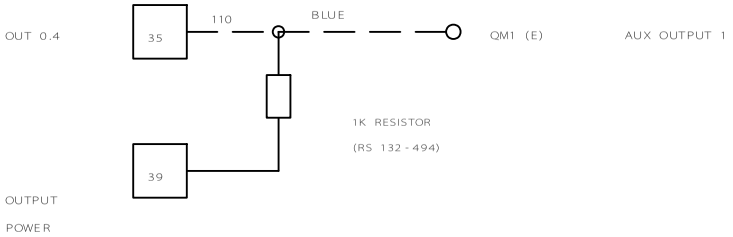
DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

IF IN DOUBT ASK

50 WAY ADDITIONAL I/O

CONNECTOR FOR OPTIONS

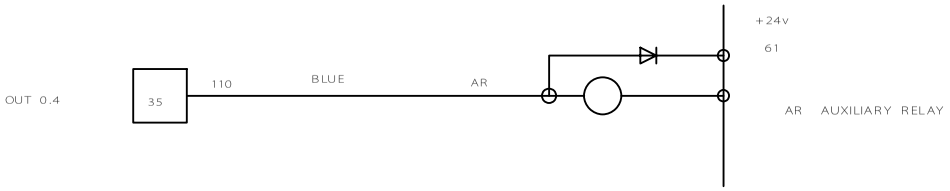


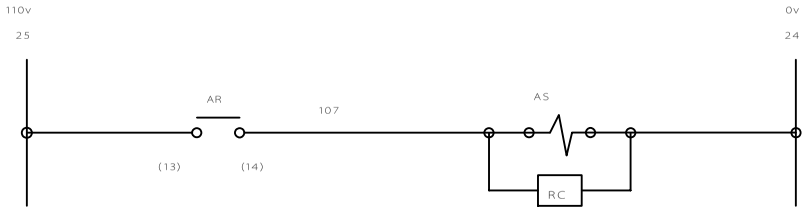
REMOVE

RESISTOR AND WIRE NUMBER 110 (IF FITTED)

