

# Service Bulletin

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**Machinery Affected:** *Cyber*<sup>®</sup>, *Cyber AIT*<sup>®</sup>, *SmartSet*<sup>®</sup>, and *SmartSet Pro Saws*<sup>®</sup>

**Document:** SB180

**Title:** Replacing a *GE*<sup>®</sup> AF-300 E11 VFD with a *GE* AF-300 Mini VFD

**Applies To:** All *Cyber* and *Cyber AIT* Saws Shipped Before 15 November 2007, All *SmartSet* and *SmartSet Pro Saws* Shipped before 1 November 2007



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**www.mii.com**

Item #	SB180 Rev. A
Revised	26 March 2009
Revised By	R. Tucker
Date Created	25 October 2007
Created By	R. Widder
Reviewed by	R. Tucker
Approved by	G. McNeelege
Applicability	77500-501, 60000-530
Effectivity	<i>Cyber</i> and <i>Cyber A/T</i> saws shipped before 15 November 2007, <i>SmartSet</i> and <i>SmartSet Pro</i> saws shipped before 1 November 2007

## Purpose and Scope

The *Cyber*<sup>®</sup>, *Cyber A/T*, *SmartSet*<sup>®</sup>, and *SmartSetPro* saws use *GE*<sup>®</sup> AF-300 E11 VFDs (variable frequency drives) that have been discontinued. If these VFDs require replacement, they must be replaced with the new AF-300 Mini VFD.

## Overview

The parts included in each kit are shown in Table 1 through Table 3. Please ensure all parts are present before starting this procedure.

**Table 1: Parts for ANGLE and/or CENTERLINE VFD Replacement**

Saw Model		<i>Cyber A/T</i>	<i>Cyber</i>	<i>SmartSet Pro</i> (angle)	<i>SmartSet</i>
Qty.	Part Description	SB180KIT-A	SB180KIT-J	SB180KIT-D	N/A
1	Service Bulletin	SB180A	SB180D	SB180B	N/A
1	VFD, 1hp	94001	94026	94004	N/A
1 ea	Drawing included	90507	92034	90129	N/A

**Table 2: Parts for CARRIAGE VFD Replacement**

Saw Model		<i>Cyber A/T</i>	<i>Cyber</i>	<i>SmartSet Pro</i>	<i>SmartSet</i>
Qty.	Part Description	SB180KIT-B	SB180KIT-K	SB180KIT-E	SB180KIT-G
1	Service Bulletin	SB180A	SB180D	SB180B	SB180C
1	VFD, 2hp	94002	94027	94005	94007
4	8-32x1/2" round head machine screw	341068	341068	341068	341068
1 ea	Drawings included	90507	92034	90129	90124

**Table 3: Parts for INFEED VFD Replacement**

Saw Model		<i>Cyber A/T</i>	<i>Cyber</i>	<i>SmartSet Pro</i>	<i>SmartSet</i>
Qty.	Part Description	SB180KIT-C	SB180KIT-L	SB180KIT-F	SB180KIT-H
1	Service Bulletin	SB180A	SB180D	SB180B	SB180C
1	VFD, 2hp	94003	94028	94006	94008
4	8-32x1/2" round head machine screw	341068	341068	341068	341068
1 ea	Drawings included	90507	92034	90129	90124



Before beginning the procedure, gather the supplies listed in Table 4.

**Table 4: Customer-Supplied Items**


<b>Qty.</b>	<b>Part Description</b>
1	Phillips screwdriver set
1	Drill
1	#29 drill bit
1	8/32 tap
1	Marker or grease pencil

If you have any questions, call MiTek Machinery Division Customer Service at 800-523-3380.

## Procedure



### Electrical Lockout/Tagout Procedures

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


Before opening the main electrical enclosure, or attempting to repair or replace an electrical transmission line to the machine, lockout/tagout the machine properly. Follow your company’s approved lockout/tagout procedures which should include, but are not limited to the steps here.


1. Engage an E-stop on the machine.
2. Turn the machine’s disconnect switch to the “off” position. This is usually required to open the main electrical enclosure’s door.
3. Shut the power to the machine off at the machine’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.
4. Attach a lock and tag that meets OSHA requirements for lockout/tagout to the electrical service entry panel.
5. Open the door to the enclosure in which you need access, and using a multimeter, verify that the power is off.

**Figure 1: Lockout/Tagout on the Power Source Panel**



### **Pneumatic System Lockout/Tagout Procedure**

<b>WARNING</b>	
	<p><b>MOVING PARTS CAN CRUSH AND CUT.</b></p> <p>Always verify that power to the machine has been turned off and follow approved lockout/tagout procedures.</p> <p>Turn off the air switch before performing any maintenance on the equipment.</p>

<b>WARNING</b>	
	<p><b>HIGH PRESSURE HAZARD.</b></p> <p>Bleed pneumatic before performing any maintenance on the pneumatic system.</p>

## Replacing the VFD

### Removing the VFD

1. Disconnect all wiring from the VFD, noting how it is wired.
2. Unscrew and remove the hardware attaching the VFD. Keep the hardware for re-use.
3. Remove the VFD.

### Attaching the New VFD (1-hp VFD)

1. Place the new VFD in the same location as the VFD you removed.
2. Mark the location of the VFD mounting holes on the enclosure.
3. Remove the VFD.
4. Drill holes at the marked locations using a #29 drill bit. Drill the holes from the inside of the enclosure to the outside. Cover electrical components with clean rags if there is a risk of shavings falling onto them.
5. Tap the holes to 8/32.
6. Attach the VFD using the same hardware you removed and tighten the screws.
7. Vacuum any debris out of the electrical enclosure.

#### **CAUTION**

**Do not use compressed air to blow out debris in the electrical enclosure! This may force contaminants into components. NEVER use water in an electrical enclosure.**

## Attaching the New VFD (2-hp VFD).

1. Place the new VFD in the same location as the VFD you removed
2. Attach the VFD using the 8-32x1/2-in. screws provided in your kit.
3. Tighten the screws.
4. Vacuum any debris out of the electrical enclosure.

## Connecting the VFD (Cyber A/T Saw)

Some wires with butt splices are preconnected to the VFD before shipping. If the drawing indicates you should connect a wire to that terminal, connect it to the butt splice, then crimp the splice into place as seen in Figure 3.

Figure 2: New 2hp VFD on a Cyber A/T Saw



Figure 3: Crimp Butt Splice



To connect wires to the new VFD, find the correct VFD on Drawing 90507. Connect the wires as indicated in Table 5.

**Table 5: Old and New Terminal Connections, Cyber A/T Saw**

Wire	Old Terminal	New Terminal
T#A/B/C-L1	R	R
T#A/B/C-L2	S	S
T#A/B/C-L3	T	T
T#B-T1	U	U
T#B-T2	V	V
T#B-T3	W	W
1T	C	C, and may also daisy chain to other VFDs
VFD Fault	B	B
Common	CM	CM
Common	11	11
+10V	12	12
REV/RAISE	REV	REV
FWD/EXTEND	FWD	FWD
RESET	X5	<b>X3</b>
+24 VDC	Y1	Y1
-24 VDC	CME	Y1E



## Connecting the VFD (Cyber Saw)

Some wires with butt splices are preconnected to the VFD before shipping. If the drawing indicates you should connect a wire to that terminal, connect it to the butt splice, then crimp the splice into place as seen in Figure 3.

To connect wires to the new VFD, find the correct VFD on Drawing 92034. Connect the wires as indicated in Table 6.

**Table 6: Old and New Terminal Connections, Cyber Saw**

Wire	Old Terminal	New Terminal
T#A/B-L1	R	R
T#A/B-L2	S	S
T#A/B-L3	T	T
T#B-T1	U	U
T#B-T2	V	V
T#B-T3	W	W
1S	C	C, and may also daisy chain to other VFDs
VFD Fault	B	B
Common	SD	<b>CM</b>
Common	5	<b>11</b>
+10V	2	<b>12</b>
REV/UP	STR	<b>REV</b>
FWD/DOWN	STF	<b>FWD</b>

**Connecting the VFD (*SmartSet Pro Saw*)**

Some wires with butt splices are preconnected to the VFD before shipping. If the drawing indicates you should connect a wire to that terminal, connect it to the butt splice, then crimp the splice into place as seen in Figure 3.

To connect wires to the new VFD, find the correct VFD on Drawing 90129. Connect the wires as indicated in Table 7.

**Table 7: Old and New Terminal Connections, *SmartSet Pro Saw***

Old Terminal	New Terminal
R	R
S	S
T	T
U	U
V	V
W	W
CM	CM
X1	X1
X2	X2
X3	X3
X5	—
VFD Fault	<b>30A</b>
1	<b>30C, and may also daisy chain to other VFDs</b>
REV	REV
FWD	FWD

**Connecting the VFD (*SmartSet Saw*)**

Some wires with butt splices are preconnected to the VFD before shipping. If the drawing indicates you should connect a wire to that terminal, connect it to the butt splice, then crimp the splice into place as seen in Figure 3.

To connect wires to the new VFD, find the correct VFD on Drawing 90124. Connect the wires as indicated in Table 8.

**Table 8: Old and New Terminal Connections, *SmartSet Saw***

Old Terminal	New Terminal
R	R
S	S
T	T
U	U
V	V
W	W
CM	CM
REV	REV
FWD	FWD
11	11
12	12
13	13

**END OF SERVICE BULLETIN**

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE
C		FOR FABRICATION	BL			
D	7-11-97	PG 8 & 12; ADD IF--CONV-HZ-ADJ-27W SW. DEL PG 16.	GCB			
E	5-15-98	PG 1 - 5. SEE EDN 2403	GCB			
F	3-22-99	SEE EDN 2756	DK			
G	8-22-99	ADDED FAN KIT PG'S 3 & 5	SDH			
H	7/31/00	UL DWG UPDATE APPROPRIATE LABELING	GCB			
I	5/1/01	UPDATE DESIGNATORS	MLS			

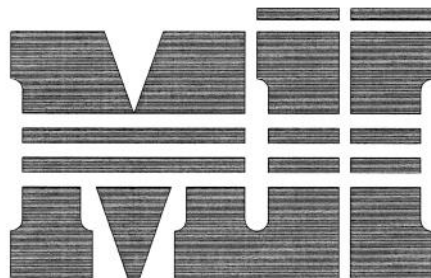
# D92034

# MiTek Industries

## Component Saw - Electrical Schematic

### (Cyber Saw) - 230V

### U.S.A.



**MiTek Industries, Inc.**

4203 Shoreline Drive, Earth City, MO 63045

P.O. Box 66702, St. Louis, MO 63166-6702

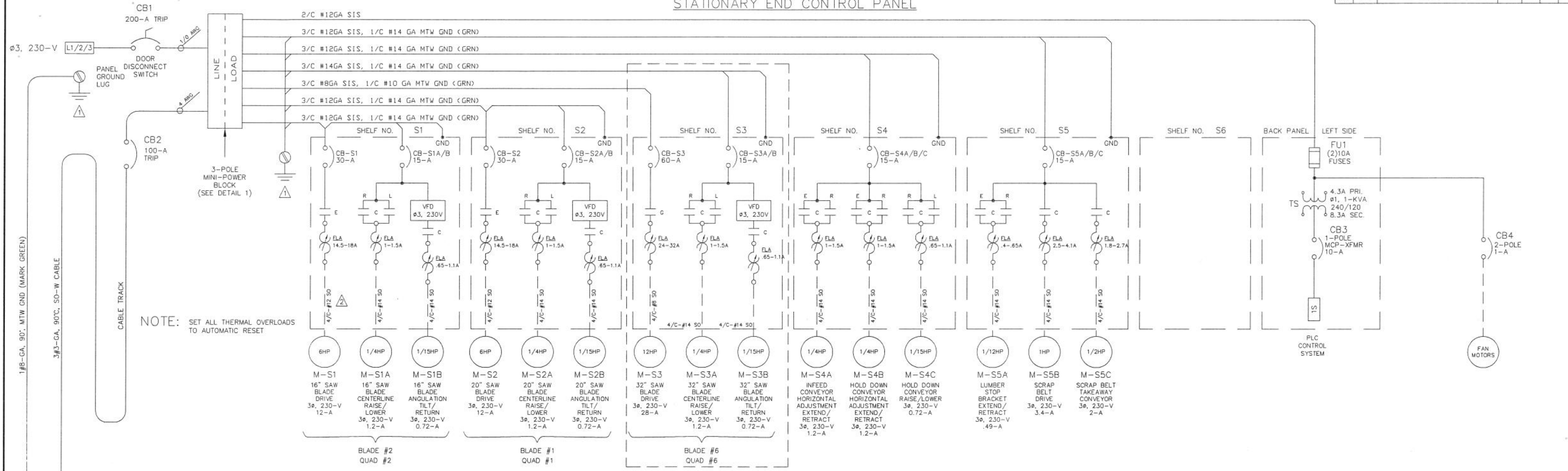
(314) 298-8088 \* (800) 523-3380 \* FAX (314) 298-3824

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
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<small>UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:</small> FRACTIONS: ± 1/32 DECIMALS: ± .010 ANGLES: ± 1° TOTAL ROUNDOUT: ± 0.005 MACHINED SURFACES: 250 <small>NOT SPECIFIED</small>						
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APPROVED		DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V		
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE
VDC	5/1/01	B.L.(MWA)	06/23/99	NA	1 : 1	0 of 15
						D92034
						REV. 1

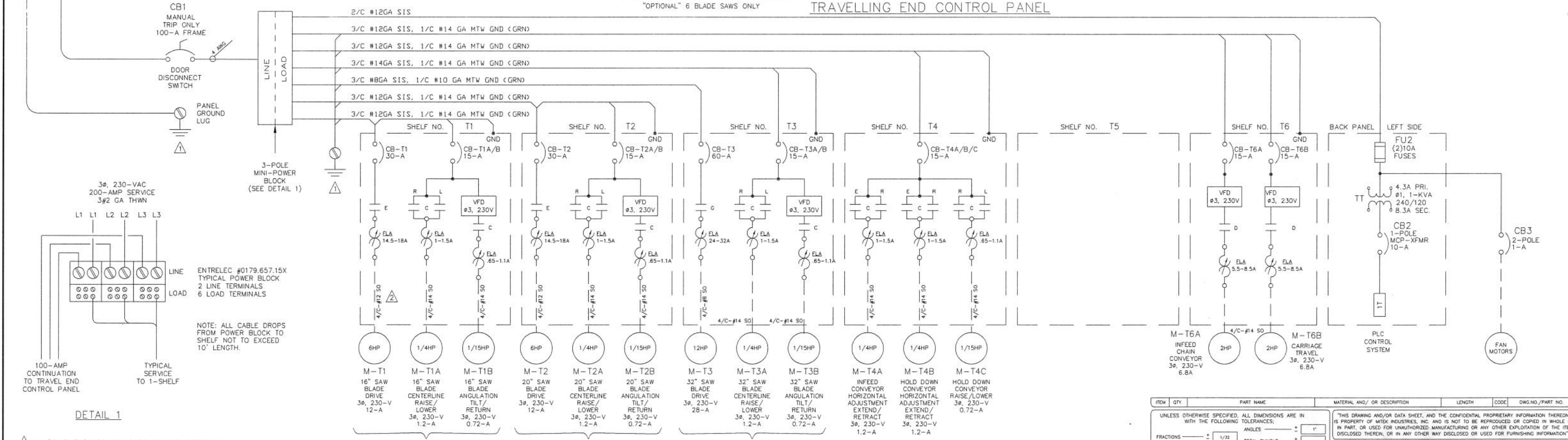
STATIONARY END CONTROL PANEL

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE
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NOTE: SET ALL THERMAL OVERLOADS TO AUTOMATIC RESET

TRAVELLING END CONTROL PANEL



ENTRELEC #0179.657.15X TYPICAL POWER BLOCK 2 LINE TERMINALS 6 LOAD TERMINALS

NOTE: ALL CABLE DROPS FROM POWER BLOCK TO SHELF NOT TO EXCEED 10' LENGTH.

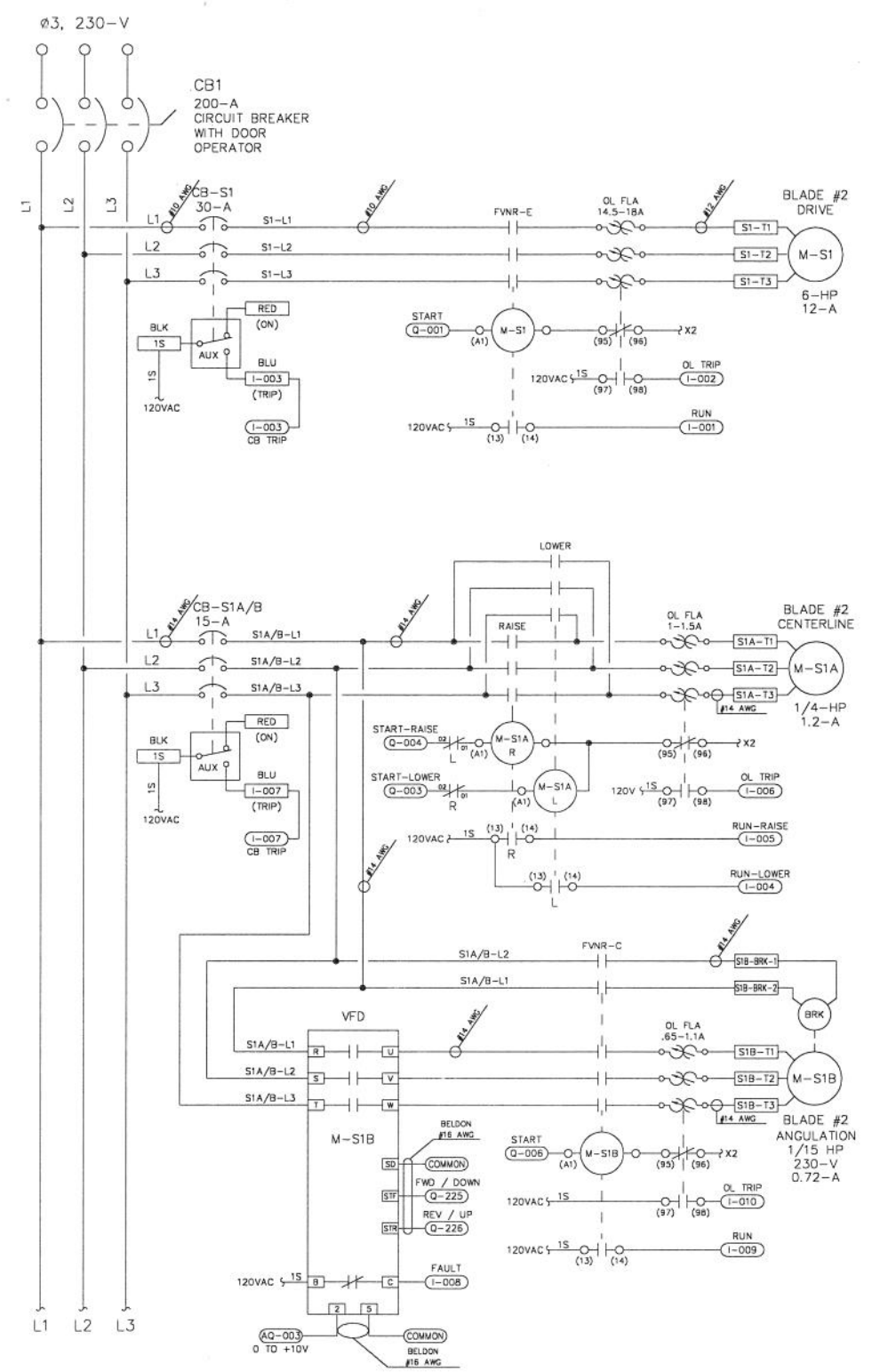
DETAIL 1

- 1 - EQUIPMENT GROUNDING BONDS ARE SIZED IN ACCORDANCE WITH TABLE 250-95 OF THE NEC.
- 2 - SO CORDS ARE SIZED IN ACCORDANCE WITH TABLE 400-5(A) OF THE NEC. ALL GREEN SO CONDUCTORS ARE TO SERVE AS EQUIPMENT BONDS BETWEEN MOTOR AND PANEL GROUNDING TERMINALS.

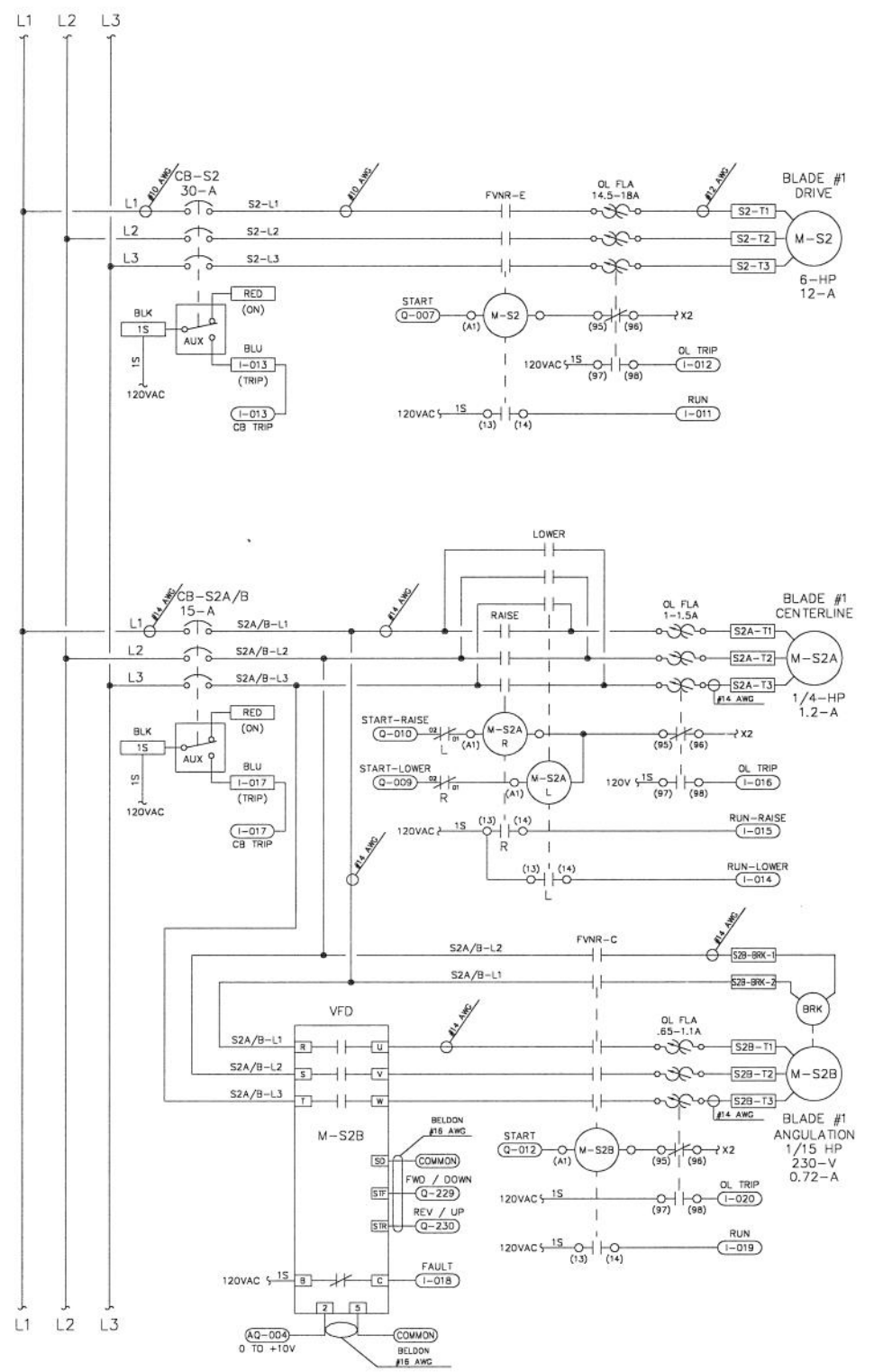
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DECIMALS	±	.010	TOTAL RUNOUT	±	250	
MACHINED SURFACES NOT SPECIFIED						
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CHECKED			DATE	DRAWN	FINISH PAINT	SCALE
VDC			5/1/01	B.L.(MWA)	NA	1 : 1
PAGE 1 OF 15						D92034

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					REMARKS

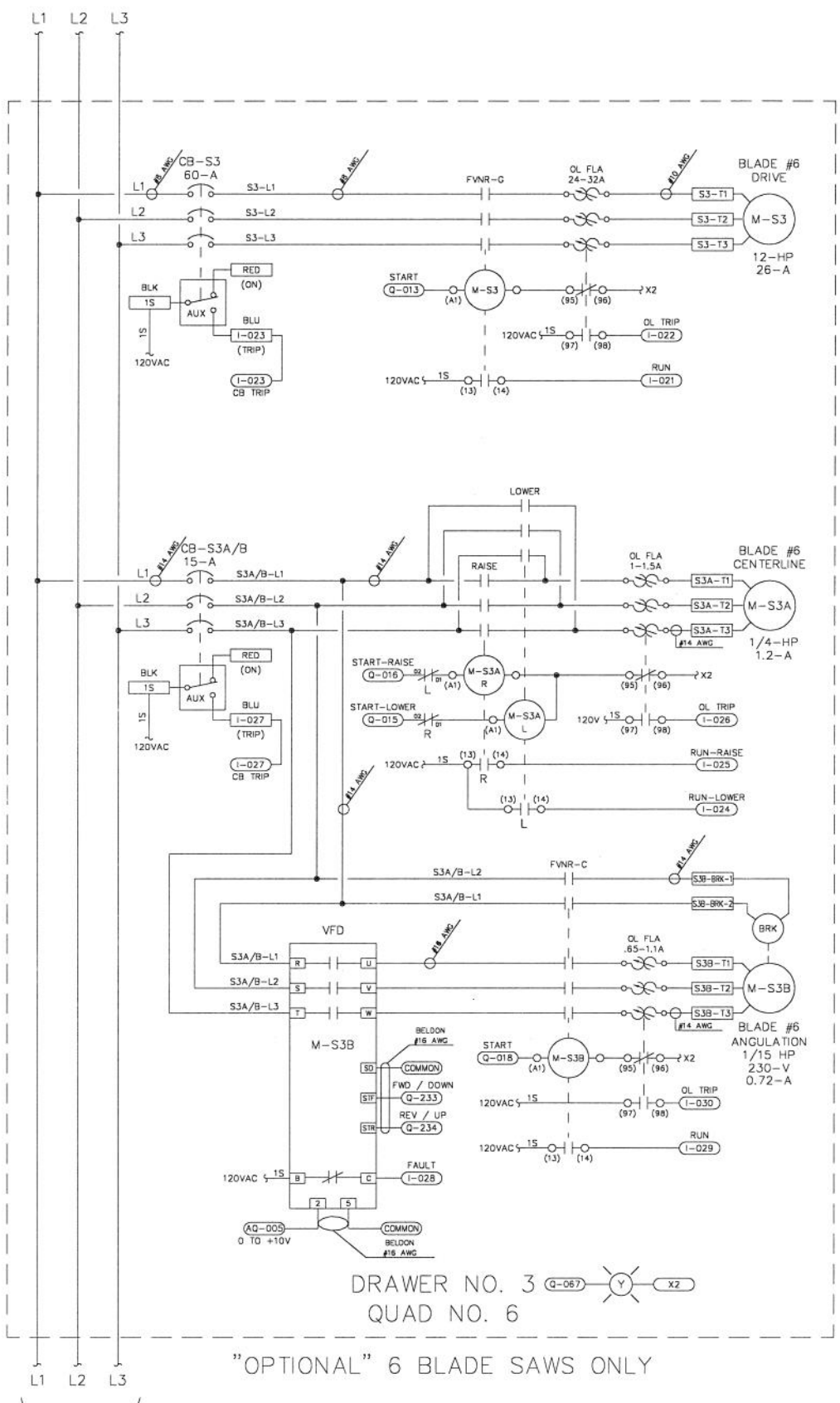
MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MD 83045



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QUAD NO. 2



DRAWER NO. 2  
QUAD NO. 1



DRAWER NO. 3  
QUAD NO. 6

"OPTIONAL" 6 BLADE SAWS ONLY

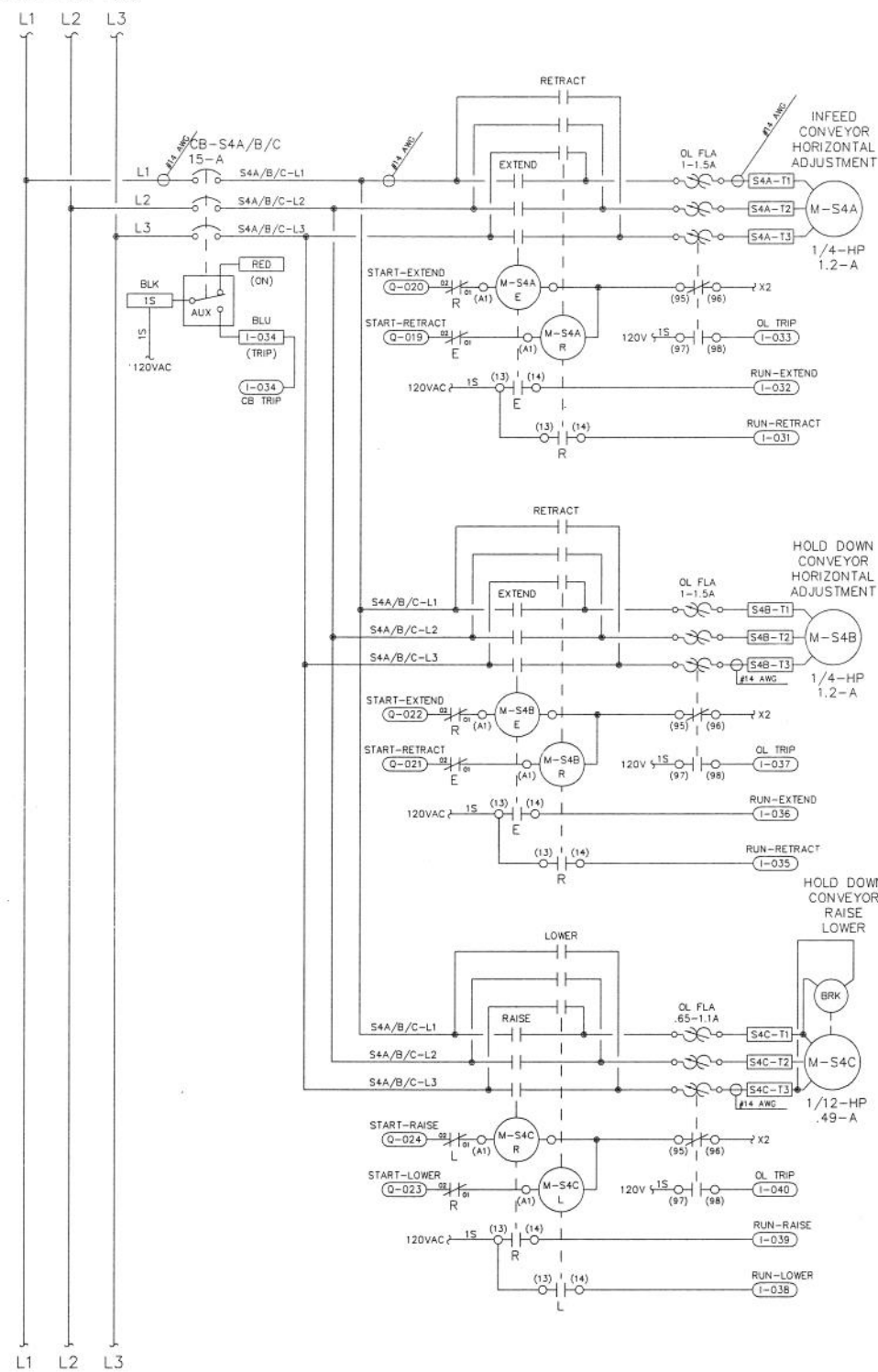
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STATIONARY END CONTROL PANEL

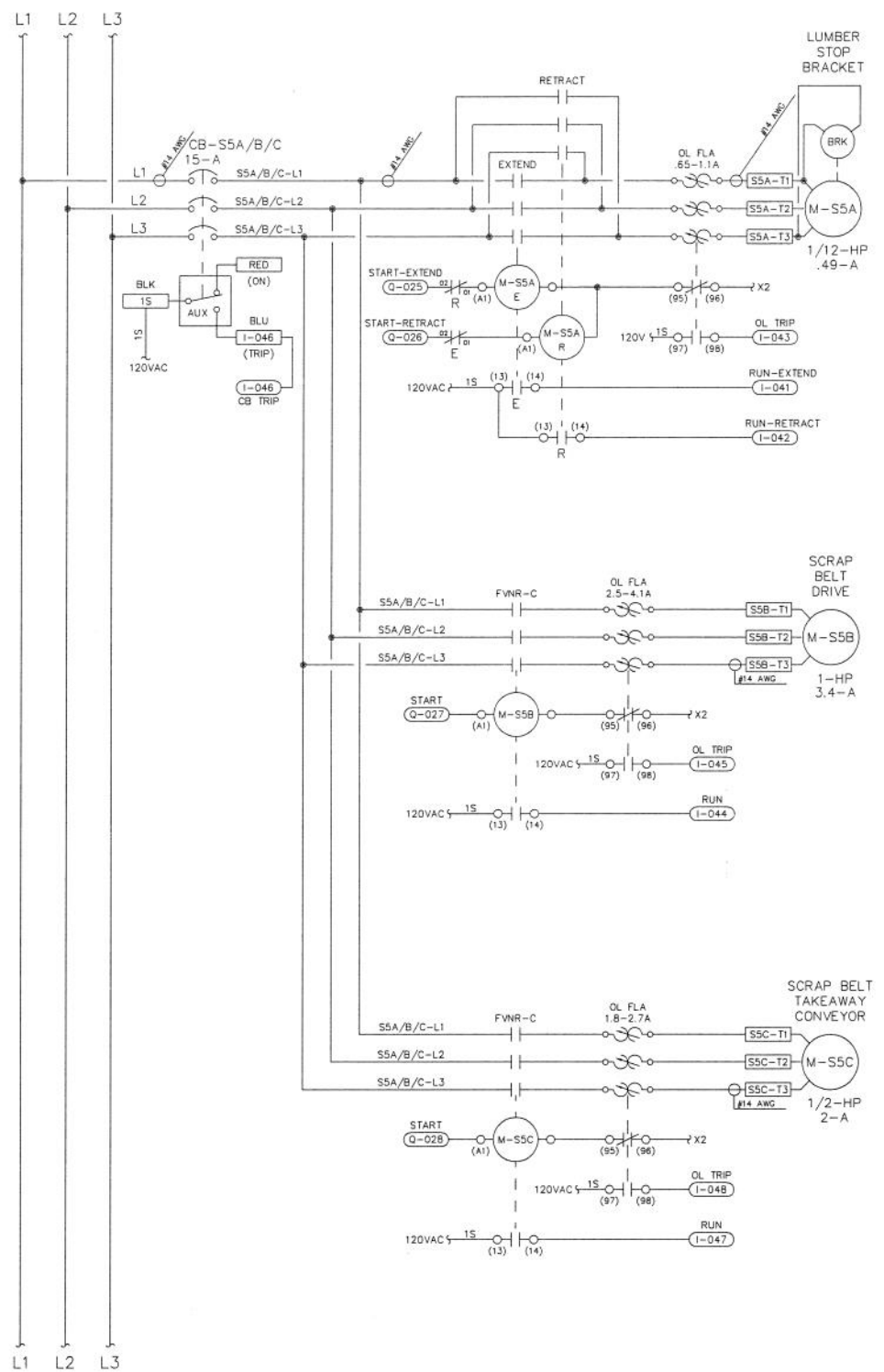
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DECIMALS	±	.010	TOTAL ROUND	±		
MACHINED SURFACES NOT SPECIFIED 250						
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CYBERSAW, SCHEMATIC, US, 230V						X
D92034						X

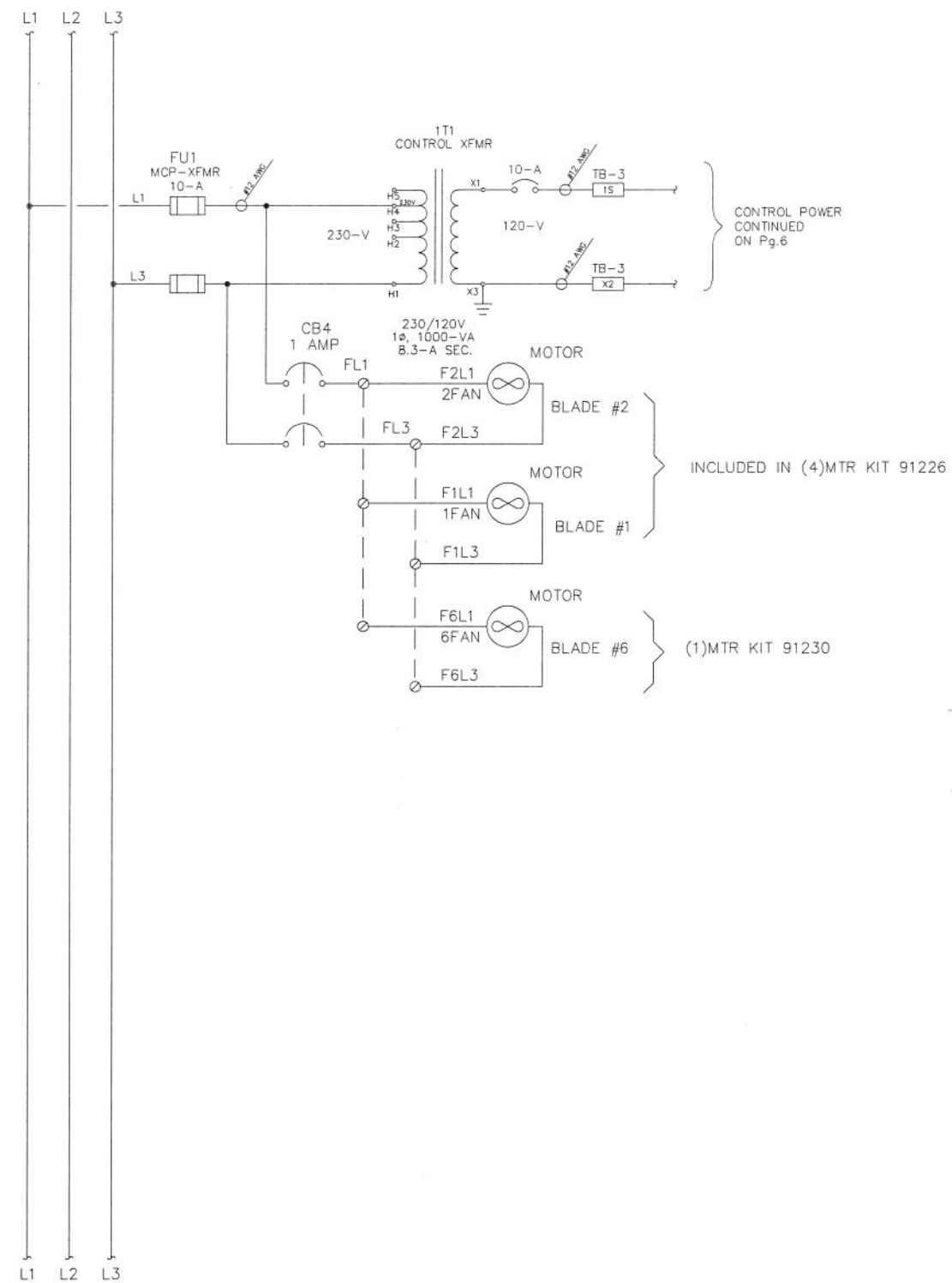
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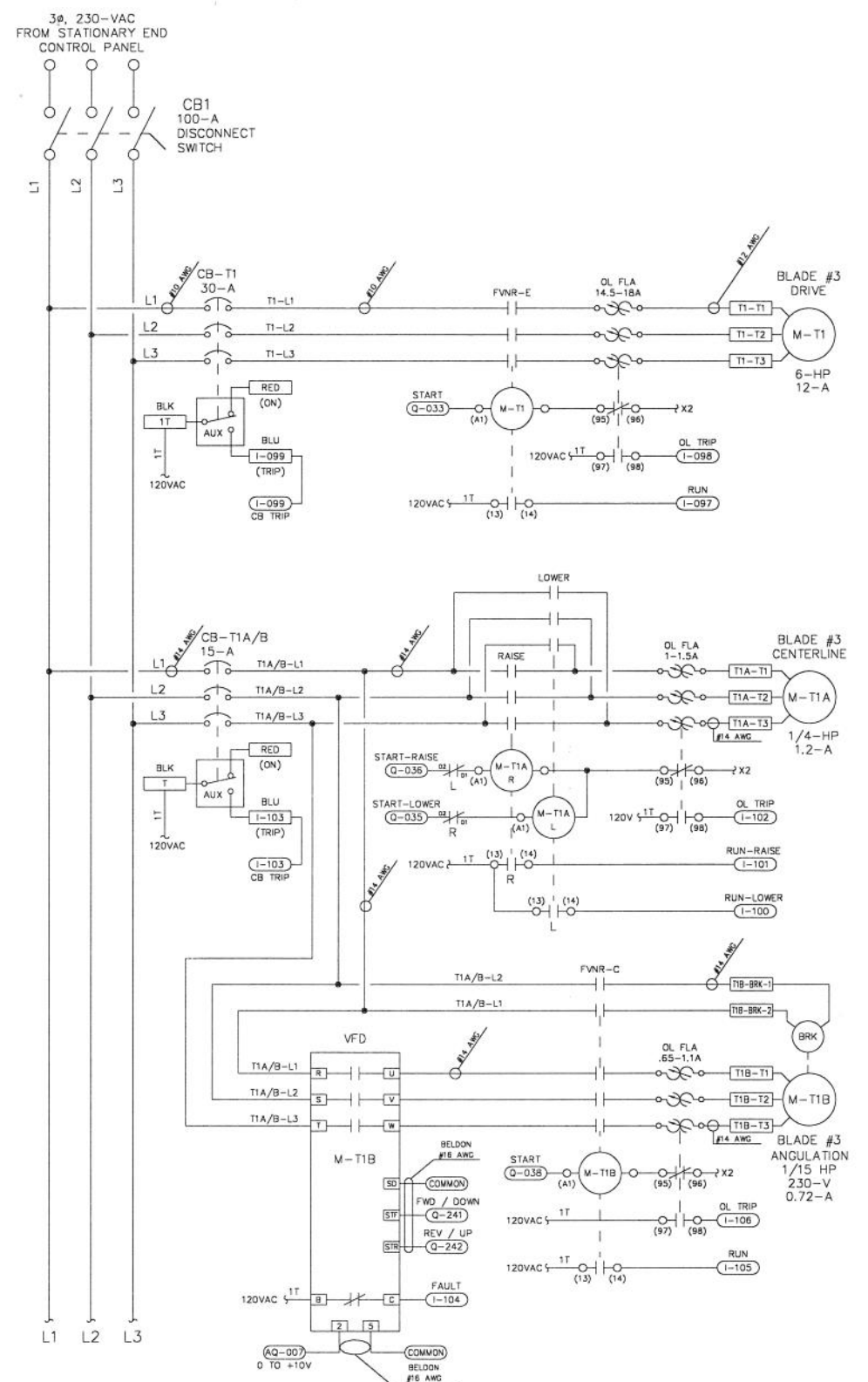


POWER TO TRAVELLING END CONTROL PANEL (SEE U.S.A. SAW-12) BACK PANEL LEFT SIDE

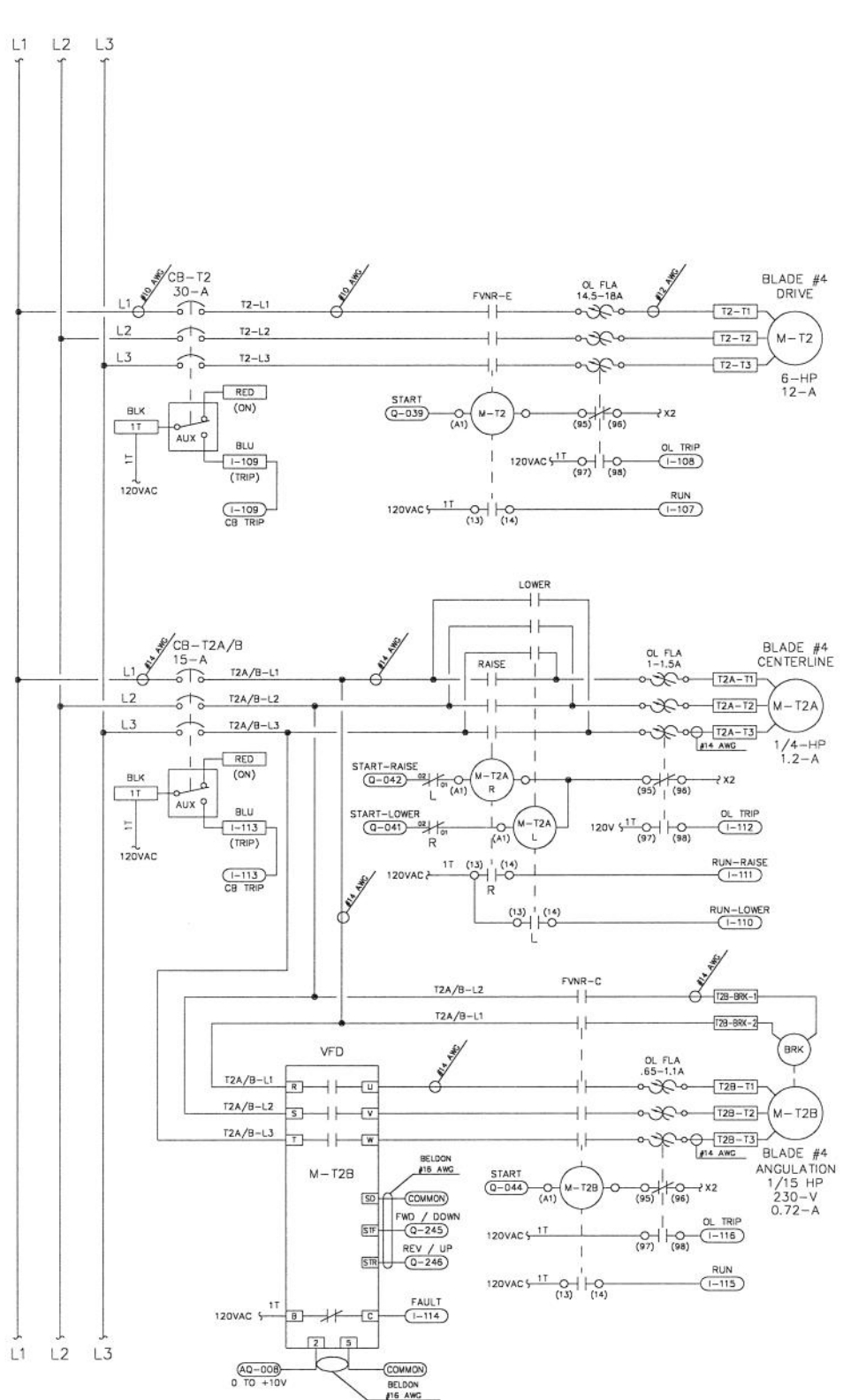
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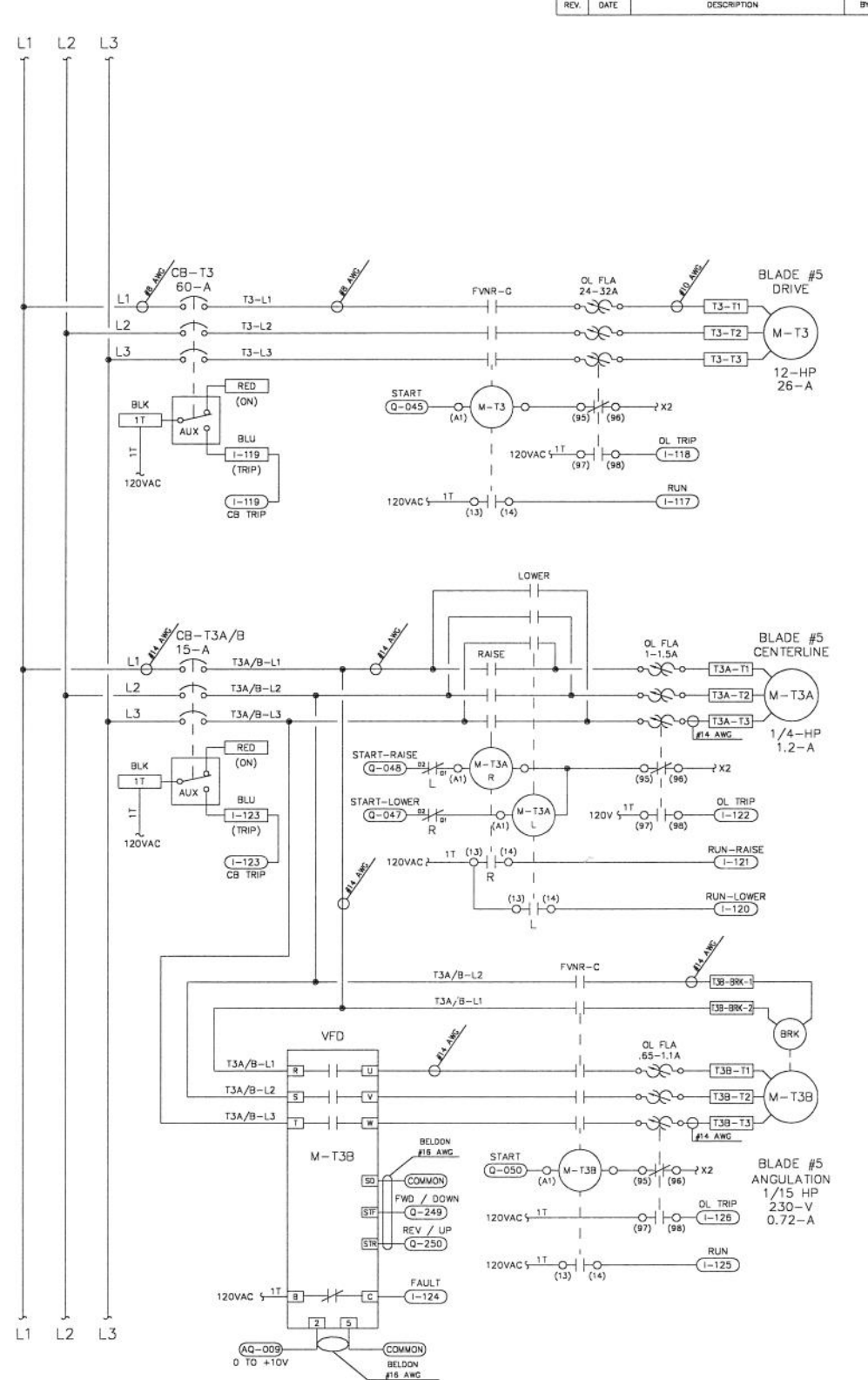
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D92034						REV. 1



