MiTek®

SERVICE BULLETIN

Document ID:

SB263

Title:

Installing the Second Electrical Enclosure for Dual Zone Setup

Affected machinery: *RailRider® Pro*

Distribution: All customers with affected frames

Applies to: *RailRider® Pros* built in late 2022 to mid 2023 that did not receive a Dual Zone electrical enclosure

Effectivity: Frames RRP- 501,503,504,506,507,510,511,513-7,521,526,528,532,535,537,540, 542,543,546,547,549,552-8,561-4,566,570,572,573,575,576,578-86,590,651,652,655,658

CAUTION:
MiTek recommends printing this document in high resolution using color ink. Many of the graphics may be unclear and may create an unsafe condition if this recommendation is not followed.

MiTek Automation
Phone: 800-523-3380
Fax: 636-328-9218
www.mitek-us.com

Part # and Rev.	SB263 rev. B
Print Date	29 August 2024
Effectivity	See above
Revision Date	15 March 2024
Revised By	M. Farmer
Orig. Release Date	21 December 2023
Created By	M. Farmer
Approved By	R. Tucker

NOTICE

An RMA will be included with your kit. Please reuse the provided packaging for securing the removed PLC, and contact MiTek to arrange pickup.

MiTek Automation Support 1-800-523-3380

Purpose and Scope

Customers in need of dual zone setups were given a second single zone electrical enclosure, instead of a dual zone electrical enclosure. This kit instructs on how to connect the second single zone enclosure to the machine, and how to replace the main PLC.

Overview

Parts Included

The parts included in this kit are shown in Table 1. Please make sure all parts and supplies are present before starting the procedure.

Table 1: Parts in SB263KIT

Quantity	Description	Part #
1	PLC	92243
4	Concrete Anchors	305022
1	Pairing Programmable Transmitter Service Bulletin	SB255
1	Service bulletin document	SB263

If you have any questions, call MiTek Automation Support at 1-800-523-3380.

Supplies Needed

- Cable ties
- Small flathead screwdriver
- Drill for mounting electrical enclosure into concrete flooring

Procedure

Electrical Lockout/Tagout Procedure

The lockout/tagout procedure must be followed for the *RailRider Pro* Gantry Head, and for the electrical enclosures at both ends of the table.

	⚠ WARNING
	**ELECTROCUTION HAZARD.** **All electrical work must be performed by a qualified electrician.** **Verify that all power to the machine has been turned off and follow approved lockout/tagout safety procedures before performing any maintenance.** **If it is absolutely necessary to troubleshoot an energized machine, follow NFPA 70E for proper procedures and personal protective equipment.**

Locking Out Power to the Electrical Enclosures

1. Shut off the power to the table's power source, which is usually an electrical service entry panel on the facility wall. One example of a locked-out power source panel is shown in Figure 1.
2. Attach a lock and tag that meet OSHA requirements for lockout/tagout to the electrical service entry panel.

Figure 1: Lockout/Tagout on the Power Source Panel

Locking Out Power to the *RailRider Pro*

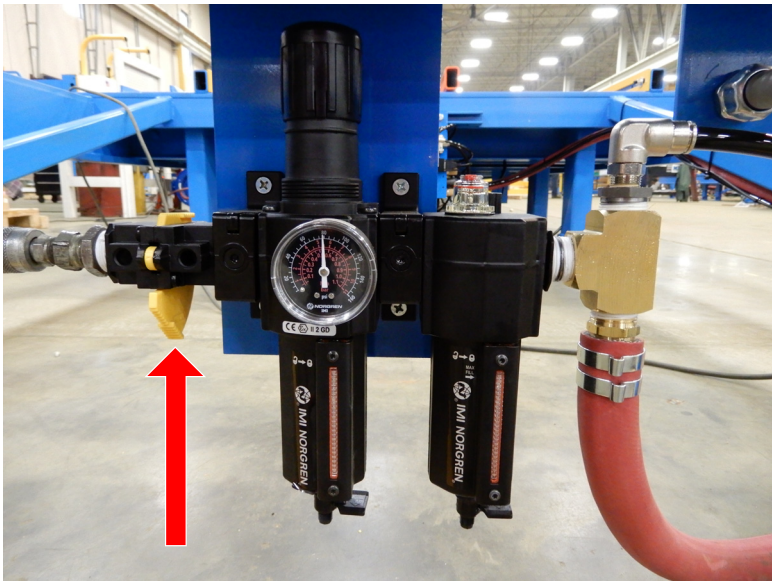
1. Engage an E-stop on the machine.
2. Turn the disconnect switch handle to the Off position.
3. Attach a lock and tag that meet OSHA requirements for lockout/tagout to the electrical service entry panel.

Pneumatic System Lockout/Tagout Procedure

	⚠ WARNING
	**HIGH PRESSURE HAZARD.** **Bleed pneumatic lines before performing any maintenance on the system.** **Working on pressurized lines may cause injury.**

1. After lockout tagout of the electrical power, turn off or close the system's air shut-off valve and attach a lock and tag. See Figure 1.

