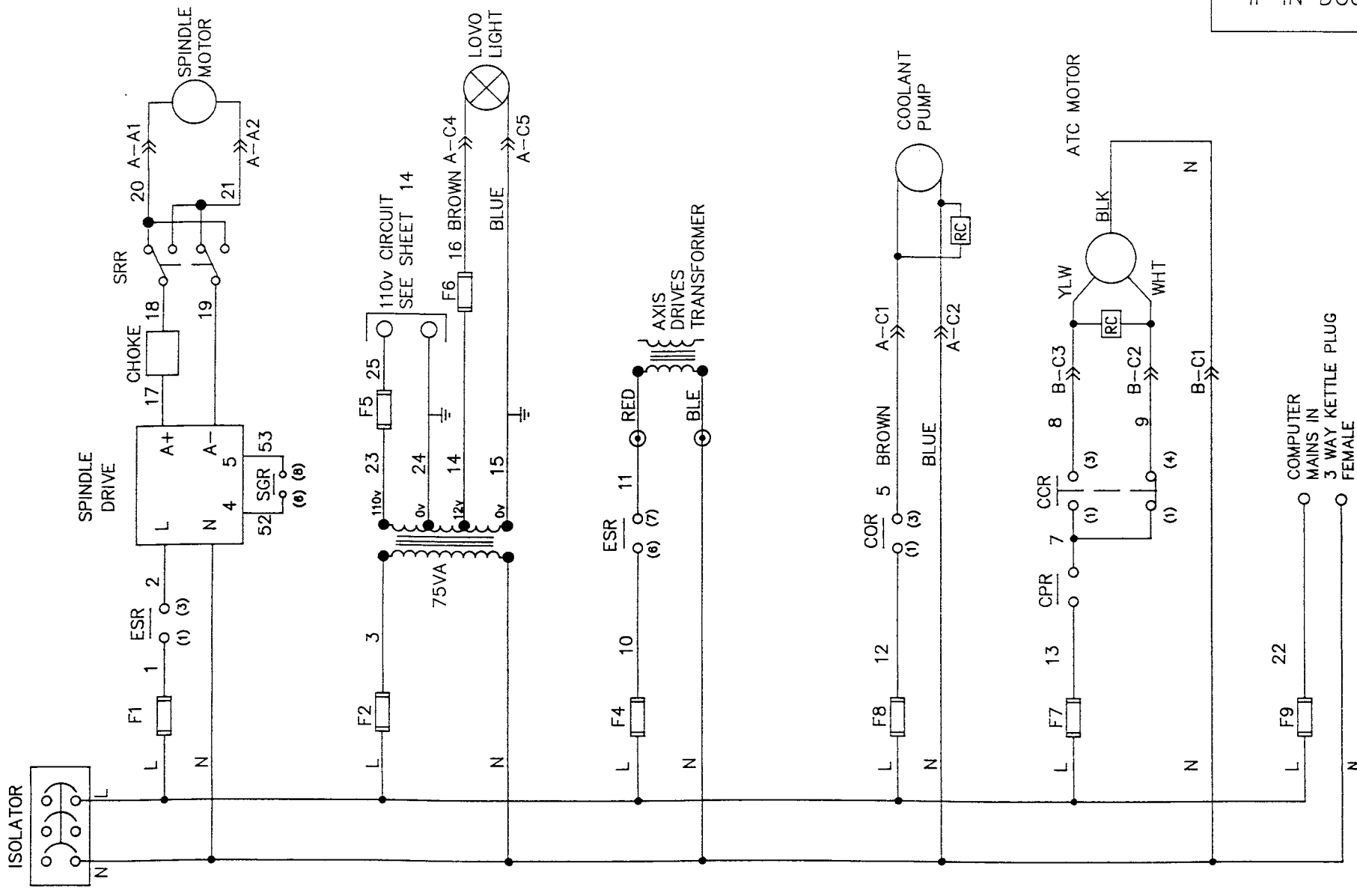
IF IN DOUBT ASK

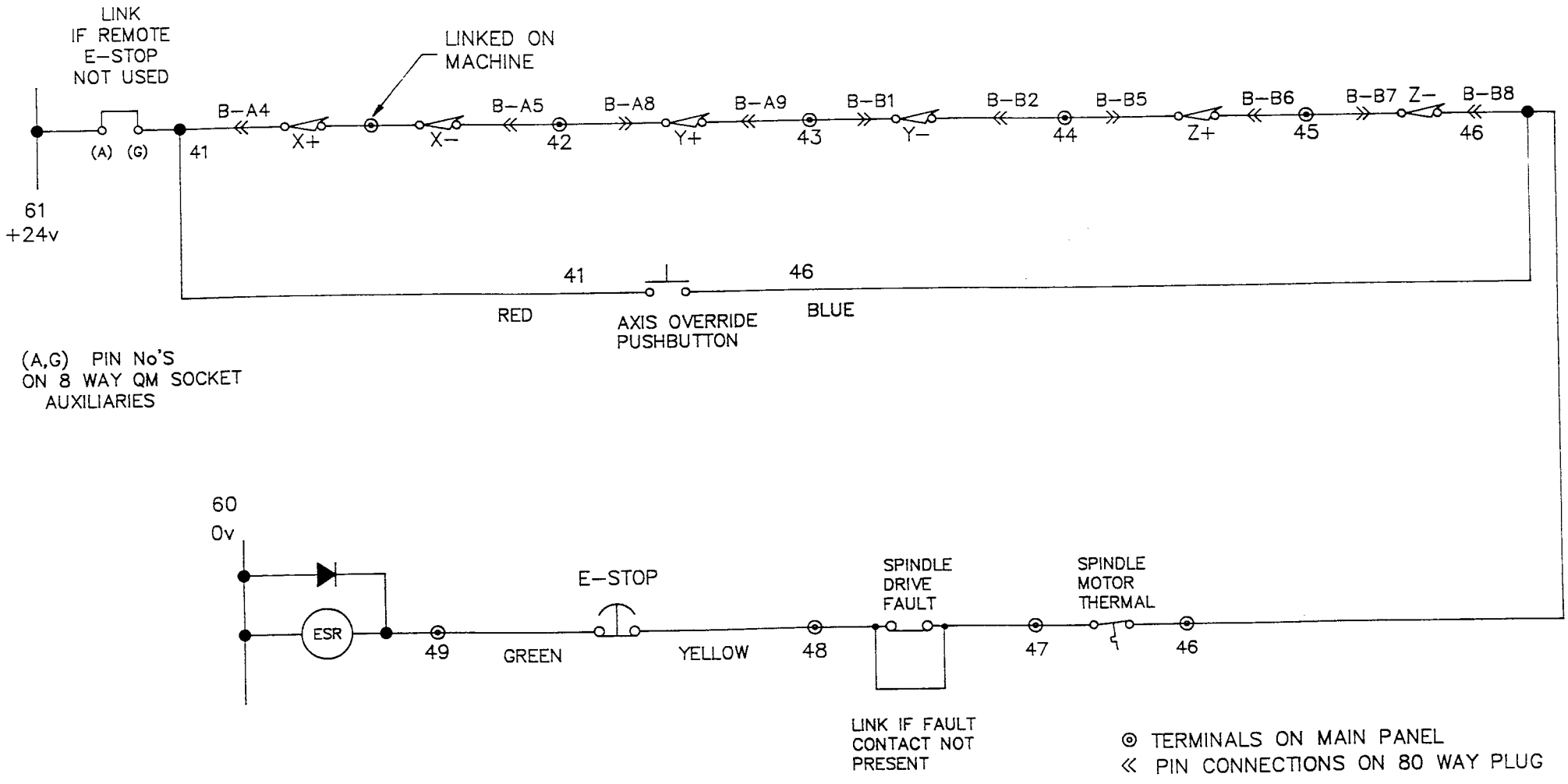


NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

» REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

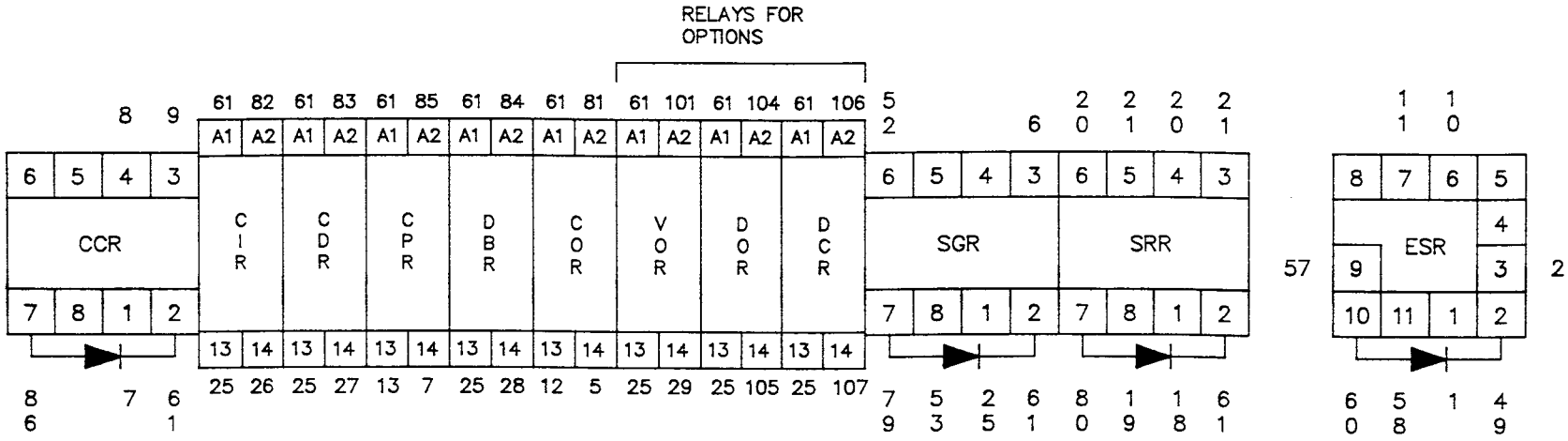
TRIAC VMC MAIN POWER SCHEMATIC (SPRINT DRIVE)	SHEET 1 OF [S1C]

