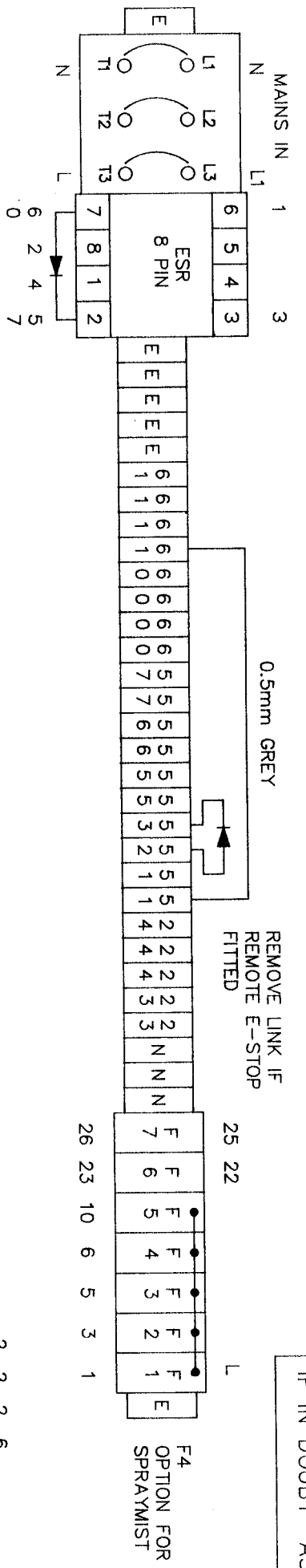
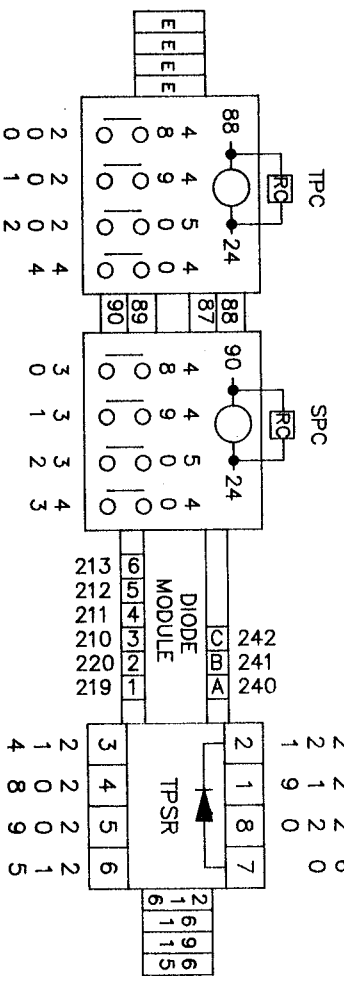
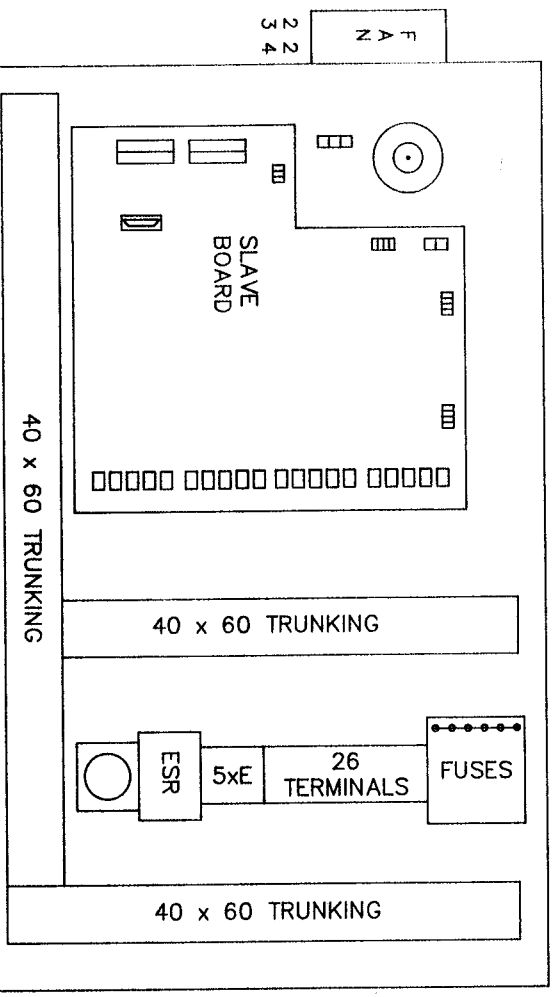


F1	6.3 A	AXIS DRIVES
F2	6.3 A	SPINDLE AND TOOLPOST DRIVE
F3	6.3 A	CONTROL TRANS. PRIMARY
F4	3.15 A	SPRAYMIST (OPTION)
F5	3.15 A	SLAVE BOARD POWER SUPPLY
F6	3.15 A	110V CONTROL
F7	3.15 A	WORKLIGHT
F10	500 mA	(ON SLAVE BOARD) 5V CONTROL VOLTAGE
F11	6.3 A	(ON SLAVE BOARD) AXIS DRIVE

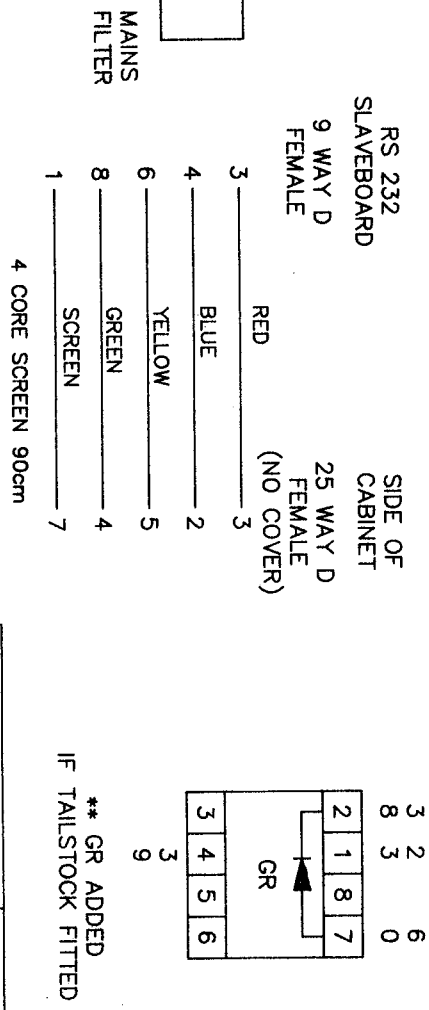
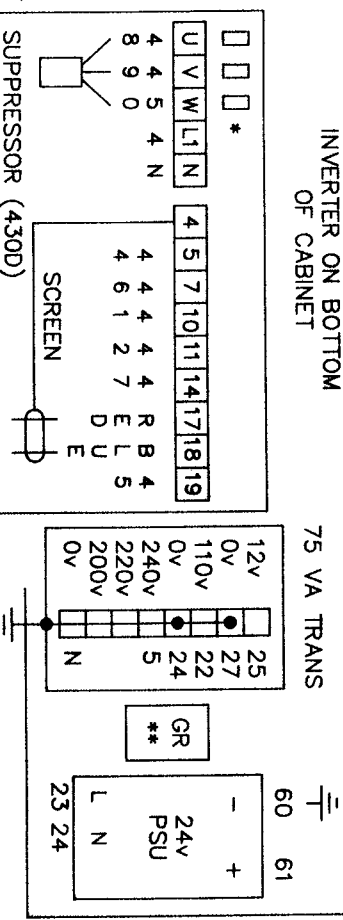
□ = SLEEVED EMI ABSORBER