ADD RELAY TO SAME TERMINAL

AS BELOW





AR AUXILIARY SOLENOID

TO CONTROL VICE ATTACHMENT

M62 ENERGISES RELAY

M64 DE-ENERGISES RELAY

DRN BY A McHENRY

DATE 20-2-97

TRIAC PC

ADDITIONAL I/O

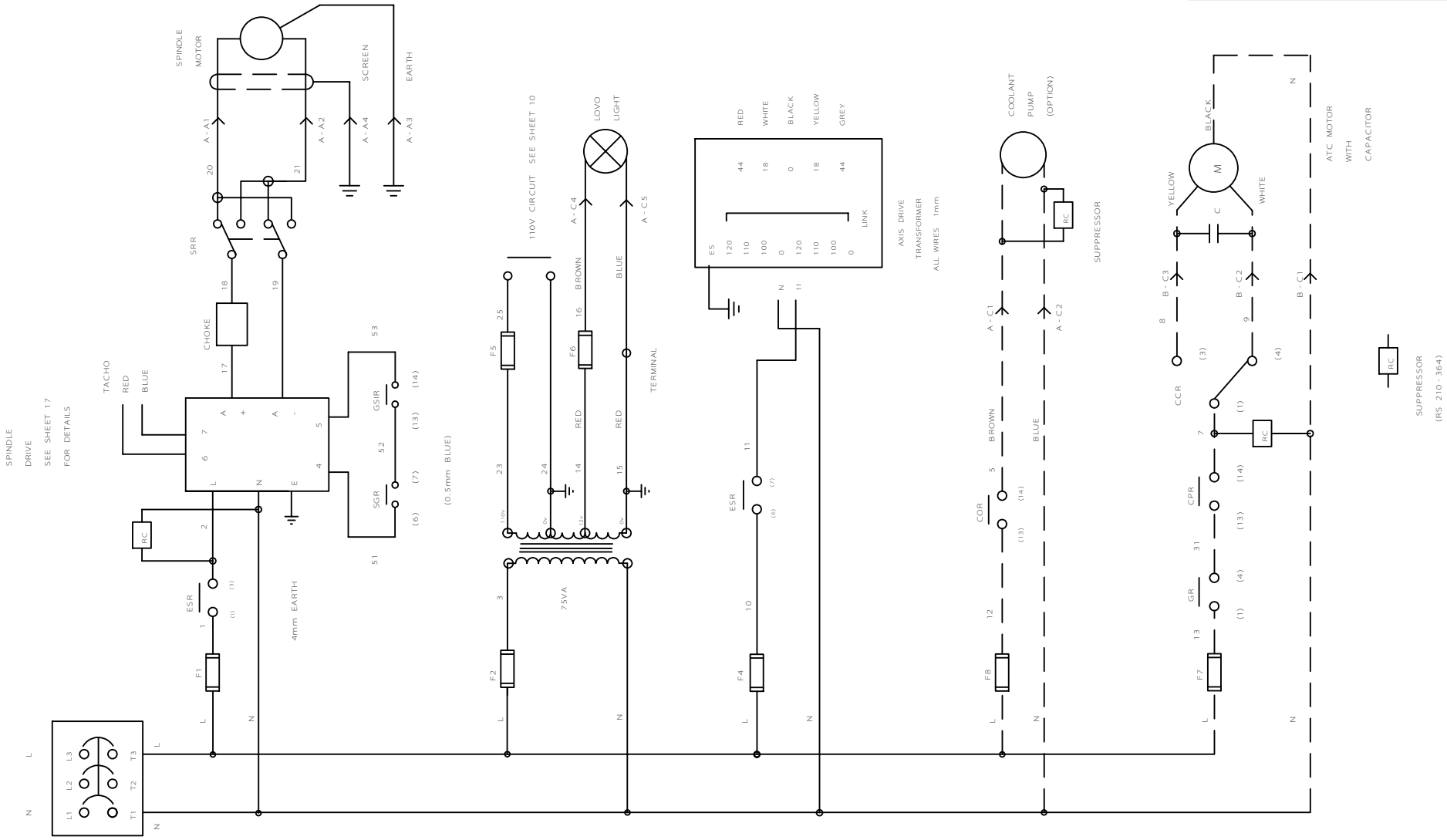
FOR OPTIONS

[TPC]