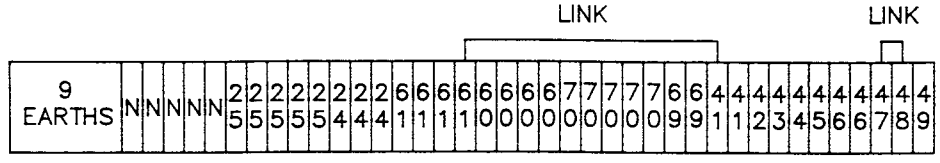
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 23–2–93	A3– 400190 C

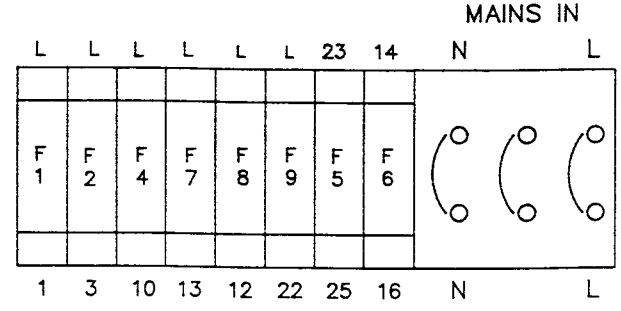


TRIAC VMC EMERGENCY STOP CIRCUIT	SHEET 2 OF

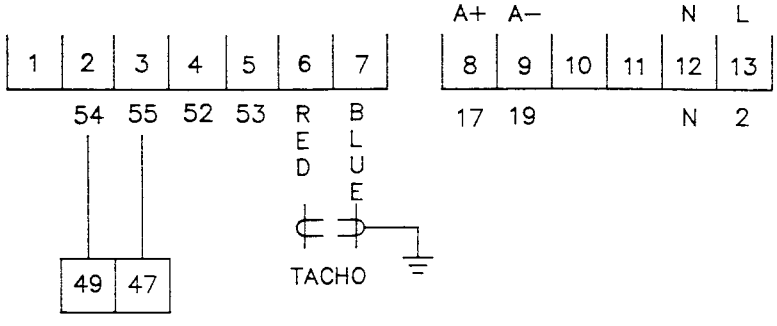
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17–12–90 | A3– 400191 A







