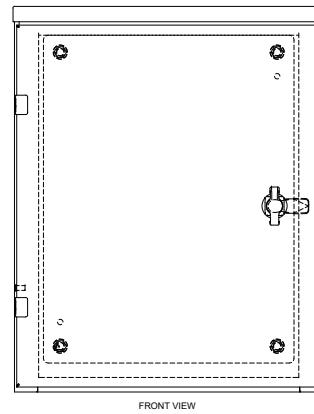
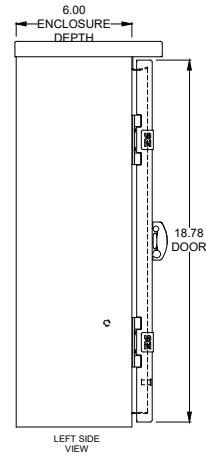
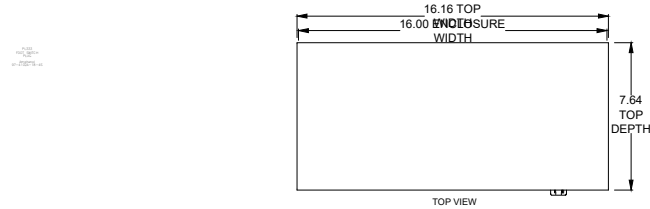


