***MiTek*®**
Machinery Division

Service Bulletin

Machinery Affected:	***Cyber*®, *Cyber*® *A/T*, *SmartSet*®, and *SmartSet*® *Pro* Saws**
Document:	**SB180**
Title:	**Replacing a *GE*® AF-300 E11 VFD with a *GE* AF-300 Mini VFD**
Applies To:	**All *Cyber* and *Cyber A/T* Saws Shipped Before 15 November 2007, All *SmartSet* and *SmartSet Pro* Saws Shipped before 1 November 2007**

MiTek
Machinery Division
301 Fountain Lakes Industrial Drive
St. Charles, MO 63301
Phone: 800-523-3380
Sales fax: 636-328-9222
Customer Service fax: 636-328-9218
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	*Cyber* and *Cyber A/T* saws shipped before 15 November 2007, *SmartSet* and *SmartSet Pro* saws shipped before 1 November 2007

Purpose and Scope

The *Cyber*®, *Cyber A/T*, *SmartSet*®, and *SmartSetPro* saws use *GE*® 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		*Cyber A/T*	*Cyber*	*SmartSet Pro* (angle)	*SmartSet*
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		*Cyber A/T*	*Cyber*	*SmartSet Pro*	*SmartSet*
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		*Cyber A/T*	*Cyber*	*SmartSet Pro*	*SmartSet*
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

Qty.	Part Description
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

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

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

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

	WARNING
	HIGH PRESSURE HAZARD. **Bleed pneumatic before performing any maintenance on the pneumatic system.**

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.

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

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 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	**X3**
+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	**CM**
Common	5	**11**
+10V	2	**12**
REV/UP	STR	**REV**
FWD/DOWN	STF	**FWD**

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	**30A**
1	**30C, and may also daisy chain to other VFDs**
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	DATE	FOR FABRICATION	BLL			
D	7-11-97	PG 8 & 12; ADD IF-CONV-H2-ADJ-2"HM SW. DEL PG 16.	GCB			
E	5-15-98	PG 1 - 5. SEE ECN 2403.	GCB			
F	3-22-99	SEE ECN 2756.	DK			
G	9-22-99	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

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

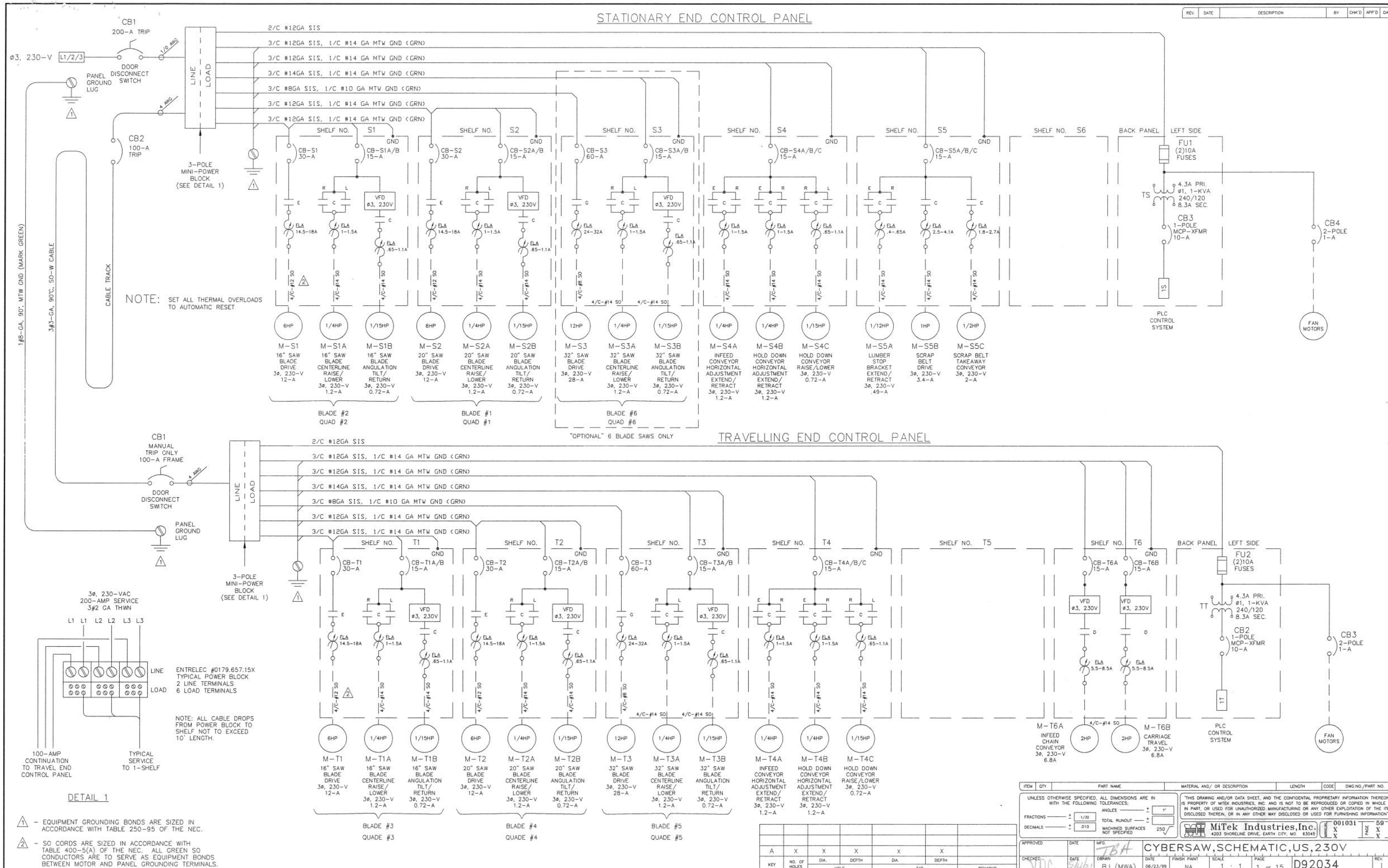
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES:
FRACTIONS ± 1/32 — ANGLES ± 1°
DECIMALS ± .010 — TOTAL RUNOUT ±
MACHINED SURFACES NOT SPECIFIED 250

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

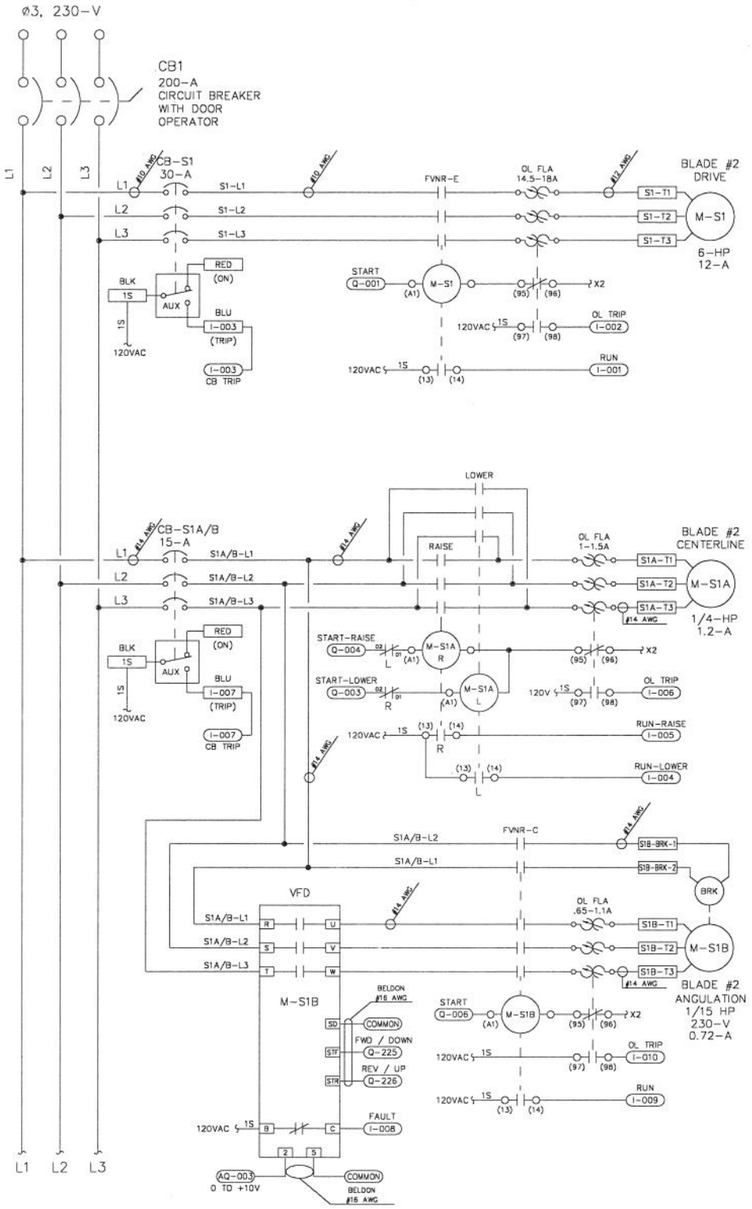
DRAWING 001031 XX — PAGE 58 XX

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

APPROVED	DATE	MFG.					
			CYBERSAW,SCHEMATIC,US,230V				
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	REV.
VDC	5/4/01	B.L.(MWA)	06/23/99	NA	1 : 1	0 of 15	D92034 I


STATIONARY END CONTROL PANEL
CB1
200-A TRIP
ø3, 230-V
L1/2/3
1/0 AWG
DOOR DISCONNECT SWITCH
PANEL GROUND LUG
CB2
100-A TRIP
4 AWG
LINE
LOAD
3-POLE MINI-POWER BLOCK (SEE DETAIL 1)
2/C #12GA SIS
3/C #12GA SIS, 1/C #14 GA MTW GND (GRN)
3/C #14GA SIS, 1/C #14 GA MTW GND (GRN)
3/C #8GA SIS, 1/C #10 GA MTW GND (GRN)
1#8-GA, 90°, MTW GND (MARK GREEN)
3#3-GA, 90°C, SO-W CABLE
CABLE TRACK
NOTE: SET ALL THERMAL OVERLOADS TO AUTOMATIC RESET
SHELF NO. S1
SHELF NO. S2
SHELF NO. S3
SHELF NO. S4
SHELF NO. S5
SHELF NO. S6
BACK PANEL LEFT SIDE
GND
CB-S1 30-A
CB-S1A/B 15-A
CB-S2 30-A
CB-S2A/B 15-A
CB-S3 60-A
CB-S3A/B 15-A
CB-S4A/B/C 15-A
CB-S5A/B/C 15-A
VFD ø3, 230V
FLA
4/C-#12 SO
4/C-#14 SO
4/C-#8 SO
FU1 (2)10A FUSES
TS
4.3A PRI. ø1, 1-KVA 240/120 8.3A SEC.
CB3 1-POLE MCP-XFMR 10-A
CB4 2-POLE 1-A
PLC CONTROL SYSTEM
FAN MOTORS
M-S1 16" SAW BLADE DRIVE 3ø, 230-V 12-A
M-S1A 16" SAW BLADE CENTERLINE RAISE/LOWER 3ø, 230-V 1.2-A
M-S1B 16" SAW BLADE ANGULATION TILT/RETURN 3ø, 230-V 0.72-A
M-S2 20" SAW BLADE DRIVE 3ø, 230-V 12-A
M-S2A 20" SAW BLADE CENTERLINE RAISE/LOWER 3ø, 230-V 1.2-A
M-S2B 20" SAW BLADE ANGULATION TILT/RETURN 3ø, 230-V 0.72-A
M-S3 32" SAW BLADE DRIVE 3ø, 230-V 28-A
M-S3A 32" SAW BLADE CENTERLINE RAISE/LOWER 3ø, 230-V 1.2-A
M-S3B 32" SAW BLADE ANGULATION TILT/RETURN 3ø, 230-V 0.72-A
M-S4A INFEED CONVEYOR HORIZONTAL ADJUSTMENT EXTEND/RETRACT 3ø, 230-V 1.2-A
M-S4B HOLD DOWN CONVEYOR HORIZONTAL ADJUSTMENT EXTEND/RETRACT 3ø, 230-V 1.2-A
M-S4C HOLD DOWN CONVEYOR RAISE/LOWER 3ø, 230-V 0.72-A
M-S5A LUMBER STOP BRACKET EXTEND/RETRACT 3ø, 230-V .49-A
M-S5B SCRAP BELT DRIVE 3ø, 230-V 3.4-A
M-S5C SCRAP BELT TAKEAWAY CONVEYOR 3ø, 230-V 2-A
BLADE #2 QUAD #2
BLADE #1 QUAD #1
BLADE #6 QUAD #6
"OPTIONAL" 6 BLADE SAWS ONLY
TRAVELLING END CONTROL PANEL
CB1 MANUAL TRIP ONLY 100-A FRAME
SHELF NO. T1
SHELF NO. T2
SHELF NO. T3
SHELF NO. T4
SHELF NO. T5
SHELF NO. T6
CB-T1 30-A
CB-T1A/B 15-A
CB-T2 30-A
CB-T2A/B 15-A
CB-T3 60-A
CB-T3A/B 15-A
CB-T4A/B/C 15-A
CB-T6A 15-A
CB-T6B 15-A
FU2 (2)10A FUSES
TT
CB2 1-POLE MCP-XFMR 10-A
CB3 2-POLE 1-A
M-T1 16" SAW BLADE DRIVE 3ø, 230-V 12-A
M-T1A 16" SAW BLADE CENTERLINE RAISE/LOWER 3ø, 230-V 1.2-A
M-T1B 16" SAW BLADE ANGULATION TILT/RETURN 3ø, 230-V 0.72-A
M-T2 20" SAW BLADE DRIVE 3ø, 230-V 12-A
M-T2A 20" SAW BLADE CENTERLINE RAISE/LOWER 3ø, 230-V 1.2-A
M-T2B 20" SAW BLADE ANGULATION TILT/RETURN 3ø, 230-V 0.72-A
M-T3 32" SAW BLADE DRIVE 3ø, 230-V 28-A
M-T3A 32" SAW BLADE CENTERLINE RAISE/LOWER 3ø, 230-V 1.2-A
M-T3B 32" SAW BLADE ANGULATION TILT/RETURN 3ø, 230-V 0.72-A
M-T4A INFEED CONVEYOR HORIZONTAL ADJUSTMENT EXTEND/RETRACT 3ø, 230-V 1.2-A
M-T4B HOLD DOWN CONVEYOR HORIZONTAL ADJUSTMENT EXTEND/RETRACT 3ø, 230-V 1.2-A
M-T4C HOLD DOWN CONVEYOR RAISE/LOWER 3ø, 230-V 0.72-A
M-T6A INFEED CHAIN CONVEYOR 3ø, 230-V 6.8A
M-T6B CARRIAGE TRAVEL 3ø, 230-V 6.8A
BLADE #3 QUADE #3
BLADE #4 QUADE #4
BLADE #5 QUADE #5
3ø, 230-VAC 200-AMP SERVICE 3#2 GA THWN
L1 L1 L2 L2 L3 L3
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.
100-AMP CONTINUATION TO TRAVEL END CONTROL PANEL
TYPICAL SERVICE TO 1-SHELF
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.
"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".
MiTek Industries, Inc.
CYBERSAW, SCHEMATIC, US, 230V
DRAWN B.L.(MWA)
DATE 06/23/99
SCALE 1 : 1
PAGE 1 of 15
D92034
REV. 1

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



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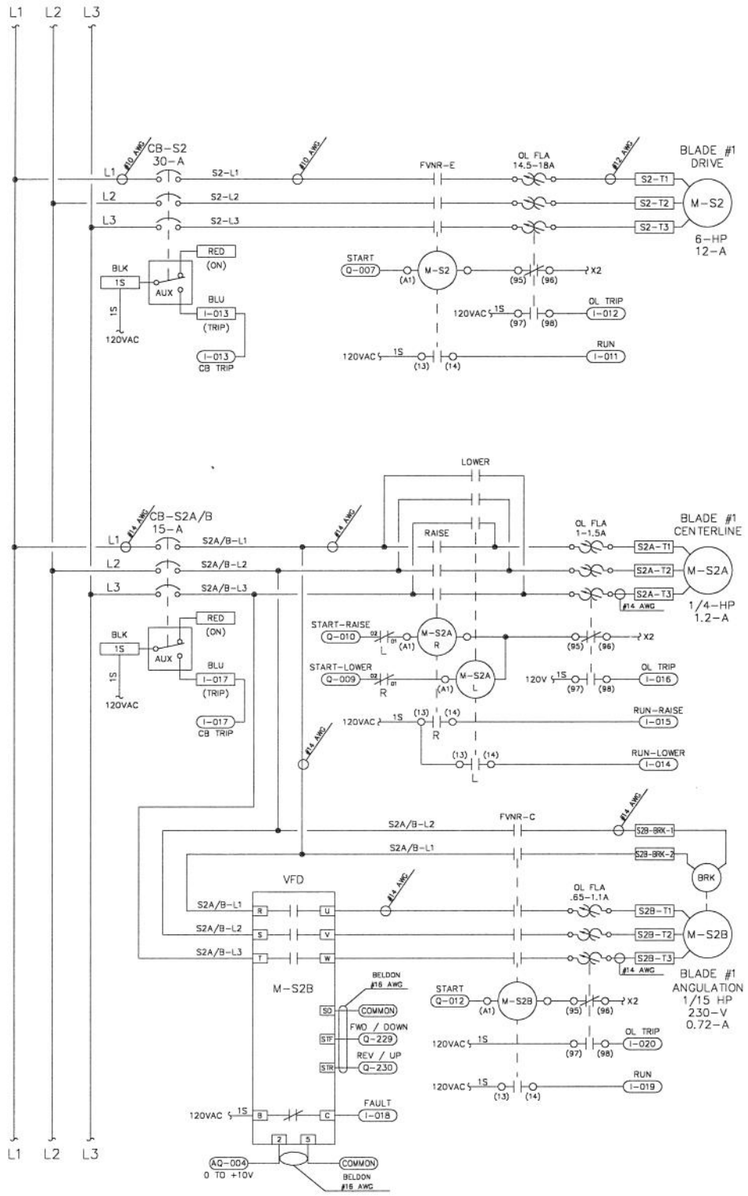

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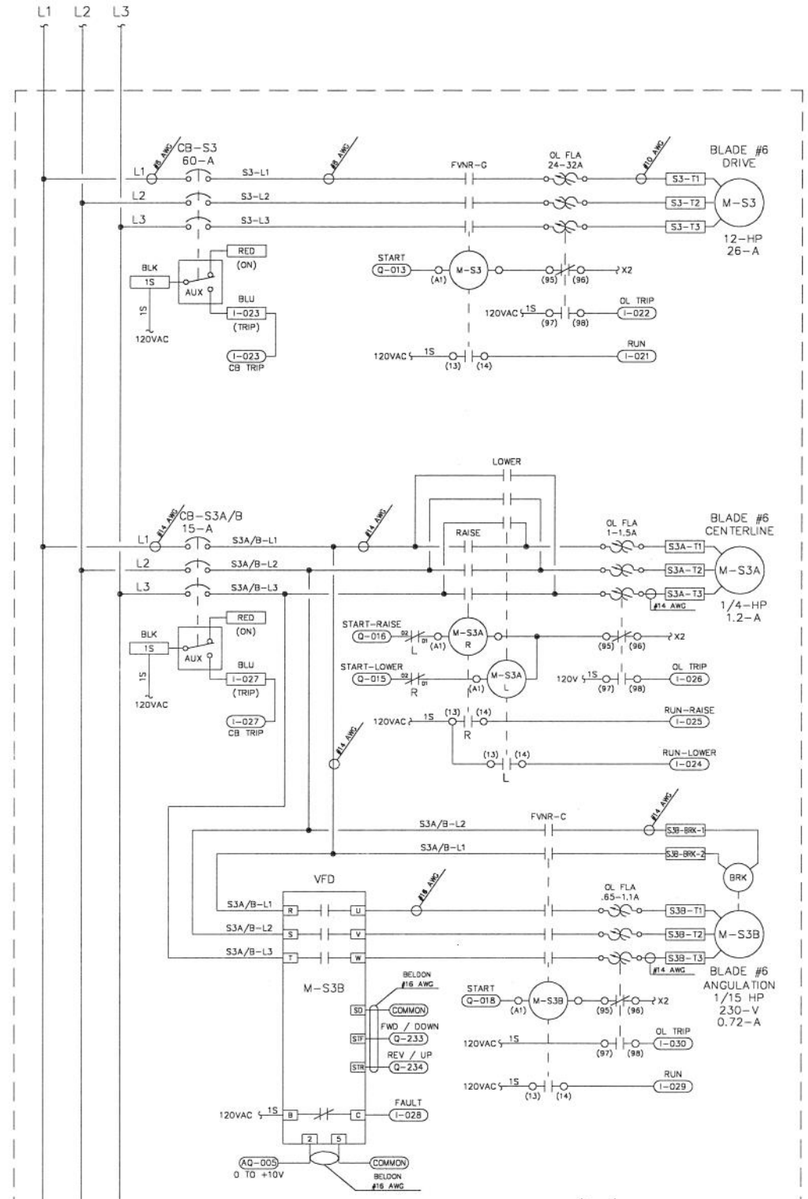

DRAWER NO. 3 (Q-067 Y X2)
QUAD NO. 6

"OPTIONAL" 6 BLADE SAWS ONLY

L1 L2 L3

(CONTINUED ON Pg.3)

STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES;
FRACTIONS ± 1/32 — ANGLES ± 1°
DECIMALS ± .010 — TOTAL RUNOUT ±
MACHINED SURFACES NOT SPECIFIED 250

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

MANUAL 001031 X X — PAGE 60 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V			
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 2 OF 15	D92034	REV. 1

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

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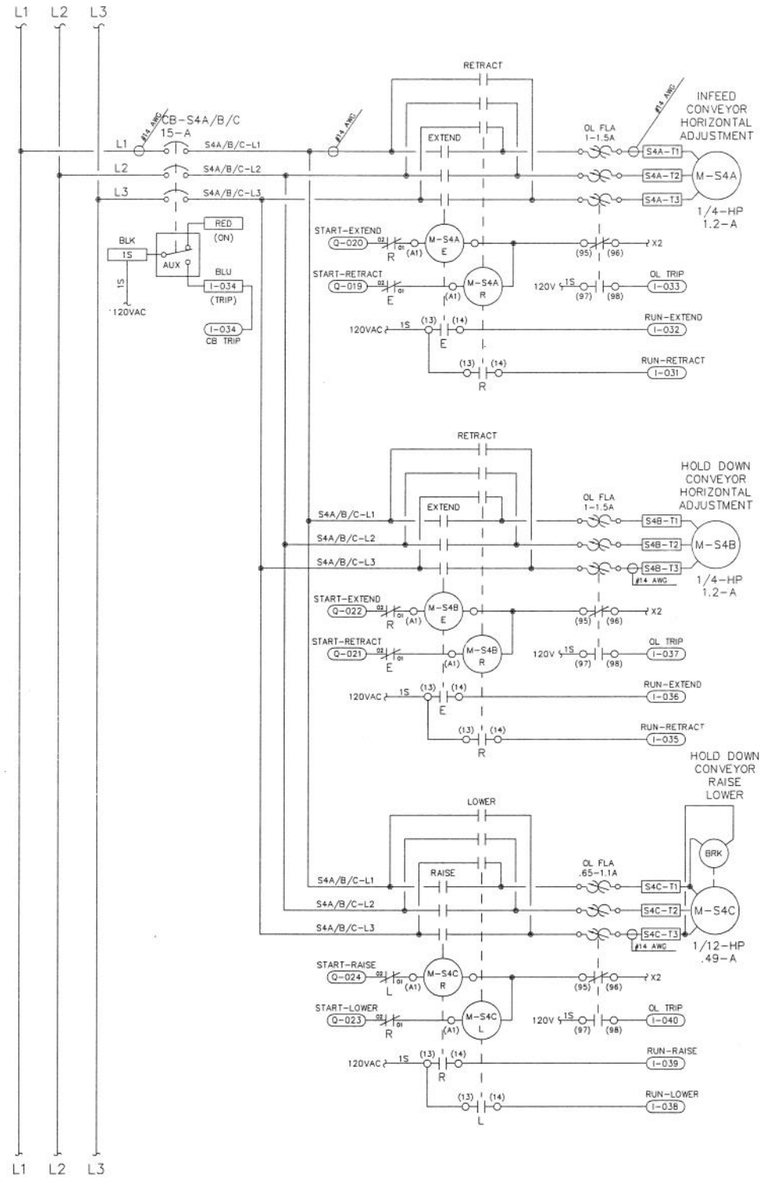
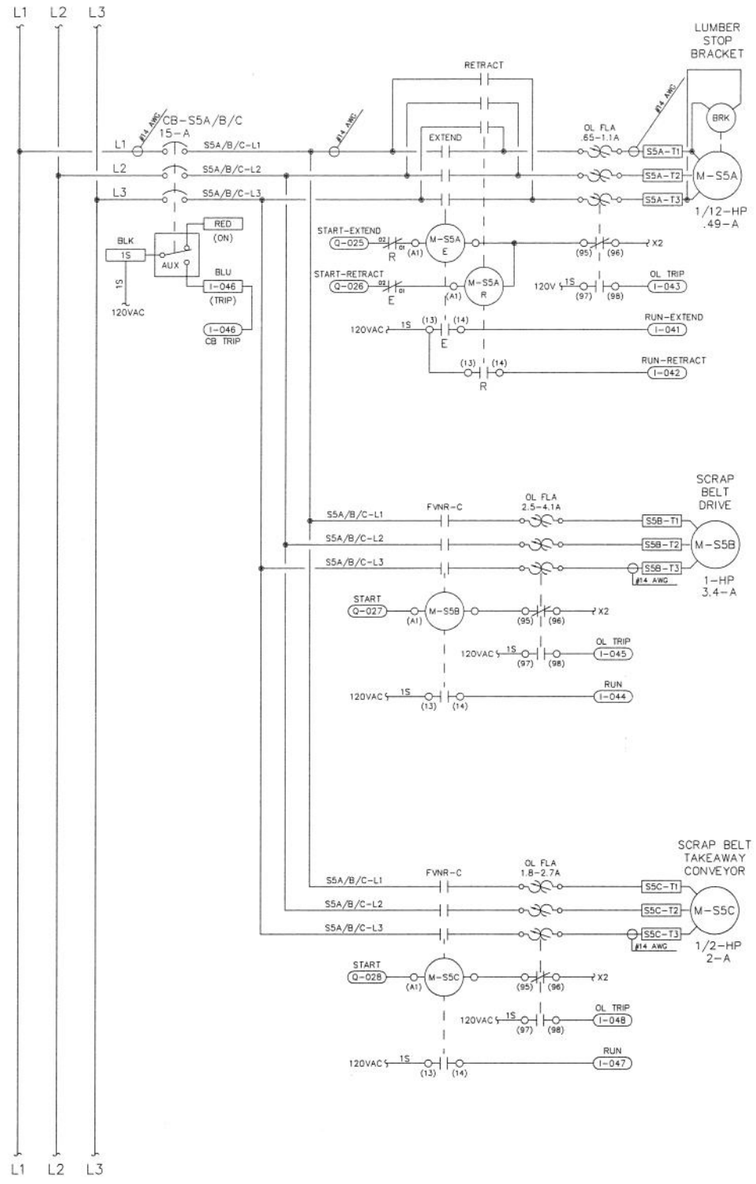
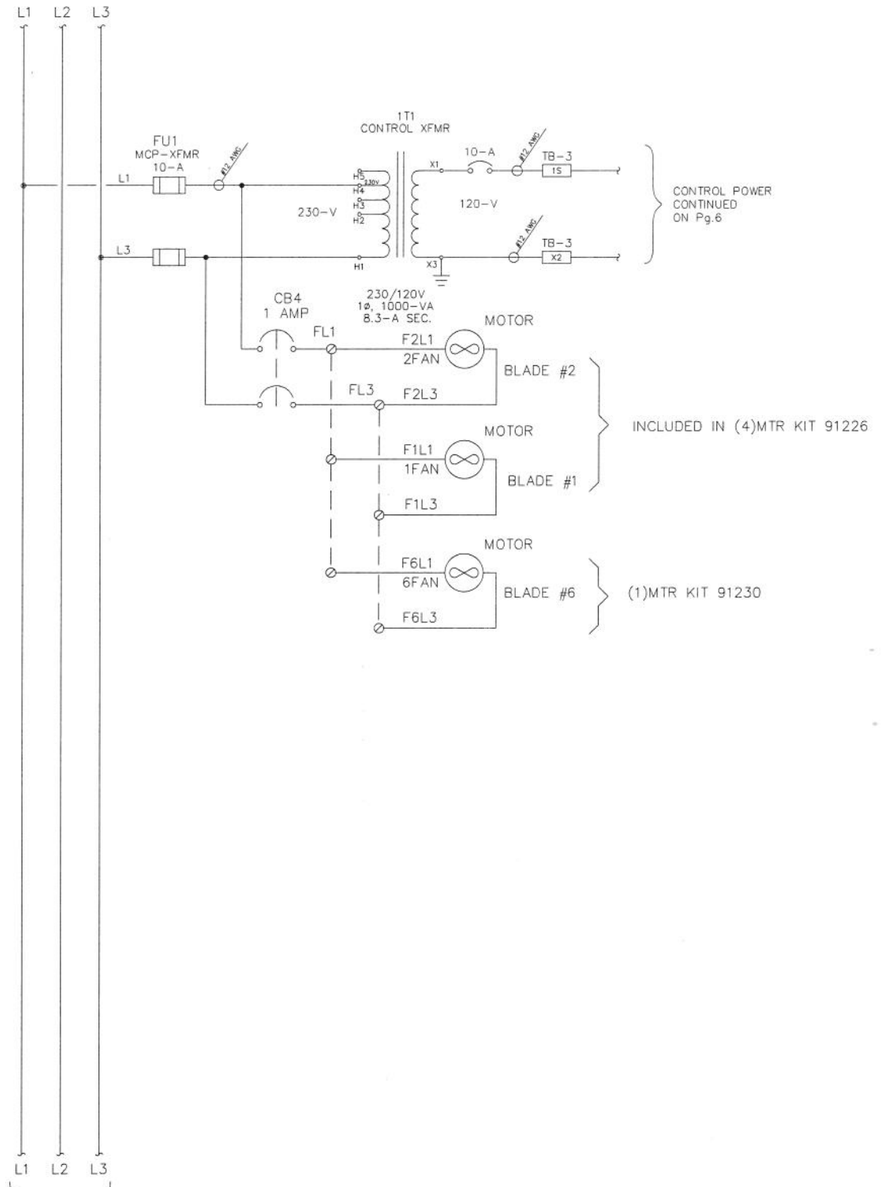