SPRINT DRIVE CONNECTIONS

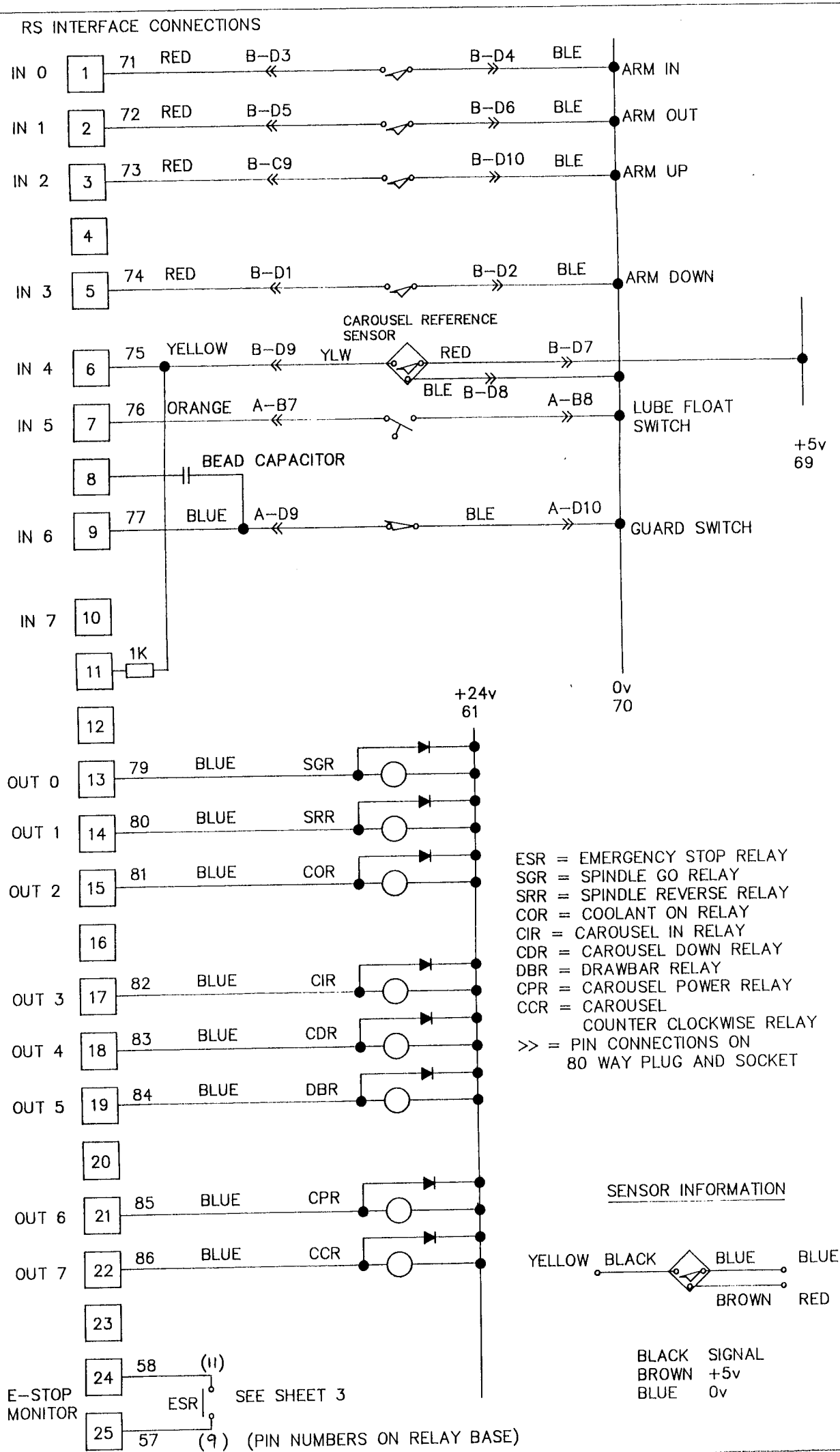


F1	SPINDLE DRIVE	6.3 AMP
F2	CONTROL TRANS	3.15 AMP
F4	DRIVES TRANS	6.3 AMP
F5	110v CIRCUIT	3.15 AMP
F6	WORKLIGHT	3.15 AMP
F7	ATC MOTOR	3.15 AMP
F8	COOLANT PUMP	3.15 AMP
F9	COMPUTER	3.15 AMP

TRIAC VMC
RELAY CONNECTIONS
(SPRINT DRIVE)

SHEET 3
OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-9-92 | A3- 400200 E

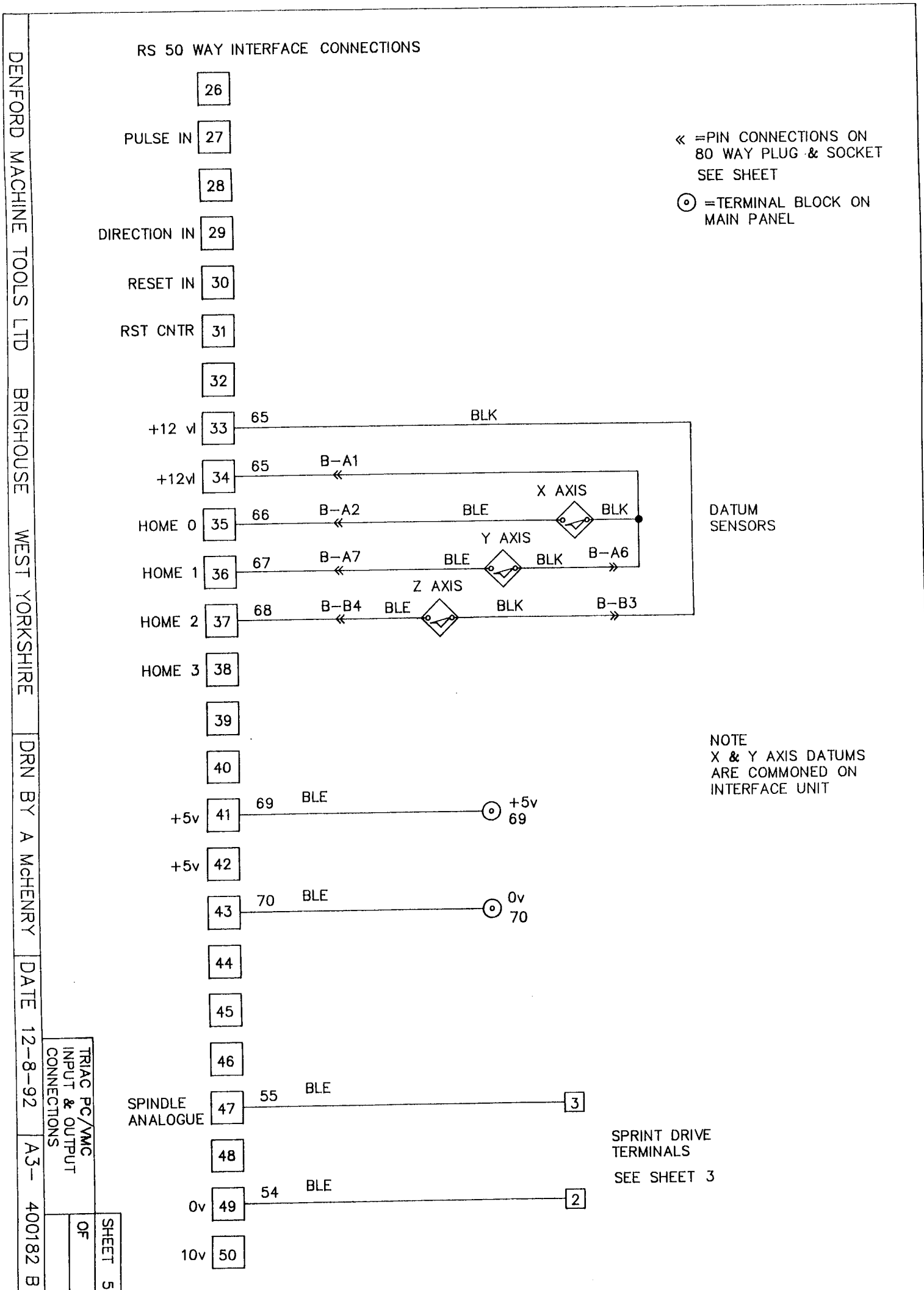


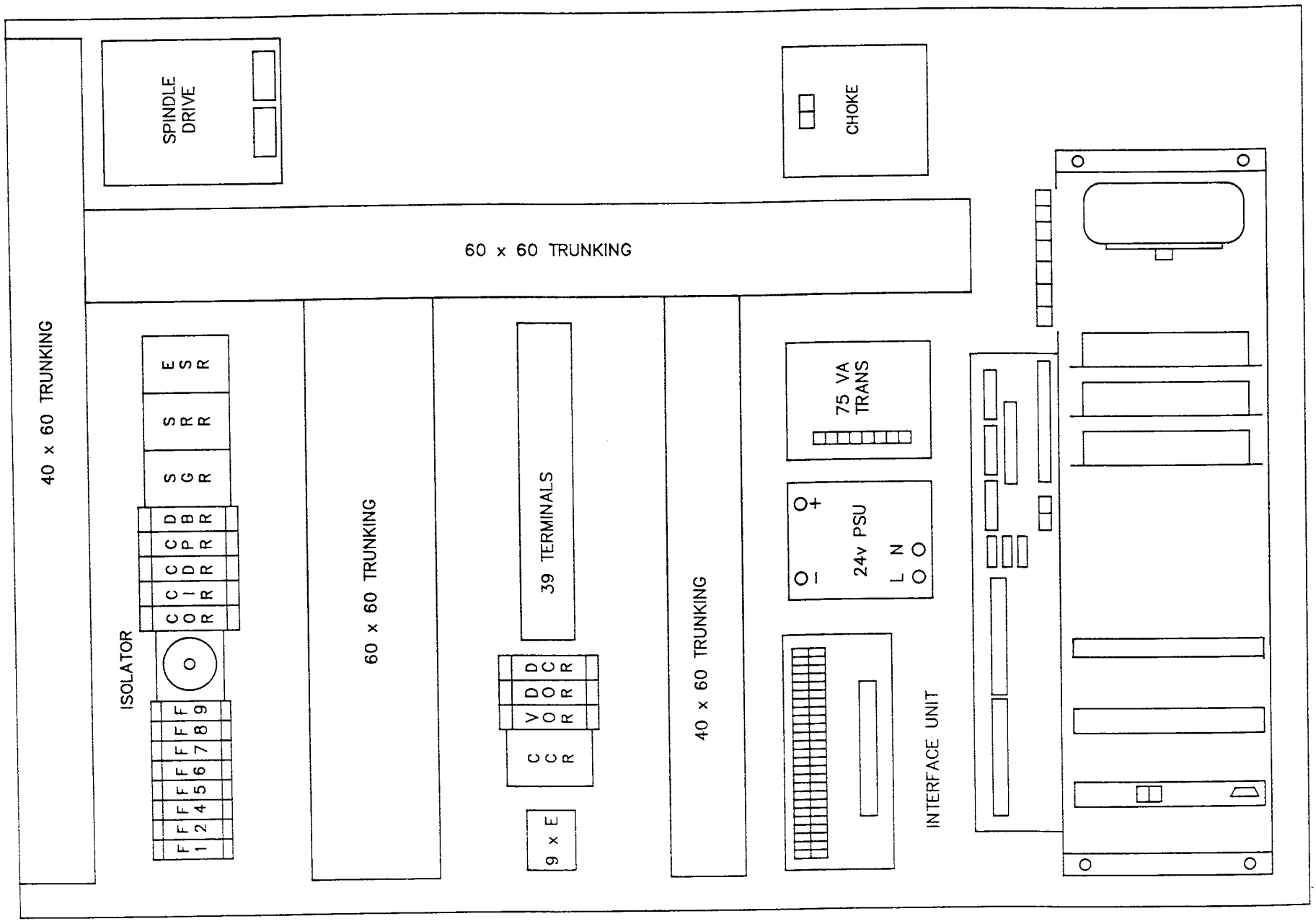
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY	DATE	A3–	400181 B
A McHENRY	11–6–92		