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QUAD #3



DRAWER NO. 2  
QUAD #4



DRAWER NO. 3  
QUAD #5

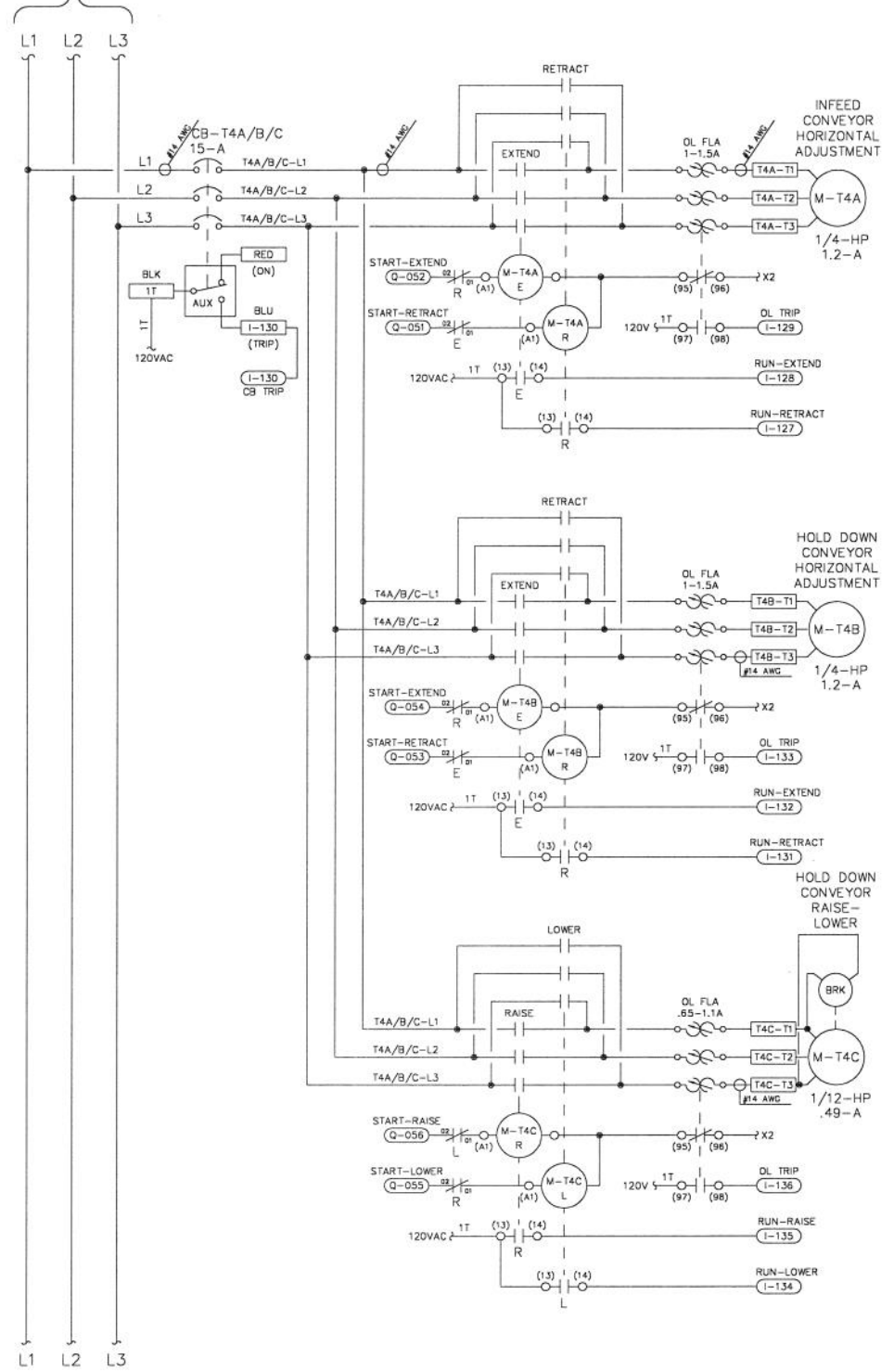
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<small>UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES. FRACTIONS: 1/32, DECIMALS: .010. TOTAL RUNOUT: 250. MACHINED SURFACES NOT SPECIFIED.</small>					
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<b>MiTek Industries, Inc.</b> <small>4203 SHORELINE DRIVE, EARTH CITY, MO. 63045</small>			001031	62	X X
<b>CYBERSAW, SCHEMATIC, US, 230V</b>			1	4	15
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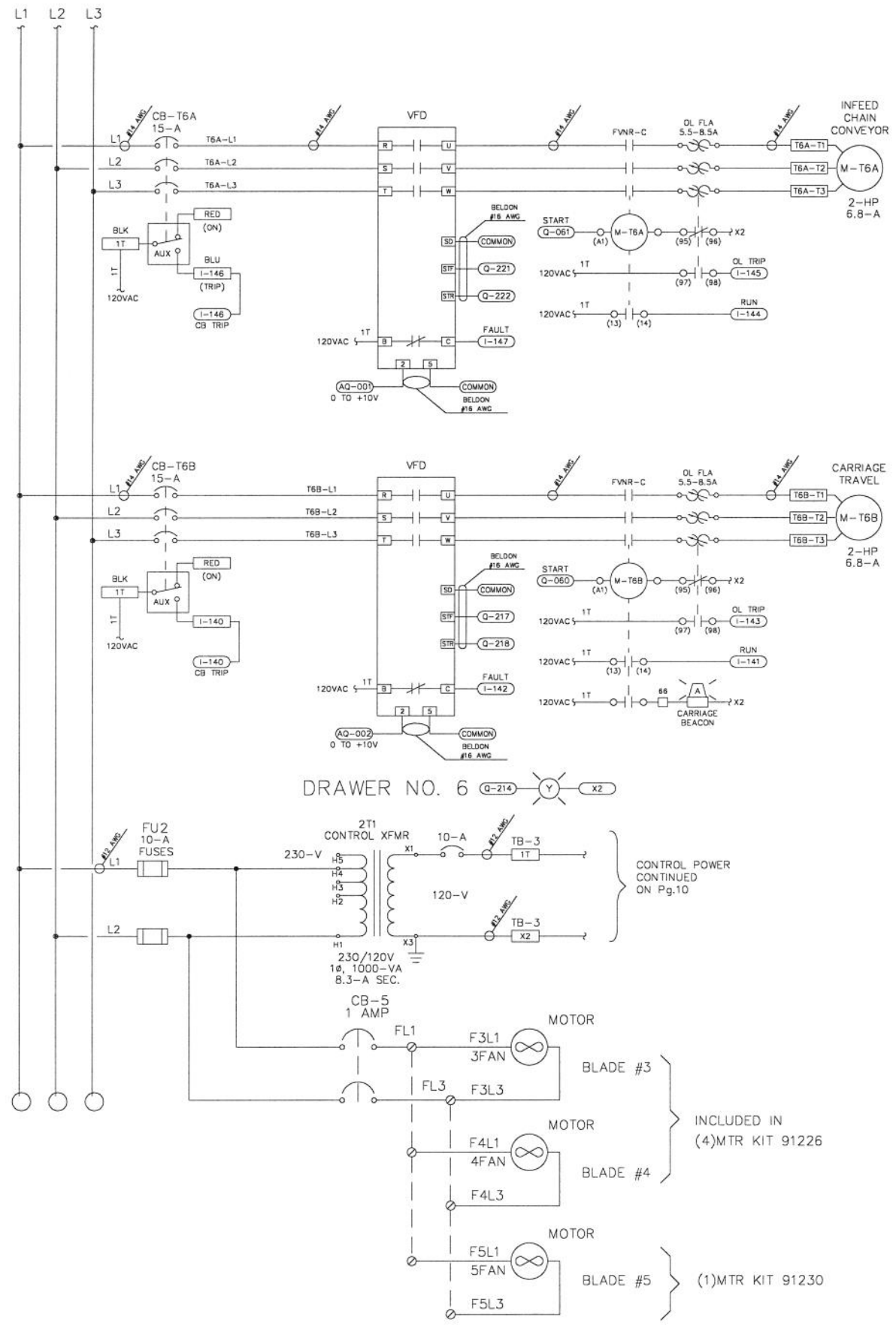


CONTINUED FROM  
DWG. U.S.A. SAW-12



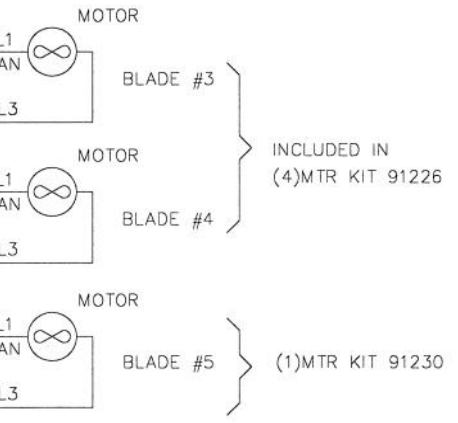
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TRAVELLING END CONTROL PANEL



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BACK PANEL LEFT SIDE

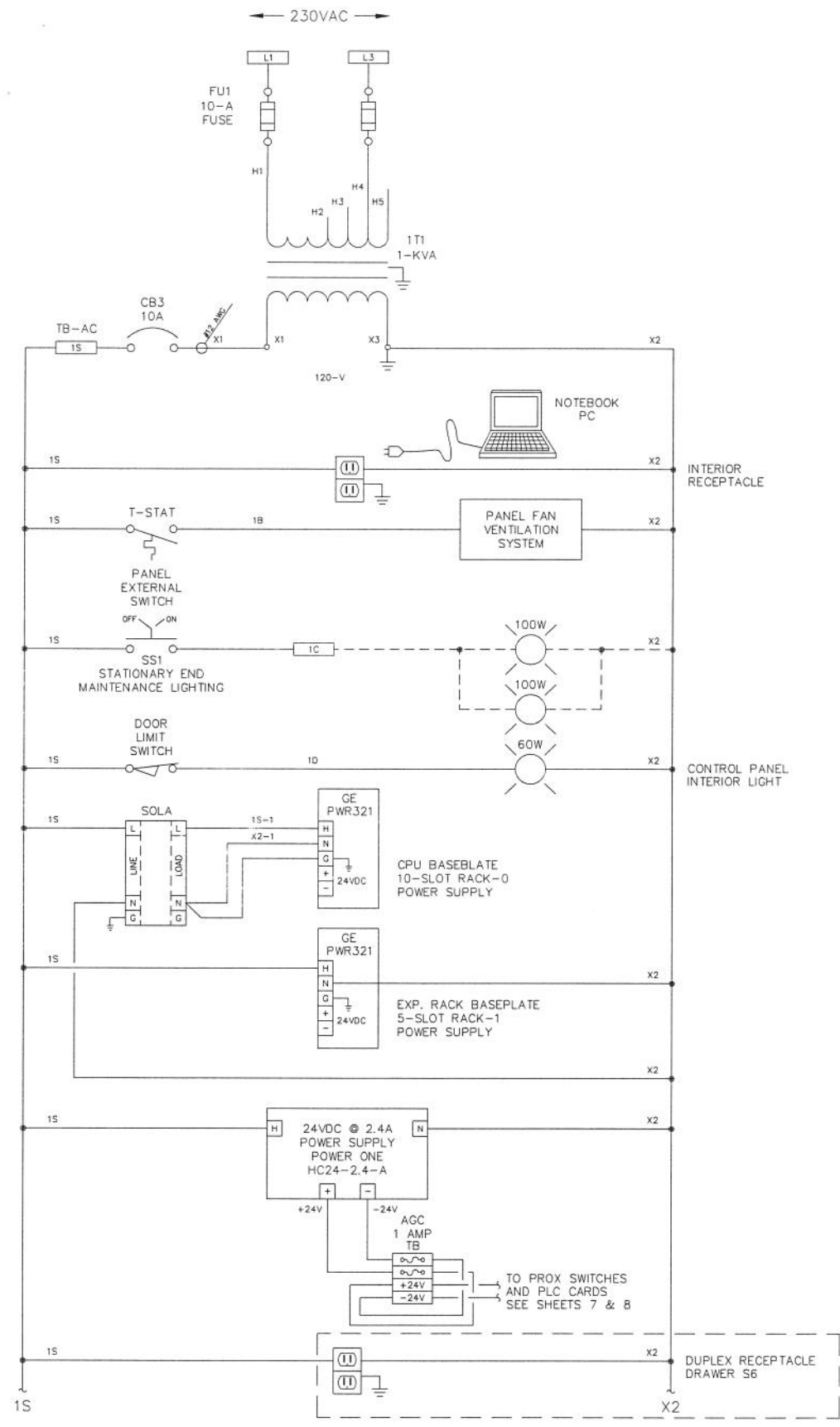


INCLUDED IN  
(4)MTR KIT 91226

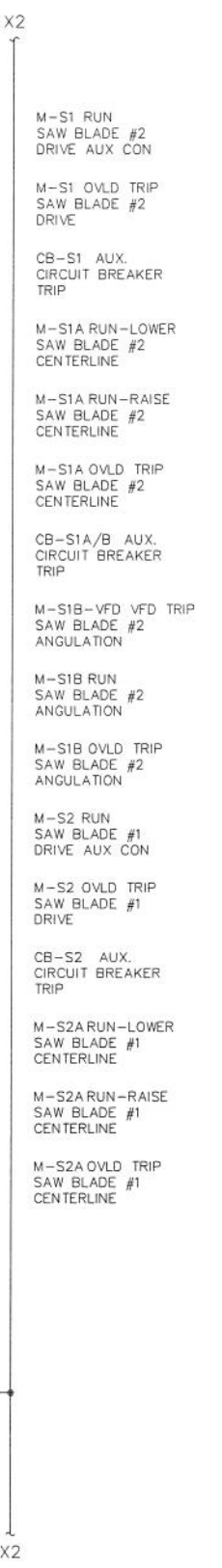
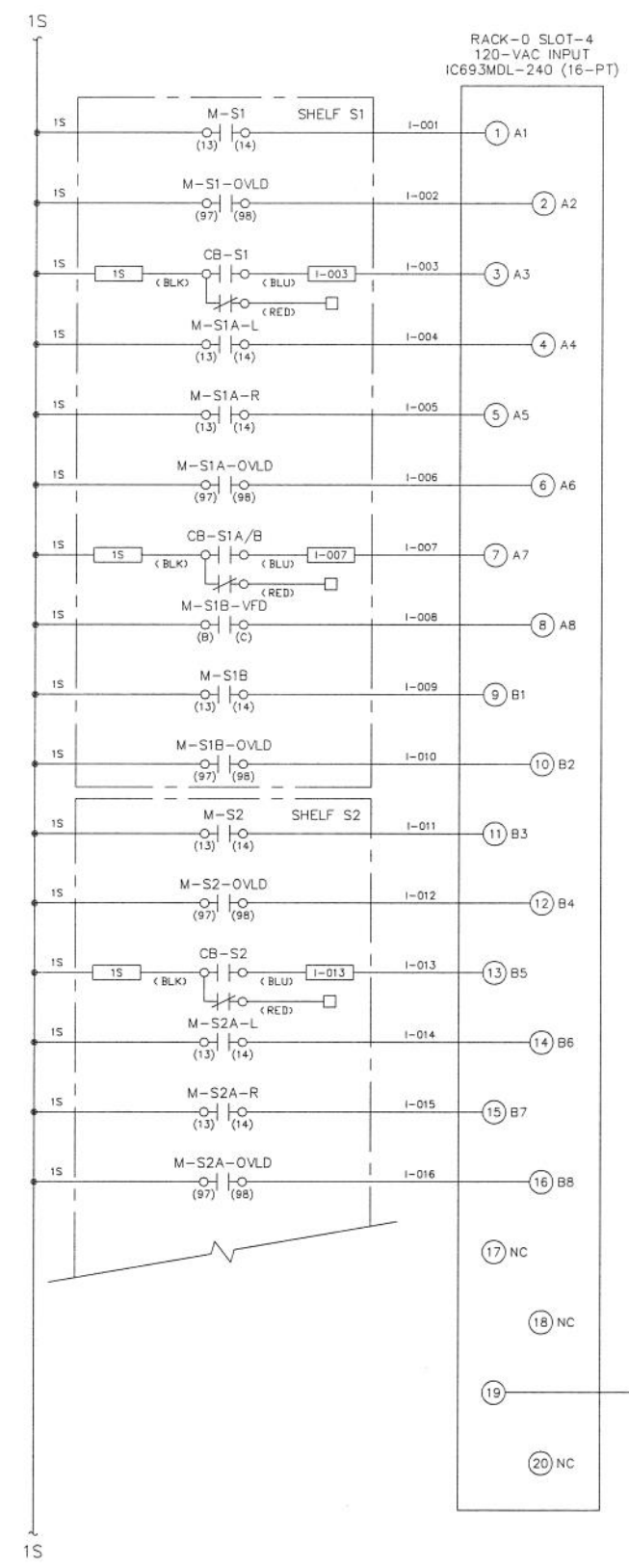
(1)MTR KIT 91230

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		NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	

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UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:						
FRACTIONS	±	1/32	ANGLES	±	1°	
DECIMALS	±	.010	TOTAL RUNOUT	±	250	
MACHINED SURFACES NOT SPECIFIED						
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APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V			
06/24/99	5/14/01	B.L.(MWA)	SCALE	PAGE	D92034	
			1 : 1	5 OF 15		



STATIONARY END CONTROL PANEL



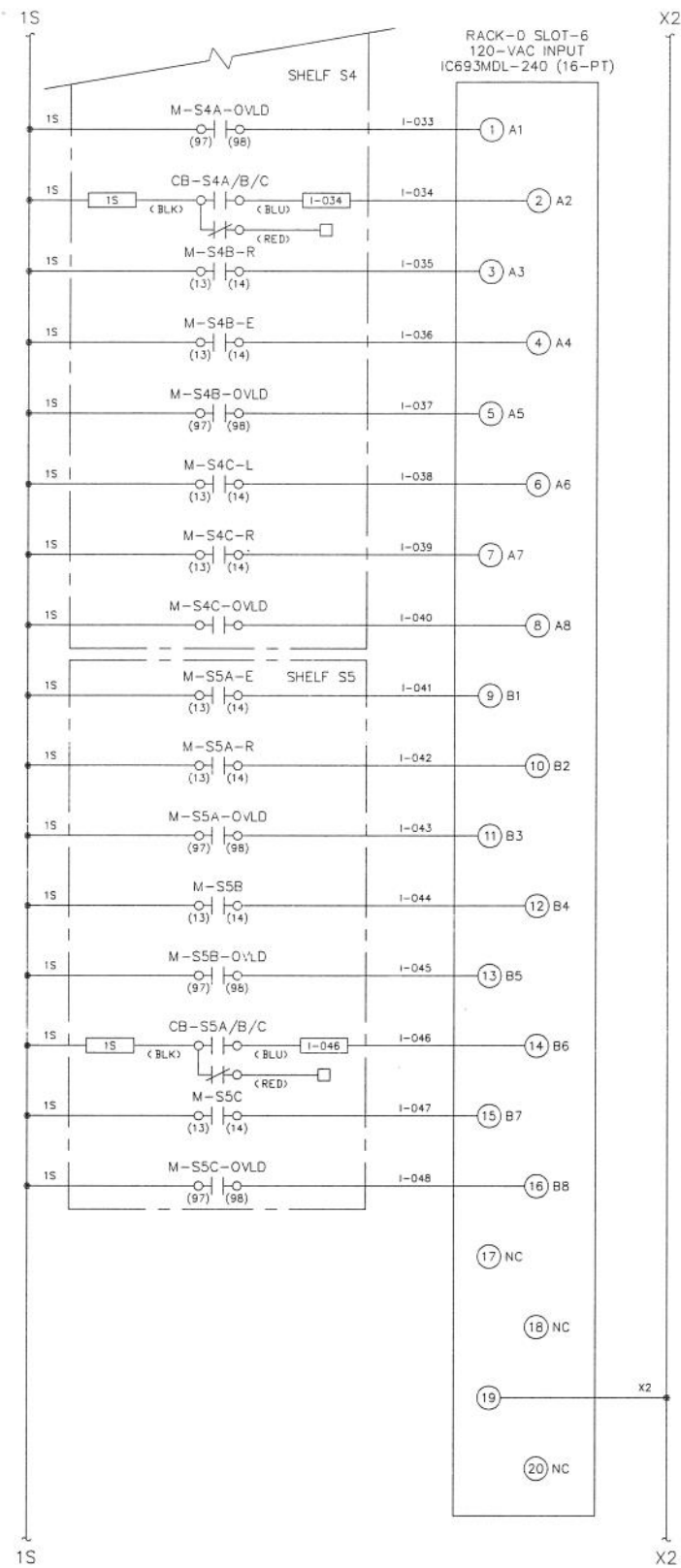
"OPTIONAL" 6 BLADE SAWS ONLY

- TERMINAL NOTES:
- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
  - TERMINALS LOCATED IN TRAVELING END CONTROL PANEL
  - TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	TAP DEPTH	REMARKS
A	X	X	X	X

ITEM	QTY	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:						
FRACTIONS		ANGLES		TOTAL RUNOUT		
DECIMALS		MACHINED SURFACES		250		
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APPROVED			DATE			
CHECKED			DATE			
DRAWN			DATE			
FINISH PAINT			SCALE			
PAGE			REV.			

**MiTek Industries, Inc.**  
 4203 SHORELINE DRIVE, EARTH CITY, MD. 21045  
 001031 64  
 X X  
 X X  
 CYBERSAW, SCHEMATIC, US, 230V  
 B.L.(MWA) 06/24/99 NA 1 : 1 6 of 15 D92034 1



M-S4A OVLD TRIP  
INFEEED CONVEYOR  
HORIZ. ADJUSTMENT

CB-S4A/B/C AUX.  
CIRCUIT BREAKER  
TRIP

M-S4B-R RUN-RETRACT  
HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT

M-S4B-E RUN-EXTEND  
HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT

M-S4B OVLD TRIP  
HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT

M-S4C-L RUN-LOWER  
HOLD DOWN CONVEYOR  
VERTICAL ADJUSTMENT

M-S4C-R RUN-RAISE  
HOLD DOWN CONVEYOR  
VERTICAL ADJUSTMENT

M-S4C OVLD TRIP  
HOLD DOWN CONVEYOR  
R/L ADJUSTMENT

M-S5A-E RUN-EXTEND  
LUMBER STOP

M-S5A-R RUN-RETRACT  
LUMBER STOP

M-S5A OVLD TRIP  
LUMBER STOP

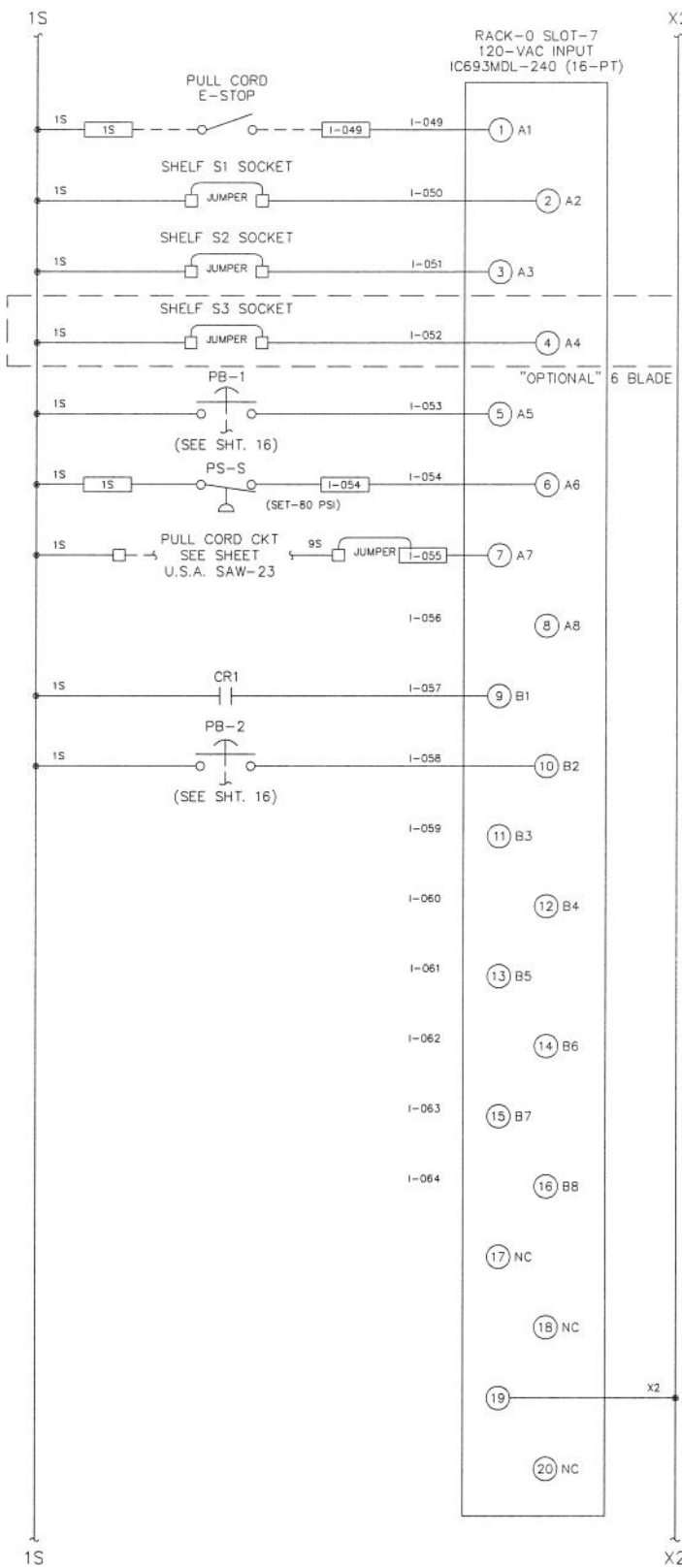
M-S5B RUN  
SCRAP BELT  
CONVEYOR DRIVE AUX CON

M-S5B OVLD TRIP  
SCRAP BELT  
CONVEYOR DRIVE

CB-S5A/B/C AUX.  
CIRCUIT BREAKER  
TRIP

M-S5C RUN  
SCRAP BELT TAKEAWAY  
CONVEYOR AUX CON

M-S5C OVLD TRIP  
SCRAP BELT  
TAKEAWAY CONVEYOR



PULL CORD  
E-STOP

SHELF S1 SOCKET

SHELF S2 SOCKET

SHELF S3 SOCKET

PB-1  
(SEE SHT. 16)

PS-S  
(SET-80 PSI)

PULL CORD CKT  
SEE SHEET  
U.S.A. SAW-23

CR1

PB-2  
(SEE SHT. 16)

EMERGENCY STOP  
PULL CORD  
SAFETY SWITCH

BLADE NO. 2 (S1)  
INSTALLED

BLADE NO. 1 (S2)  
INSTALLED

BLADE NO. 6 (S3)  
INSTALLED

"OPTIONAL" 6 BLADE  
SAWS ONLY

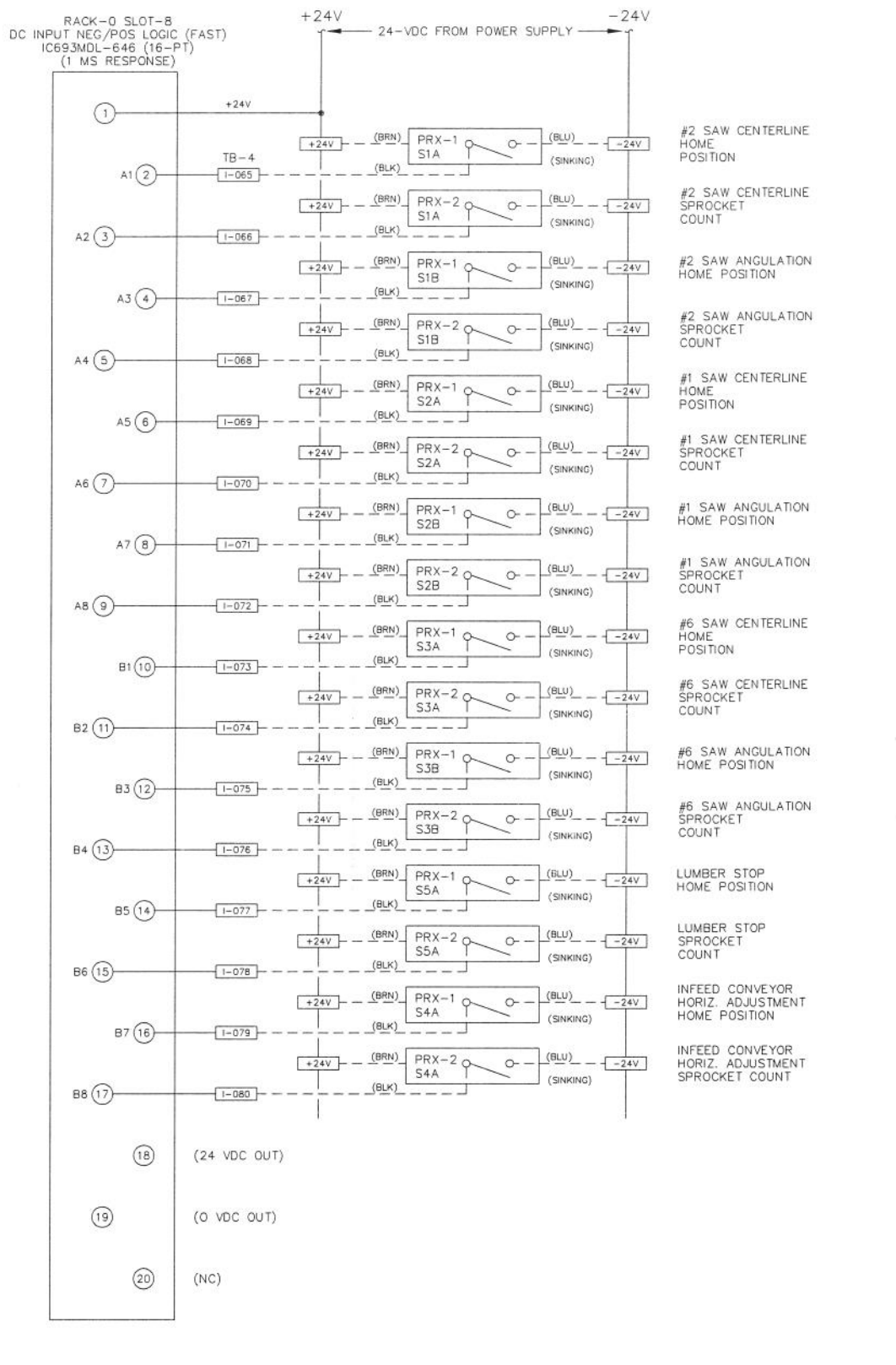
CONTROL PANEL  
E-STOP

INSUFFICIENT  
AIR BRAKE  
PRESSURE

STATIONARY END  
CONTROL POWER  
VERIFY

STATIONARY END  
SYSTEM ENABLE

STATIONARY END  
CONTROL PANEL  
SIDE MTD E-STOP



RACK-0 SLOT-8  
DC INPUT NEG/POS LOGIC (FAST)  
IC693MDL-646 (16-PT)  
(1 MS RESPONSE)

#2 SAW CENTERLINE  
HOME POSITION

#2 SAW CENTERLINE  
SPROCKET COUNT

#2 SAW ANGLUATION  
HOME POSITION

#2 SAW ANGLUATION  
SPROCKET COUNT

#1 SAW CENTERLINE  
HOME POSITION

#1 SAW CENTERLINE  
SPROCKET COUNT

#1 SAW ANGLUATION  
HOME POSITION

#1 SAW ANGLUATION  
SPROCKET COUNT

#6 SAW CENTERLINE  
HOME POSITION

#6 SAW CENTERLINE  
SPROCKET COUNT

#6 SAW ANGLUATION  
HOME POSITION

#6 SAW ANGLUATION  
SPROCKET COUNT

LUMBER STOP  
HOME POSITION

LUMBER STOP  
SPROCKET COUNT

INFEEED CONVEYOR  
HORIZ. ADJUSTMENT  
HOME POSITION

INFEEED CONVEYOR  
HORIZ. ADJUSTMENT  
SPROCKET COUNT

(24 VDC OUT)

(0 VDC OUT)

(NC)

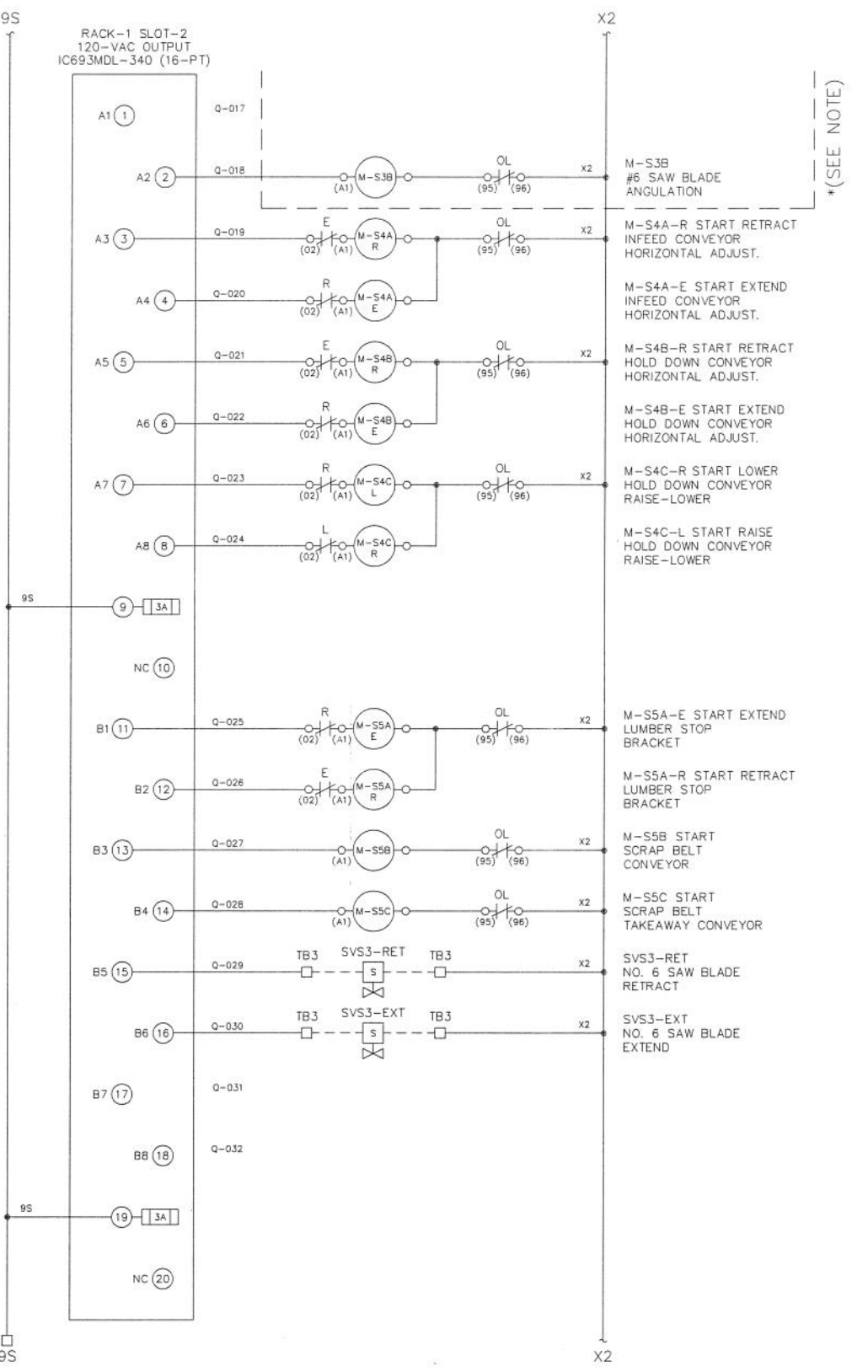
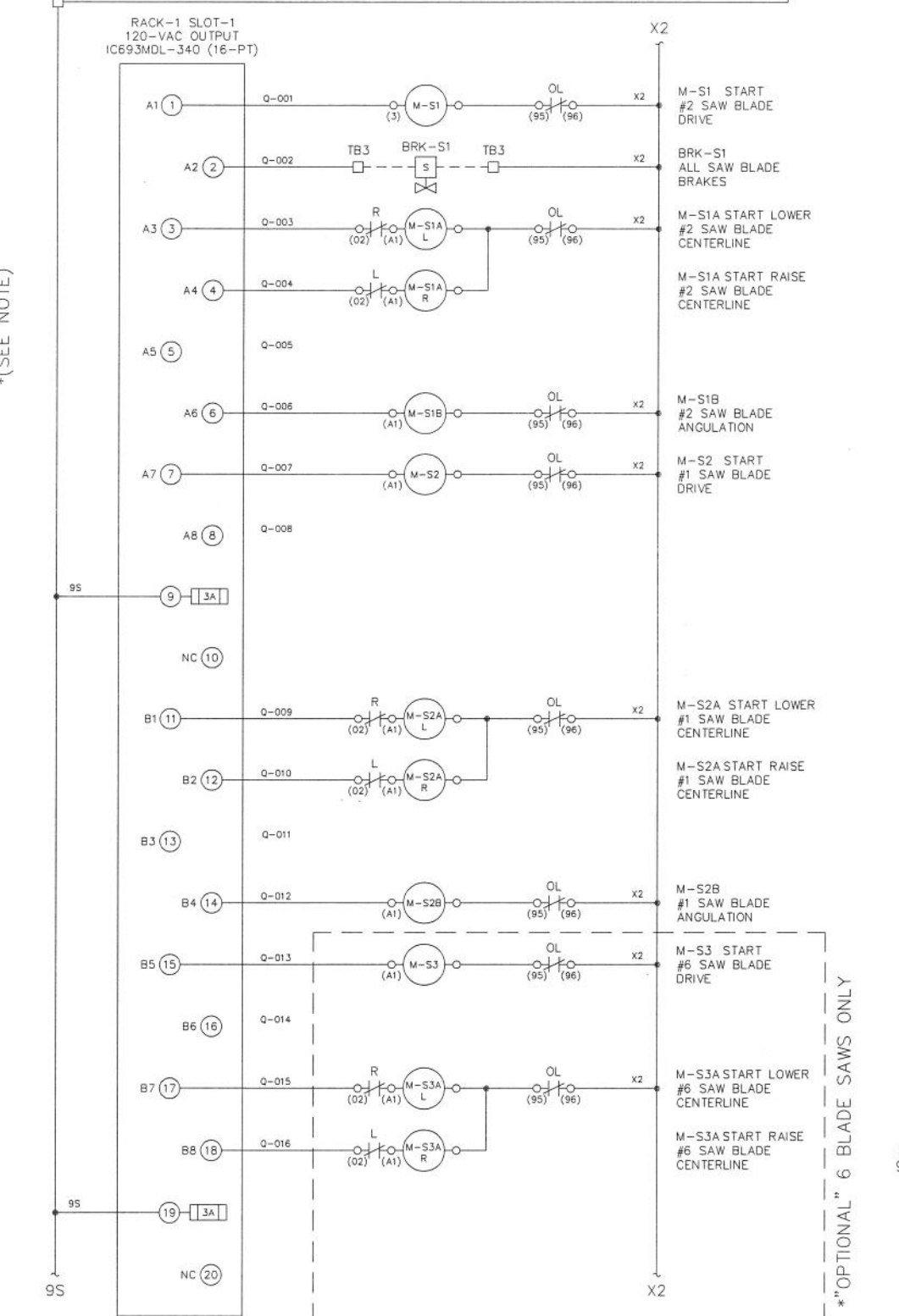
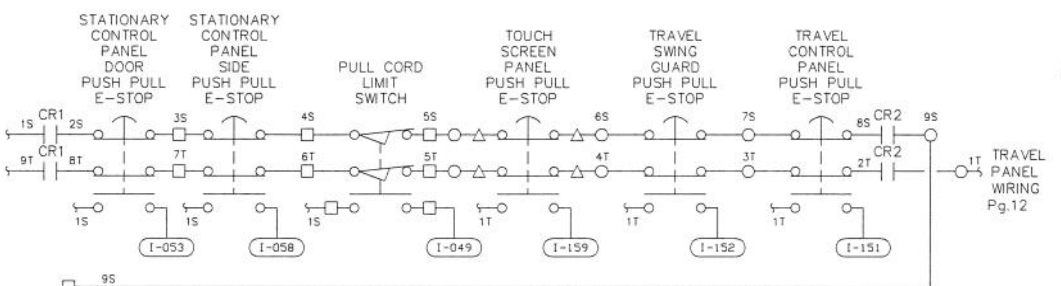
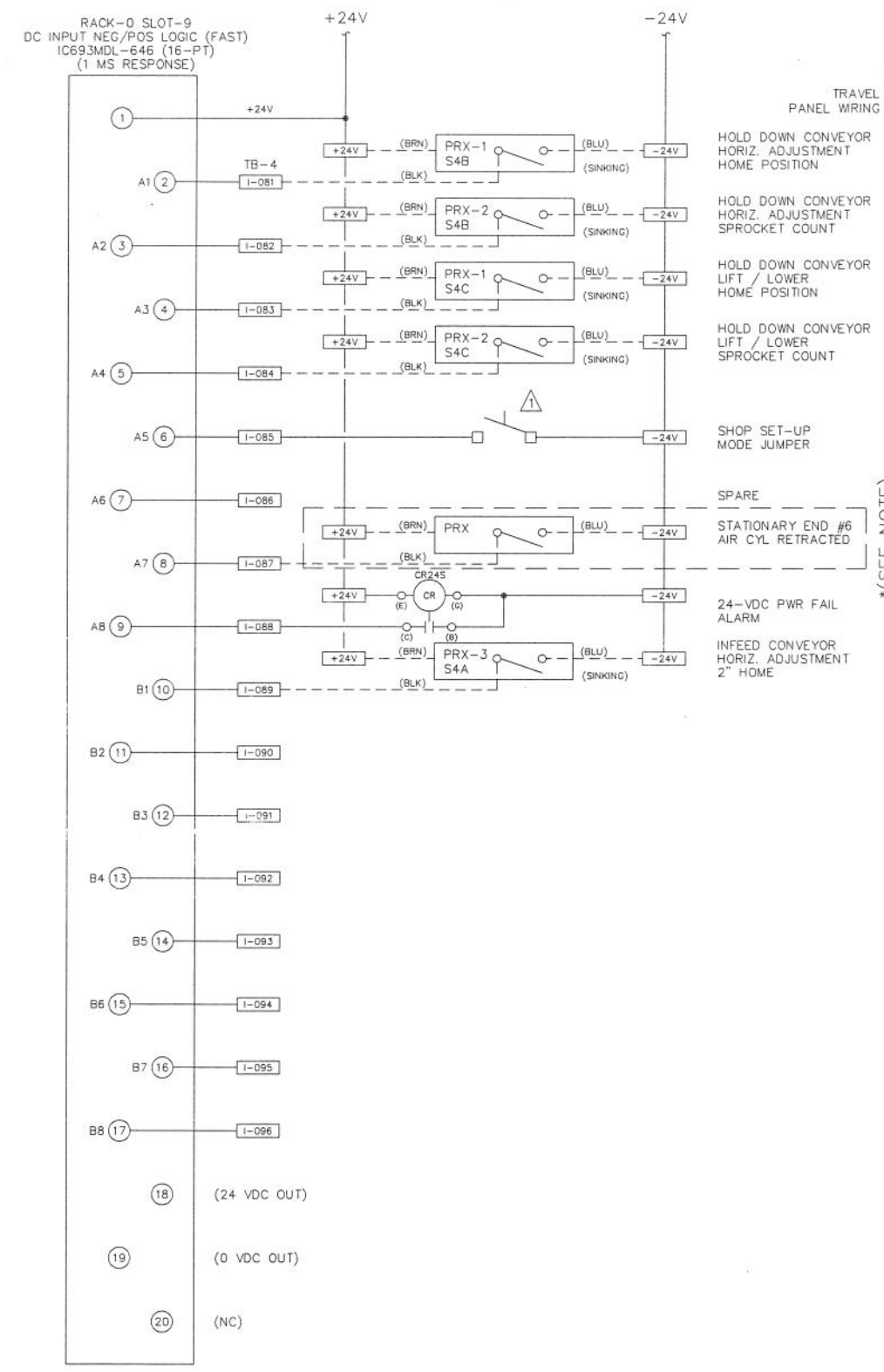
STATIONARY END CONTROL PANEL

TERMINAL NOTES:

- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
- TERMINALS LOCATED IN TRAVELING END CONTROL PANEL
- TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG NO./PART NO.
<p>UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:</p> <p>ANGLES: ± 1°</p> <p>FRACTIONS: ± 1/32</p> <p>DECIMALS: ± .010</p> <p>TOTAL ROUNDUP: 250</p> <p>MACHINED SURFACES NOT SPECIFIED</p>						
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<p>MiTek Industries, Inc. 001031 65</p> <p>4203 SHORELINE DRIVE, EARTH CITY, MO. 63045</p>						
APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V			
CHECKED	DATE	DRAWN	FINISH PAINT	SCALE	PAGE	REV.
VDC	3/4/01	B.L.(MWA)	06/24/99	NA	7 of 15	D92034



⚠ SET-UP MODE JUMPER - WHEN JUMPER IS REMOVED, PROGRAMMED TRAVEL LIMITS FOR ALL DRIVES EQUIPPED WITH HOME POSITION DETECTORS ARE DISABLED AND ALL AUTO MODE OPERATIONS ARE DENIED. THIS FEATURE IS PROVIDED TO ALLOW INITIAL AXIS POSITIONING DURING SHOP SET-UP OR IN THE EVENT OF COMPUTER CPU REPLACEMENT.