DRAWER NO. 4 Q-068 Y X2

DRAWER NO. 5 Q-069 Y X2

BACK PANEL LEFT SIDE

STATIONARY END CONTROL PANEL

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

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

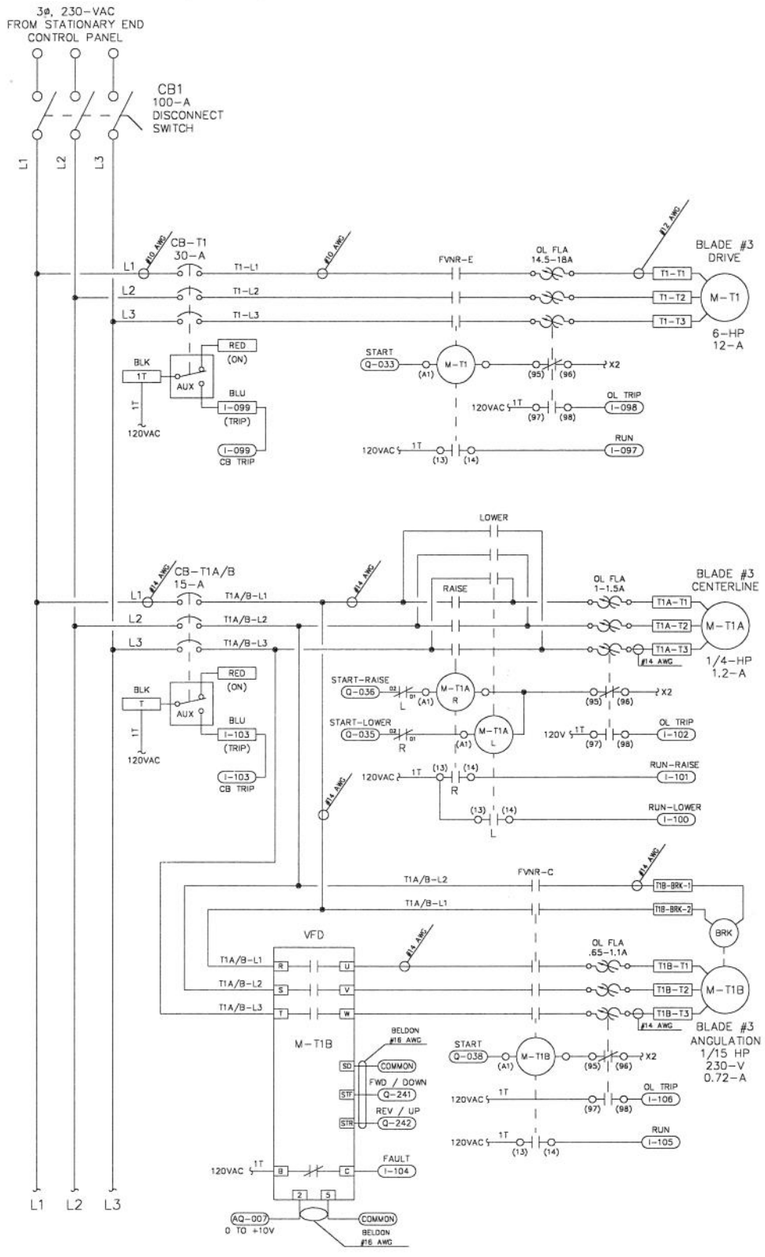
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1° TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

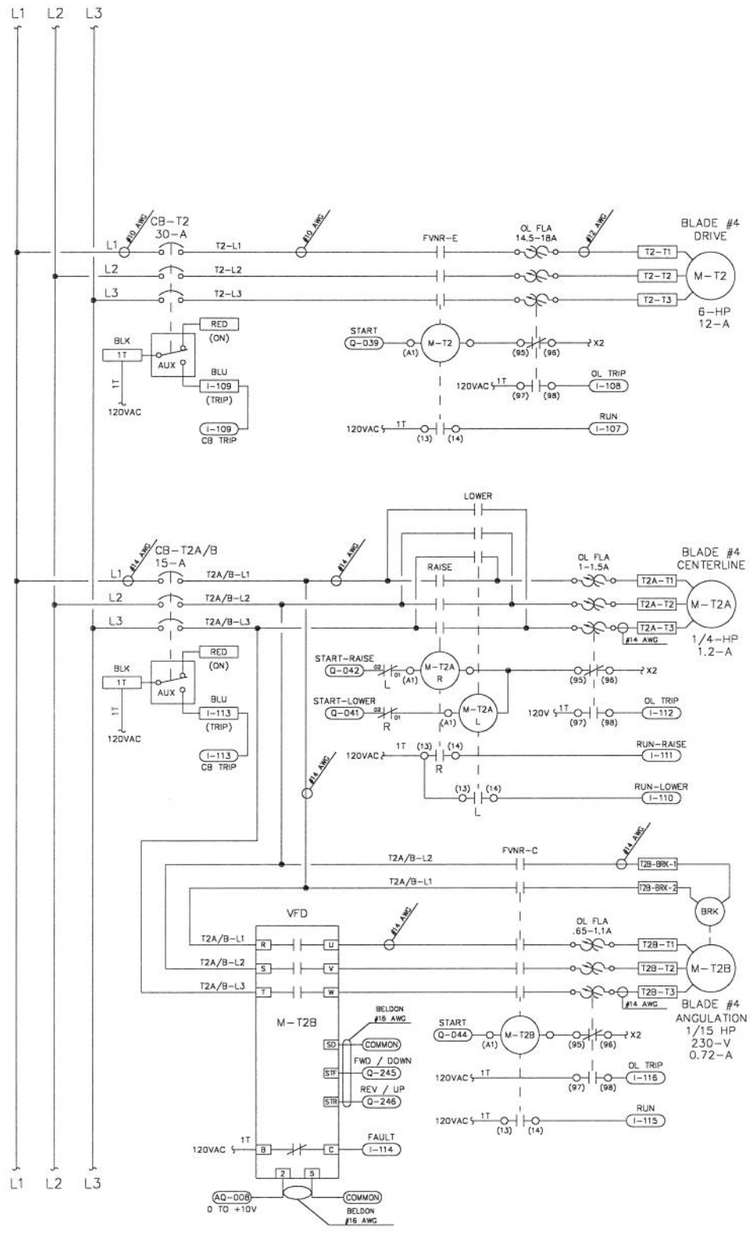
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

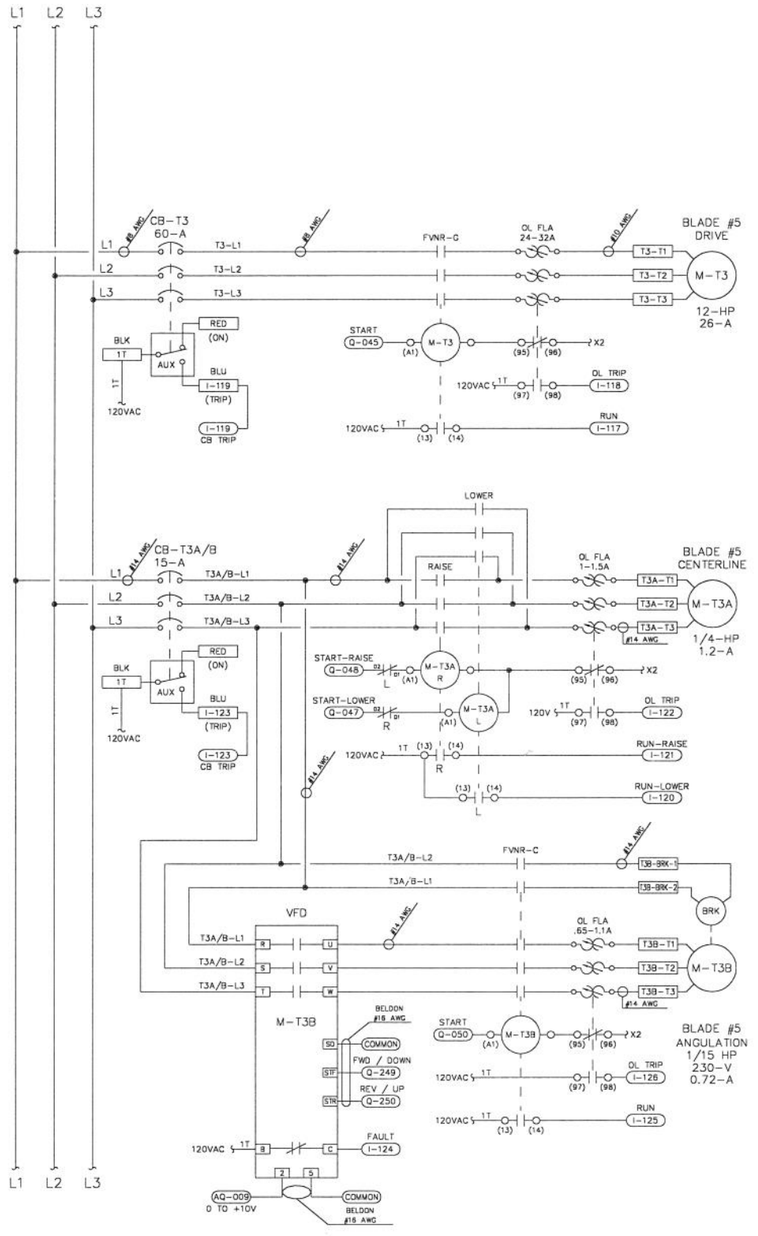
MANUAL 001031 X X PAGE 61 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V			
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 3 OF 15	D92034	REV. 1

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







TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES;
FRACTIONS ± 1/32 — ANGLES ± 1°
DECIMALS ± .010 — TOTAL RUNOUT ±
MACHINED SURFACES NOT SPECIFIED 250

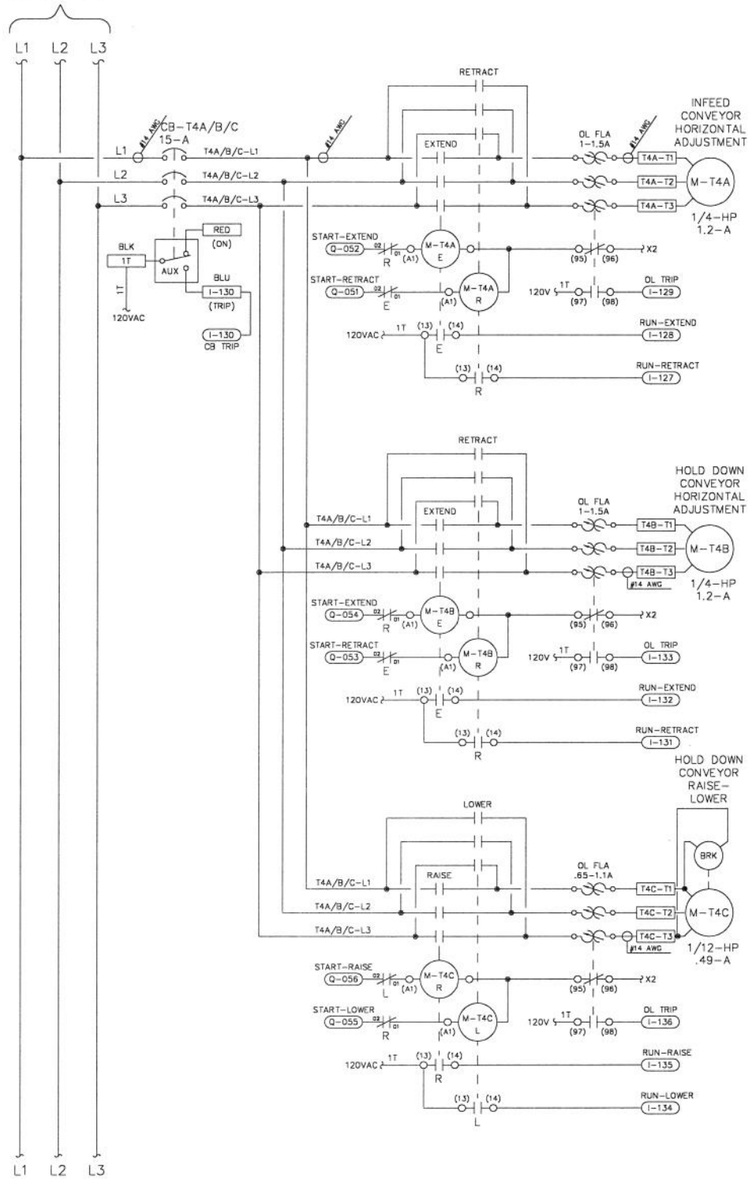
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

MANUAL 001031 X X — PAGE 62 X X

APPROVED	DATE	MFG	CYBERSAW, SCHEMATIC, US, 230V				
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 4 OF 15	D92034 REV. I

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

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



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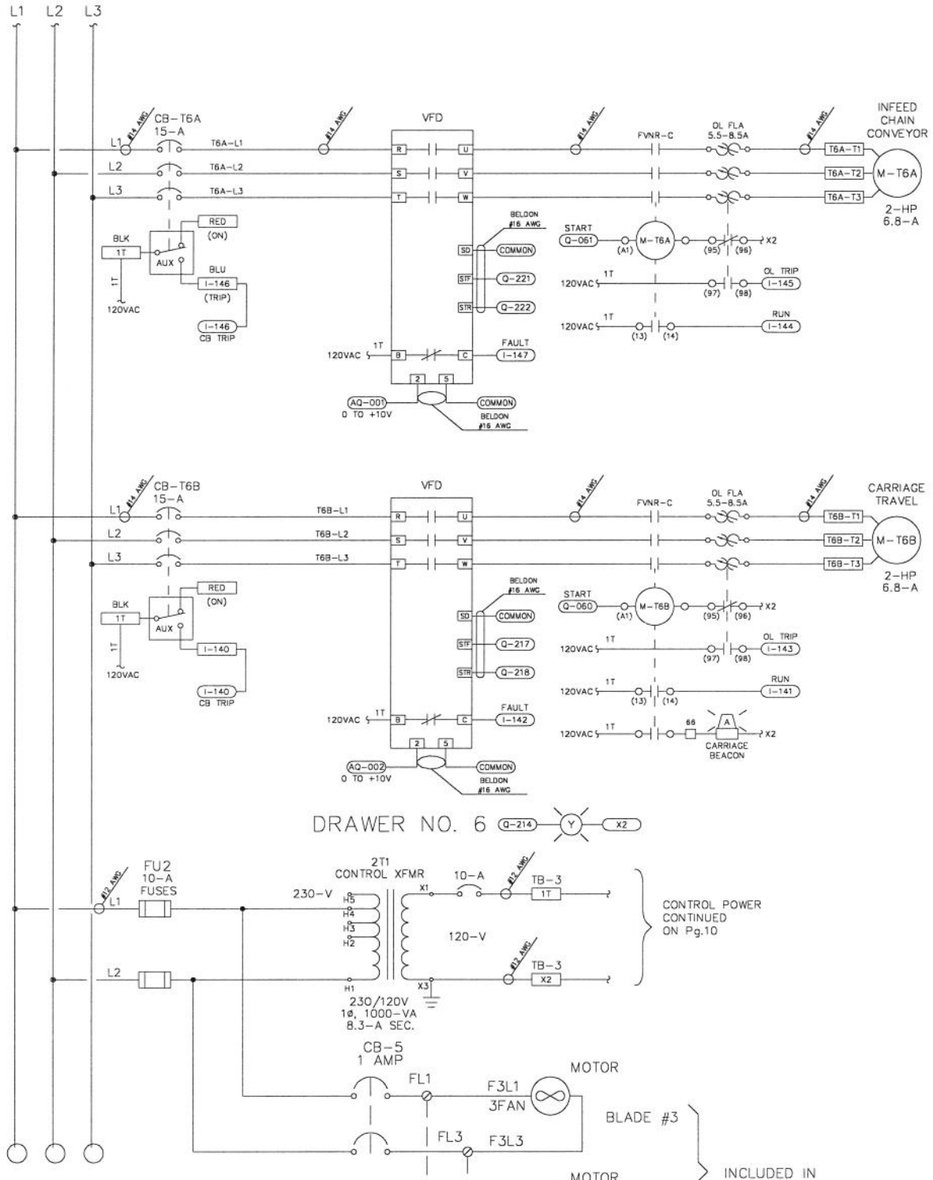
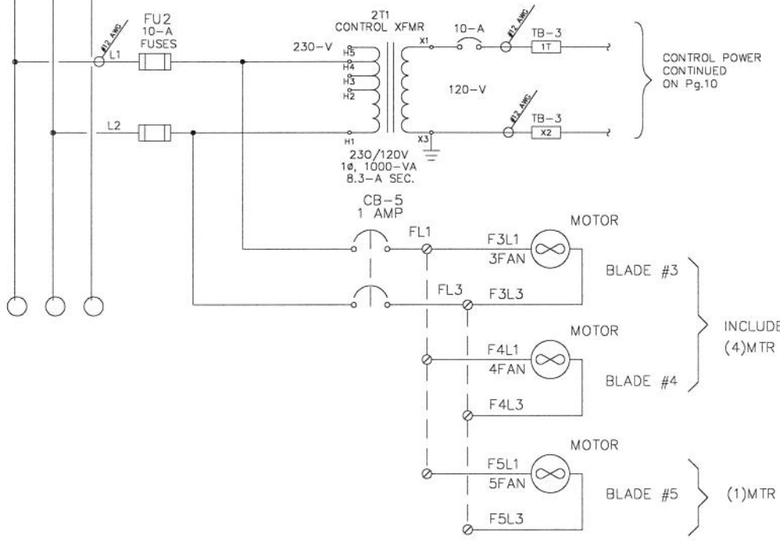


DRAWER NO. 6 Q-214 Y X2



TRAVELLING END CONTROL PANEL

BACK PANEL LEFT SIDE

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

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

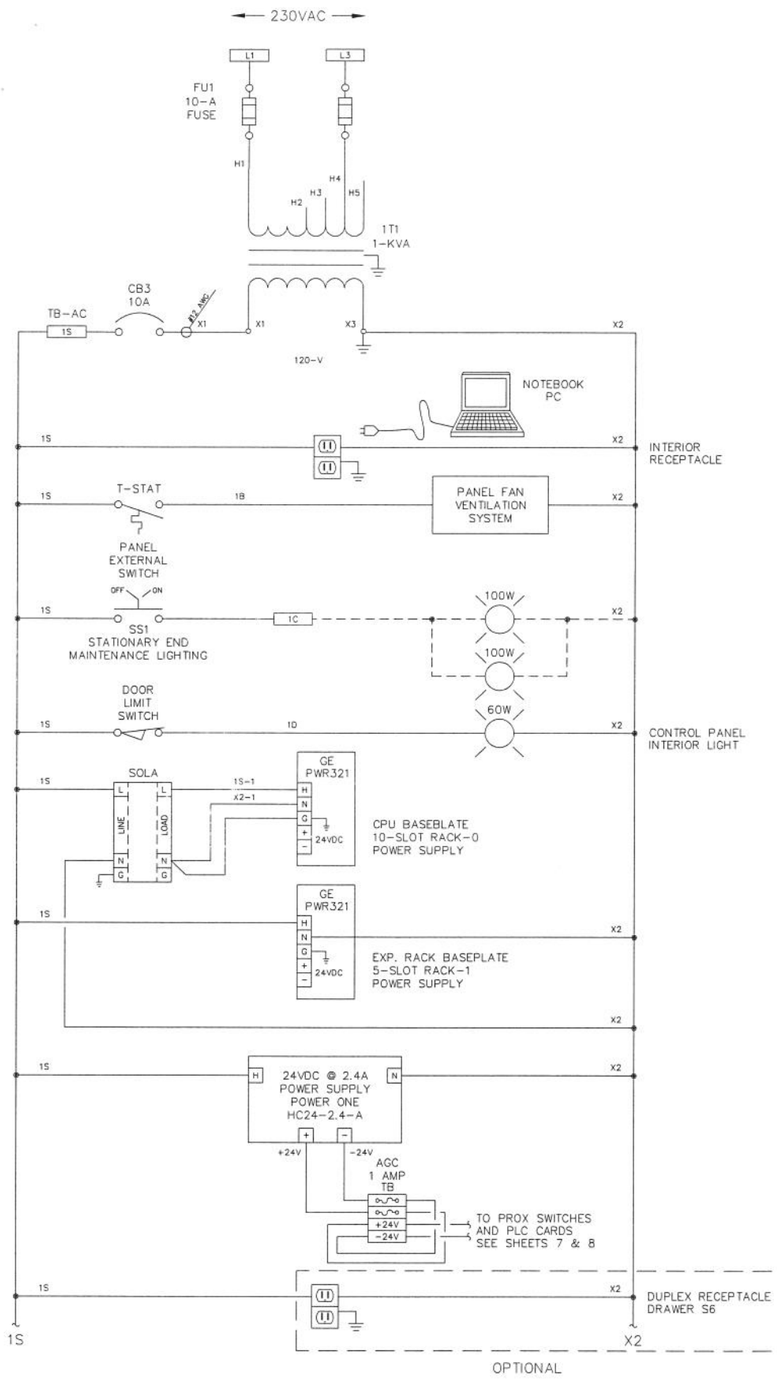
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1° TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

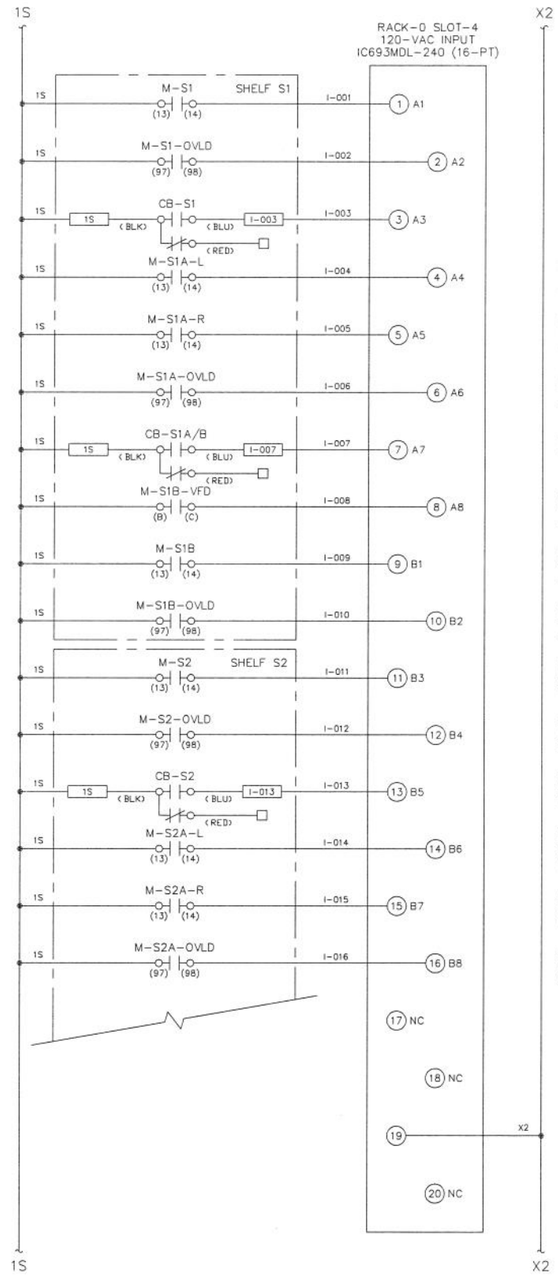
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

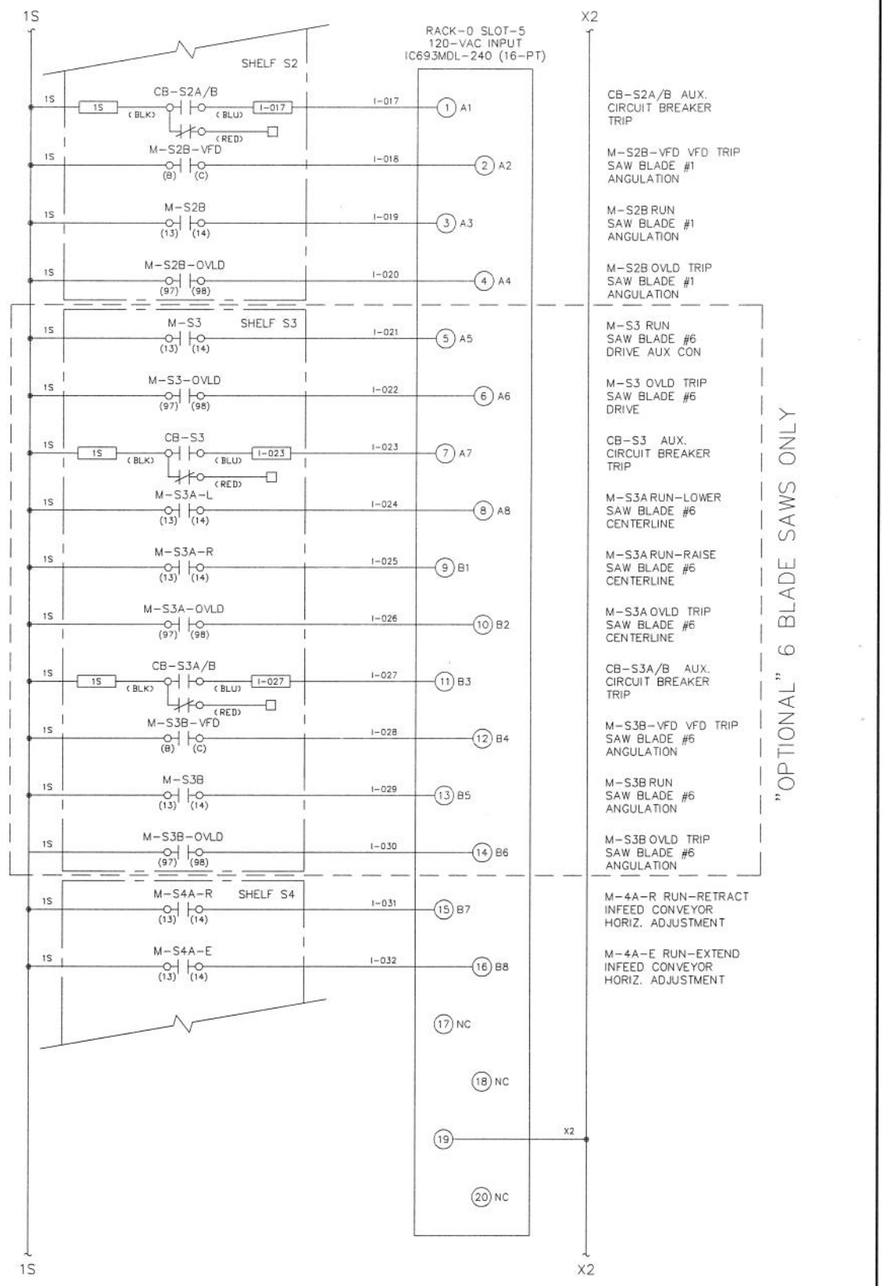
MANUAL 001031 X X PAGE 63 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V				
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 5 or 15	D92034 REV. 1

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







TERMINAL NOTES:

△ 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	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP DEPTH	REMARKS
A	X	X	X	X	X	

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

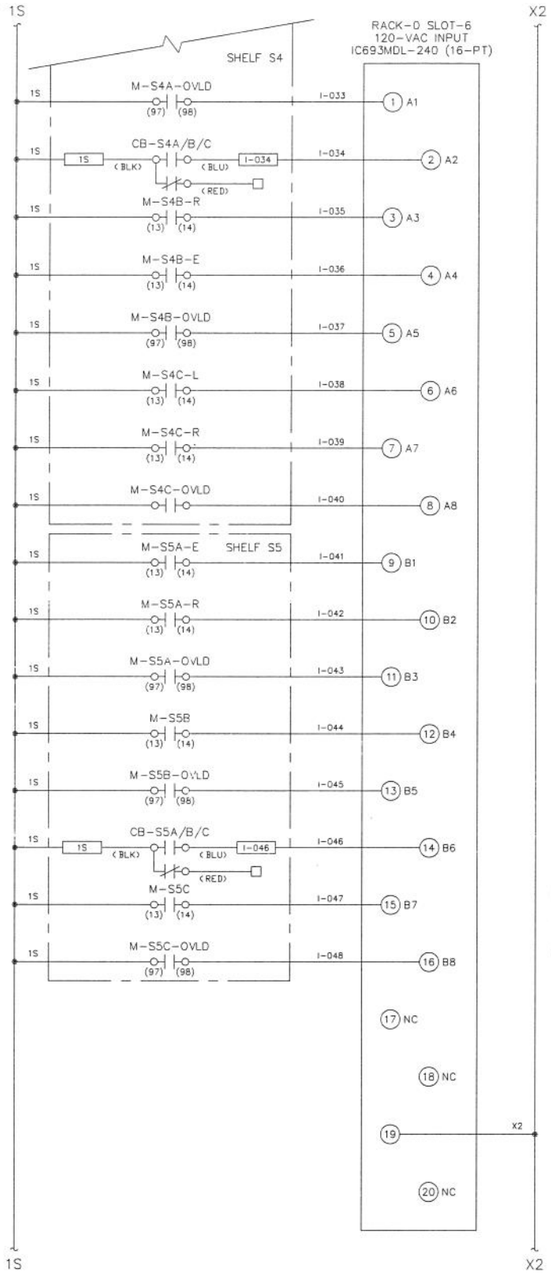
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES:
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1° TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

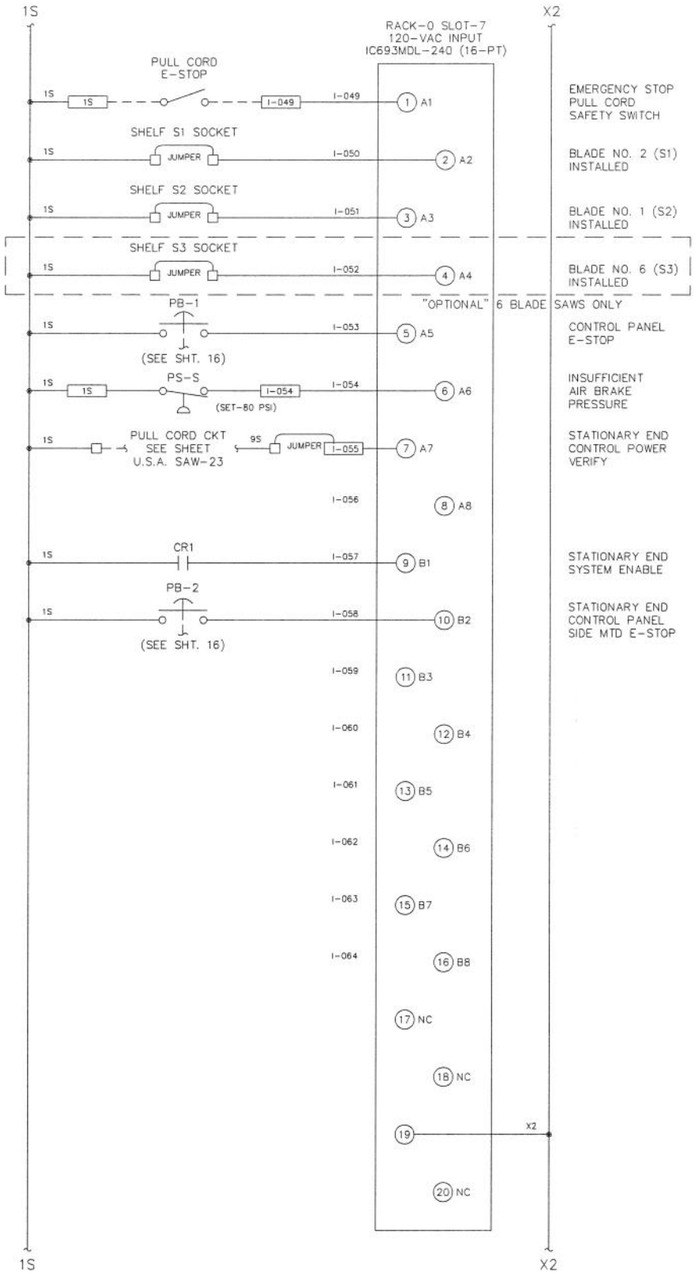
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