IF IN DOUBT ASK

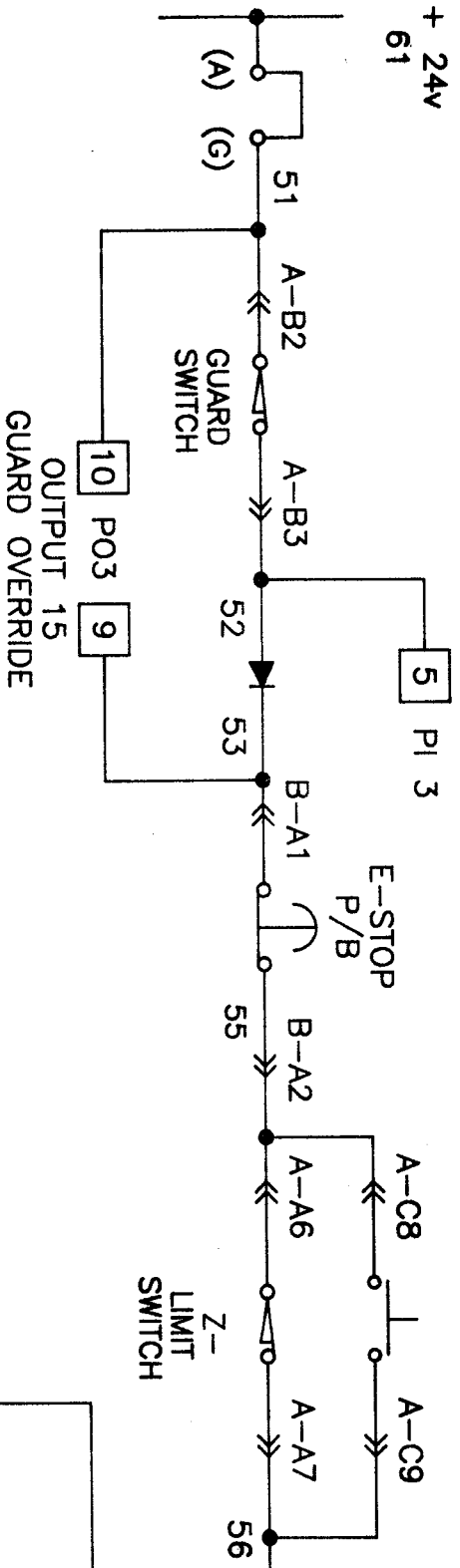


COMPONENTS FOR DM8 TURRET  
MOUNTED ON BOTTOM OF BOX



IF IN DOUBT ASK

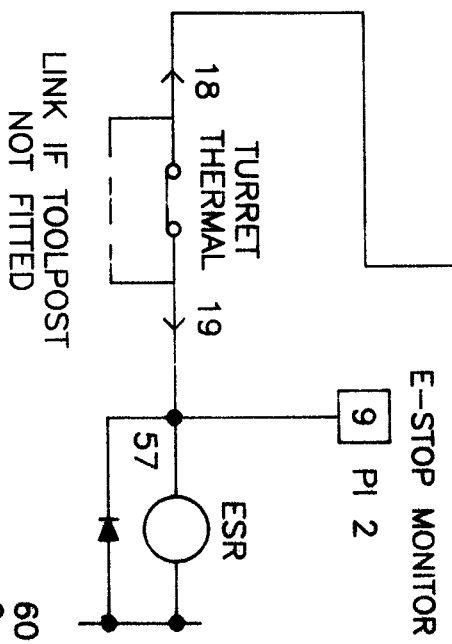
REMOVE LINK  
IF REMOTE  
E-STOP FITTED



GUARD MONITOR

LIMIT SWITCH  
OVERRIDE P/B

10 P03 9  
OUTPUT 15  
GUARD OVERRIDE



LINK IF TOOLPOST  
NOT FITTED

E-STOP MONITOR

QM1 = 8 WAY ROUND QM  
CONNECTOR FOR  
AUXILIARIES

- (A) 61
- (B) 60
- (C) 72
- (D) 73
- (E) 74
- (F) 75
- (G) 51
- (H) EARTH

0.5mm BLUE  
0.5mm EARTH

« 50 WAY HARTING CONNECTOR  
ESR EMERGENCY STOP RELAY

SEE SHEET 6 FOR INPUT DETAILS  
SEE SHEET 7 FOR OUTPUT DETAILS

< 24 WAY HARTING CONNECTOR  
FOR TOOLPOST  
SEE SHEET 10

[ MPC ]

SHEET 3

MIRAC PC  
E-STOP CIRCUIT

PLUG A 25 WAY CONNECTOR  
 MALE INSERT  
 FEMALE PINS

⊗ EARTH 2.5mm

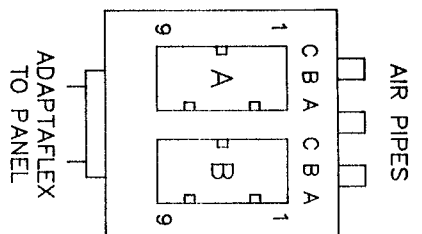
PIN	WIRE	COLOUR			
A1	30	BLUE			
A2	31	BLACK			
A3	32	BROWN	SPINDLE MOTOR		1.5 mm 4 CORE SCREEN
A4	E	SCREEN			
A5	E	EARTH			
A6	55	RED	Z - LIMIT		0.5mm SINGLES
A7	56	YLW			
A8	304	RED	GUARD FULLY OPEN SWITCH		2 CORE SCREEN
A9	61	BLUE			
B2	51	RED	GUARD CONTACT 1		2 CORE SCREEN
B3	52	BLUE			
B4	40	RED	GUARD CONTACT 2		2 CORE SCREEN
B5	47	BLUE			
B6	38	RED	GUARD CONTACT 3		2 CORE SCREEN
B7	61	BLUE			
B8					
C1	96	RED	GUARD SOLENOID		2 CORE SCREEN
C2	60	BLUE			
C3					
C4	7	BLACK	SPRAYMIST UNIT		0.5mm SINGLES
C5	N	BLACK			
C6	26	RED	WORKLIGHT		1mm SINGLES
C7	27	RED			
C8	55	RED	AXIS OVERRIDE		2 CORE SCREEN
C9	56	BLUE			