BN 01

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

IF IN DOUBT ASK



F1=6.3 AMP
F2=3.15 AMP
F4=6.3 AMP
F5=3.15 AMP
F6=3.15 AMP
F7=3.15 AMP
F8=3.15 AMP

NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

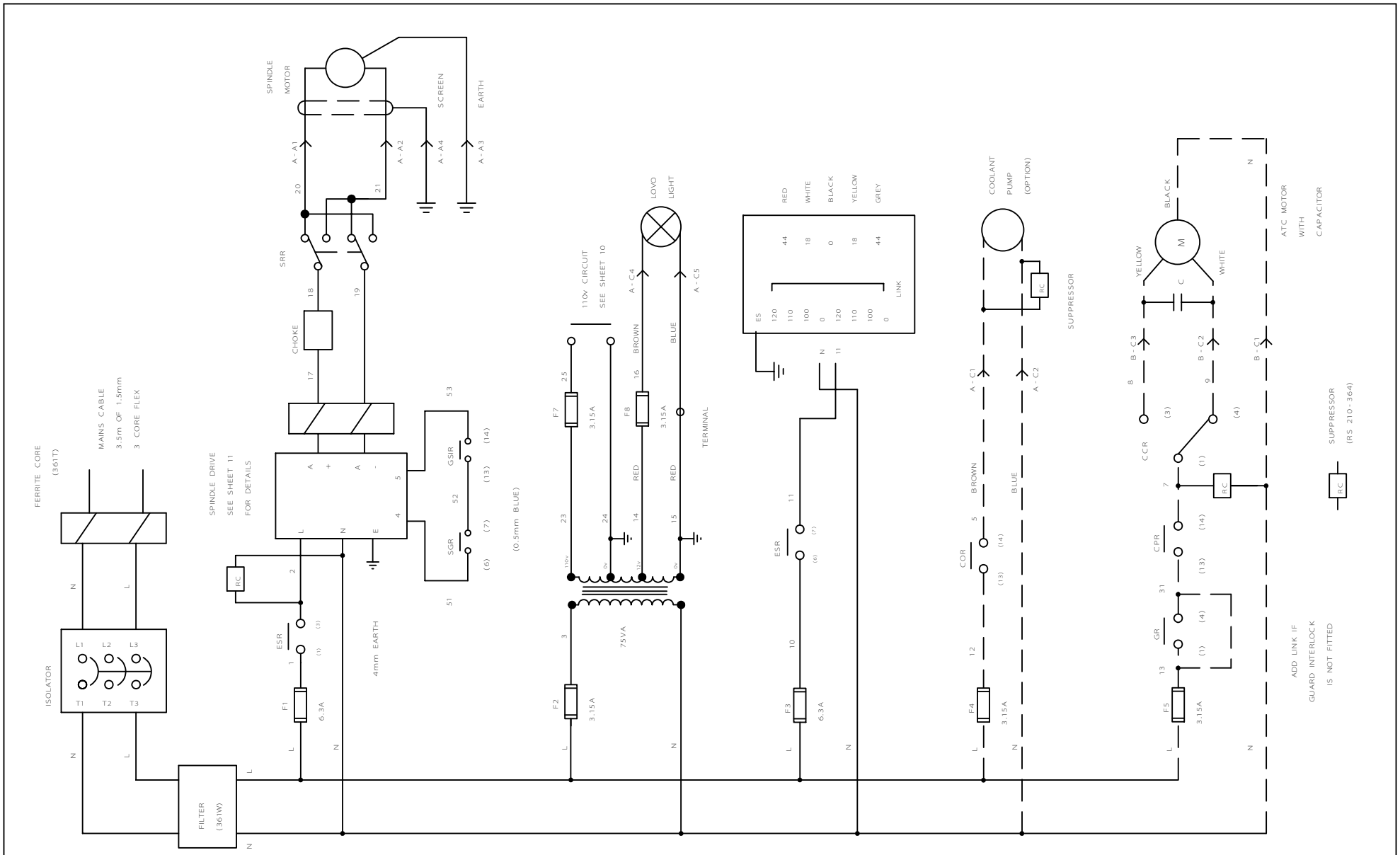
> REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC
POWER SCHEMATIC
SD12, 13 DRIVES

SHEET 1
[TPC]
[GR1]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 23 - 2 - 95 | A3 - 400176 K



NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

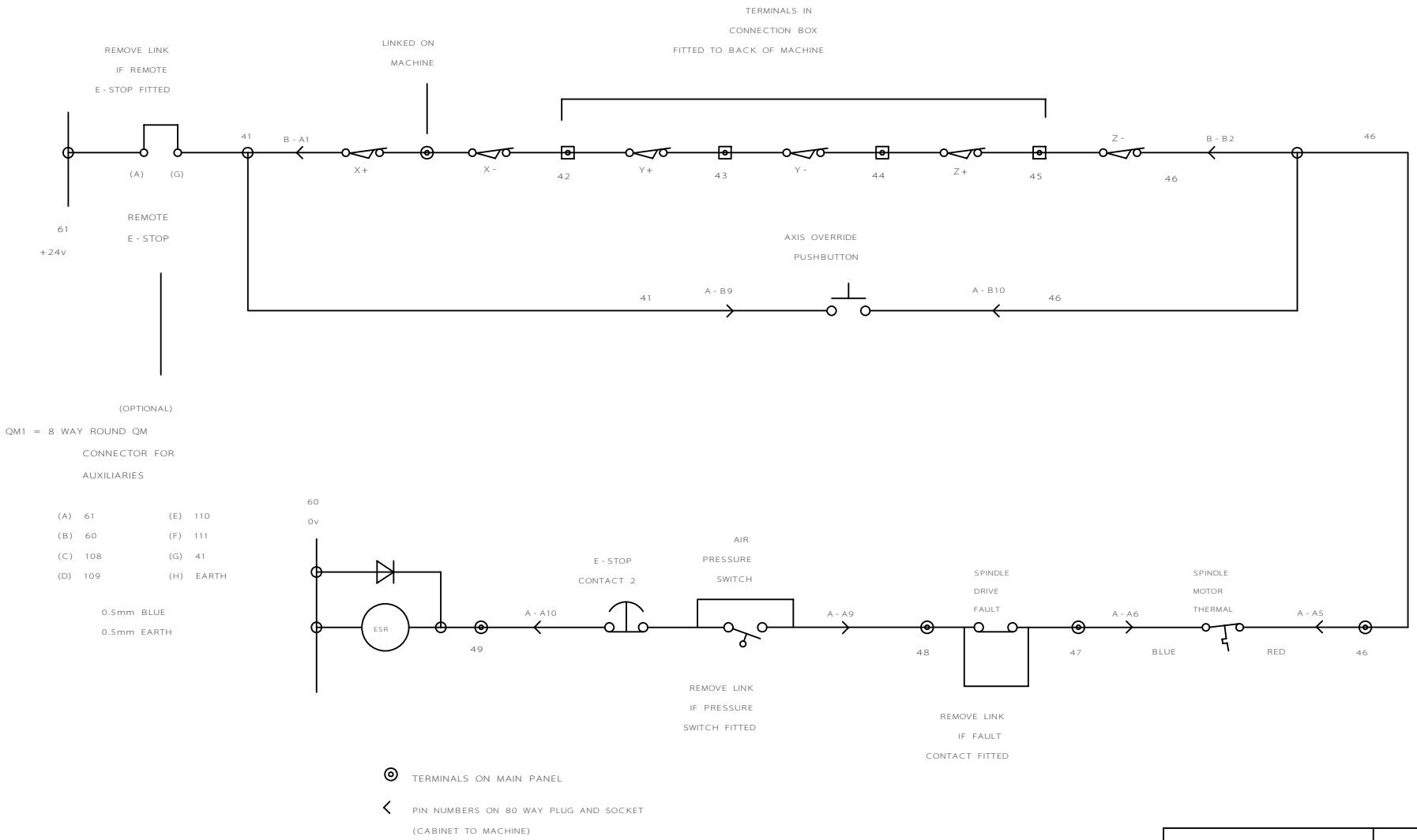
> REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC
POWER SCHEMATIC
SD12, 13 DRIVES

SHEET 1
[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 25 - 3 - 96	GR - 01 A