TERMINAL NOTES:  
 ▲ TERMINALS LOCATED IN TOUCHSCREEN PANEL  
 ○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL  
 □ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

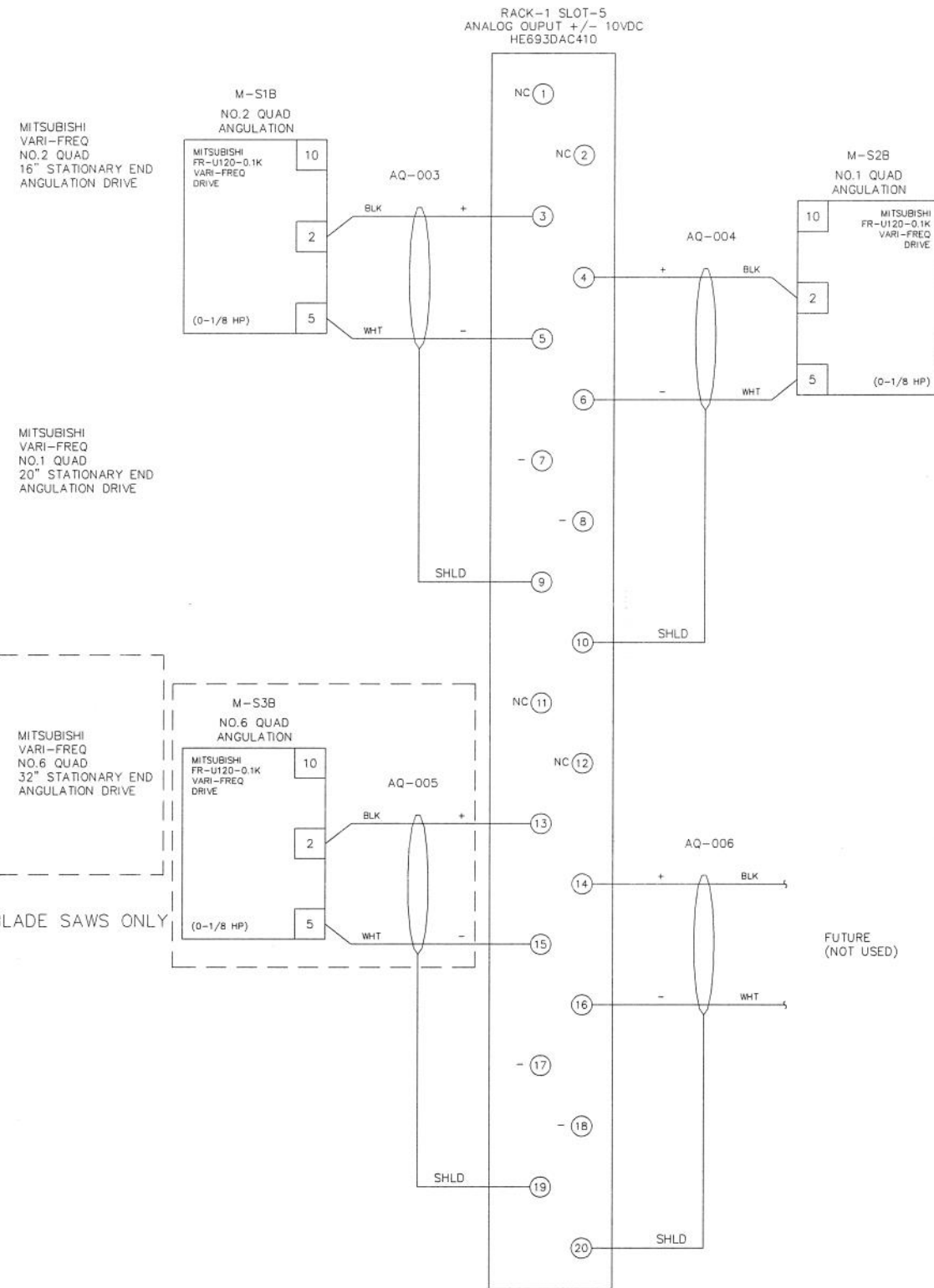
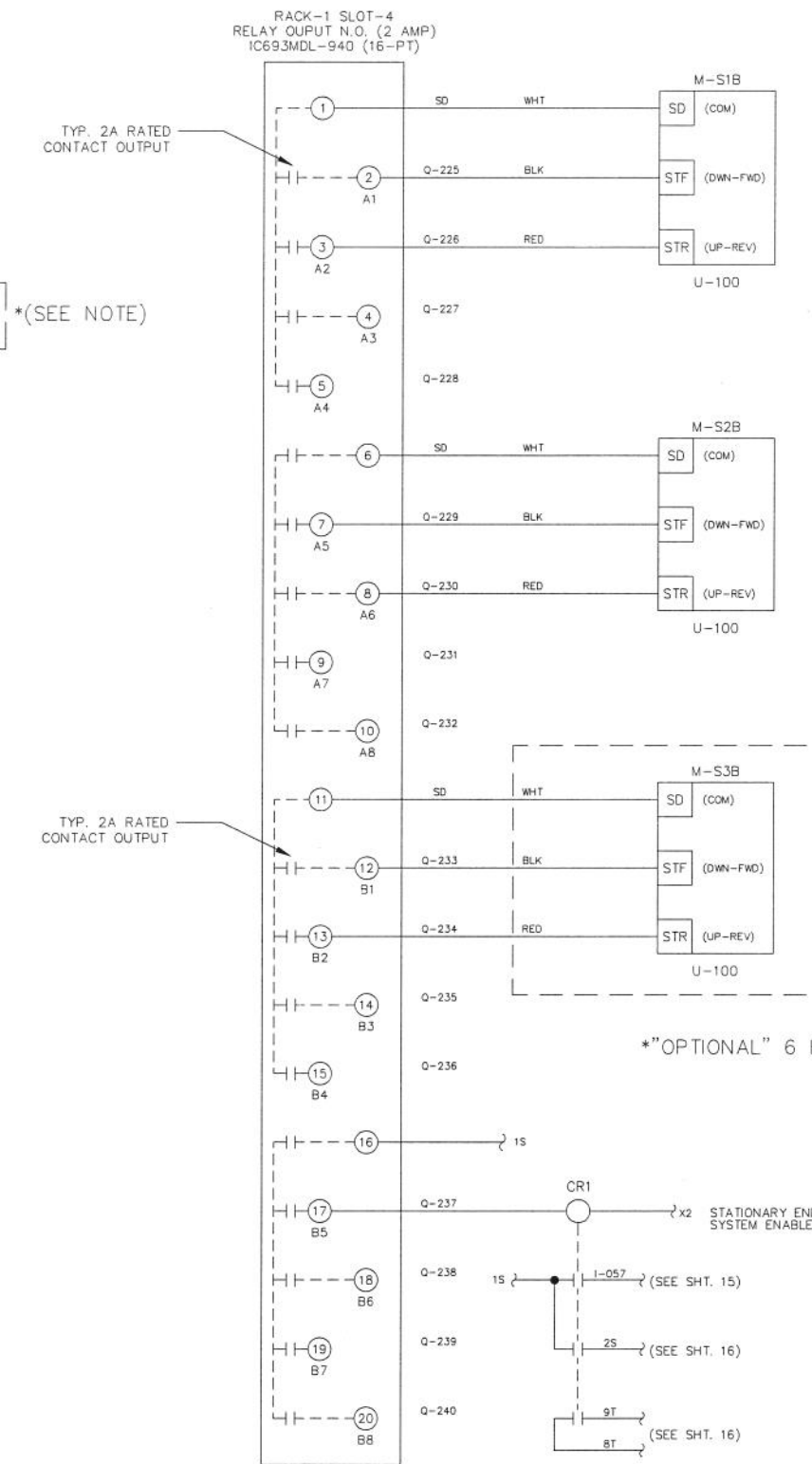
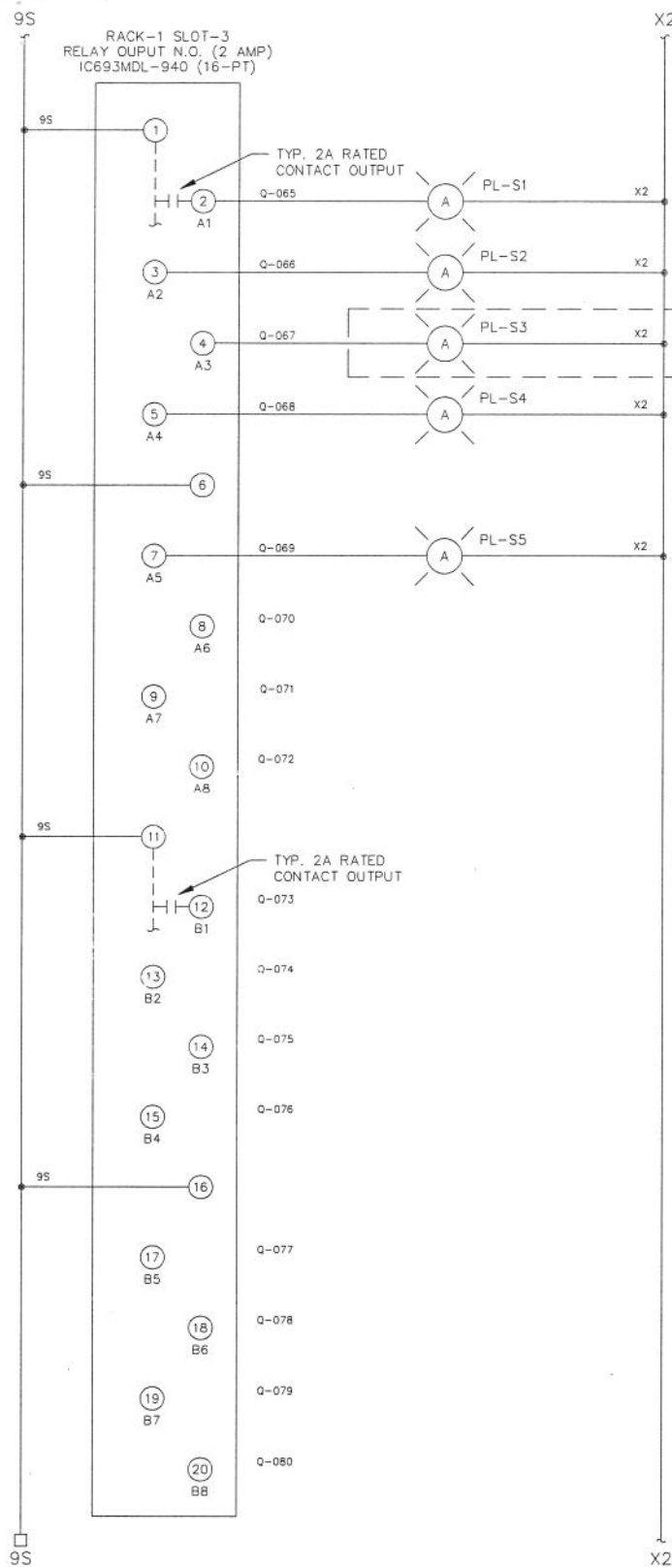
\*OPTIONAL # 6 BLADE SAWS ONLY

STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:						
FRACTIONS		± 1/32	TOTAL RUNOUT		± .010	250
DECIMALS		± .010	MACHINED SURFACES		NOT SPECIFIED	
APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V			
CHECKED	DATE	DRAWN	FINISH PAINT	SCALE	PAGE	REV.
VDC	3/4/00	B.L.(MWA)	NA	1 : 1	8 of 15	D92034

MiTek Industries, Inc. 4253 SHORELINE DRIVE, EARTH CITY, MO. 63045



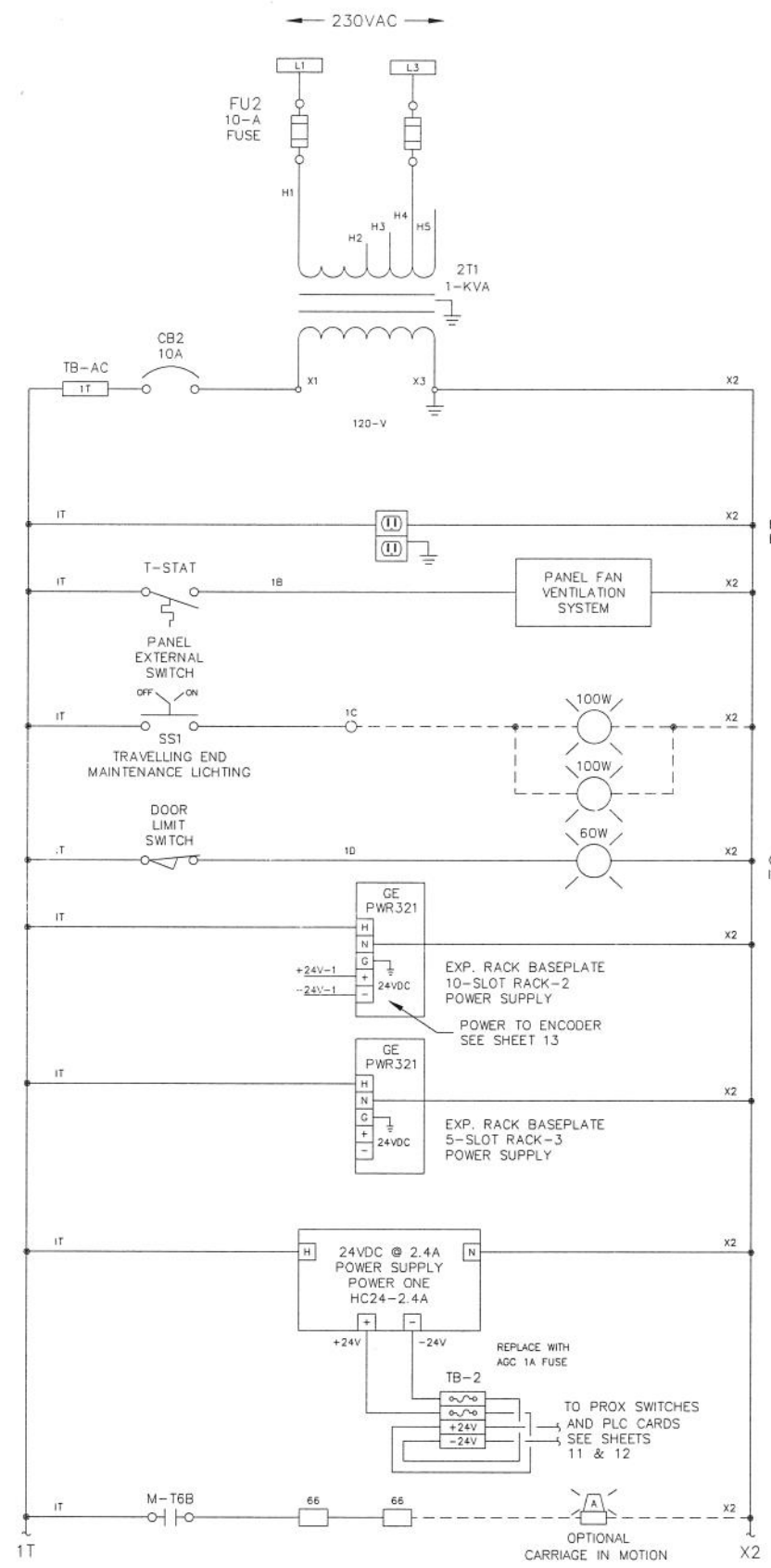
### STATIONARY END CONTROL PANEL

#### TERMINAL NOTES:

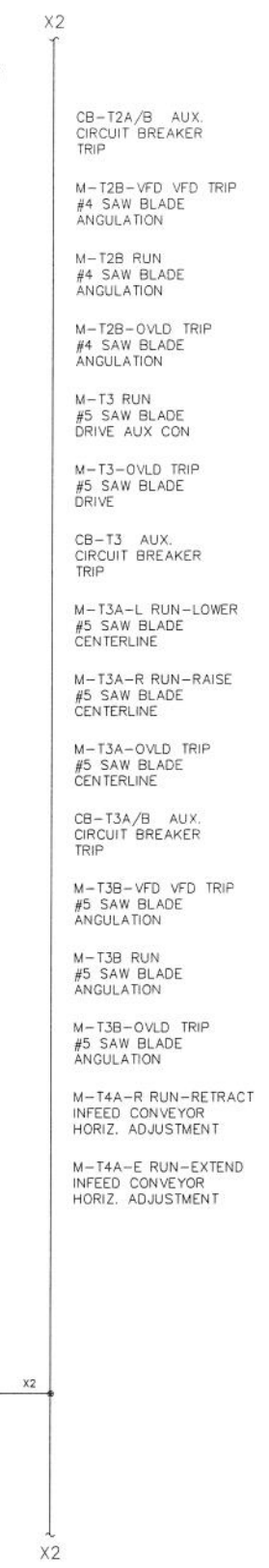
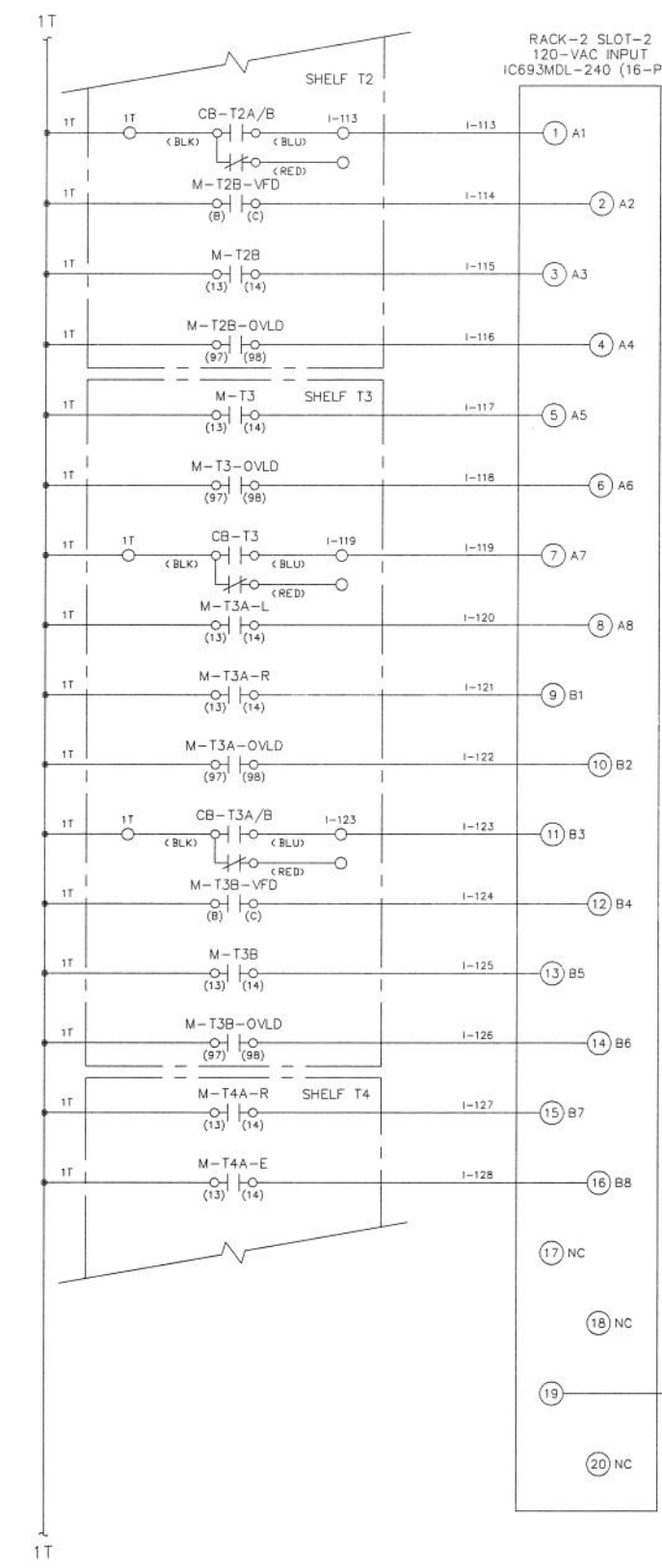
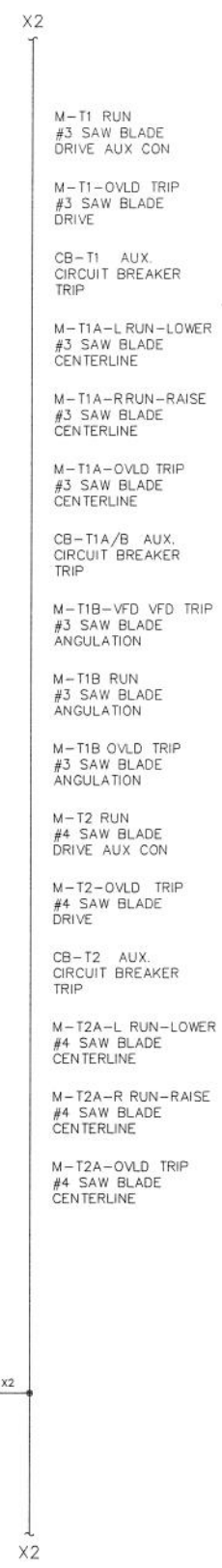
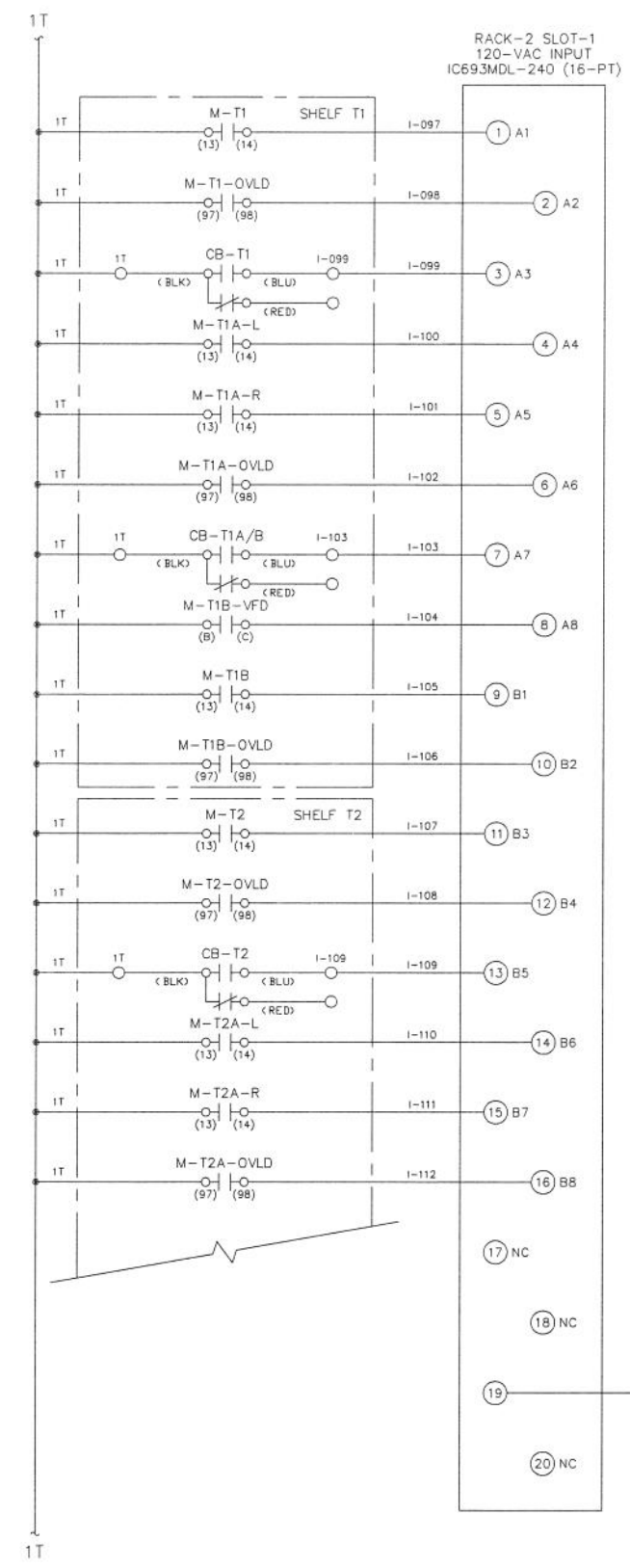
- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
- TERMINALS LOCATED IN TRAVELING END CONTROL PANEL
- TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.														
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:																				
FRACTIONS		ANGLES		TOTAL RUNOUT																
DECIMALS		250		MACHINED SURFACES NOT SPECIFIED																
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APPROVED	DATE	MFG.	DATE	FINISH PAINT	SCALE	PAGE														
VOC	5/4/01	B.L.(MWA)	06/24/99	NA	1 : 1	9 of 15														
<b>CYBERSAW SCHEMATIC, US, 230V</b> MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045						001031 67 87														
D92034						REV. 1														



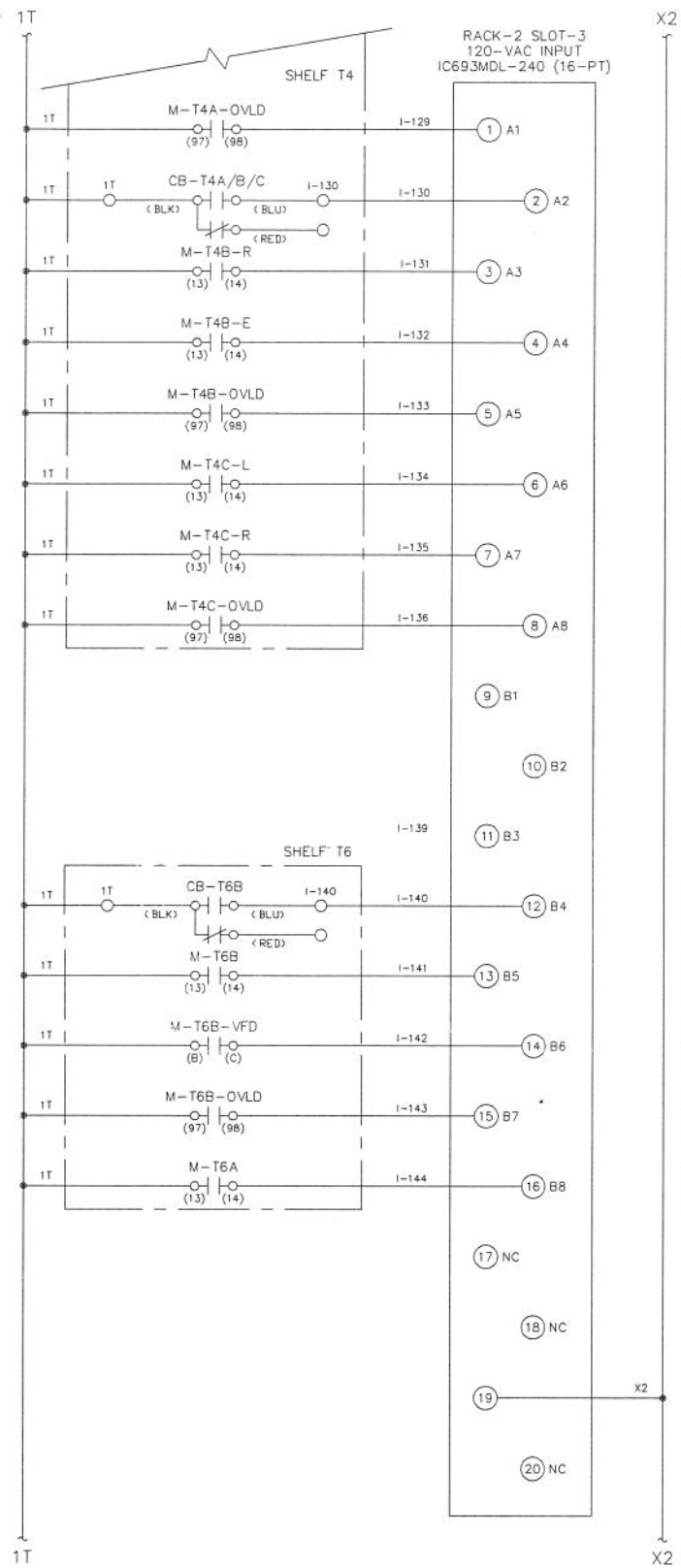
TRAVELLING END CONTROL PANEL



TERMINAL NOTES:

- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
- TERMINALS LOCATED IN TRAVELLING END CONTROL PANEL
- TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
<p>UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN THE FOLLOWING TOLERANCES:</p> <p>FRACTIONS: ± 1/32 ANGLES: ± 1°</p> <p>DECIMALS: ± .010 TOTAL RUNOUT: ± .005 MACHINED SURFACES NOT SPECIFIED: 250</p>						
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<p>APPROVED: <i>TBH</i> DATE: 06/24/99</p>			<p>MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045</p>			
<p>CHECKED: <i>VDC</i> DATE: 5/4/00</p>			<p>CYBERSAW, SCHEMATIC, US, 230V</p>			
<p>KEY: A X NO. OF HOLES DIA. DEPTH DIA. DEPTH</p>			<p>SCALE: 1 : 1 PAGE: 10 OF 15 REV. 1</p>			



M-T4A-OVLD TRIP  
INFEED CONVEYOR  
HORIZ. ADJUSTMENT

CB-T4A/B/C AUX.  
CIRCUIT BREAKER  
TRIP

M-T4B-R RUN-RETRACT  
HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT

M-T4B-E RUN-EXTEND  
HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT

M-T4B-OVLD TRIP  
HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT

M-T4C-L RUN-LOWER  
HOLD DOWN CONVEYOR  
RAISE-LOWER

M-T4C-R RUN-RAISE  
HOLD DOWN CONVEYOR  
RAISE-LOWER

M-T4C-OVLD TRIP  
HOLD DOWN CONVEYOR  
RAISE-LOWER

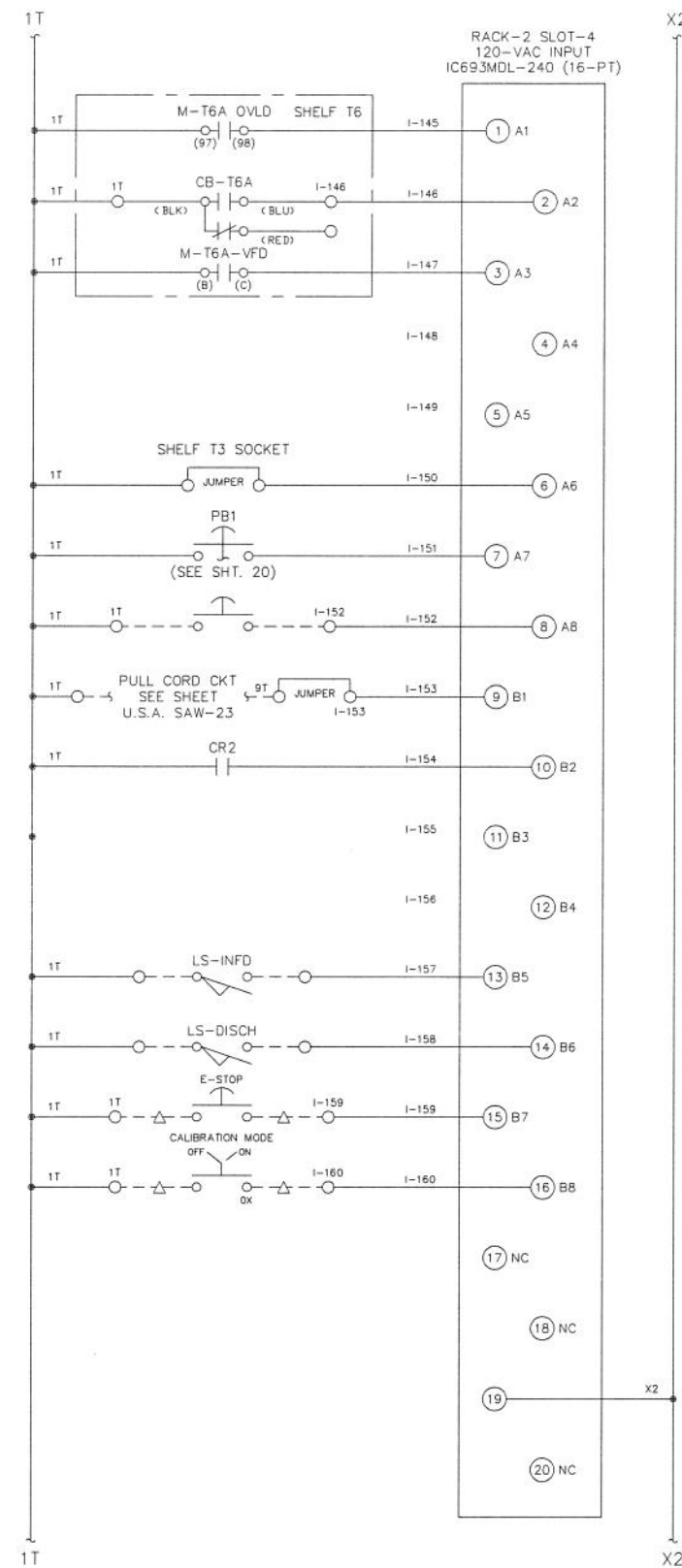
CB-T6B  
CKT. BRKR  
TRIP CARRIAGE

M-T6B  
CARRIAGE RUN  
CONTACTOR

M-T6B-VFD  
CARRIAGE  
VFD FAULT TRIP

M-T6B-OVLD  
CARRIAGE  
OVLD TRIP

M-T6A  
INFEED CONVEYOR  
RUN CONTACTOR



M-T6A  
INFEED CONVEYOR  
OVLD TRIP

CB-T6A  
CKT. BRKR  
TRIP INFEED

INFEED CONVEYOR  
VFD FAULT  
TRIP

SPARE

SPARE

BLADE NO. 5 (T3)  
INSTALLED

CONTROL PANEL  
E-STOP

SWING GUARD  
EMERGENCY STOP

TRAVELLING END  
CONTROL POWER  
VERIFY

CARRIAGE END  
SYSTEM ENABLE

SPARE

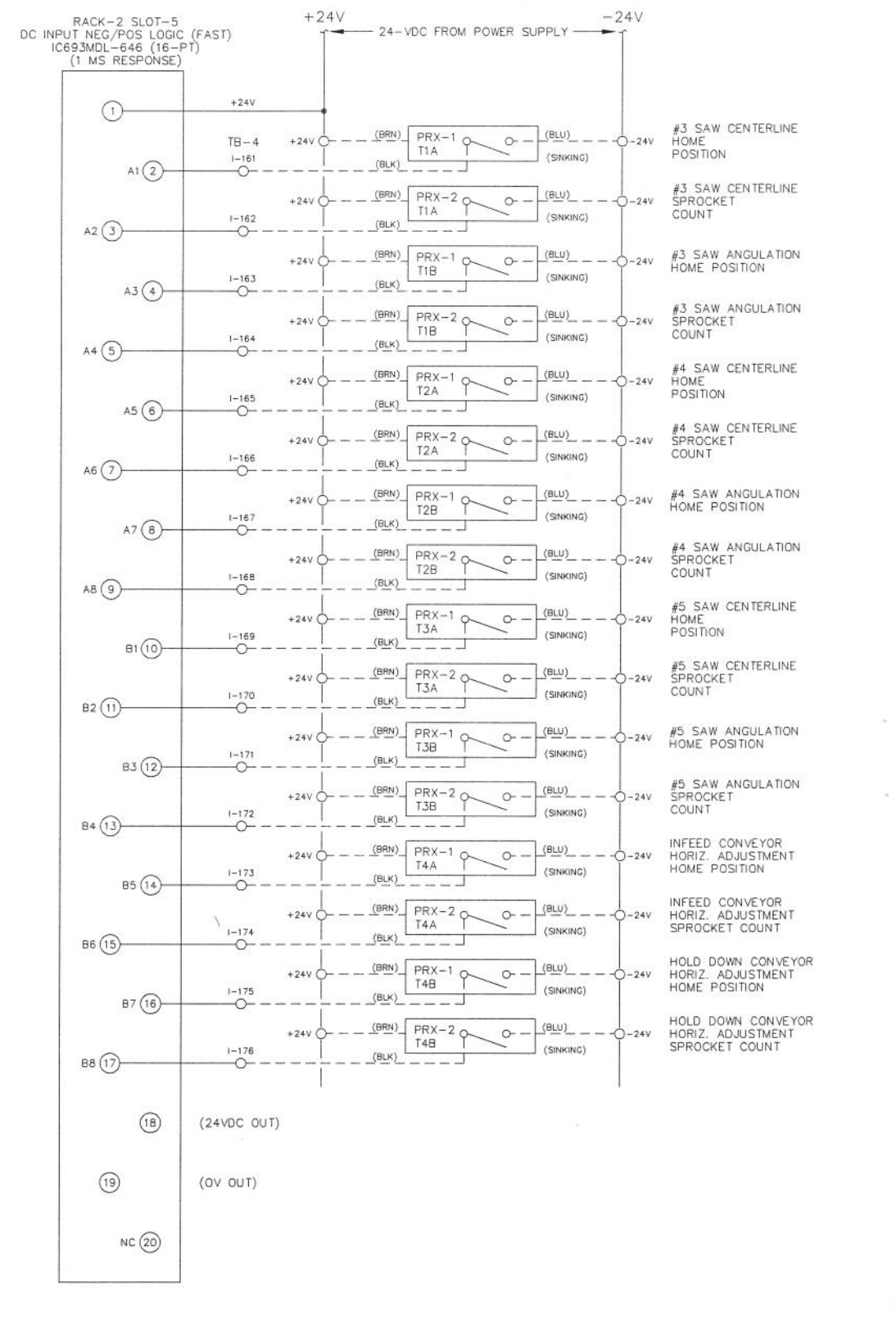
SPARE

INFEED LUMBER COUNT  
LIMIT SWITCH

OUTBOUND  
LUMBER  
LIMIT SWITCH

TOUCH SCREEN  
ENCLOSURE  
E-STOP

TOUCH SCREEN  
ENCLOSURE  
CALIBRATION MODE  
OFF-ON KEY-SWITCH



#3 SAW CENTERLINE  
HOME  
POSITION

#3 SAW CENTERLINE  
SPROCKET  
COUNT

#3 SAW ANGLUATION  
HOME POSITION

#3 SAW ANGLUATION  
SPROCKET  
COUNT

#4 SAW CENTERLINE  
HOME  
POSITION

#4 SAW CENTERLINE  
SPROCKET  
COUNT

#4 SAW ANGLUATION  
HOME POSITION

#4 SAW ANGLUATION  
SPROCKET  
COUNT

#5 SAW CENTERLINE  
HOME  
POSITION

#5 SAW CENTERLINE  
SPROCKET  
COUNT

#5 SAW ANGLUATION  
HOME POSITION

#5 SAW ANGLUATION  
SPROCKET  
COUNT

INFEED CONVEYOR  
HORIZ. ADJUSTMENT  
HOME POSITION

INFEED CONVEYOR  
HORIZ. ADJUSTMENT  
SPROCKET COUNT

HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT  
HOME POSITION

HOLD DOWN CONVEYOR  
HORIZ. ADJUSTMENT  
SPROCKET COUNT

(24VDC OUT)

(0V OUT)

TRAVELLING END CONTROL PANEL

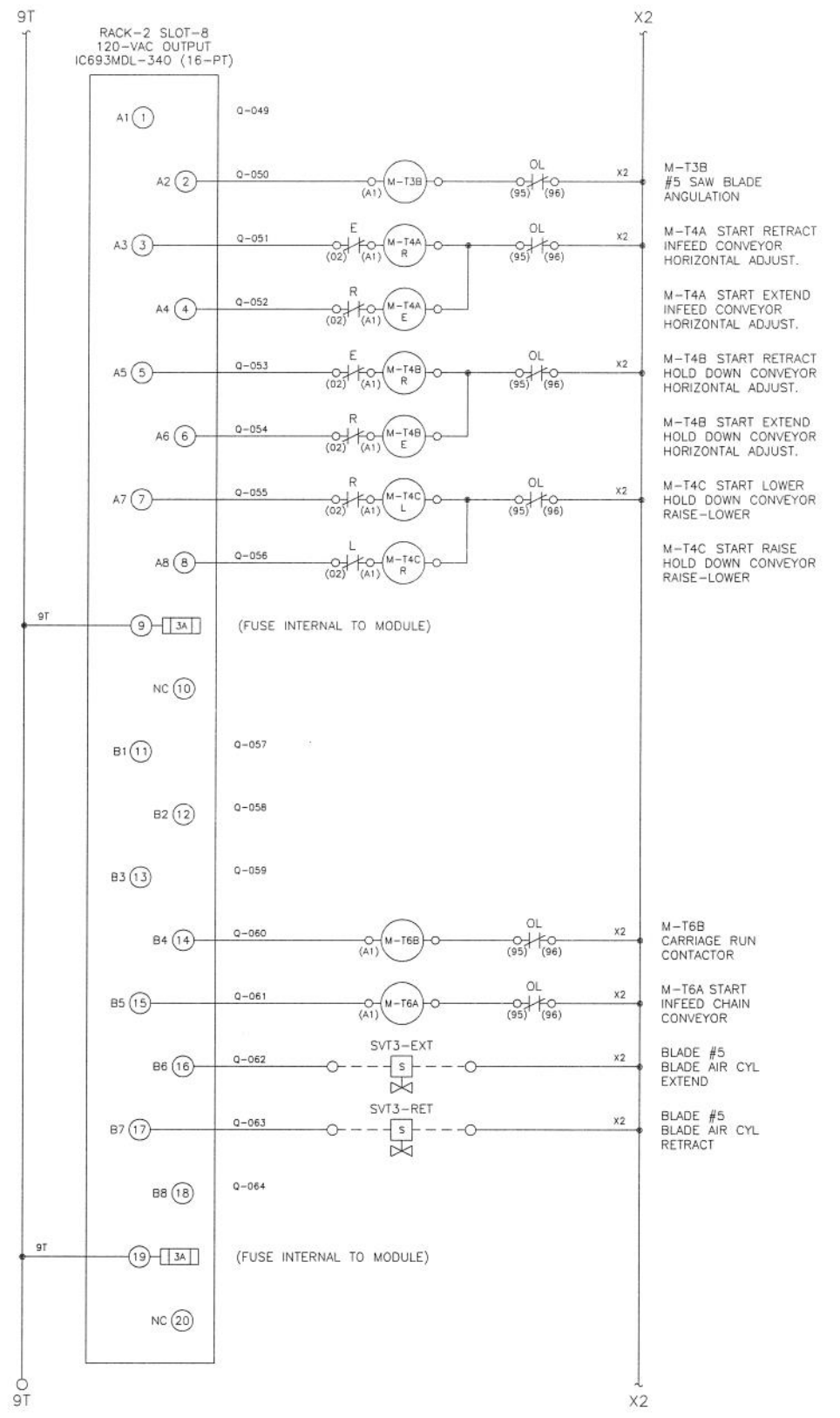
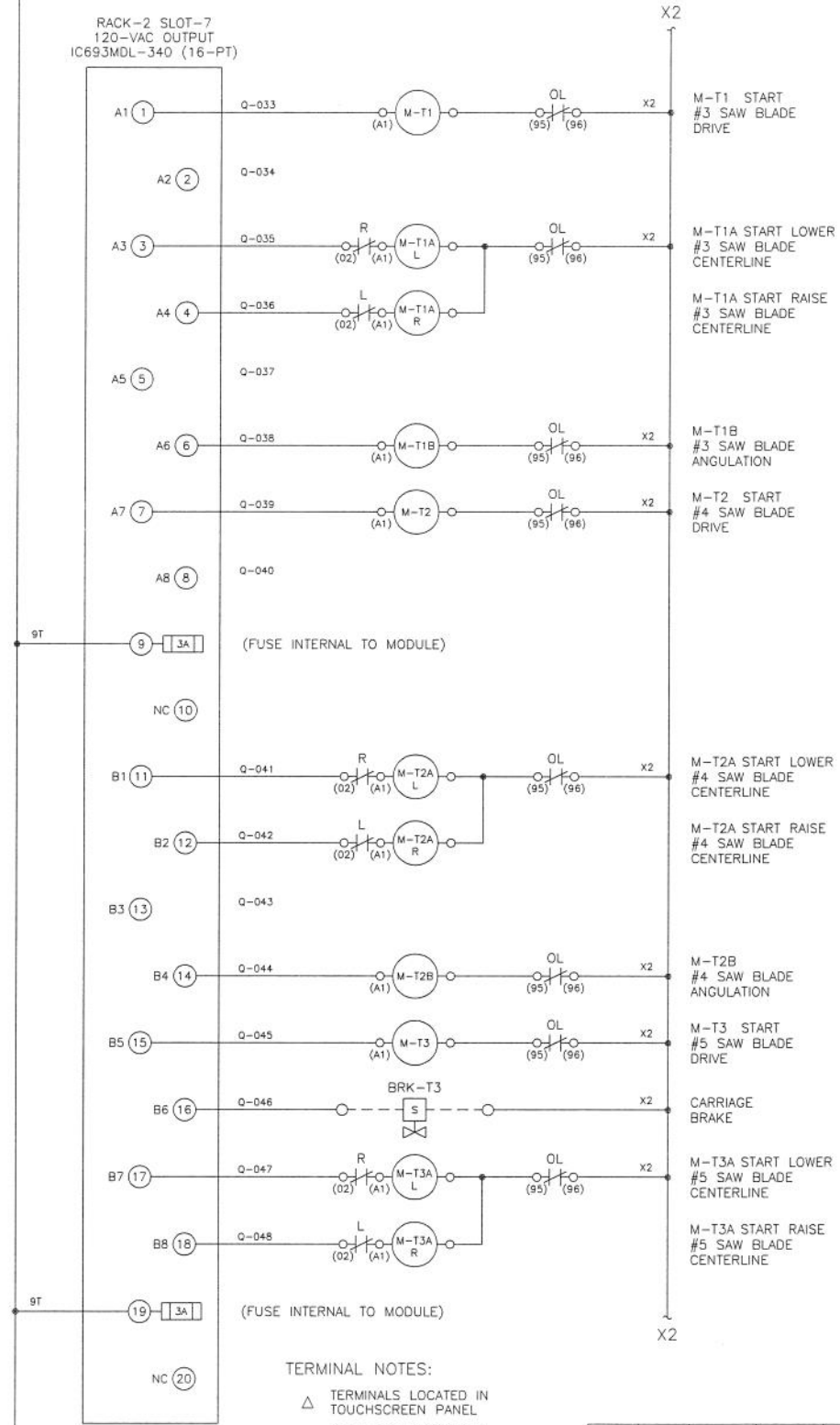
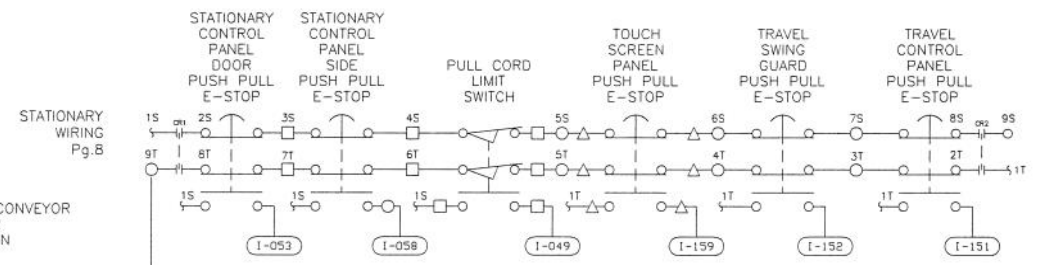
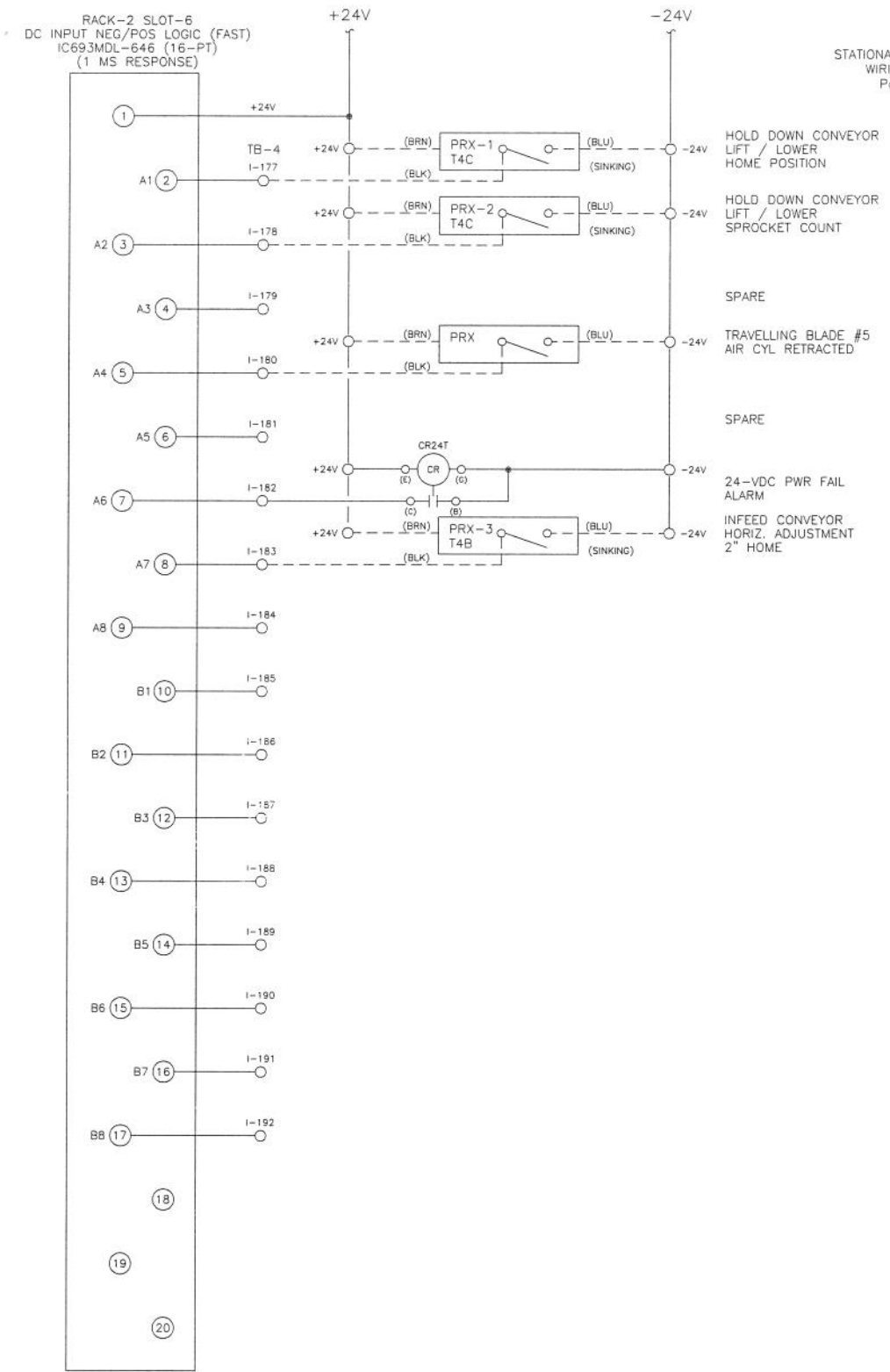
TERMINAL NOTES:

- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
- TERMINALS LOCATED IN TRAVELLING END CONTROL PANEL
- TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN THE FOLLOWING TOLERANCES:						
FRACTIONS	±	1/32	ANGLES	±	1°	
DECIMALS	±	.010	TOTAL RUNOUT	±	250	
MACHINED SURFACES NOT SPECIFIED						
<p>APPROVED: <i>JBH</i> DATE: 06/24/99 MFG: B.L.(MWA) CYBERSAW, SCHEMATIC, US, 230V</p> <p>CHECKED: VDC DATE: 5/4/01 DRAWN: B.L.(MWA) FINISH PAINT: NA SCALE: 1:1 PAGE: 11 of 15 REV. 1</p>						

MiTek Industries, Inc. 001031 69  
4203 SHORELINE DRIVE, EARTH CITY, MD. 63045



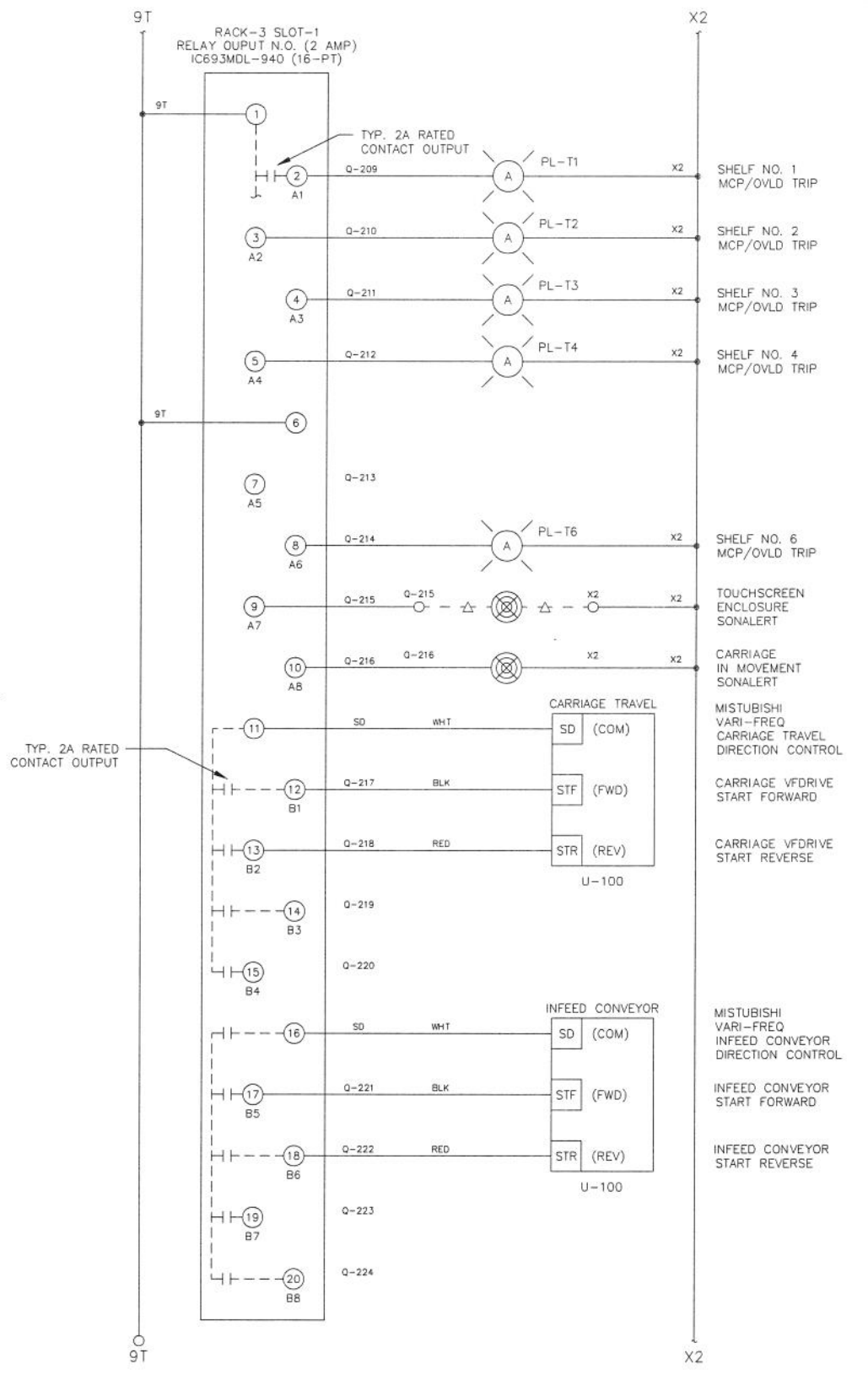
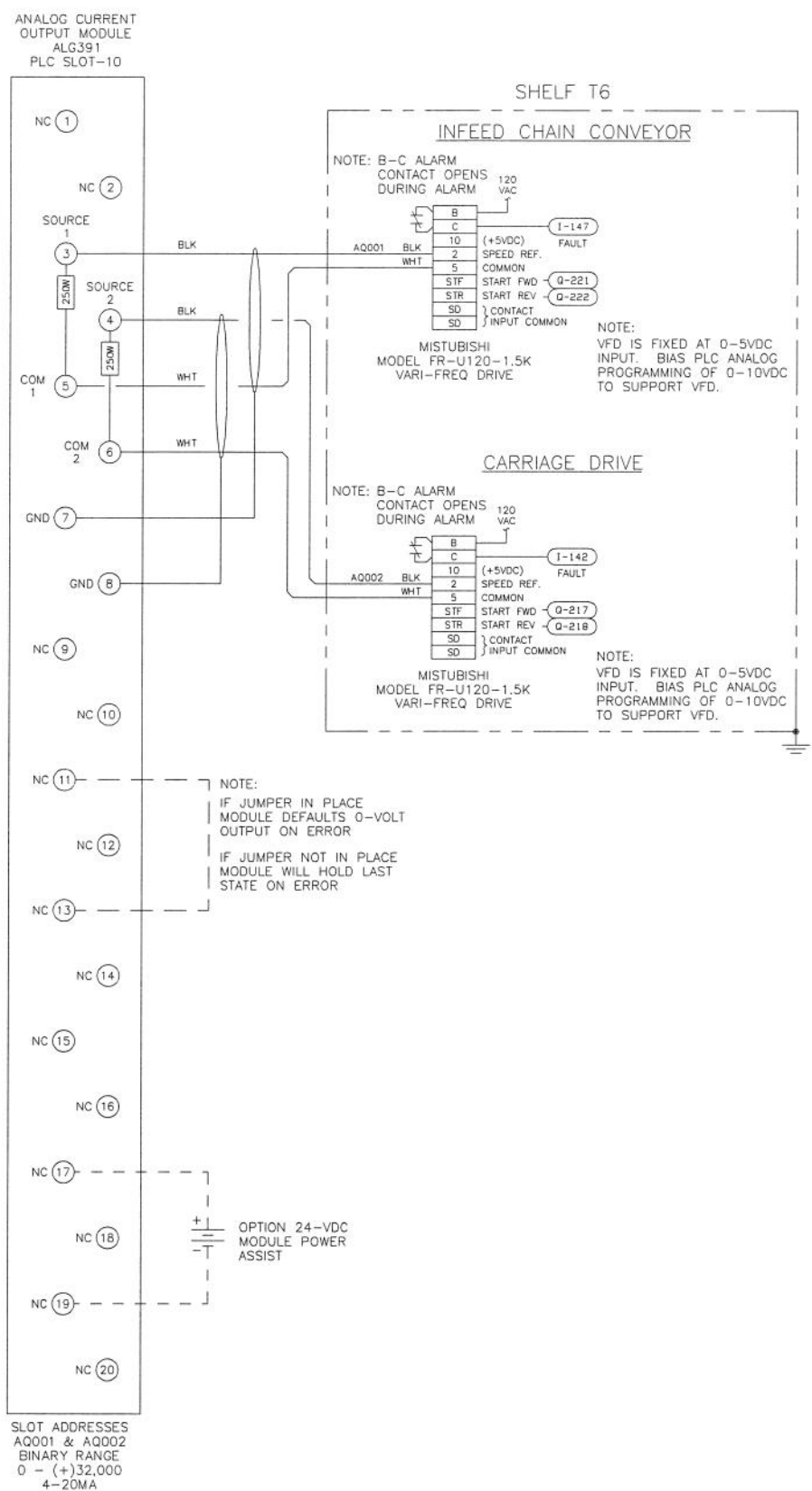
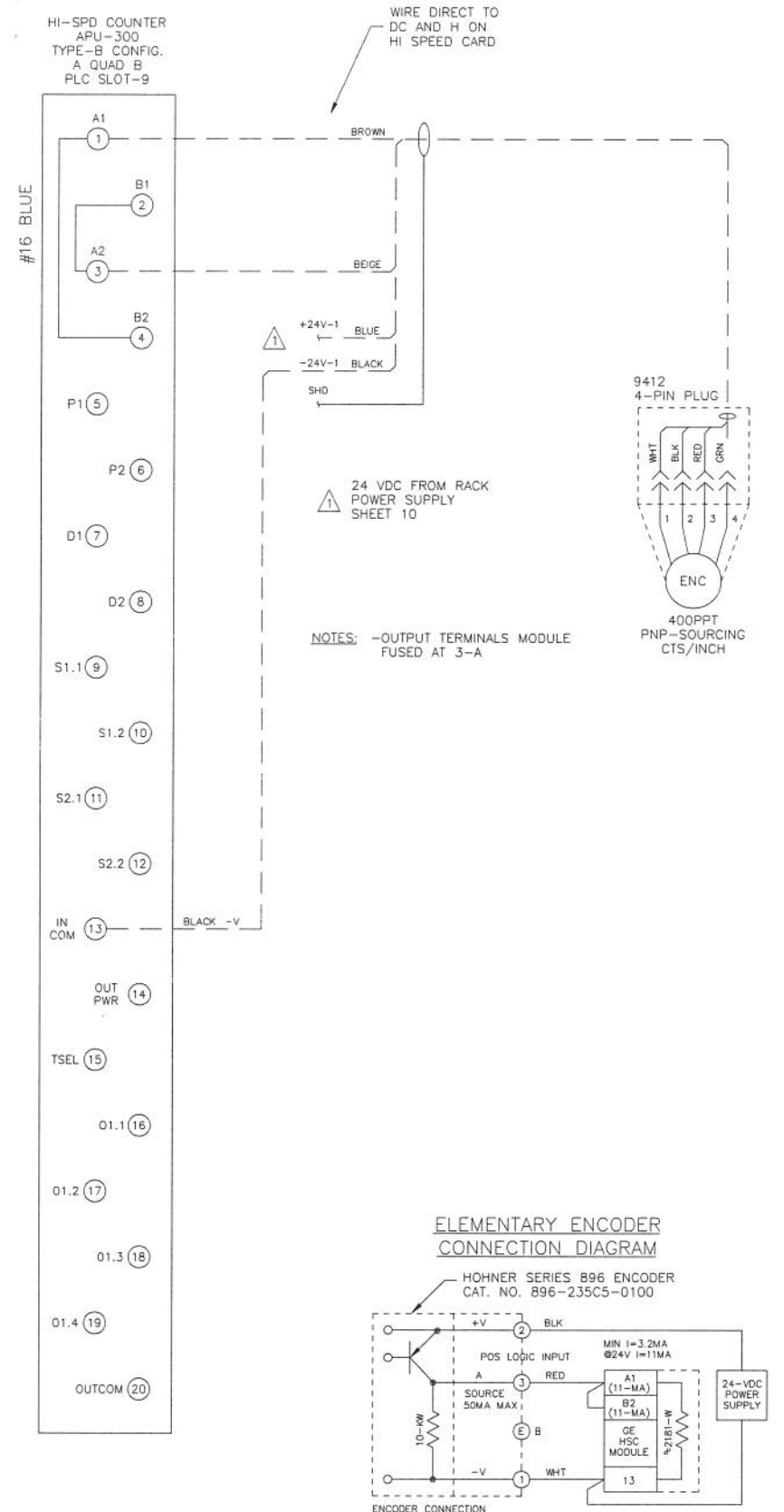
TRAVELLING END CONTROL PANEL

- TERMINAL NOTES:
- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
  - TERMINALS LOCATED IN TRAVELING END CONTROL PANEL
  - TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:						
FRACTIONS		± 1/32		ANGLES		± 1°
DECIMALS		± .010		TOTAL RUNOUT		± .005
				MACHINED SURFACES		± .005
				NOT SPECIFIED		± .005
<p>APPROVED: <i>[Signature]</i> DATE: 06/24/99</p> <p>CHECKED: VDC DATE: 5/4/99 DRAWN: B.L.(MWA) FINISH PAINT: NA SCALE: 1:1</p> <p>MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045</p> <p>CYBERSAW, SCHEMATIC, US, 230V</p>						





- TERMINAL NOTES:**
- △ TERMINALS LOCATED IN TOUCHSCREEN PANEL
  - TERMINALS LOCATED IN TRAVELLING END CONTROL PANEL
  - TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIAM.	DEPTH	DIAM.	DEPTH	REMARKS
A	X	X	X	X	X	

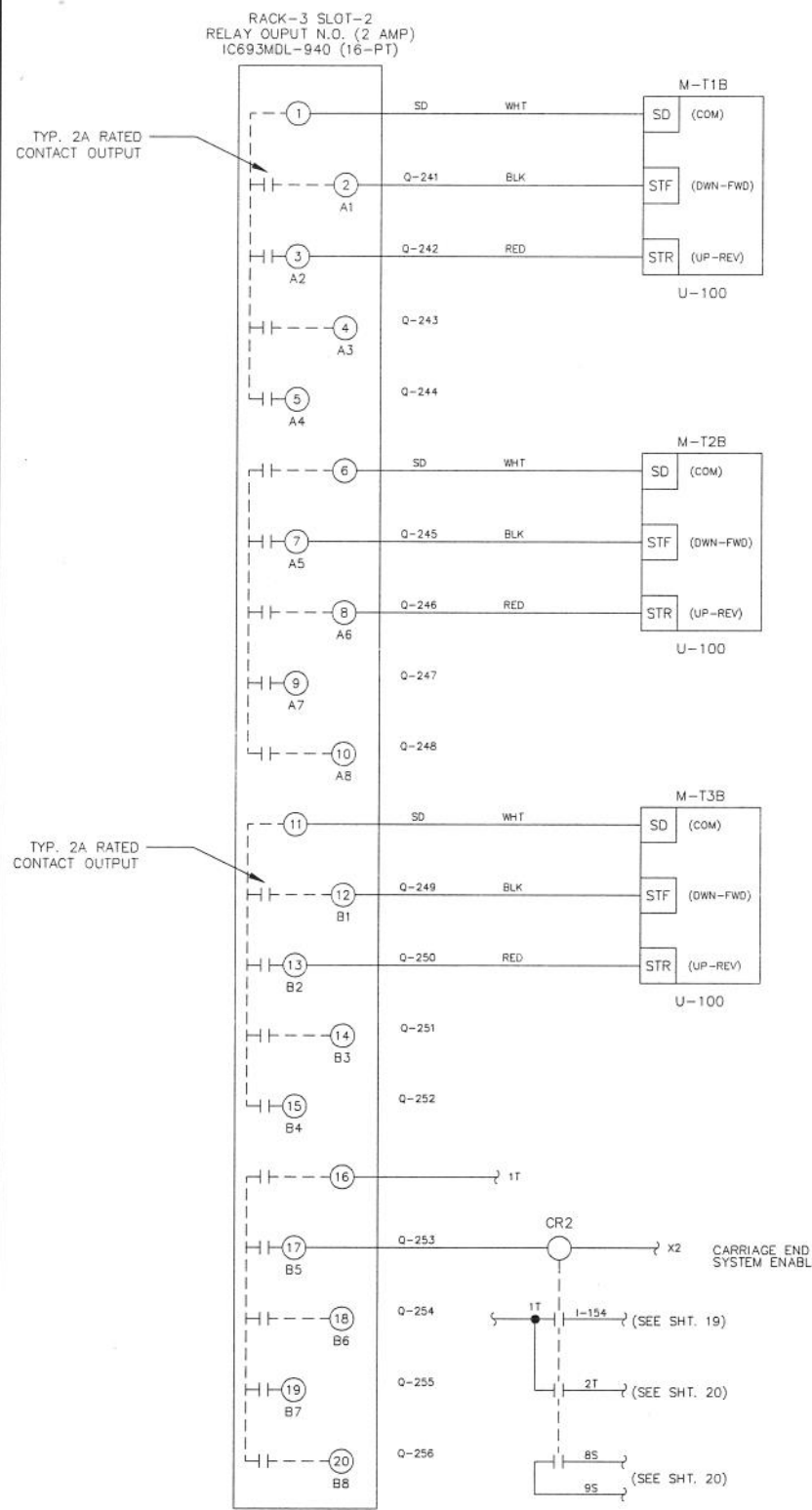
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:						
FRACTIONS	±	1/32	ANGLES	±	1'	
DECIMALS	±	.010	TOTAL RUNOUT	±	250	
MACHINED SURFACES NOT SPECIFIED						
APPROVED	DATE	MFG	CYBERSAW, SCHEMATIC, US, 230V			
CHECKED	DATE	DRAWN	SCALE	PAGE	REV.	
VDC	7/11/01	B.L.(MWA)	1 : 1	13 of 15	D92034	

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MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MD. 63045

001031 71 X X X X

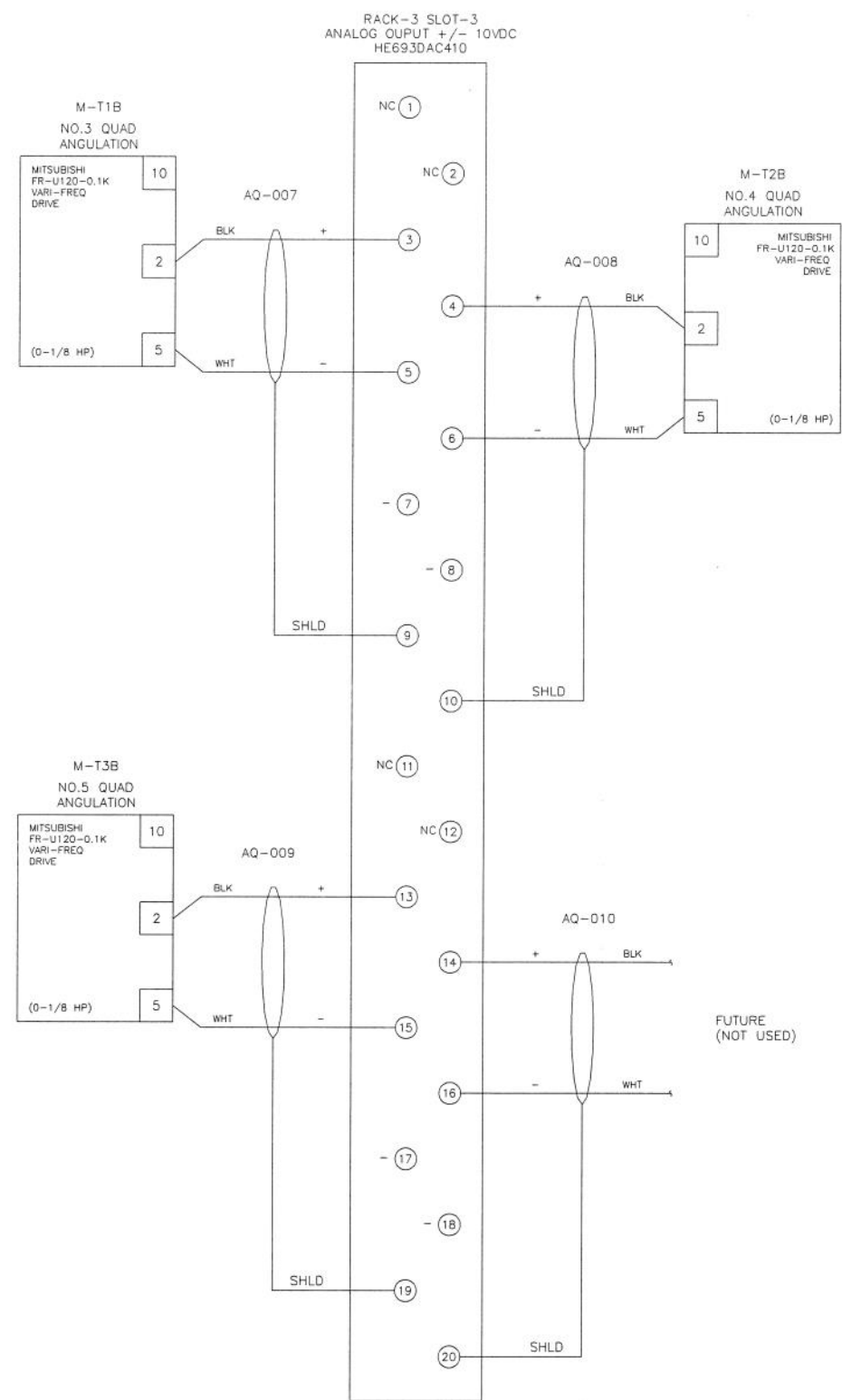
TRAVELLING END CONTROL PANEL



MITSUBISHI  
VARI-FREQ  
NO.3 QUAD  
16" CARRIAGE END  
ANGULATION DRIVE

MITSUBISHI  
VARI-FREQ  
NO.4 QUAD  
20" CARRIAGE END  
ANGULATION DRIVE

MITSUBISHI  
VARI-FREQ  
NO.5 QUAD  
32" CARRIAGE END  
ANGULATION DRIVE



TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE	DEPTH	DIA.	TAP	REMARKS
A	X	X	X	X	X	

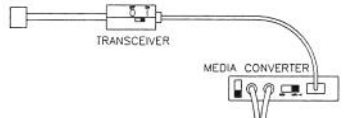
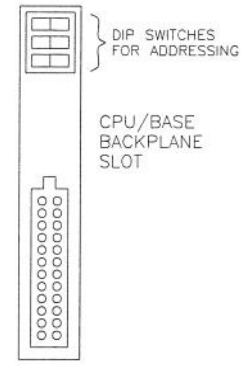
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES WITH THE FOLLOWING TOLERANCES:						
FRACTIONS	±	1/32	ANGLES	±	1°	
DECIMALS	±	.010	TOTAL RUNOUT	±		
			MACHINED SURFACES	±	250	
NOT SPECIFIED						
<p>APPROVED: <i>VOC</i> DATE: 5/1/01          DRAWN: B.L.(MWA) DATE: 06/24/99          FINISH PAINT: NA SCALE: 1:1          PAGE: 14 of 15 D92034</p>						
<p>MiTek Industries, Inc.          4203 SHORELINE DRIVE, EARTH CITY, MO. 63045</p>						001031 72 X X X

STATIONARY END CONTROL PANEL

CABLE TRACK

TRAVELLING END CONTROL PANEL

RACK NUMBER				
DIP SWITCH	1	2	3	4
1	OPEN	CLOSED	OPEN	
2	CLOSED	OPEN	OPEN	
3	CLOSED	CLOSED	CLOSED	



FIBER OPTIC DETAILS ON DWG #92044

GRAPHIC SCREEN CONNECTION CABLE

TB3 (120VAC) 1T X2

RITTAL SWING ARM

TOPAZ UPS

Touchscreen Computer

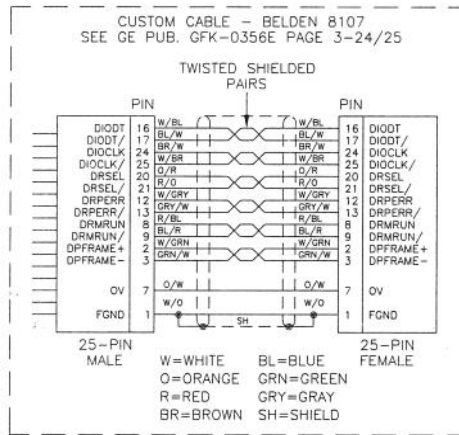
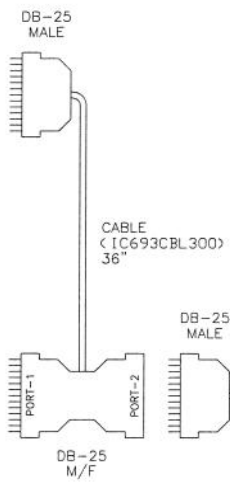
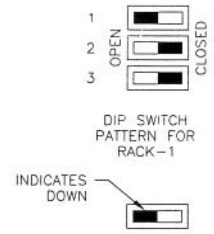
TO ETHERNET CARD FIBER OPTIC PCI #AT-2450

PS	1	2	3	4	5	6	7	8	9	10	EXPANSION
PWR330	CPU351	CMM321	PCM301	MDL240	MDL240	MDL240	MDL240	MDL646	MDL646		
		CMM	PCM	I AC16	I AC16	I AC16	I AC16	I DC16	I DC16		
				RefAdr %10001	RefAdr %10017	RefAdr %10033	RefAdr %10049	RefAdr %10065	RefAdr %10081		

MODEL-331 BASE, CPU, 10-SLOT (IC693CHS391)

PS	1	2	3	4	5	EXPANSION
PWR321	MDL340	MDL340	MDL940	MDL940	HE693	
	Q AC16	Q AC16				
	RefAdr %00001	RefAdr %00017	RefAdr %00065	RefAdr %00225	RefAdr %A0003	

MODEL-331 BASE, EXPANSION, 5-SLOT (IC693CHS398)



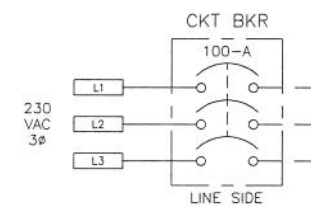
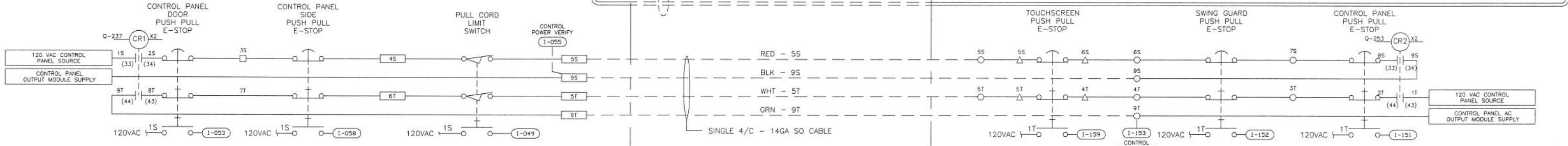
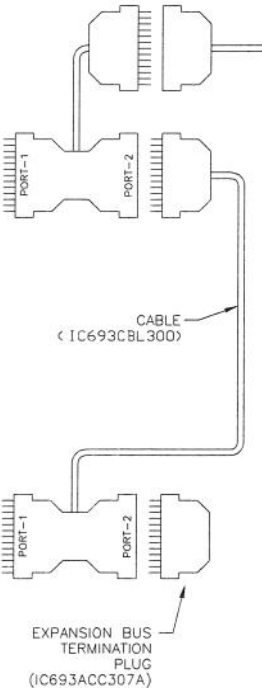
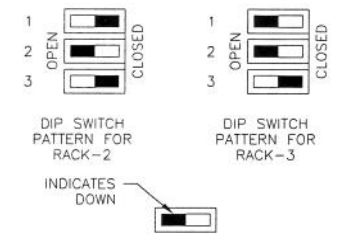
APPROX. LENGTH = 60'

PS	1	2	3	4	5	6	7	8	9	10	EXPANSION
PWR321	MDL240	MDL240	MDL240	MDL240	MDL646	MDL646	MDL340	MDL340	APU300	ALG391	
	I AC16	I AC16	I AC16	I AC16	I DC16	I DC16	Q AC16	Q AC16	HSC	QALGV2	
	RefAdr %10097	RefAdr %10113	RefAdr %10129	RefAdr %10145	RefAdr %10161	RefAdr %10177	RefAdr %00033	RefAdr %00049	RefAdr 010193 A10001	RefAdr %A0001	

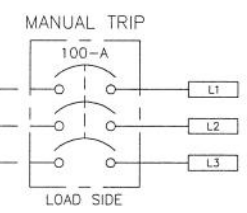
MODEL-331 BASE, REMOTE EXPANSION, 10-SLOT (IC693CHS393)

PS	1	2	3	4	5	EXPANSION
PWR321	MDL940	MDL940	HE693			
	RefAdr %00209	RefAdr %00241	RefAdr %A0007			

MODEL-331 BASE, REMOTE EXPANSION, 5-SLOT (IC693CHS399)



(3) #6 GA, 90°C, 259 STRAND, 109 AMP MOTOR LEAD CABLE BANDED TO FORM SINGLE ASSEMBLY CABLE



STATIONARY END PNEUMATIC SYSTEM

TRAVELLING END PNEUMATIC SYSTEM

(3) 1/4" OD IMPERIAL-EASTMAN "NYLO-SEAL" TUBING - #44-NF-114

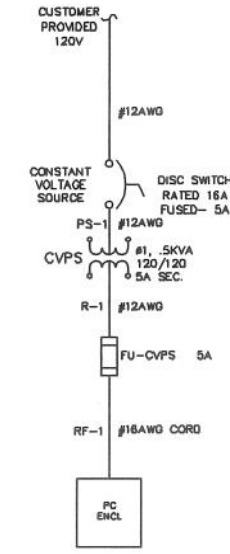
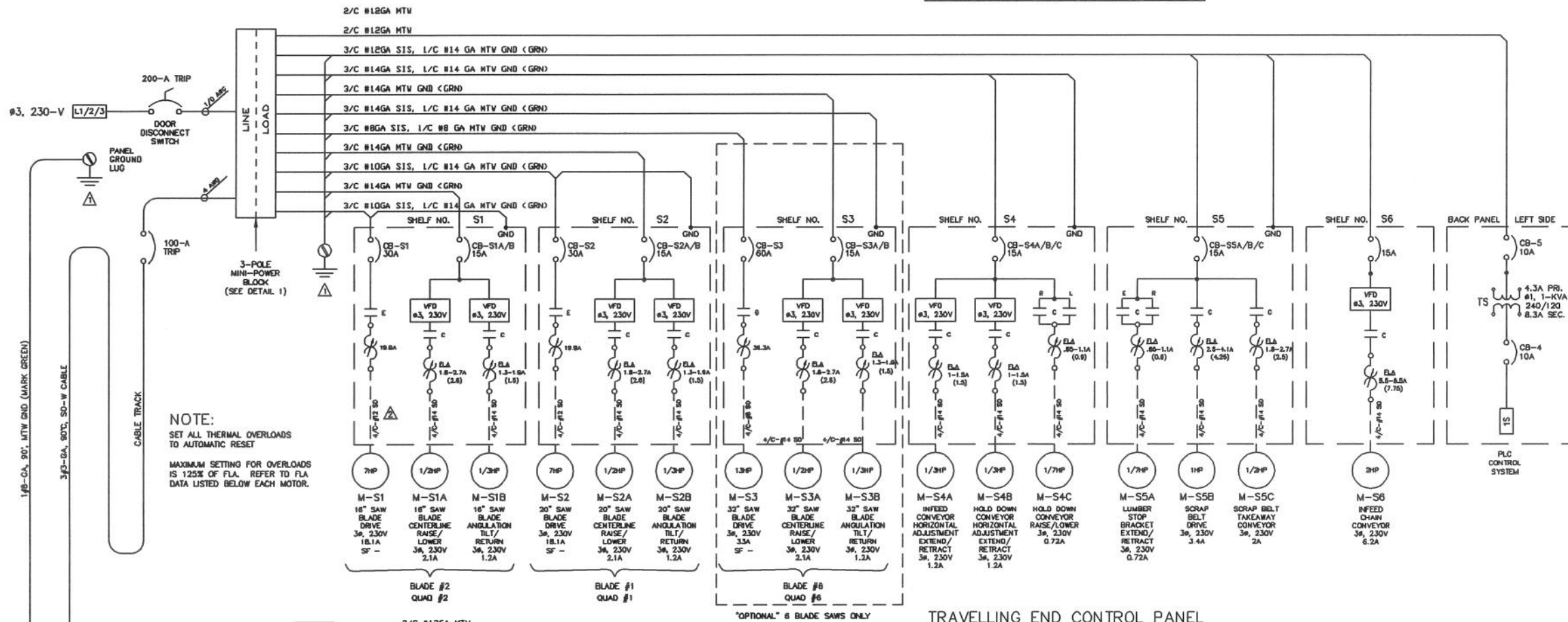
ITEM	QTY	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG NO./PART NO.
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN THE FOLLOWING TOLERANCES:						
FRACTIONS	±	1/32	ANGLES	±	1°	
DECIMALS	±	.010	TOTAL RUNOUT	±	250	
MACHINED SURFACES NOT SPECIFIED						
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APPROVED		DATE	MFG	CYBERSAW, SCHEMATIC, US, 230V		
CHECKED		DATE	DRAWN	FINISH PAINT	SCALE	PAGE
VDC		5/4/01	B.L.(MWA)	06/24/99	NA	15 of 15
D92034						REV. 1

KEY	NO. OF HOLES	HOLE DIA.	DEPTH	TAP DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

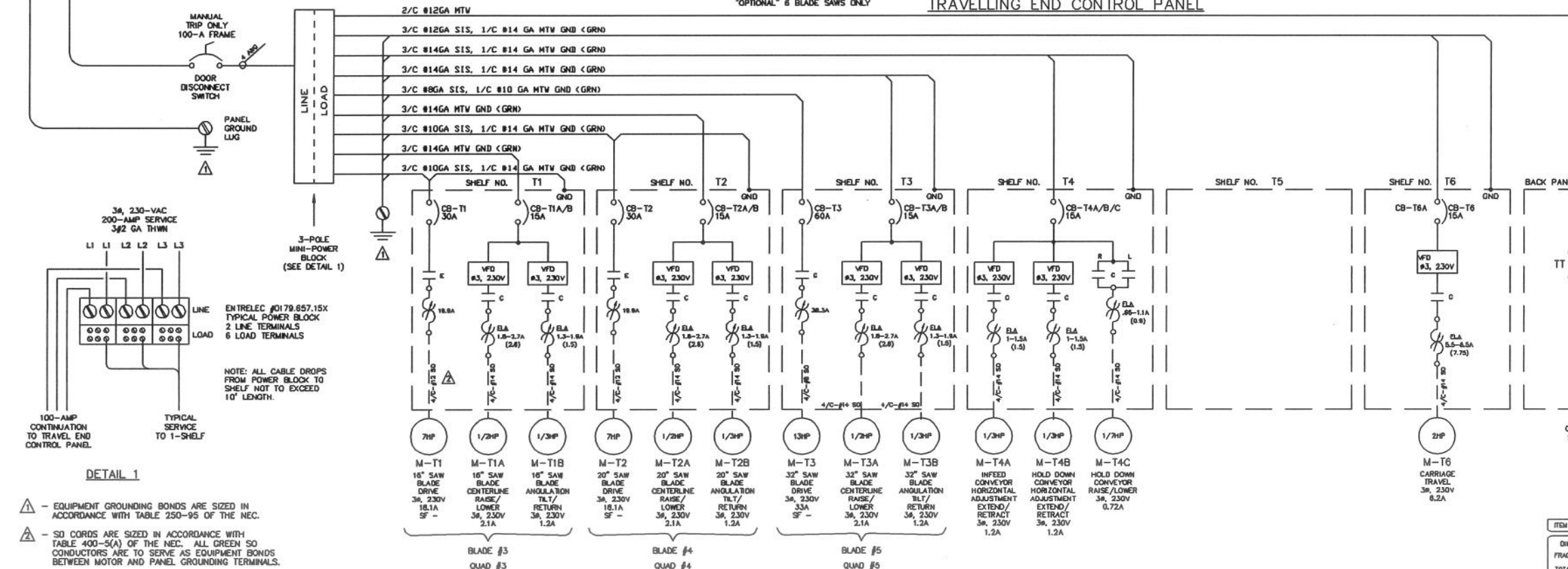
MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

STATIONARY END CONTROL PANEL

REV	DATE	DESCRIPTION	BY	CHK'D	APPD	DATE
-	06/13/01	INITIAL RELEASE	DKM			
A	11/22/01	SEE ECD 3247-3	DKM			
B	1/8/02	SEE ECD 5008	DKM			
C	3/28/02	SEE ECD 5017	DKM			
D	4/9/03	SEE ECD 5118	L			
E	8/14/03	SEE ECD 5147	L			
F	2/8/04	CHANGED TEXT FOR AMPER	Q			
G	6/01/04	CHANGED BRK RELAY	DKM			
H	1/07/04	SEE ECD #5186	DKM			
I	8/23/04	CPU CHANGE, ADDED IBC	Q			
J	1/08/05	CHANGE OVERLOAD SETTING	DKM			
K	6/07/05	CHANGE 2HP VFD SETTING	BB			
L	6/7/06	SWITCHED ENCODERS SEE ECD 6089	LH			
M	6/7/06	CHANGING TERMINALS, SEE ECD 6508	LH			