MTR648
YAW AXIS
STEPPER MOTOR

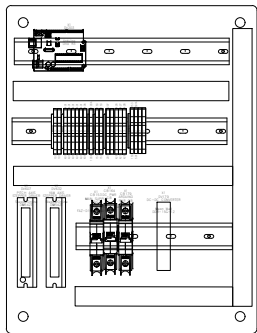
625A

X1 Standard Enclosure Option

SAGINAW CONTROL & ENGINEERING
SCE-20R1606LP



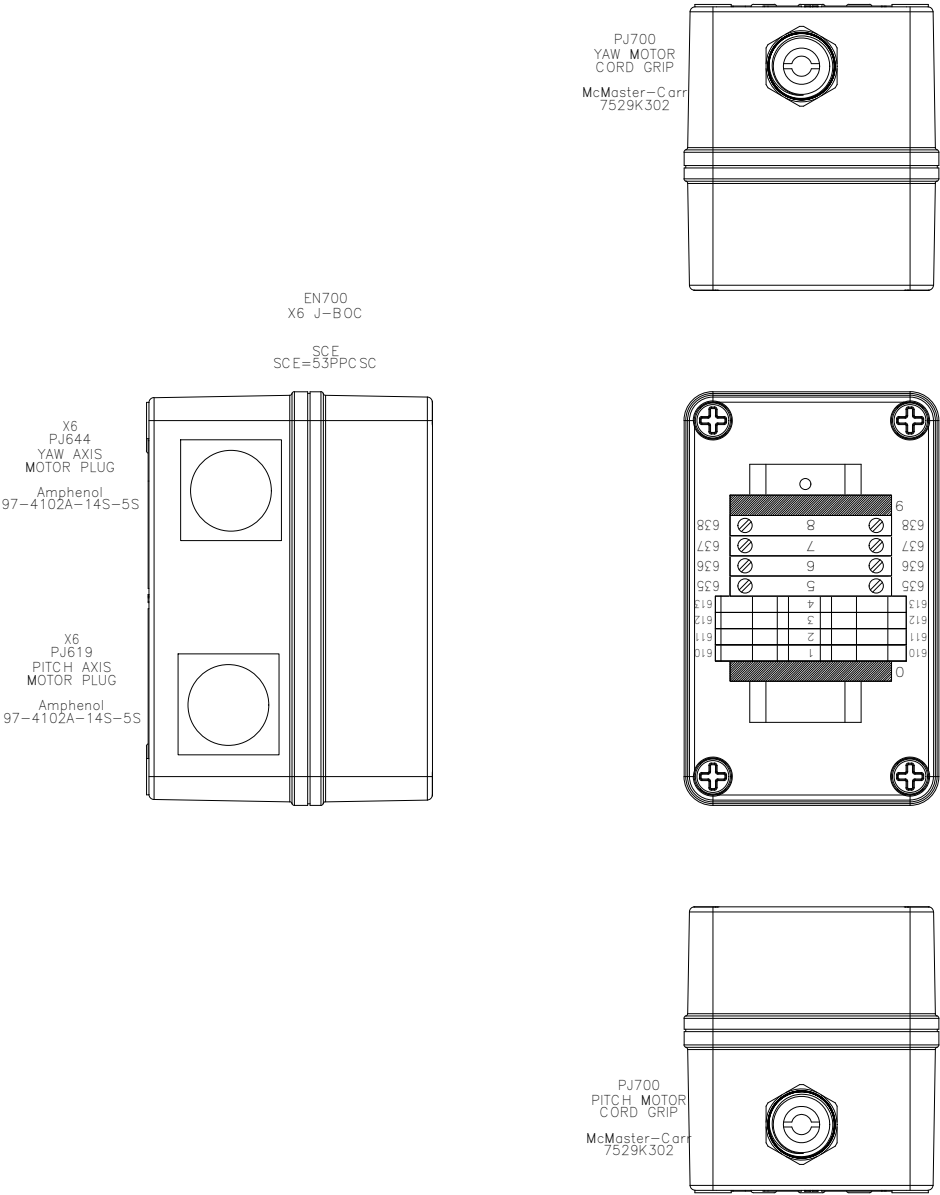
12VDC Input Power Option



SAGINAW CONTROL & ENGINEERING
SCE-20P16

DATA SUBJECT TO CHANGE WITHOUT NOTICE

X6 J-Box



SAGINAW CONTROL & ENGINEERING
SCE-53PPCSC

TAGS	QTY	CATALOG	MFG	DESCRIPTION
CBL338	1	08190-1	AUTOMATION DIRECT	
DV330	1	B07D9JC75F	WALFRONT / AMAZON	
CBL506	1	SUPPLIED WITH VALVE	BANJO	
CBL501	1	SJEDOW-16-2BK-1	AUTOMATION DIRECT	
PT3501	1	807VBL866V	FUIDEC	
CBL621	2	WITH MOTOR	ANAHEIM AUTOMATION	
CBL647				
CBL615	4	Q4177-1	AUTOMATION DIRECT	
CBL617				
CBL640				
CBL642				
MTR623	2	GBPH-0601-NP-010-AA231-250	ANAHEIM AUTOMATION	
MTR648				
MTR623	2	23Y65106S-CS4	ANAHEIM AUTOMATION	
MTR648				
T8200	2	1492-J3-DR	AB	SCREW CONNECTION TERMINAL BLOCK; 1492-J FEED-THROUGH 25MPS ORANGE COLOR, 30-12AWG, RATED VOLTAGE 600VAC/DC STANDARD FEED-THROUGH BLOCK; SCREW CONNECTION
T8505	4	1492-J3	AB	SCREW CONNECTION TERMINAL BLOCK; 1492-J FEED-THROUGH 25MPS GRAY COLOR, 30-12AWG, RATED VOLTAGE 600VAC/DC STANDARD FEED-THROUGH BLOCK; SCREW CONNECTION
T102	3	1492-J3-B	AB	SCREW CONNECTION TERMINAL BLOCK; 1492-J FEED-THROUGH 25MPS BLUE COLOR, 30-12AWG, RATED VOLTAGE 600VAC/DC STANDARD FEED-THROUGH BLOCK; SCREW CONNECTION
T8100A	7	1492-J3-W	AB	SCREW CONNECTION TERMINAL BLOCK; 1492-J FEED-THROUGH 25MPS WHITE COLOR, 30-12AWG, RATED VOLTAGE 600VAC/DC STANDARD FEED-THROUGH BLOCK; SCREW CONNECTION