Figure 1: Pneumatic System Shut-Off Valve

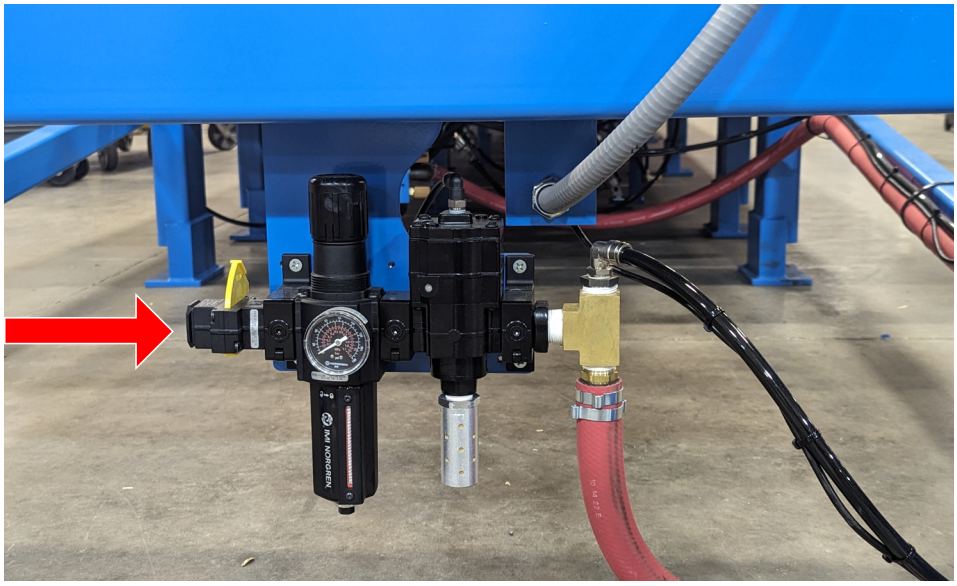


2. Drain the pneumatics system of the *RailRider Pro* table entirely.

Routing the Air for the Pneumatics

1. Ensure the building's air line is routed to the regulators on both ends of the *RailRider Pro* table.

Figure 2: Air Hook-up Location



Setting up the Air Line for Dual Zone

1. Turn both air switches, located near the middle of the *RailRider Pro* table, to Dual Zone.

Figure 3: Air Switch

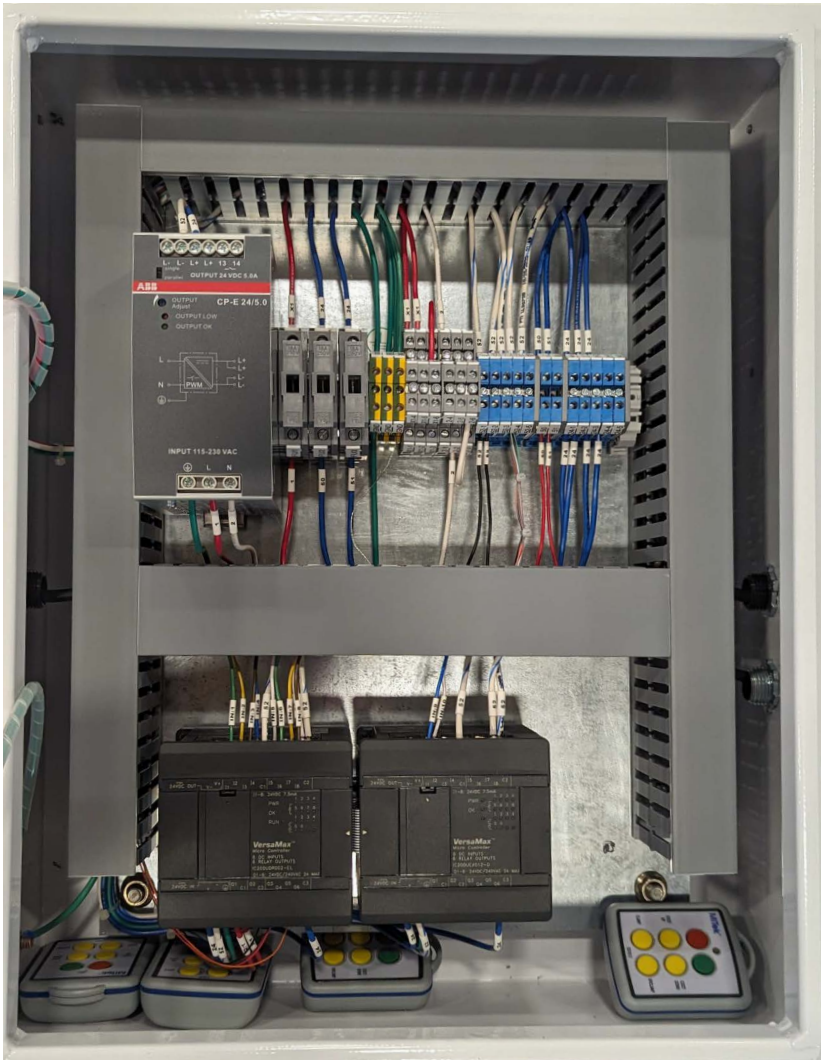
Note: If you have welded the clamping bars together, cut the welds to separate them.

Install the Provided PLC into the New Electrical Enclosure

	⚠ WARNING
	**MOVING PARTS CAN CRUSH AND CUT.** **Always verify that power to the machine has been turned off and follow approved lockout/tagout procedures.**

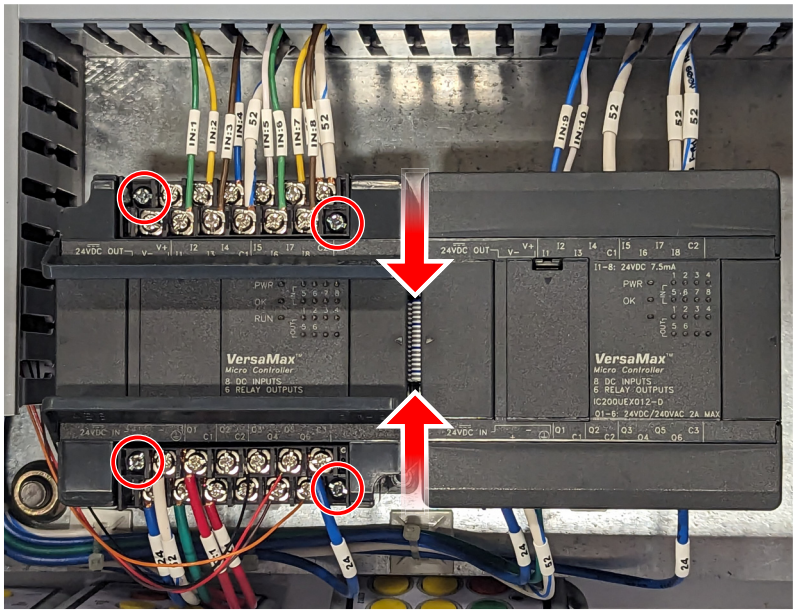
1. With plant power locked out, connect power to the new electrical enclosure from your plant power source. See pages 9 and 10 for the wiring diagrams of wireless remotes, and page 15 for wired remotes.
    - Note: Be mindful of new electrical enclosure location. Ensure gray flexible conduit will reach the *RailRider Pro* filter regulator assembly, and the power cable will reach the desired power source.
2. Open the door to the new electrical enclosure by turning both door handles 90º counterclockwise.

Figure 4: Inside the New Electrical Enclosure



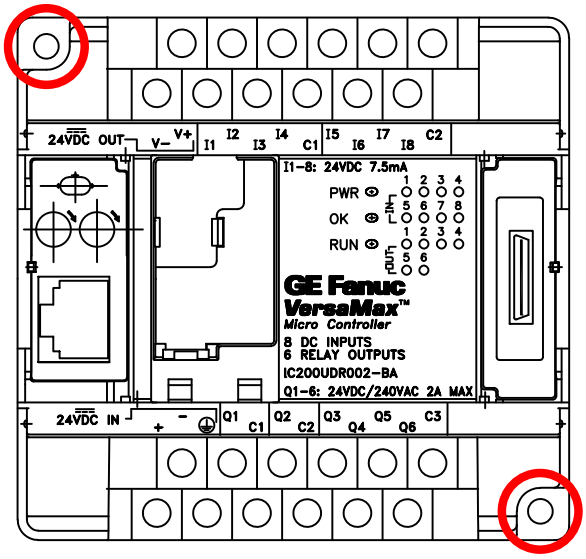
3. Remove wire harnesses attached to the left PLC by lifting the cover panels and removing the screws circled in Figure 5. Lift the wire harnesses up and away from the left PLC.
4. Then, lift the cover panel over the ribbon cable. Pinch the sides and pull to remove the ribbon cable, as illustrated in Figure 5.