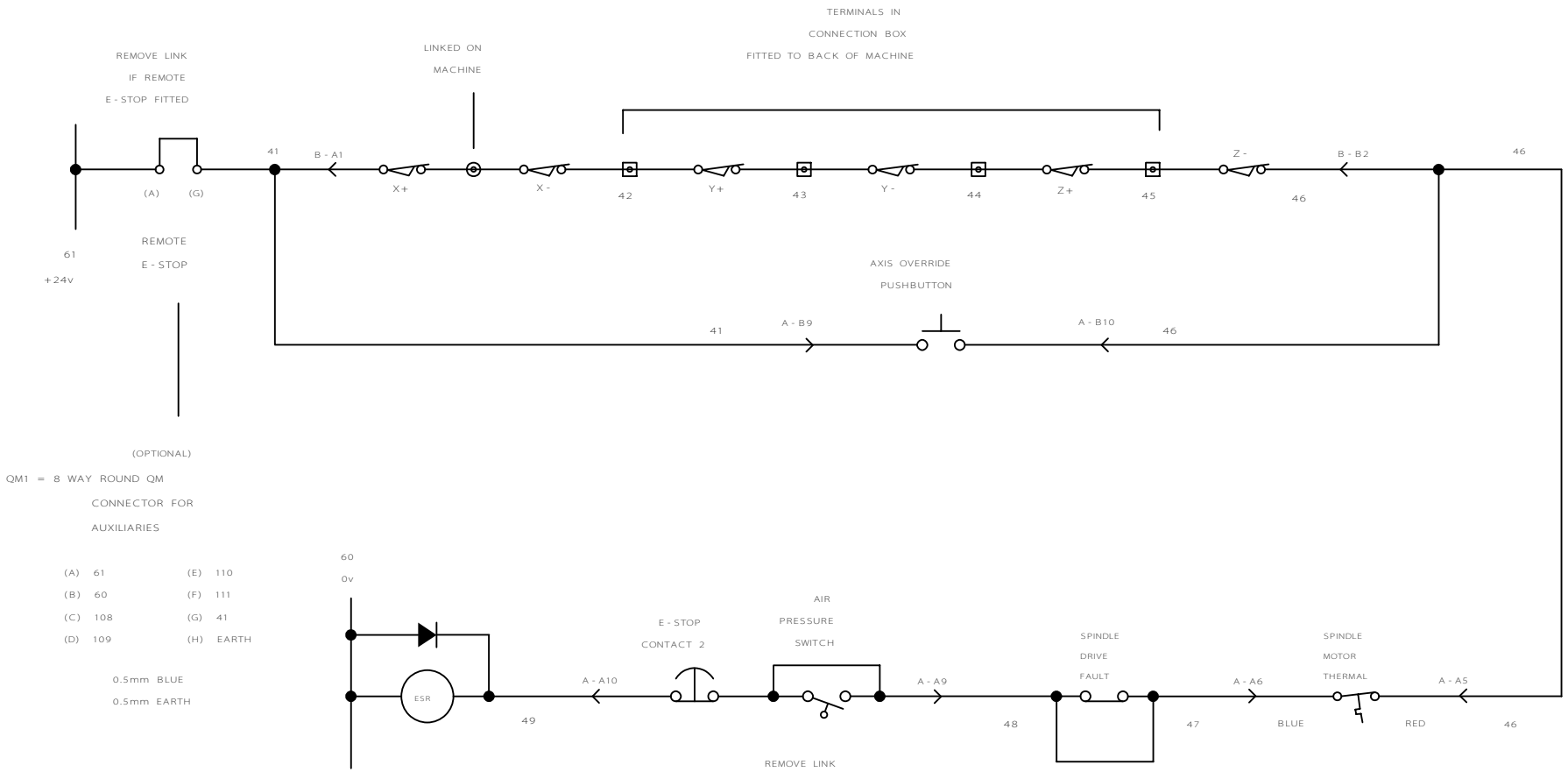
IF IN DOUBT ASK



TRIAC PC EMERGENCY STOP CIRCUIT	SHEET 2 [TPC] [GR2]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 24 - 2 - 95	A3 - 400191 E

IF IN DOUBT ASK



< PIN NUMBERS ON 80 WAY PLUG AND SOCKET
(CABINET TO MACHINE)

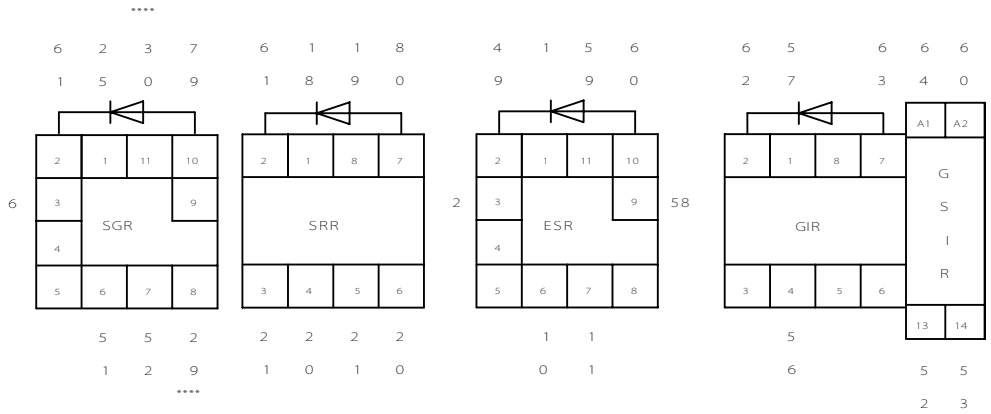
TRIAC PC EMERGENCY STOP CIRCUIT	SHEET 2 [TPC]