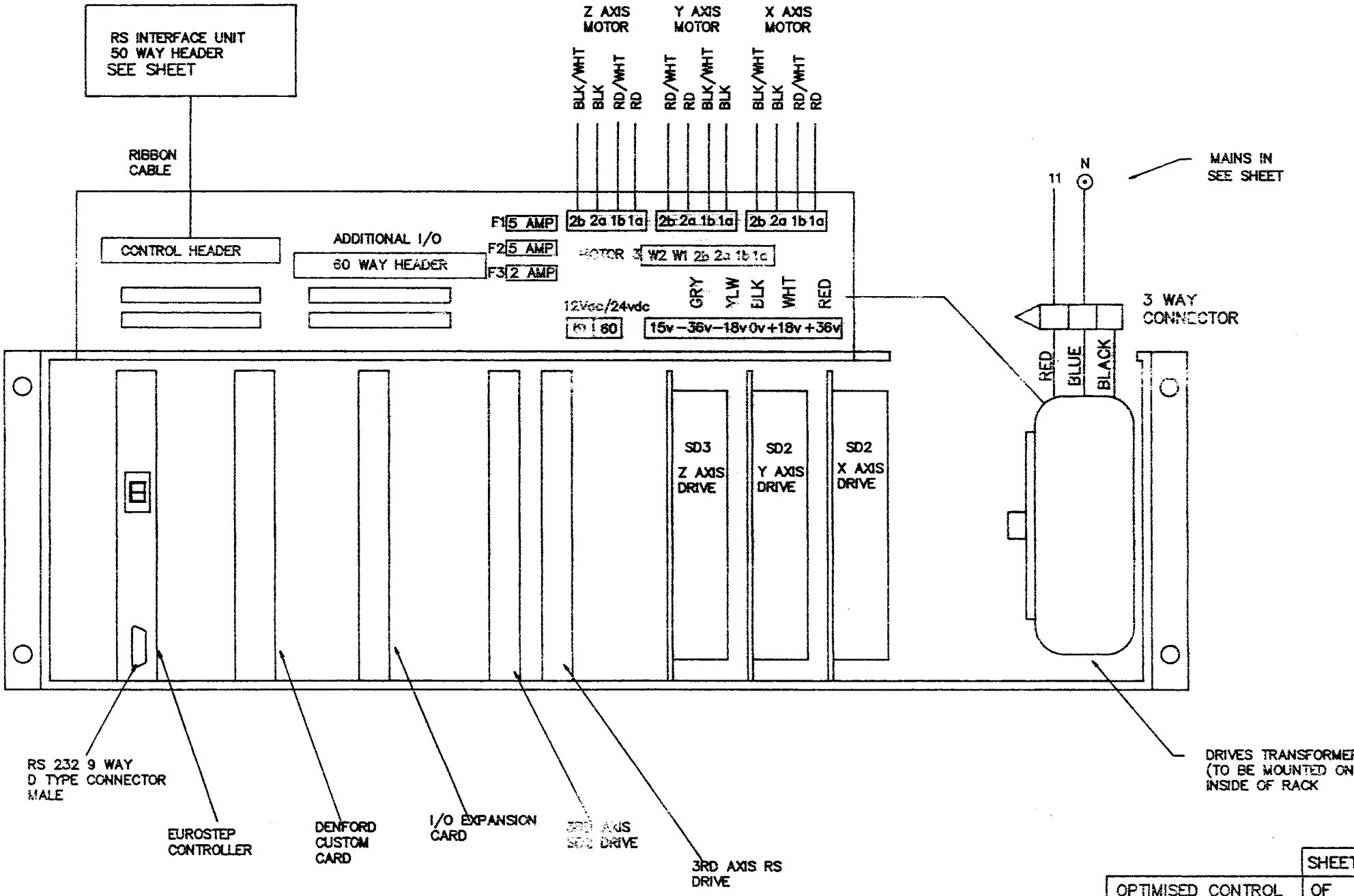
TRIAC VMC/PC I/O WIRING 1–25 (WITHOUT SPINDLE SENSOR)

SHEET 4 OF


RS 50 WAY INTERFACE CONNECTIONS
26
PULSE IN 27
28
DIRECTION IN 29
RESET IN 30
RST CNTR 31
32
+12 vl 33
+12vl 34
HOME 0 35
HOME 1 36
HOME 2 37
HOME 3 38
39
40
+5v 41
+5v 42
43
44
45
46
SPINDLE ANALOGUE 47
48
0v 49
10v 50
65
BLK
65
B–A1
66
B–A2
BLE
BLK
X AXIS
DATUM SENSORS
67
B–A7
BLE
BLK
B–A6
Y AXIS
68
B–B4
BLE
BLK
B–B3
Z AXIS
69
BLE
+5v
69
70
BLE
0v
70
55
BLE
3
54
BLE
2
« =PIN CONNECTIONS ON 80 WAY PLUG & SOCKET SEE SHEET
⊙ =TERMINAL BLOCK ON MAIN PANEL
NOTE
X & Y AXIS DATUMS ARE COMMONED ON INTERFACE UNIT
SPRINT DRIVE TERMINALS
SEE SHEET 3
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE
DRN BY A McHENRY
DATE 12–8–92
A3– 400182 B
TRIAC PC/VMC INPUT & OUTPUT CONNECTIONS
SHEET 5
OF



TRIAC VMC MAIN PANEL LAYOUT		SHEET 6 OF [S6B]	
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 12-1-93	A3- 400186 B



	SHEET No 7
OPTIMISED CONTROL RACK ASSEMBLEY	OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A. NEWSOME | DATE 17-10-90 | A3– 400177 A

PLUG A

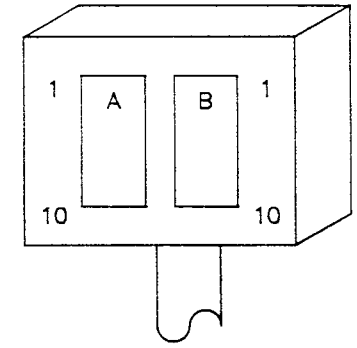
ROW A

PIN No	COLOUR	CABLE No	DESTINATION
1	BROWN	20	SPINDLE MOTOR — 4 CORE SCREEN 1.5mm
2	BLUE	21	
3	EARTH		
4	SCREEN		
5	RED	46	THERMAL — 2 CORE SCREEN
6	BLUE	47	
7			
8			
9			
10			