Figure 5: Left PLC Wire Connections



5. Remove the left PLC by unscrewing 2 screws, circled in Figure 6.

Figure 6: PLC Mounting Screw Locations

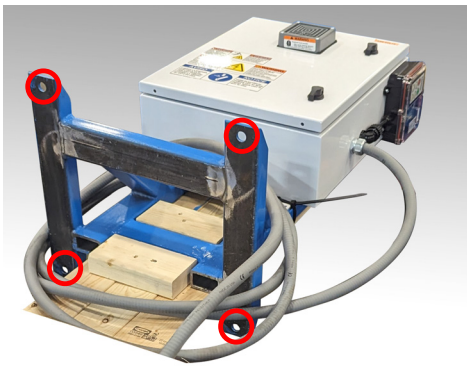


6. Install the provided PLC in place using the 2 screws from the previous step. Reconnect the wire harnesses and ribbon cable, ensuring no pins are bent.
7. Secure the removed PLC in the packaging used for the provided PLC. See the Notice on page 2 for return instructions.

Install the New Electrical Enclosure

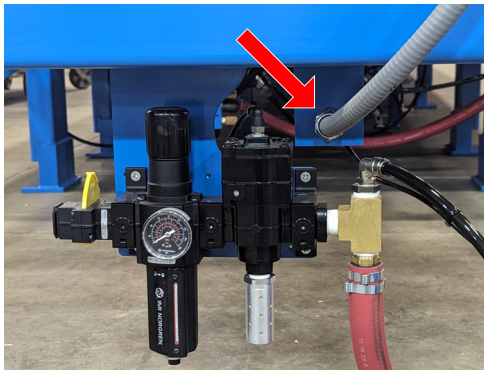
1. Mount the new electrical enclosure at the opposite end of the table as the first electrical enclosure, using the concrete anchors provided. Mounting holes are circled in Figure 7.

   Figure 7: Electrical Enclosure Mounting Holes

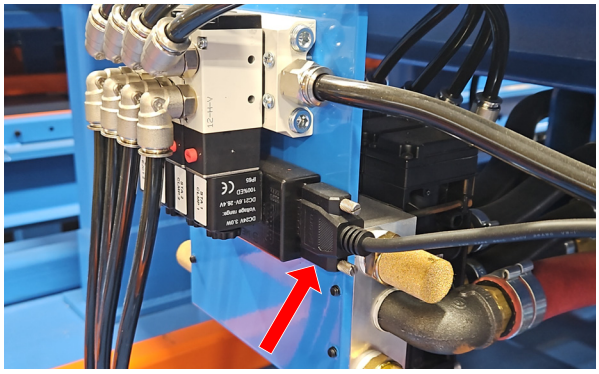
2. Route the gray flexible conduit to the table, feeding the inner wire through the frame near the pneumatic manifold, shown in Figure 8.

   Figure 8: Cable Connection Location

3. Route the inner wire along the table frame, following pneumatic tubing, to the valve bank. Secure with cable ties (not provided). Plug the wire in and use a flathead screwdriver to secure the connection, shown in Figure 9.