PLUG B 25 WAY CONNECTOR  
 MALE INSERT  
 FEMALE PINS

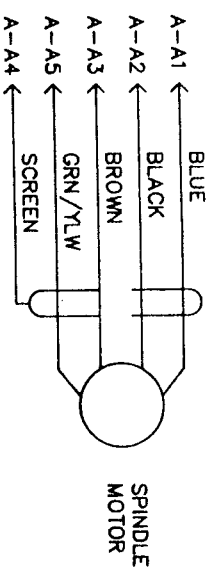
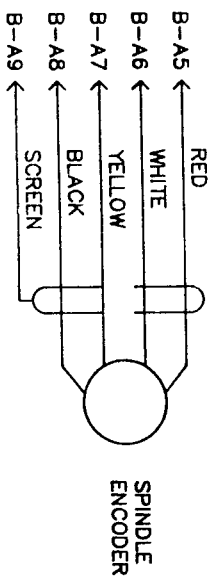
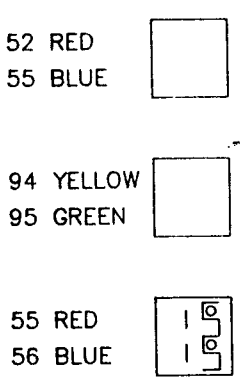
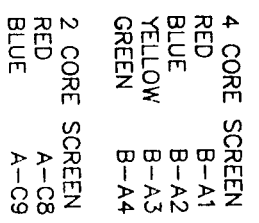
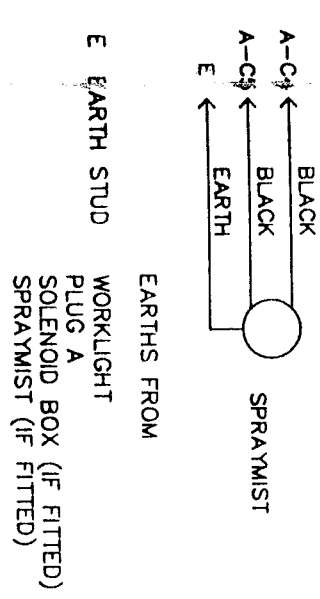
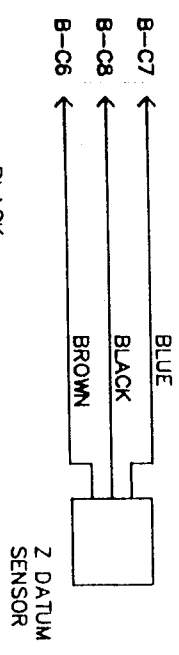
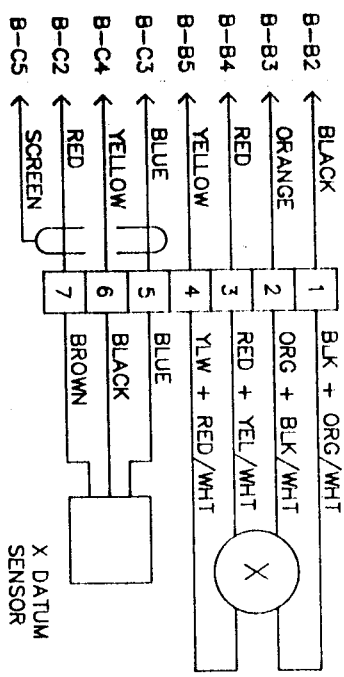
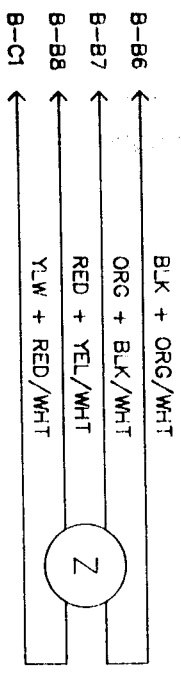
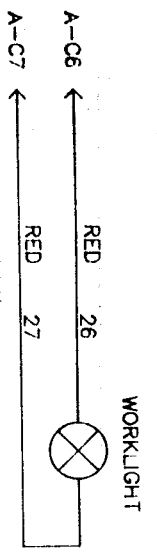
⊗ EARTH 2.5mm

PIN	WIRE	COLOUR			
A1	53	RED	E-STOP CONTACT 1		2 CORE SCREEN
A2	55	BLUE			
A3	94	RED	E-STOP CONTACT 2		2 CORE SCREEN
A4	95	BLUE			
A5		RED			
A6		BLUE	SPINDLE ENCODER		4 CORE SCREEN
A7		YELLOW			
A8		GREEN			
A9	E	SCREEN			
B2		BLACK	X AXIS MOTOR		0.2 mm SINGLES
B3		ORANGE			
B4		RED			
B5		YELLOW			
B6		BLACK	Z AXIS MOTOR		0.2 mm SINGLES
B7		ORANGE			
B8		RED			
C1		YELLOW			
C2	61	RED	X AXIS DATUM		4 CORE SCREEN
C3	60	BLUE			
C4	77	YELLOW			
C5	E	SCREEN	Z AXIS DATUM		4 CORE SCREEN
C6	61	RED			
C7	60	BLUE			
C8	78	YELLOW			
C9	E	SCREEN			

50 WAY HARTING CONNECTOR  
 32mm ADAPTAFLEX 1.5m  
 CABLES 3.5m

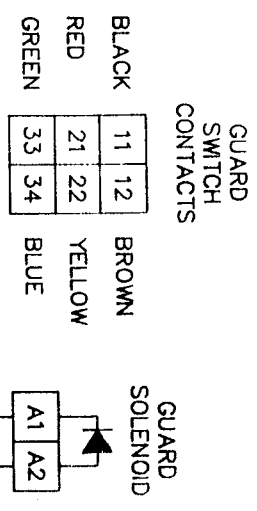


IF IN DOUBT ASK



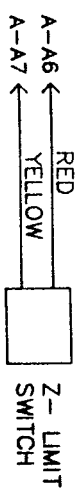
**GUARD INTERLOCK WITH SOLENOID**

(REMOVE LINK 12 - 41)