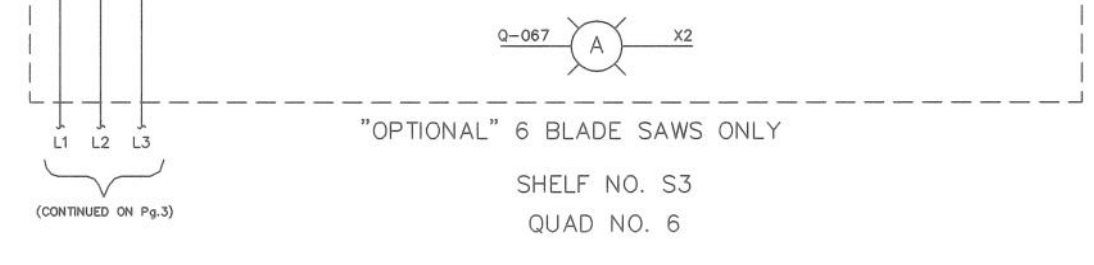
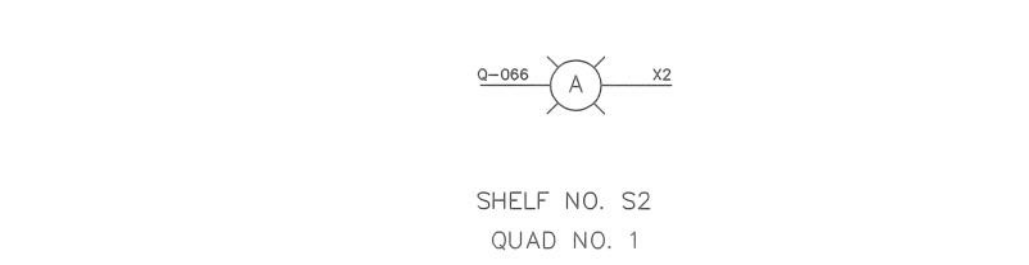
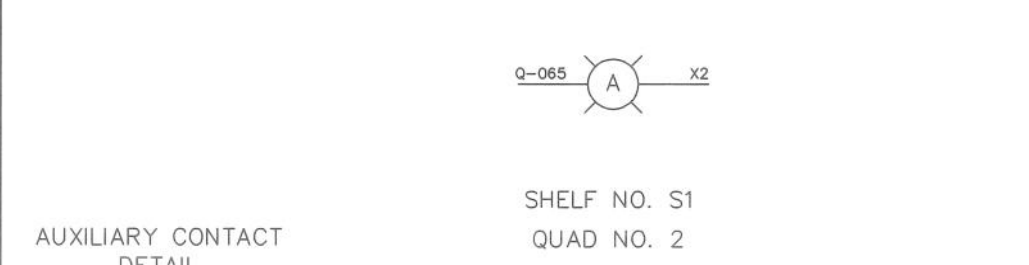
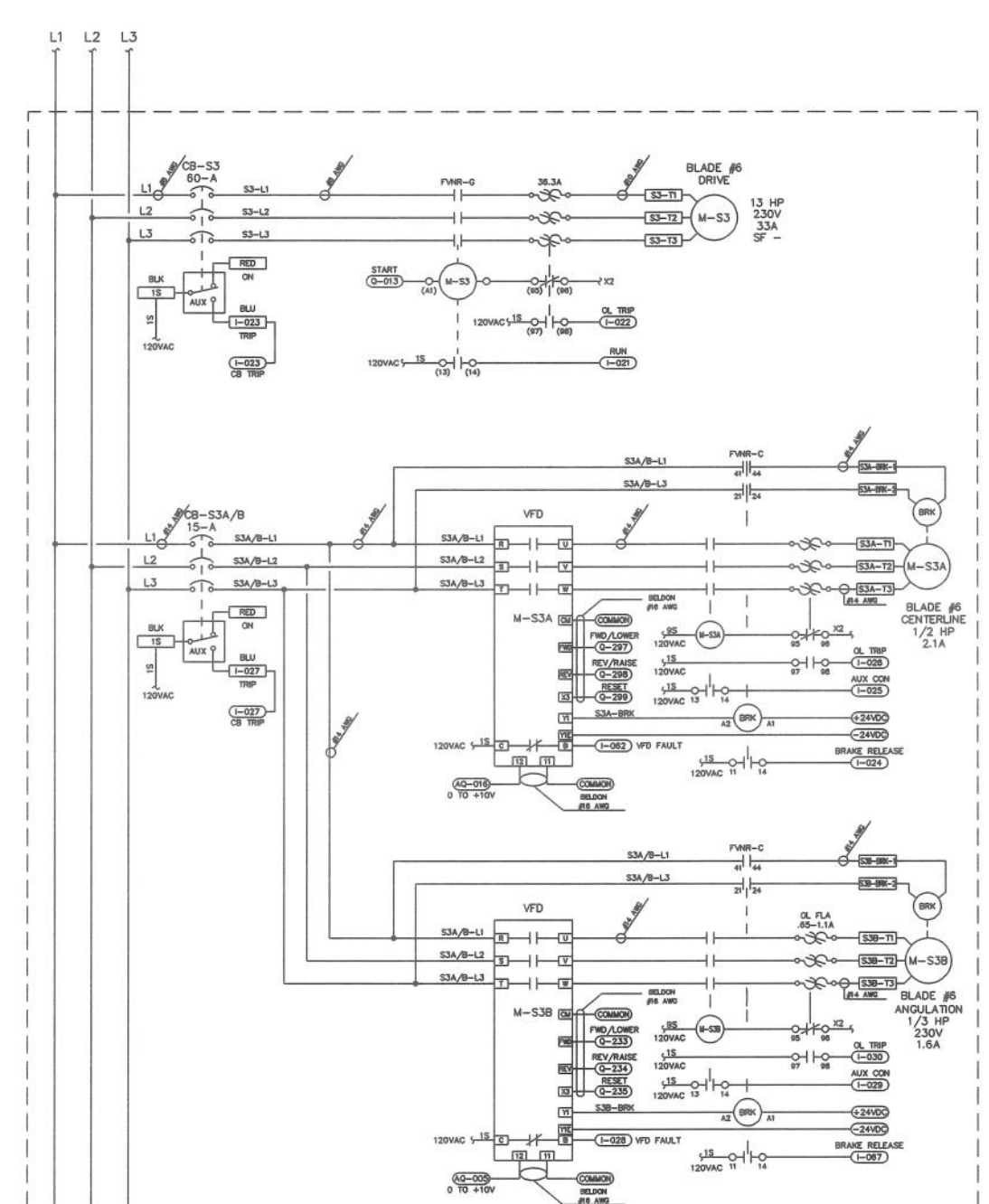
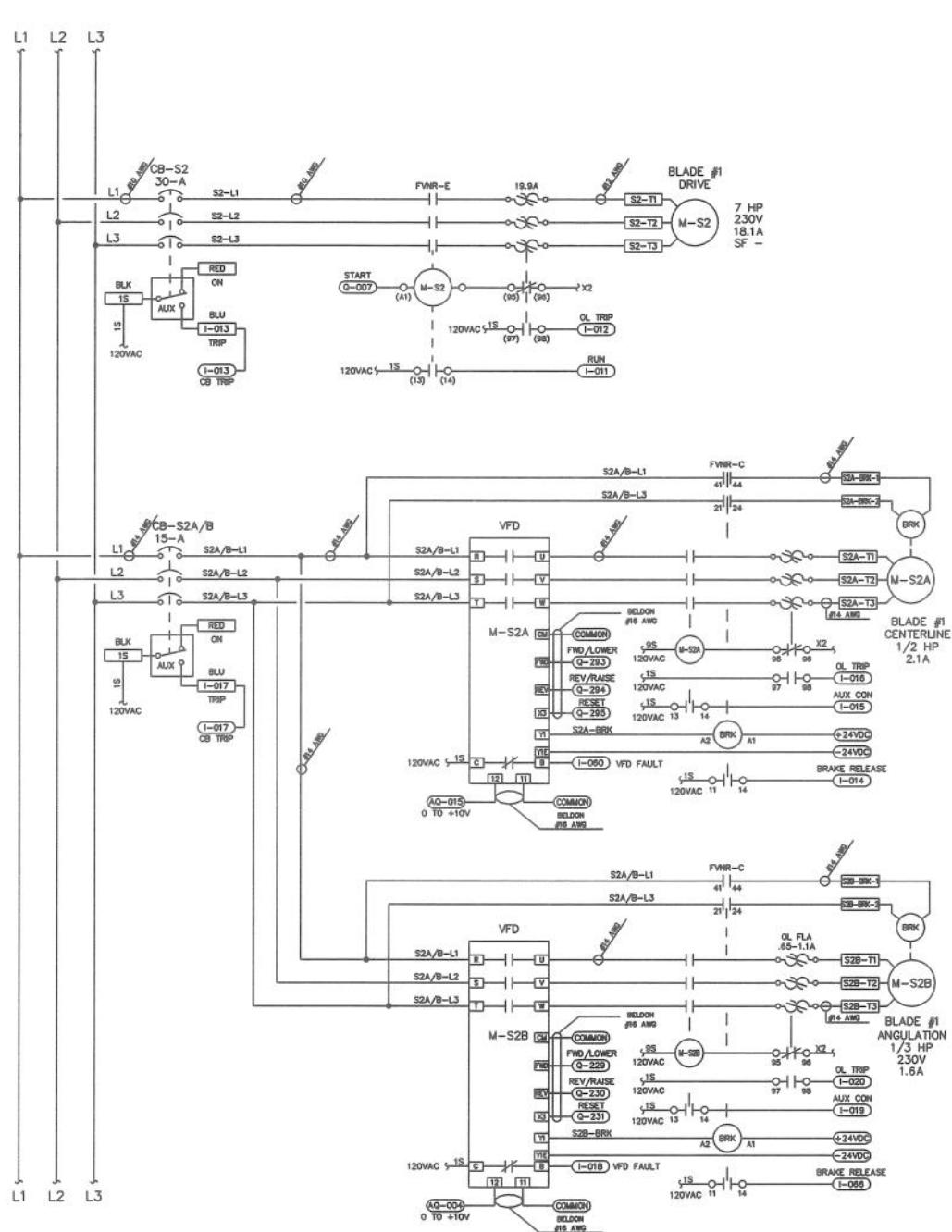
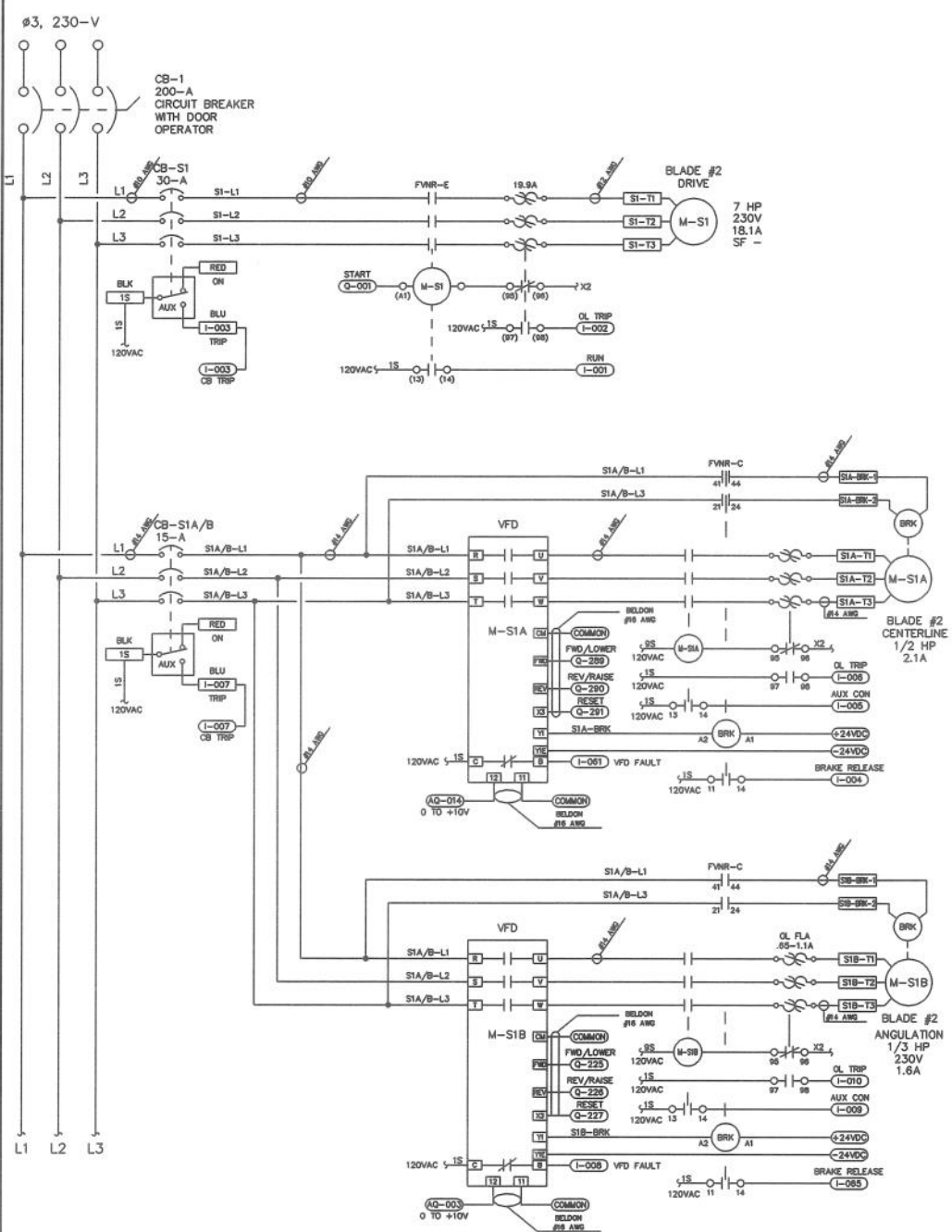
TRAVELLING END CONTROL PANEL



DETAIL 1  
ENTRELEC #0179.857.15X  
TYPICAL POWER BLOCK  
2 LINE TERMINALS  
6 LOAD TERMINALS  
NOTE: ALL CABLE DROPS FROM POWER BLOCK TO SHELF NOT TO EXCEED 10' LENGTH.

100-AMP CONTINUATION TO TRAVEL END CONTROL PANEL  
TYPICAL SERVICE TO 1-SHELF

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DRG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS = 1/32    DECIMALS = 0.010    ANGLES = 1°						
TOTAL RUNOUT =    MACHINED SURFACES NOT SPECIFIED						
FEATURES: X						
MiTek Industries, Inc. 4201 SHORELINE DRIVE, EARTH CITY, MO 63045						
CYBER, AT, ELE, SCHEM, 230V, US						
APPROVED	DATE	BY	DATE	FINISH PART	SCALE	PAGE
		G. Bowers	10/30/00	X	NONE	1 of 21
KEY	NO. OF HOLES	DR.	DEPTH	DR.	DEPTH	REMARKS



SHELF NO. S1  
QUAD NO. 2

SHELF NO. S2  
QUAD NO. 1

"OPTIONAL" 6 BLADE SAWS ONLY  
SHELF NO. S3  
QUAD NO. 6

STATIONARY END CONTROL PANEL

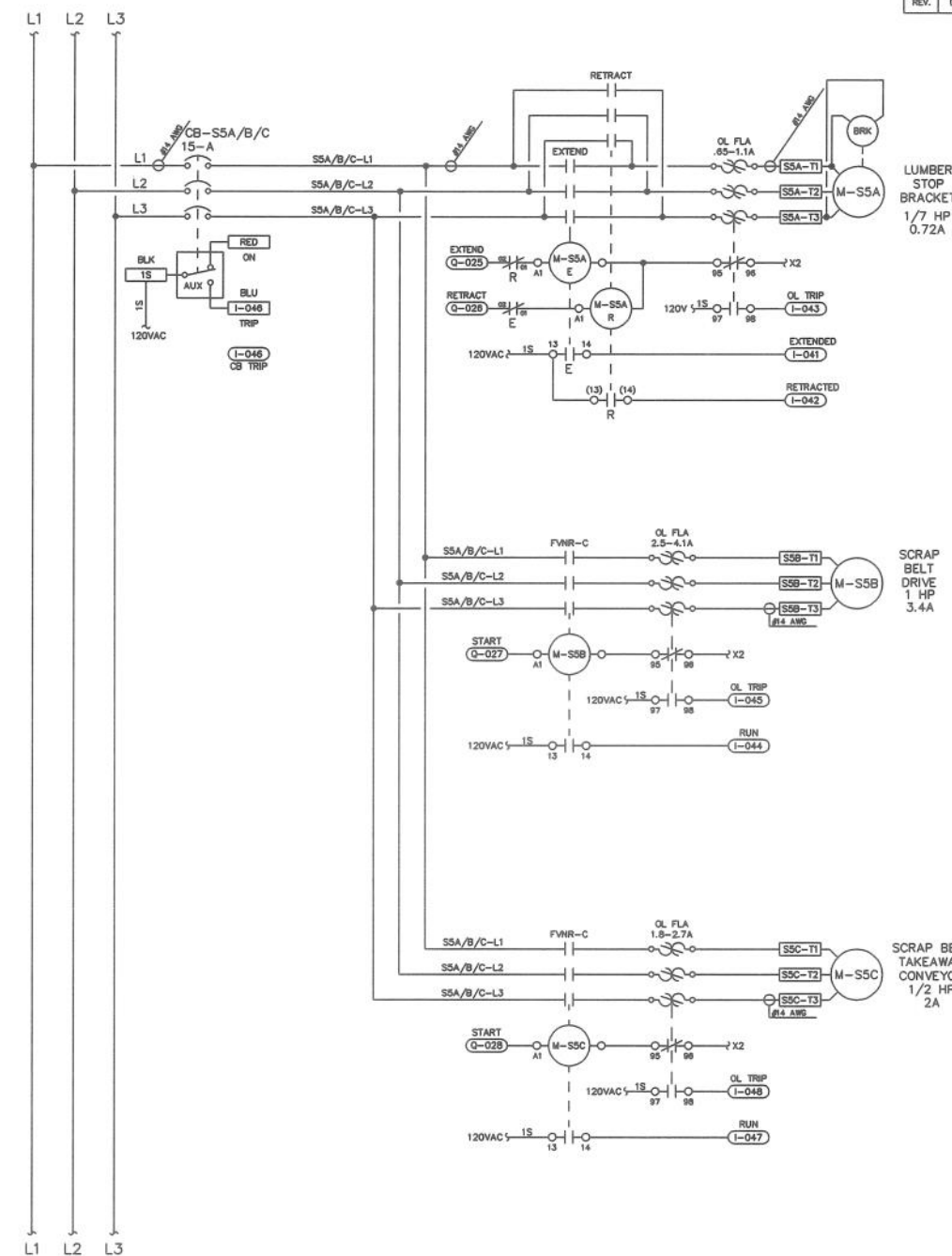
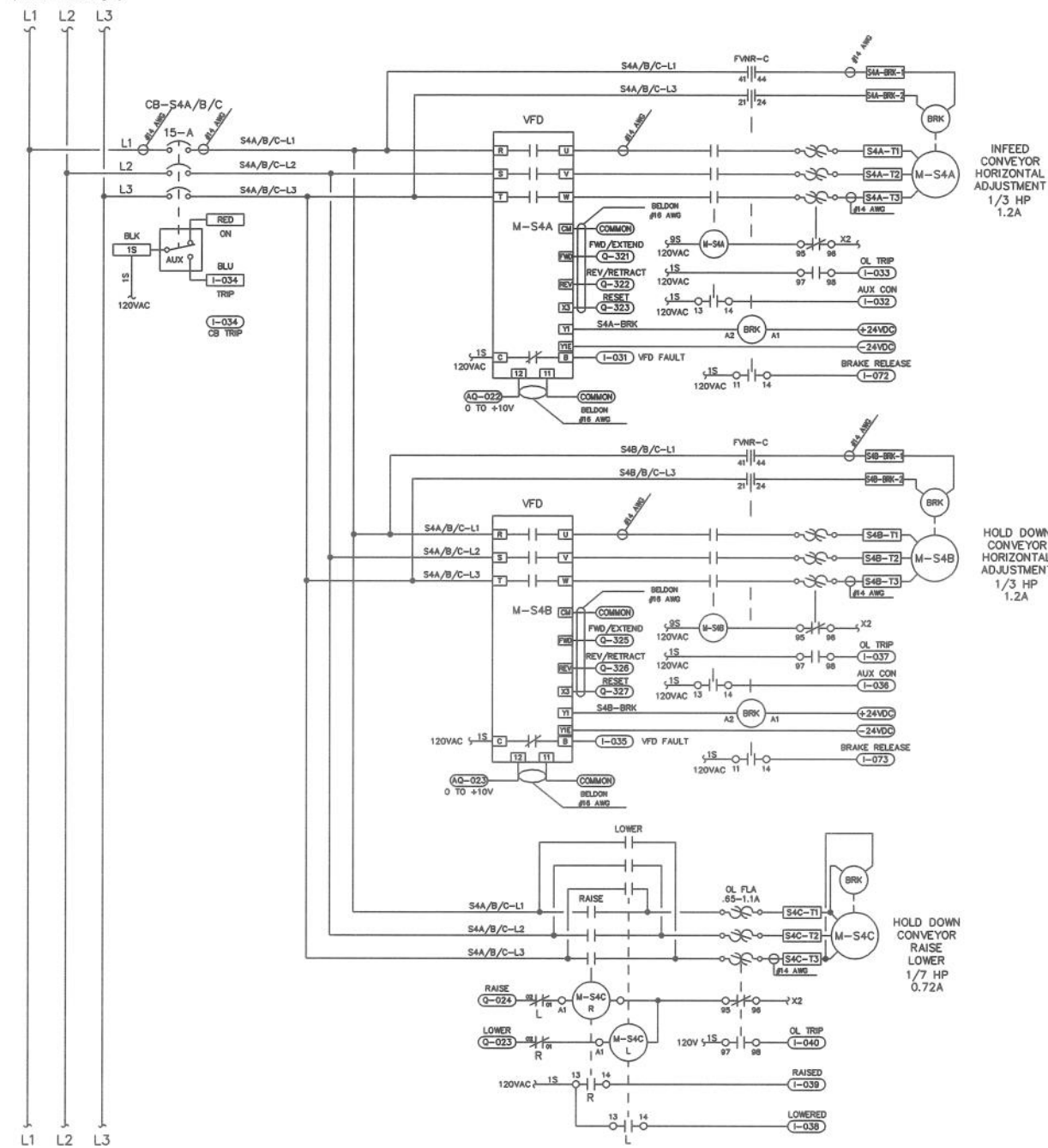
KEY	NO. OF HOLES	HOLE	DEPTH	TAP	REMARKS
A	X	X	X	X	X

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:            FRACTIONS ± [1/32]    DECIMALS ± [0.10]    ANGLES ± [1°]            TOTAL RUNOUT ± [ ]    MACHINED SURFACES NOT SPECIFIED [ ]</small>						
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APPROVED: [Signature] DATE: 10/30/00		MFG. DATE: 10/30/00 DRAWN BY: G.Bowers		FINISH PAINT: X SCALE: NONE		PAGE: 2 of 21 DASH NO.: 90507 REV.: M

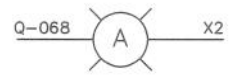
MiTek Industries, Inc.  
4233 SHORELINE DRIVE, EARTH CITY, MO. 63045

CYBER, AT, ELE, SCHEM, 230V, US

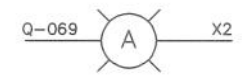
(CONT. FROM Pg.2)



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



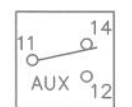
SHELF NO. 4S



SHELF NO. 5S

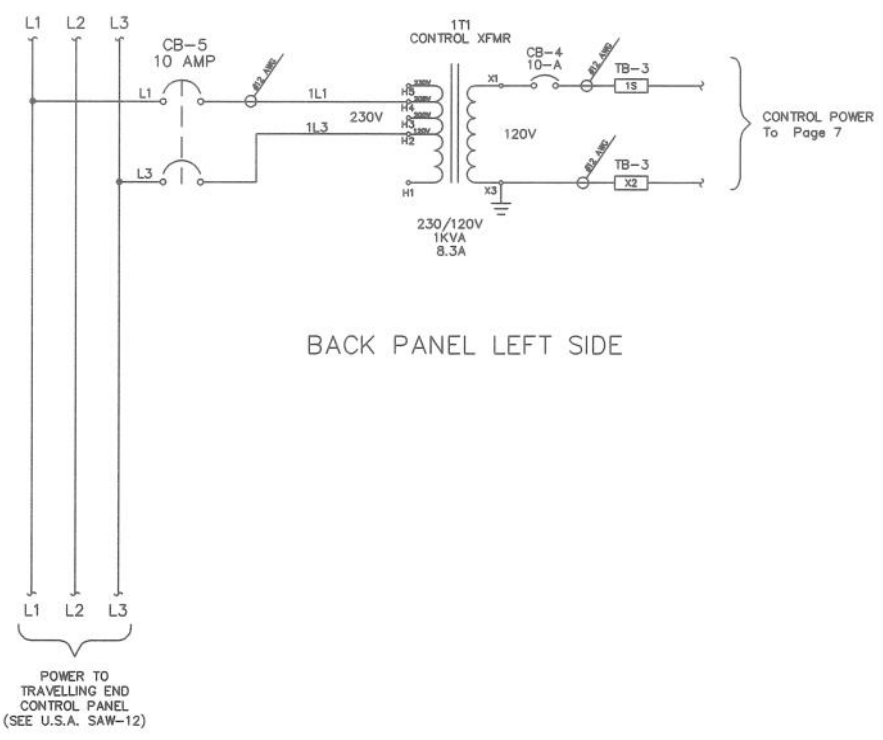
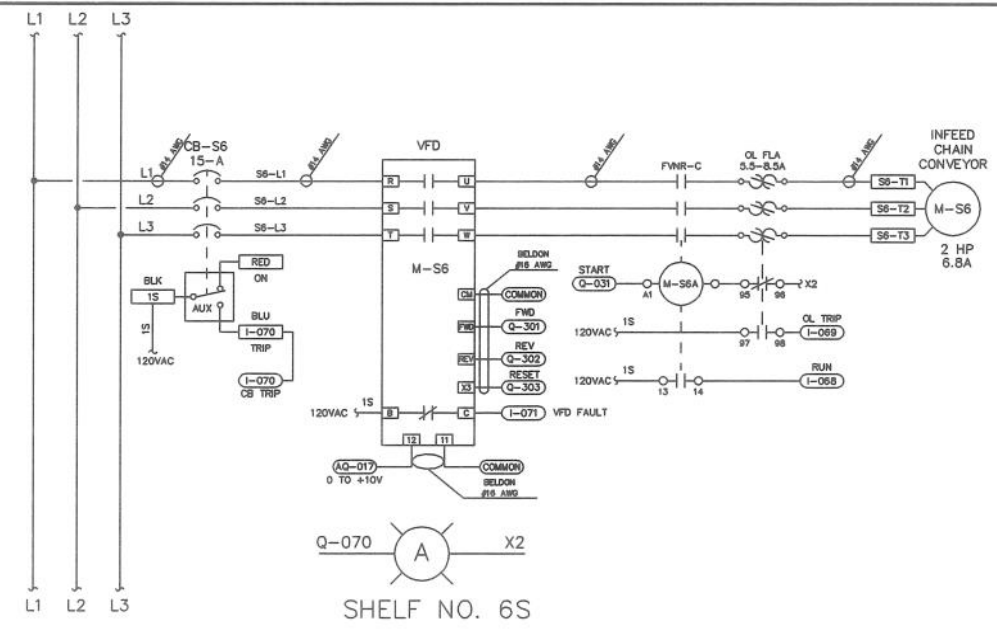
STATIONARY END CONTROL PANEL

AUXILIARY CONTACT DETAIL

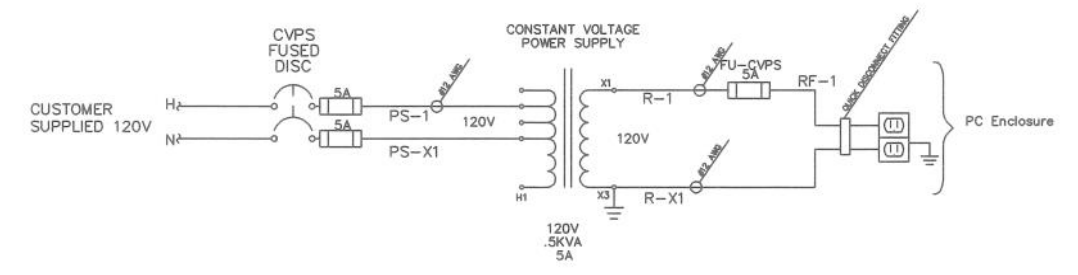


ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± (1/32)    DECIMALS ± (0.10)    ANGLES ± (1°)						
TOTAL RUNOUT ± (0.005)    MACHINED SURFACES NOT SPECIFIED (0.005)						
FEATURES: X						
APPROVED: DATE: 10/30/00    MFE: G.Bowers    MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045						
CHECKED: DATE: 10/30/00    DRAWN: G.Bowers    CYBER, AT, ELE, SCHEM, 230V, US    SCALE: NONE    PAGE: 3 of 21    DASH NO.: 90507    REV.: M						

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	



STATIONARY END CONTROL PANEL

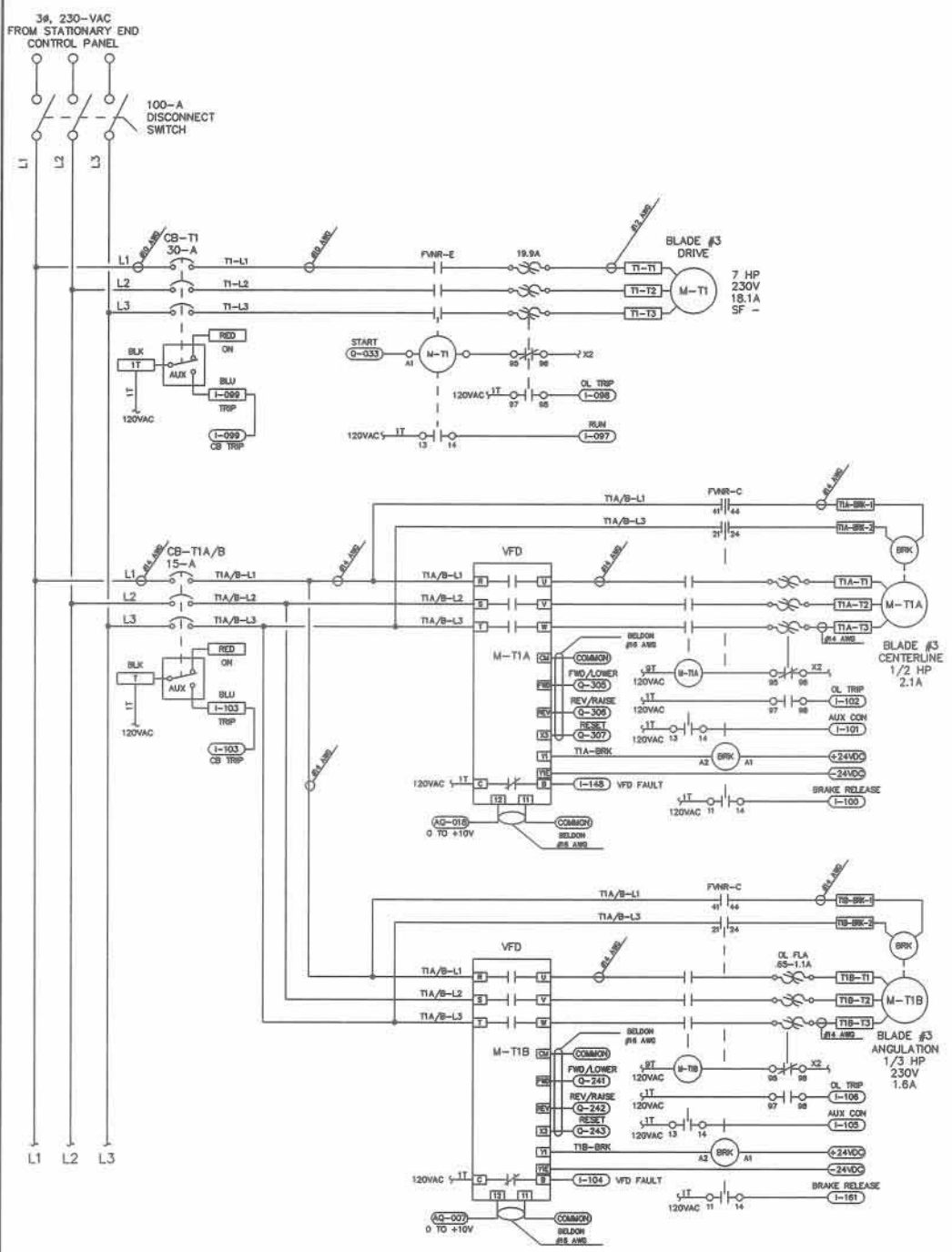


AUXILIARY CONTACT DETAIL

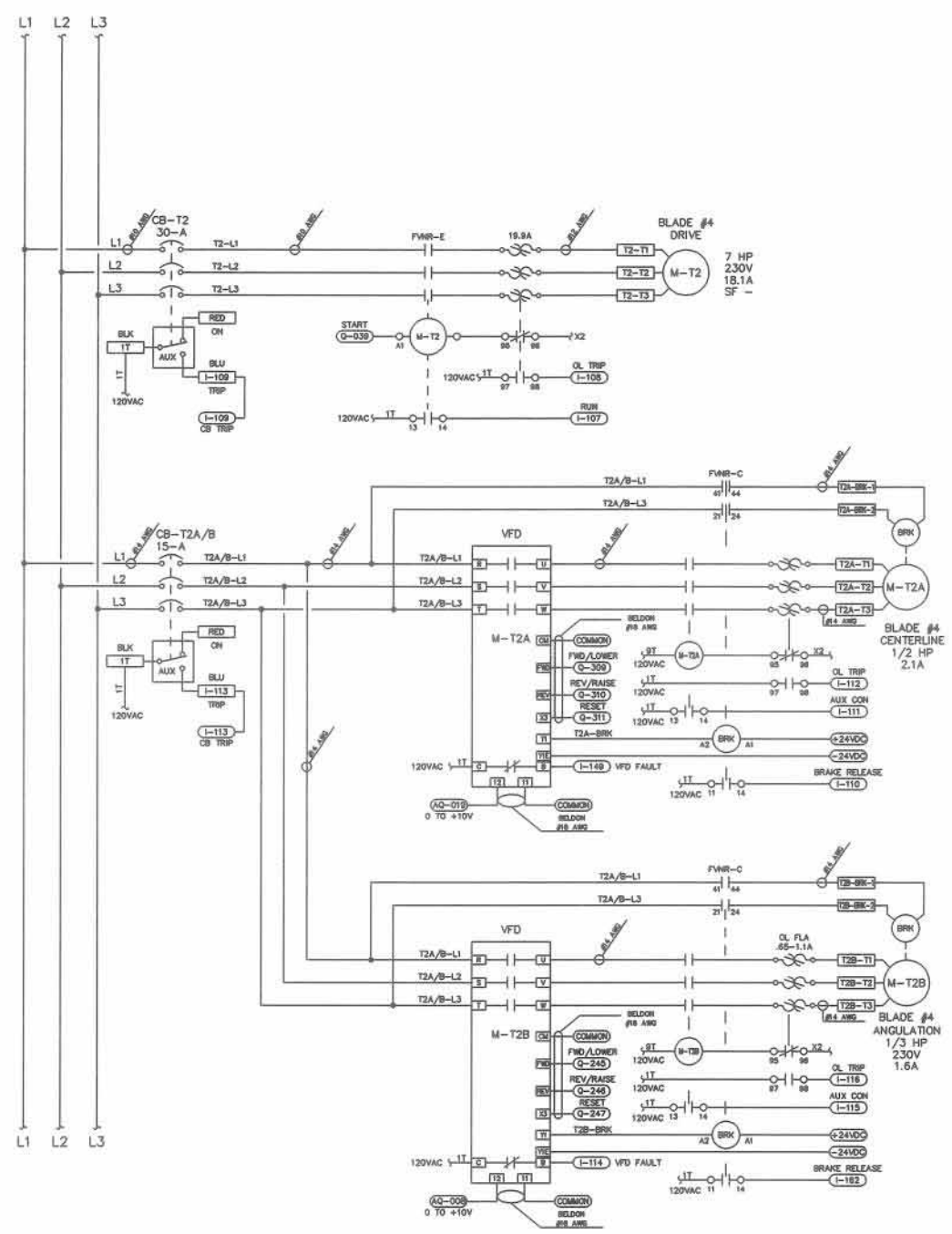


ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± (1/32)    DECIMALS ± (.010)    ANGLES ± (1°)						
TOTAL RUNOUT ± ( )    MACHINED SURFACES NOT SPECIFIED (RV)						
FEATURES: X						
APPROVED: <i>[Signature]</i> DATE: 10/30/00 DRAWN: G.Bowers DATE: 10/30/00						
CYBER, AT, ELE, SCHEM, 230V, US						
MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045						
SCALE: X NONE    PAGE: 4 OF 21    DASH NO.: 90507    REV.: M						

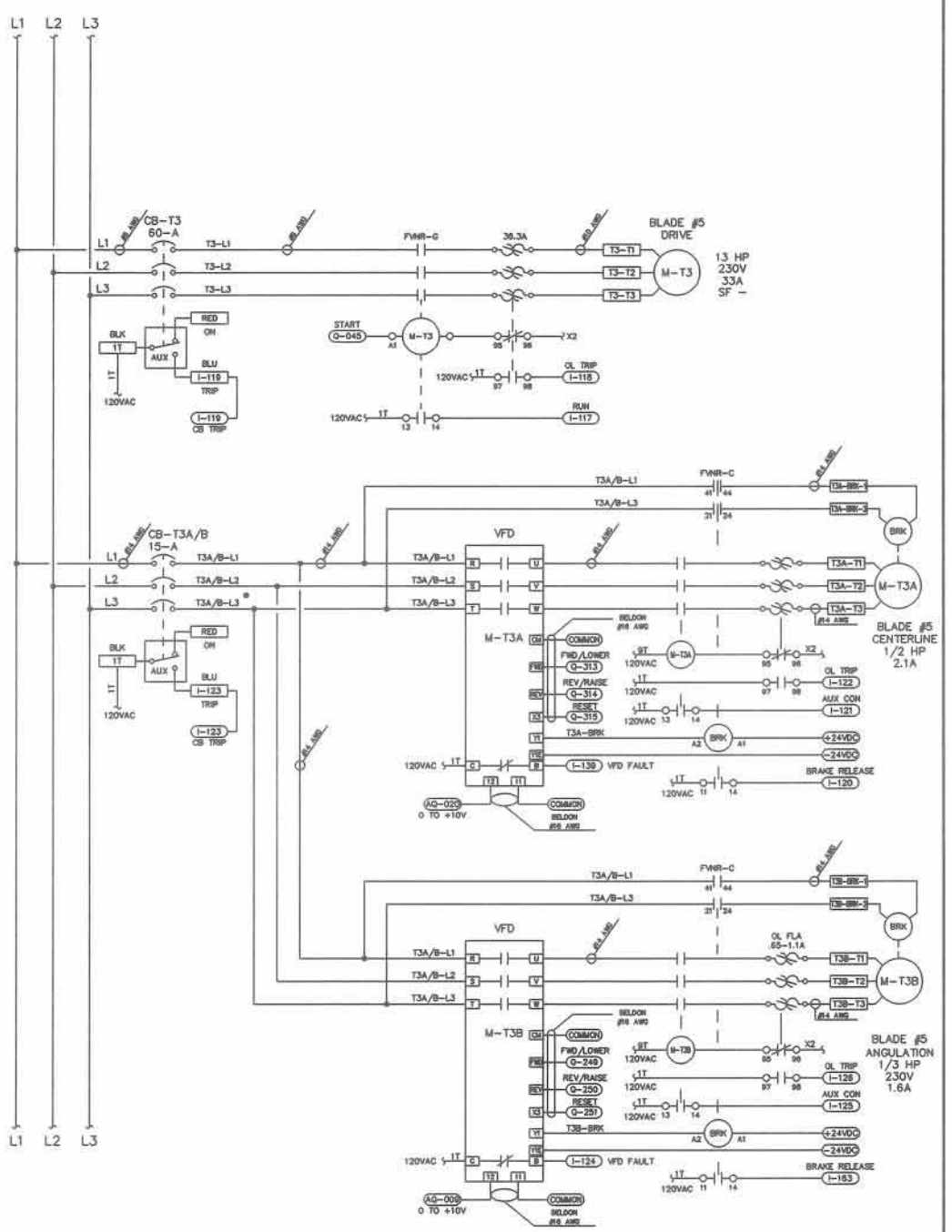
KEY	NO. OF HOLES	HOLE	TAP	REMARKS
A	X	X	X	X



Q-209 (A) X2  
SHELF NO. 1T  
QUAD #3



Q-210 (A) X2  
SHELF NO. 2T  
QUAD #4



Q-211 (A) X2  
SHELF NO. 3T  
QUAD #5

CARRIAGE END CONTROL PANEL

AUXILIARY CONTACT  
DETAIL



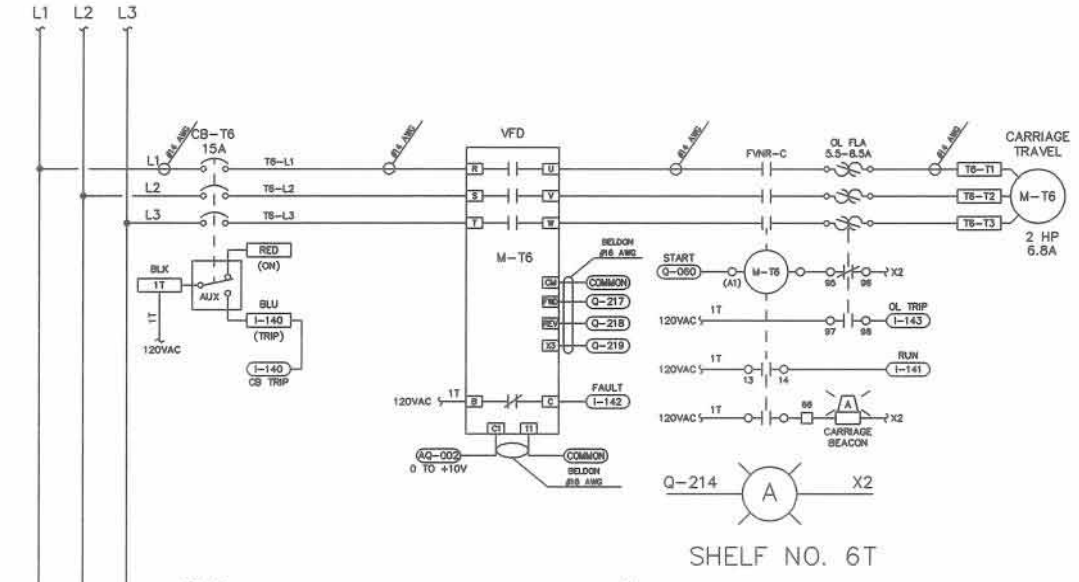
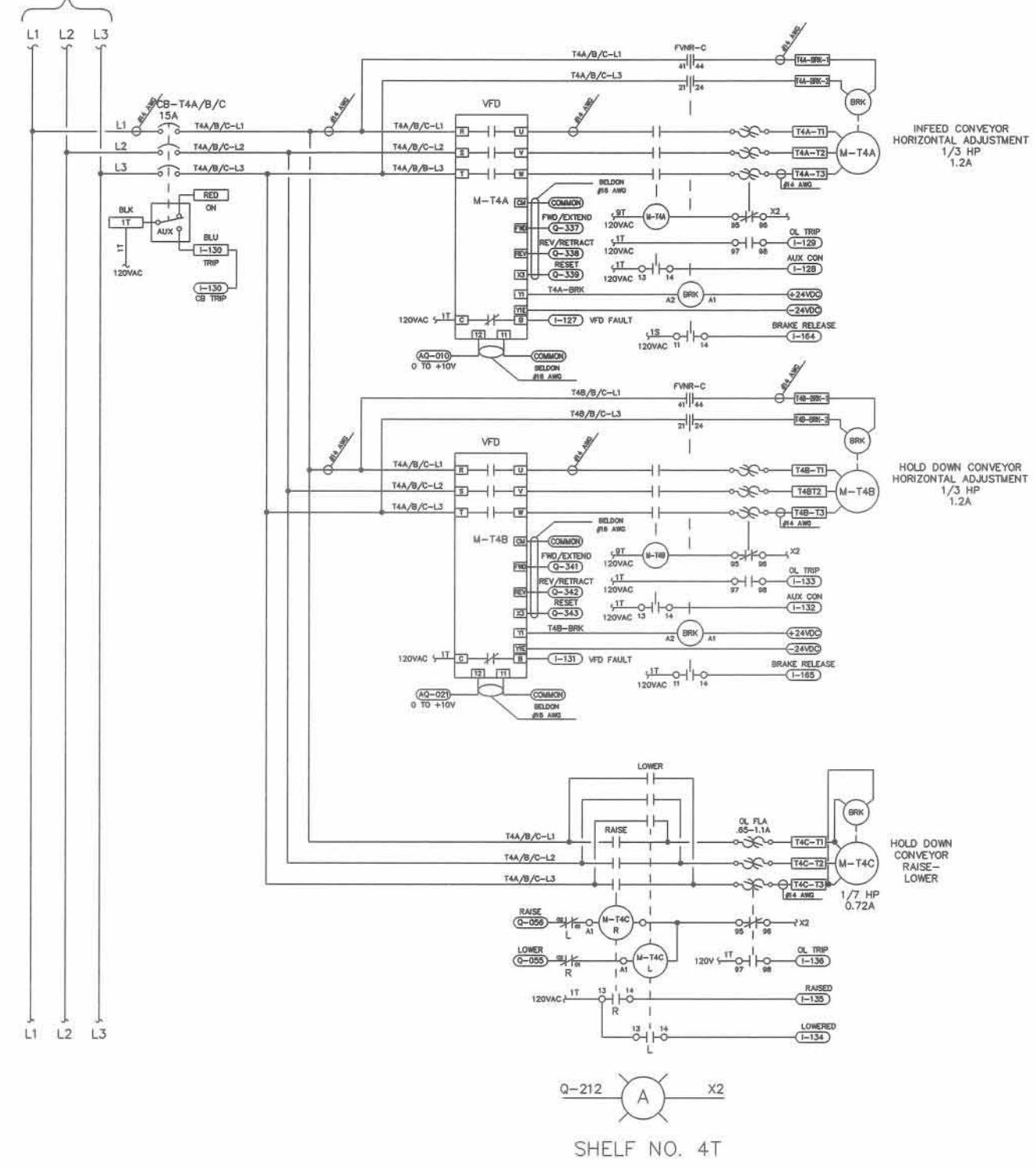
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:            FRACTIONS ± (1/32)    DECIMALS ± (0.10)    ANGLES ± (1°)            TOTAL RUNOUT ± ( )    MACHINED SURFACES NOT SPECIFIED (RV)</small>						
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<b>FEATURES</b> X						
<b>APPROVED</b> DATE: 10/30/00    BY: G.Bowers    TITLE: CYBER, AT, ELE. SCHEM, 230V, US						
<b>CHECKED</b> DATE: 10/30/00    BY: G.Bowers    TITLE: NONE    SCALE: NONE    PAGE: 5 of 21    DASH NO.: 90507    REV.: M						

KEY	NO. OF HOLES	HOLE	DEPTH	TAP	REMARKS
A	X	X	X	X	X



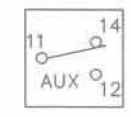
REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE
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CONTINUED FROM  
DWG. U.S.A. SAW-12



BACK PANEL LEFT SIDE

AUXILIARY CONTACT  
DETAIL



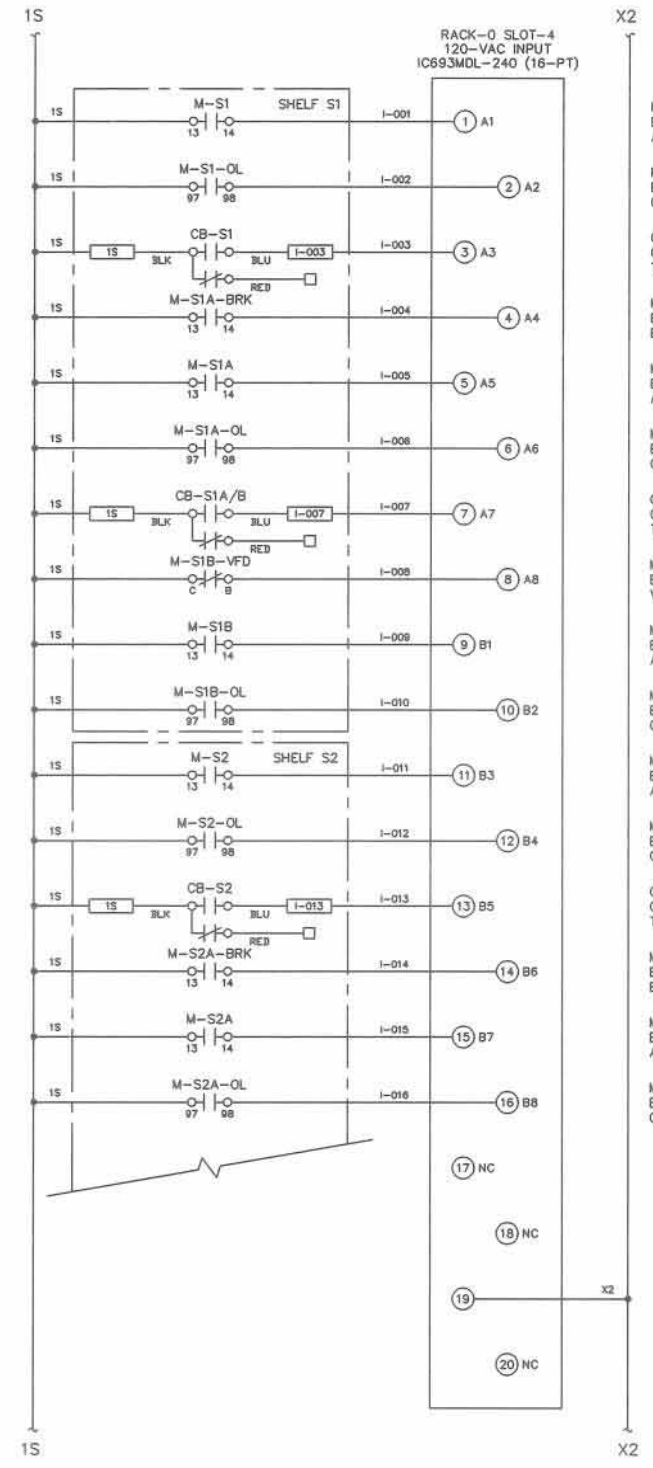
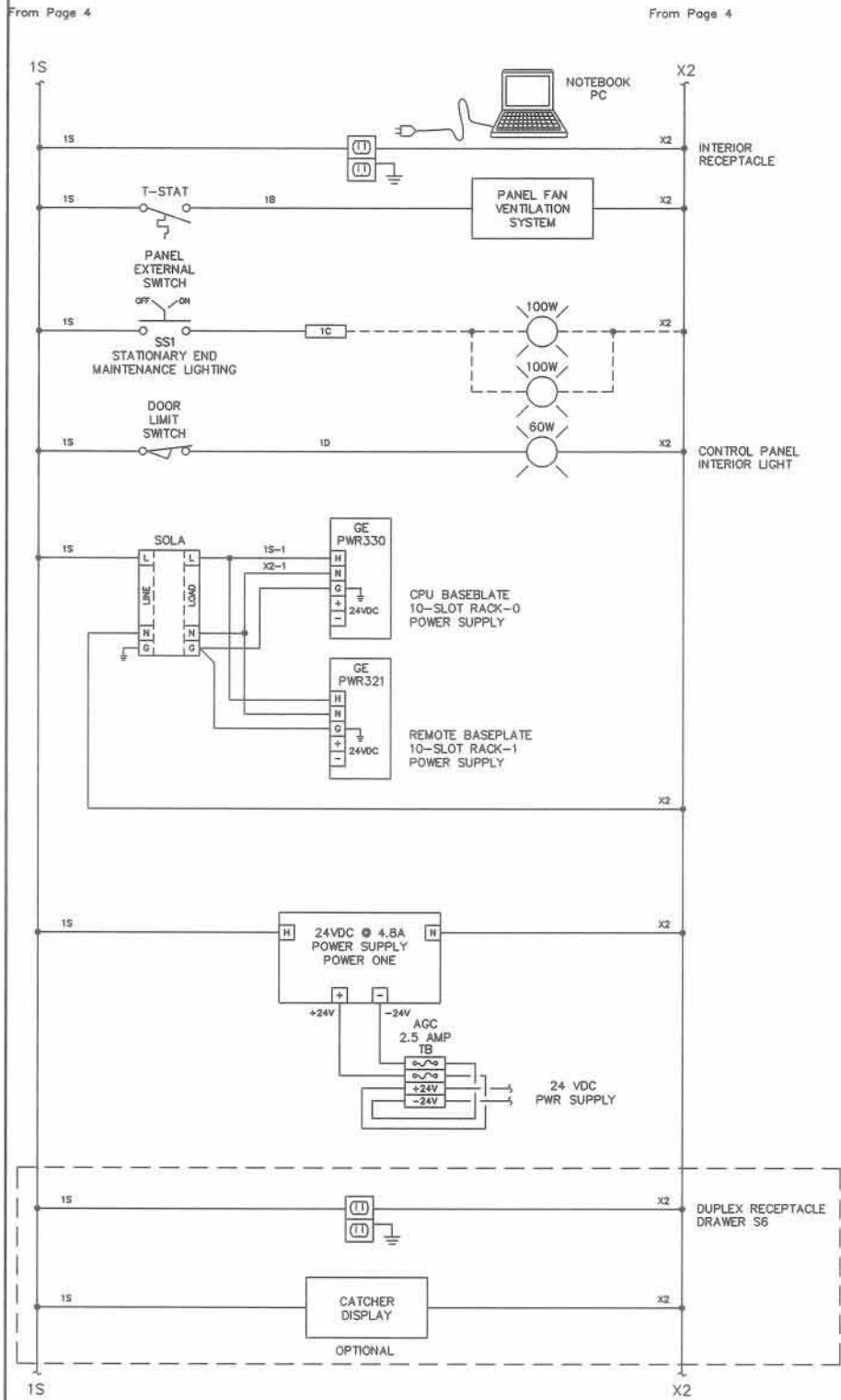
TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE	DEPTH	TAP	REMARKS
A	X	X	X	X	X