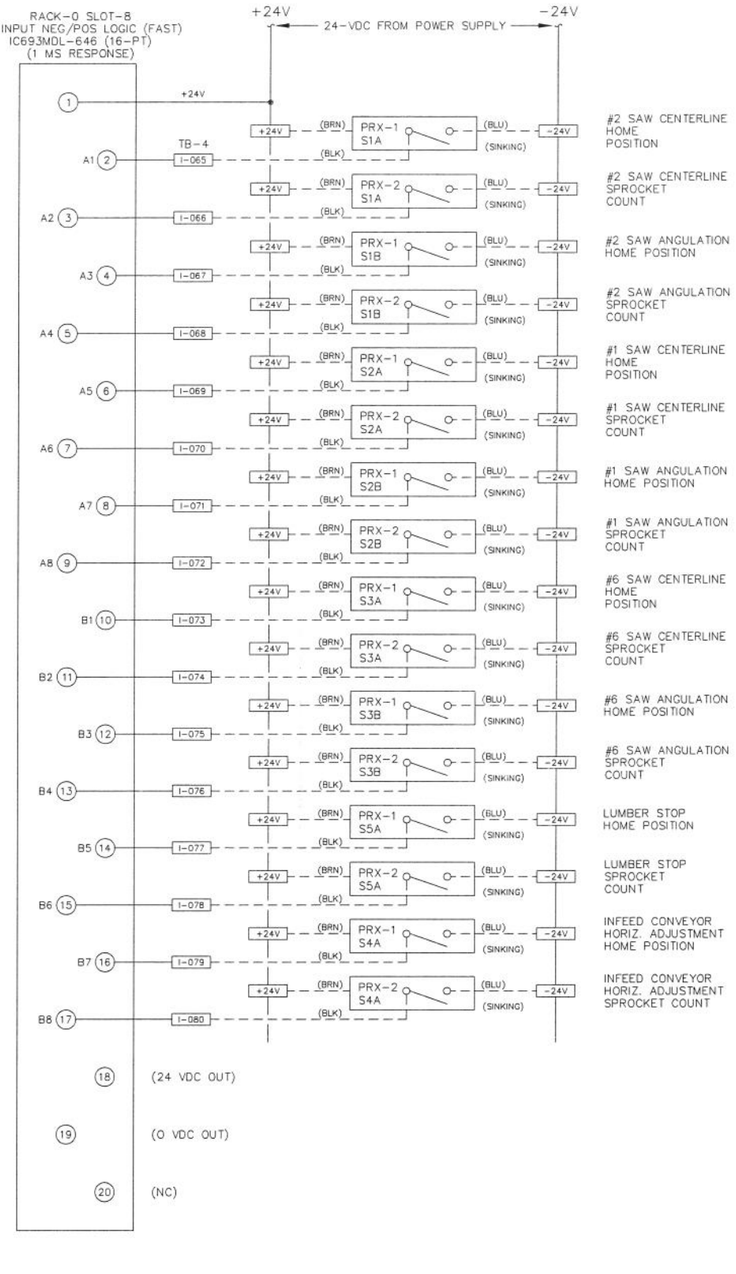
MANUAL 001031 X X PAGE 64 X X

APPROVED	DATE	MFG.	CYBERSAW,SCHEMATIC,US,230V				
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 6 of 15	D92034 REV. 1

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







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	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES:
FRACTIONS ± 1/32
DECIMALS ± .010
ANGLES ± 1°
TOTAL RUNOUT ±
MACHINED SURFACES NOT SPECIFIED 250

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

MANUAL 001031 X X PAGE 65 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V				
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 7 of 15	D92034 REV. 1

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

RACK-0 SLOT-9
DC INPUT NEG/POS LOGIC (FAST)
IC693MDL-646 (16-PT)
(1 MS RESPONSE)

+24V

-24V

1	+24V		
A1 2	I-081	PRX-1 S4B	HOLD DOWN CONVEYOR HORIZ. ADJUSTMENT HOME POSITION
A2 3	I-082	PRX-2 S4B	HOLD DOWN CONVEYOR HORIZ. ADJUSTMENT SPROCKET COUNT
A3 4	I-083	PRX-1 S4C	HOLD DOWN CONVEYOR LIFT / LOWER HOME POSITION
A4 5	I-084	PRX-2 S4C	HOLD DOWN CONVEYOR LIFT / LOWER SPROCKET COUNT
A5 6	I-085	⚠1	SHOP SET-UP MODE JUMPER
A6 7	I-086		SPARE
A7 8	I-087	PRX	STATIONARY END #6 AIR CYL RETRACTED
A8 9	I-088	CR245 (E) (G) (C) (B) CR	24-VDC PWR FAIL ALARM
B1 10	I-089	PRX-3 S4A	INFEED CONVEYOR HORIZ. ADJUSTMENT 2" HOME
B2 11	I-090		
B3 12	I-091		
B4 13	I-092		
B5 14	I-093		
B6 15	I-094		
B7 16	I-095		
B8 17	I-096		
18	(24 VDC OUT)		
19	(0 VDC OUT)		
20	(NC)		

TB-4

(BRN) (BLK) (BLU) (SINKING)

*(SEE NOTE)

STATIONARY CONTROL PANEL DOOR PUSH PULL E-STOP
STATIONARY CONTROL PANEL SIDE PUSH PULL E-STOP
PULL CORD LIMIT SWITCH
TOUCH SCREEN PANEL PUSH PULL E-STOP
TRAVEL SWING GUARD PUSH PULL E-STOP
TRAVEL CONTROL PANEL PUSH PULL E-STOP

TRAVEL PANEL WIRING

CR1 CR2 1S 2S 3S 4S 5S 6S 7S 8S 9S 9T 8T 7T 6T 5T 4T 3T 2T 1T

I-053 I-058 I-049 I-159 I-152 I-151

1T TRAVEL PANEL WIRING Pg.12

RACK-1 SLOT-1
120-VAC OUTPUT
IC693MDL-340 (16-PT)

X2

A1 1	Q-001	M-S1 START #2 SAW BLADE DRIVE
A2 2	Q-002	BRK-S1 ALL SAW BLADE BRAKES
A3 3	Q-003	M-S1A START LOWER #2 SAW BLADE CENTERLINE
A4 4	Q-004	M-S1A START RAISE #2 SAW BLADE CENTERLINE
A5 5	Q-005	
A6 6	Q-006	M-S1B #2 SAW BLADE ANGULATION
A7 7	Q-007	M-S2 START #1 SAW BLADE DRIVE
A8 8	Q-008	
9	3A	
NC 10		
B1 11	Q-009	M-S2A START LOWER #1 SAW BLADE CENTERLINE
B2 12	Q-010	M-S2A START RAISE #1 SAW BLADE CENTERLINE
B3 13	Q-011	
B4 14	Q-012	M-S2B #1 SAW BLADE ANGULATION
B5 15	Q-013	M-S3 START #6 SAW BLADE DRIVE
B6 16	Q-014	
B7 17	Q-015	M-S3A START LOWER #6 SAW BLADE CENTERLINE
B8 18	Q-016	M-S3A START RAISE #6 SAW BLADE CENTERLINE
19	3A	
NC 20		

*"OPTIONAL" 6 BLADE SAWS ONLY

9S

RACK-1 SLOT-2
120-VAC OUTPUT
IC693MDL-340 (16-PT)

X2

A1 1	Q-017	
A2 2	Q-018	M-S3B #6 SAW BLADE ANGULATION
A3 3	Q-019	M-S4A-R START RETRACT INFEED CONVEYOR HORIZONTAL ADJUST.
A4 4	Q-020	M-S4A-E START EXTEND INFEED CONVEYOR HORIZONTAL ADJUST.
A5 5	Q-021	M-S4B-R START RETRACT HOLD DOWN CONVEYOR HORIZONTAL ADJUST.
A6 6	Q-022	M-S4B-E START EXTEND HOLD DOWN CONVEYOR HORIZONTAL ADJUST.
A7 7	Q-023	M-S4C-R START LOWER HOLD DOWN CONVEYOR RAISE-LOWER
A8 8	Q-024	M-S4C-L START RAISE HOLD DOWN CONVEYOR RAISE-LOWER
9	3A	
NC 10		
B1 11	Q-025	M-S5A-E START EXTEND LUMBER STOP BRACKET
B2 12	Q-026	M-S5A-R START RETRACT LUMBER STOP BRACKET
B3 13	Q-027	M-S5B START SCRAP BELT CONVEYOR
B4 14	Q-028	M-S5C START SCRAP BELT TAKEAWAY CONVEYOR
B5 15	Q-029	SVS3-RET NO. 6 SAW BLADE RETRACT
B6 16	Q-030	SVS3-EXT NO. 6 SAW BLADE EXTEND
B7 17	Q-031	
B8 18	Q-032	
19	3A	
NC 20		

*(SEE NOTE)

⚠1 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

STATIONARY END CONTROL PANEL

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

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

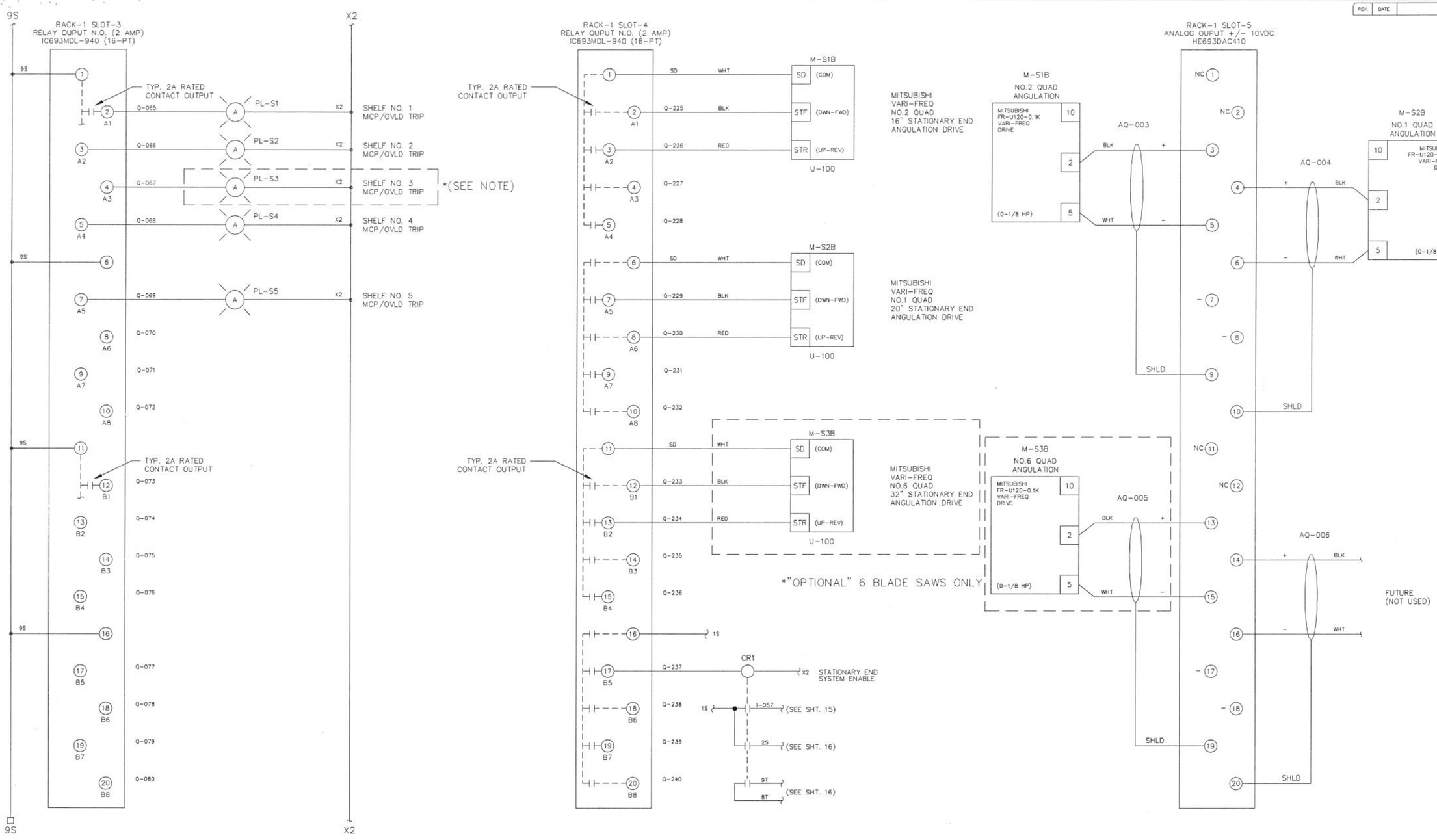
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES;
ANGLES ± 1°
FRACTIONS ± 1/32
TOTAL RUNOUT ±
DECIMALS ± .010
MACHINED SURFACES NOT SPECIFIED 250

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

MANUAL 001031 X X PAGE 66 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V				
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 8 OF 15	D92034 REV. 1

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



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

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

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES:
ANGLES ± 1°
FRACTIONS ± 1/32
TOTAL RUNOUT ±
DECIMALS ± .010
MACHINED SURFACES NOT SPECIFIED 250

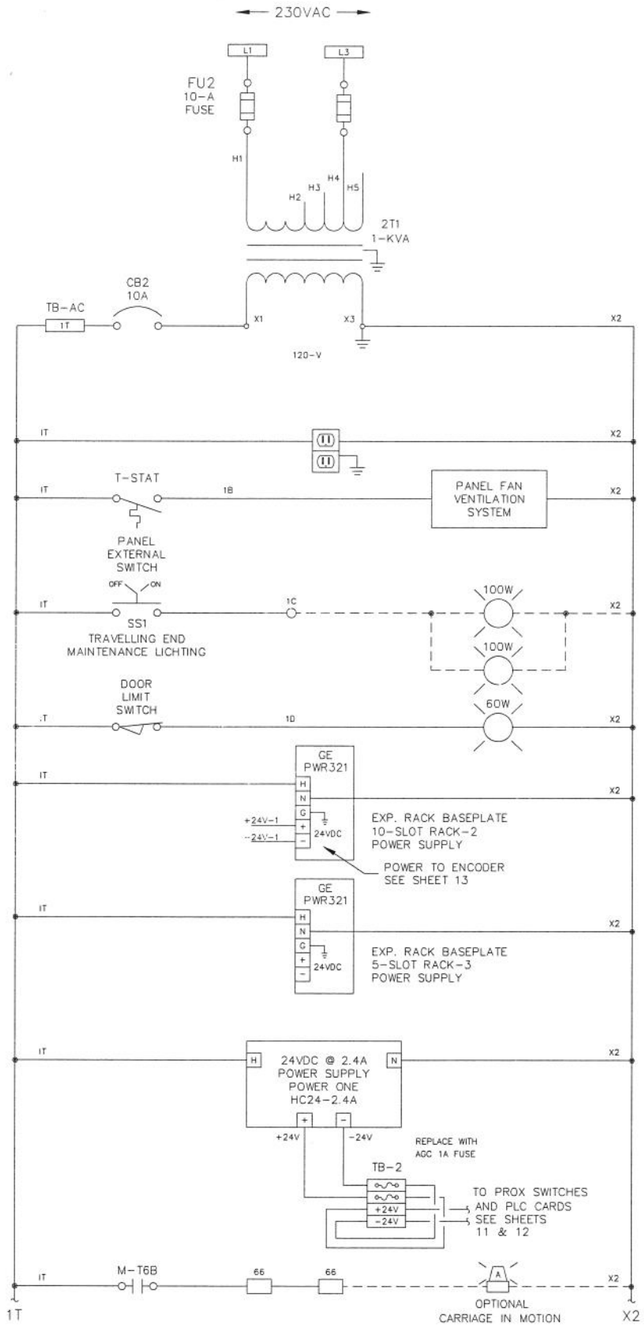
MiTek Industries,Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

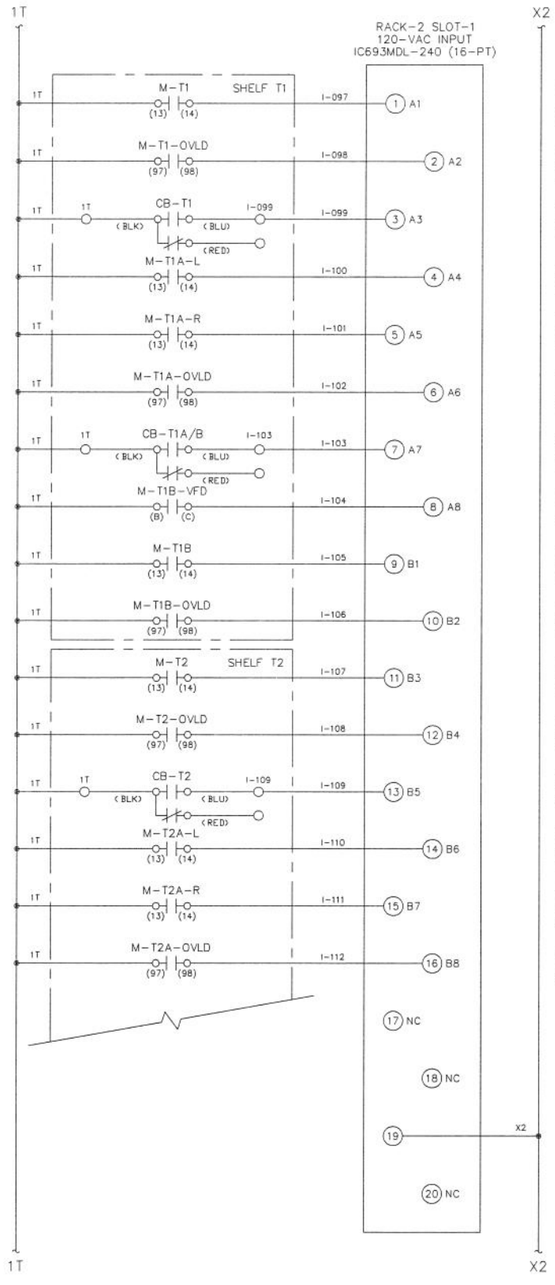
MANUAL 001031 X X PAGE 67 X X

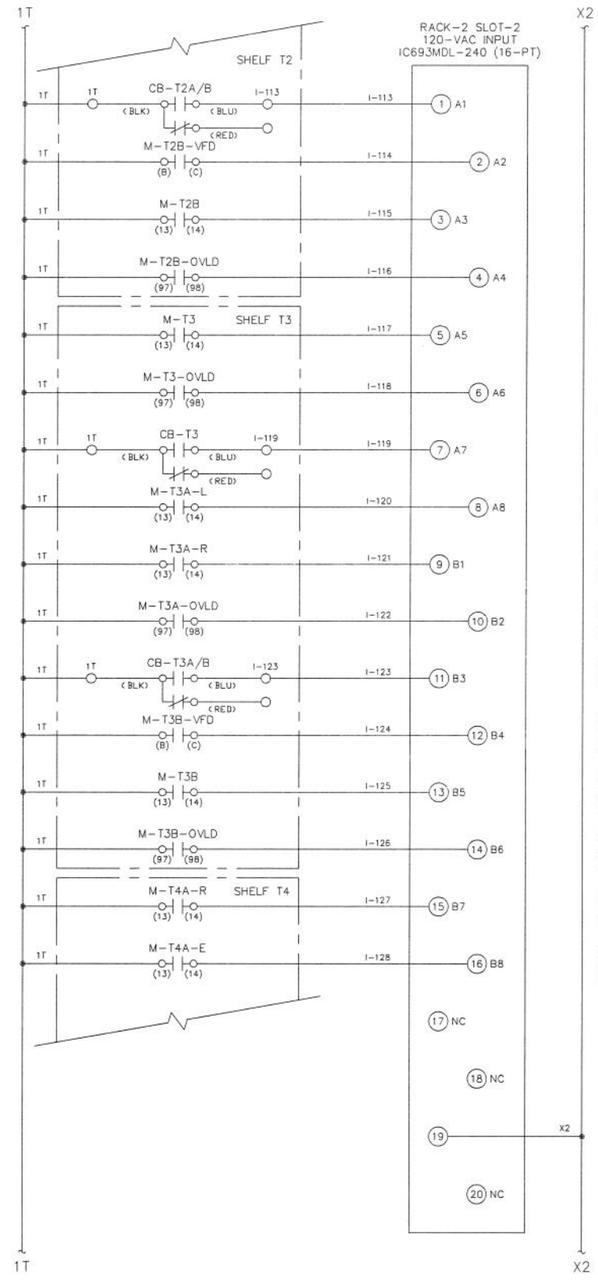
KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP DEPTH	REMARKS
A	X	X	X	X	X	

APPROVED	DATE	MFG.	CYBERSAW,SCHEMATIC,US,230V				
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 9 OF 15	D92034 REV. 1

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







TERMINAL NOTES:

△ TERMINALS LOCATED IN TOUCHSCREEN PANEL

○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL

□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES:

FRACTIONS ± 1/32 — DECIMALS ± .010 — ANGLES ± 1° — TOTAL RUNOUT ± — MACHINED SURFACES NOT SPECIFIED 250

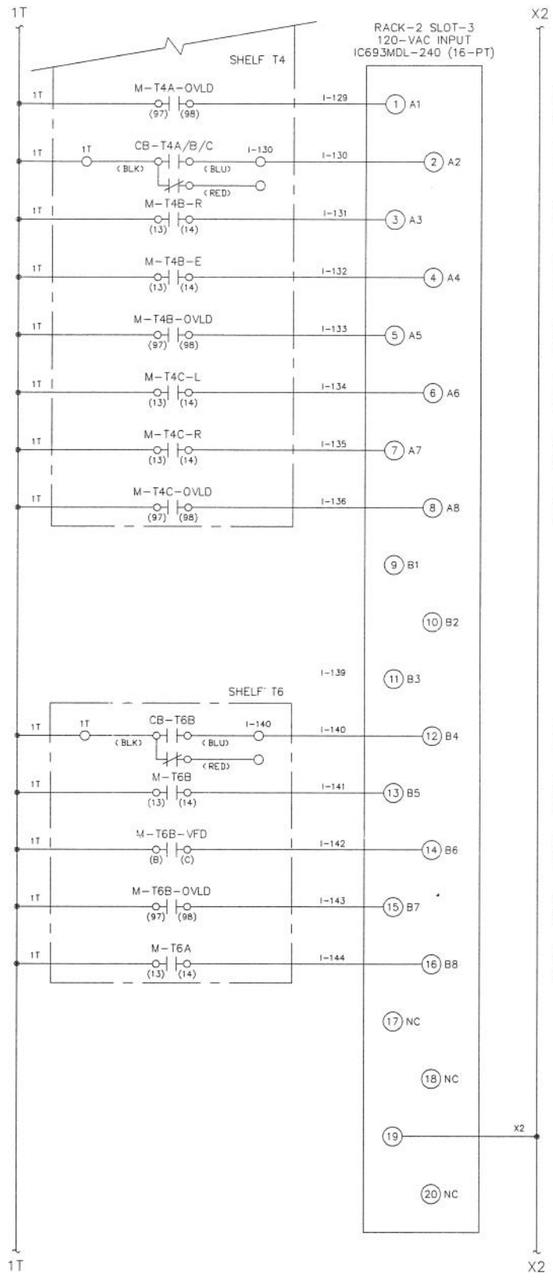
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

MANUAL 001031 X X — PAGE 68 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V			
CHECKED VDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 10 OF 15

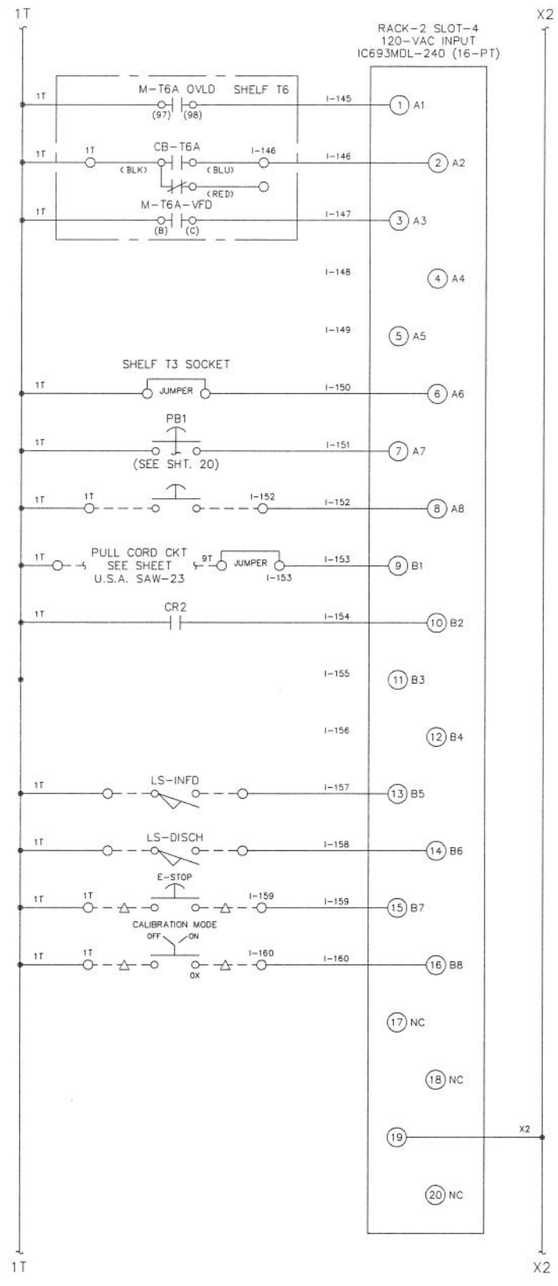
D92034 — REV. 1

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



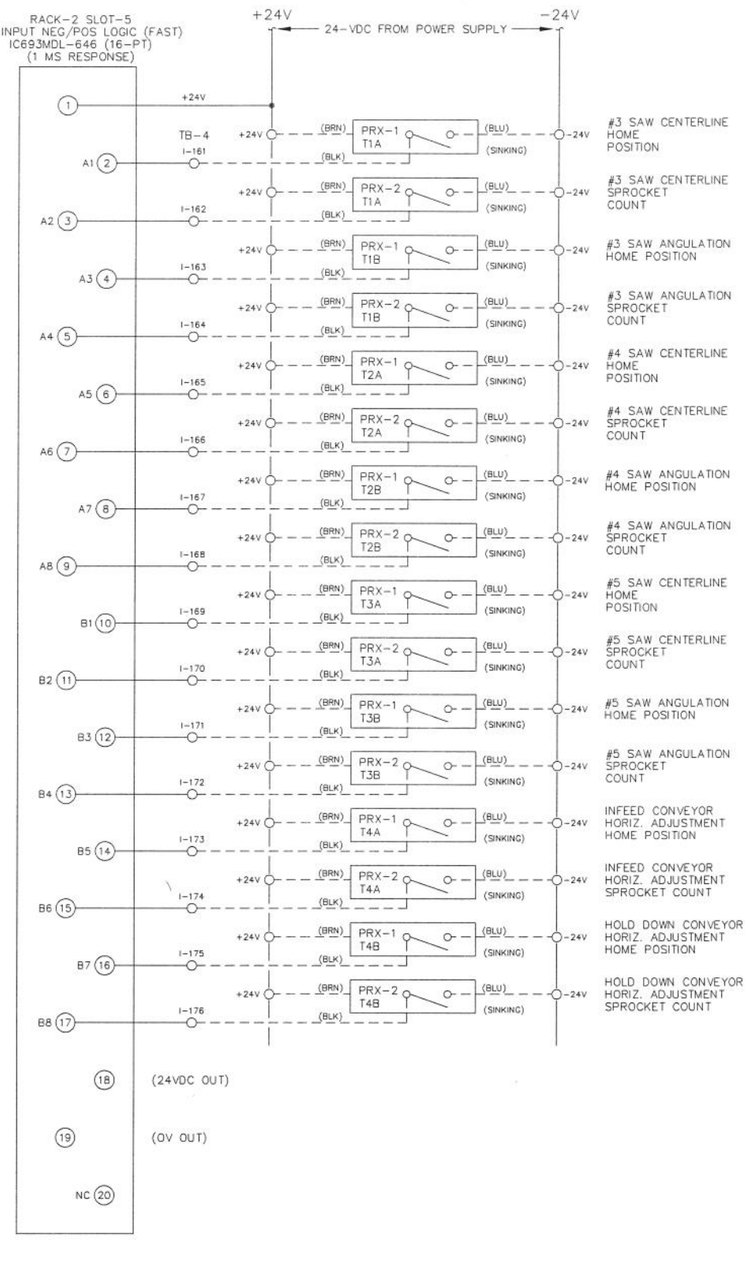
X2

- 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



X2

- 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 ANGULATION HOME POSITION
- #3 SAW ANGULATION SPROCKET COUNT
- #4 SAW CENTERLINE HOME POSITION
- #4 SAW CENTERLINE SPROCKET COUNT
- #4 SAW ANGULATION HOME POSITION
- #4 SAW ANGULATION SPROCKET COUNT
- #5 SAW CENTERLINE HOME POSITION
- #5 SAW CENTERLINE SPROCKET COUNT
- #5 SAW ANGULATION HOME POSITION
- #5 SAW ANGULATION 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

TERMINAL NOTES:

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

TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES:
FRACTIONS ± 1/32 — DECIMALS ± .010 — ANGLES ± 1° — TOTAL RUNOUT ± — MACHINED SURFACES NOT SPECIFIED 250

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

MANUAL 001031 X X — PAGE 69 X X

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V					
CHECKED VDC	DATE 5/4/61	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 11 OF 15	D92034	REV. 1

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

RACK-2 SLOT-6
DC INPUT NEG/POS LOGIC (FAST)
IC693MDL-646 (16-PT)
(1 MS RESPONSE)