T8101				
T8100	4	1492-J3-RE	AB	SCREW CONNECTION TERMINAL BLOCK; 1492-J FEED-THROUGH 25MPS RED COLOR, 30-12AWG, RATED VOLTAGE 600VAC/DC STANDARD FEED-THROUGH BLOCK; SCREW CONNECTION
T8150				
T102	7	1492-N06	AB	END BARRIER (CAI) HARDWARE END BARRIER END BARRIER FOR 1492-CA1 TERMINAL BLOCK
T8100A				
T8101				
T8200				
T8505				
PL340	1	97-4106-A-20-7P	AMPHENDL	
PL151	1	XDYK	HARTING	
DV160	1	B081K6PRK3	MGGI	
DV179	1	BDR-15G-12	MEAN WELL	
DV203	1	6821407379055	ELECTRONICS-SALON	
DV203	1	UND R3	AROUND	
CB164	1	FAZ-D10-1-NA-SP	EATON	
CB153	1	FAZ-D16-1-NA-L-SP	EATON	
DV607	2	DM542T	STEPPERONLINE	
DV432				
P-208	4	97-4106A-18-4P	AMPHENDL	
PL333				
P-208	4	97-3057-1010-1	AMPHENDL	
PL333				
P-208	4	97-4102A-18-4S	AMPHENDL	
PL333				
PL336	1	97-4106A-20-7P	AMPHENDL	
PL336	2	97-3057-1012-1	AMPHENDL	
PL340				
PL336	2	97-4102A-20-7S	AMPHENDL	
PL340				
T620	2	1492-J3-B	AB	
T620	4	1492-J3-BL	AB	SCREW CONNECTION TERMINAL BLOCK; 1492-J FEED-THROUGH 25MPS BLACK COLOR, 30-12AWG, RATED VOLTAGE 600VAC/DC STANDARD FEED-THROUGH BLOCK; SCREW CONNECTION
EN700	1	SCE+53PPCSC	SCE	
PJ700	2	7529K302	MECMASER-CARR	
PJ619				
PJ644				
PL616				
PL641				
PJ619	4	97-3057-1007-1	AMPHENDL	
PJ644				
PL616				
PL641				
PJ619	2	97-45-1622S-4(0920)	AMPHENDL	
PL616				
PJ619	2	97-45-1622P-4(0920)	AMPHENDL	
PL616				
PJ619	4	97-4102A-14S-5S	AMPHENDL	
PJ644				
PL616				
PL641				
	4	199-DR1	AB	ZINC/STEEL BIN RAIL EN 50022 (35mm x 75mm x 1in) SLOTTED