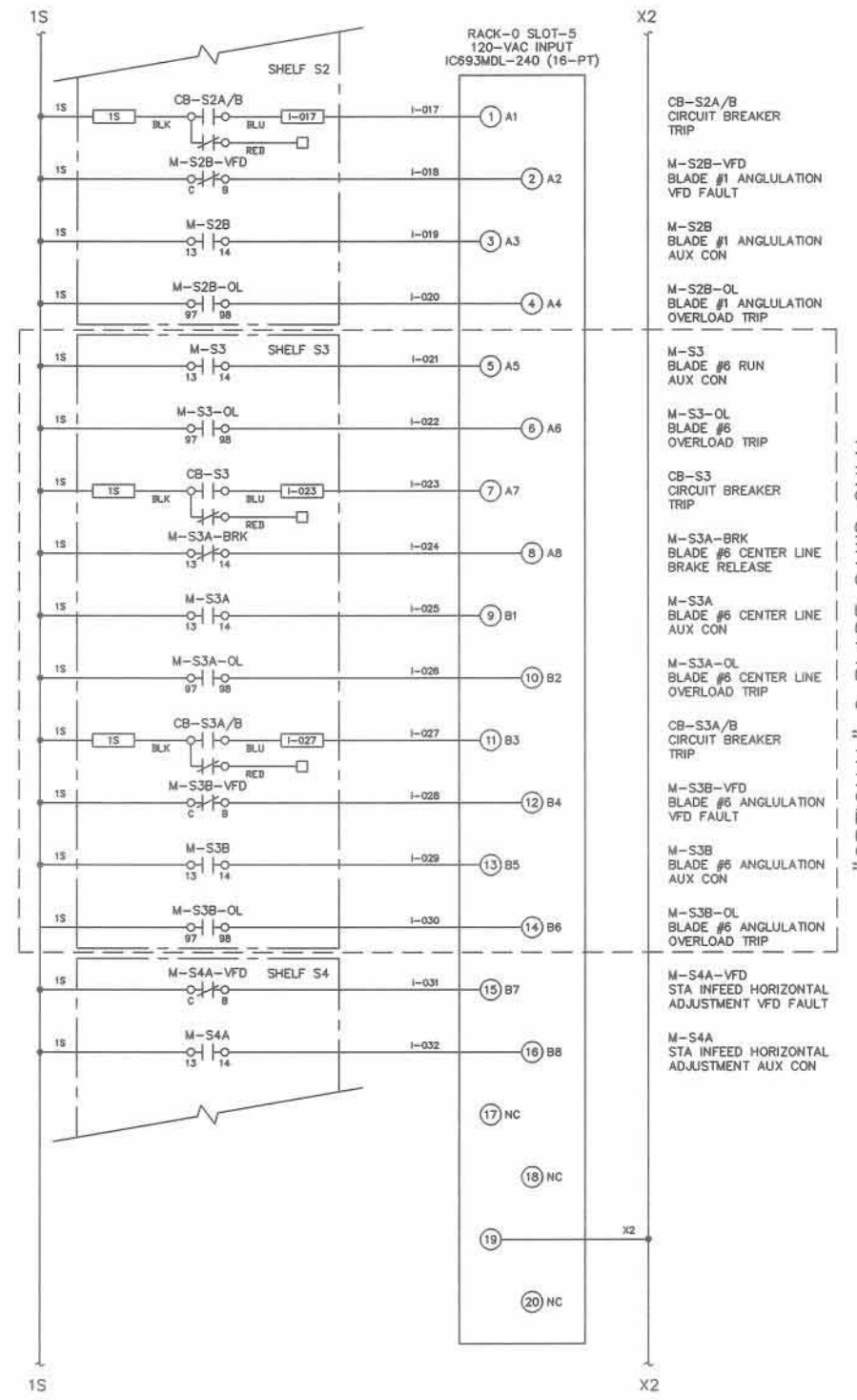
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± (1/32)    DECIMALS ± (0.01)    ANGLES ± (1°)						
TOTAL RUNOUT ± (0.005)    MACHINED SURFACES NOT SPECIFIED (0.005)						
APPROVED: <i>[Signature]</i> DATE: 10/30/00 CHECKED: <i>[Signature]</i> DATE: 10/30/00 DRAWN: G.Bowers FINISH PAINT: X SCALE: NONE PAGE: 6 of 21 DASH NO.: 90507 REV.: M						

MiTek Industries, Inc.  
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

CYBER, AT, ELE, SCHEM, 230V, US



- M-S1 BLADE #2 RUN AUX CON
- M-S1-OL BLADE #2 OVERLOAD TRIP
- CB-S1 CIRCUIT BREAKER TRIP
- M-S1A-BRK BLADE #2 CENTER LINE BRAKE RELEASE
- M-S1A BLADE #2 CENTER LINE AUX CON
- M-S1A-OL BLADE #2 CENTER LINE OVERLOAD TRIP
- CB-S1A/B CIRCUIT BREAKER TRIP
- M-S1B-VFD BLADE #2 ANGLULATION VFD FAULT
- M-S1B BLADE #2 ANGLULATION AUX CON
- M-S1B-OL BLADE #2 ANGLULATION OVERLOAD TRIP
- M-S2 BLADE #1 RUN AUX CON
- M-S2-OL BLADE #1 OVERLOAD TRIP
- CB-S2 CIRCUIT BREAKER TRIP
- M-S2A-BRK BLADE #1 CENTER LINE BRAKE RELEASE
- M-S2A BLADE #1 CENTER LINE AUX CON
- M-S2A-OL BLADE #1 CENTER LINE OVERLOAD TRIP



- CB-S2A/B CIRCUIT BREAKER TRIP
- M-S2B-VFD BLADE #1 ANGLULATION VFD FAULT
- M-S2B BLADE #1 ANGLULATION AUX CON
- M-S2B-OL BLADE #1 ANGLULATION OVERLOAD TRIP
- M-S3 BLADE #6 RUN AUX CON
- M-S3-OL BLADE #6 OVERLOAD TRIP
- CB-S3 CIRCUIT BREAKER TRIP
- M-S3A-BRK BLADE #6 CENTER LINE BRAKE RELEASE
- M-S3A BLADE #6 CENTER LINE AUX CON
- M-S3A-OL BLADE #6 CENTER LINE OVERLOAD TRIP
- CB-S3A/B CIRCUIT BREAKER TRIP
- M-S3B-VFD BLADE #6 ANGLULATION VFD FAULT
- M-S3B BLADE #6 ANGLULATION AUX CON
- M-S3B-OL BLADE #6 ANGLULATION OVERLOAD TRIP
- M-S4A-VFD STA INFED HORIZONTAL ADJUSTMENT VFD FAULT
- M-S4A STA INFED HORIZONTAL ADJUSTMENT AUX CON

"OPTIONAL" 6 BLADE SAWS ONLY

STATIONARY END CONTROL PANEL

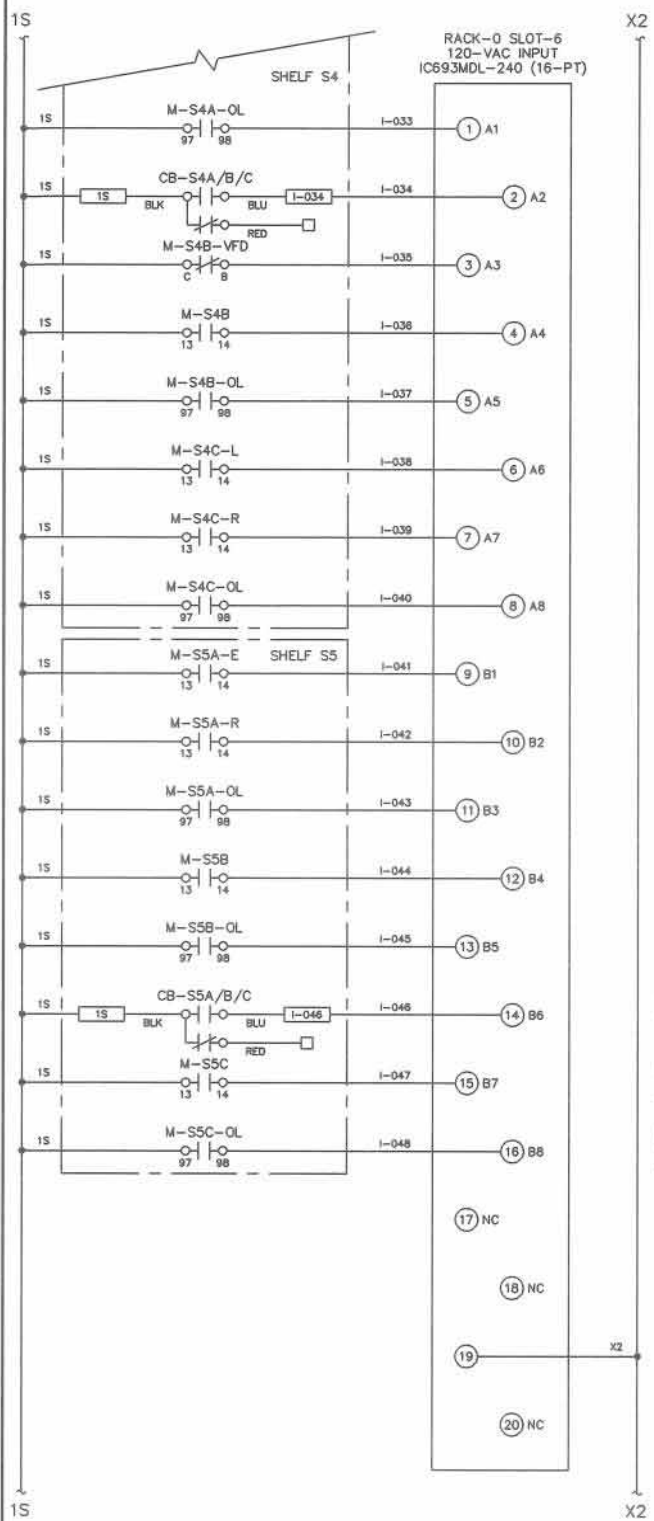
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:  
 FRACTIONS ± [1/32]    DECIMALS ± [0.10]    ANGLES ± [1°]  
 TOTAL RUNOUT ± [ ]    MACHINED SURFACES NOT SPECIFIED [ ]

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APPROVED: [Signature] DATE: 10/30/06 MFD: [Signature] DRAWN: G.Bowers  
 CYBER, AT, ELE, SCHEM. 230V, US  
 SCALE: NONE    PAGE: 7 of 21    DASH NO.: 90507    REV.: M

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS



M-S4A-OL  
STA INFEED HORIZONTAL  
ADJUSTMENT OVERLOAD TRIP

CB-S4A/B/C  
CIRCUIT BREAKER  
TRIP

M-S4B-VFD  
STA HOLD DOWN HORIZONTAL  
ADJUSTMENT VFD FAULT

M-S4B  
STA HOLD DOWN HORIZONTAL  
ADJUSTMENT AUX CON

M-S4B-OL  
STA HOLD DOWN HORIZONTAL  
ADJUSTMENT OVERLOAD TRIP

M-S4C-L  
STA VERTICAL HOLD  
DOWN LOWERED

M-S4C-R  
STA VERTICAL HOLD  
DOWN RAISED

M-S4C-OL  
STA VERTICAL HOLD  
DOWN OVERLOAD TRIP

M-S5A-E  
LUMBER STOP  
EXTENDED

M-S5A-R  
LUMBER STOP  
RETRACTED

M-S5A-OL  
LUMBER STOP  
OVERLOAD TRIP

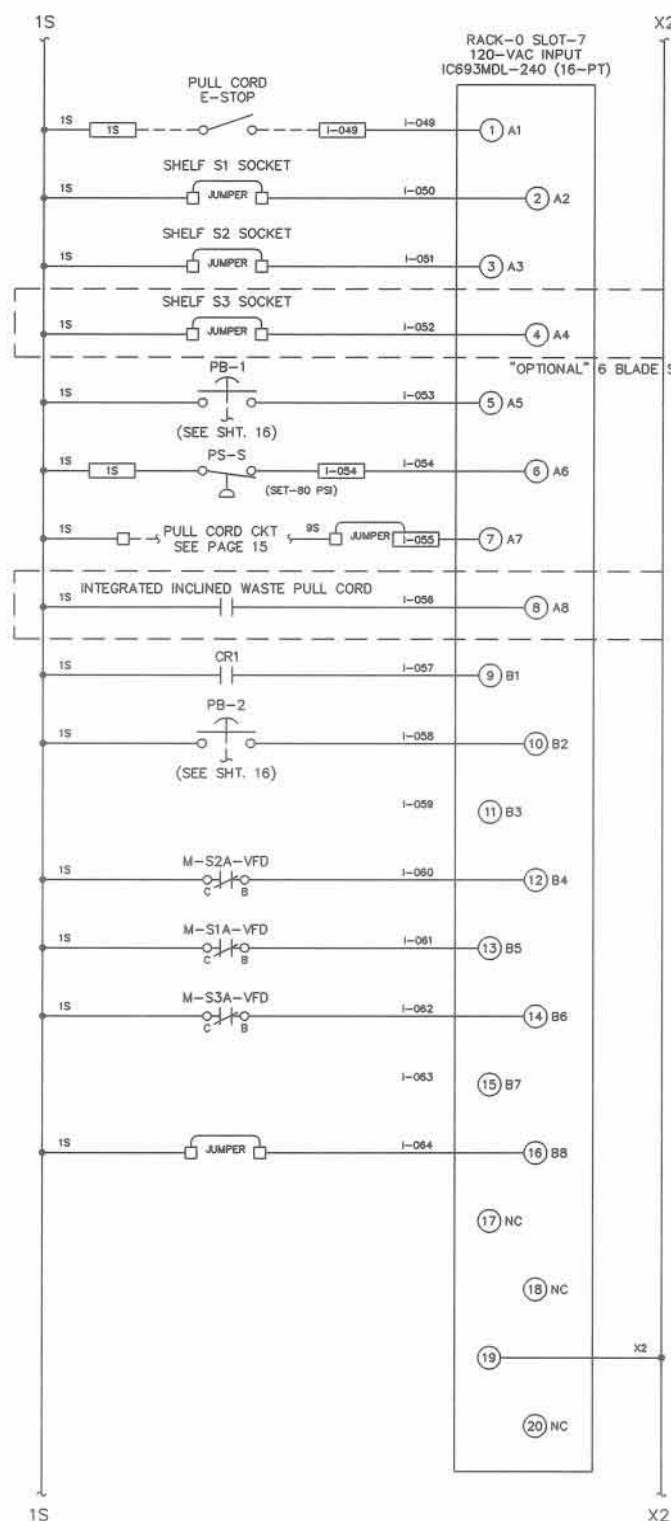
M-S5B  
SCRAP BELT CONVEYOR  
RUN AUX CON

M-S5B-OL  
SCRAP BELT CONVEYOR  
OVERLOAD TRIP

CB-S5A/B/C  
CIRCUIT BREAKER  
TRIP

M-S5C  
SCRAP BELT TAKEAWAY  
CONVEYOR RUN AUX CON

M-S5C-OL  
SCRAP BELT TAKEAWAY  
CONVEYOR OVERLOAD TRIP



EMERGENCY STOP  
PULL CORD  
SAFETY SWITCH

BLADE NO. 2 (S1)  
INSTALLED

BLADE NO. 1 (S2)  
INSTALLED

BLADE NO. 6 (S3)  
INSTALLED

"OPTIONAL" 6 BLADE  
SAWS ONLY

CONTROL PANEL  
E-STOP

INSUFFICIENT  
AIR BRAKE  
PRESSURE

STATIONARY END  
CONTROL POWER  
VERIFY

INTEGRATED INCLINED  
WASTE CONVEYOR  
E-STOP

STATIONARY END  
SYSTEM ENABLE

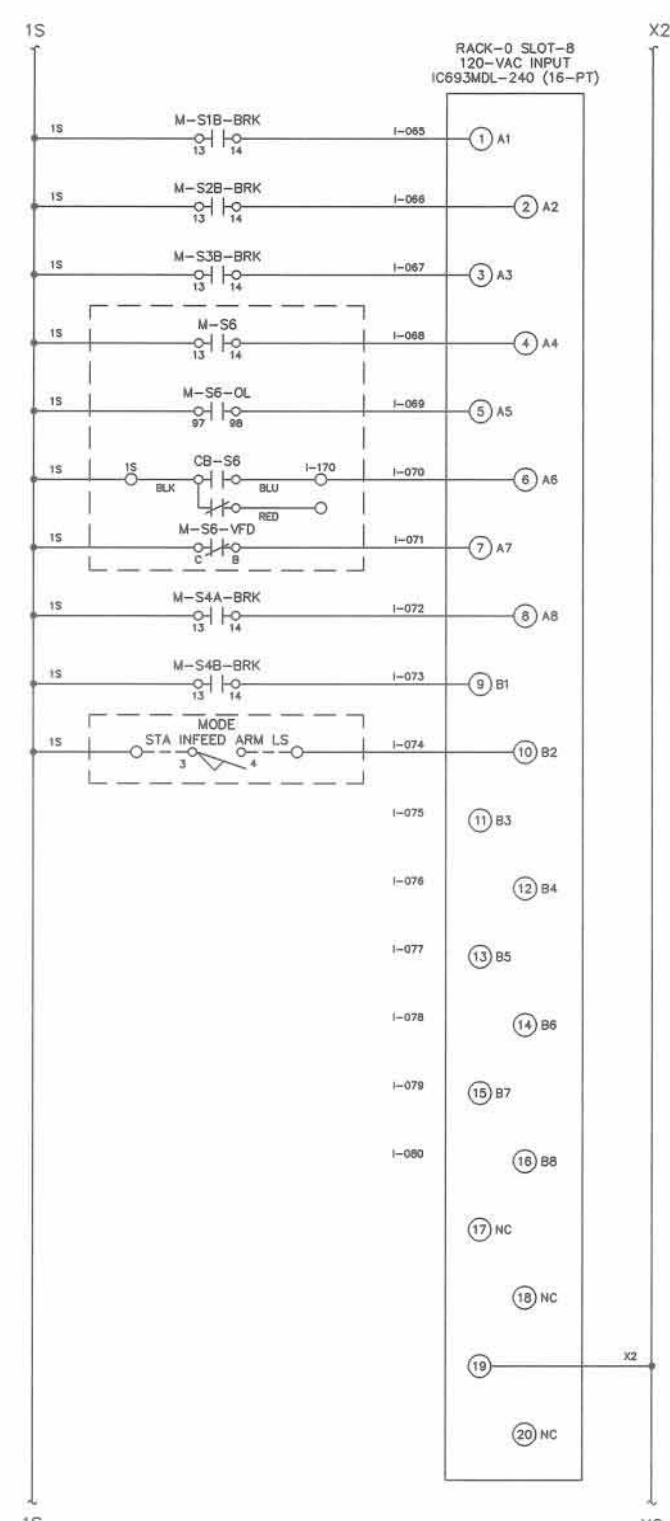
STATIONARY END  
CONTROL PANEL  
SIDE MTD E-STOP

M-S2A-VFD  
BLADE 1 CENTER LINE  
VFD FAULT

M-S1A-VFD  
BLADE 2 CENTER LINE  
VFD FAULT

M-S3A-VFD  
BLADE 6 CENTER LINE  
VFD FAULT

METRIC (CE)  
SAW



M-S1B-BRK  
BLADE 2 ANGLULATION  
BRAKE RELEASE

M-S2B-BRK  
BLADE 1 ANGLULATION  
BRAKE RELEASE

M-S3B-BRK  
BLADE 6 ANGLULATION  
BRAKE RELEASE

M-S6  
INFEED CHAIN CONVEYOR  
CONTACTOR

M-S6  
INFEED CHAIN CONVEYOR  
OVERLOAD TRIP

CB-S6  
CIRCUIT BREAKER  
TRIP

M-S6-VFD  
INFEED CHAIN CONVEYOR  
VFD FAULT

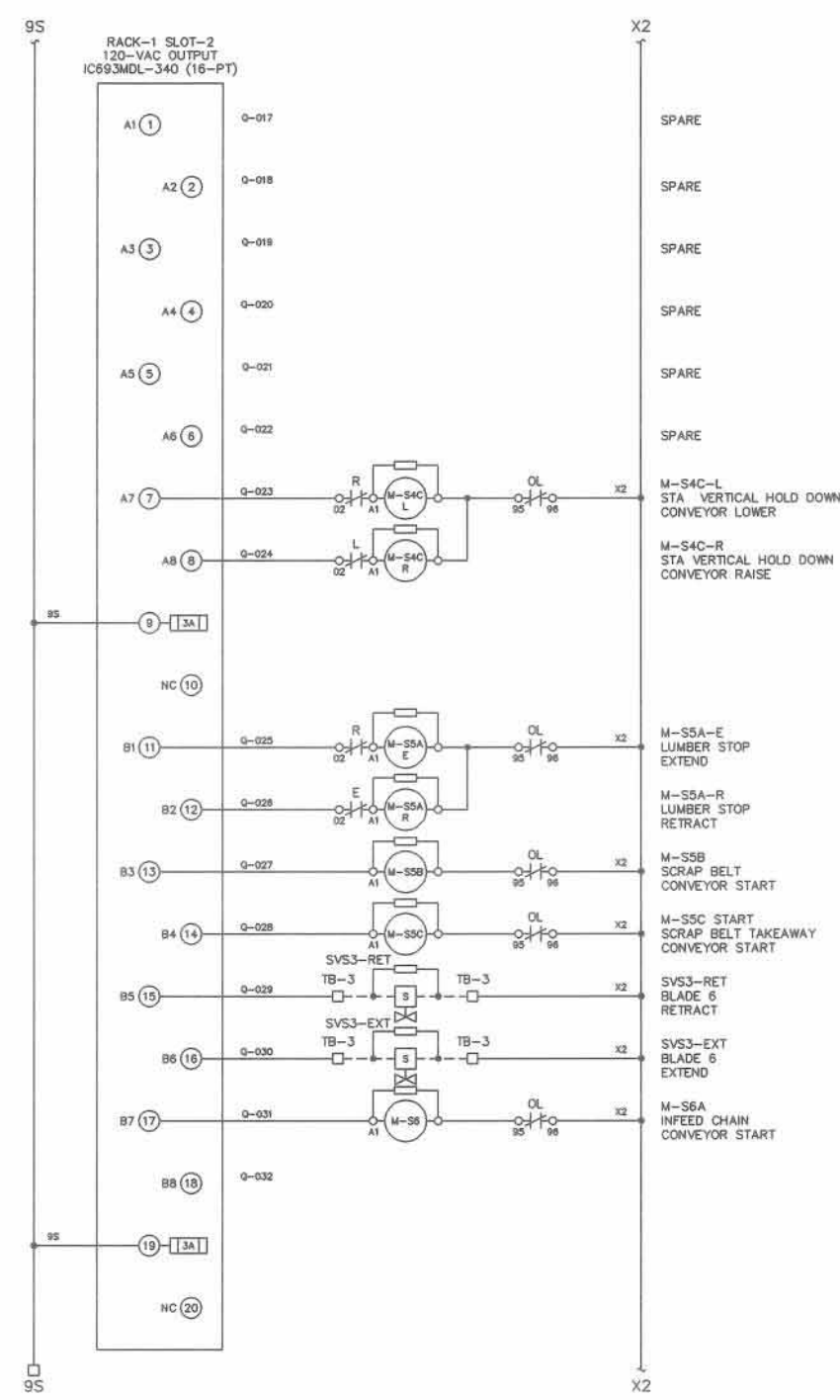
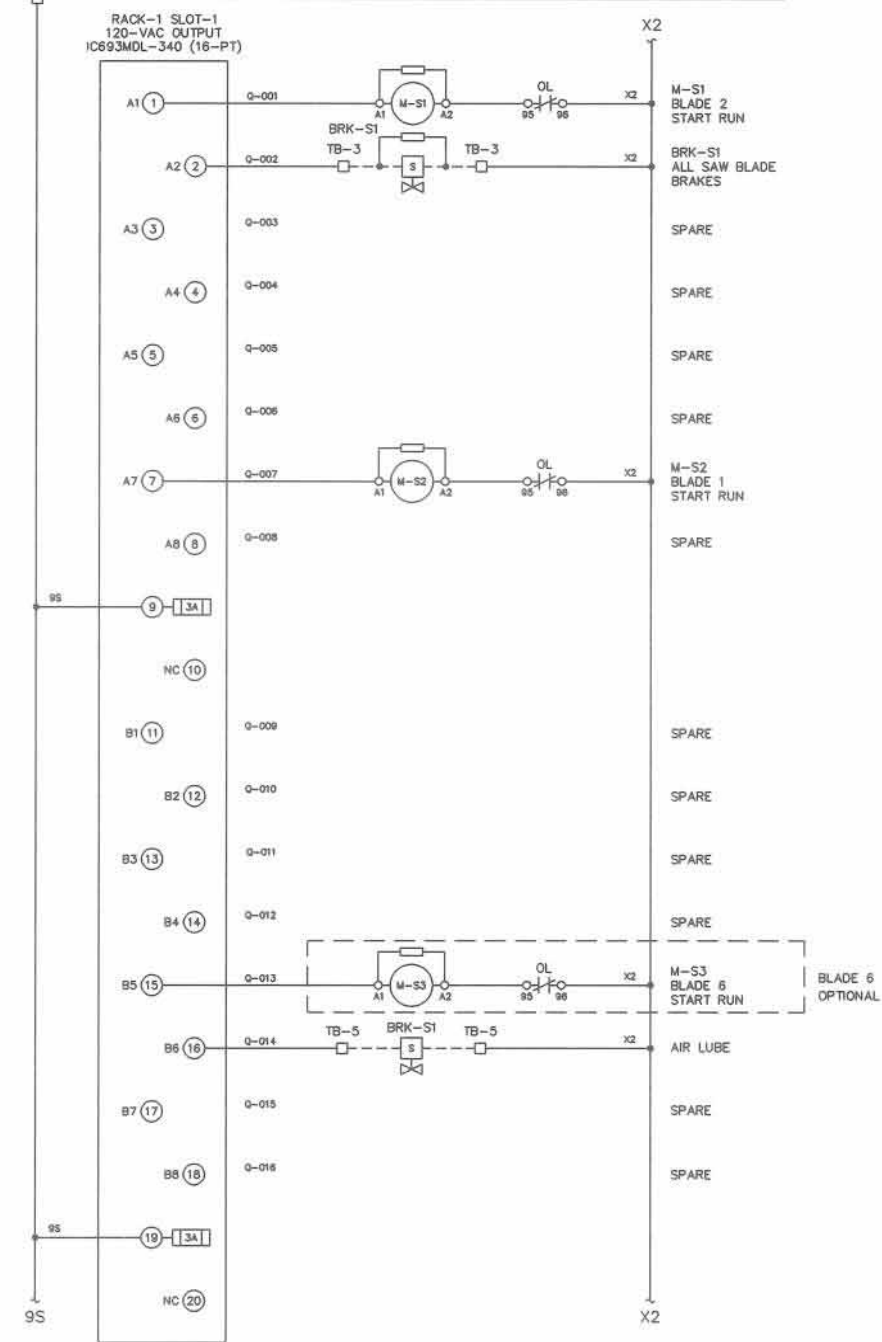
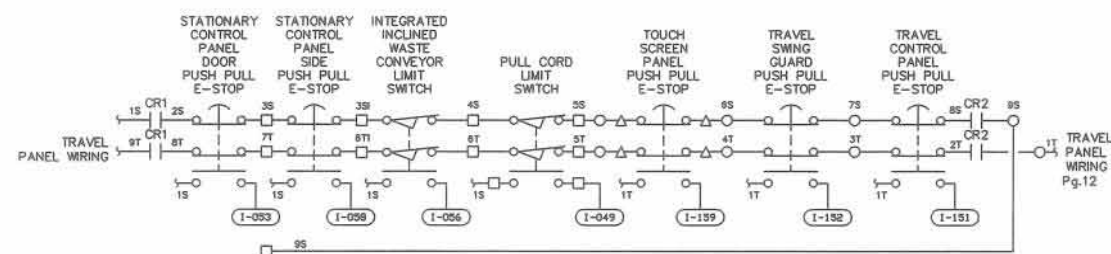
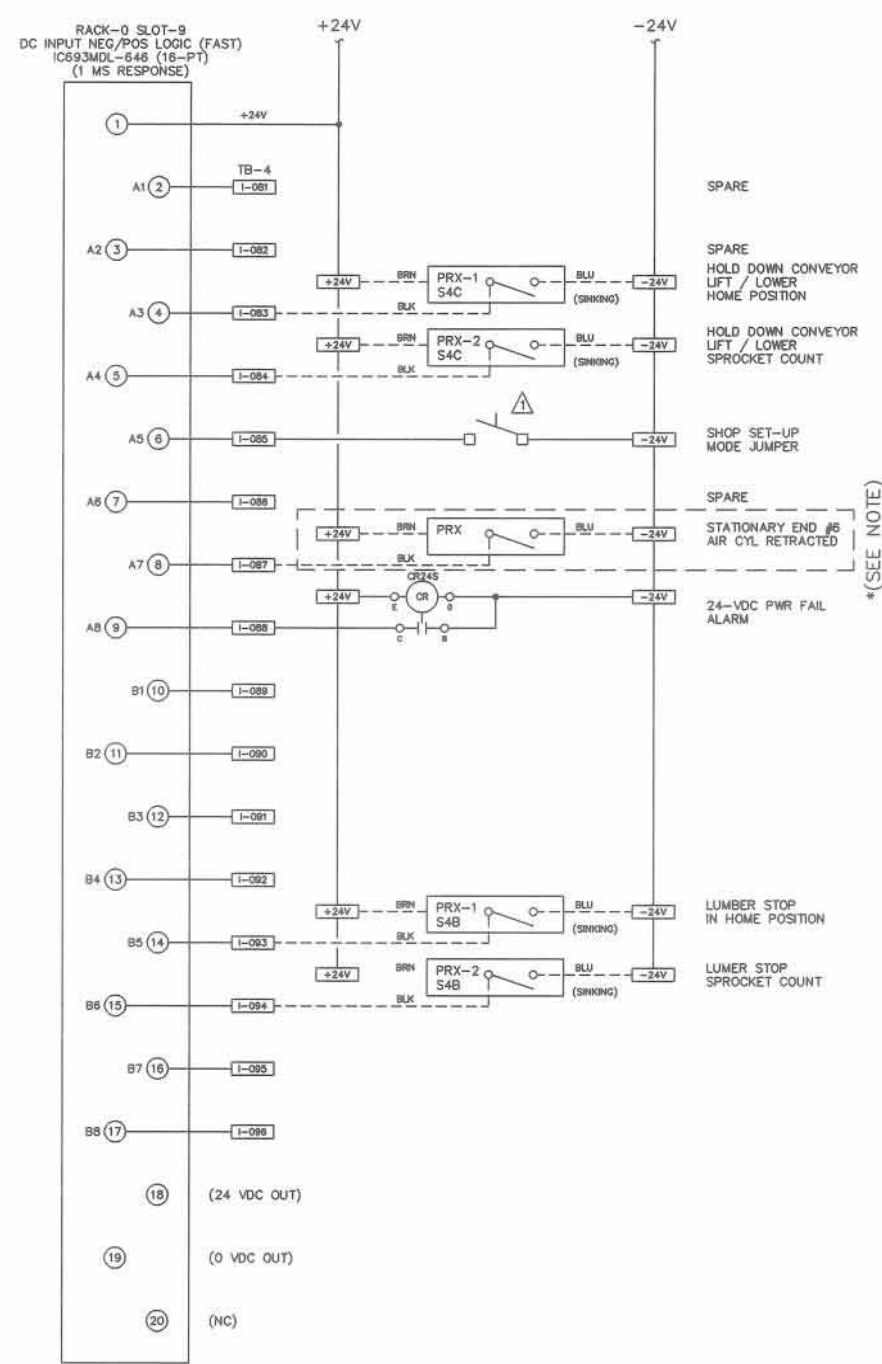
M-S4A-BRK  
STA INFEED CONVEYOR  
BRAKE RELEASE

M-S4B-BRK  
STA HORIZONTAL HOLD DOWN  
BRAKE RELEASE

### STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± [1/32]    DECIMALS ± [0.01]    ANGLES ± [1°]						
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<b>MITTEK INDUSTRIES, INC.</b> 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045						
APPROVED	DATE	DRAWN	DATE	FIRST PART	SCALE	PAGE
		G.Bowers	10/30/00	X	NONE	8 of 21
<b>CYBER, AT, ELE, SCHEMIC, 230V, US</b>						<b>90507</b>



SET-UP MODE JUMPER - WHEN JUMPER IS REMOVED, PROGRAMMED TRAVEL LIMITS FOR ALL DRIVES EQUIPPED WITH HOME POSITION DETECTORS ARE DISABLED AND ALL AUTO MODE OPERATIONS ARE DENIED. THIS FEATURE IS PROVIDED TO ALLOW INITIAL AXIS POSITIONING DURING SHOP SET-UP OR IN THE EVENT OF COMPUTER CPU REPLACEMENT.

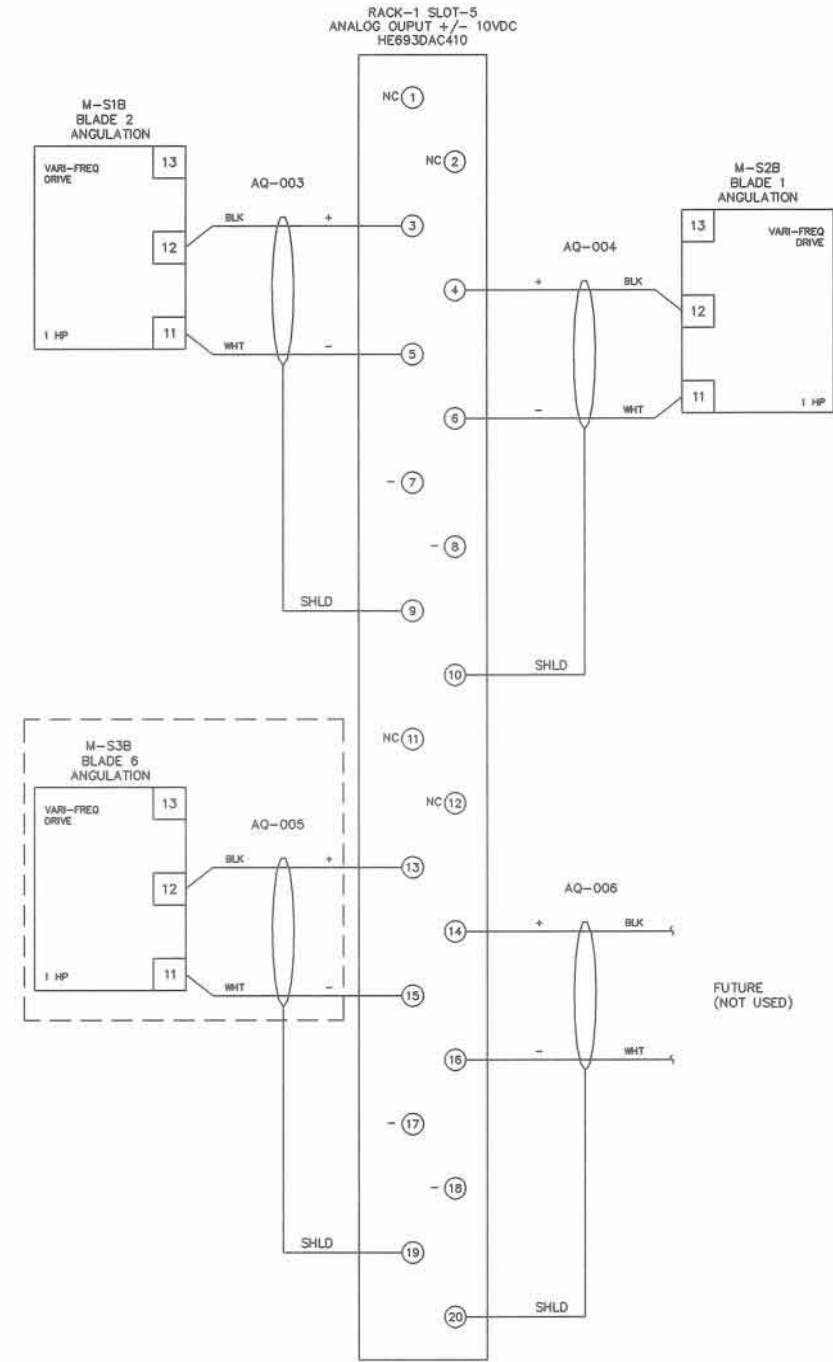
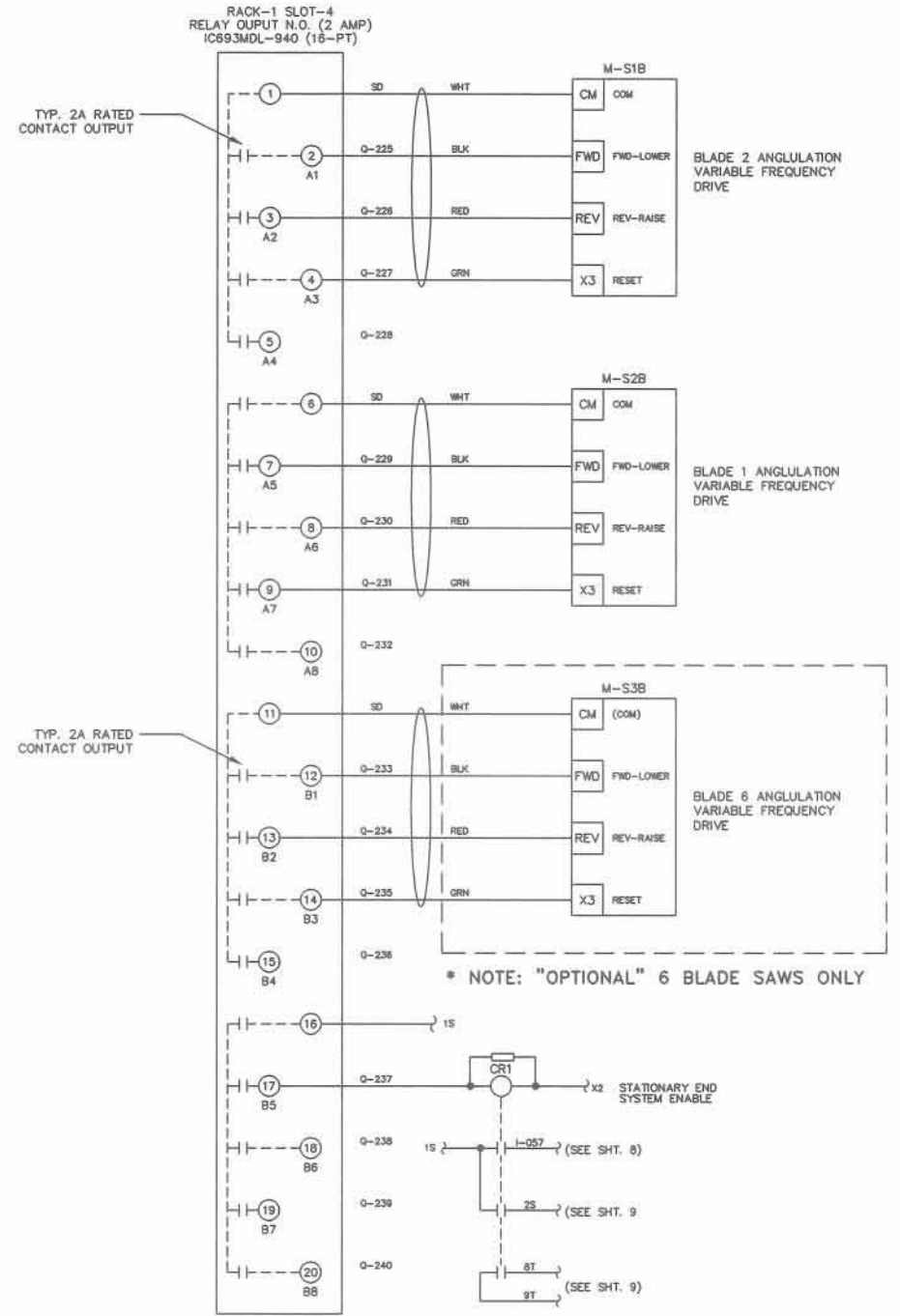
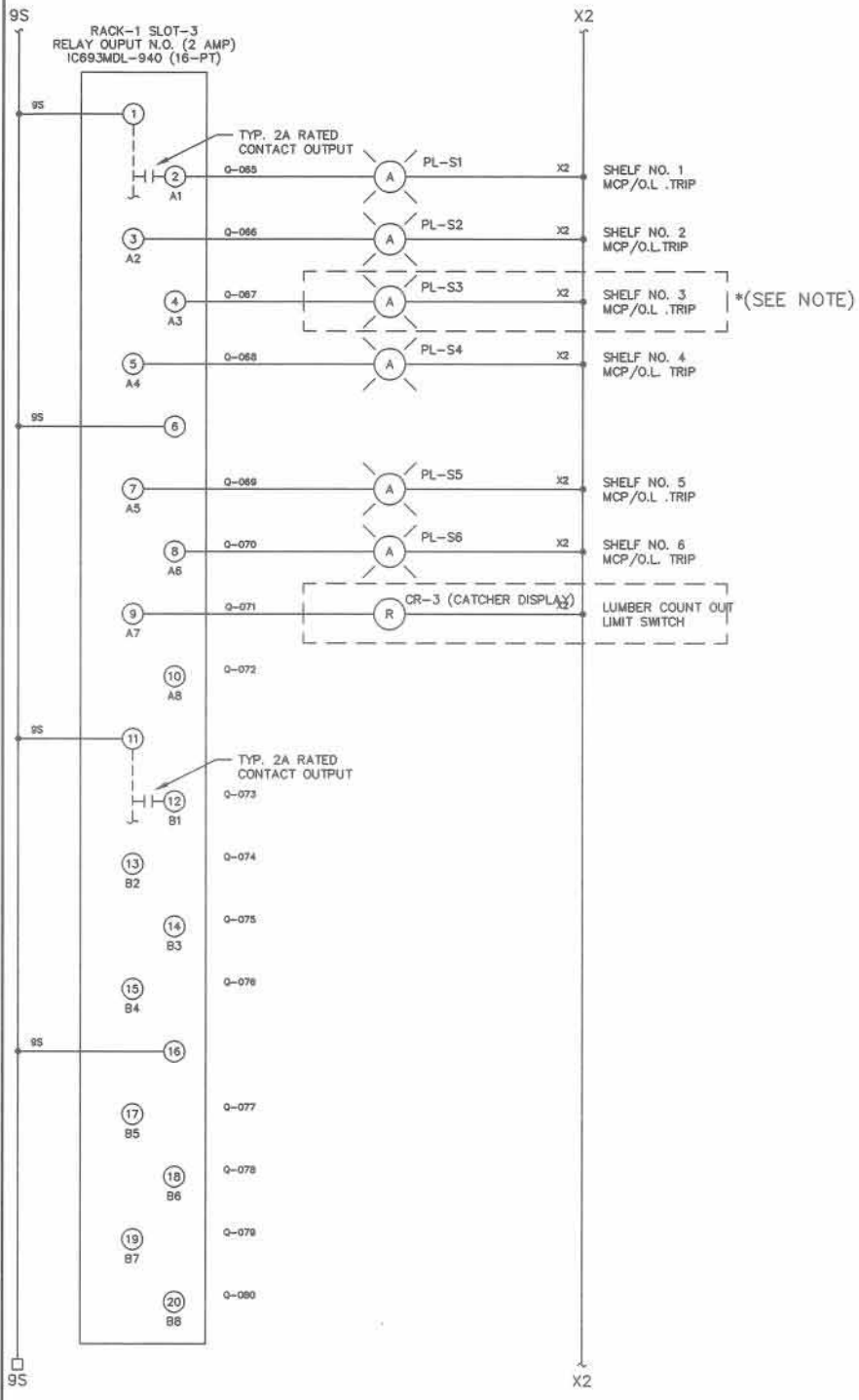
TERMINAL NOTES:  
 Δ TERMINALS LOCATED IN TOUCHSCREEN PANEL  
 ○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL  
 □ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± [1/32]    DECIMALS ± [0.10]    ANGLES ± [1°]						
TOTAL RUNOUT ± [ ]    MACHINED SURFACES NOT SPECIFIED [ ]						
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<b>MiTek Industries, Inc.</b> 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045						
APPROVED	DATE	DRAWN	DATE	FINISH PART	SCALE	PAGE
[Signature]	10/30/00	G. Bowers	10/30/00	X	NONE	9 of 21
CYBER, AT, ELE, SCHEM, 230V, US						DASH NO. REV. 90507 M

BELDEN CABLE (9418) EFFECTIVE  
FRAME #358 FORWARD



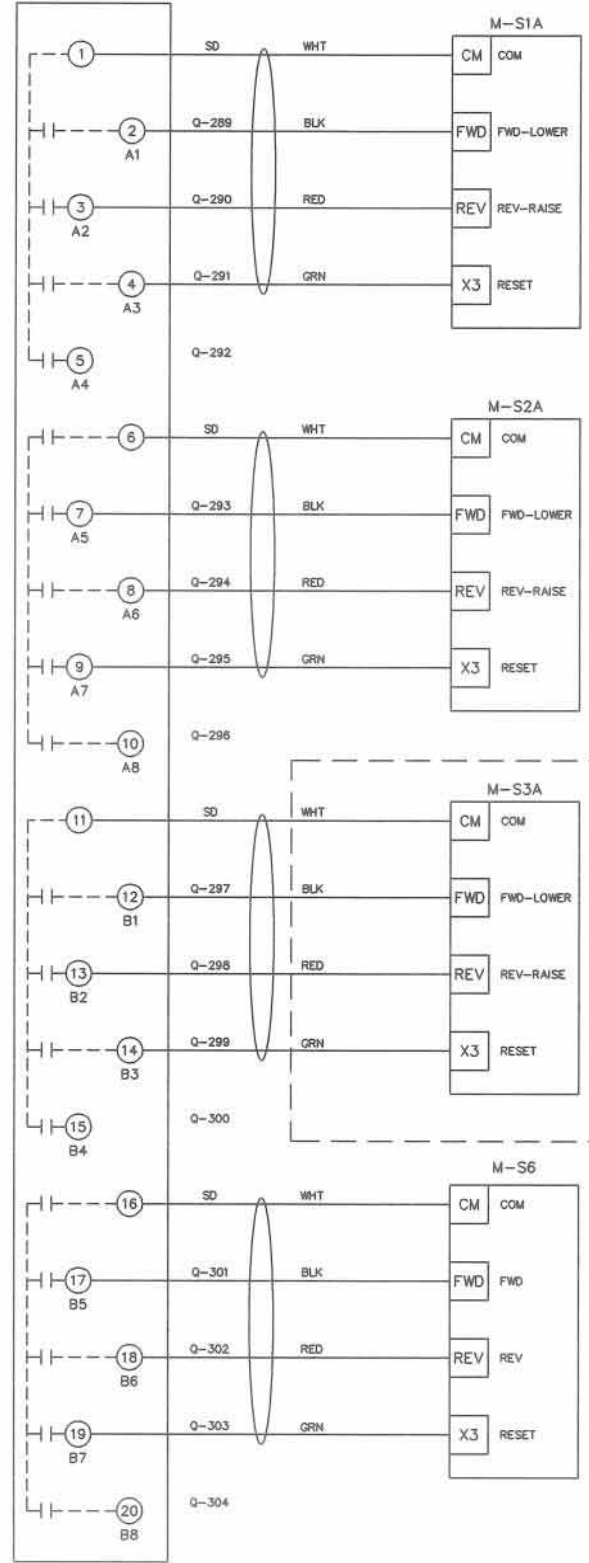
STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DRG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:          FRACTIONS ± [1/32] DECIMALS ± [0.010] ANGLES ± [1°]          TOTAL RUNOUT ± [0.004] MACHINED SURFACES NOT SPECIFIED 250</small>						
<small>THIS DRAWING AND/OR DATA SHEET, AND THE CONFIDENTIAL PROPRIETARY INFORMATION THEREON, IS PROPERTY OF MITEK INDUSTRIES, INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART, OR USED FOR UNAUTHORIZED MANUFACTURING OR ANY OTHER EXPLOITATION OF THE ITEM DISCLOSED THEREON, OR IN ANY OTHER WAY DISCLOSED OR USED FOR FURNISHING INFORMATION.</small>						
APPROVED		DATE	MPG	<b>CYBER, AT, ELE, SCHEM, 230V, US</b>		
CHECKED		DATE	DRG. BY	DATE	FINISH PART	SCALE
		10/30/00	G. Bowers	10/30/00	X	NONE
				PAGE	10 of 21	90507
				DASH NO.		M

BELDEN CABLE (9418) EFFECTIVE  
FRAME #358 FORWARD

RACK-1 SLOT-6  
RELAY OUTPUT N.O. (2 AMP)  
IC693MDL-940 (16-PT)



BLADE 2 CENTER LINE  
VARIABLE FREQUENCY  
DRIVE

BLADE 1 CENTER LINE  
VARIABLE FREQUENCY  
DRIVE

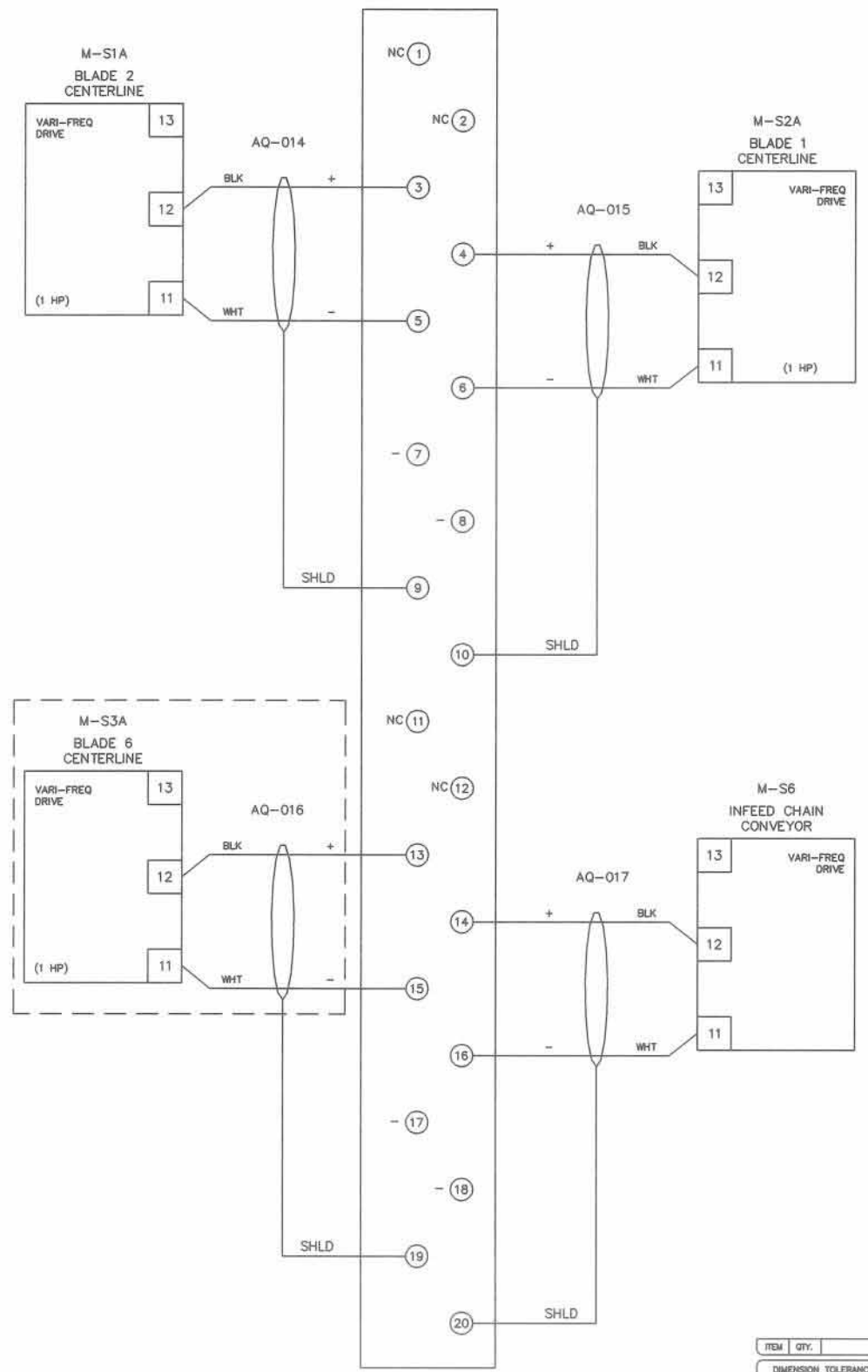
\*"OPTIONAL" 6 BLADE SAWS ONLY

BLADE 6 CENTER LINE  
VARIABLE FREQUENCY  
DRIVE

INFEED CHAIN CONVEYOR

NOTE:  
VFD IS FIXED AT 0-5VDC  
INPUT. BIAS PLC ANALOG  
PROGRAMMING OF 0-10VDC  
TO SUPPORT VFD.