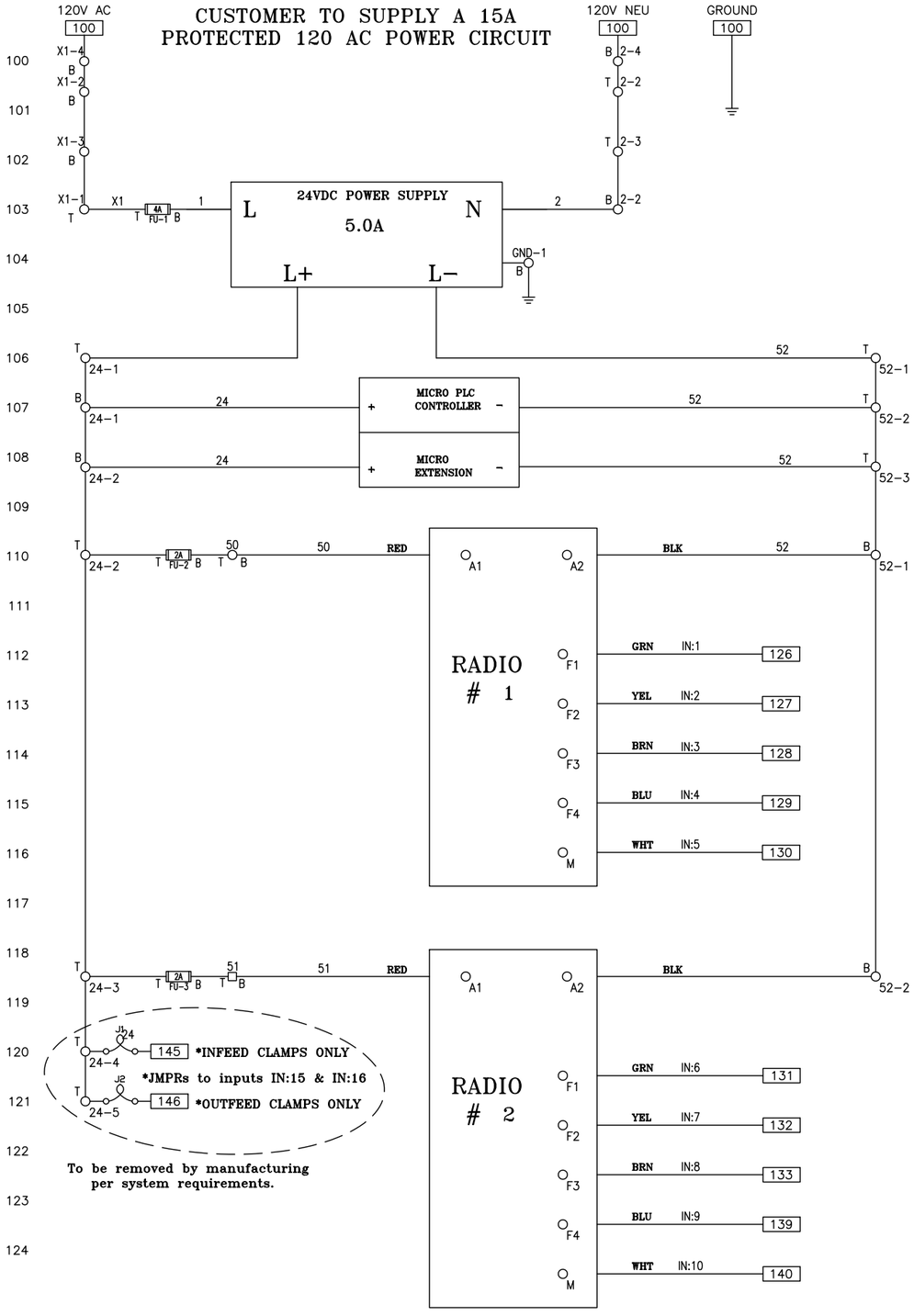
   Figure 9: Valve Bank Wire Connection

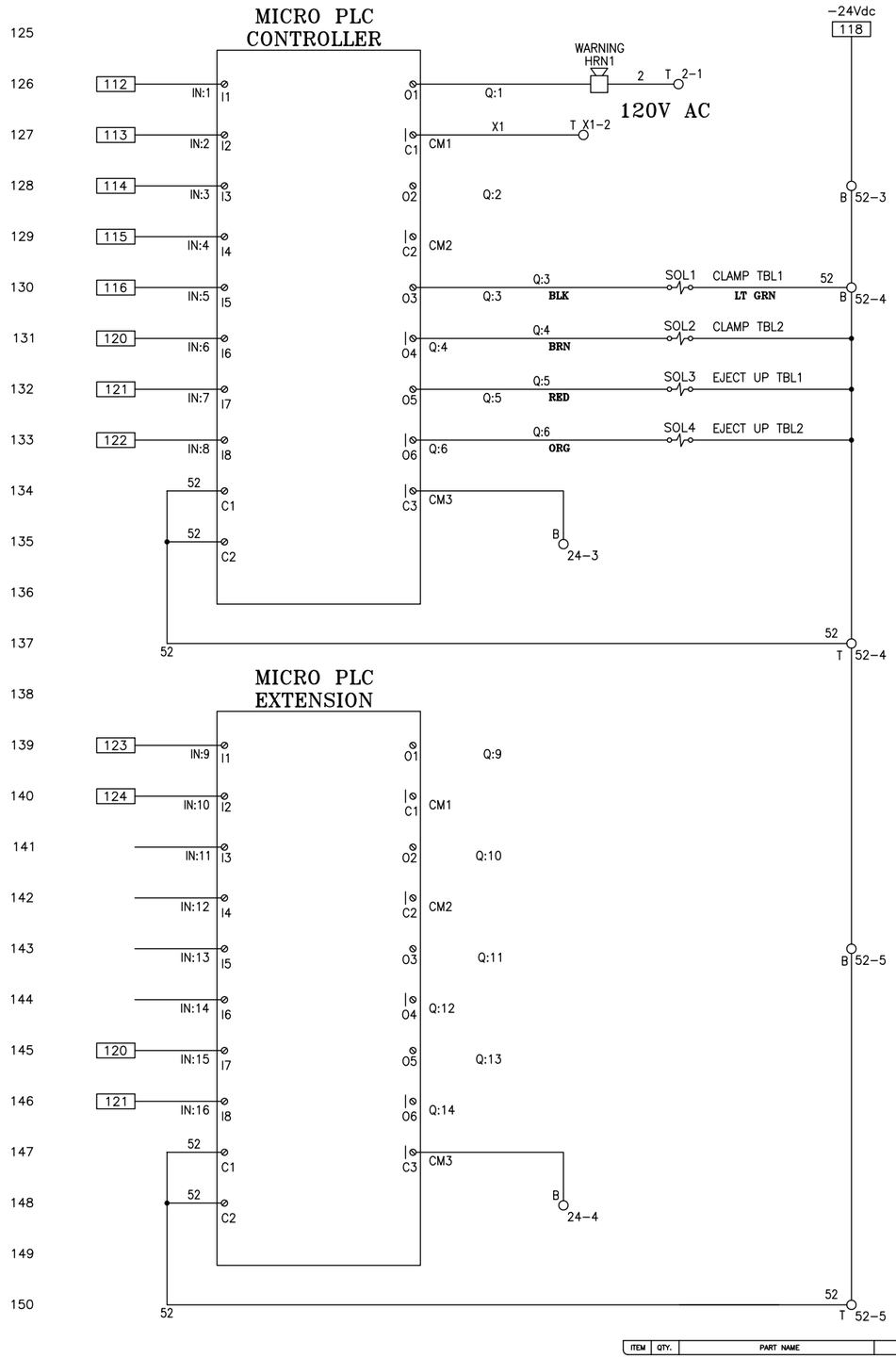
   

4. Remove lockout/tagout devices, allow pneumatic lines to fill, then test your *RailRider Pro* machine.

END OF SERVICE BULLETIN

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE
-	5/18/15	INITIAL RELEASE	VDC			
A	8/7/15	CORRECTED WIRE COLOR	VDC			
B	10/6/15	ADD JUMPERS FOR CLAMP ONLY SYSTEMS	VDC			
C	2021-06-18	UPDATED TERMINAL BLOCK CONNECTIONS	AK			
D	2022-08-10	ADDED X1 & 2 TERMINALS ADDED SECOND PAGE FOR 120VAC PLC/IO ALTERNATE	BWM			





RailRider Table RADIO Application	
Function # INPUT	Function DESCRIPTION
F1	EJECT UP
F2	EJECT DWN
F3	CLAMP
F4	UNCLAMP
F5	ANY (F# KEY)