ROW B

PIN No	COLOUR	CABLE No	DESTINATION
1	RED		TACHO — 2 CORE SCREEN
2	BLUE		
3	SCREEN		
4	RED/GREEN	6	LUBE PUMP — 0.2mm SINGLES
5	RED/BLUE	24	
6	EARTH		
7	ORANGE	76	LUBE FLOAT SWITCH — 0.2mm SINGLES
8	ORANGE	70	
9	BLACK	105	DOOR OPEN SOLENOID — 1 mm SINGLES
10	BLACK	107	DOOR CLOSE SOLENOID — 1 mm SINGLES

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

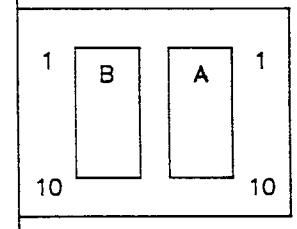
ROW C

PIN No	COLOUR	CABLE No	DESTINATION
1	BROWN	5	COOLANT — 1mm SINGLES
2	BLUE	N	
3	EARTH		
4	BROWN	16	LOVO LIGHT — 0.5mm SINGLES
5	BLUE	15	
6	RED	112	AIR PRESSURE SWITCH
7	RED		X AXIS MOTOR — 0.2mm SINGLES
8	RED/WHITE		
9	BLACK		
10	BLACK/WHITE		

ROW D

PIN No	COLOUR	CABLE No	DESTINATION
1	RED		Y AXIS MOTOR — 0.2mm SINGLES
2	RED/WHITE		
3	BLACK		
4	BLACK/WHITE		
5	RED		Z AXIS MOTOR — 0.2mm SINGLES
6	RED/WHITE		
7	BLACK		
8	BLACK/WHITE		
9	BLUE	77	GUARD SWITCH — 0.2mm SINGLES
10	BLUE	70	

(MALE PINS)



VIEW OF MACHINE SOCKET

TRIAC VMC
PLUG A
(WITHOUT SPINDLE SENSOR)

SHEET 8
OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 20-7-92 | A3- 400192 C

IF IN DOUBT ASK

PLUG B

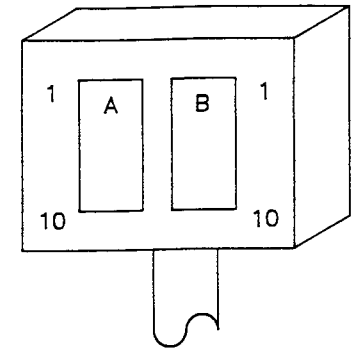
ROW A

PIN No	COLOUR	CABLE No	DESTINATION	
1	BLACK	65	X DATUM	0.2mm SINGLES
2	BLUE	66		
3	BROWN	29	VICE SOLENOID	1mm SINGLE
4	WHITE	41	X +/- O/TRAVEL	0.2mm SINGLES
5	YELLOW	42		
6	BLACK	65	Y DATUM	0.2mm SINGLES
7	BLUE	67		
8	RED	42	Y+ O/TRAVEL	0.2mm SINGLES
9	YELLOW	43		
10	BLUE	61	AIR PRESSURE SWITCH	0.2mm SINGLE

ROW B

PIN No	COLOUR	CABLE No	DESTINATION	
1	RED	43	Y- O/TRAVEL	0.2mm SINGLES
2	YELLOW	44		
3	BLACK	65	Z DATUM	0.2mm SINGLES
4	BLUE	68		
5	RED	44	Z+ O/TRAVEL	0.2mm SINGLES
6	YELLOW	45		
7	RED	45	Z- O/TRAVEL	0.2mm SINGLES
8	YELLOW	46		
9	RED	103	GUARD FULLY OPEN SWITCH	2 CORE SCREEN
10	BLUE	61		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

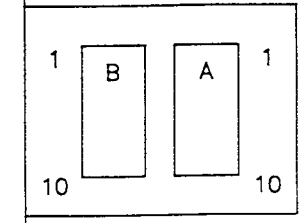
ROW C

PIN No	COLOUR	CABLE No	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4	BLACK	26	ARM IN SOLENOID	
5	BLACK	27	ARM DOWN SOLENOID	
6	BLACK	28	DRAWBAR SOLENOID	
7	BLACK	24	SOLENOID COMMON	1mm SINGLES
8	EARTH			
9	RED	73	ARM UP LIMIT SWITCH	0.2mm SINGLES
10	BLUE	70		

ROW D

PIN No	COLOUR	CABLE No	DESTINATION	
1	RED	74	ARM DOWN LIMIT SWITCH	0.2mm SINGLES
2	BLUE	70		
3	RED	71	ARM IN LIMIT SWITCH	0.2mm SINGLES
4	BLUE	70		
5	RED	72	ARM OUT LIMIT SWITCH	0.2mm SINGLES
6	BLUE	70		
7	RED	69	ATC SENSOR	4 CORE SCREEN
8	BLUE	70		
9	YELLOW	75		
10	SCREEN			

(MALE PINS)



VIEW OF MACHINE SOCKET

TRIAC VMC
PLUG B

SHEET 9
OF

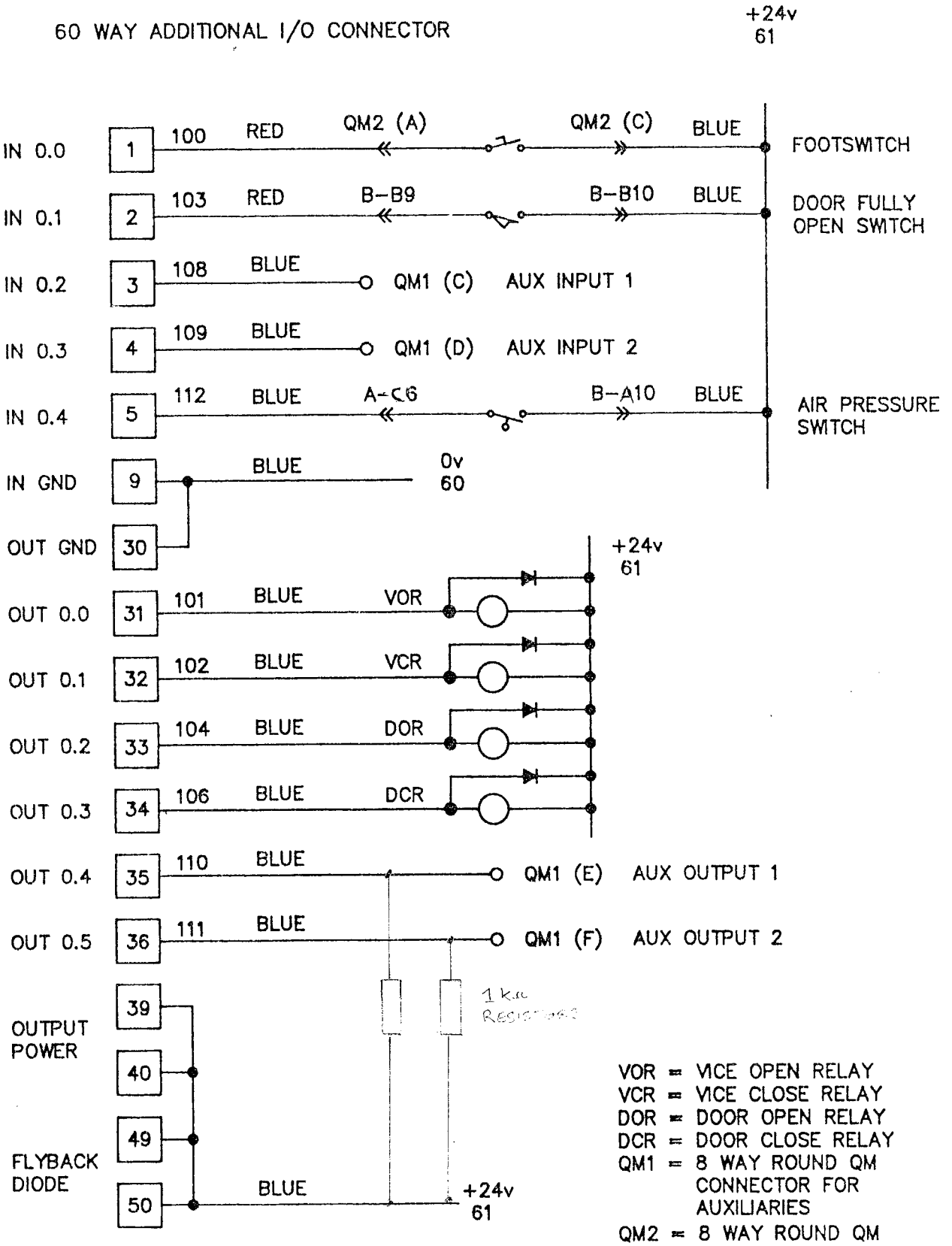
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 23-04-91 | A3- 400193 A