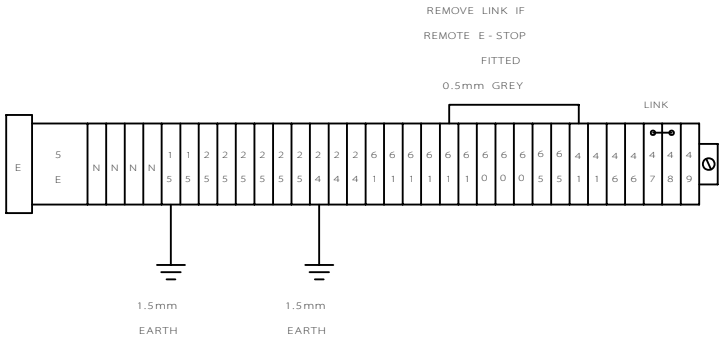
DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 25 - 3 - 96	GR - 02 A

IF IN DOUBT ASK

SEE SHEET 16
FOR OPTIONAL RELAYS

SEE SHEET 17
FOR SPINDLE DRIVE DETAILS



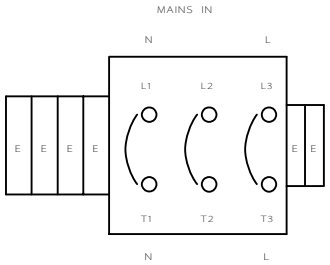


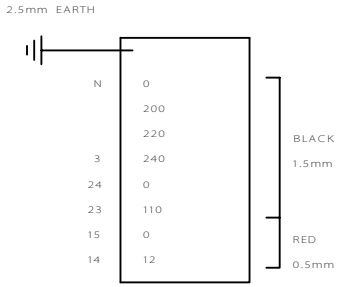
* ADD IF SPRAY MIST FITTED

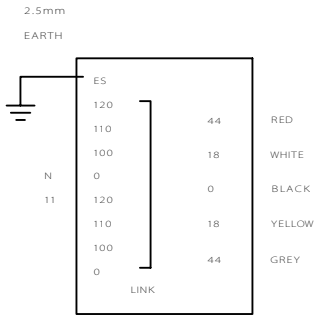
** ADD IF TOOLCHANGER FITTED

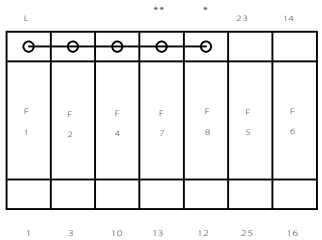
*** IF POWER VICE IS AUTOMATIC ADD VOR (SHEET 16)

**** ADD IF POWER VICE IS MANUALLY CONTROLLED

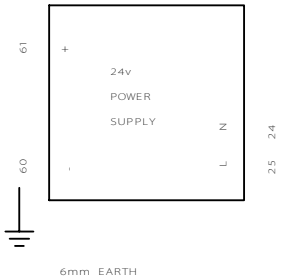








F1	SPINDLE DRIVE	10 AMP
F2	CONTROL TRANS	3.15 AMP
F4	DRIVES TRANS	6.3 AMP
F5	110v CIRCUIT	3.15 AMP
F6	WORKLIGHT	3.15 AMP
F7	ATC MOTOR	3.15 AMP
F8	COOLANT PUMP	3.15 AMP



TRIAC PC
PANEL WIRING
DETAILS

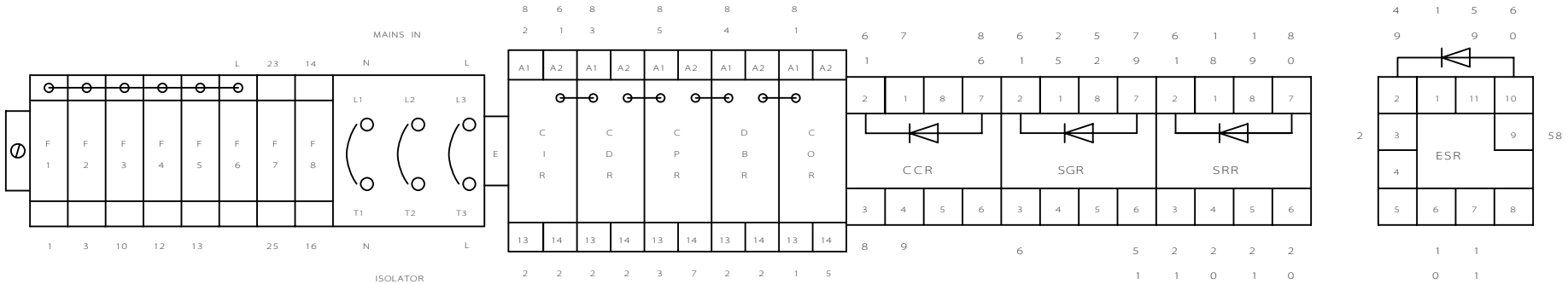
SHEET 3
[TPC]
[GR3]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 23-2-95 | A3- 400179 L