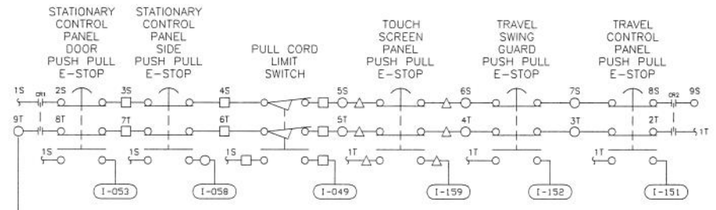
+24V

-24V

STATIONARY WIRING Pg.8

1	+24V			
A1 2	TB-4	I-177	PRX-1 T4C (BRN) (BLK) (BLU) (SINKING)	HOLD DOWN CONVEYOR LIFT / LOWER HOME POSITION
A2 3		I-178	PRX-2 T4C (BRN) (BLK) (BLU) (SINKING)	HOLD DOWN CONVEYOR LIFT / LOWER SPROCKET COUNT
A3 4		I-179		SPARE
A4 5		I-180	PRX (BRN) (BLK) (BLU)	TRAVELLING BLADE #5 AIR CYL RETRACTED
A5 6		I-181		SPARE
A6 7		I-182	CR24T CR (E) (C) (C) (B)	24-VDC PWR FAIL ALARM
A7 8		I-183	PRX-3 T4B (BRN) (BLK) (BLU) (SINKING)	INFEED CONVEYOR HORIZ. ADJUSTMENT 2" HOME
A8 9		I-184		
B1 10		I-185		
B2 11		I-186		
B3 12		I-187		
B4 13		I-188		
B5 14		I-189		
B6 15		I-190		
B7 16		I-191		
B8 17		I-192		
18				
19				
20				

STATIONARY CONTROL PANEL DOOR PUSH PULL E-STOP
STATIONARY CONTROL PANEL SIDE PUSH PULL E-STOP
PULL CORD LIMIT SWITCH
TOUCH SCREEN PANEL PUSH PULL E-STOP
TRAVEL SWING GUARD PUSH PULL E-STOP
TRAVEL CONTROL PANEL PUSH PULL E-STOP



RACK-2 SLOT-7
120-VAC OUTPUT
IC693MDL-340 (16-PT)

X2

A1 1	Q-033	M-T1 (A1) OL (95) (96) X2	M-T1 START #3 SAW BLADE DRIVE
A2 2	Q-034		
A3 3	Q-035	R (02) M-T1A L (A1) OL (95) (96) X2	M-T1A START LOWER #3 SAW BLADE CENTERLINE
A4 4	Q-036	L (02) M-T1A R (A1)	M-T1A START RAISE #3 SAW BLADE CENTERLINE
A5 5	Q-037		
A6 6	Q-038	M-T1B (A1) OL (95) (96) X2	M-T1B #3 SAW BLADE ANGULATION
A7 7	Q-039	M-T2 (A1) OL (95) (96) X2	M-T2 START #4 SAW BLADE DRIVE
A8 8	Q-040		
9T 9	3A	(FUSE INTERNAL TO MODULE)	
NC 10			
B1 11	Q-041	R (02) M-T2A L (A1) OL (95) (96) X2	M-T2A START LOWER #4 SAW BLADE CENTERLINE
B2 12	Q-042	L (02) M-T2A R (A1)	M-T2A START RAISE #4 SAW BLADE CENTERLINE
B3 13	Q-043		
B4 14	Q-044	M-T2B (A1) OL (95) (96) X2	M-T2B #4 SAW BLADE ANGULATION
B5 15	Q-045	M-T3 (A1) OL (95) (96) X2	M-T3 START #5 SAW BLADE DRIVE
B6 16	Q-046	BRK-T3 S X2	CARRIAGE BRAKE
B7 17	Q-047	R (02) M-T3A L (A1) OL (95) (96) X2	M-T3A START LOWER #5 SAW BLADE CENTERLINE
B8 18	Q-048	L (02) M-T3A R (A1)	M-T3A START RAISE #5 SAW BLADE CENTERLINE
9T 19	3A	(FUSE INTERNAL TO MODULE)	
NC 20			

9T

X2

TERMINAL NOTES:

△ TERMINALS LOCATED IN TOUCHSCREEN PANEL

○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL

□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

RACK-2 SLOT-8
120-VAC OUTPUT
IC693MDL-340 (16-PT)

9T

X2

A1 1	Q-049		
A2 2	Q-050	M-T3B (A1) OL (95) (96) X2	M-T3B #5 SAW BLADE ANGULATION
A3 3	Q-051	E (02) M-T4A R (A1) OL (95) (96) X2	M-T4A START RETRACT INFEED CONVEYOR HORIZONTAL ADJUST.
A4 4	Q-052	R (02) M-T4A E (A1)	M-T4A START EXTEND INFEED CONVEYOR HORIZONTAL ADJUST.
A5 5	Q-053	E (02) M-T4B R (A1) OL (95) (96) X2	M-T4B START RETRACT HOLD DOWN CONVEYOR HORIZONTAL ADJUST.
A6 6	Q-054	R (02) M-T4B E (A1)	M-T4B START EXTEND HOLD DOWN CONVEYOR HORIZONTAL ADJUST.
A7 7	Q-055	R (02) M-T4C L (A1) OL (95) (96) X2	M-T4C START LOWER HOLD DOWN CONVEYOR RAISE-LOWER
A8 8	Q-056	L (02) M-T4C R (A1)	M-T4C START RAISE HOLD DOWN CONVEYOR RAISE-LOWER
9T 9	3A	(FUSE INTERNAL TO MODULE)	
NC 10			
B1 11	Q-057		
B2 12	Q-058		
B3 13	Q-059		
B4 14	Q-060	M-T6B (A1) OL (95) (96) X2	M-T6B CARRIAGE RUN CONTACTOR
B5 15	Q-061	M-T6A (A1) OL (95) (96) X2	M-T6A START INFEED CHAIN CONVEYOR
B6 16	Q-062	SVT3-EXT S X2	BLADE #5 BLADE AIR CYL EXTEND
B7 17	Q-063	SVT3-RET S X2	BLADE #5 BLADE AIR CYL RETRACT
B8 18	Q-064		
9T 19	3A	(FUSE INTERNAL TO MODULE)	
NC 20			

9T

X2

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

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

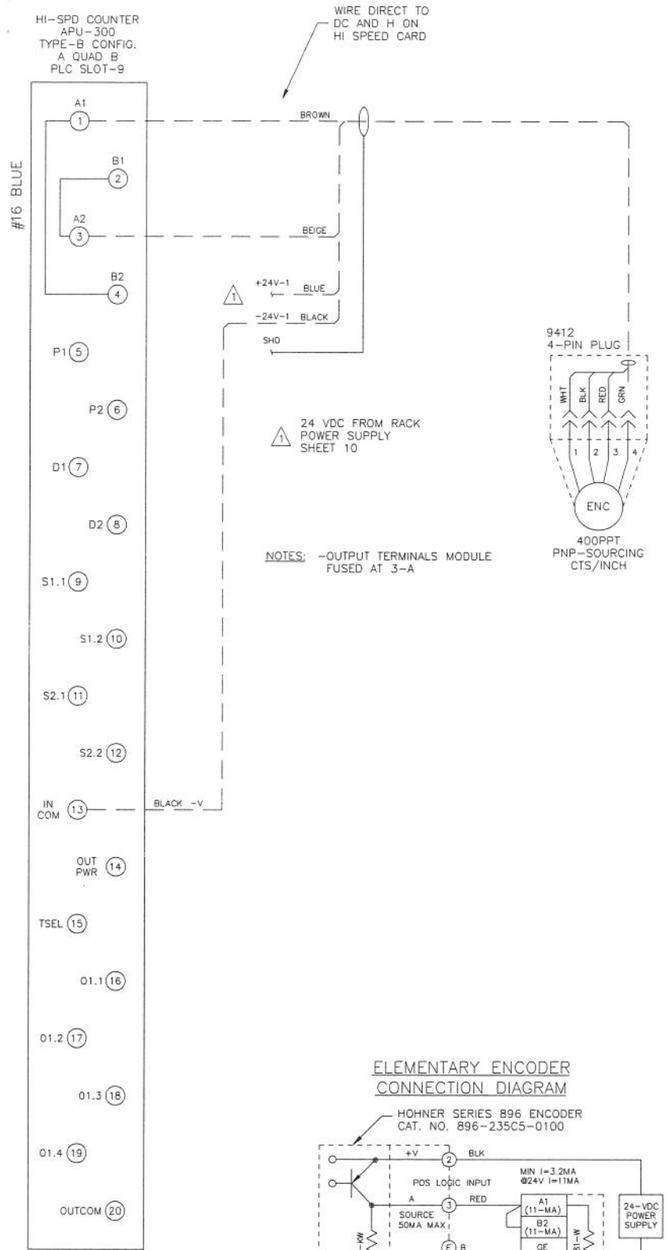
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES:
FRACTIONS ± 1/32
DECIMALS ± .010
ANGLES ± 1°
TOTAL RUNOUT ±
MACHINED SURFACES NOT SPECIFIED 250

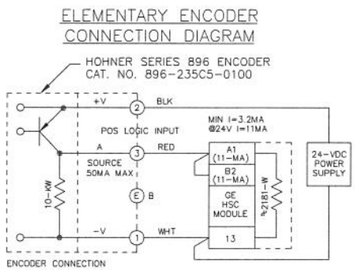
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

MANUAL 001031 X X X PAGE 70 X X

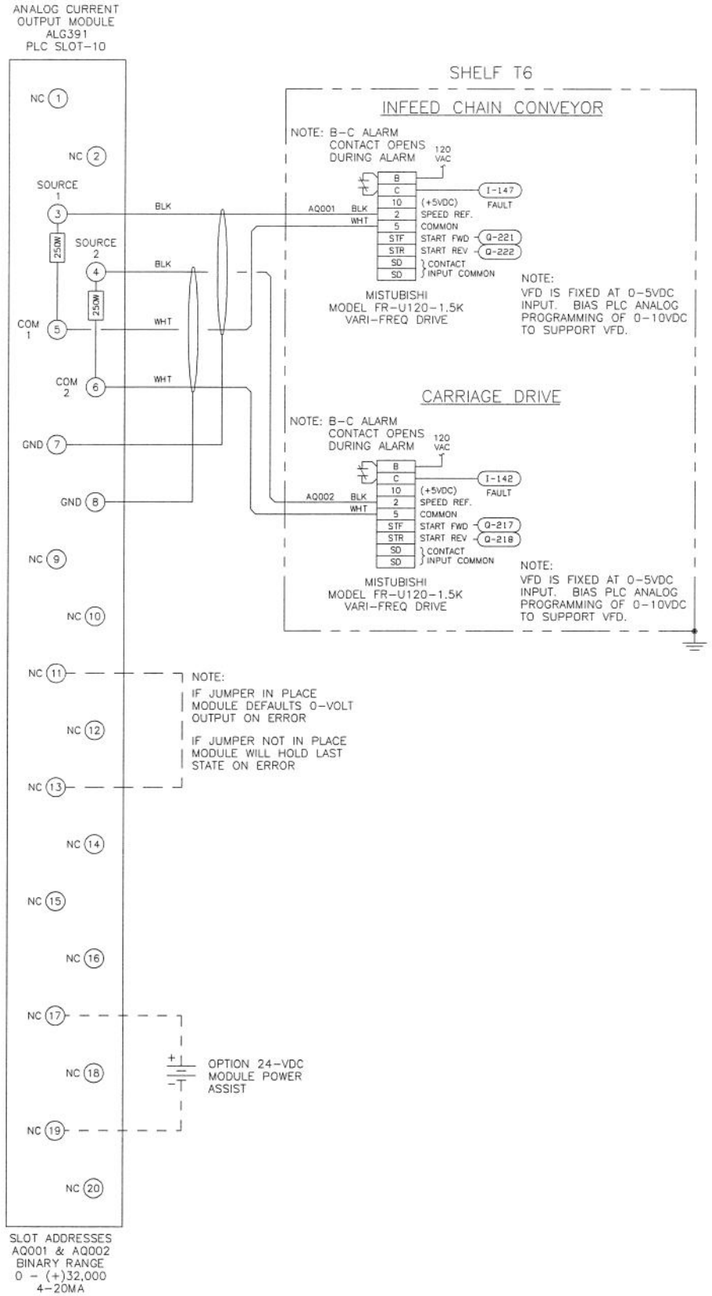
APPROVED	DATE	MFG.	CYBERSAW,SCHEMATIC,US,230V					
CHECKED JDC	DATE 5/4/01	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 12 of 15	D92034	REV. 1

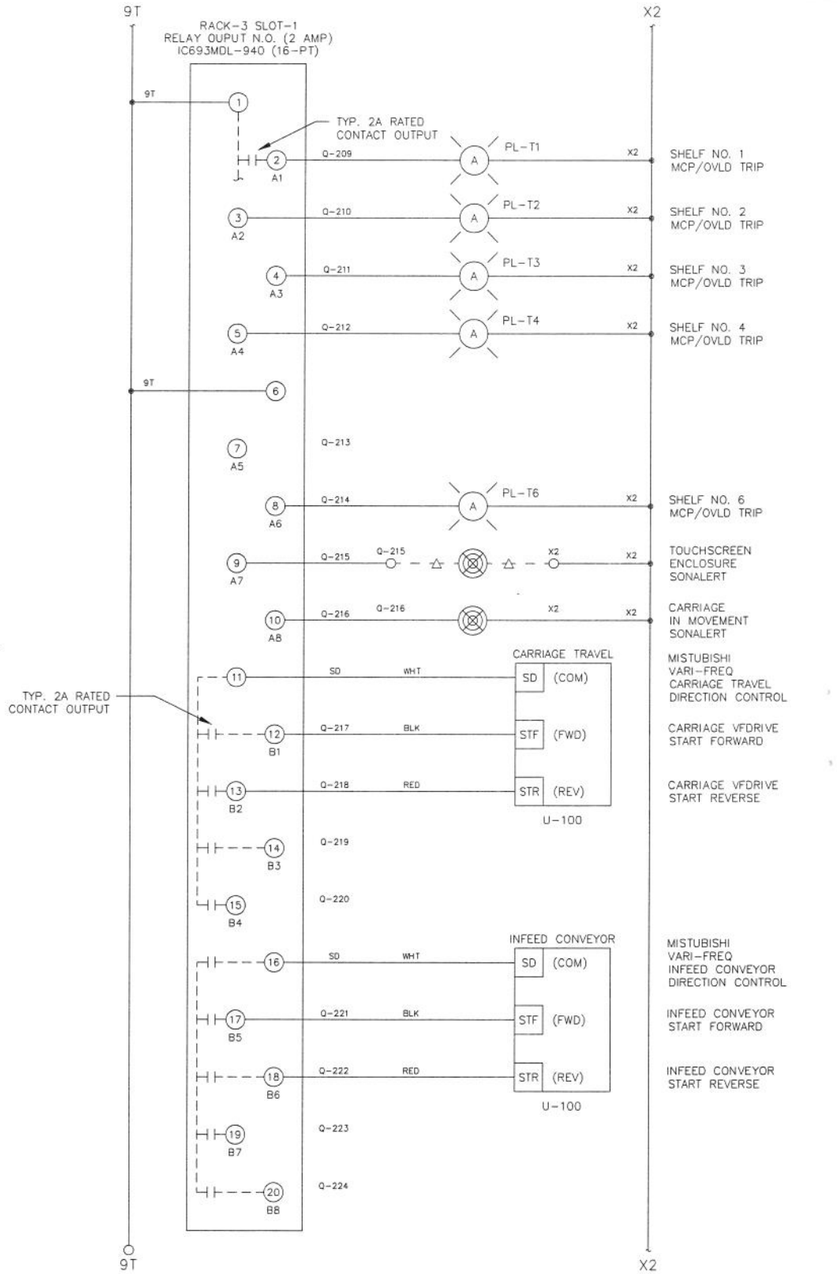
TRAVELLING END CONTROL PANEL





SINGLE CHANNEL CIRCUIT SHOWN.
NOTE: DUAL PLC INPUT PER CHANNEL IS TO PROVIDE POSITIVE GOING PULSES PER REVOLUTION RATE DETECTION FOR BOTH LEFT AND RIGHT TRAVEL. A1 CHANNEL IS USED EXCLUSIVELY FOR LOCATION TRACKING.





TERMINAL NOTES:

△ TERMINALS LOCATED IN TOUCHSCREEN PANEL

○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL

□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

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

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

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

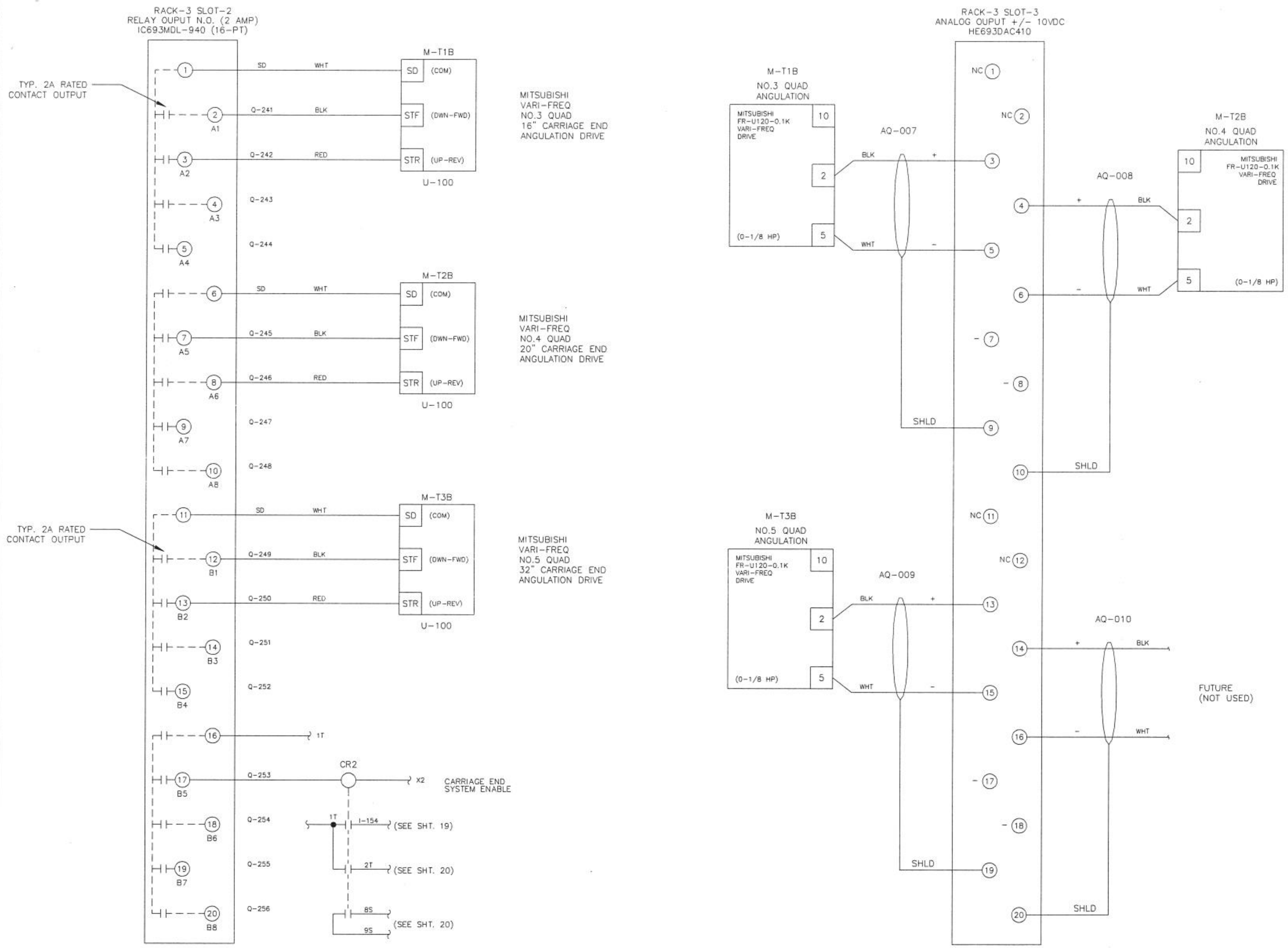
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN WITH THE FOLLOWING TOLERANCES;
ANGLES ± 1°
FRACTIONS ± 1/32
TOTAL RUNOUT ±
DECIMALS ± .010
MACHINED SURFACES NOT SPECIFIED 250

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

MANUAL 001031 X X X PAGE 71 X X X

APPROVED	DATE	MFG.	CYBERSAW,SCHEMATIC,US,230V					
CHECKED VDC	9/16/99	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 13 or 15	D92034	REV. 1

TRAVELLING END CONTROL PANEL


RACK-3 SLOT-2
RELAY OUPUT N.O. (2 AMP)
IC693MDL-940 (16-PT)
TYP. 2A RATED
CONTACT OUTPUT
M-T1B
SD (COM)
STF (DWN-FWD)
STR (UP-REV)
U-100
MITSUBISHI
VARI-FREQ
NO.3 QUAD
16" CARRIAGE END
ANGULATION DRIVE
M-T2B
MITSUBISHI
VARI-FREQ
NO.4 QUAD
20" CARRIAGE END
ANGULATION DRIVE
M-T3B
MITSUBISHI
VARI-FREQ
NO.5 QUAD
32" CARRIAGE END
ANGULATION DRIVE
Q-241 Q-242 Q-243 Q-244 Q-245 Q-246 Q-247 Q-248 Q-249 Q-250 Q-251 Q-252 Q-253 Q-254 Q-255 Q-256
CR2
X2
CARRIAGE END
SYSTEM ENABLE
1T
1-154
(SEE SHT. 19)
2T
(SEE SHT. 20)
8S
9S
(SEE SHT. 20)
RACK-3 SLOT-3
ANALOG OUPUT +/- 10VDC
HE693DAC410
M-T1B
NO.3 QUAD
ANGULATION
MITSUBISHI
FR-U120-0.1K
VARI-FREQ
DRIVE
(0-1/8 HP)
AQ-007
AQ-008
M-T2B
NO.4 QUAD
ANGULATION
M-T3B
NO.5 QUAD
ANGULATION
AQ-009
AQ-010
SHLD
FUTURE
(NOT USED)

TRAVELLING END CONTROL PANEL

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

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES:
FRACTIONS ± 1/32
DECIMALS ± .010
ANGLES ± 1°
TOTAL RUNOUT ±
MACHINED SURFACES NOT SPECIFIED 250

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

MANUAL 001031 X X — PAGE 72 X X

APPROVED | DATE | MFG.

CYBERSAW,SCHEMATIC,US,230V

CHECKED VOC | DATE 5/4/01 | DRAWN B.L.(MWA) | DATE 06/24/99 | FINISH PAINT NA | SCALE 1 : 1 | PAGE 14 OF 15 | D92034 | REV. 1

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

STATIONARY END CONTROL PANEL

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

DIP SWITCHES FOR ADDRESSING

CPU/BASE BACKPLANE SLOT

TRANSCEIVER

MEDIA CONVERTER

FIBER OPTIC DETAILS ON DWG #92044

CABLE TRACK

GRAPHIC SCREEN CONNECTION CABLE

GND BOND

TRAVELLING END CONTROL PANEL

RITTAL SWING ARM

TOPAZ UPS

Touchscreen Computer

BLACK RED

TO ETHERNET CARD FIBER OPTIC PCI #AT-2450

TB3 (120VAC) 1T X2

RACK 0

PS	1	2	3	4	5	6	7	8	9	10	
PWR330	CPU351	CMM321 CMM	PCM301 PCM	MDL240 I AC16 RefAdr %I0001	MDL240 I AC16 RefAdr %I0017	MDL240 I AC16 RefAdr %I0033	MDL240 I AC16 RefAdr %I0049	MDL646 I DC16 RefAdr %I0065	MDL646 I DC16 RefAdr %I0081		EXPANSION

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

RACK 1

PS	1	2	3	4	5	
PWR321	MDL340 Q AC16 RefAdr %Q0001	MDL340 Q AC16 RefAdr %Q0017	MDL940 RefAdr %Q0065	MDL940 RefAdr %Q0225	HE693 RefAdr %AQ0003	EXPANSION

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

DIP SWITCH PATTERN FOR RACK-1

INDICATES DOWN

DB-25 MALE

CABLE (IC693CBL300) 36"

DB-25 M/F

DB-25 MALE

PORT-1 PORT-2

CUSTOM CABLE - BELDEN 8107
SEE GE PUB. GFK-0356E PAGE 3-24/25

TWISTED SHIELDED PAIRS

PIN			PIN	
DIODT	16	W/BL	16	DIODT
DIODT/	17	BL/W	17	DIODT/
DIOCLK	24	BR/W	24	DIOCLK
DIOCLK/	25	W/BR	25	DIOCLK/
DRSEL	20	O/R	20	DRSEL
DRSEL/	21	R/O	21	DRSEL/
DRPERR	12	W/GRY	12	DRPERR
DRPERR/	13	GRY/W	13	DRPERR/
DRMRUN	8	R/BL	8	DRMRUN
DRMRUN/	9	BL/R	9	DRMRUN/
DPFRAME+	2	W/GRN	2	DPFRAME+
DPFRAME-	3	GRN/W	3	DPFRAME-
OV	7	O/W	7	OV
FGND	1	W/O	1	FGND
		SH		

25-PIN MALE — 25-PIN FEMALE

W=WHITE O=ORANGE R=RED BR=BROWN
BL=BLUE GRN=GREEN GRY=GRAY SH=SHIELD

RACK 2

PS	1	2	3	4	5	6	7	8	9	10	
PWR321	MDL240 I AC16 RefAdr %I0097	MDL240 I AC16 RefAdr %I0113	MDL240 I AC16 RefAdr %I0129	MDL240 I AC16 RefAdr %I0145	MDL646 I DC16 RefAdr %I0161	MDL646 I DC16 RefAdr %I0177	MDL340 Q AC16 RefAdr %Q0033	MDL340 Q AC16 RefAdr %Q0049	APU300 HSC RefAdr %I0193 AI0001	ALG391 QALGV2 RefAdr %AQ001	EXPANSION

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

PORT-1 PORT-2

CABLE (IC693CBL300)

RACK 3

PS	1	2	3	4	5	
PWR321	MDL940 RefAdr %Q0209	MDL940 RefAdr %Q0241	HE693 RefAdr %AQ007			EXPANSION

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

DIP SWITCH PATTERN FOR RACK-2

DIP SWITCH PATTERN FOR RACK-3

INDICATES DOWN

PORT-1 PORT-2

EXPANSION BUS TERMINATION PLUG (IC693ACC307A)

APPROX. LENGTH = 60'

CONTROL PANEL DOOR PUSH PULL E-STOP

CONTROL PANEL SIDE PUSH PULL E-STOP

PULL CORD LIMIT SWITCH

CONTROL POWER VERIFY I-055

TOUCHSCREEN PUSH PULL E-STOP

SWING GUARD PUSH PULL E-STOP

CONTROL PANEL PUSH PULL E-STOP

Q-237 CR1 X2

120 VAC CONTROL PANEL SOURCE

CONTROL PANEL OUTPUT MODULE SUPPLY

1S 2S (33) (34) 3S 4S 5S 9S 6S 7S 8S 9S

9T 8T (44) (43) 7T 6T 5T 9T 4T 3T 2T 1T

120VAC 1S I-053 120VAC 1S I-058 120VAC 1S I-049

RED - 5S
BLK - 9S
WHT - 5T
GRN - 9T

SINGLE 4/C - 14GA SO CABLE

120VAC 1T I-159 I-153 CONTROL POWER VERIFY 120VAC 1T I-152 120VAC 1T I-151

Q-253 CR2 X2

120 VAC CONTROL PANEL SOURCE

CONTROL PANEL AC OUTPUT MODULE SUPPLY

CKT BKR 100-A

230 VAC 3ø L1 L2 L3

LINE SIDE

GRAY - L1
GRAY - L2
GRAY - L3

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

MANUAL TRIP 100-A

L1 L2 L3

LOAD SIDE

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

STATIONARY END PNEUMATIC SYSTEM

TRAVELLING END PNEUMATIC SYSTEM

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 WITH THE FOLLOWING TOLERANCES;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1° TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

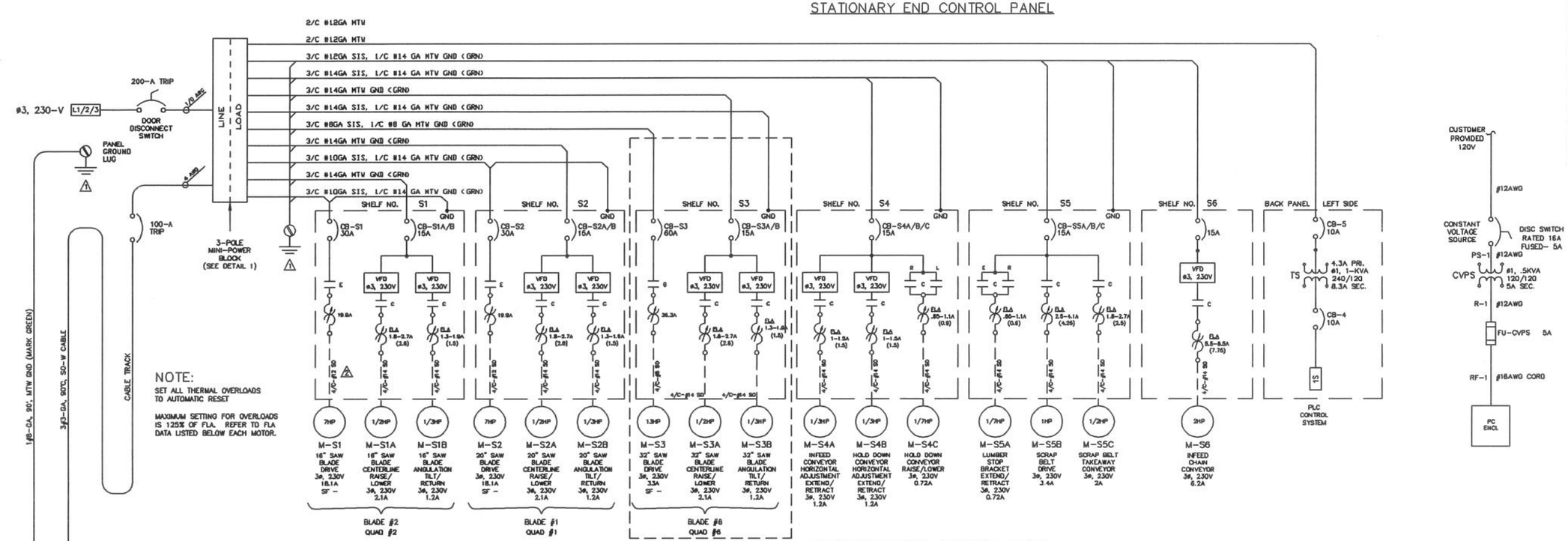
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

MANUAL 001031 X X X PAGE 73

APPROVED	DATE	MFG.	CYBERSAW, SCHEMATIC, US, 230V					
CHECKED VDC 5/4/01	DATE	DRAWN B.L.(MWA)	DATE 06/24/99	FINISH PAINT NA	SCALE 1 : 1	PAGE 15 of 15	D92034	REV. 1

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE
–	06/13/01	INITIAL RELEASE	DJKM			
A	11/27/01	SEE ECN 3247-3	DJKM			
B	1/8/02	SEE ECN 5008	DJKM			
C	3/28/02	SEE ECN 5017	DJKM			
D	4/8/03	SEE ECN 5118	EL			
E	8/14/03	SEE ECN 5167	EL			
F	2/6/04	CHANGED TEXT FOR JUMPER	GS			
G	6/01/04	CHANGED BRAKE RELAY	DKM			
H	7/07/04	SEE ECN #5186	DKM			
I	8/23/04	CPU CHANGE, ADDED ENC	GS			
J	1/28/05	CHANGE OVERLOAD SETTING	DKM			
K	6/07/05	CHANGE 3HP VFD SETTING	BB			
L	6/7/06	SWITCHED ENCODERS SEE ECO 6089	LH			
M	6/7/06	CHANGING TERMINALS, SEE ECO 6506	LH			

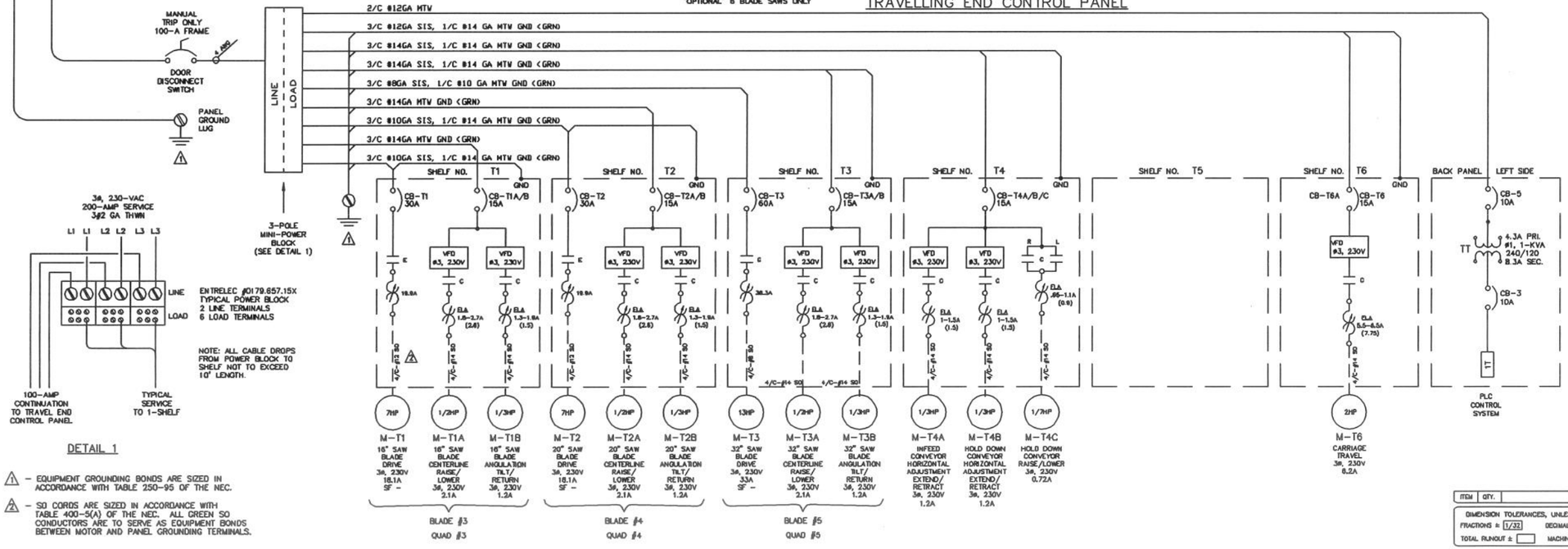
STATIONARY END CONTROL PANEL



NOTE:
SET ALL THERMAL OVERLOADS TO AUTOMATIC RESET

MAXIMUM SETTING FOR OVERLOADS IS 125% OF FLA. REFER TO FLA DATA LISTED BELOW EACH MOTOR.