*FOR USE WITH 24VDC POWERED
PLC & EXPANSION I/O*

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

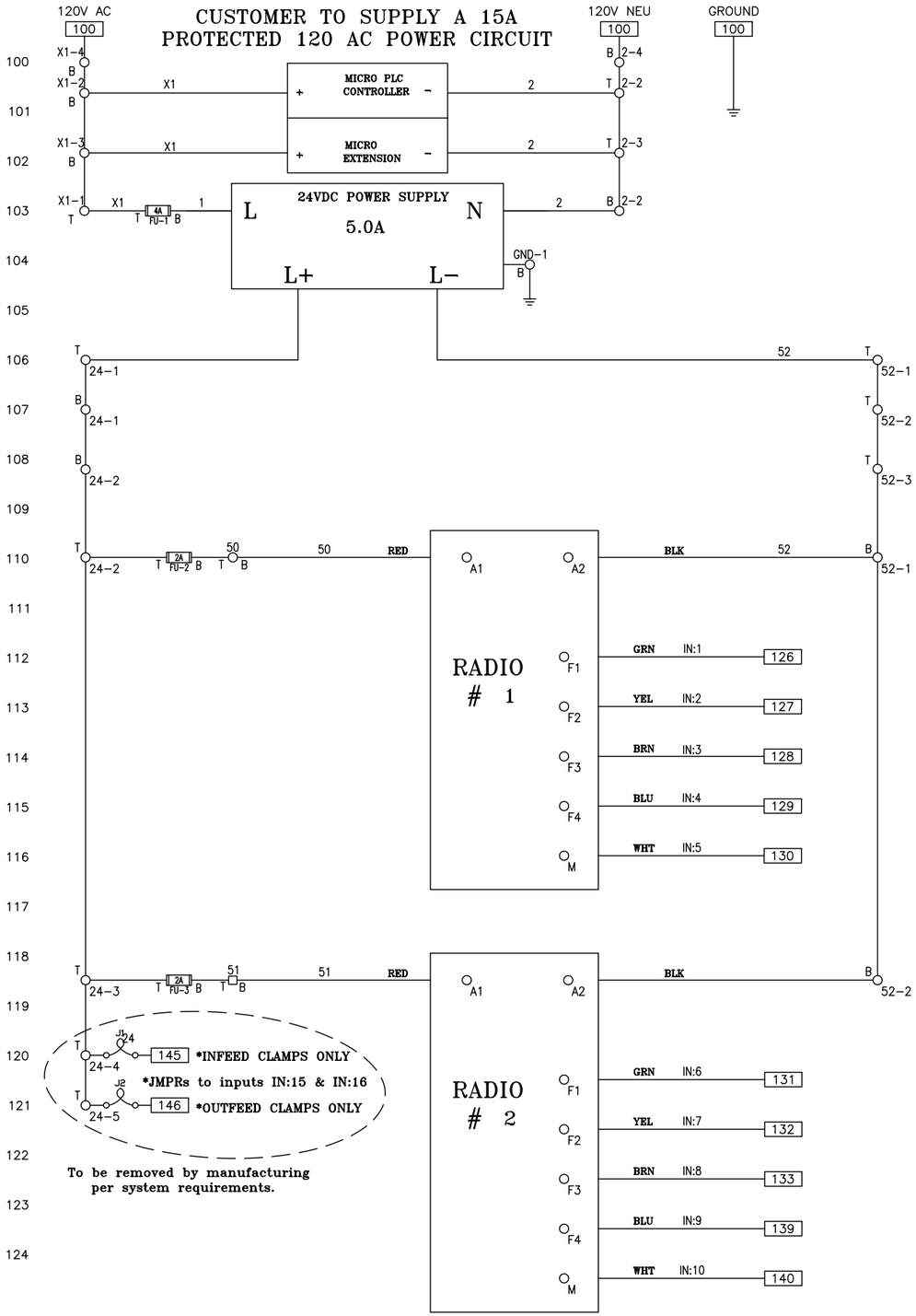
FEATURES: ELECTRICAL SCHEMATIC

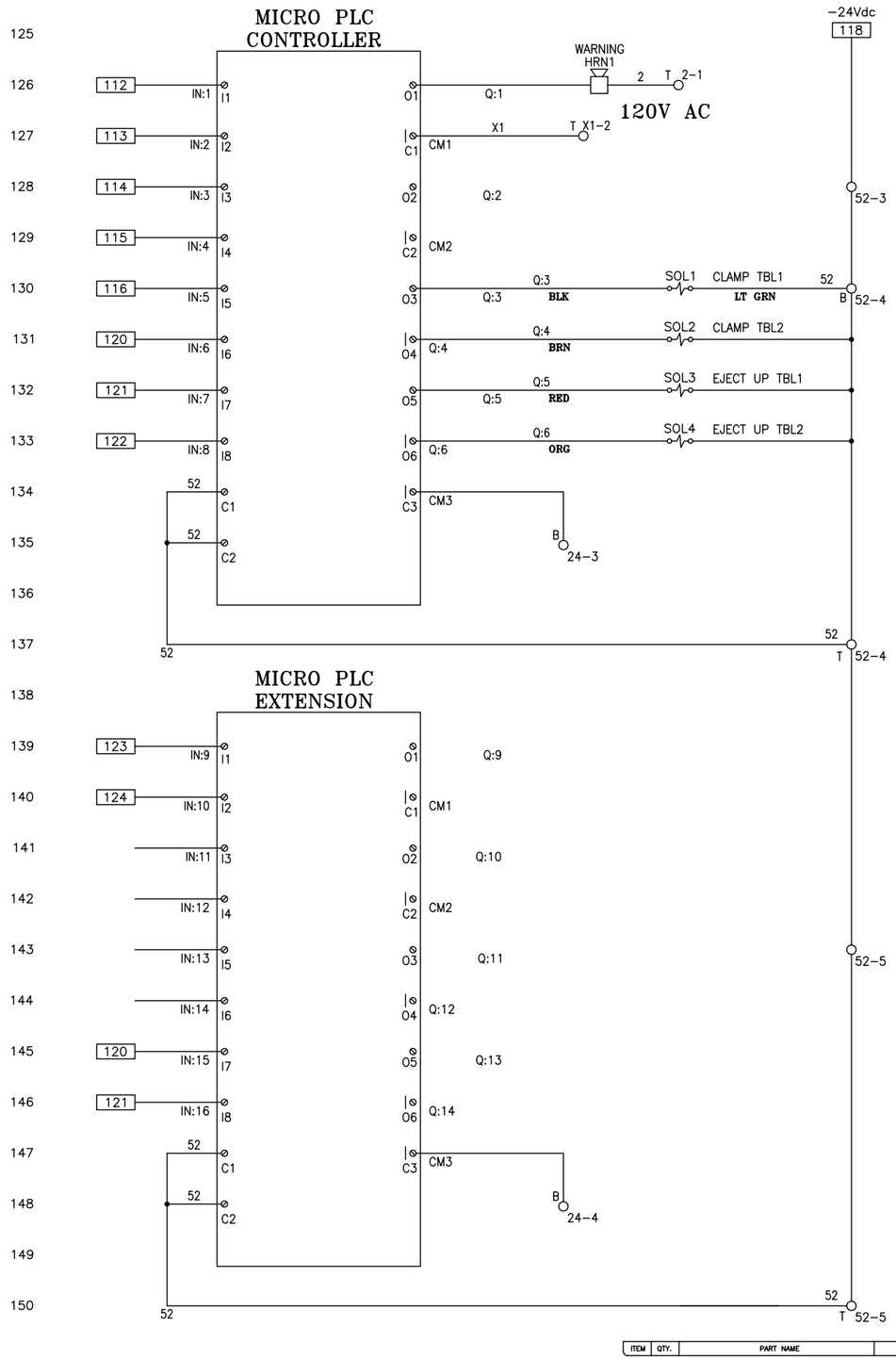
MiTek®
301 FOUNTAIN LAKES INDUSTRIAL DRIVE
ST. CHARLES, MO. 63301

MANUAL X X X PAGE X X X

APPROVED	DATE	MFG.	PNEUMATIC REMOTE CONTROLS						
VDC									
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		VDC	----	X	NONE	1 OF 2	90619	X	D

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE





RailRider Table RADIO Application	
Function # INPUT	Function DESCRIPTION
F1	EJECT UP
F2	EJECT DWN
F3	CLAMP
F4	UNCLAMP
F5	ANY (F# KEY)

*FOR USE WITH 120VAC POWERED
PLC & EXPANSION I/O*

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES: ELECTRICAL SCHEMATIC

MiTek®
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APPROVED	DATE	MFG.	PNEUMATIC REMOTE CONTROLS					
VDC								
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		VDC	----	X	NONE	2 OF 2	90619 x	D