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 25-04-91 | A3-400196 A

TRIAC PC / VMC ADDITIONAL I/O (FMS)

SHEET No 10 OF

60 WAY ADDITIONAL I/O CONNECTOR



VOR = VICE OPEN RELAY
VCR = VICE CLOSE RELAY
DOR = DOOR OPEN RELAY
DCR = DOOR CLOSE RELAY
QM1 = 8 WAY ROUND QM CONNECTOR FOR AUXILIARIES
QM2 = 8 WAY ROUND QM CONNECTOR FOR FOOTSWITCH

>> = PIN CONNECTIONS ON 80 WAY PLUG AND SOCKET

IF IN DOUBT ASK

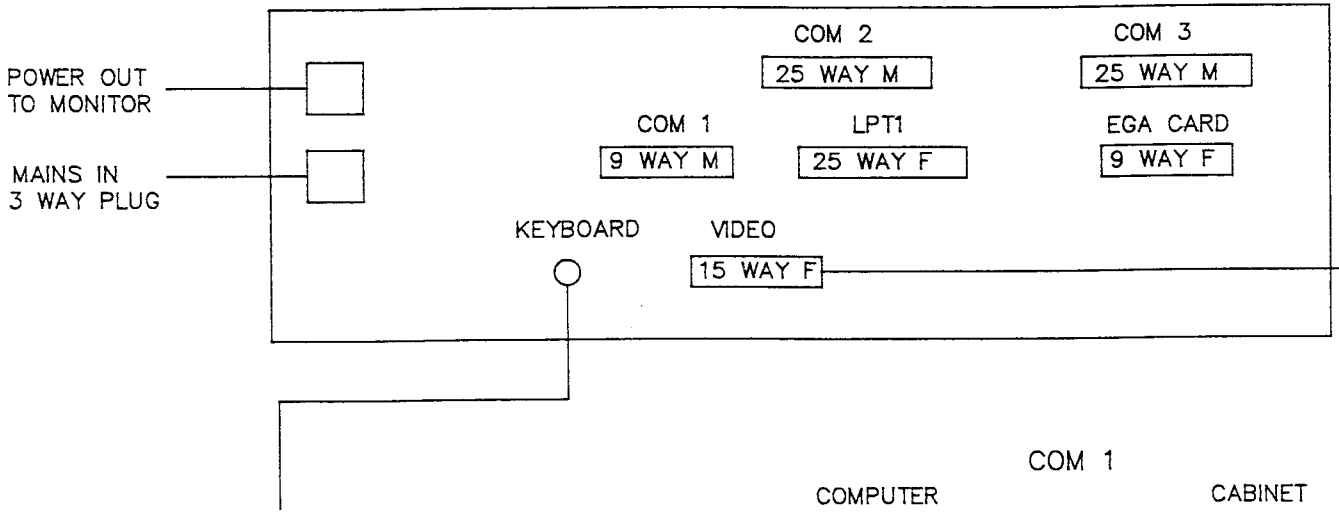
COM 3

COMPUTER 25 WAY D TYPE FEMALE		RACK SERIAL LINK 9 WAY D TYPE FEMALE
2	RED	2
3	BLUE	3
6		4
20		6
5	YELLOW	7
4	GREEN	8
7	SCREEN	9

4 CORE SCREEN

COMPUTER HIGH DENSITY 15 WAY D TYPE MALE		MONITOR HIGH DENSITY 15 WAY D TYPE FEMALE
1	RED	1
2	GREEN	2
3	BLUE	3
13	YELLOW	13
14	MAUVE	14
10	SCREEN	10

8 CORE SCREEN



KEYBOARD CONNECTOR

5 WAY DIN PLUG COMPUTER END		5 WAY DIN SOCKET CABINET END
1	RED	1
2	BLUE	2
3	YELLOW	3
4	SCREEN	4
5	GREEN	5

4 CORE SCREEN

COM 1

COMPUTER 9 WAY D TYPE FEMALE		CABINET 25 WAY D TYPE MALE
1	RED	8
2	WHITE	3
3	BLUE	2
4	GREEN	20
5	SCREEN	7
6	MAUVE	6
7	BROWN	4
8	BLACK	5
9	YELLOW	22

8 CORE SCREEN

COM 2

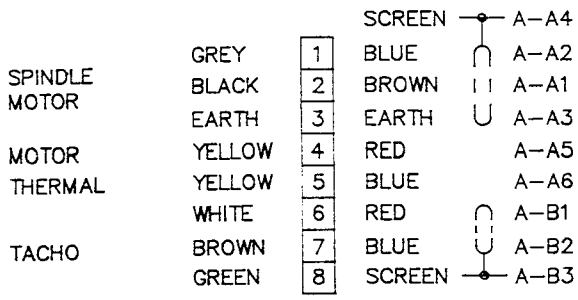
COMPUTER 25 WAY D TYPE FEMALE		KEYPAD 25 WAY D TYPE MALE
2	RED	2
3	BLUE	3
4	YELLOW	4
5	GREEN	
6	BLACK	6
7	SCREEN	7
20	BROWN	20

8 CORE SCREEN

VMC COMPUTER CONNECTIONS (386 SX / VGA)

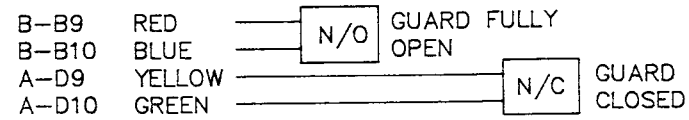
SHEET 11 OF [S11E]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 8-2-93 | A3- 400188 E