TRAVELLING END CONTROL PANEL



3ø, 230-VAC
200-AMP SERVICE
3#2 GA THWN

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.

100-AMP CONTINUATION TO TRAVEL END CONTROL PANEL

TYPICAL SERVICE TO 1-SHELF

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.

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: X

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

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US					
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	1 OF 21	90507	M

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

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

ø3, 230-V

CB-1
200-A
CIRCUIT BREAKER
WITH DOOR
OPERATOR

L1 L2 L3

CB-S1
30-A

BLADE #2
DRIVE

7 HP
230V
18.1A
SF –

M-S1

START
Q-001

OL TRIP
I-002

RUN
I-001

CB-S1A/B
15-A

VFD

M-S1A

BLADE #2
CENTERLINE
1/2 HP
2.1A

FWD/LOWER
Q-289

REV/RAISE
Q-290

RESET
Q-291

S1A-BRK

AUX CON
I-005

VFD FAULT
I-061

BRAKE RELEASE
I-004

AQ-014
0 TO +10V

M-S1B

BLADE #2
ANGULATION
1/3 HP
230V
1.6A

FWD/LOWER
Q-225

REV/RAISE
Q-226

RESET
Q-227

S1B-BRK

OL TRIP
I-010

AUX CON
I-009

VFD FAULT
I-008

AQ-003
0 TO +10V

Q-065
A
X2

SHELF NO. S1
QUAD NO. 2

CB-S2
30-A

BLADE #1
DRIVE

7 HP
230V
18.1A
SF –

M-S2

START
Q-007

OL TRIP
I-012

RUN
I-011

CB-S2A/B
15-A

M-S2A

BLADE #1
CENTERLINE
1/2 HP
2.1A

FWD/LOWER
Q-293

REV/RAISE
Q-294

RESET
Q-295

S2A-BRK

OL TRIP
I-016

AUX CON
I-015

VFD FAULT
I-060

BRAKE RELEASE
I-014

AQ-015
0 TO +10V

M-S2B

BLADE #1
ANGULATION
1/3 HP
230V
1.6A

FWD/LOWER
Q-229

REV/RAISE
Q-230

RESET
Q-231

S2B-BRK

OL TRIP
I-020

AUX CON
I-019

VFD FAULT
I-018

AQ-004
0 TO +10V

Q-066
A
X2

SHELF NO. S2
QUAD NO. 1

CB-S3
60-A

BLADE #6
DRIVE

13 HP
230V
33A
SF –

M-S3

START
Q-013

OL TRIP
I-022

RUN
I-021

CB-S3A/B
15-A

VFD

M-S3A

BLADE #6
CENTERLINE
1/2 HP
2.1A

FWD/LOWER
Q-297

REV/RAISE
Q-298

RESET
Q-299

S3A-BRK

AUX CON
I-025

VFD FAULT
I-062

BRAKE RELEASE
I-024

AQ-016
0 TO +10V

M-S3B

BLADE #6
ANGULATION
1/3 HP
230V
1.6A

FWD/LOWER
Q-233

REV/RAISE
Q-234

RESET
Q-235

S3B-BRK

OL TRIP
I-030

AUX CON
I-029

VFD FAULT
I-028

AQ-005
0 TO +10V

Q-067
A
X2

"OPTIONAL" 6 BLADE SAWS ONLY

SHELF NO. S3
QUAD NO. 6

L1 L2 L3

(CONTINUED ON Pg.3)

AUXILIARY CONTACT
DETAIL

11 14
AUX
12

STATIONARY END CONTROL PANEL

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

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

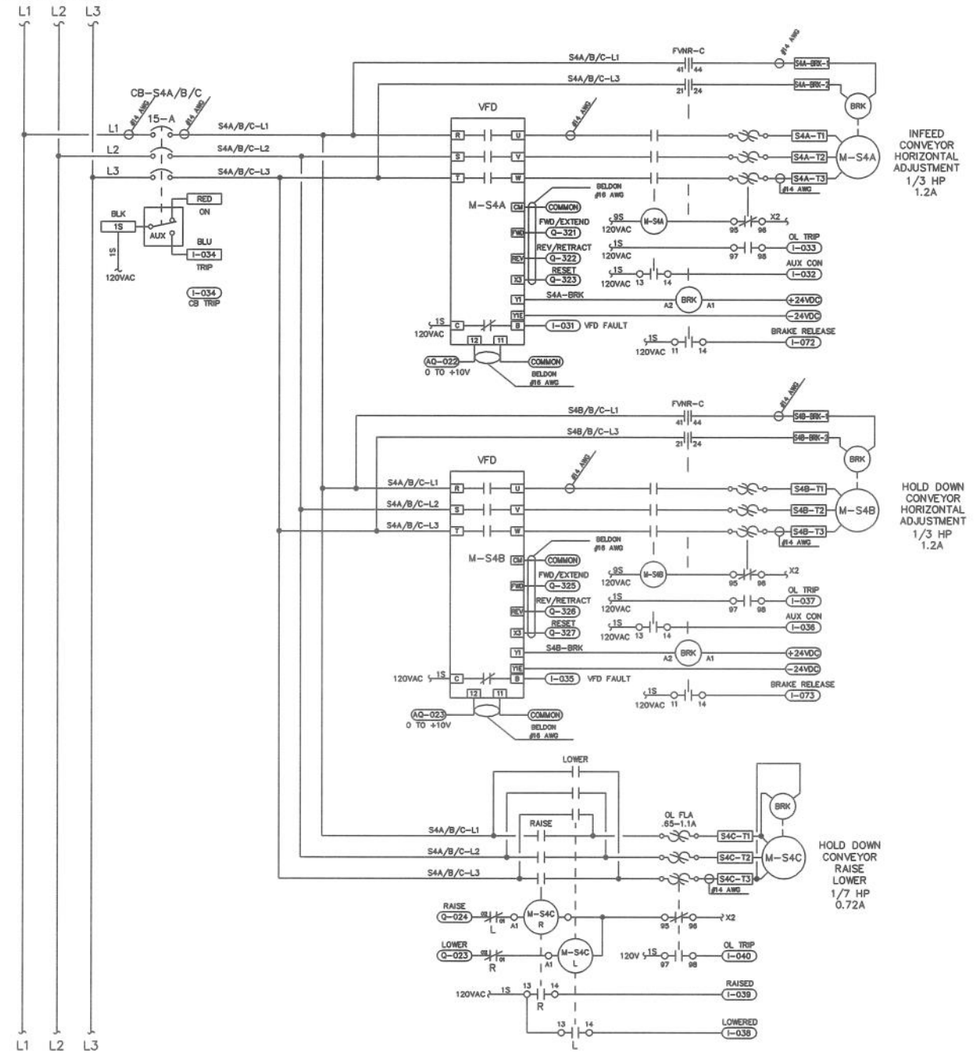
FEATURES
X

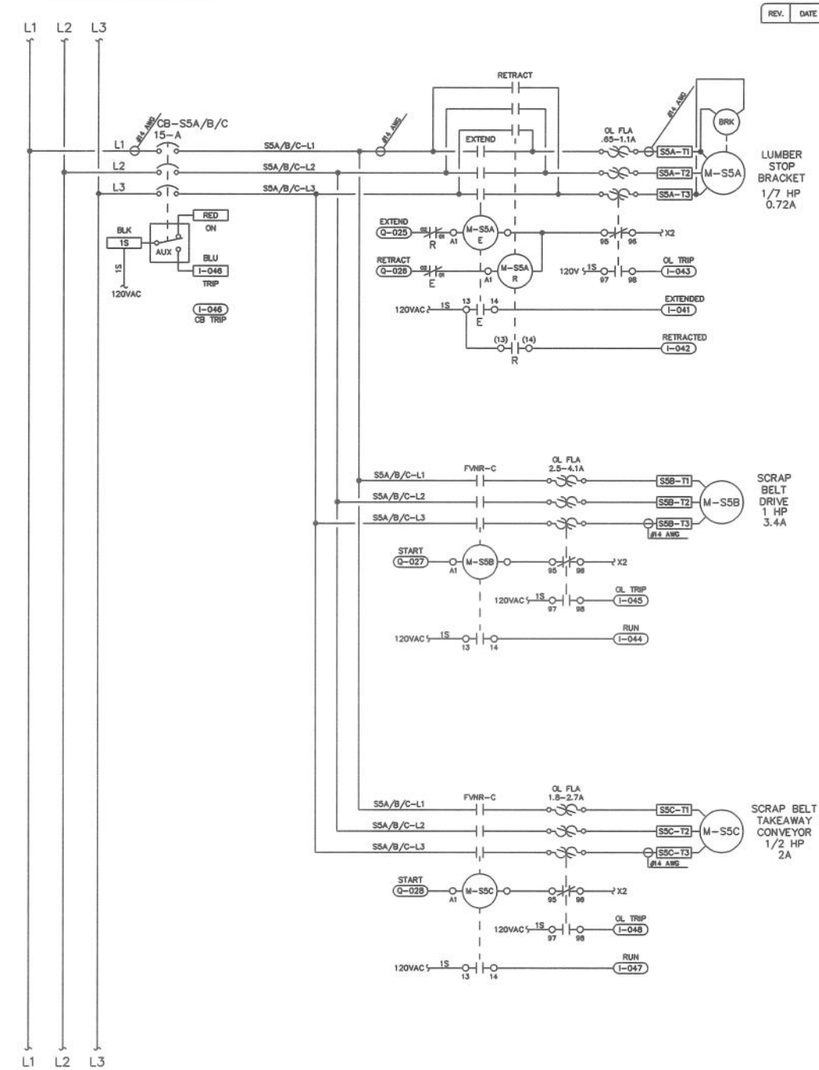
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

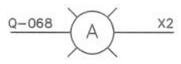
MANUAL X X X PAGE X X

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US					
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	2 OF 21	90507	M

(CONT. FROM Pg.2)







SHELF NO. 4S

SHELF NO. 5S

STATIONARY END CONTROL PANEL

AUXILIARY CONTACT DETAIL

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

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: X

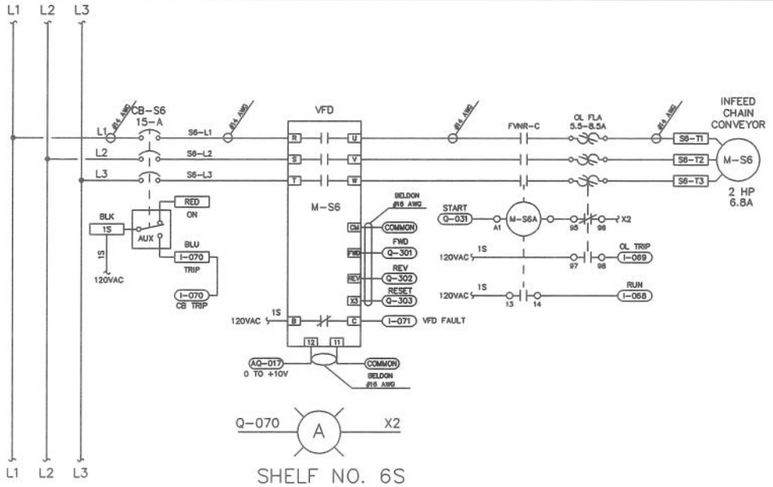
MiTek Industries,Inc.
4203 SHORELINE DRIME, EARTH CITY, MO. 63045

MANUAL X X X PAGE X X X

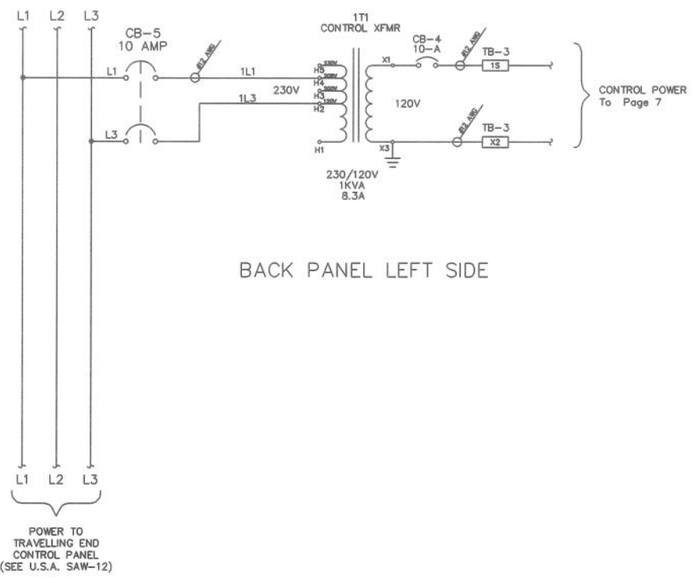
KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP DEPTH	REMARKS
A	X	X	X	X	X	

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	3 OF 21	90507		M

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

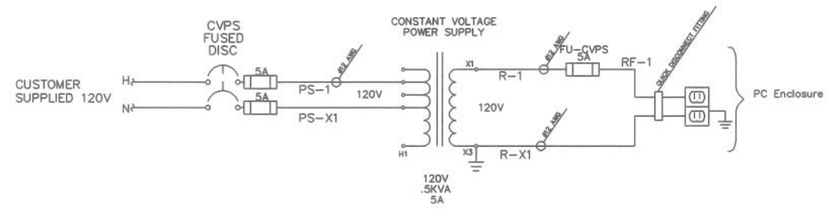


SHELF NO. 6S



BACK PANEL LEFT SIDE

STATIONARY END CONTROL PANEL



120V POWER TO PC ENCLOSURE

AUXILIARY CONTACT
DETAIL

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

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

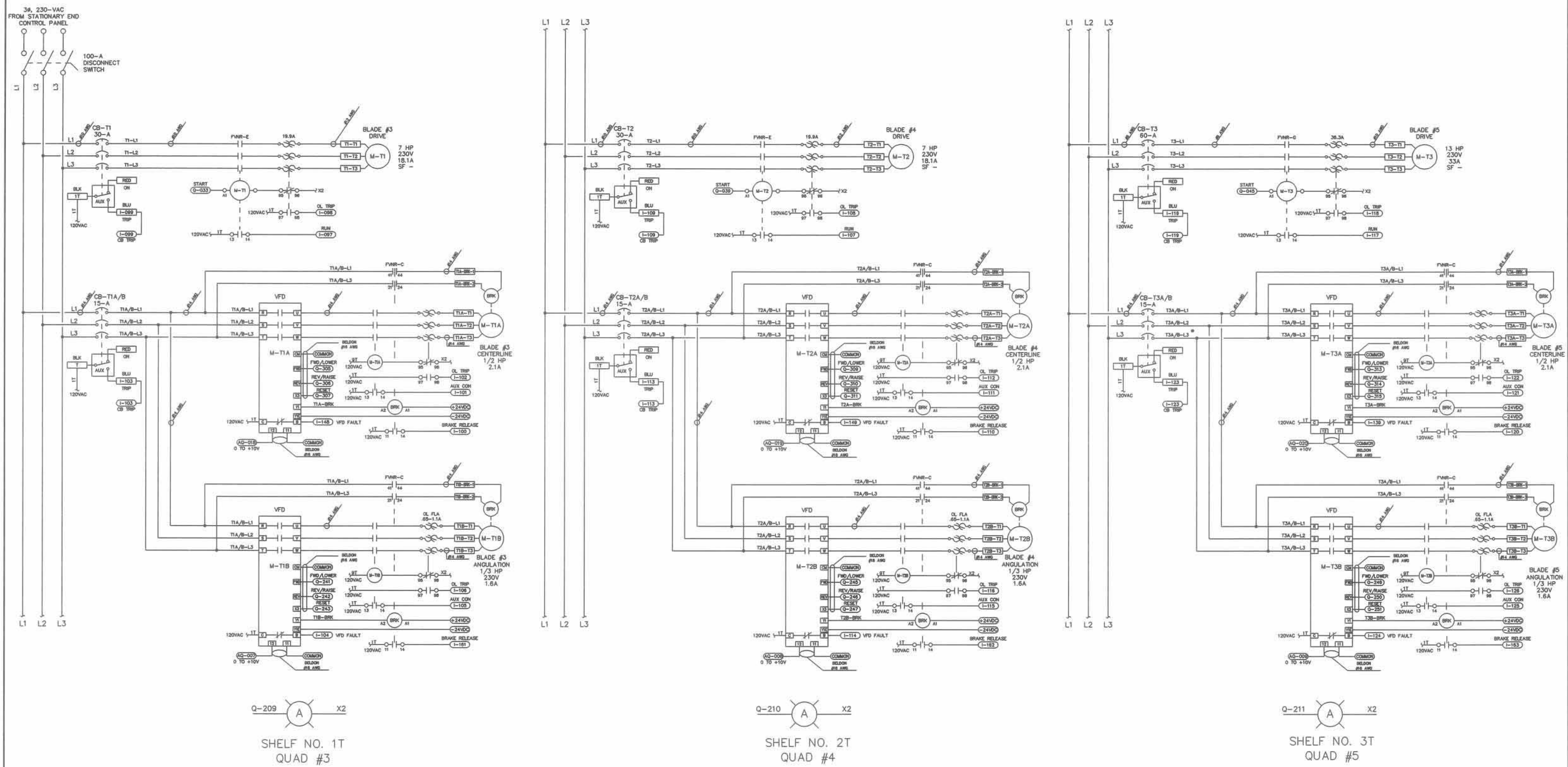
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES: X

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

MANUAL X X X PAGE X X X

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	4 OF 21	90507		M



CARRIAGE END CONTROL PANEL

AUXILIARY CONTACT DETAIL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED

FEATURES X

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

MANUAL X X X PAGE X X X

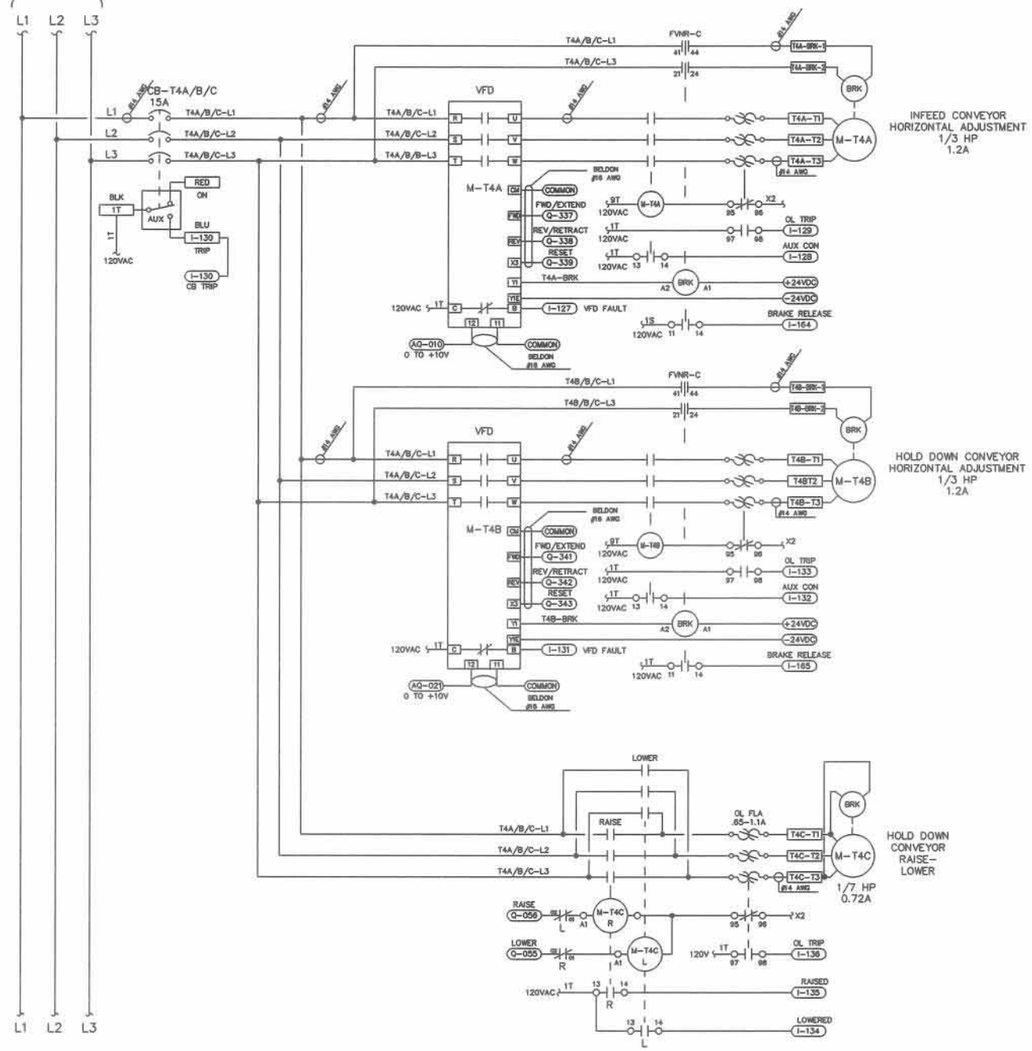
APPROVED | DATE | MFG.

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

CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
VDC	9/20/01	G.Bowers	10/30/00	X	NONE	5 OF 21	90507		M

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

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



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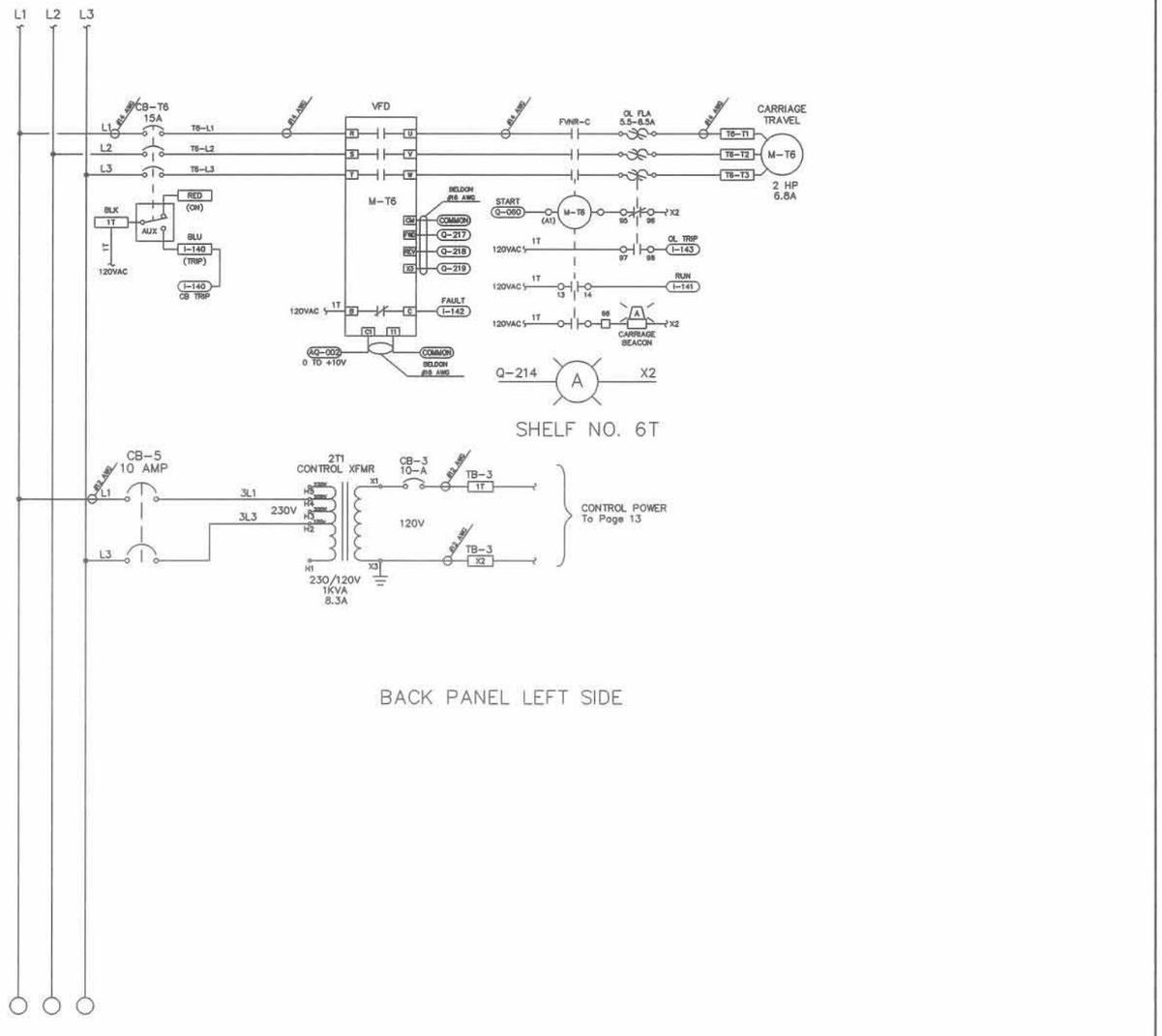


SHELF NO. 6T

BACK PANEL LEFT SIDE

AUXILIARY CONTACT
DETAIL

TRAVELLING 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 ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES
X

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

MANUAL X X X
PAGE X X X

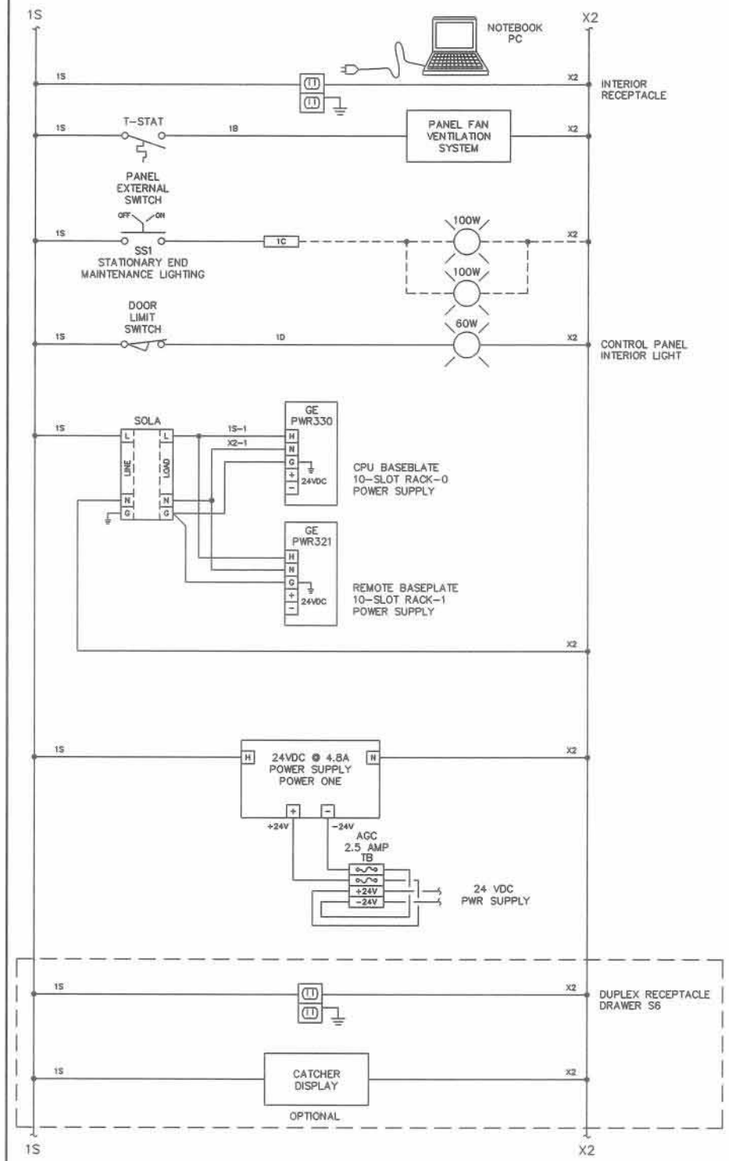
KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP DEPTH	REMARKS
A	X	X	X	X	X	