REV.	DATE	DESCRIPTION	DESIGNER
–	2018-09-27	INITIAL RELEASE	VDC
A	2022-04-15	REMOVED 519632,UPDATED DESCR 90647-102	NAR
B	2022-11-15	REMOVED 518181; CHG QTY 518192,518234,518232	NAR

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.
26	0 EA	ELECTRICAL SCHEMATIC		X	D	90647
25	1 EA	LABEL-WARNING DO NOT	BSM6000-B39WHBS(HCS)	X	P	691518
24	1 EA	LABEL-WARNING HAZARDOUS	BSM5025-742WHBS(HCS)	X	P	691507
23	1 EA	LABEL-NOTICE TURN ELEC.	BSMH6058-746NHBS(HCS)	X	P	691701
22	1 EA	LABEL-DANGER-ARC FLASH	(HCS) 5022301C	X	P	691411
21	1 EA	HORN,24VDC, NEMA4,VIBRATING	EDWARDS #871P-G1	X	P	513565
20	1 EA	PWR,SUPPLY,24VDC 5.0A	ABB #1SVR427014R0000	X	P	519903
19	1 FT	DUCT,COVER,1.5", WIRING,PVC	PANDUIT #C1.5LG6	X	P	510153
18	1 FT	DUCT,WIRE,1.5X3 PVC	PANDUIT #G1.5X3LG6	X	P	511743
17	4 FT	DUCT,COVER,1",WIRING, PVC	PANDUIT #C1LG6	X	P	510151
16	4 FT	DUCT,WIRE, 1X3 PVC	PANDUIT #G1X3LG6	X	P	510141
15	2 FT	RAIL,DIN	IDEC #BNDN-1000	X	P	146122
14	1 EA	PLC,MICRO 14PT,EXPANSION ,24VDC	GE #IC200UEX012	X	P	504126
13	1 EA	PLC,MICRO 14PT,8IN-6OUT, 24VDC	GE #IC200UDR002	X	P	504125
12	3 EA	TERM,BLCK,G/Y, 1P,6mm,GRND	ENTRELEC #165113.16	X	P	518209
11	2 EA	TERM,JUMPER,BAR,6MM,10P,BJM6	ENTRELEC #168.973.07	X	P	518143
B 10	0 EA					
B 9	12 EA	TERM,BLCK, 6mm,BLUE	ENTRELEC #125116.01	X	P	518232
8	4 EA	TERM,BLCK,FLD- FLD,6mm,GREY	ENTRELEC #115116.07	X	P	518223
B 7	4 EA	TERM,END,SEC,FLD-FLD	ENTRELEC #118368.16	X	P	518234
B 6	3 EA	TERM,END,STOP, screwless	ENTRELEC #399903.02	X	P	518192
5	EA			X	P	
4	1 EA	FUSE, 1/4x1-1/4, 4A TIME DELAY	BUSSMAN #MDL-4	FU1	P	516533
3	1 EA	TERM,FUS-HLDR	ENTRELEC #115378.05	X	P	518207
2	0 EA					
1	1 EA	CUSTOM ENCLSR	20x16x6, HINGED	X	P	90647-102

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± ☐ MACHINED SURFACES NOT SPECIFIED 250

FEATURES
BILL OF MATERIAL

MiTek MACHINERY DIVISION
301 FOUNTAIN LAKES INDUSTRIAL DRIVE
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APPROVED	DATE	MFG.	RR PRO,SINGLE TABLE,PB ENCLOSURE					
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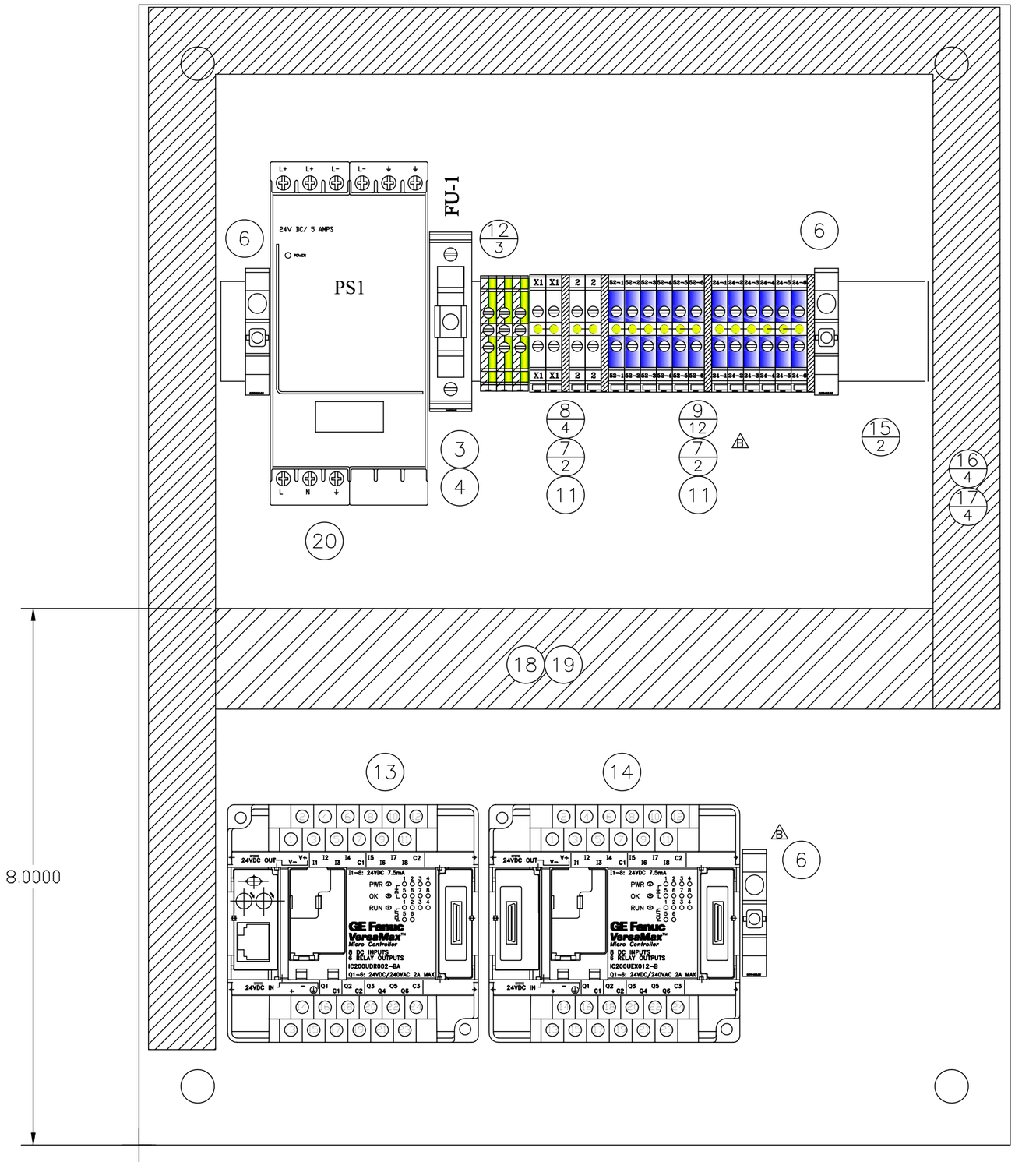

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.