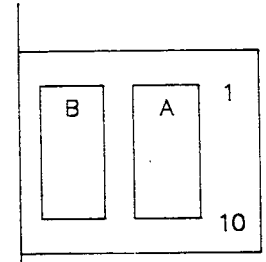
TERMINAL BLOCK
ON SPINDLE MOTOR

POWER GUARD SWITCH CONNECTIONS
4 CORE SCREEN



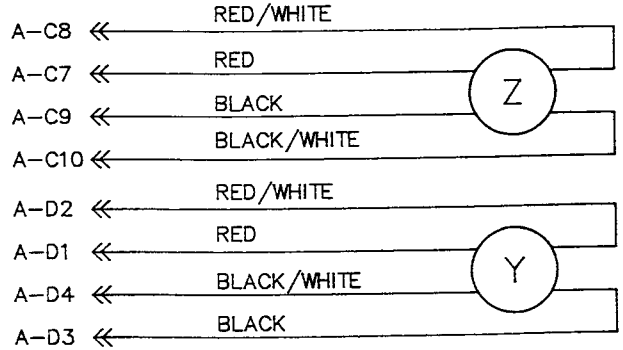
8 CORE FROM X AXIS
DATUM AND O/TRAVELS

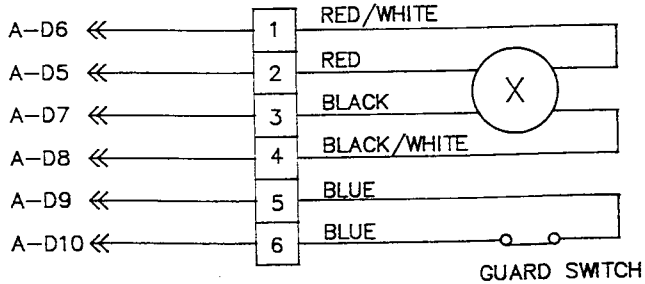
BLACK	B–A1
BLUE	B–A2
WHITE	B–A4
YELLOW	B–A5



PIN NUMBERS READ DOWNWARDS

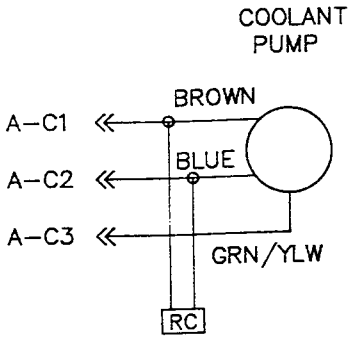
PLUG ARRANGEMENT
OUTSIDE VIEW OF
MACHINE END

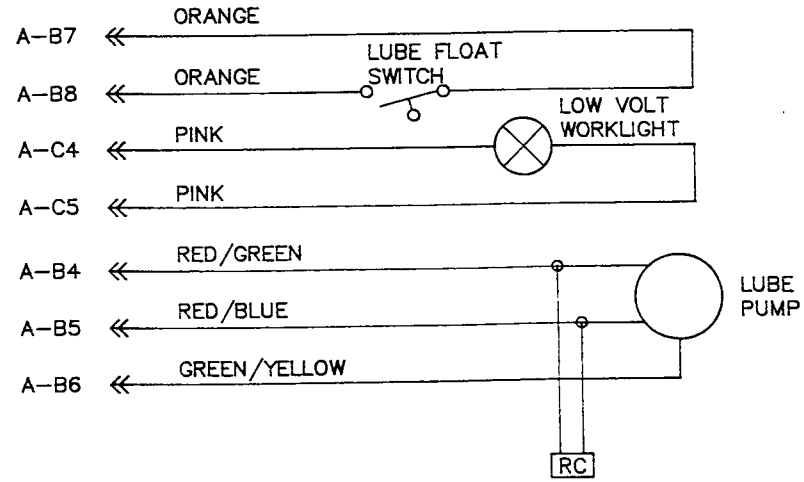




CONNECTION BOX
MOUNTED
ON X AXIS

(NON POWER)
(DOOR MACHINE)