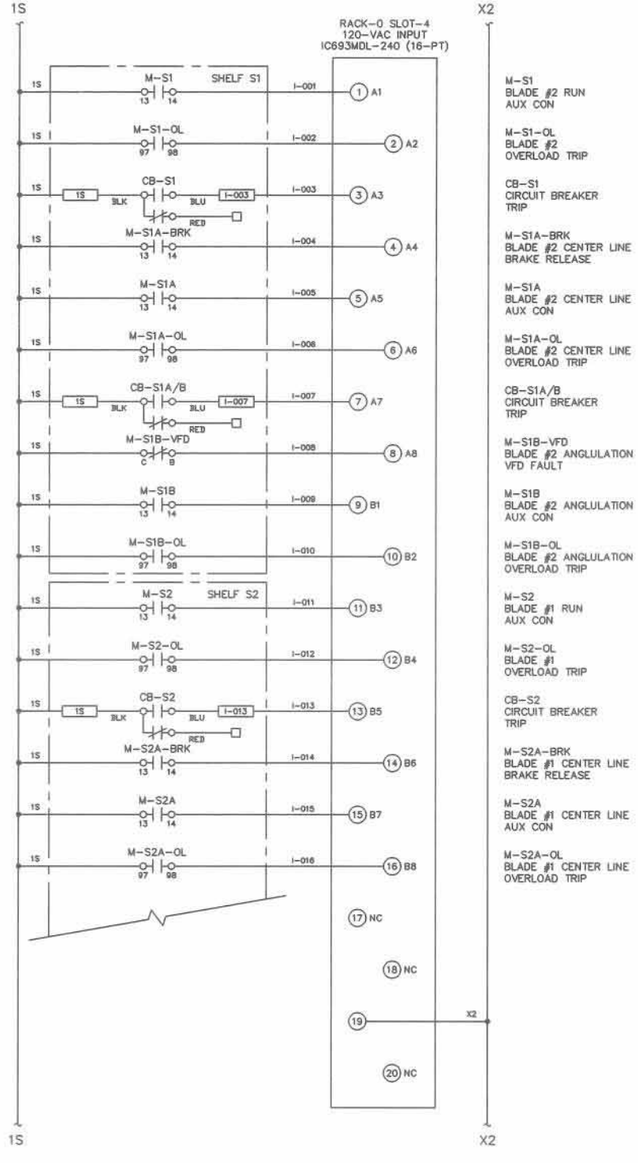
APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	90507	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	6 OF 21			M

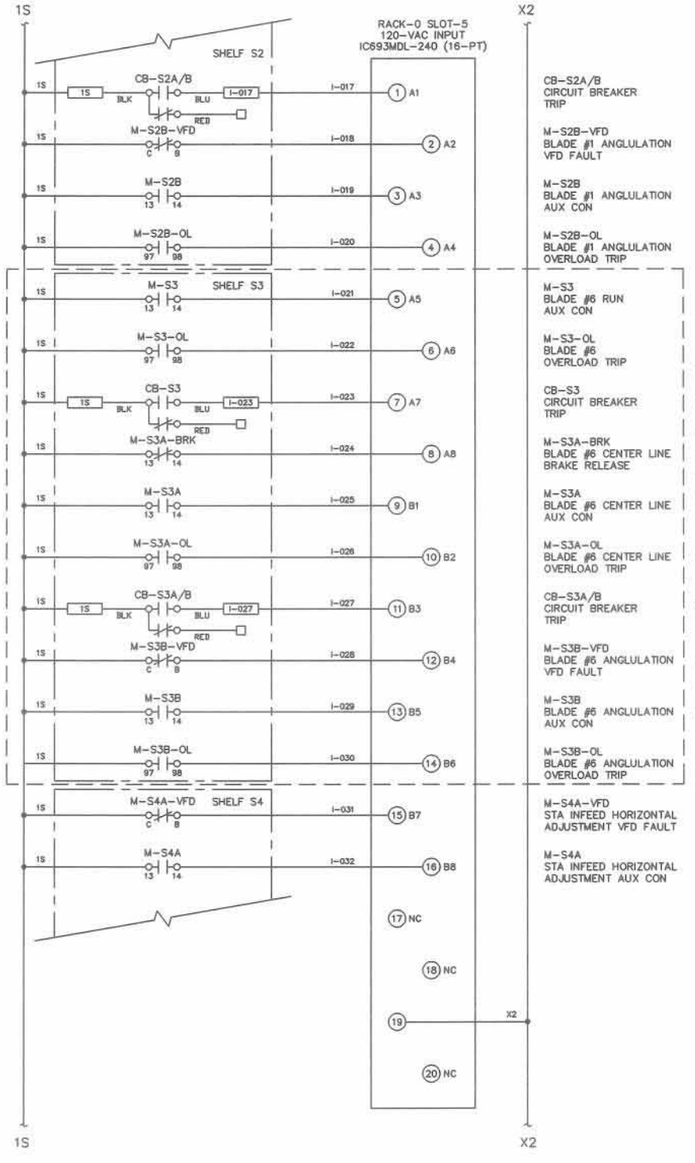
REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	DATE

From Page 4

From Page 4







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 ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED

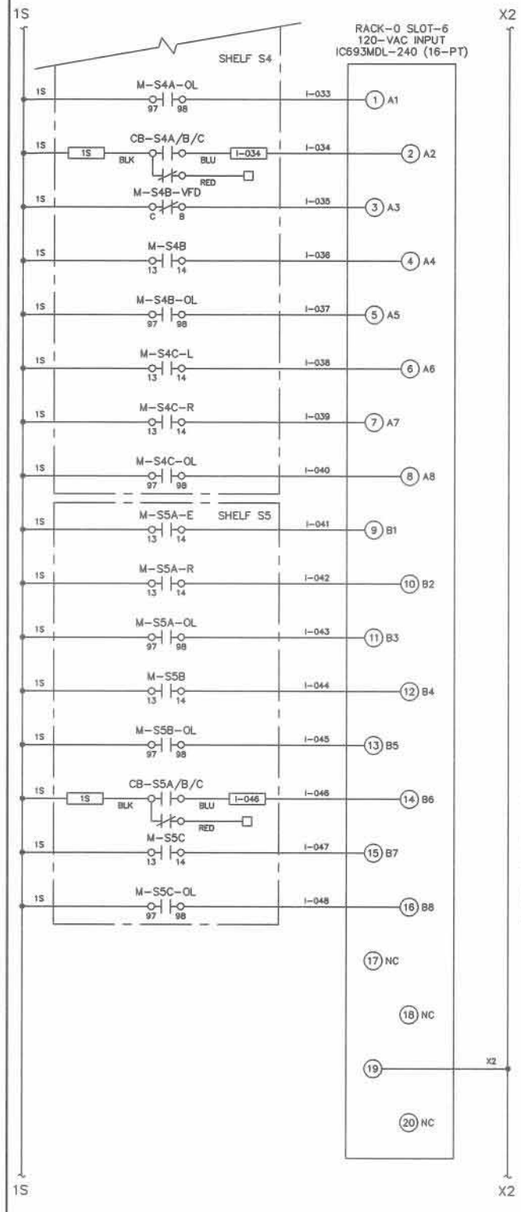
FEATURES: X

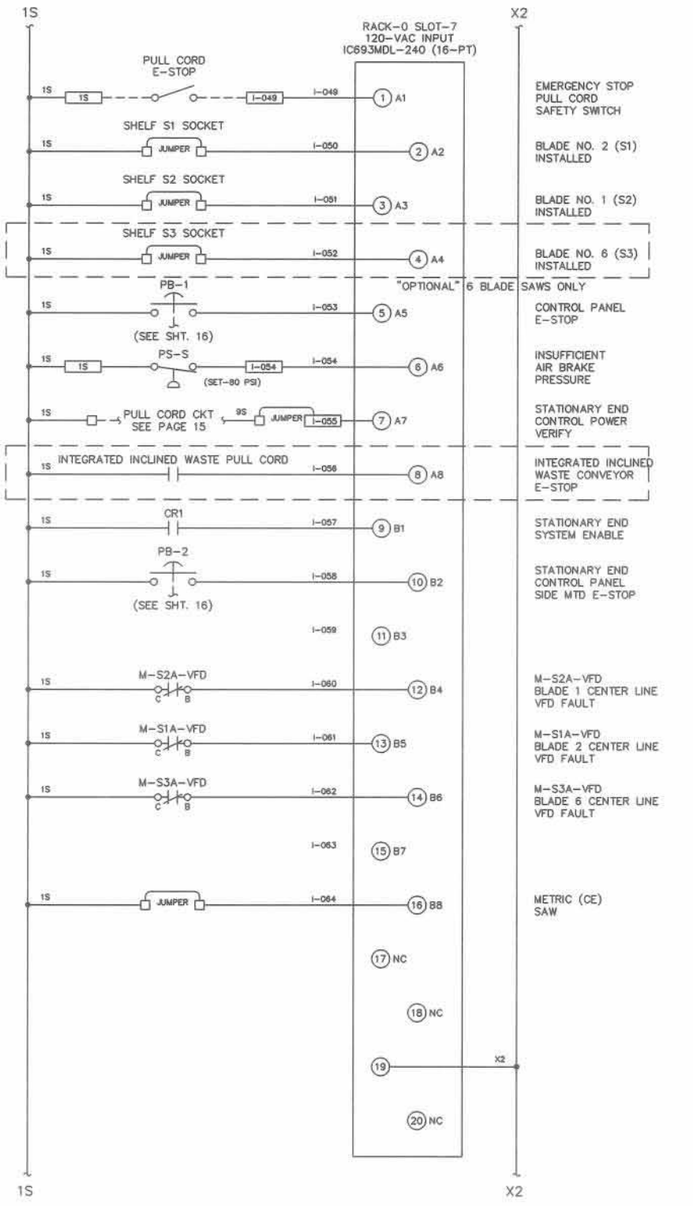
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

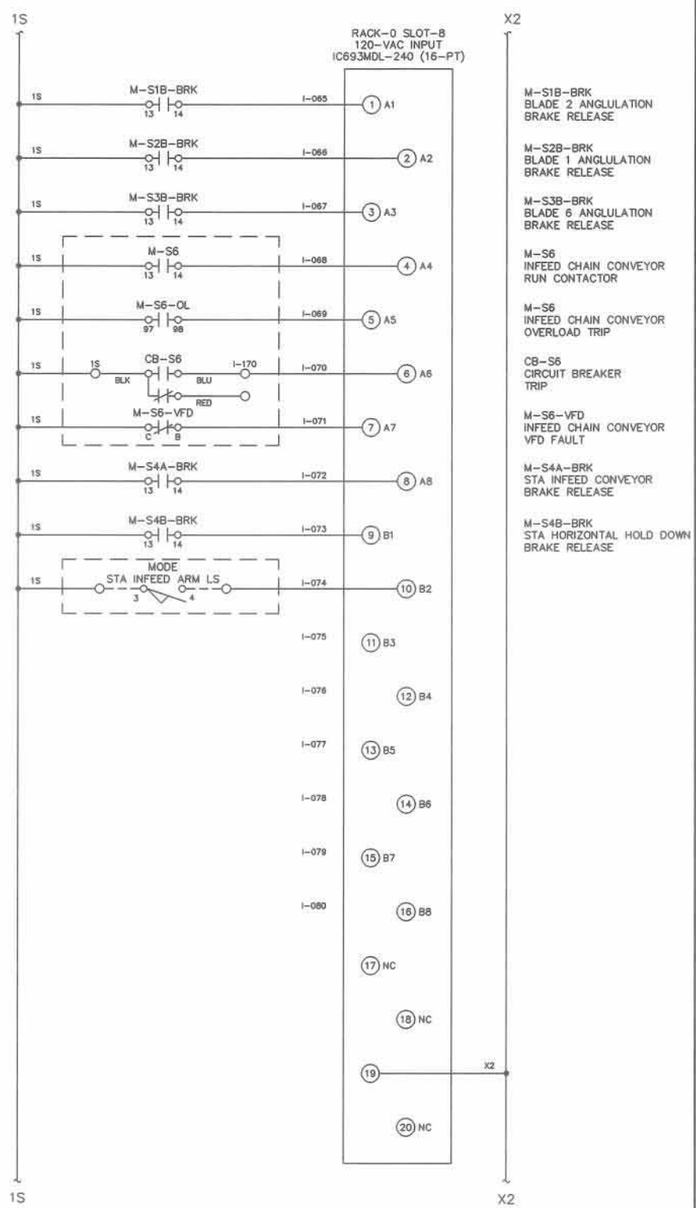
A	X	X	X	X	X	
KEY	NO. OF HOLES	DIA.	DEPTH	DIA.	DEPTH	REMARKS
		HOLE		TAP		

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM.230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	7 or 21	90507		M

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







STATIONARY END CONTROL PANEL

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

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

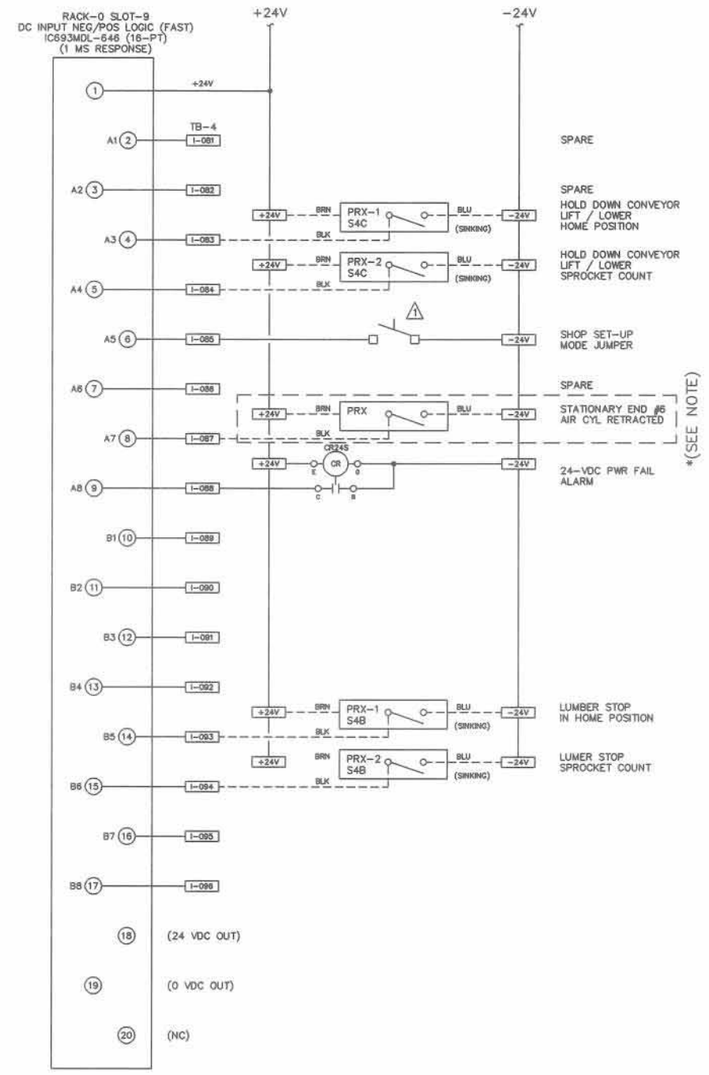
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

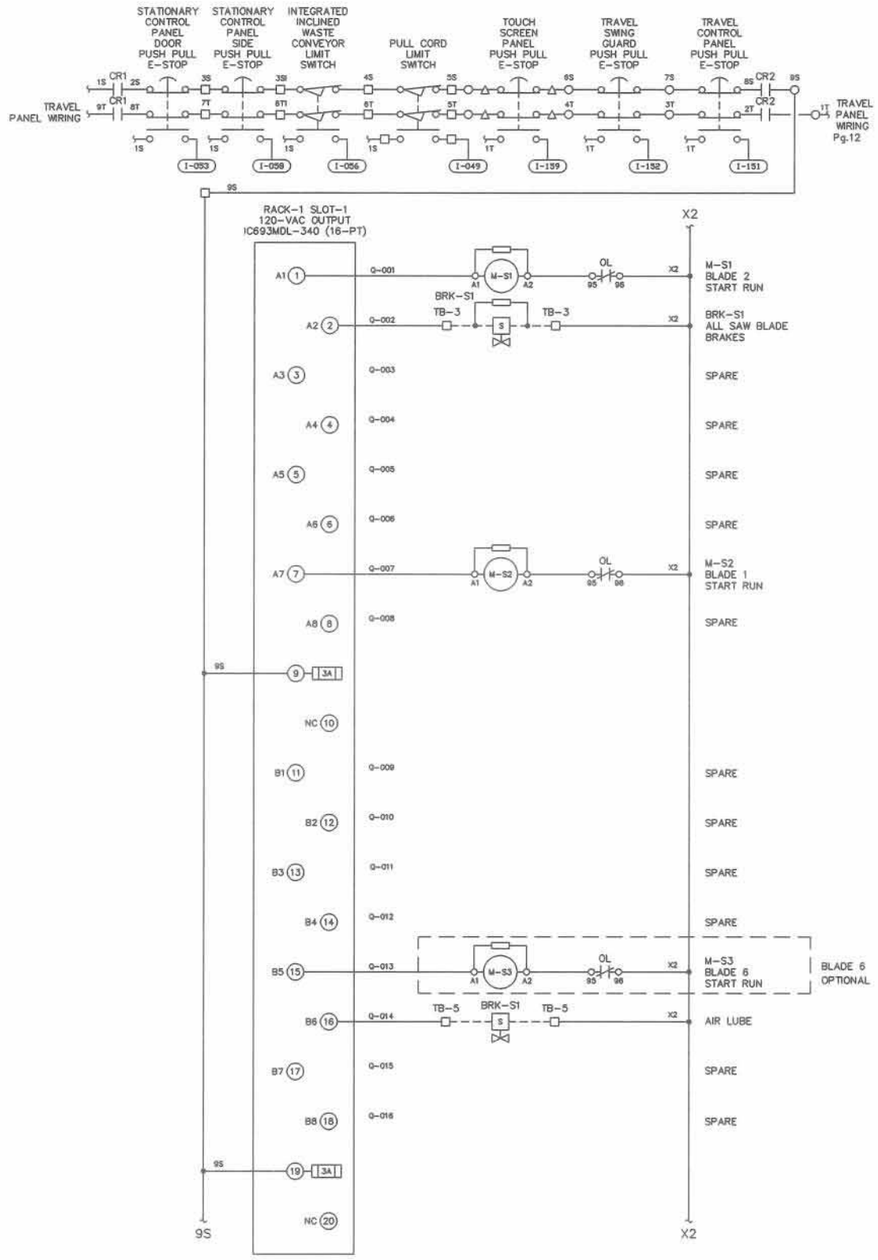
FEATURES: X

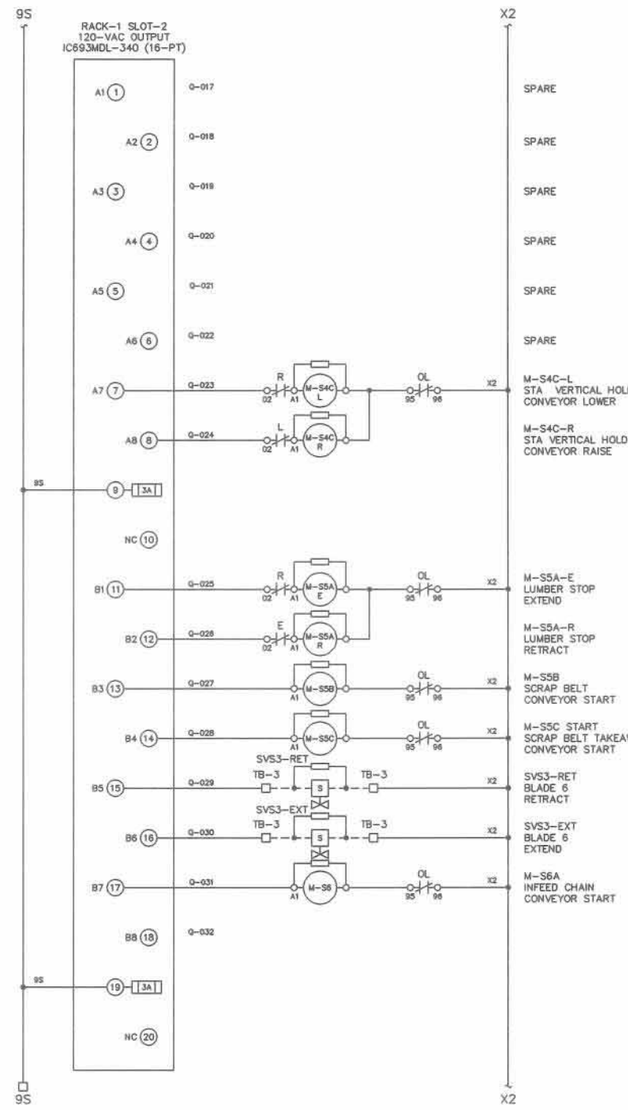
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

MANUAL X X X PAGE X X X

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEMIC,230V,US					
CHECKED	DATE	DRAWN: G.Bowers	DATE: 10/30/00	FINISH PAINT: X	SCALE: NONE	PAGE: 8 OF 21	90507	DASH NO. / REV. M







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

⚠ 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

STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED

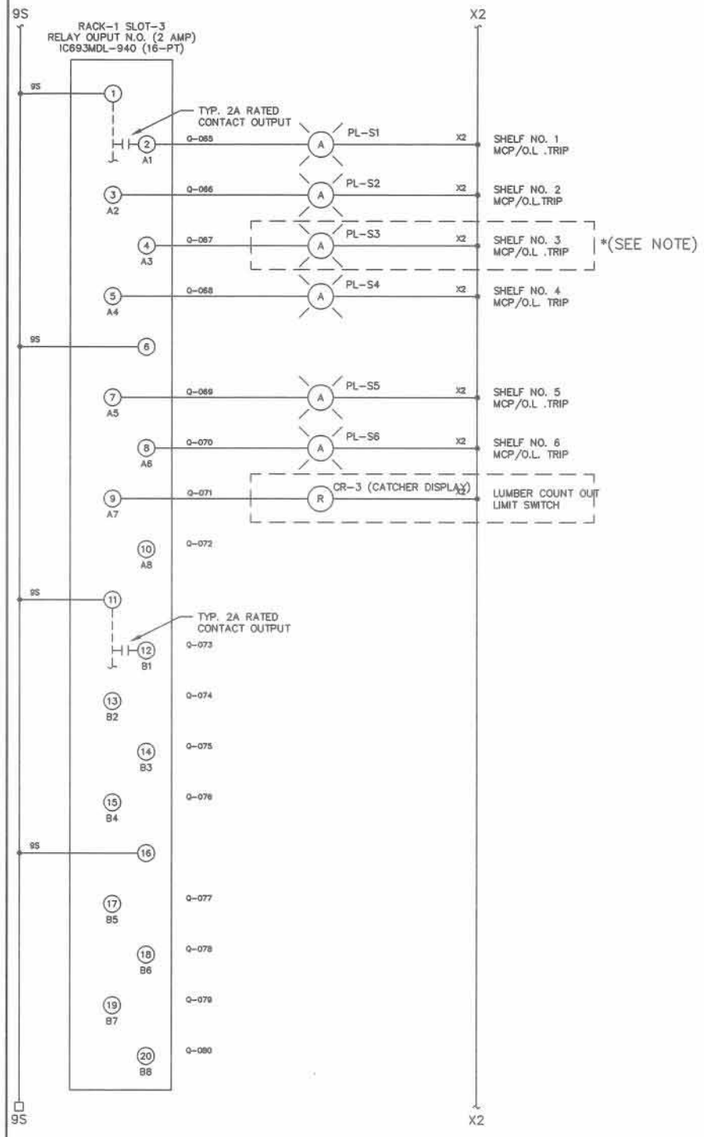
FEATURES: X

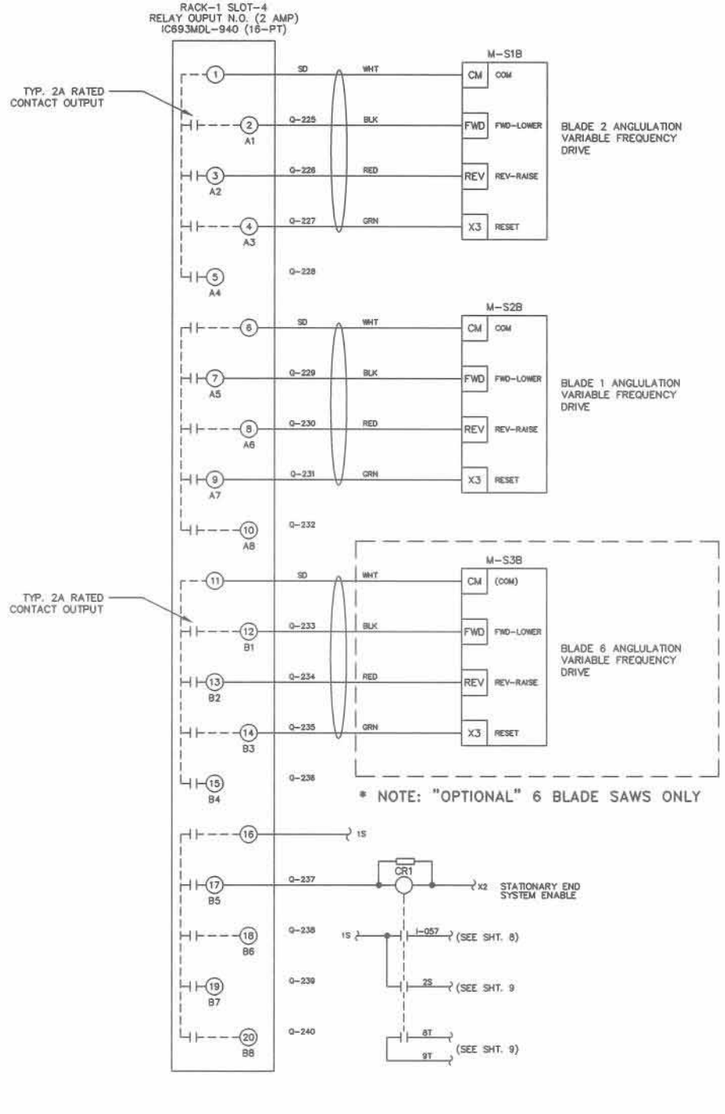
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

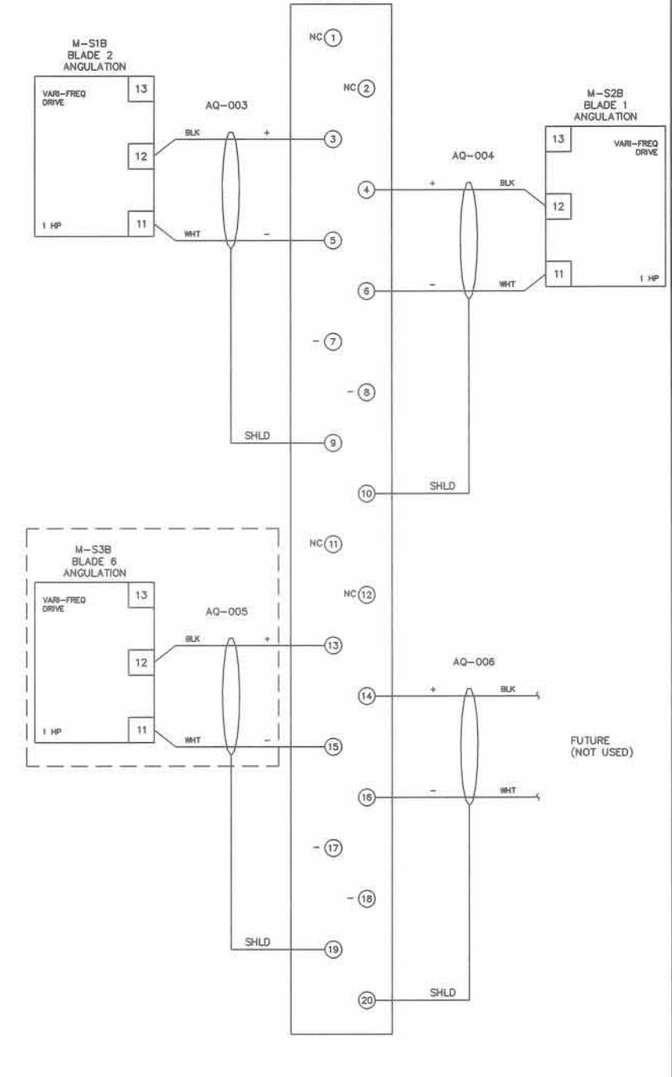
APPROVED	DATE	MFG	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	90507	DASH NO.	REV.
		G. Bowers	10/30/00	X	NONE	9 or 21			M