- 8 CORE SCREEN
- BLACK A-B2
- BROWN A-B3
- RED A-B4
- YELLOW A-B5
- GREEN A-B6
- BLUE A-B7
- WHITE A-C1
- VIOLET A-C2

**IF GUARD INTERLOCK NOT FITTED  
CONNECT GUARD SWITCH  
AS SHOWN BELOW**



IF IN DOUBT ASK

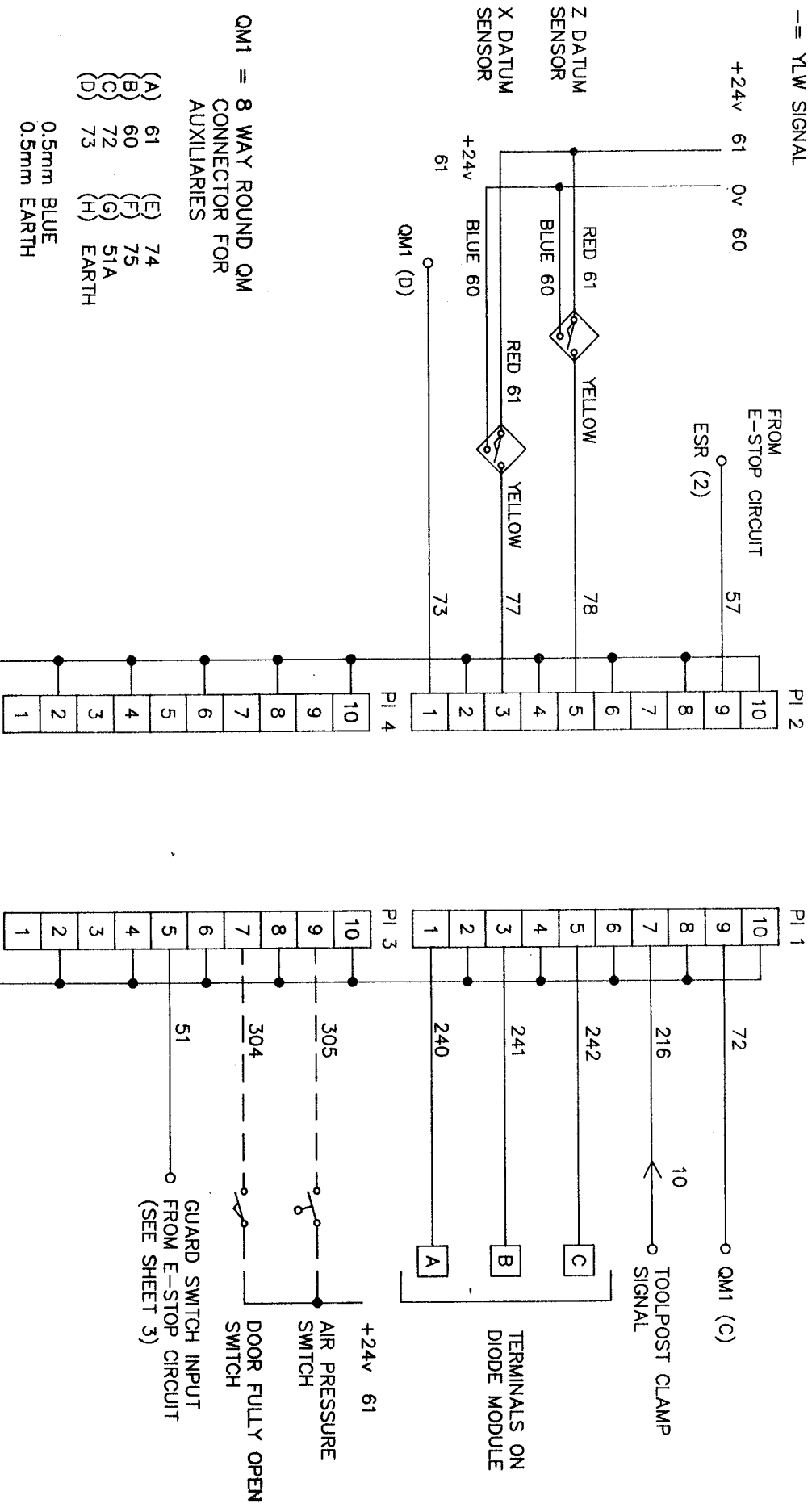
ALTERNATIVE  
SENSOR  
BALUFF

A = BLE 0v  
+ = RED 24v  
- = YLW SIGNAL

CONNECTORS  
PI 2 AND PI 4  
ARE BELOW

CONNECTORS  
PI 1 AND PI 3  
ARE ON TOP

< 24 WAY HARTING  
CONNECTOR FOR TOOLPOST  
SEE SHEETS 9 AND 10



QM1 = 8 WAY ROUND QM  
CONNECTOR FOR  
AUXILIARIES

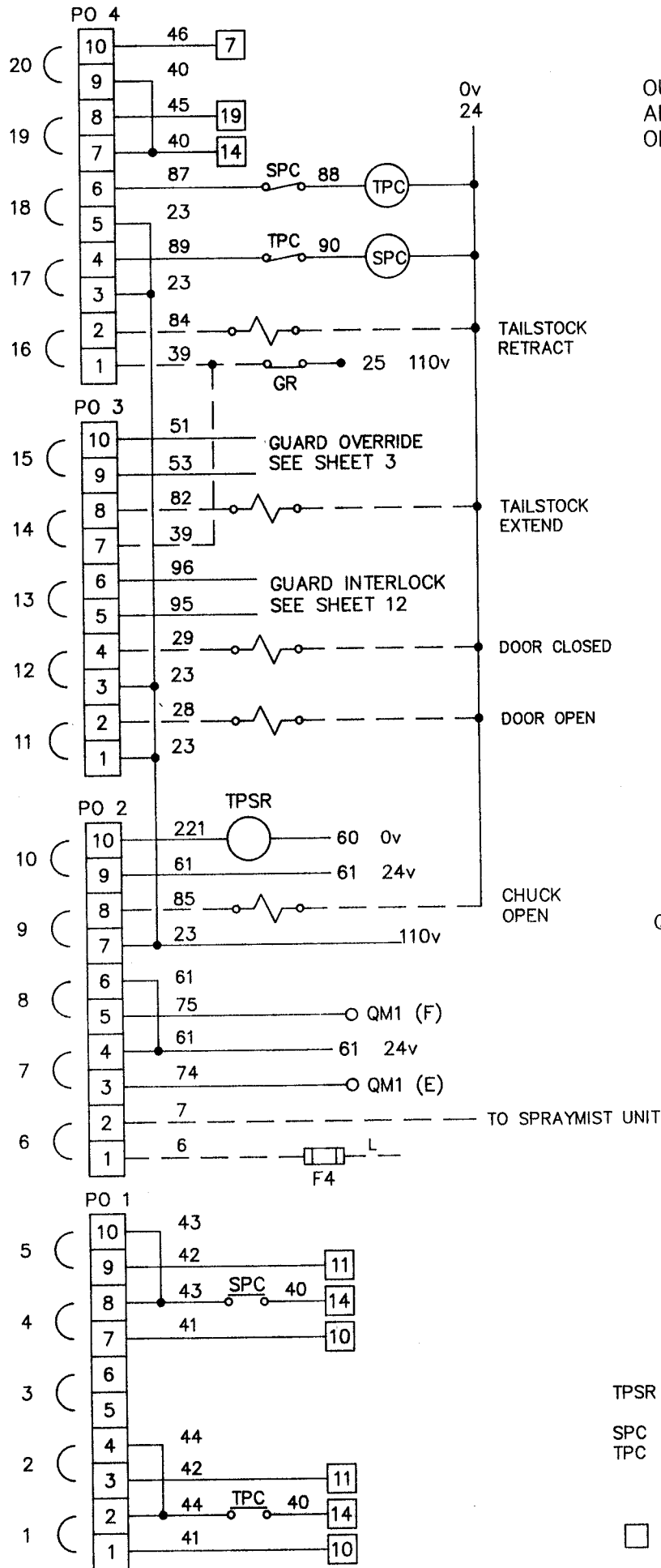
- |     |    |     |       |
|-----|----|-----|-------|
| (A) | 61 | (E) | 74    |
| (B) | 60 | (F) | 75    |
| (C) | 72 | (G) | 51A   |
| (D) | 73 | (H) | EARTH |
- 0.5mm BLUE  
0.5mm EARTH

IF IN DOUBT ASK

IF IN DOUBT ASK

MIRAC PC  
SLAVEBOARD OUTPUTS  
DENFORD DM8  
TURRET

SHEET 7  
[ MPC ]



OUTPUT CONNECTORS ARE ON THE RIGHT SIDE OF THE SLAVEBOARD

QM1 = 8 WAY ROUND QM CONNECTOR FOR AUXILIARIES

- (A) 61 (E) 74
- (B) 60 (F) 75
- (C) 72 (G) 51
- (D) 73 (H) EARTH

0.5mm BLUE  
0.5mm EARTH

TPSR TOOL POSITION SELECT RELAY

SPC SPINDLE CONTACTOR  
TPC TOOLPOST CONTACTOR

□ TERMINALS ON COMBINED DRIVE (SPINDLE AND TOOLPOST)