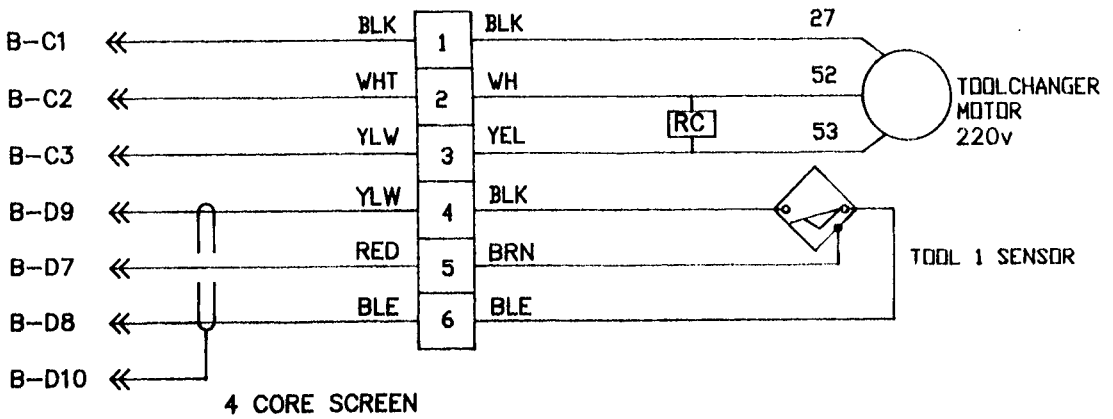


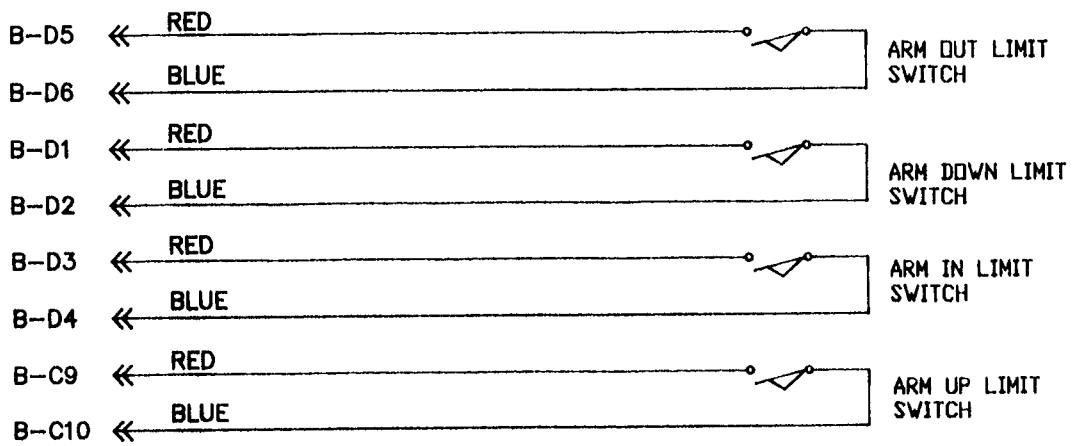
TRIAC VMC LIMIT SWITCH & MOTOR WIRING	SHEET 12
	OF

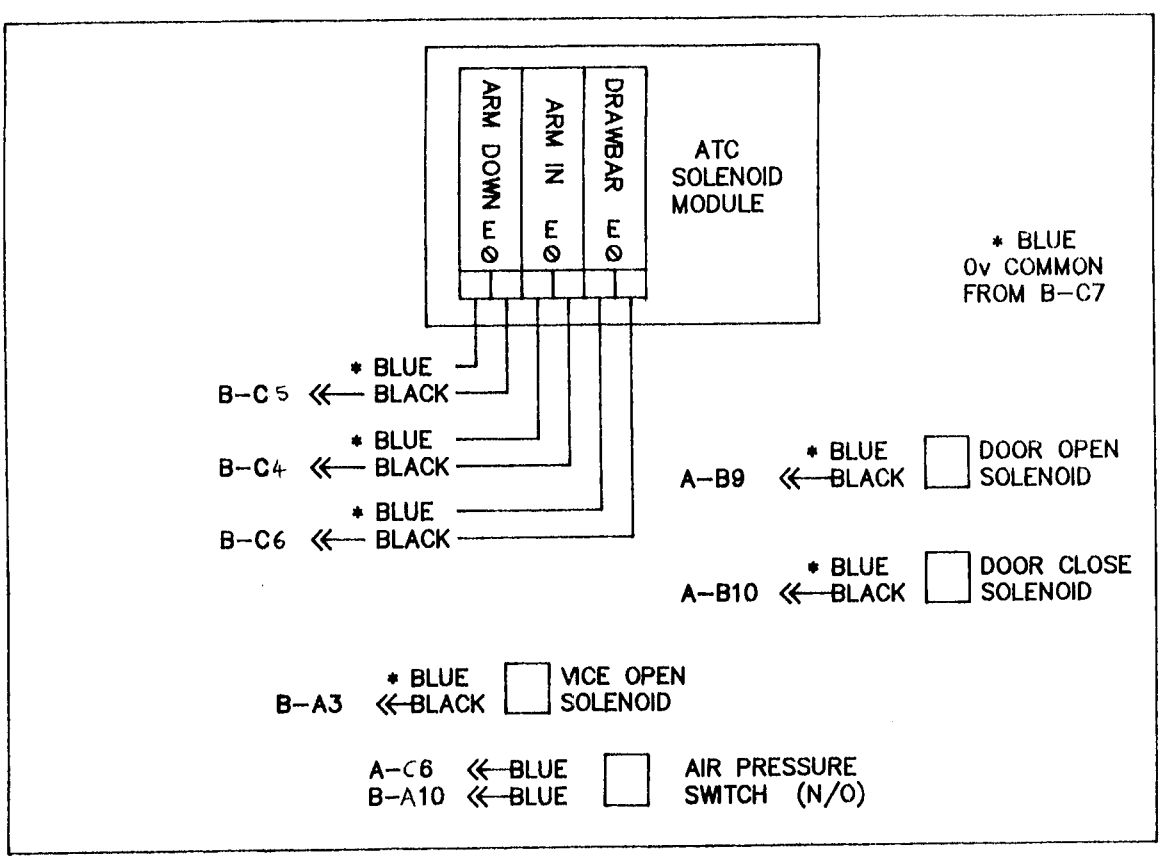
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-6-92 | A3- 400211 A

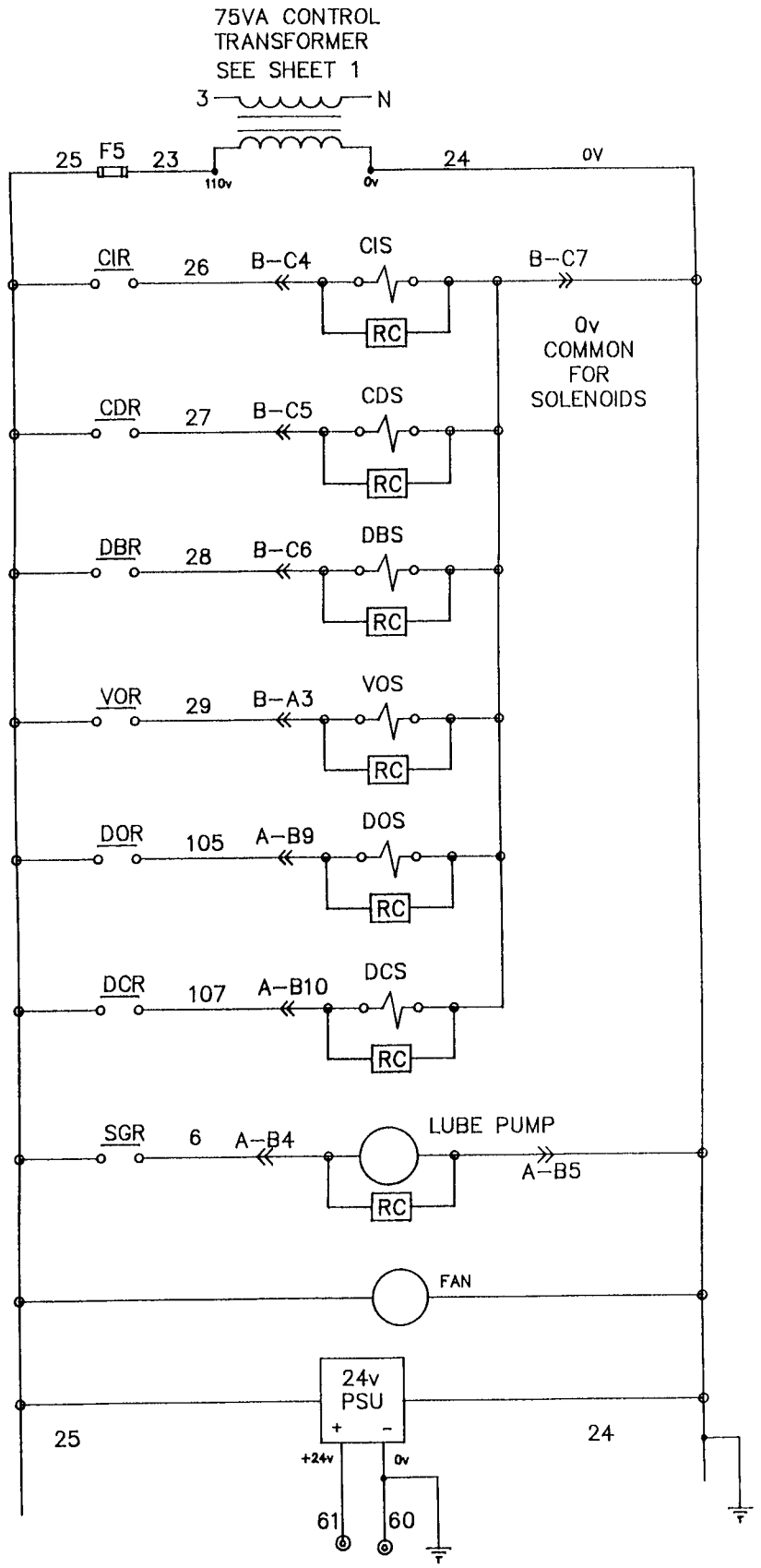
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 29-04-91 | A3- | TRIAC PC/VMC ATC & SOLENOID WIRING | SHEET No 13 OF

9 WAY TERMINAL BLOCK
MOUNTED ON CAROUSEL









CIS CAROUSEL IN SOLENOID
CDS CAROUSEL DOWN SOLENOID
DBS DRAWBAR SOLENOID
VOS VICE OPEN SOLENOID

« PIN CONNECTIONS ON 80 WAY PLUG

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY	DATE	A3–
A McHENRY	29–04–91	400195 A

TRIAC VMC
110 V
SCHEMATIC

SHEET 14
OF

IF IN DOUBT
ASK

HARTING 24 WAY

PIN	COLOUR	
1	BROWN	POWER TO MONITOR 1mm FLEX
2	BLUE	
3	EARTH	
4	RED	SIGNALS TO KEYPAD 8 CORE SCREEN
5	BLUE	
6	BLACK	
7	BROWN	
8	YELLOW	
9	GREEN	
10	SCREEN	
11	RED	SIGNALS TO MONITOR 8 CORE SCREEN
12	GREEN	
13	BLUE	
14	YELLOW	
15	MAUVE	
16	SCREEN	
17	RED	AXIS OVERRIDE — 4 CORE SCREEN
18	BLUE	
19	YELLOW	E-STOP PUSHBUTTON — 4 CORE SCREEN
20	GREEN	
21		
22		
23		
24		

MONITOR POWER
1mm FLEX 3.5m

KEYPAD
8 CORE SCREEN 3.5m

MONITOR SIGNALS
8 CORE SCREEN 3.5m

PUSHBUTTONS
4 CORE
3.5m

SHEET 15

TRIAC VMC
MONITOR CONNECTOR

DENFORD MACHINE TOOLS LTD	DATE 4-11-92	DRN BY A McHENRY	DRN No A4- 400214 C