RACK-1 SLOT-7  
ANALOG OUTPUT +/- 10VDC  
HE693DAC410



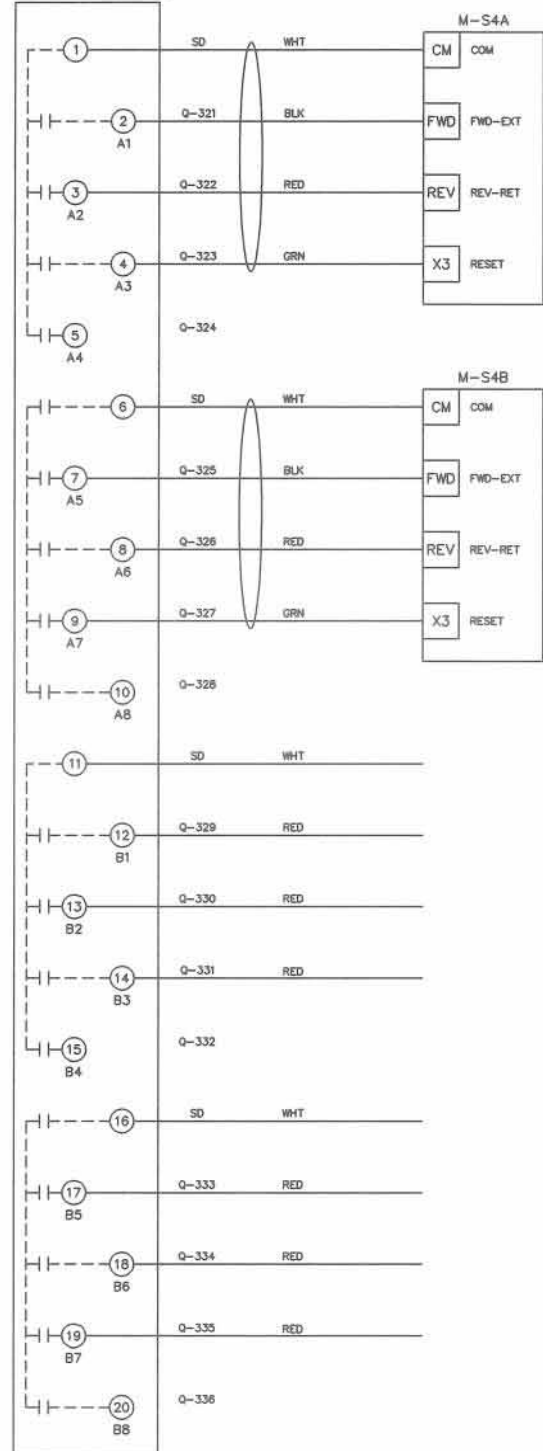
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:            FRACTIONS ± 1/32    DECIMALS ± 0.010    ANGLES ± 1°            TOTAL RUNOUT ± 0.005    MACHINED SURFACES NOT SPECIFIED ± 0.005</small>						
<small>THIS DRAWING AND/OR DATA SHEET, AND THE CONFIDENTIAL PROPRIETARY INFORMATION THEREON,            IS PROPERTY OF MITEK INDUSTRIES, INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR            IN PART, OR USED FOR UNAUTHORIZED MANUFACTURING OR ANY OTHER EXPLOITATION OF THE ITEM            DISCLOSED THEREIN, OR IN ANY OTHER WAY DISCLOSED OR USED FOR FURNISHING INFORMATION.</small>						
<b>FEATURES</b> X			<b>MiTek Industries, Inc.</b> <small>4303 SHORELINE DRIVE, EARTH CITY, MO. 63045</small>			
<b>APPROVED</b> DATE: 10/30/00 BY: G. Bowers		<b>CYBER, AT, ELE, SCHEM, 230V, US</b> SCALE: NONE    PAGE: 11 of 21    DASH NO.: 90507    REV.: M				

KEY	NO. OF HOLES	HOLE	DEPTH	TAP	REMARKS
A	X	X	X	X	X

BELDEN CABLE (9418) EFFECTIVE  
FRAME #358 FORWARD

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE
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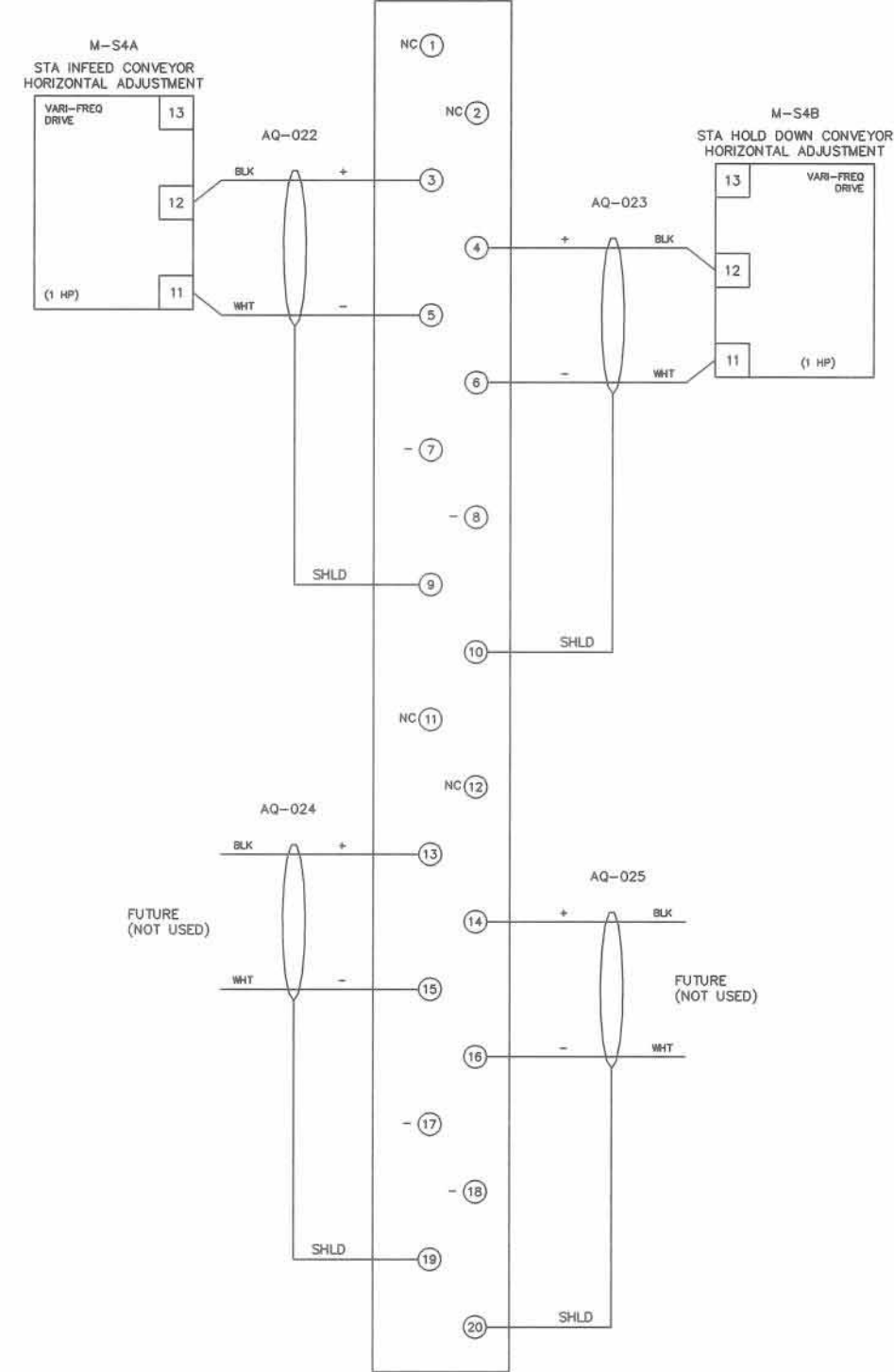
RACK-1 SLOT-8  
RELAY OUTPUT N.O. (2 AMP)  
IC693MDL-940 (16-PT)



STA INFEDD CONVEYOR  
HORIZONTAL ADJUSTMENT

STA HOLD DOWN CONVEYOR  
HORIZONTAL ADJUSTMENT

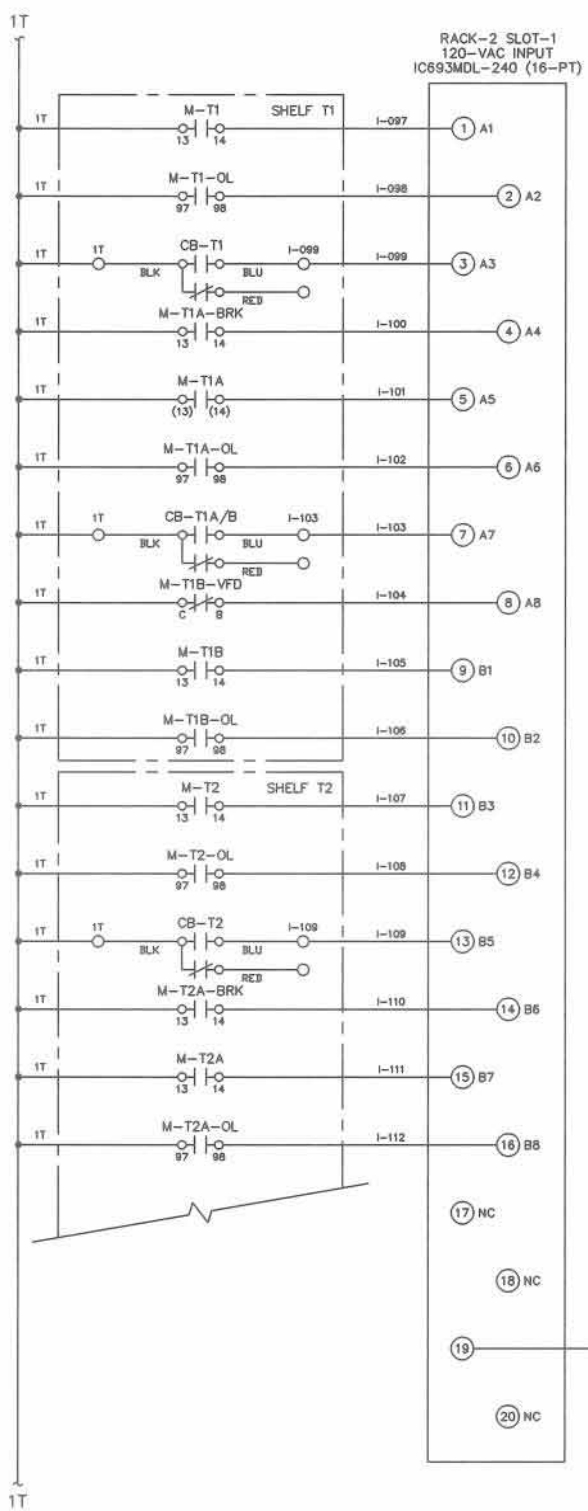
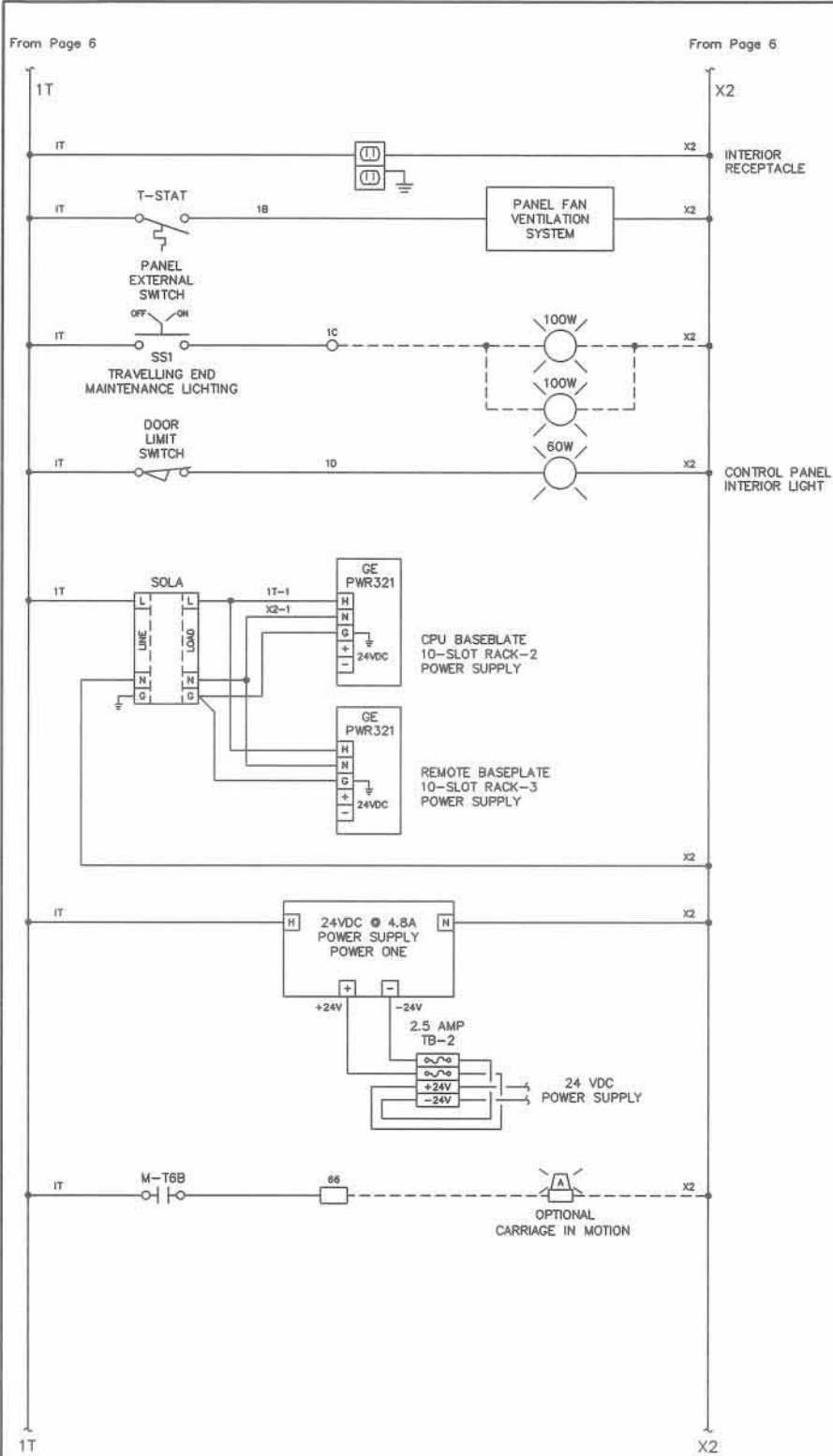
RACK-1 SLOT-9  
ANALOG OUTPUT +/- 10VDC  
HE693DAC410



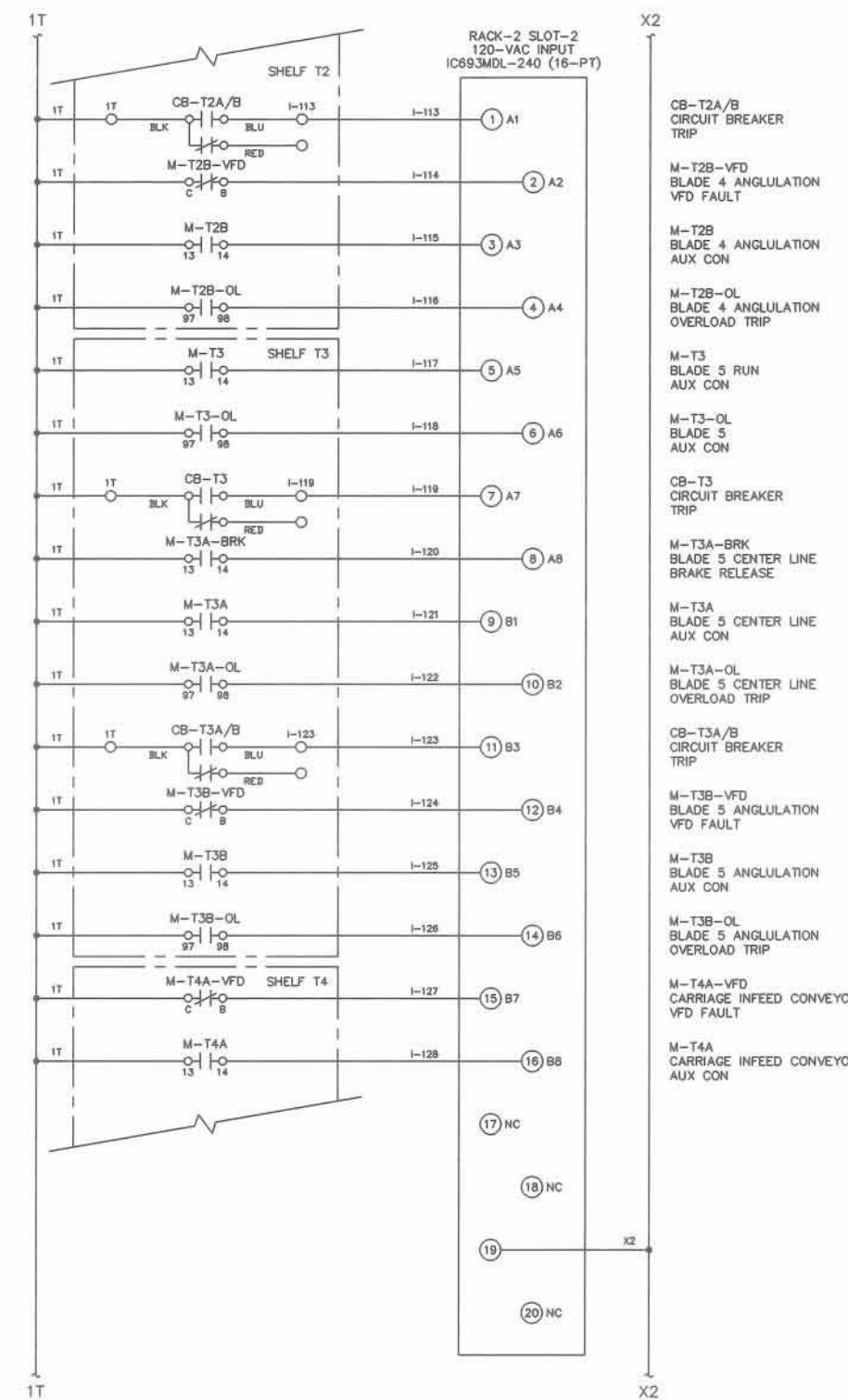
TOUCHSCREEN PANEL  
○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL  
□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/ OR DESCRIPTION	LENGTH	CODE	DWG.NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± $\frac{1}{32}$ DECIMALS ± $[.010]$ ANGLES ± $[T]$ TOTAL RUNOUT ± $\square$ MACHINED SURFACES NOT SPECIFIED $\frac{25}{100}$						
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APPROVED: <i>[Signature]</i> DATE: 10/30/00			MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045			
DRAWN: G.Bowers		DATE: 10/30/00		FIRST PART: X		SCALE: NONE
CYBER, AT, ELE, SCHEM, 230V, US			PAGE: 12 of 21		90507	



- M-T1  
BLADE 3 RUN  
AUX CON
- M-T1-OL  
BLADE 3  
OVERLOAD TRIP
- CB-T1  
CIRCUIT BREAKER  
TRIP
- M-T1A-BRK  
BLADE 3 CENTER LINE  
BRAKE RELEASE
- M-T1A  
BLADE 3 CENTER LINE  
AUX CON
- M-T1A-OL  
BLADE 3 CENTER LINE  
OVERLOAD TRIP
- CB-T1A/B  
CIRCUIT BREAKER  
TRIP
- M-T1B-VFD  
BLADE 3 ANGLULATION  
VFD FAULT
- M-T1B  
BLADE 3 ANGLULATION  
AUX CON
- M-T1B-OL  
BLADE 3 ANGLULATION  
OVERLOAD TRIP
- M-T2  
BLADE 4 RUN  
AUX CON
- M-T2-OL  
BLADE 4  
OVERLOAD TRIP
- CB-T2  
CIRCUIT BREAKER  
TRIP
- M-T2A-BRK  
BLADE 4 CENTER LINE  
BRAKE RELEASE
- M-T2A  
BLADE 4 CENTER LINE  
AUX CON
- M-T2A-OL  
BLADE 4 CENTER LINE  
OVERLOAD TRIP



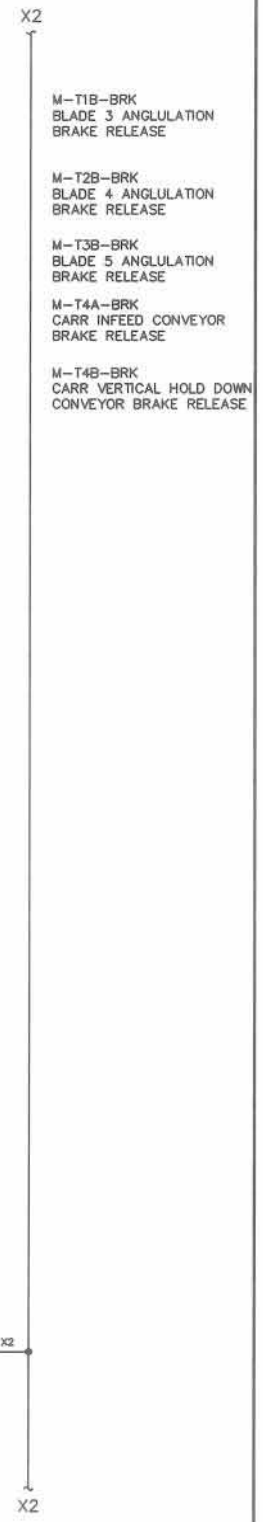
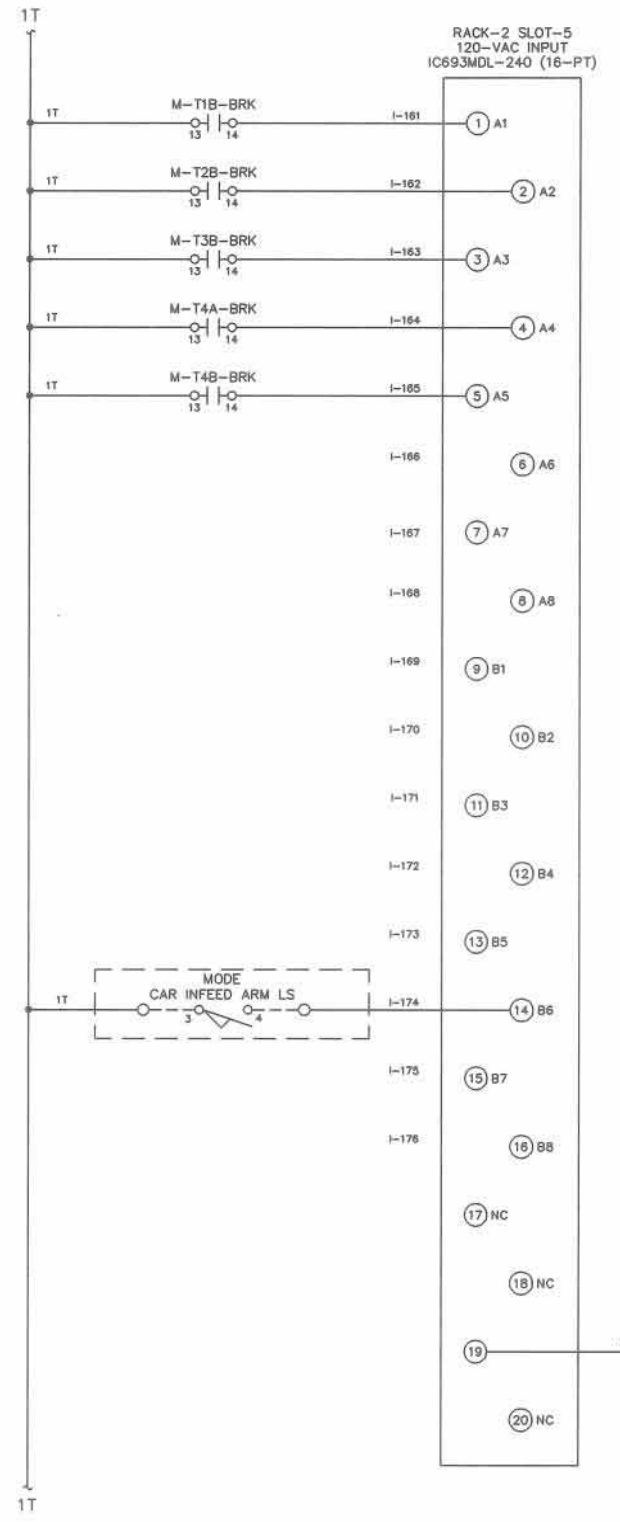
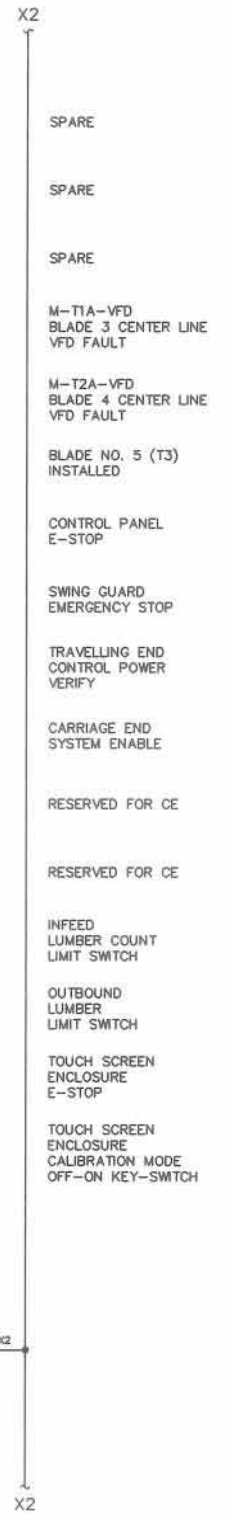
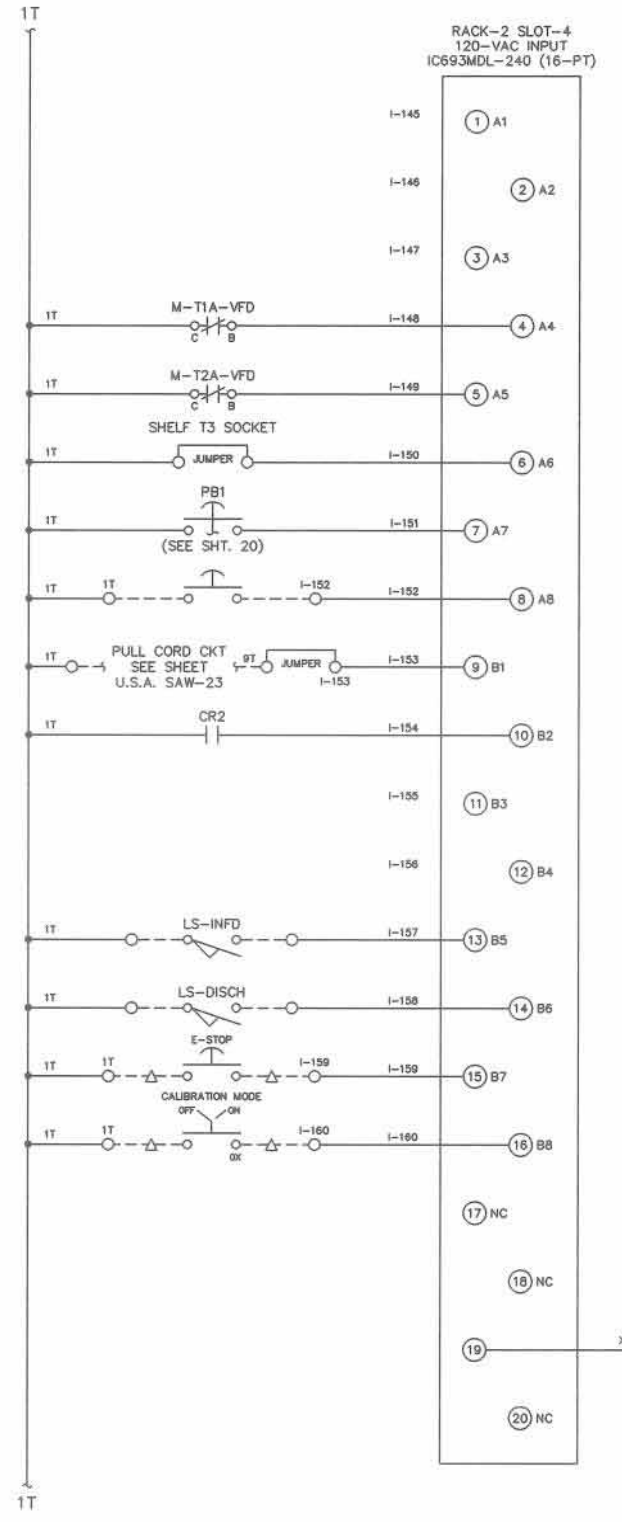
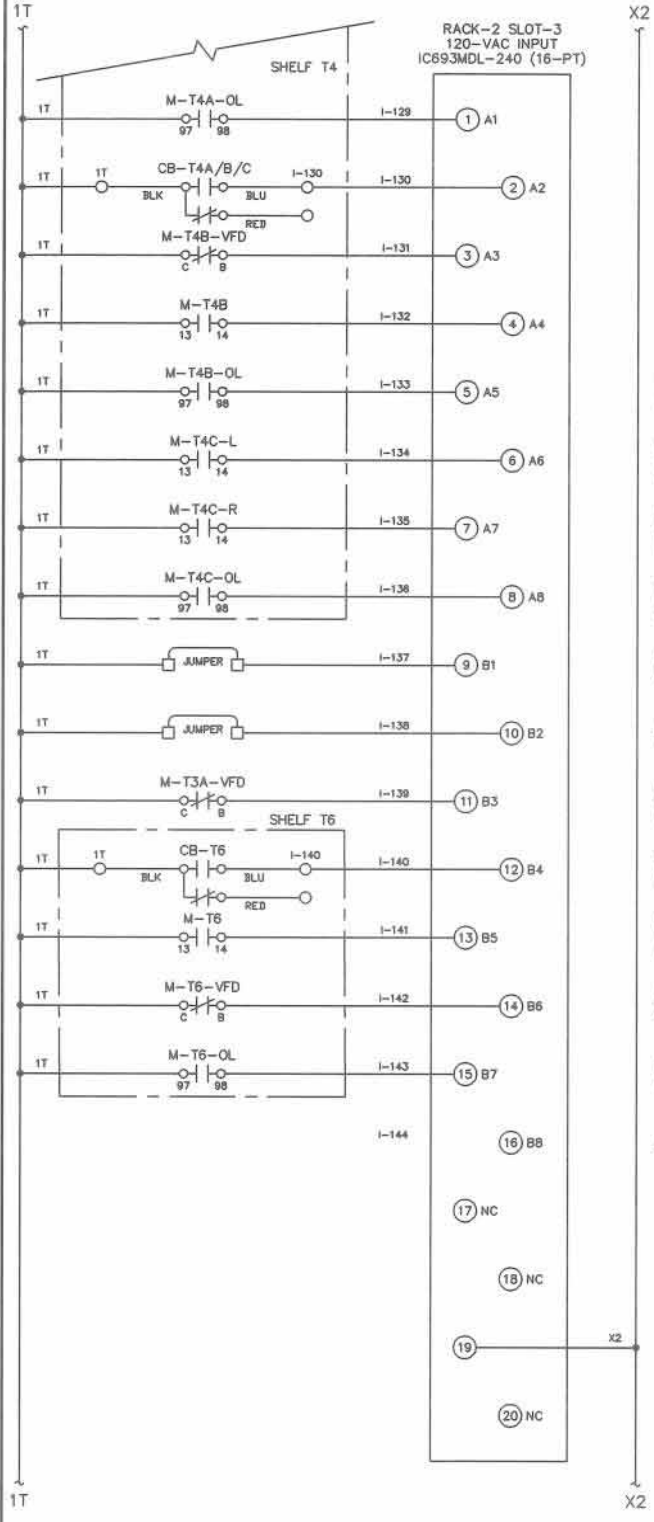
- CB-T2A/B  
CIRCUIT BREAKER  
TRIP
- M-T2B-VFD  
BLADE 4 ANGLULATION  
VFD FAULT
- M-T2B  
BLADE 4 ANGLULATION  
AUX CON
- M-T2B-OL  
BLADE 4 ANGLULATION  
OVERLOAD TRIP
- M-T3  
BLADE 5 RUN  
AUX CON
- M-T3-OL  
BLADE 5  
AUX CON
- CB-T3  
CIRCUIT BREAKER  
TRIP
- M-T3A-BRK  
BLADE 5 CENTER LINE  
BRAKE RELEASE
- M-T3A  
BLADE 5 CENTER LINE  
AUX CON
- M-T3A-OL  
BLADE 5 CENTER LINE  
OVERLOAD TRIP
- CB-T3A/B  
CIRCUIT BREAKER  
TRIP
- M-T3B-VFD  
BLADE 5 ANGLULATION  
VFD FAULT
- M-T3B  
BLADE 5 ANGLULATION  
AUX CON
- M-T3B-OL  
BLADE 5 ANGLULATION  
OVERLOAD TRIP
- M-T4A-VFD  
CARRIAGE INFEEED CONVEYOR  
VFD FAULT
- M-T4A  
CARRIAGE INFEEED CONVEYOR  
AUX CON

TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± [1/32] DECIMALS ± [0.01] ANGLES ± [1°] TOTAL RUNOUT ± [0.004] MACHINED SURFACES NOT SPECIFIED [0.004]						
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APPROVED		DATE	MFR.	<b>MiTek Industries, Inc.</b> 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045		
CHECKED		DATE	DRAWN	DATE	FINISH PART	SCALE
			G. Bowers	10/30/00	X	NONE
CYBER, AT, ELE, SCHEM, 230V, US				PAGE	REV.	
				13 of 21	90507	



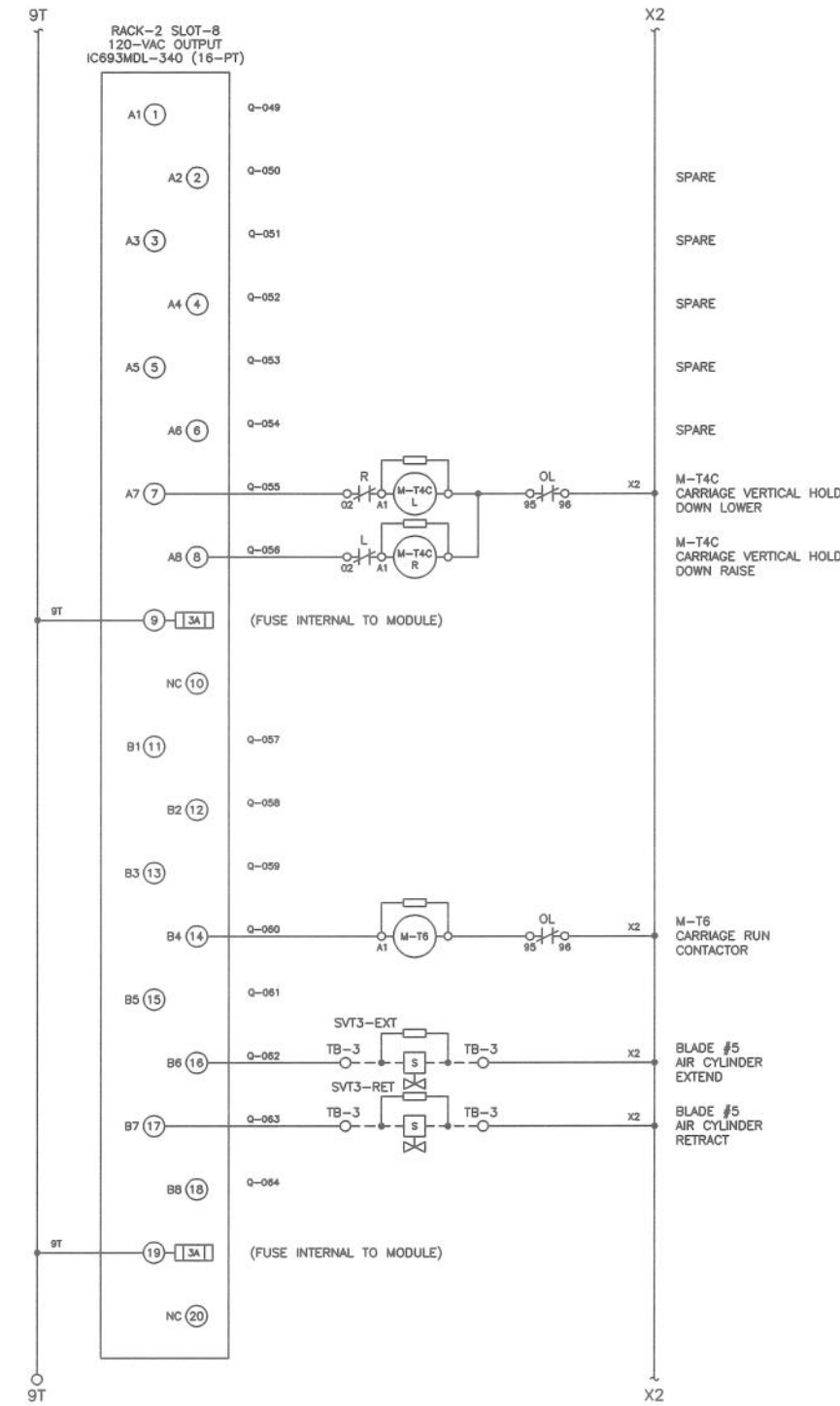
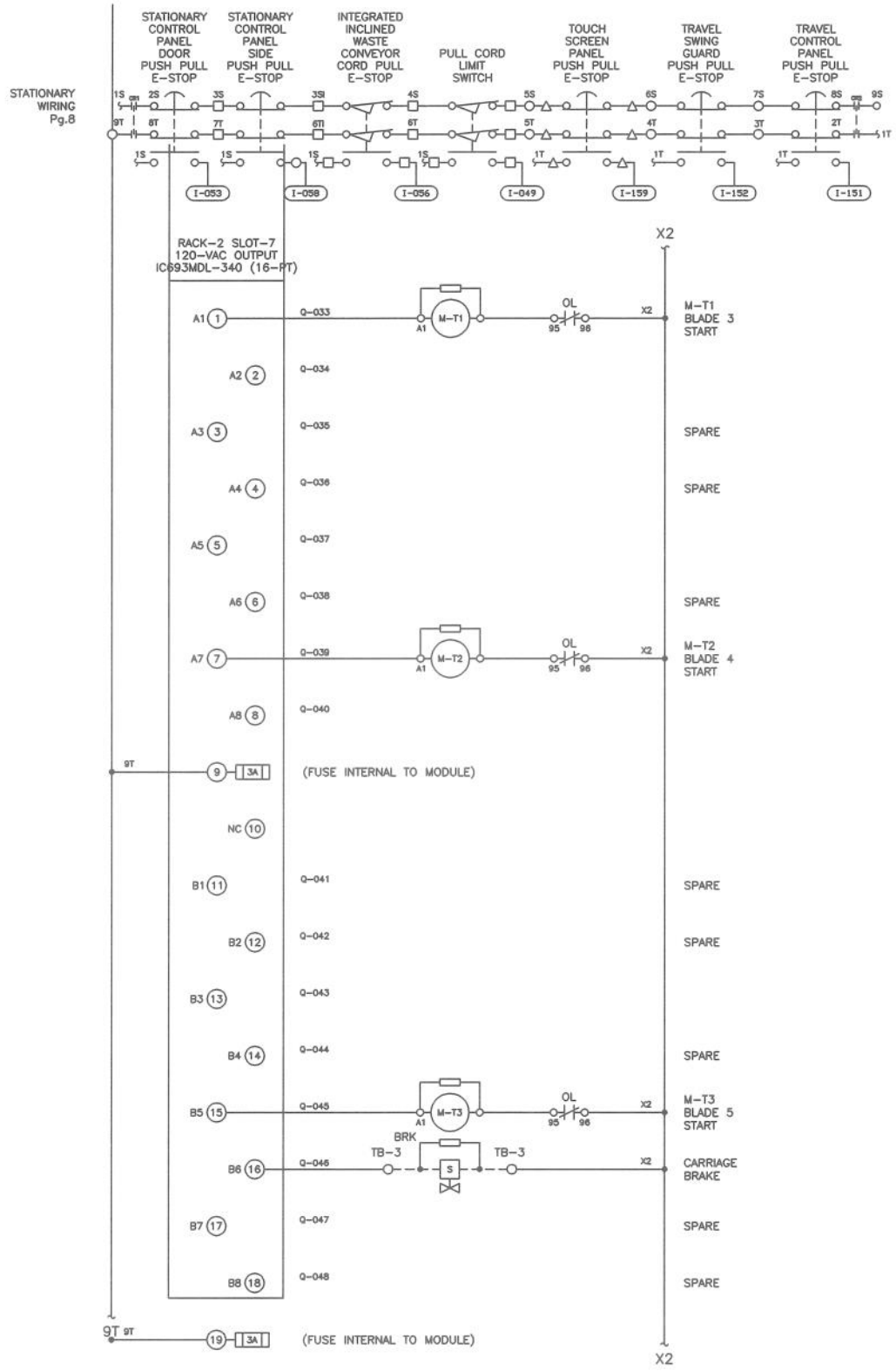
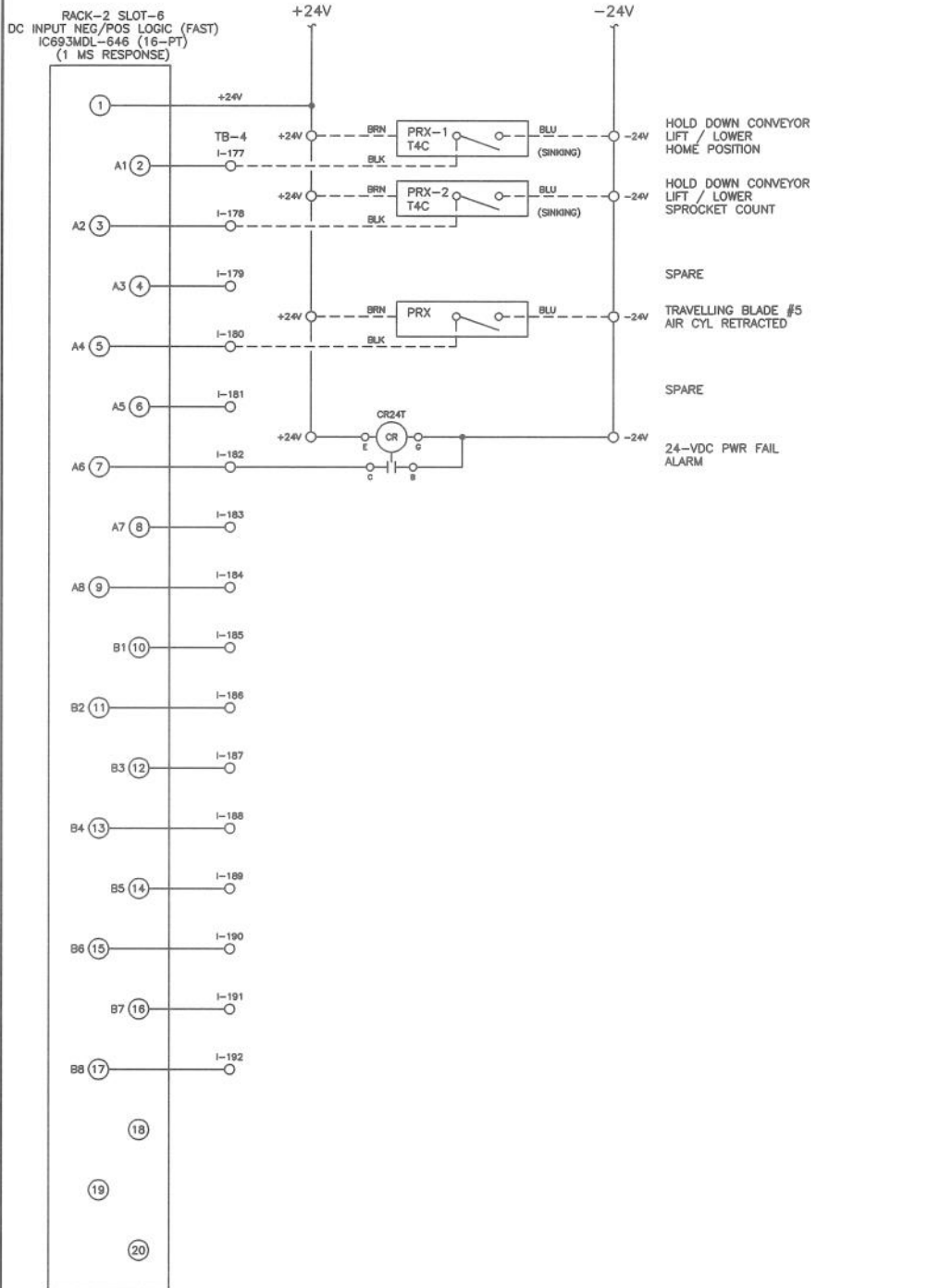


TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE	TAP	REMARKS
A	X	X	X	X

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°)						
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<b>FEATURES</b> X						
<b>APPROVED</b> DATE    MFG. <b>CYBER, AT, ELE. SCHEM, 230V, US</b>						
<b>CHECKED</b> DATE    DRAWN    DATE    FRESH PAINT    SCALE    PAGE    DASH NO.    REV.						
10/30/08    X    NONE    14 of 21    90507    M						



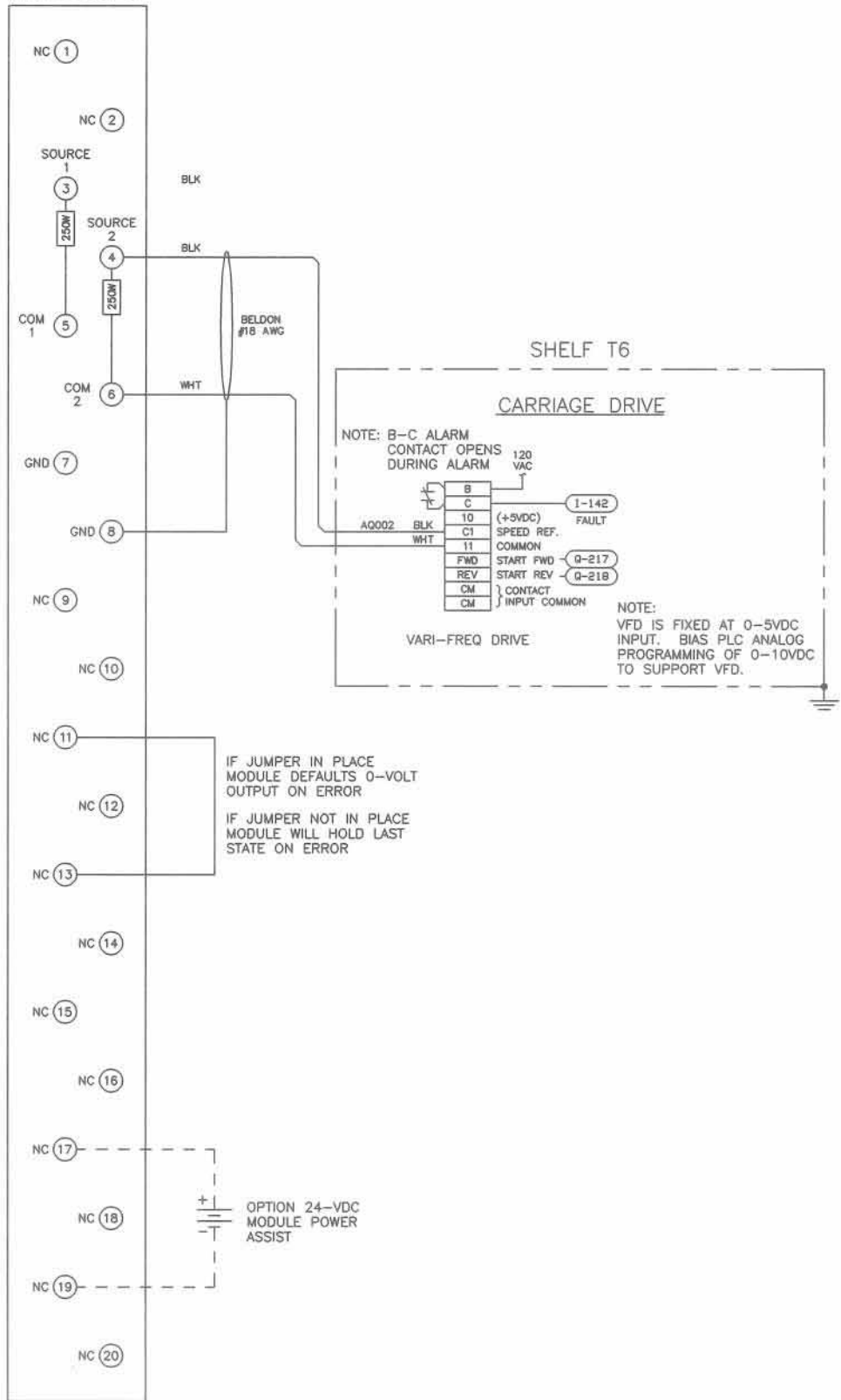


TRAVELLING END CONTROL PANEL

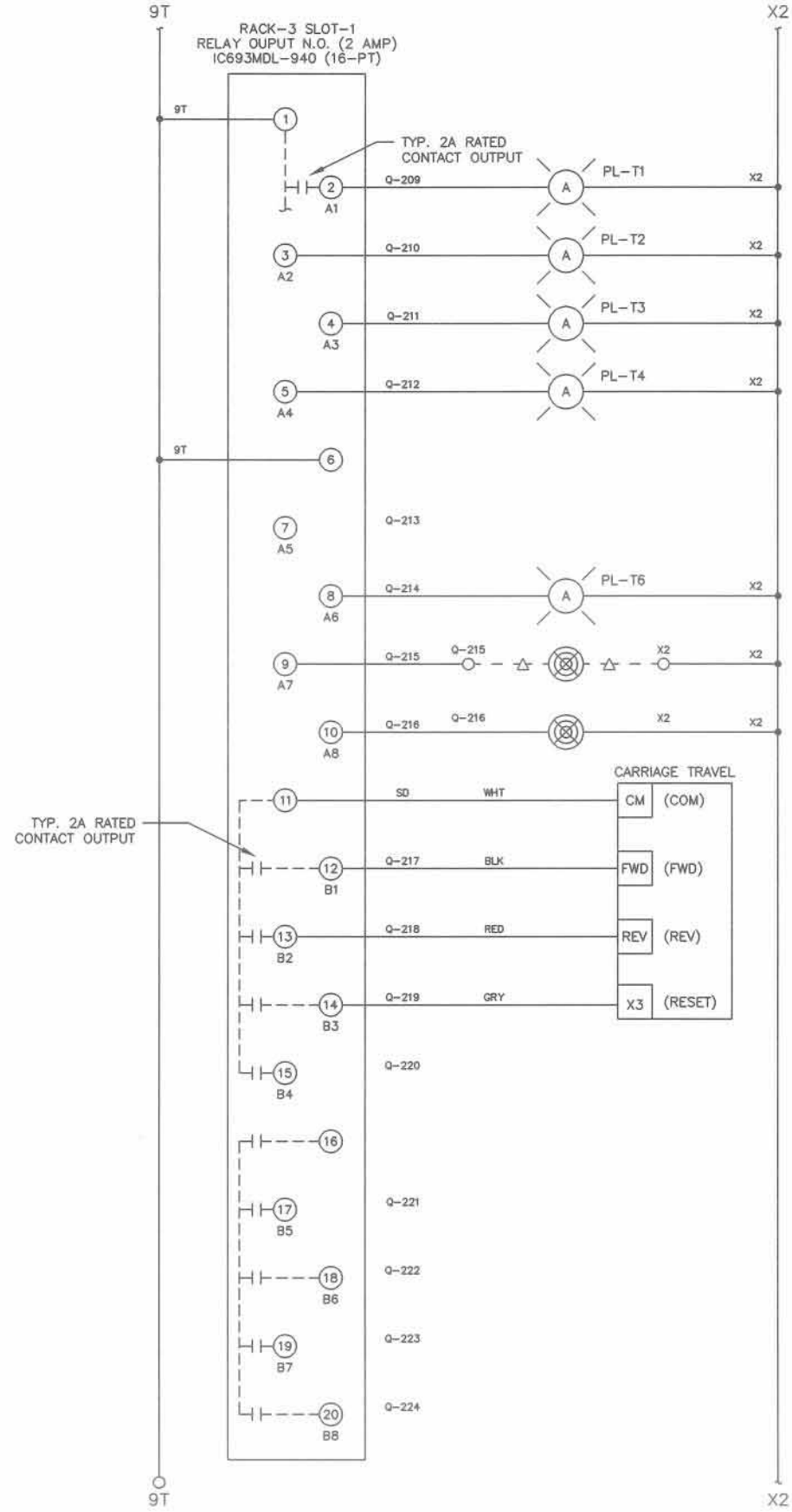
KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

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 FINISH ± 0.005    MACHINED SURFACES NOT SPECIFIED ± 0.005						
APPROVED: <i>[Signature]</i> DATE: 10/30/00 CHECKED: G.Bowers DATE: 10/30/00						
MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045						
CYBER, AT, ELE, SCHEM, 230V, US SCALE: NONE    PAGE: 15 of 21    DASH NO.: 90507    REV.: M						

ANALOG CURRENT  
OUTPUT MODULE  
ALG391  
RACK 2 SLOT-10



SLOT ADDRESSES  
AQ001 & AQ002  
BINARY RANGE  
0 - (+)32,000  
4-20MA



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

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:  
 FRACTIONS &  $\frac{1}{32}$  DECIMALS &  $\frac{.010}{.010}$  ANGLES &  $1^\circ$   
 TOTAL RUNOUT &  $\frac{.005}{.005}$  MACHINED SURFACES NOT SPECIFIED  $\frac{.005}{.005}$

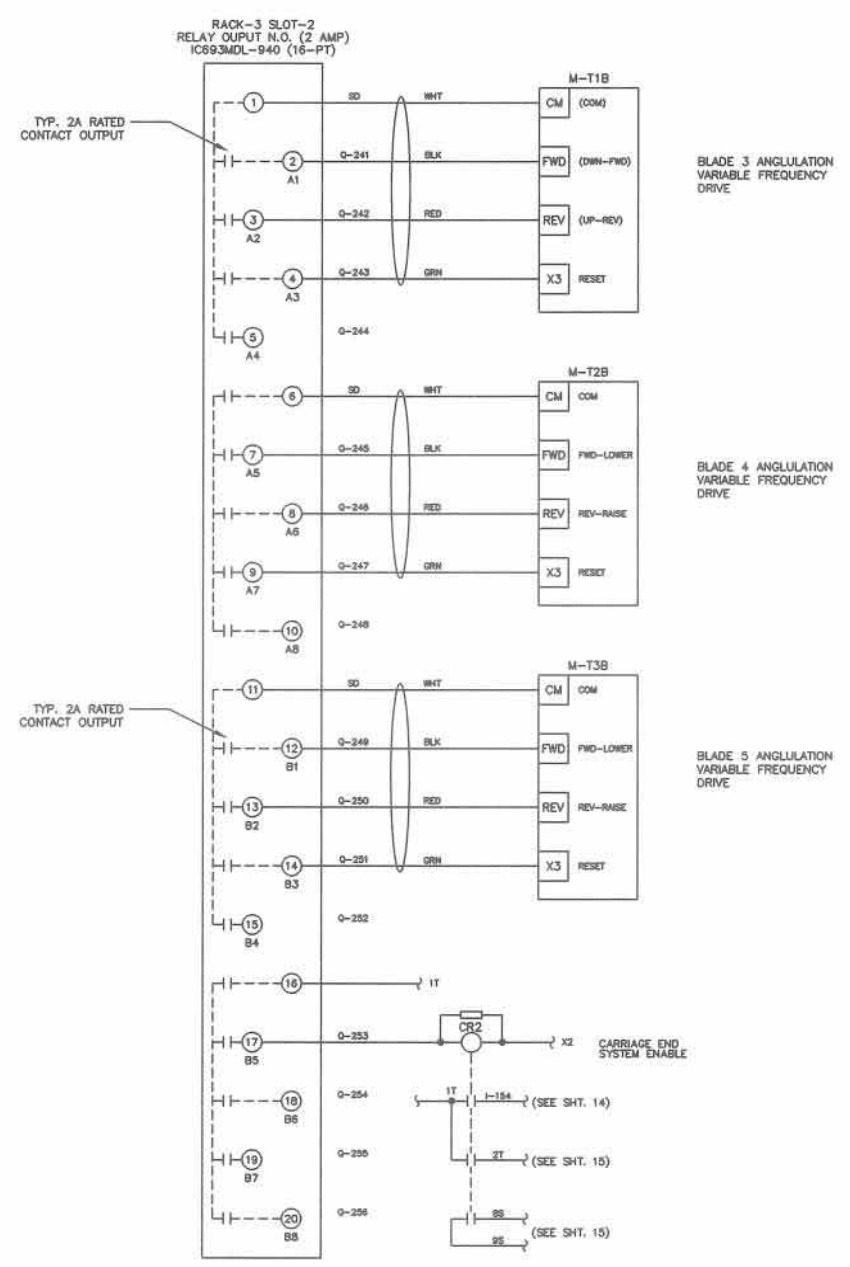
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**MITTEK Industries, Inc.**  
 4303 SHORELINE DRIVE, EARTH CITY, MO. 63045

APPROVED: *[Signature]* DATE: 10/30/06  
 DRAWN: G. Bowers DATE: 10/30/06  
 CYBER, AT, ELE, SCHEM, 230V, US  
 SCALE: NONE PAGE: 16 of 21 90507 DASH NO.: M

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS

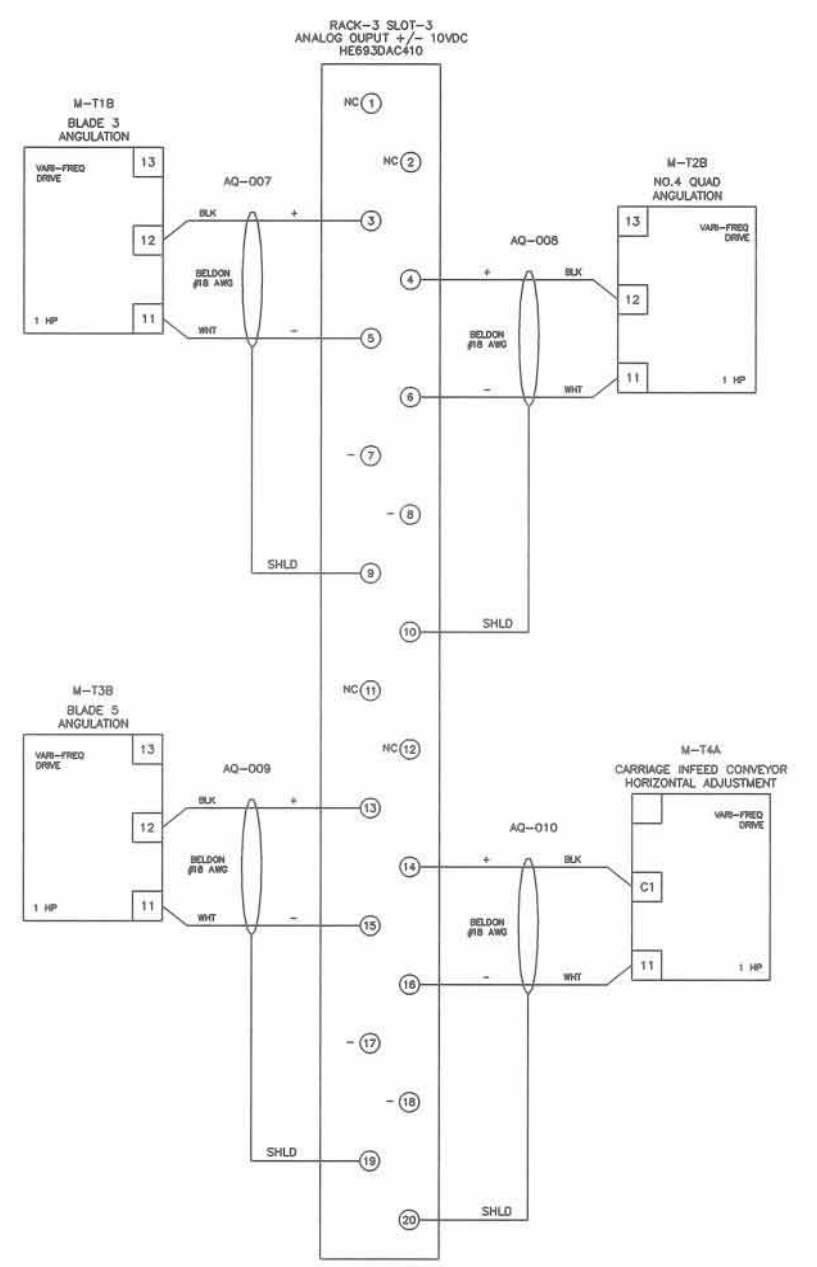
BELDEN CABLE (9418) EFFECTIVE  
FRAME #358 FORWARD



BLADE 3 ANGLULATION  
VARIABLE FREQUENCY  
DRIVE

BLADE 4 ANGLULATION  
VARIABLE FREQUENCY  
DRIVE

BLADE 5 ANGLULATION  
VARIABLE FREQUENCY  
DRIVE



TRAVELLING END CONTROL PANEL

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:            FRACTIONS ± 1/32    DECIMALS ± .010    ANGLES ± 1°            TOTAL RUNOUT ± 0.005    MACHINED SURFACES NOT SPECIFIED ± 0.005</small>						

APPROVED		DATE	DRAWN		DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
G. Bowers		10/30/00	G. Bowers		10/30/00	X	NONE	17 of 21	90507	M

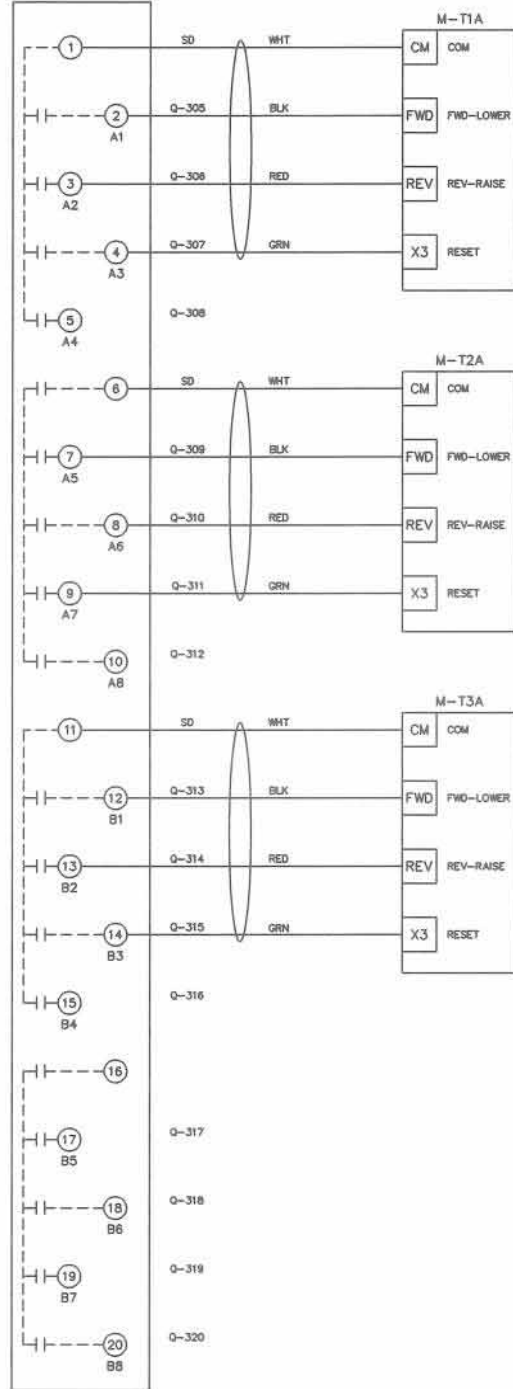
MiTek Industries, Inc.  
4203 SHORELINE DRIVE, SMITH CITY, MO. 63548

CYBER, AT, ELE, SCHEM, 230V, US

BELDEN CABLE (9418) EFFECTIVE  
FRAME #358 FORWARD

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

RACK-3 SLOT-4  
RELAY OUTPUT N.O. (2 AMP)  
IC693MDL-940 (16-PT)

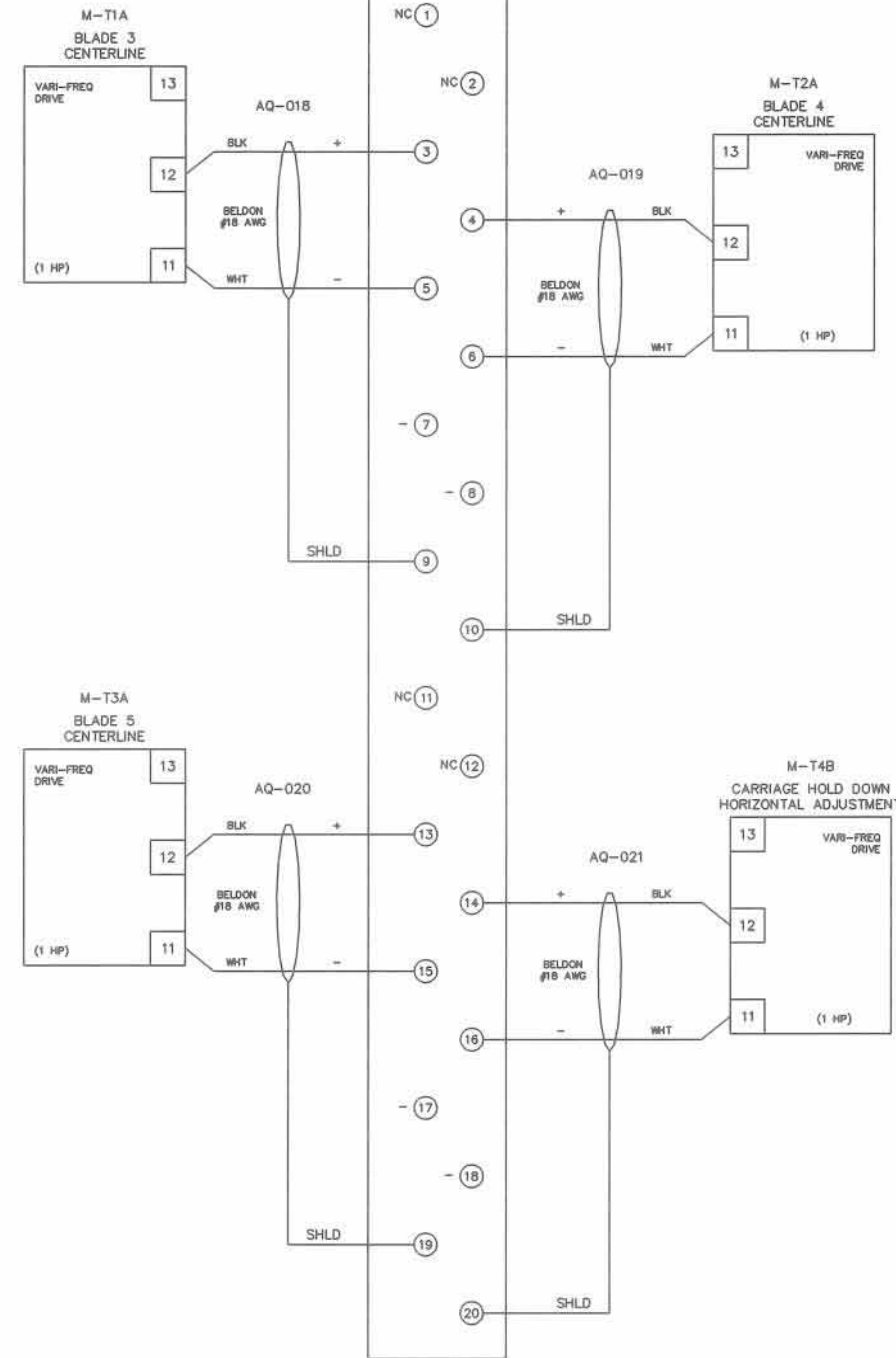


BLADE 3 CENTER LINE  
VARIABLE FREQUENCY  
DRIVE

BLADE 4 CENTER LINE  
VARIABLE FREQUENCY  
DRIVE

BLADE 5 CENTER LINE  
VARIABLE FREQUENCY  
DRIVE

RACK-3 SLOT-5  
ANALOG OUTPUT +/- 10VDC  
HE693DAC410



- TOUCHSCREEN PANEL
- TERMINALS LOCATED IN TRAVELING END CONTROL PANEL
- TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DRG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:            FRACTIONS ± [1/32]    DECIMALS ± [0.010]    ANGLES ± [1°]            TOTAL RUNOUT ± [ ]    MACHINED SURFACES NOT SPECIFIED: [ ]</small>						

APPROVED: [Signature] DATE: 10/30/00 MFG. DATE: 10/30/00  
 DRAWN: G. Bowers  
 MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

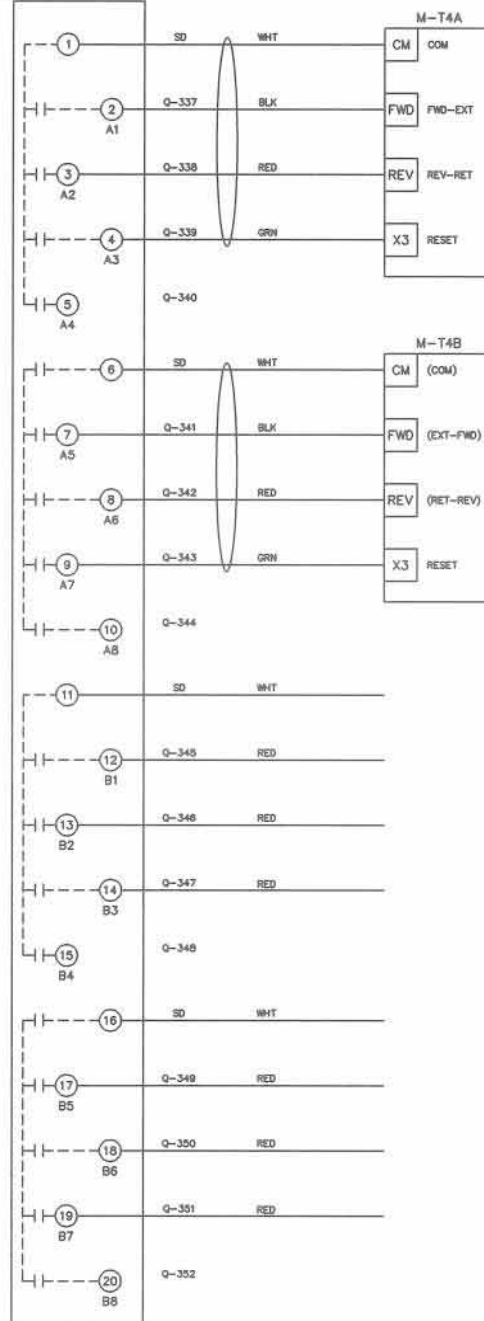
KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	

APPROVED	DATE	MFG. DATE	FINISH PART	SCALE	PAGE	REV.
[Signature]	10/30/00	10/30/00	X	NONE	18 of 21	M

CYBER, AT, ELE, SCHEM, 230V, US  
 90507

BELDEN CABLE (9418) EFFECTIVE  
FRAME #358 FORWARD

RACK-3 SLOT-6  
RELAY OUTPUT N.O. (2 AMP)  
IC693MDL-940 (16-PT)



CARRIAGE  
INFEEED CONVEYOR  
HORIZONTAL ADJUSTMENTS

CARRIAGE  
HOLD DOWN CONVEYOR  
HORIZONTAL ADJUSTMENT

VFD SETTINGS (SEE MODEL#)

Parameter	Description	Carriage	Infeed	All Others
<b>MODEL #6KE11 SERIES</b>				
F02	Operation Method	2	2	2
<b>MODEL #AF-300 MINI</b>				
F02	Operation Method	1	1	1

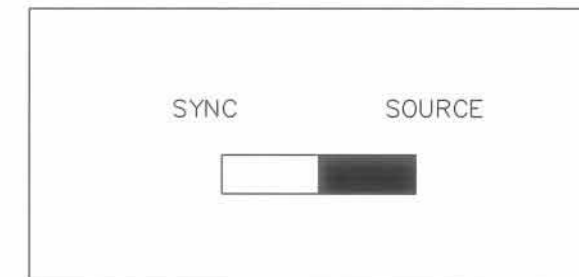
VFD SETTINGS FOR ALL MODELS

Parameter	Description	Carriage	Infeed	All Others
F01	Frequency Command	2	1	1
F07	Acceleration Time	1.00	1.00	1.00
F08	Deceleration Time	0.60	0.50	0.50
P03	Rated Current	7.75	7.75	Default

CHANGING PARAMETER SETTINGS

- 1) Press the PRG key to start the program mode
- 2) Press the Up/Down arrow keys to select the parameter to change.
- 3) Press the FUNC key to display the data
- 4) Use Up/Down arrow keys to change the data.
- 5) Press the FUNC key to store the data
- 6) Repeat step 2 thru 5 for all parameters that are to be changed.
- 7) After all settings have been made, press the PRG key to exit the program mode.

VFD SWITCHES

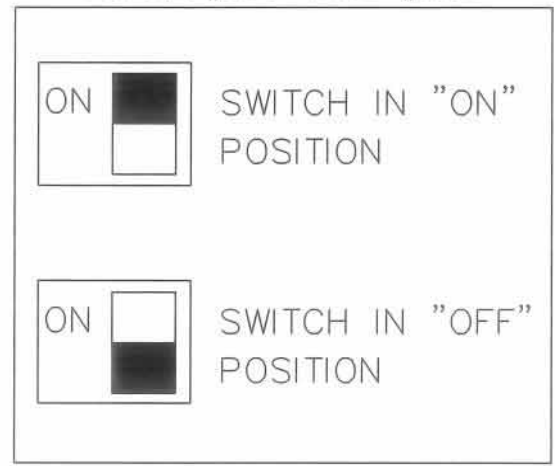


TOUCHSCREEN PANEL  
 TERMINALS LOCATED IN TRAVELING END CONTROL PANEL  
 TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

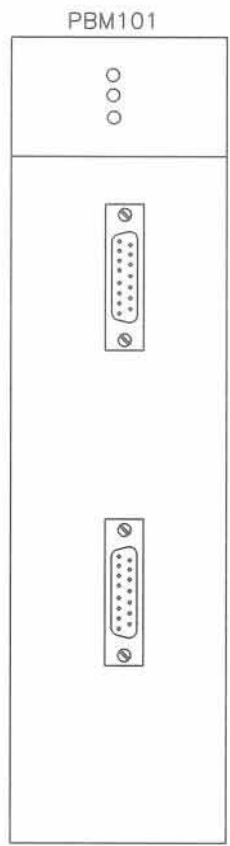
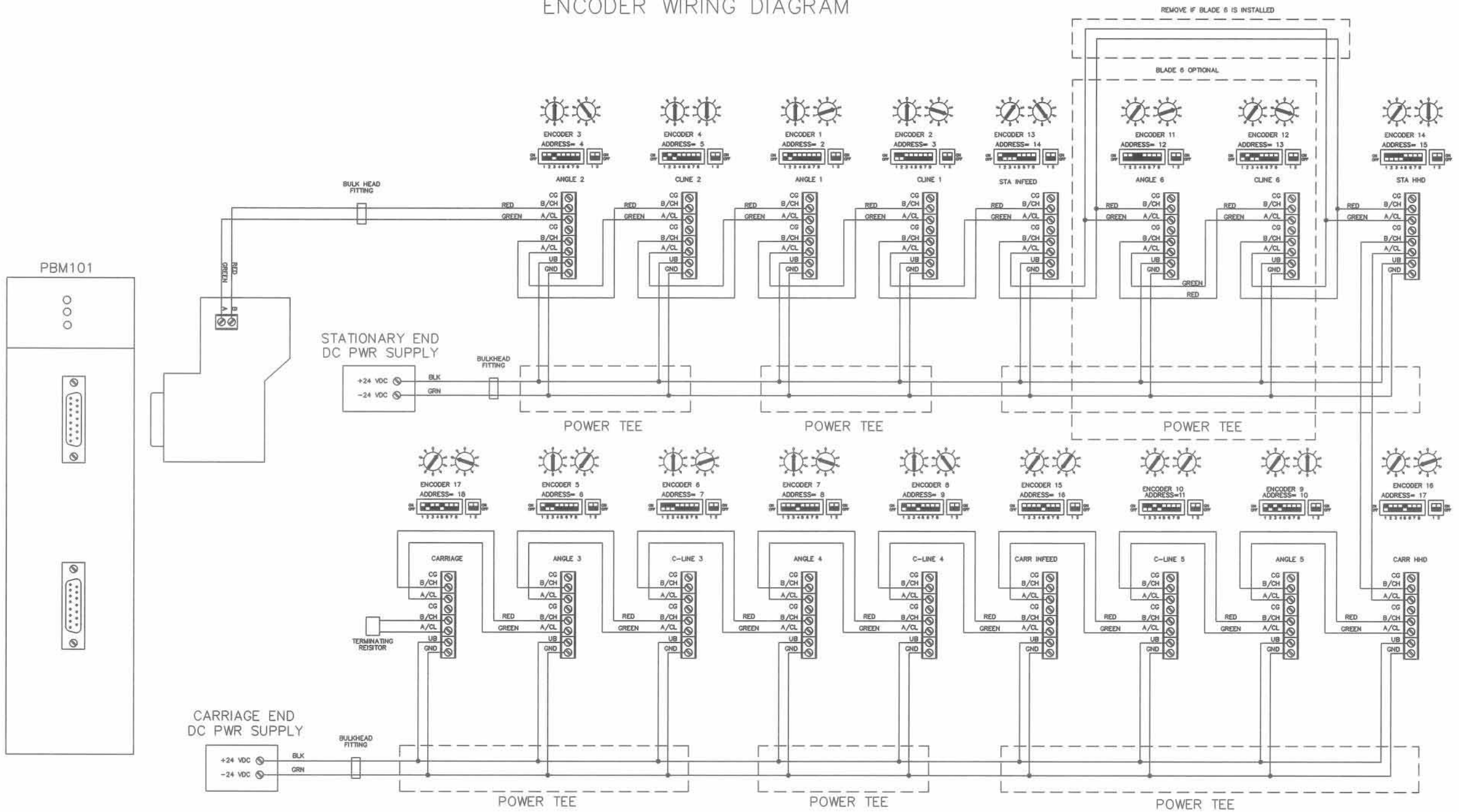
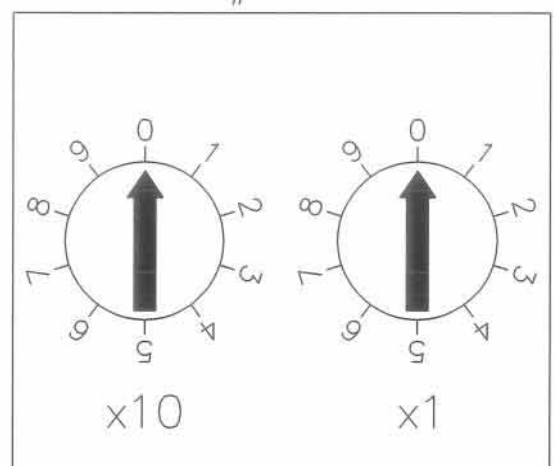
ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DRG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:          FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°          TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED</small>						
<small>THIS DRAWING AND/OR DATA SHEET, AND THE CONFIDENTIAL PROPRIETARY INFORMATION THEREON, IS PROPERTY OF MITEK INDUSTRIES, INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART, OR USED FOR UNAUTHORIZED MANUFACTURING OR ANY OTHER EXPLOITATION OF THE ITEM DISCLOSED THEREIN, OR IN ANY OTHER WAY DISCLOSED OR USED FOR FURNISHING INFORMATION.</small>						
APPROVED: <i>[Signature]</i> DATE: <i>[Date]</i> MFG: <i>[MFG]</i>			MiTek Industries, Inc. 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045			
CHECKED: <i>[Signature]</i> DATE: <i>[Date]</i> DRAWN: <i>[Signature]</i>			CYBER, AT, ELE, SCHEM, 230V, US			
KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
			HOLE		TAP	
APPROVED: <i>[Signature]</i> DATE: 10/30/00 MFG: G.Bowers CHECKED: <i>[Signature]</i> DATE: <i>[Date]</i> DRAWN: <i>[Signature]</i> FINISH PART: X SCALE: NONE PAGE: 19 of 21 DASH NO.: 90507 REV: M						

### ENCODER WIRING DIAGRAM

ENCODER (P/N 504518)  
FRAME #269 THRU #384

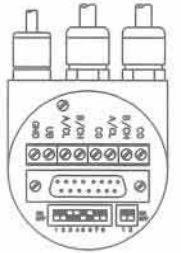


ENCODER (P/N 504460)  
FRAME #385 ONWARD



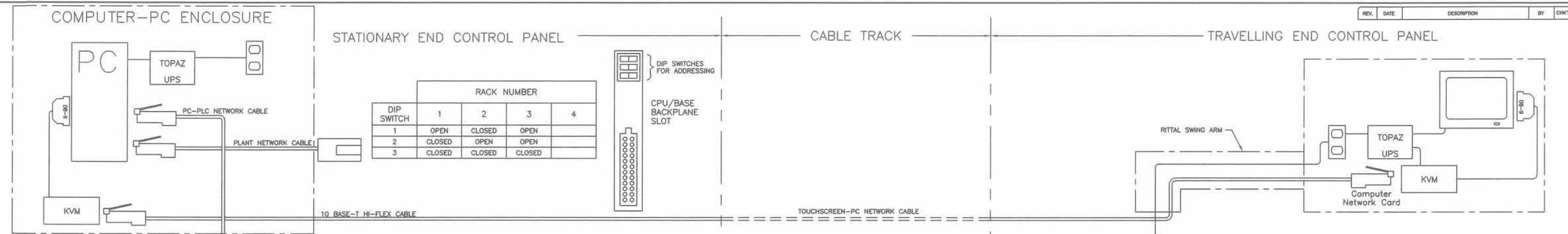
ELECTRICAL CONNECTIONS

TERMINAL	DEFINITION
CG	NOT CONNECTED
B/CH	POSITIVE SERIAL TRANSMITTED/RECEIVED DATA (PAIR 1)
A/CL	NEGATIVE SERIAL TRANSMITTED/RECEIVED DATA (PAIR 1)
CG	NOT CONNECTED
B/CH	POSITIVE SERIAL TRANSMITTED/RECEIVED DATA (PAIR 2)
A/CL	NEGATIVE SERIAL TRANSMITTED/RECEIVED DATA (PAIR 2)
UB	VOLTAGE SUPPLY
GND	VOLTAGE SUPPLY



ITEM	QTY.	PART NAME	MATERIAL AND/OR DESCRIPTION	LENGTH	CODE	DWG. NO./PART NO.
<small>DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED: FRACTIONS ± [0.22] DECIMALS ± [0.010] ANGLES ± [1°] TOTAL RUNOUT ± [ ] MACHINED SURFACES NOT SPECIFIED [ ]</small>						
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<b>MITEK Industries, Inc.</b> 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045			CYBER, AT, ELE, SCHEM, 230V, US			
APPROVED	DATE	MFG.	CHECKED	DATE	URWIN	SCALE
				10/30/00		
G. Bowers			NONE 20 of 21 90507			

KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
A	X	X	X	X	X	
		HOLE		TAP		



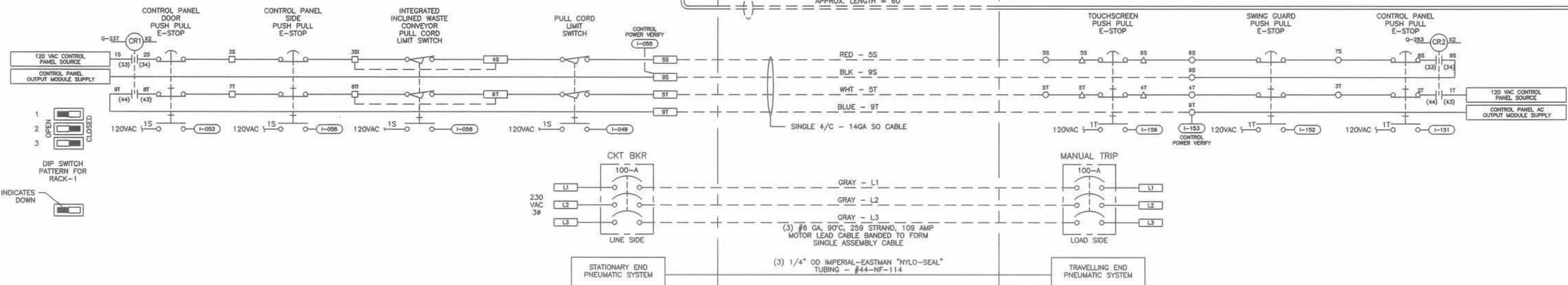
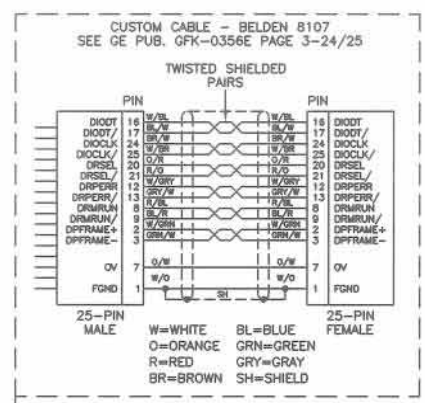
RACK NUMBER				
DIP SWITCH	1	2	3	4
1	OPEN	CLOSED	OPEN	
2	CLOSED	OPEN	OPEN	
3	CLOSED	CLOSED	CLOSED	

PS	1	2	3	4	5	6	7	8	9	10
PWR330	CPU364	PBM101		MDL240	MDL240	MDL240	MDL240	MDL240	MDL240	MDL646
				I AC16	I AC16	I AC16	I AC16	I AC16	I AC16	DC16
				RefAdr %X0001	RefAdr %X0017	RefAdr %X0033	RefAdr %X0049	RefAdr %X0065	RefAdr %X0081	

PS	1	2	3	4	5	6	7	8	9	10
PWR321	MDL340	MDL340	MDL940	MDL940	HE693	MDL940	HE693	MDL940	HE693	
	Q AC16	Q AC16								
	RefAdr %X0001	RefAdr %X0017	RefAdr %X0065	RefAdr %X00225	RefAdr %X0003	RefAdr %X00289	RefAdr %X0014	RefAdr %X00321	RefAdr %X0022	

PS	1	2	3	4	5	6	7	8	9	10
PWR321	MDL240	MDL240	MDL240	MDL240	MDL240	MDL646	MDL340	MDL340		ALG391
	I AC16	I AC16	I AC16	I AC16	I AC16	I DC16	Q AC16	Q AC16		QALGV2
	RefAdr %X0097	RefAdr %X0113	RefAdr %X0129	RefAdr %X0145	RefAdr %X0161	RefAdr %X0177	RefAdr %X00033	RefAdr %X00049		RefAdr %X0001

PS	1	2	3	4	5	6	7	8	9	10
PWR321	MDL940	MDL940	HE693	MDL940	HE693	MDL940				
	RefAdr %X00209	RefAdr %X00241	RefAdr %X0007	RefAdr %X00305	RefAdr %X0018	RefAdr %X00337				



NOTE:  
 JUMPERS MUST BE REMOVED IF  
 OPTIONAL INTEGRATED INCLINED WASTE  
 CONVEYOR E-STOP CIRCUIT IS INSTALLED  
 REFER TO DRAWING #90529

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

DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED:  
 FRACTIONS ± [1/32]    DECIMALS ± [0.01]    ANGLES ± [1°]

TOTAL RUNOUT ± [0.004]    MACHINED SURFACES NOT SPECIFIED [0.004]

APPROVED: [Signature]    DATE: 10/30/00    DRAWN: G.Bowers    FINISH PART: X    SCALE: NONE    PAGE: 21 of 21    DASH NO.: 90507    REV.: M

MiTek Industries, Inc.  
 4203 SHORELINE DRIVE, EARTH CITY, MO. 63045