FUSES ON SLAVEBOARD

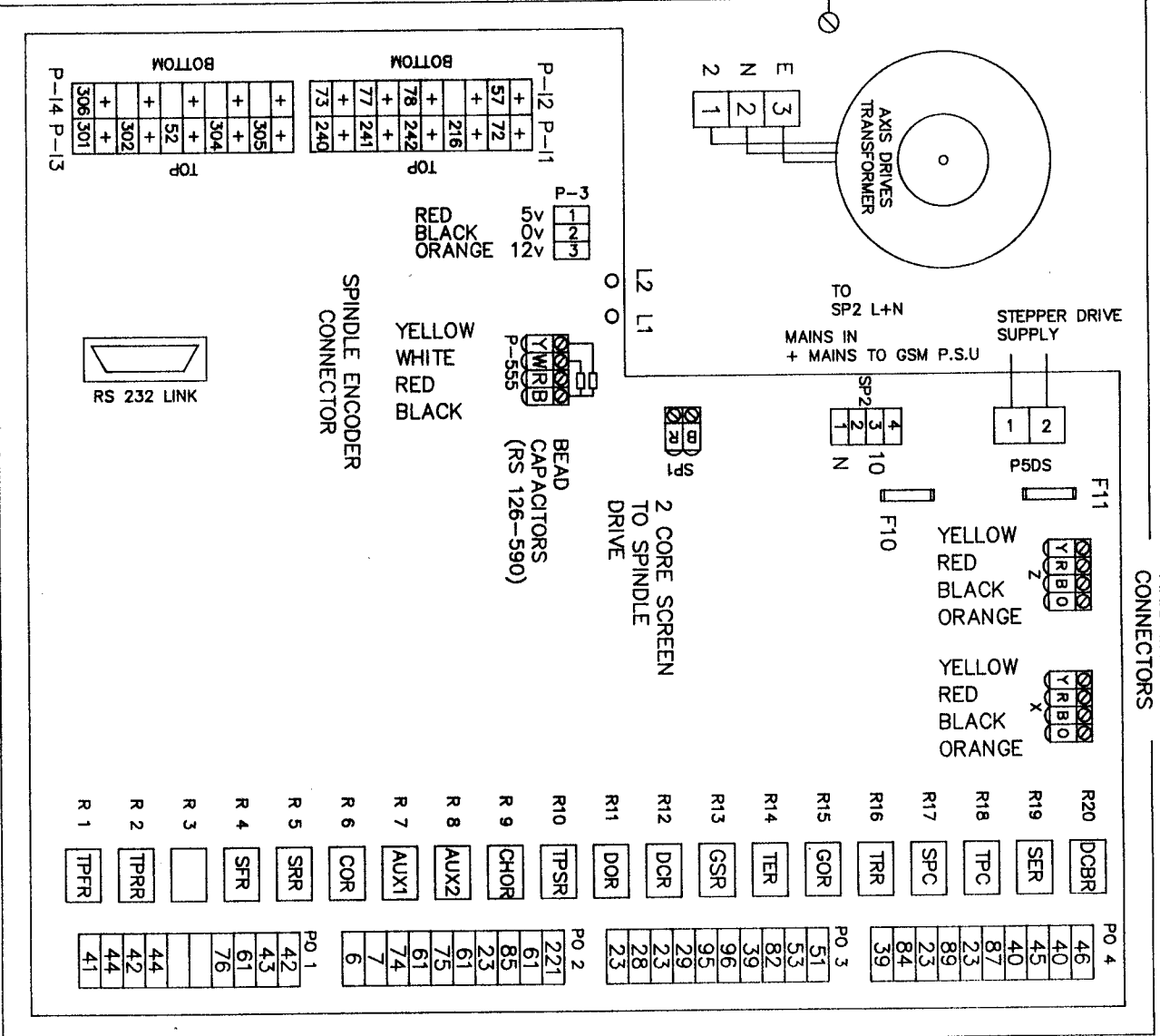
- F10 5V CONTROL VOLTAGE
- F11 AXIS DRIVES

6mm EARTH

LEDS ON SLAVEBOARD

- L1 SPINDLE SPEED
- L2 SPINDLE REFERENCE SIGNAL

+ LINK ALL EVEN NUMBERED TERMINALS TO 0V WIRE No 60



RS 232 LINK

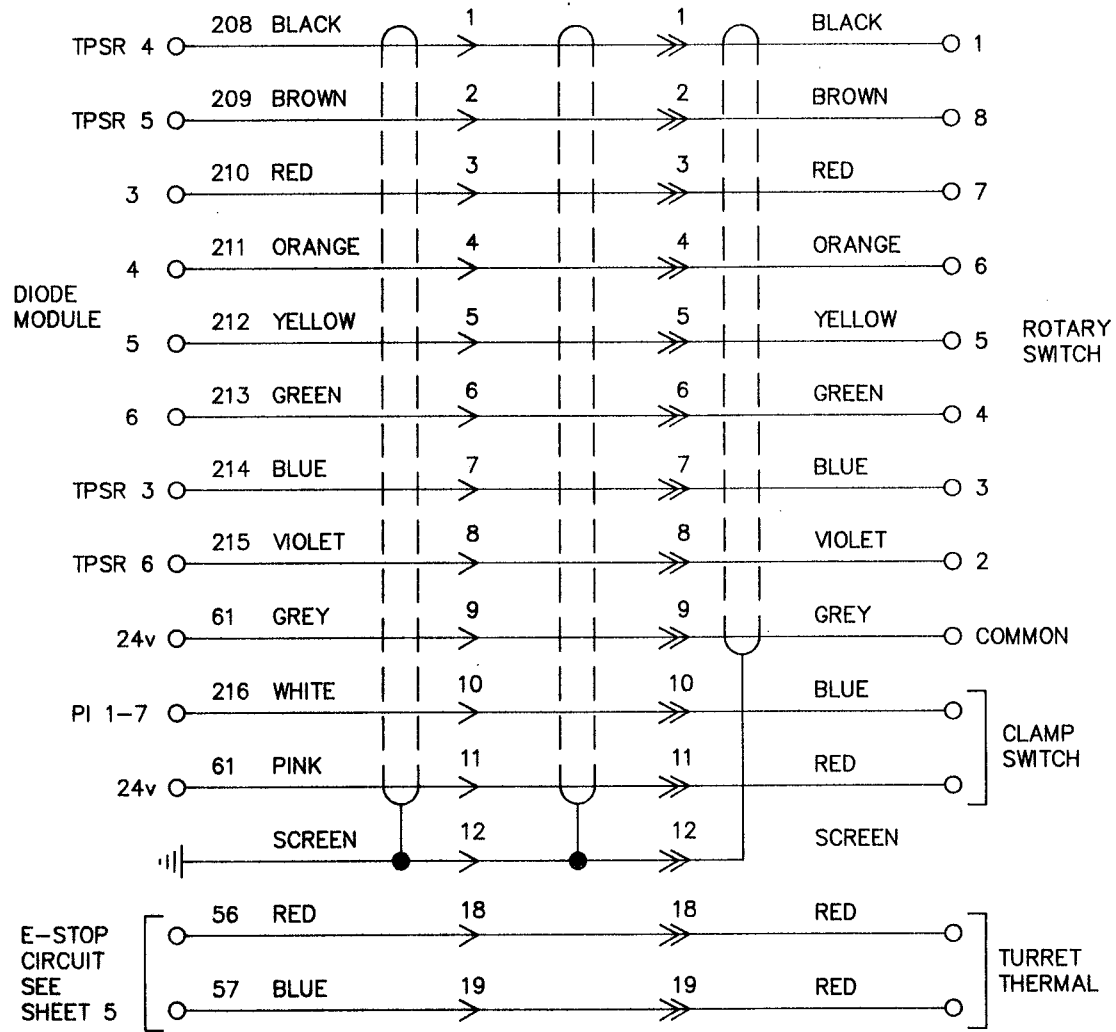
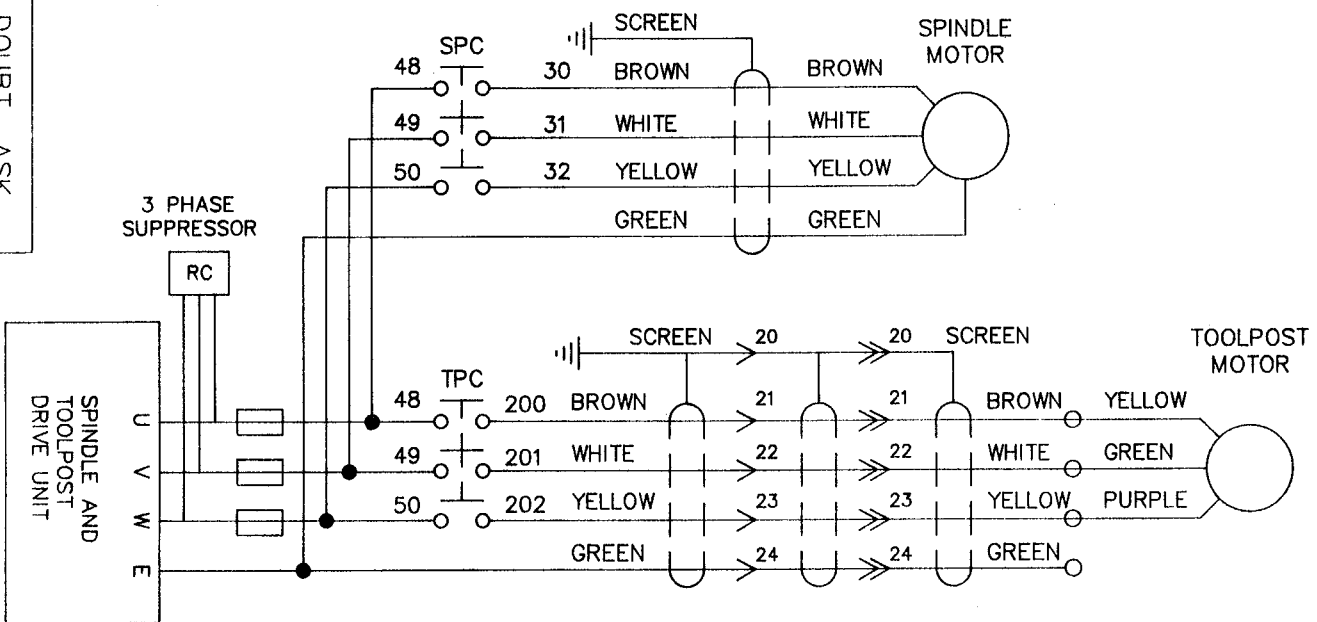
P-12	P-11	+	+
57	72	+	+
78	242	+	+
77	241	+	+
73	240	+	+
TOP			
306	301	+	+
BOTTOM			
305	304	+	+
52	304	+	+
302	302	+	+
P-14 P-13			