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FEATURES
PANEL LAYOUT

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ST. CHARLES, MO. 63301

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APPROVED	DATE	MFG.	RR PRO,SINGLE TABLE,PB ENCLOSURE						
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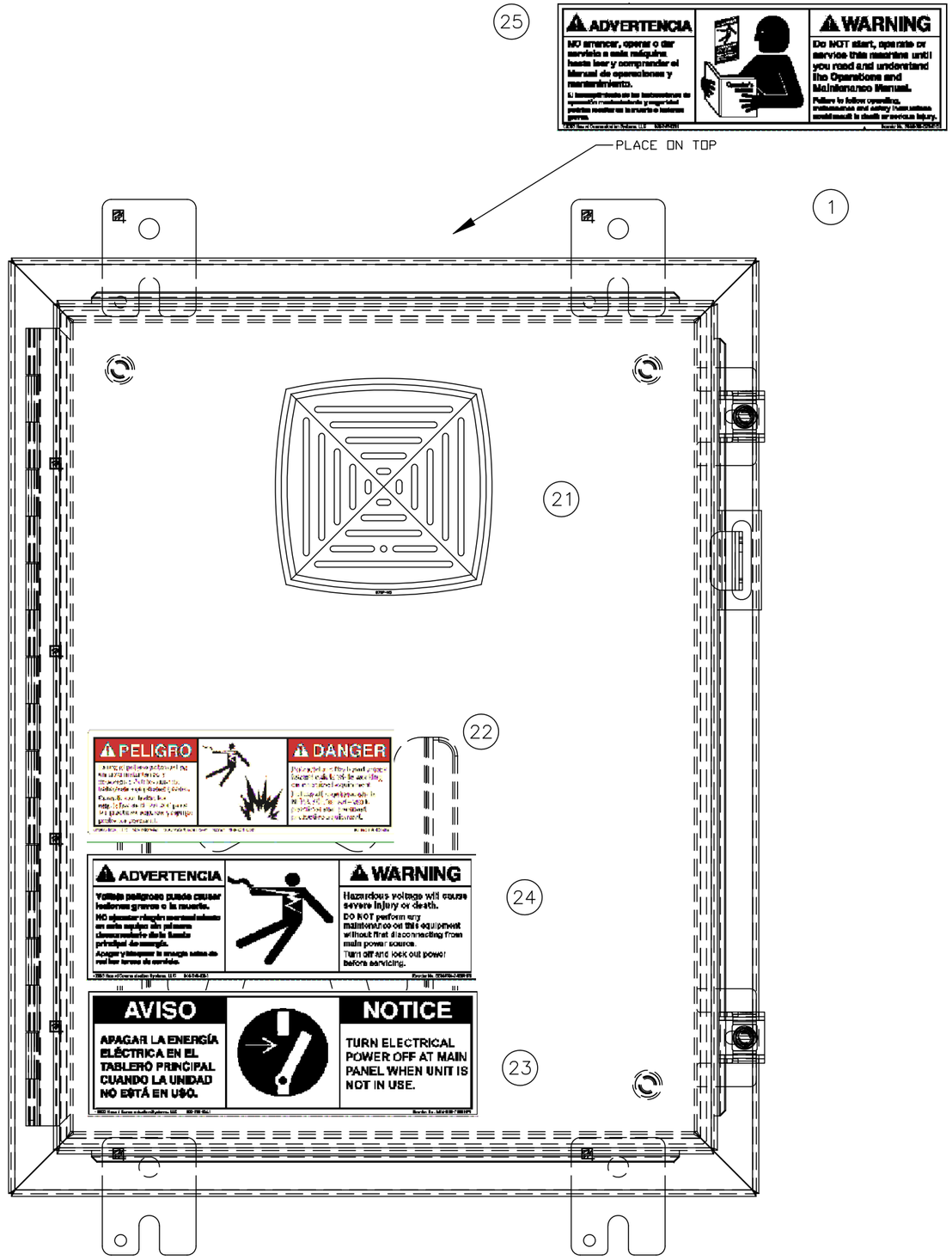

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.

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FEATURES
ENCLOSURE

MiTek MACHINERY DIVISION
301 FOUNTAIN LAKES INDUSTRIAL DRIVE
ST. CHARLES, MO. 63301

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APPROVED	DATE	MFG.	RR PRO,SINGLE TABLE,PB ENCLOSURE						
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REV.	DATE	DESCRIPTION	DESIGNER

* DENOTES
FIELD WIRING

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
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FEATURES: WIRING LAYOUT

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301 FOUNTAIN LAKES INDUSTRIAL DRIVE
ST. CHARLES, MO. 63301

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APPROVED	DATE	MFG.	RR PRO,SINGLE TABLE,PB ENCLOSURE					
VC			DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
CHECKED	DATE	DRAWN	11/15/22	X	NONE	4 OF 4	90647-502 X	B
		VDC						