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

BELDEN CABLE (9418) EFFECTIVE
FRAME #358 FORWARD







STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES: X

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

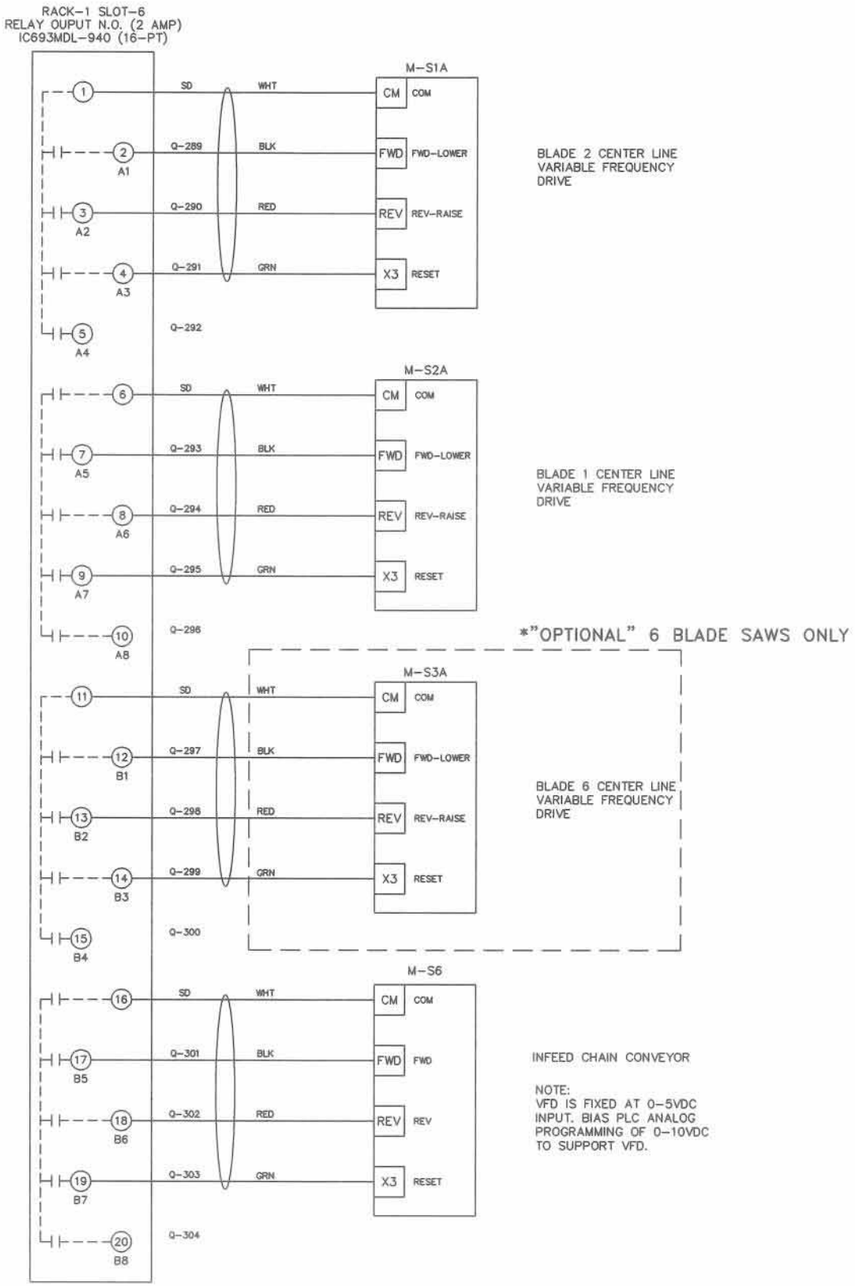
MANUAL X X X PAGE X X

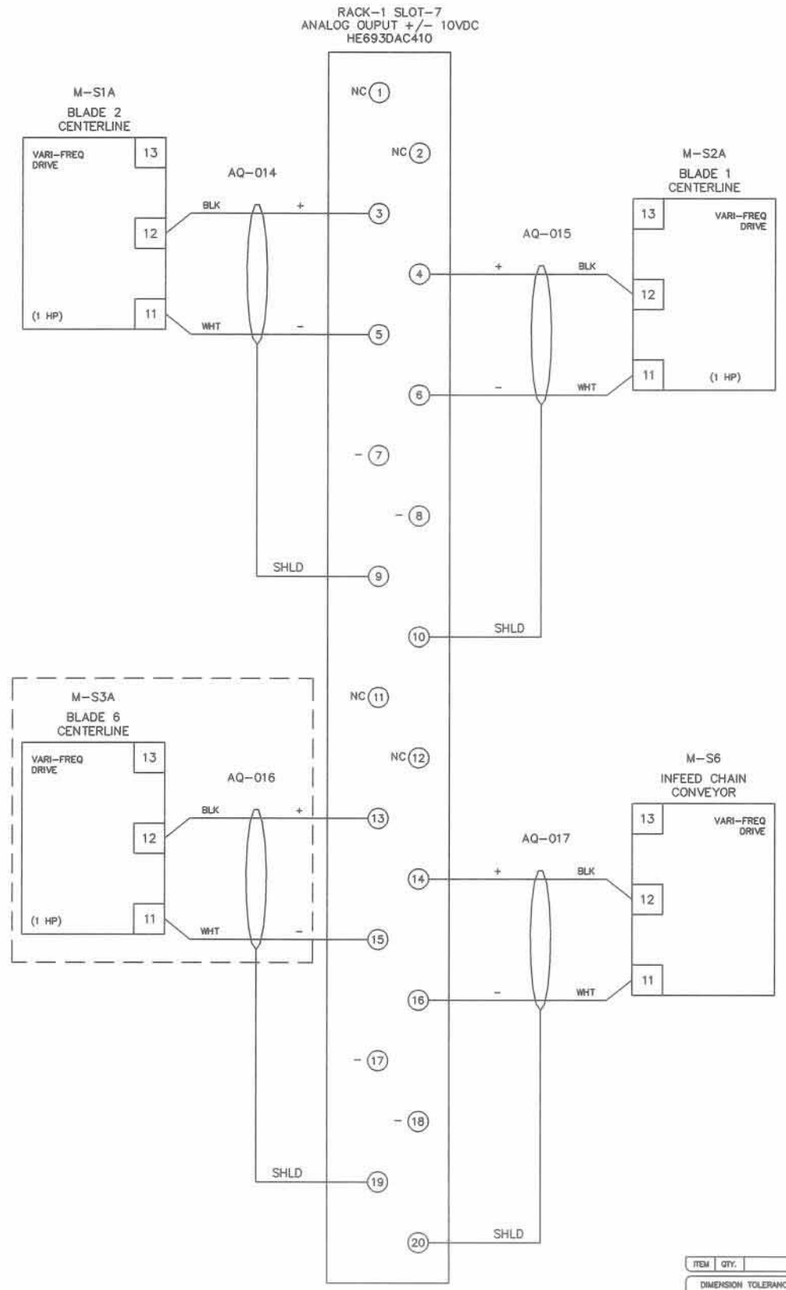
APPROVED | DATE | MFG. | CYBER,AT,ELE,SCHEM,230V,US

CHECKED | DATE | DRAWN: G.Bowers | 10/30/00 | FINISH PAINT: X | SCALE: NONE | PAGE: 10 OF 21 | 90507 | DASH NO. | REV. M

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

BELDEN CABLE (9418) EFFECTIVE FRAME #358 FORWARD





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

FEATURES: X

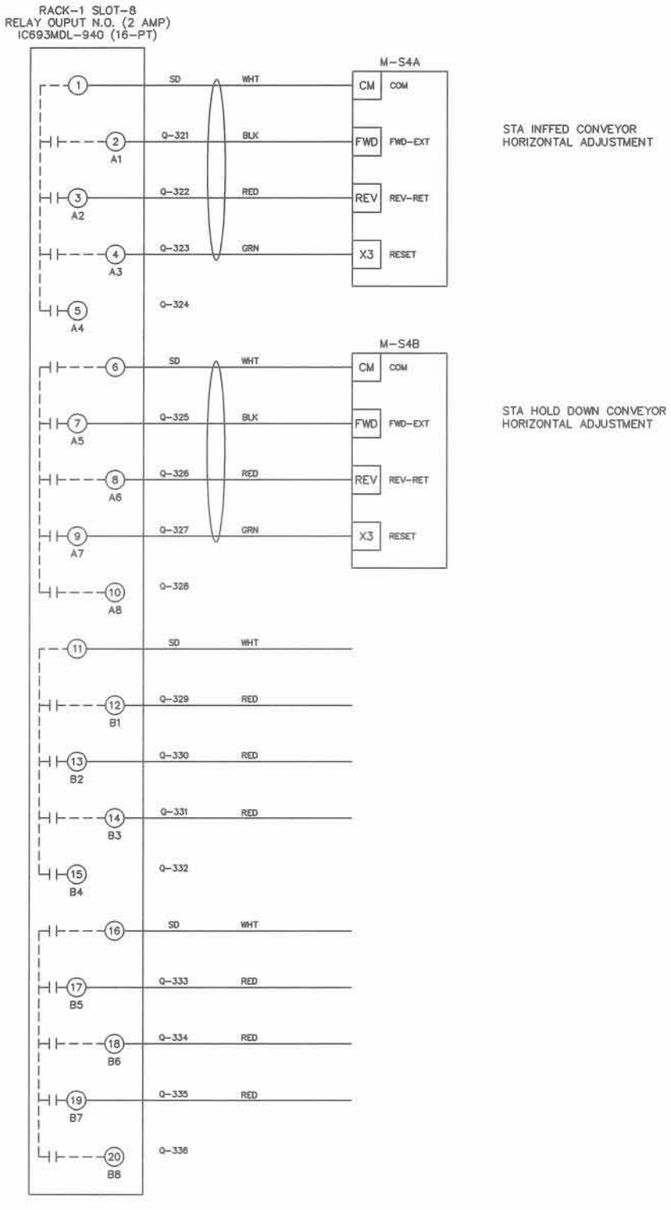
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

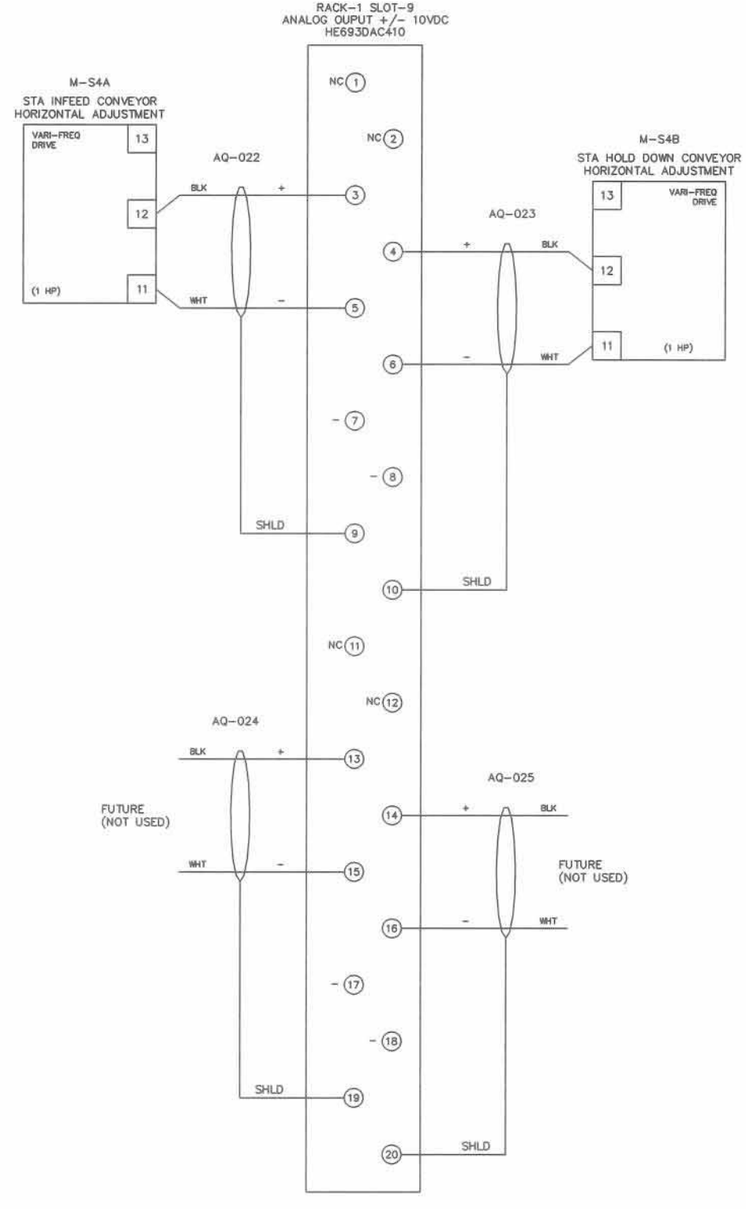
KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP DEPTH	REMARKS
A	X	X	X	X	X	

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	11 OF 21	90507		M

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

BELDEN CABLE (9418) EFFECTIVE FRAME #358 FORWARD





TOUCHSCREEN PANEL

○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL

□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

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

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

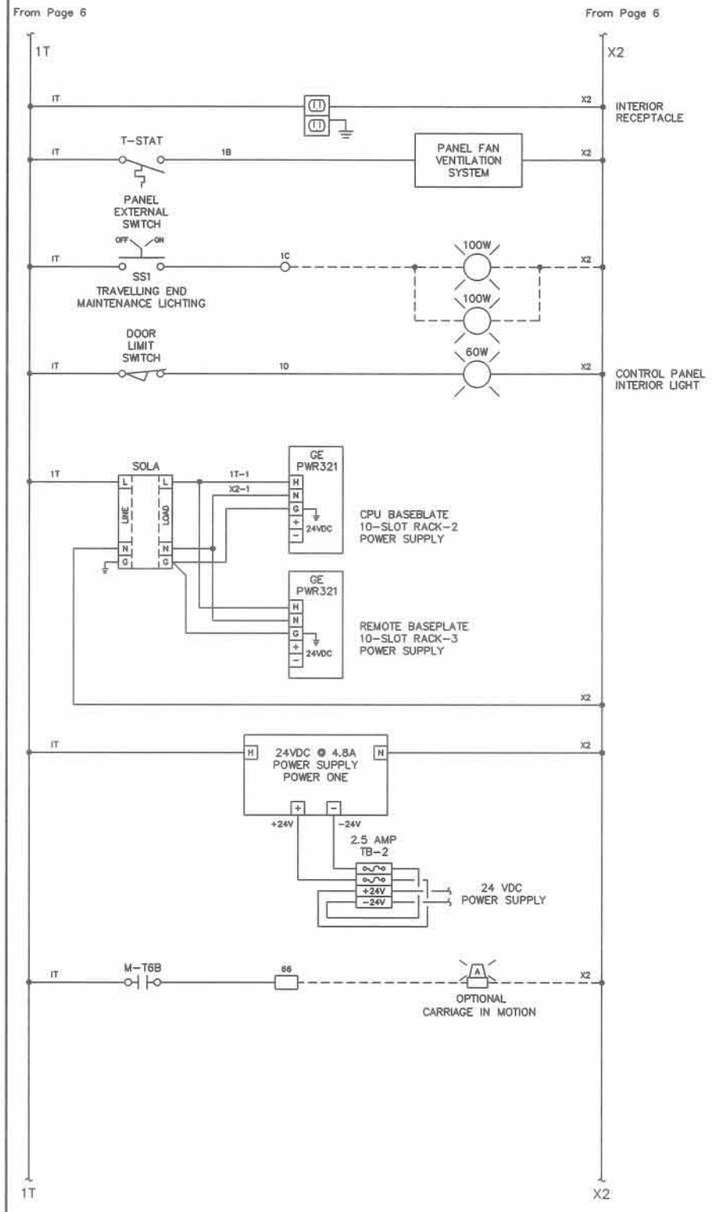
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED

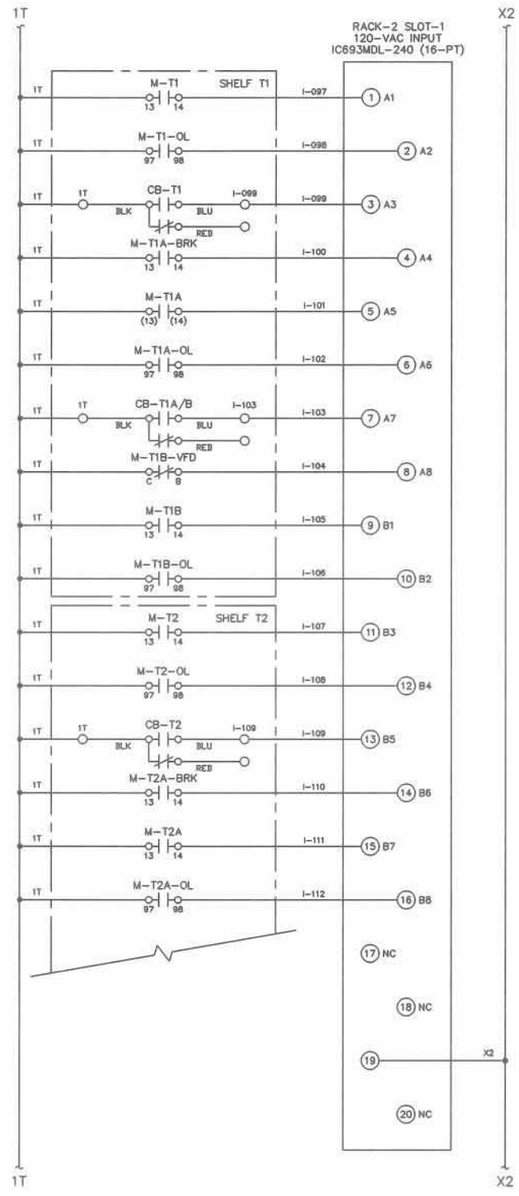
FEATURES: X

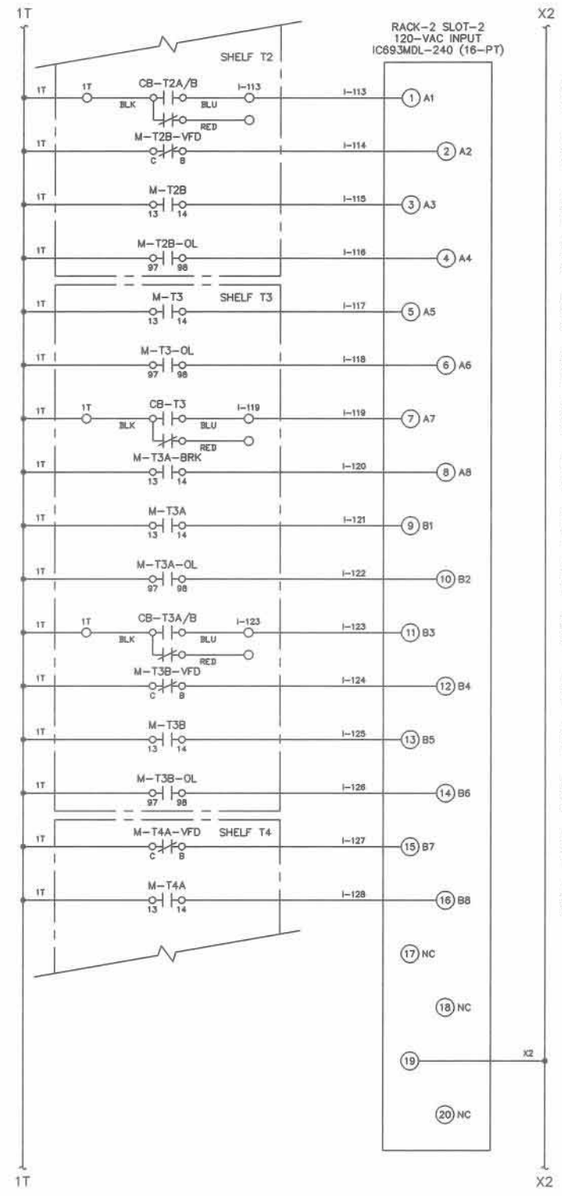
MiTek Industries,Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	12 OF 21	90507		M

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







TRAVELLING 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 ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED

FEATURES: X

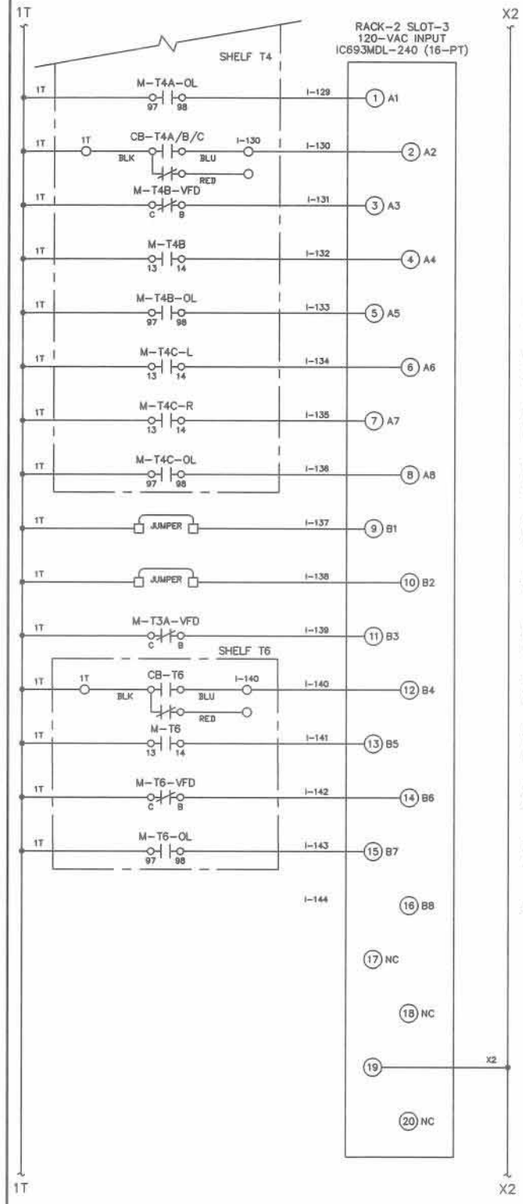
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

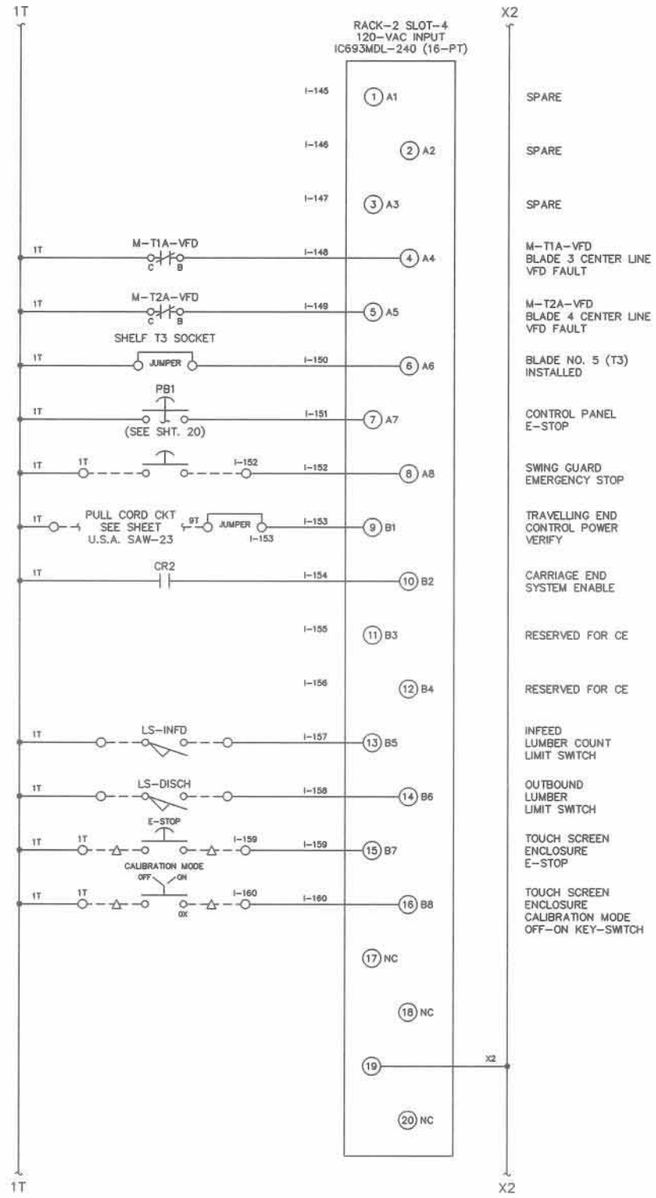
KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP DEPTH	REMARKS
A	X	X	X	X	X	

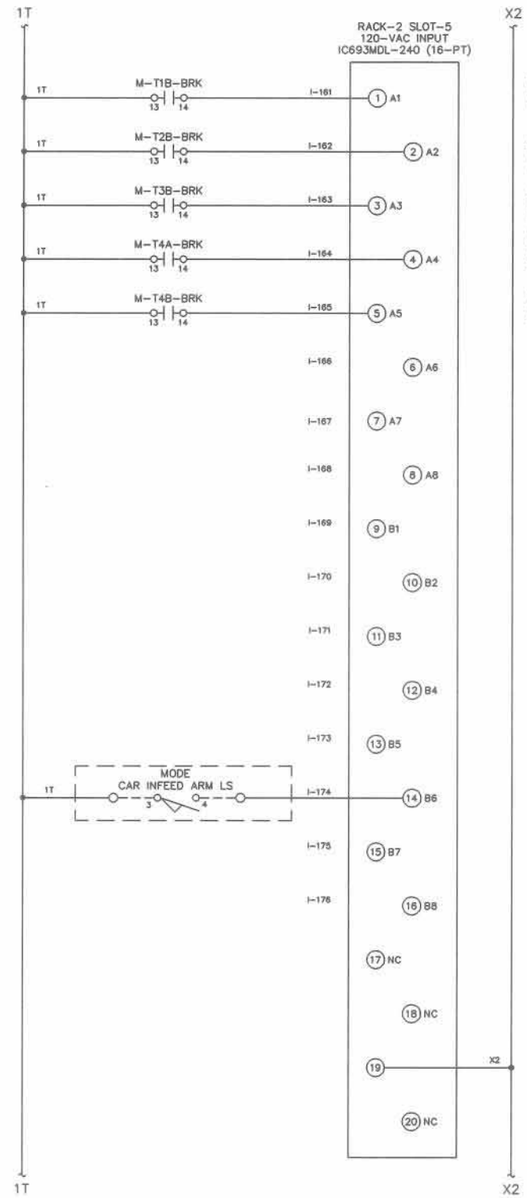
APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US					
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	13 OF 21	90507	M

DRAWING X X X
PAGE X X X

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







TRAVELLING END CONTROL PANEL

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

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

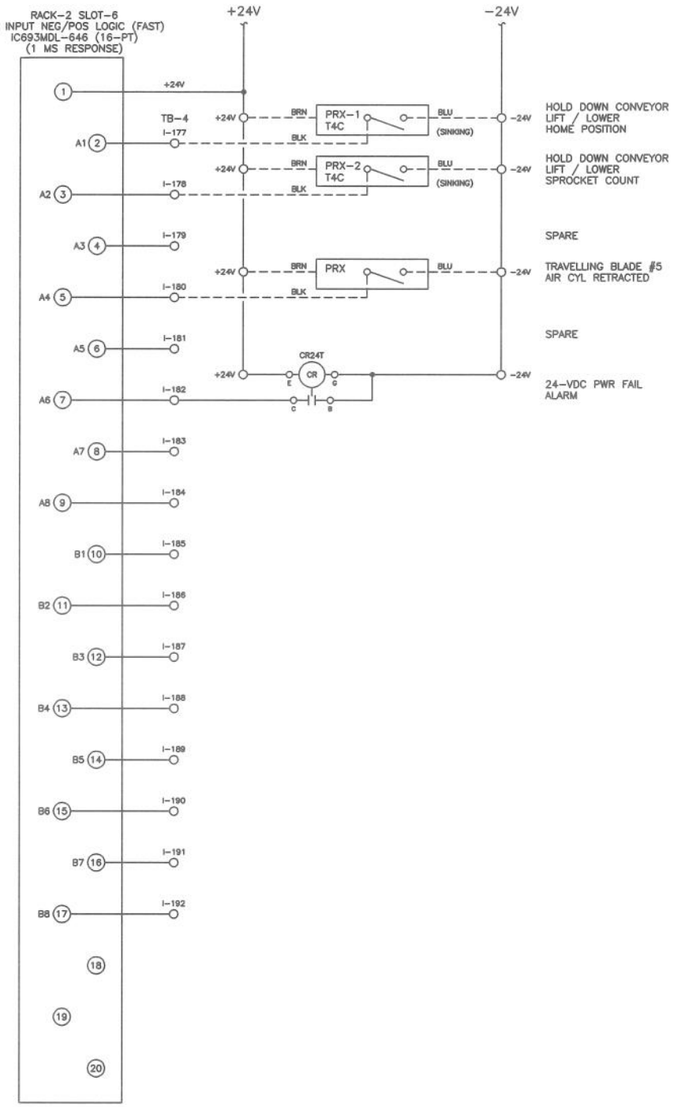
DIMENSION TOLERANCES, UNLESS OTHERWISE SPECIFIED;
FRACTIONS ± 1/32 DECIMALS ± .010 ANGLES ± 1°
TOTAL RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES: X

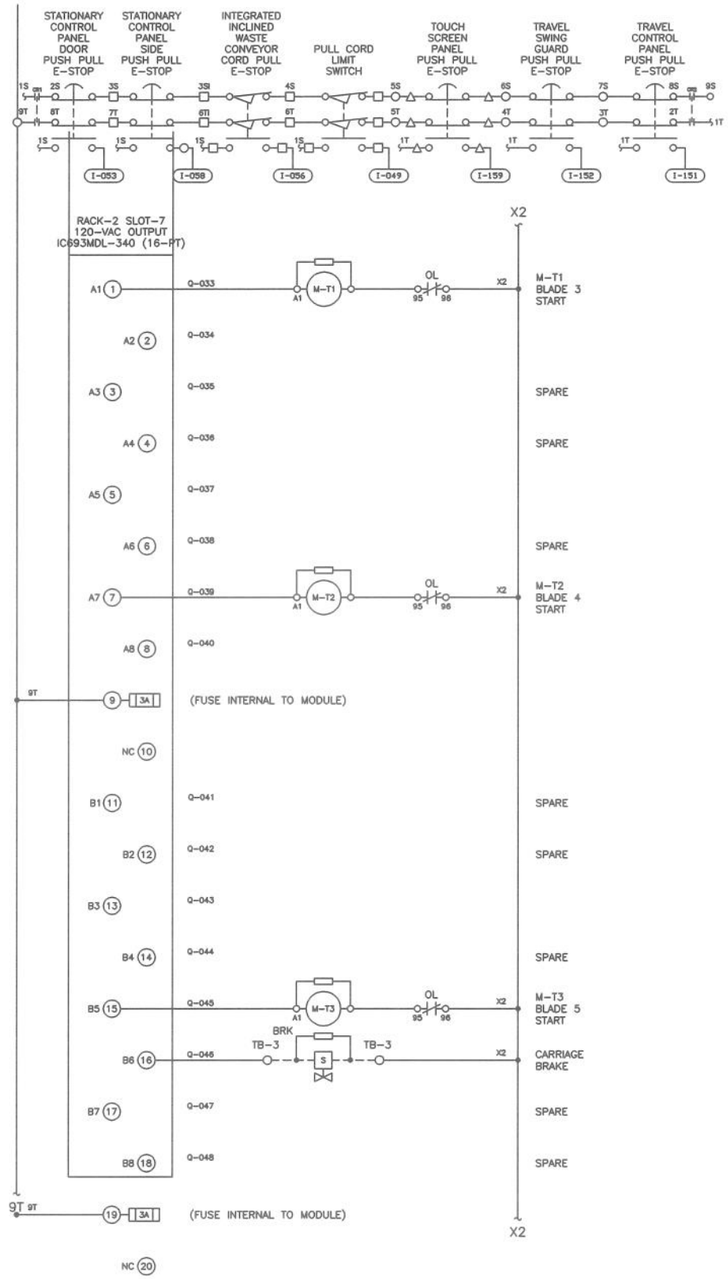
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