R20	DCBR	46
R19	SER	40
R18	TPC	45
R17	SPC	40
R16	TRR	87
R15	GOR	23
R14	TER	89
R13	GSR	23
R12	DCR	84
R11	DOR	39
R10	TPSR	51
R9	CHOR	53
R8	AUX2	82
R7	AUX1	39
R6	COR	96
R5	SRR	96
R4	SFR	29
R3		95
R2	TPRR	23
R1	TPFR	28

- DCBR DC BRAKE RELAY
- SER SPINDLE ENABLE RELAY
- TPC TOOLPOST POWER CONTACTOR
- SPC SPINDLE POWER CONTACTOR
- TRR TAILSTOCK RETRACT RELAY
- GOR GUARD OVERRIDE RELAY
- TER TAILSTOCK EXTEND RELAY
- GSR GUARD SOLENOID RELAY
- DCR DOOR CLOSE RELAY
- DOR DOOR OPEN RELAY
- TPSR TOOL POSITION SELECT RELAY
- CHOR CHUCK OPEN RELAY
- AUX2 AUXILIARY OUTPUT 2
- AUX1 AUXILIARY OUTPUT 1
- COR COOLANT ON RELAY
- SRR SPINDLE REVERSE RELAY
- SFR SPINDLE FORWARD RELAY
- TPRR TOOLPOST REVERSE RELAY
- TPFR TOOLPOST FORWARD RELAY



IF IN DOUBT ASK



> 24 WAY HARTING CONNECTOR FOR TOOLPOST

>> QM 3 24 WAY CONNECTOR FOR TURRET

MIRAC PC  
DENFORD DMB  
TURRET  
WIRING DIAGRAM

SHEET 9  
[ MPC ]

24 WAY CONNECTOR  
 MALE INSERT  
 FEMALE PINS

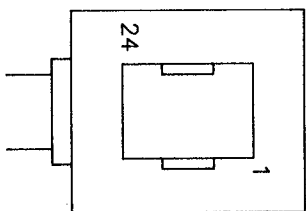
⊙ EARTH 2.5mm

PIN No	WIRE No	COLOUR
1	208	BLACK
2	209	BROWN
3	210	RED
4	211	ORANGE
5	212	YELLOW
6	213	GREEN
7	214	BLUE
8	215	VIOLET
9	61	GREY
10	216	WHITE
11	61	PINK
12	E	SCREEN
13		
14		
15		
16		
17		
18	56	RED
19	57	BLUE
20	E	SCREEN
21	200	BLUE
22	201	BLACK
23	202	BROWN
24	E	EARTH

12 CORE  
 TURRET  
 SIGNALS

2 CORE SCREEN  
 TURRET THERMAL

1mm  
 4 CORE  
 SCREEN  
 TURRET MOTOR



ADAPTAFLX  
 TO PANEL

1.5m 25mm ADAPTAFLX  
 3.5m CABLE LENGTH

24 WAY HOOD BI 00357CC  
 24 WAY HOUSING BI 00357P  
 MALE INSERT BI 00357N  
 FEMALE INSERT BI 00357M  
 THREAD CONVERTER BI 00406Z

IF IN DOUBT ASK

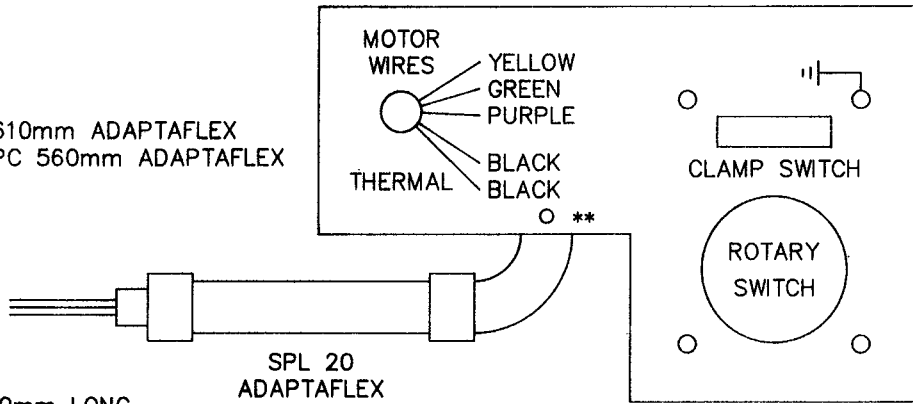
MIRAC PC  
 DM 8  
 HARTING PLUG  
 CONNECTIONS

SHEET 10

[ MPC ]