REV.	DATE	DESCRIPTION	DESIGNER
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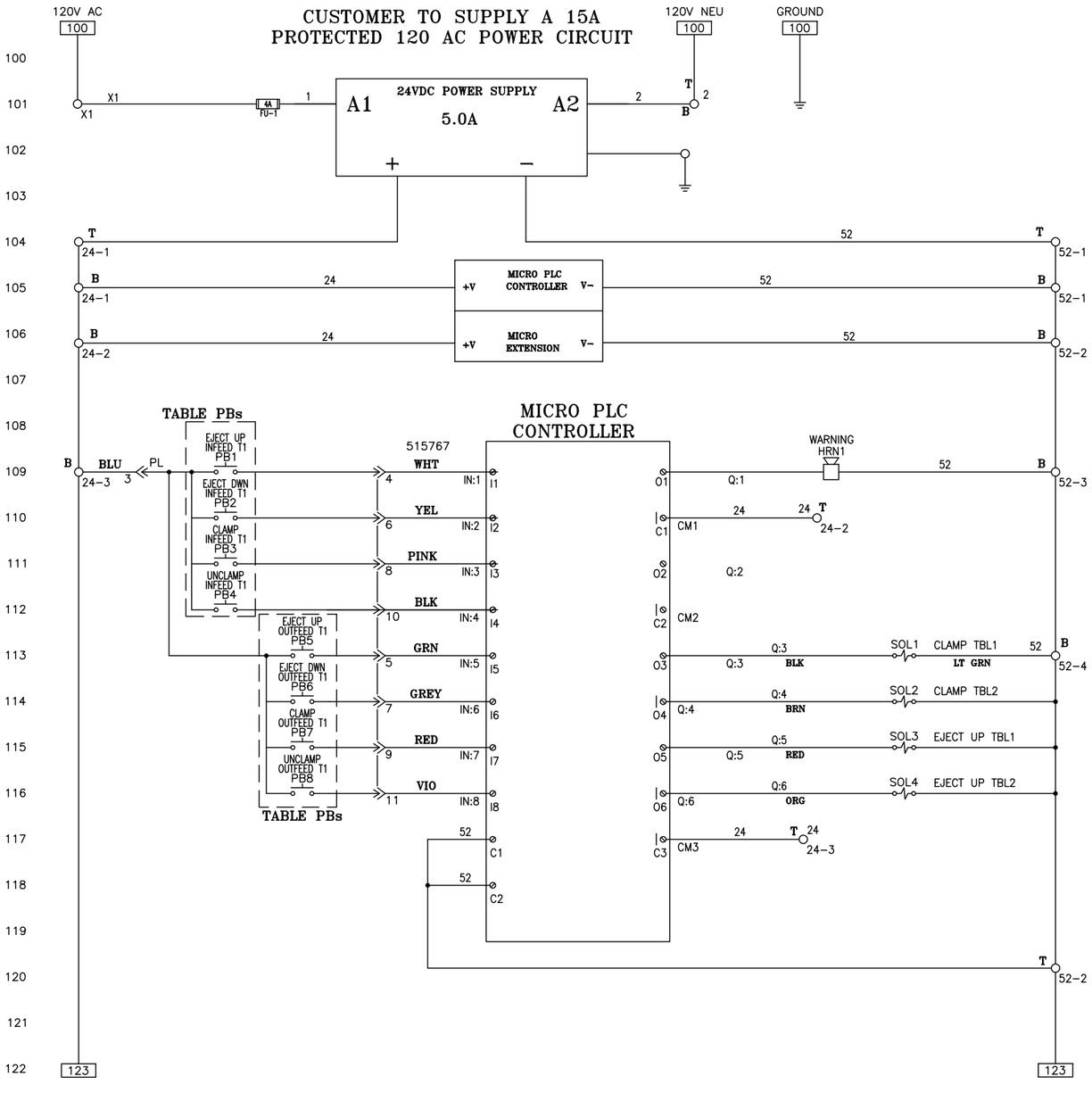

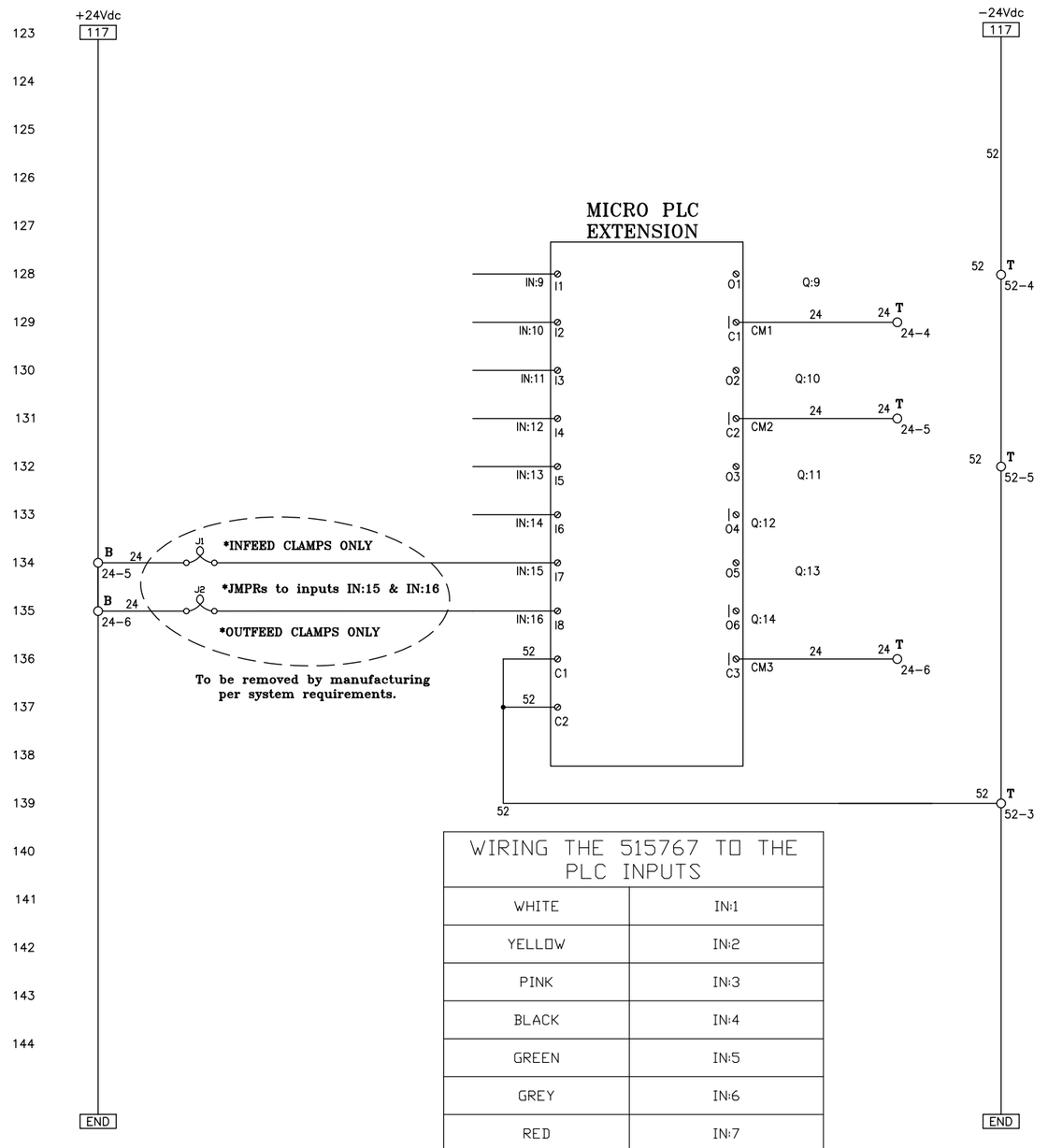

WIRING THE 515767 TO THE PLC INPUTS	
WHITE	IN:1
YELLOW	IN:2
PINK	IN:3
BLACK	IN:4
GREEN	IN:5
GREY	IN:6
RED	IN:7
VIOLET	IN:8

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FEATURES: SCHEMATIC

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MANUAL XXX PAGE XXX

APPROVED	DATE	MFG.	RR PRO,SINGLE TABLE,PB CONTROL						
VDC									
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