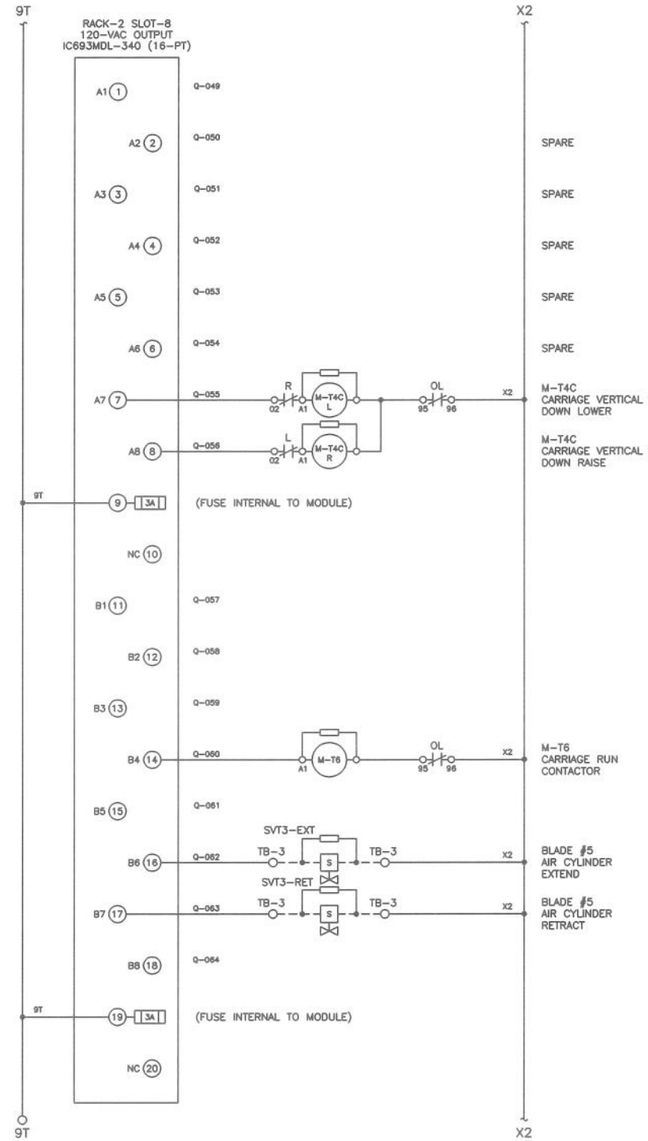
APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US					
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	14 OF 21	90507	M

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



STATIONARY WIRING Pg.8





TRAVELLING END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES: X

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

MANUAL XXX PAGE XXX

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	90507	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	15 OF 21			M

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

ANALOG CURRENT OUTPUT MODULE
ALG391
RACK 2 SLOT-10

NC (1)
NC (2)
SOURCE 1 (3) — 250W
SOURCE 2 (4) — 250W
COM 1 (5)
COM 2 (6)
GND (7)
GND (8)
NC (9)
NC (10)
NC (11)
NC (12)
NC (13)
NC (14)
NC (15)
NC (16)
NC (17)
NC (18)
NC (19)
NC (20)

BLK
BLK
WHT
BELDON #18 AWG

IF JUMPER IN PLACE MODULE DEFAULTS 0-VOLT OUTPUT ON ERROR

IF JUMPER NOT IN PLACE MODULE WILL HOLD LAST STATE ON ERROR

OPTION 24-VDC MODULE POWER ASSIST

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

SHELF T6

CARRIAGE DRIVE

NOTE: B-C ALARM CONTACT OPENS DURING ALARM

120 VAC

B
C — I-142 — FAULT
10 (+5VDC)
C1 SPEED REF.
11 COMMON
FWD START FWD — Q-217
REV START REV — Q-218
CM } CONTACT
CM } INPUT COMMON

AQ002 BLK
WHT

VARI-FREQ DRIVE

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

9T

RACK-3 SLOT-1
RELAY OUPUT N.O. (2 AMP)
IC693MDL-940 (16-PT)

TYP. 2A RATED CONTACT OUTPUT

9T	1				
	2 A1	Q-209	A	PL-T1	X2 — SHELF NO. 1 MCP/O.L. TRIP
	3 A2	Q-210	A	PL-T2	X2 — SHELF NO. 2 MCP/O.L. TRIP
	4 A3	Q-211	A	PL-T3	X2 — SHELF NO. 3 MCP/O.L. TRIP
	5 A4	Q-212	A	PL-T4	X2 — SHELF NO. 4 MCP/O.L. TRIP
9T	6				
	7 A5	Q-213			
	8 A6	Q-214	A	PL-T6	X2 — SHELF NO. 6 MCP/O.L. TRIP
	9 A7	Q-215	Q-215	X2	X2 — TOUCHSCREEN ENCLOSURE SONALERT
	10 A8	Q-216	Q-216	X2	X2 — CARRIAGE IN MOVEMENT SONALERT

CARRIAGE TRAVEL

11	SD	WHT	CM	(COM)
12 B1	Q-217	BLK	FWD	(FWD) — CARRIAGE VFDRIVE START FORWARD
13 B2	Q-218	RED	REV	(REV) — CARRIAGE VFDRIVE START REVERSE
14 B3	Q-219	GRY	X3	(RESET) — CARRIAGE VFDRIVE FAULT RESET
15 B4	Q-220			
16				
17 B5	Q-221			
18 B6	Q-222			
19 B7	Q-223			
20 B8	Q-224			

TYP. 2A RATED CONTACT OUTPUT

9T

X2

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED

FEATURES: X

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

MANUAL X X X — PAGE X X

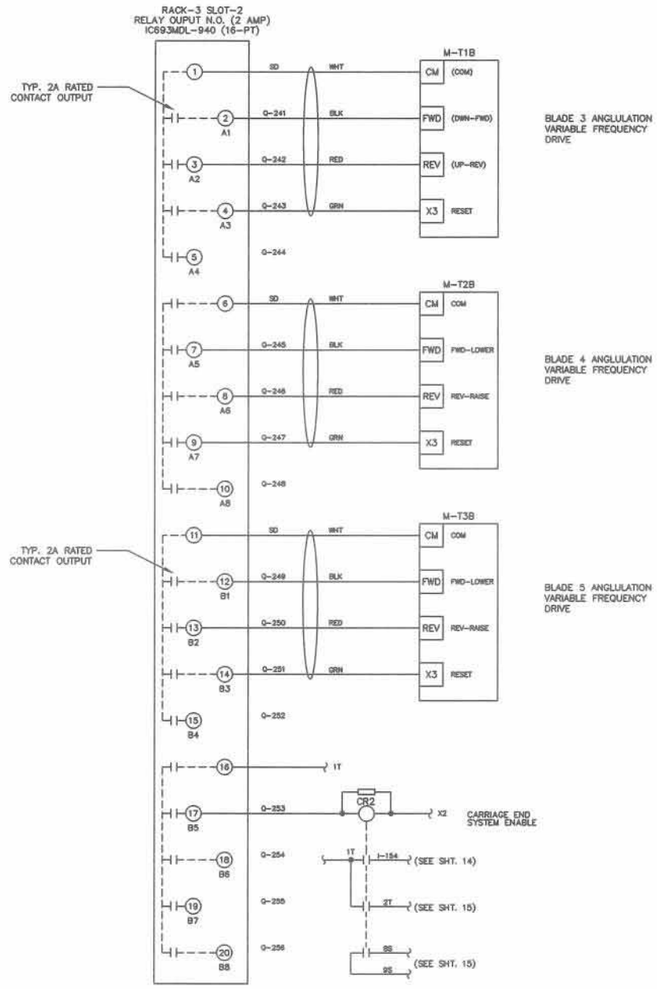
APPROVED | DATE | MFG.
CHECKED | DATE | DRAWN: G.Bowers | DATE: 10/30/00 | FINISH PAINT: X | SCALE: NONE | PAGE: 16 OF 21

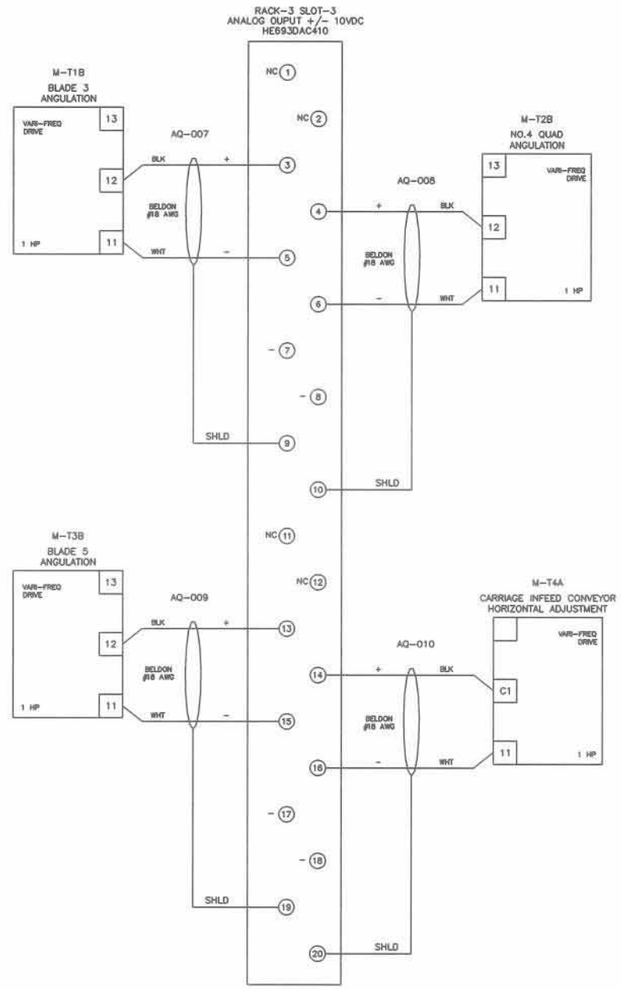
CYBER,AT,ELE,SCHEM,230V,US

90507 | DASH NO. | REV. M

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

BELDEN CABLE (9418) EFFECTIVE
FRAME #358 FORWARD





TRAVELLING END CONTROL PANEL

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

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: X

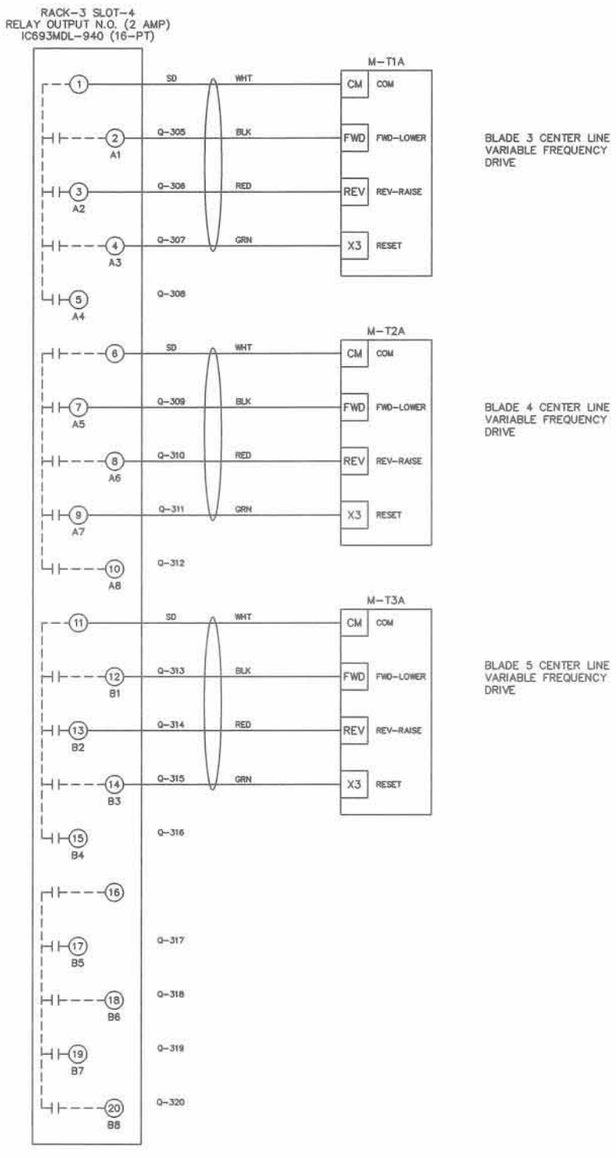
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

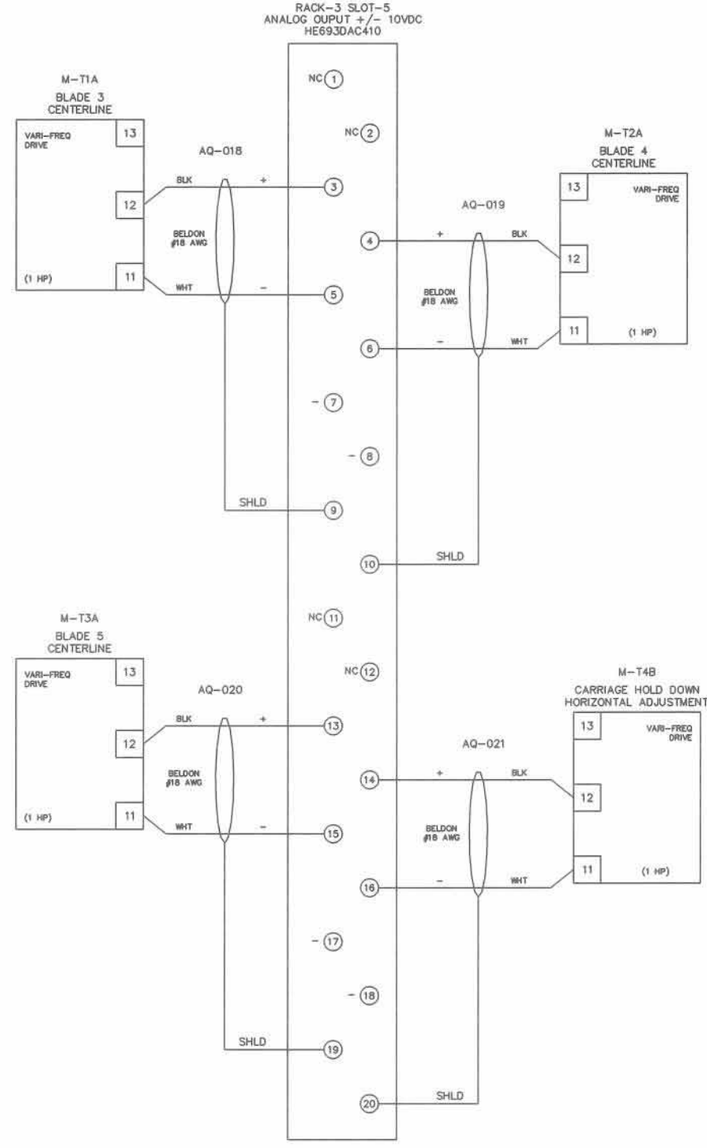
MATERIAL XXX FINISH XXX

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	17 OF 21	90507		M

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

BELDEN CABLE (9418) EFFECTIVE
FRAME #358 FORWARD





TOUCHSCREEN PANEL

○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL

□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED 125

FEATURES: X

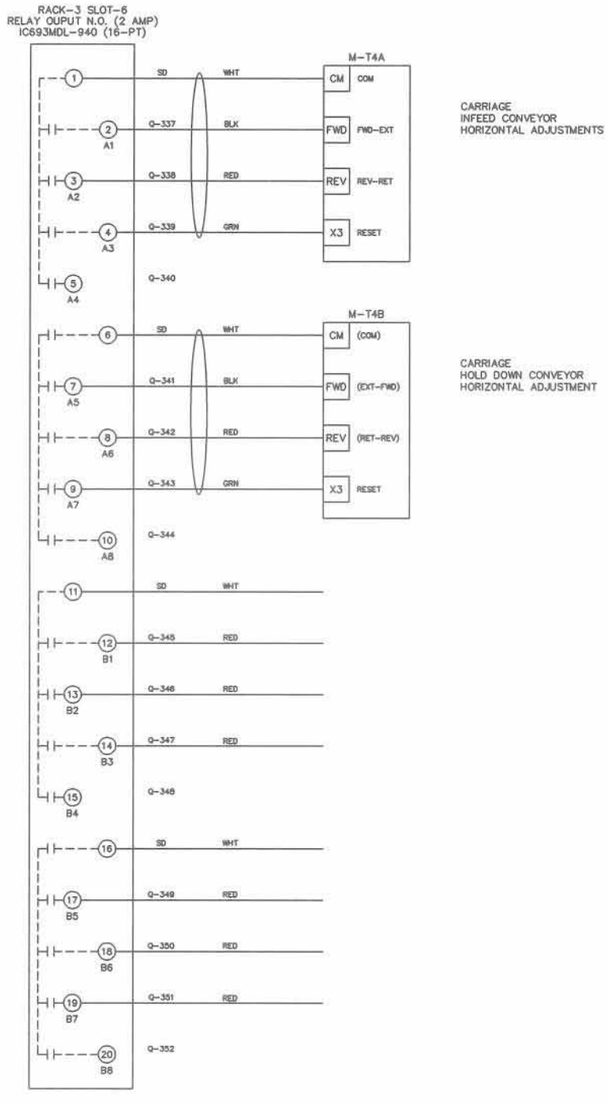
MiTek Industries, Inc.
4203 SHORELINE DRIVE, EARTH CITY, MO. 63045

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US					
CHECKED	DATE	DRAWN G.Bowers	DATE 10/30/00	FINISH PAINT X	SCALE NONE	PAGE 18 of 21	90507	DASH NO. REV. M

WIDTH X X X
PAGE X X X

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

BELDEN CABLE (9418) EFFECTIVE
FRAME #358 FORWARD



TOUCHSCREEN PANEL

○ TERMINALS LOCATED IN TRAVELING END CONTROL PANEL

□ TERMINALS LOCATED IN STATIONARY END CONTROL PANEL

VFD SETTINGS (SEE MODEL#)

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

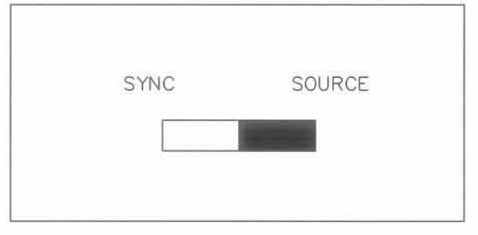
VFD SETTINGS FOR ALL MODELS

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



KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED 125

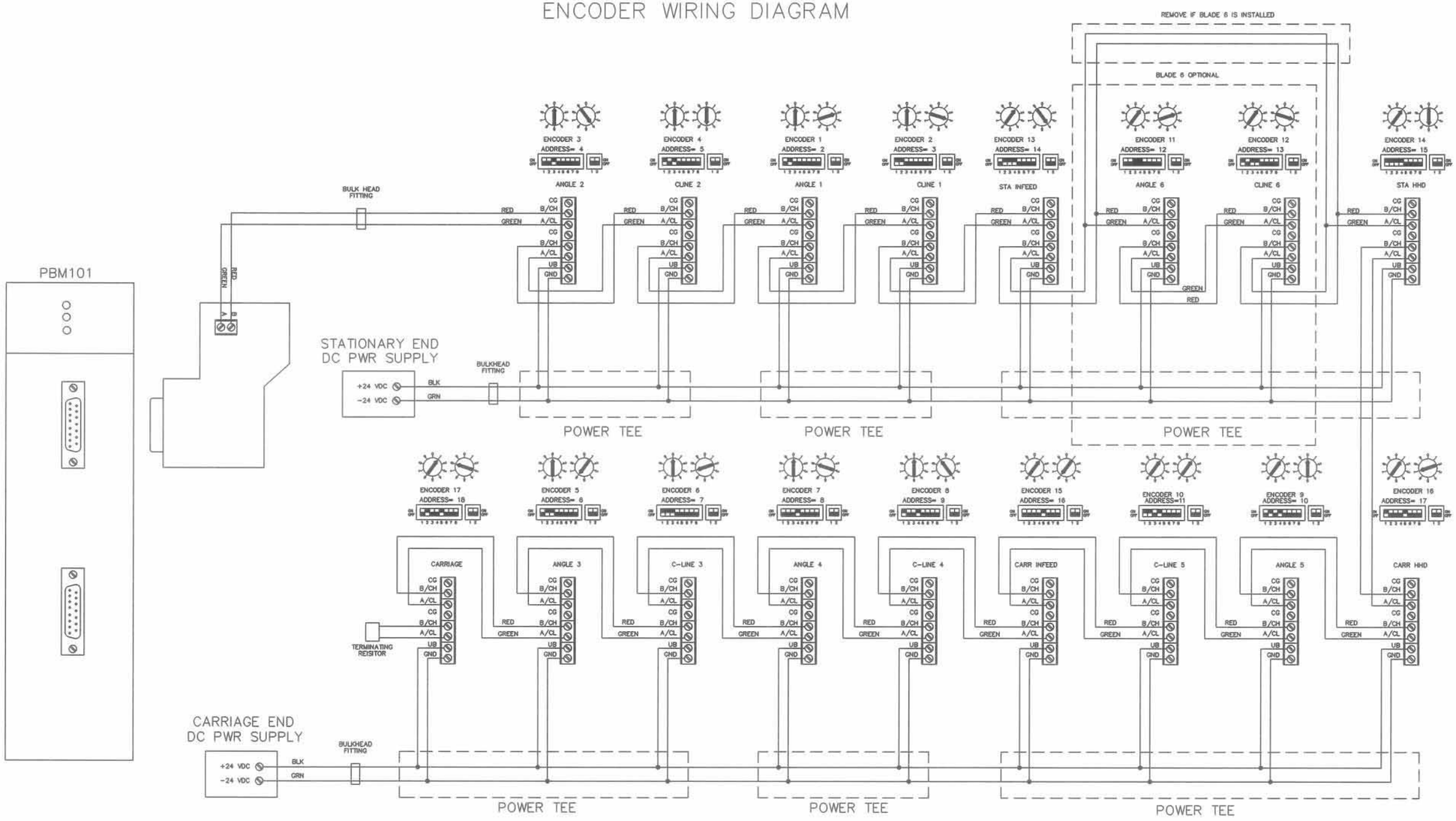
FEATURES: X

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

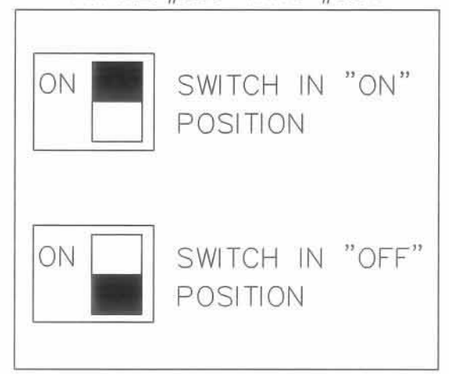
APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US					
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE	DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	19 OF 21	90507	M

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

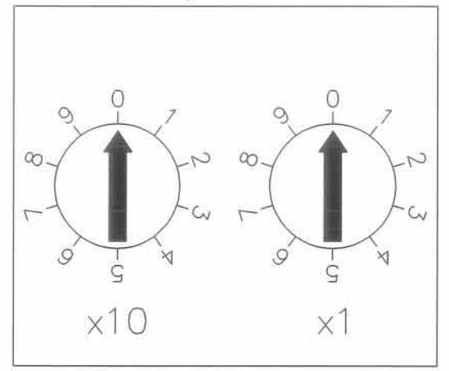
ENCODER WIRING DIAGRAM

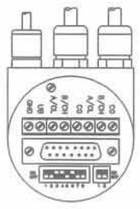


ENCODER (P/N 504518) FRAME #269 THRU #384



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

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

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: X

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

APPROVED	DATE	MFG.	CYBER,AT,ELE,SCHEM,230V,US						
CHECKED	DATE	DRAWN	DATE	FINISH PAINT	SCALE	PAGE		DASH NO.	REV.
		G.Bowers	10/30/00	X	NONE	20 OF 21	90507		M

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

COMPUTER–PC ENCLOSURE

STATIONARY END CONTROL PANEL

CABLE TRACK

TRAVELLING END CONTROL PANEL

PC

TOPAZ UPS

6–90

PC–PLC NETWORK CABLE

PLANT NETWORK CABLE

KVM

10 BASE–T HI–FLEX CABLE

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

DIP SWITCHES FOR ADDRESSING

CPU/BASE BACKPLANE SLOT

TOUCHSCREEN–PC NETWORK CABLE

RITTAL SWING ARM

TOPAZ UPS

KVM

Computer Network Card

RJ–45 RECEPT MOUNTED ON STAT ENC

CROSSOVER CABLE

GND BOND

TB3 (120VAC) 1T X2

DIP SWITCH PATTERN FOR RACK–2

OPEN CLOSED

RACK 0

PS	1	2	3	4	5	6	7	8	9	10	
PWR330	CPU364	PBM101		MDL240 I AC16 RefAdr %I0001	MDL240 I AC16 RefAdr %I0017	MDL240 I AC16 RefAdr %I0033	MDL240 I AC16 RefAdr %I0049	MDL240 I AC16 RefAdr %I0065	MDL646 I DC16 RefAdr %I0081		EXPANSION

MODEL 364 CPU BASEPLATE, 10–SLOT (IC693CHS391)

RACK 1

PS	1	2	3	4	5	6	7	8	9	10	
PWR321	MDL340 Q AC16 RefAdr %Q0001	MDL340 Q AC16 RefAdr %Q0017	MDL940 RefAdr %Q0065	MDL940 RefAdr %Q0225	HE693 RefAdr %AQ003	MDL940 RefAdr %Q0289	HE693 RefAdr %AQ014	MDL940 RefAdr %Q0321	HE693 RefAdr %AQ022		EXPANSION

EXPANSION BASEPLATE, 10–SLOT (IC693CHS392)

DB–25 MALE

CABLE (IC693CBL300) 36"

DB–25 MALE

PORT–1 PORT–2

DB–25 M/F

CUSTOM CABLE – BELDEN 8107 SEE GE PUB. GFK–0356E PAGE 3–24/25

TWISTED SHIELDED PAIRS

PIN		PIN	
DIODT	16 W/BL	16 BL/W	DIODT
DIODT/	17 BL/W	17 W/BL	DIODT/
DIOCLK	24 W/BR	24 W/BR	DIOCLK
DIOCLK/	25 O/R	25 R/O	DIOCLK/
DRSEL	20 O/R	20 R/O	DRSEL
DRSEL/	21 R/O	21 W/GRY	DRSEL/
DRPERR	12 GRY/W	12 GRY/W	DRPERR
DRPERR/	13 W/GRY	13 R/O	DRPERR/
DRMRUN	8 BL/R	8 BL/R	DRMRUN
DRMRUN/	9 BL/R	9 W/GRN	DRMRUN/
DPFRAME+	2 W/GRN	2 GRN/W	DPFRAME+
DPFRAME–	3 GRN/W		DPFRAME–
OV	7 O/W	7 O/W	OV
FGND	1 W/O	1 W/O	FGND

25–PIN MALE — 25–PIN FEMALE

W=WHITE O=ORANGE R=RED BR=BROWN BL=BLUE GRN=GREEN GRY=GRAY SH=SHIELD

RACK 2

PS	1	2	3	4	5	6	7	8	9	10	
PWR321	MDL240 I AC16 RefAdr %I0097	MDL240 I AC16 RefAdr %I0113	MDL240 I AC16 RefAdr %I0129	MDL240 I AC16 RefAdr %I0145	MDL240 I AC16 RefAdr %I0161	MDL646 I DC16 RefAdr %I0177	MDL340 Q AC16 RefAdr %Q0033	MDL340 Q AC16 RefAdr %Q0049		ALG391 QALGV2 RefAdr %AQ001	EXPANSION

EXPANSION BASEPLATE, 10–SLOT (IC693CHS392)

PORT–1 PORT–2

CABLE (IC693CBL300)

DIP SWITCH PATTERN FOR RACK–3

OPEN CLOSED

INDICATES DOWN

RACK 3

PS	1	2	3	4	5	6	7	8	9	10	
PWR321	MDL940 RefAdr %Q0209	MDL940 RefAdr %Q0241	HE693 RefAdr %AQ007	MDL940 RefAdr %Q0305	HE693 RefAdr %AQ018	MDL940 RefAdr %Q0337					EXPANSION

EXPANSION BASEPLATE, 10–SLOT (IC693CHS392)

PORT–1 PORT–2

EXPANSION BUS TERMINATION PLUG (IC693ACC307A)

APPROX. LENGTH = 60'

CONTROL PANEL DOOR PUSH PULL E–STOP

CONTROL PANEL SIDE PUSH PULL E–STOP

INTEGRATED INCLINED WASTE CONVEYOR PULL CORD LIMIT SWITCH

PULL CORD LIMIT SWITCH

CONTROL POWER VERIFY I–055

Q–237 CR1 X2

120 VAC CONTROL PANEL SOURCE

CONTROL PANEL OUTPUT MODULE SUPPLY

1S 2S (33) (34) 3S 3SI 4S 5S

9T (44) 8T (43) 7T 6TI 6T 9S

RED – 5S

BLK – 9S

WHT – 5T

BLUE – 9T

SINGLE 4/C – 14GA SO CABLE

120VAC 1S I–053 | 120VAC 1S I–056 | 120VAC 1S I–056 | 120VAC 1S I–049

TOUCHSCREEN PUSH PULL E–STOP

SWING GUARD PUSH PULL E–STOP

CONTROL PANEL PUSH PULL E–STOP

Q–253 CR2 X2

5S 5S 6S 6S 9S 7S 8S 9S (33) (34)

5T 5T 4T 4T 9T 3T 2T 1T (44) (43)

120 VAC CONTROL PANEL SOURCE

CONTROL PANEL AC OUTPUT MODULE SUPPLY

120VAC 1T I–159 | I–153 CONTROL POWER VERIFY | 120VAC 1T I–152 | 120VAC 1T I–151

DIP SWITCH PATTERN FOR RACK–1

OPEN CLOSED

INDICATES DOWN

CKT BKR 100–A

230 VAC 3ø

L1 L2 L3

LINE SIDE

GRAY – L1

GRAY – L2

GRAY – L3

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

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

MANUAL TRIP 100–A

L1 L2 L3

LOAD SIDE

STATIONARY END PNEUMATIC SYSTEM

TRAVELLING END PNEUMATIC SYSTEM

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

KEY	NO. OF HOLES	HOLE DIA.	HOLE DEPTH	TAP DIA.	TAP 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 RUNOUT ± MACHINED SURFACES NOT SPECIFIED 250

FEATURES X

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

MANUAL X X X PAGE X X

APPROVED	DATE	MFG.	CYBER,AT,230V,US						
CHECKED	DATE	DRAWN G.Bowers	DATE 10/30/00	FINISH PAINT X	SCALE NONE	PAGE 21 or 21	90507	DASH NO.	REV. M