IF IN DOUBT ASK

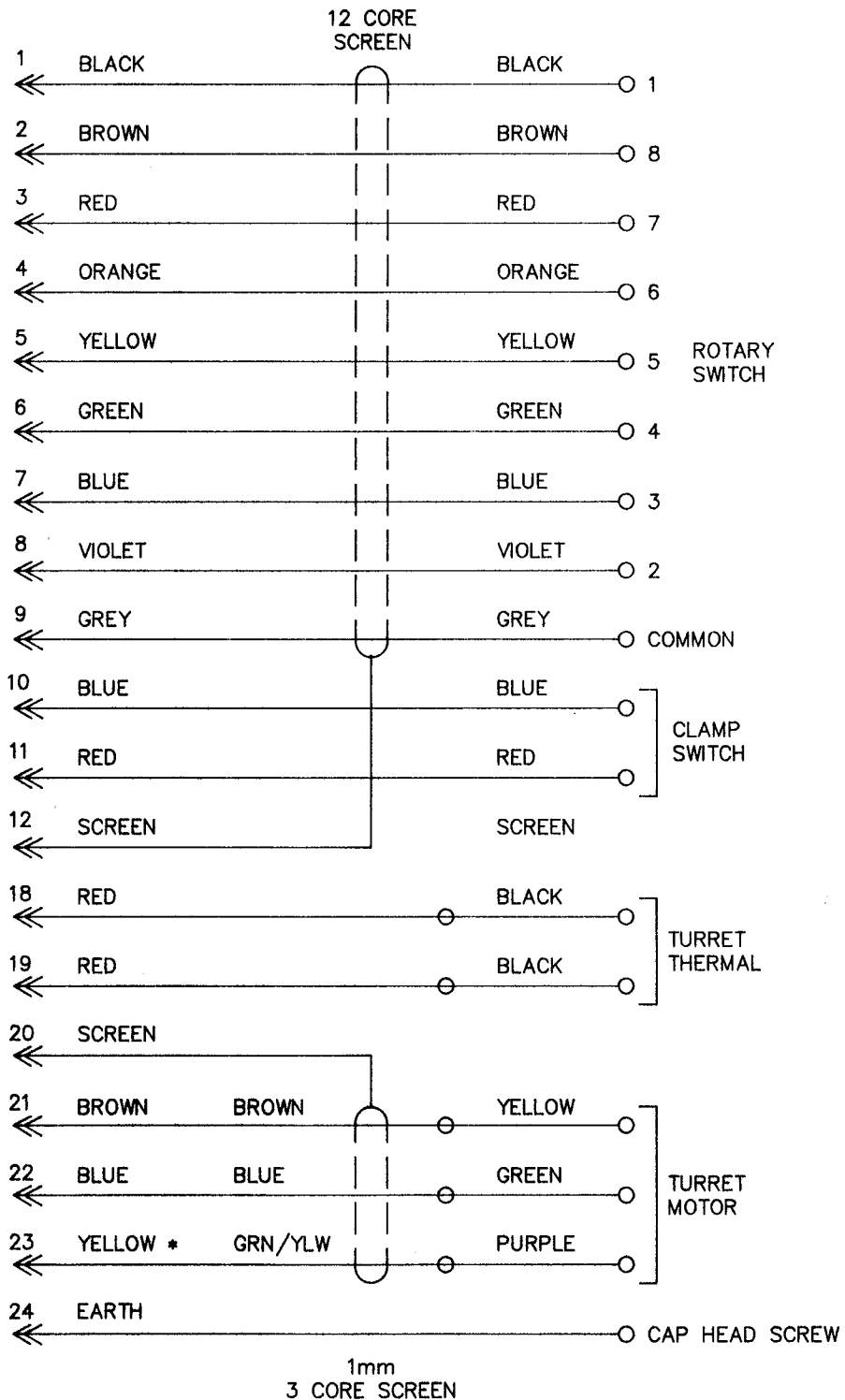
MIRAC 610mm ADAPTAFLEX  
MIRAC PC 560mm ADAPTAFLEX



CABLE 160mm LONG WITH MALE SIZE 16 PINS

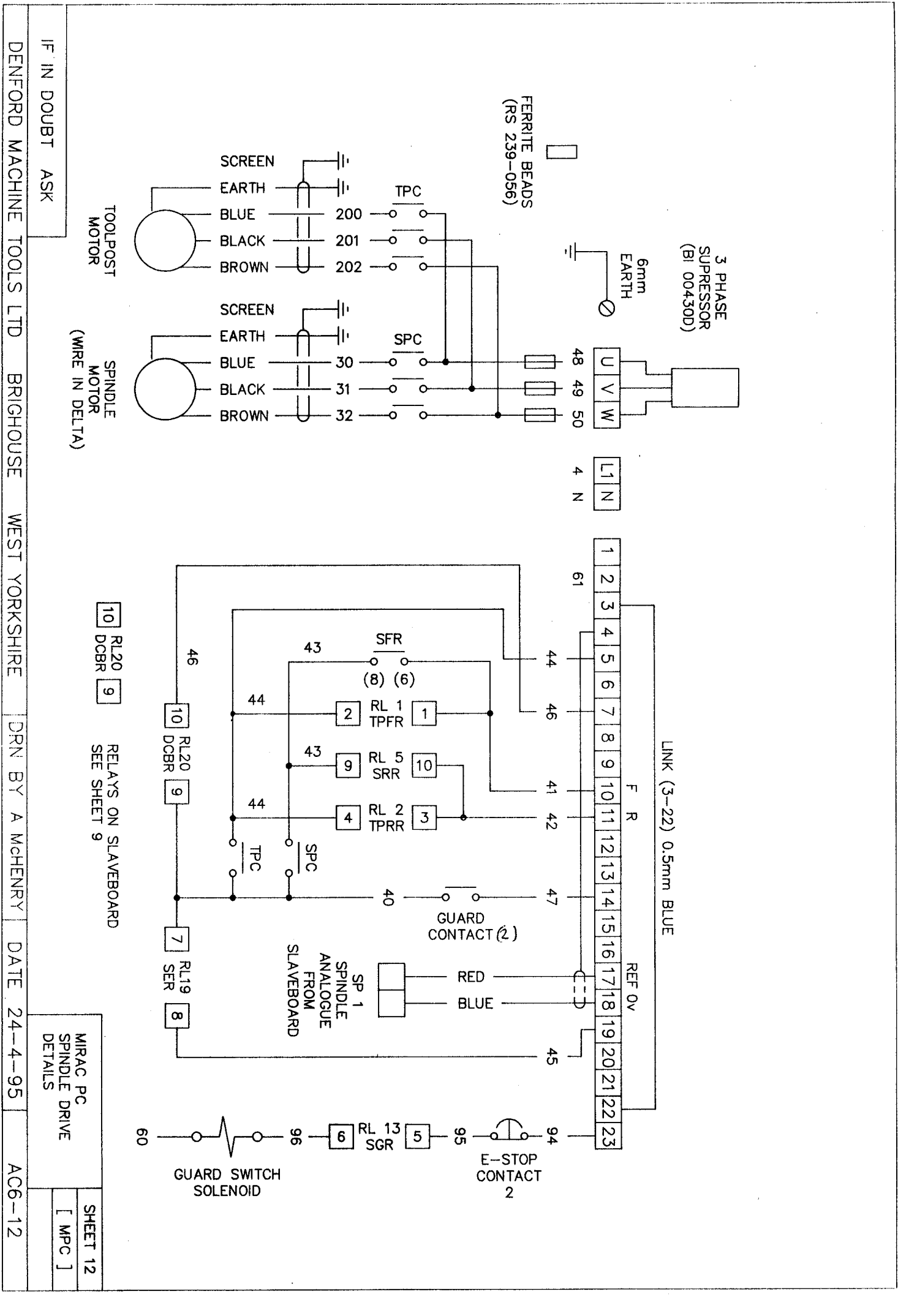
2 GLANDS  
BI 00407 N  
1 ELBOW  
BI 00407 Q

SPL 20 ADAPTAFLEX



MIRAC PC  
DENFORD DMB  
TURRET  
WIRING DETAILS

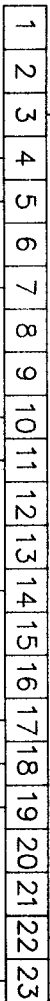
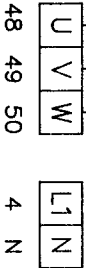
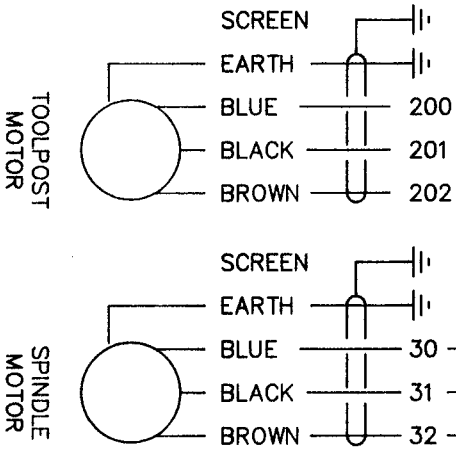
SHEET 11  
[ MPC ]