CBL	SH	MFG	CAT	REF	DESC1	DESC2	DESC3
CBL150	2	Automation Direct	SJEDOW-12-3BK-1	150			
CBL338	4	Automation Direct	08190-1	338	JOYSTICK	CABLE	
CBL501	6	Automation Direct	SJEDOW-16-2BK-1	501	WATER ON/OFF	SWITCH	
CBL506	6	Banjo	supplied with valve	506			
CBL615	7	Automation Direct	Q4177-1	615			
CBL617	7	Automation Direct	Q4177-1	617			
CBL621	7	Anaheim Automation	With Motor	621	STEPPER MOTOR	CABLE	
CBL640	7	Automation Direct	Q4177-1	640			
CBL642	7	Automation Direct	Q4177-1	642			
CBL647	7	Anaheim Automation	With Motor	647			

WIRENO	LOC1	CNP1	PIN1	LOC2	CNP2	PIN2	WLAY1
189A	X1	DV129	1	X1	DV179	1	16_BLU_MTW
150	X1	PL151	A	X1	CB153		12_Red_MTW
153	X2	PL336	F	X1	PL340	F	18_WHT_CBL_18AWG
153	X1	T8150	2	X1	PL340	F	12_Red_MTW
153	X1	PJ508	A	X1	T8505	1	12_Red_MTW
153	X1	T8150	1	X1	T8505	1	12_Red_MTW
153	X1	CB153	X1	T8150	1	12_Red_MTW	
153	X1	T8150	2	X1	DV160	1	12_Red_MTW
160	X1	DV160	4	X1	CB164		12_WHT_MTW
179	X1	CB179	X1	DV179	4	16_BLU_MTW	
207	X1	DV203	X1	T8200	1	DRG_16_DRG_MTW	
207	X1	T8200	1	X1	DV632		DRG_16_DRG_MTW
207	X1	T8200	2	X1	DV607		DRG_16_DRG_MTW
208	X1	DV203	X1	PL340	A	16_WHT_MTW	
208	X2	PL336	A	X1	PL340	A	18_Red_CBL
211	X1	DV203	X1	DV607		16_BLU_MTW	
212	X1	DV203	X1	DV607		16_BLU_MTW	
213	X1	DV203	X1	PL340	D	16_BLU_MTW	
214	X1	DV203	X1	PL340	C	16_BLU_MTW	
215	X1	DV203	X1	PL340	B	16_BLU_MTW	
216	X1	DV203	X1	PL340	C	16_BLU_MTW	
401	X1	T8101	4	X1	DV129	3	16_WHT_MTW
401	X1	DV129	2	X1	DV179	3	16_WHT_MTW
401	X1	DV179	3	X1	DV179	3	16_WHT_MTW
401	X1	T8101	1	X1	PW3113	-	16_WHT_MTW
401	X1	T8101	3	X1	DV203		16_WHT_MTW
401	X1	T8101	1	X1	PL151	C	16_WHT_MTW
401	X1	T8101	2	X1	DV607		16_WHT_MTW
401	X1	T8101	2	X1	DV632		16_WHT_MTW
401	X1	T8101	3	X1	DV632		16_WHT_MTW
401	X1	DV632	X1	DV632		16_WHT_MTW	
401	X1	T8101	4	X1	DV607		16_WHT_MTW
401	X1	DV607	X1	DV607		16_WHT_MTW	
401	X1	T8101	5	X1	DV160	2	16_WHT_MTW
401	X1	T8101	5	X1	DV160	3	16_WHT_MTW
406	X1	T8101	6	X1	PJ508	D	16_WHT_MTW
406	X1	T8101	6	X1	PJ508	C	16_WHT_MTW
426	X1	T102	1	X1	CB129		16_BLU_MTW
426	X1	CB129		X1	CB179		16_BLU_MTW
426	X1	T102	1	X1	CB114		16_BLU_MTW
427	X1	T102	2	X1	DV632		16_BLU_MTW
427	X1	T102	2	X1	DV607		16_BLU_MTW
428	X1	T102	3	X1	CB164		16_BLU_MTW
501	X2	PL336	G	X1	PL340	G	18_WHT_CBL_18AWG
501	X1	PL340	G	X1	T8505	2	16_Red_MTW
501A	X1	PJ508	B	X1	T8505	2	16_Red_MTW
610	X1	PL616	A	X6	PJ619	A	RED_14AWG
610	X6	PJ619	A	X6	T620	1	RED_14AWG
611	X1	DV607	X1	PL616	B	16_WHT_MTW	
611	X1	PL616	B	X6	PJ619	B	16_WHT_MTW
611	X6	PJ619	B	X6	T620	2	16_WHT_MTW
612	X1	DV607	X1	PL616	C	18_GRN_CBL_18AWG	
612	X1	PL616	C	X6	PJ619	C	18_GRN_CBL_18AWG
612	X6	PJ619	C	X6	T620	3	18_GRN_CBL_18AWG
613	X1	DV607	X1	PL616	D	18_BLK_CBL_18AWG	
613	X1	PL616	D	X6	PJ619	D	18_BLK_CBL_18AWG
613	X6	PJ619	D	X6	T620	4	18_BLK_CBL_18AWG
635	X1	DV632	X1	PL641	A	RED_14AWG	
635	X1	PL641	A	X6	PJ644	A	RED_14AWG
635	X6	PJ644	A	X6	T620	5	RED_14AWG
636	X1	DV632	X1	PL641	B	16_WHT_MTW	
636	X1	PL641	B	X6	PJ644	B	16_WHT_MTW
636	X6	PJ644	B	X6	T620	6	16_WHT_MTW
637	X1	DV632	X1	PL641	C	18_GRN_CBL_18AWG	
637	X1	PL641	C	X6	PJ644	C	18_GRN_CBL_18AWG
637	X6	PJ644	C	X6	T620	7	18_GRN_CBL_18AWG
638	X1	DV632	X1	PL641	D	18_BLK_CBL_18AWG	
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Richard Spayer Controls
Version 1.1

DESIGNED BY ERR	CHECKED BY ERR
DATE 06/21/2023	SCALE No Scale

SHEET NO
9 OF 9