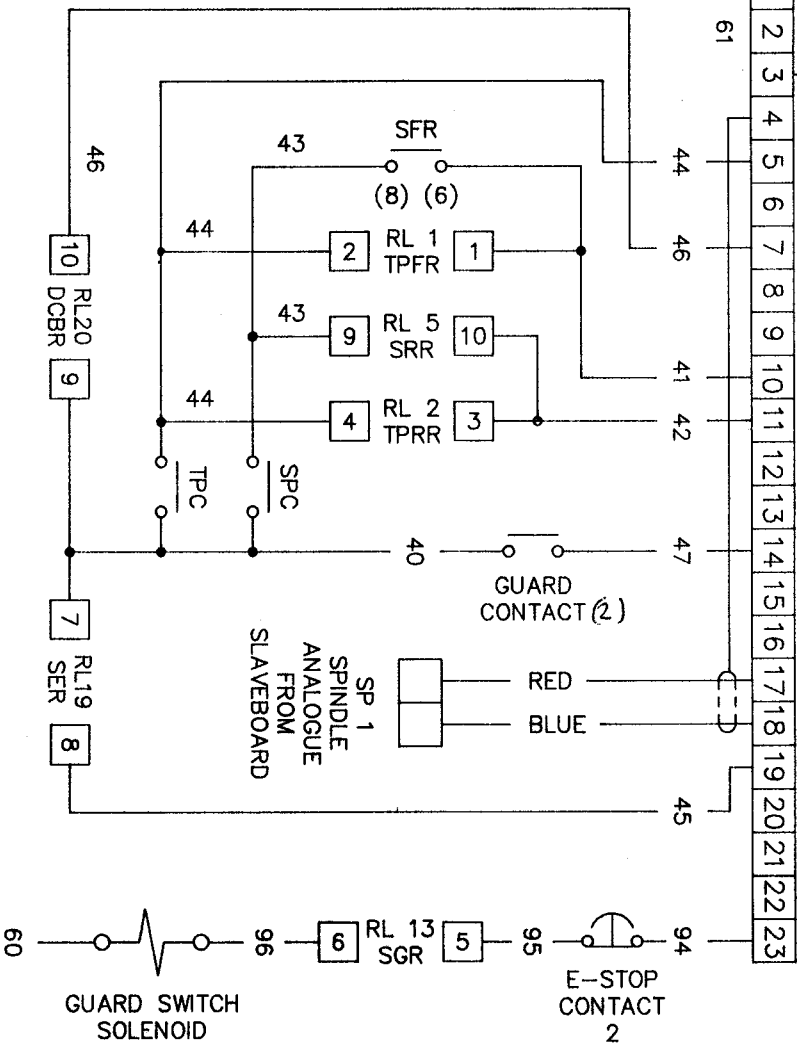
3 PHASE SUPPRESSOR (BI 004300)

6mm EARTH

FERRITE BEADS (RS 239-056)



LINK (3-22) 0.5mm BLUE



10 RL20 DCBR 9

RELAYS ON SLAVEBOARD SEE SHEET 9

7 RL19 SER 8

60 GUARD SWITCH SOLENOID

94 E-STOP CONTACT 2 95

SP 1 SPINDLE ANALOGUE FROM SLAVEBOARD

IF IN DOUBT ASK

DENFORD MACHINE TOOLS LTD

BRIGHOUSE

WEST YORKSHIRE

DRN BY A McHENRY

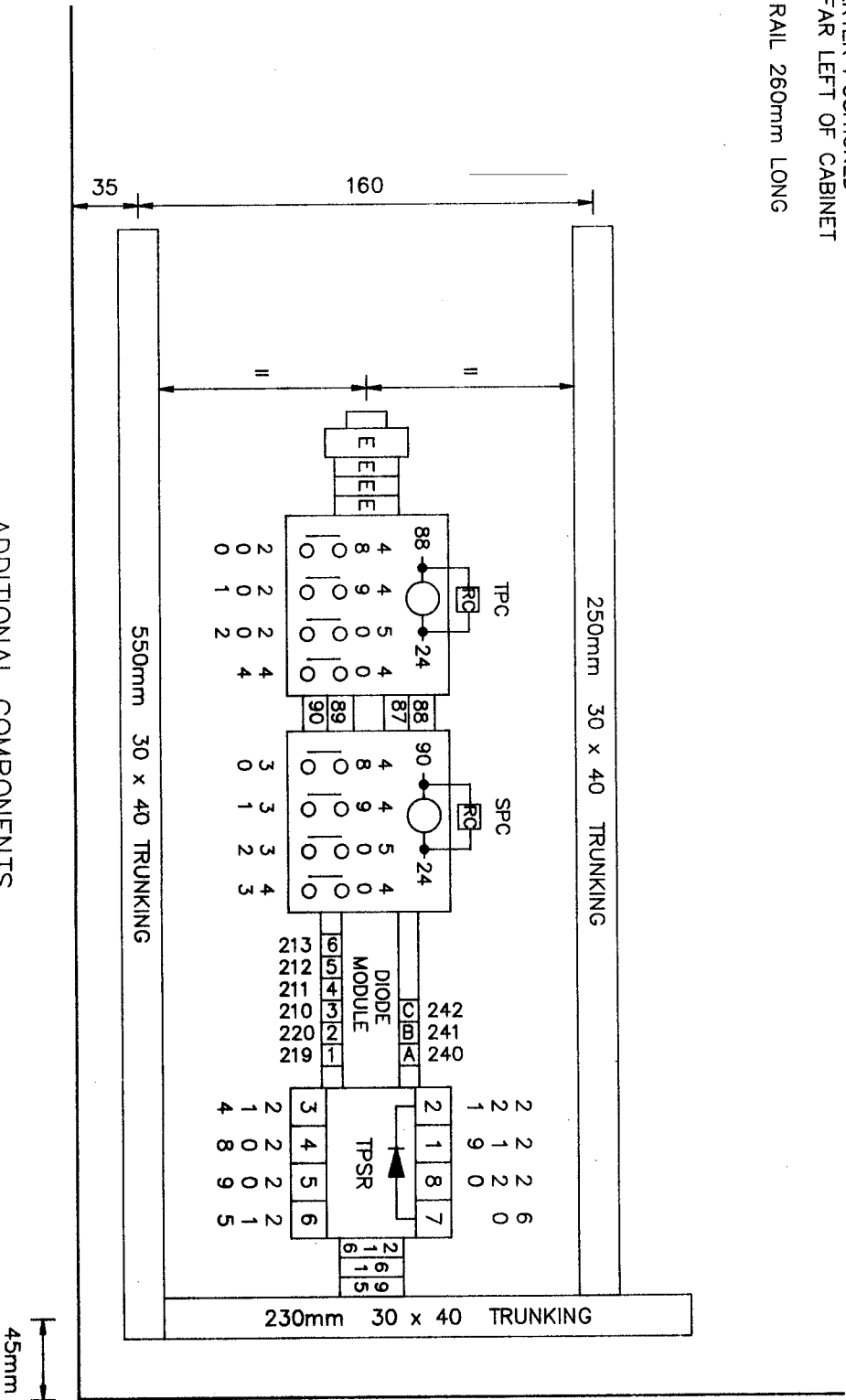
DATE 24-4-95

AC6-12

MIRAC PC SPINDLE DRIVE DETAILS

SHEET 12 [ MPC ]

NOTE:  
 INVERTER POSITIONED  
 TO FAR LEFT OF CABINET  
 DIN RAIL 260mm LONG



ADDITIONAL COMPONENTS  
 FOR DM 8 TURRET  
 ARE MOUNTED ON BOTTOM OF CABINET

IF IN DOUBT ASK

DENFORD MACHINE TOOLS LTD

BRIGHOUSE

WEST YORKSHIRE

DRN BY A McHENRY

DATE 24-4-95

AC6-13

MIRAC PC  
 DM 8 TURRET  
 ADDITIONAL  
 COMPONENTS

SHEET 13

[ MPC ]