IF IN DOUBT ASK

132.5mm FROM EDGE OF BACKPLATE
TO CENTRE OF ISOLATOR

USE LINKS WITH
RELAY TYPE 51851



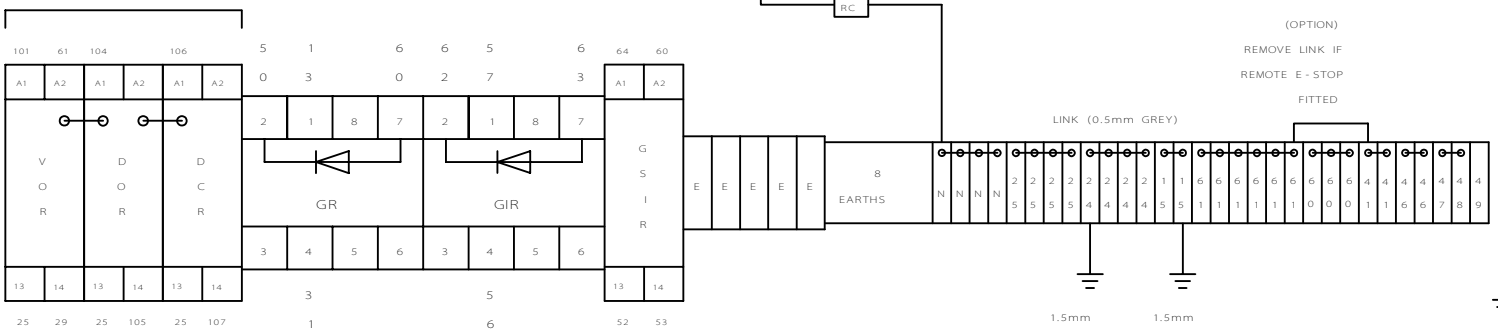
RELAYS FOR
OPTIONS

SUPPRESSOR
(RS 210-364)

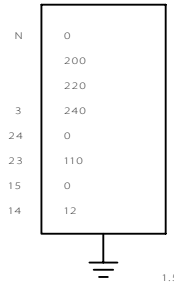
RC

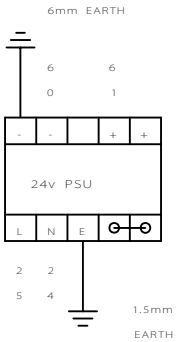
(OPTION)
REMOVE LINK IF
REMOTE E-STOP
FITTED

SPINDLE DRIVE
SEE SHEET 11
FOR DETAILS

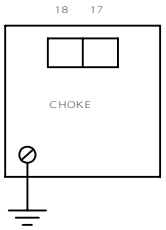


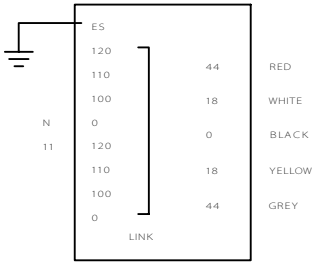
LINK 52 + 53
LINK 13 + 31
ADD LINKS IF GUARD
INTERLOCK IS NOT FITTED





F1	SPINDLE DRIVE	10 AMP
F2	CONTROL TRANS	3.15 AMP
F3	DRIVES TRANS	6.3 AMP
F4	COOLANT PUMP	3.15 AMP
F5	ATC MOTOR	3.15 AMP
(F6	COMPUTER ON TRIAC VMC)	
F7	110v CIRCUIT	3.15 AMP
F8	WORKLIGHT	3.15 AMP





AXIS DRIVE
TRANSFORMER
ALL WIRES 1mm
LINK IN 1mm BLACK

TRIAC PC
RELAY
WIRING

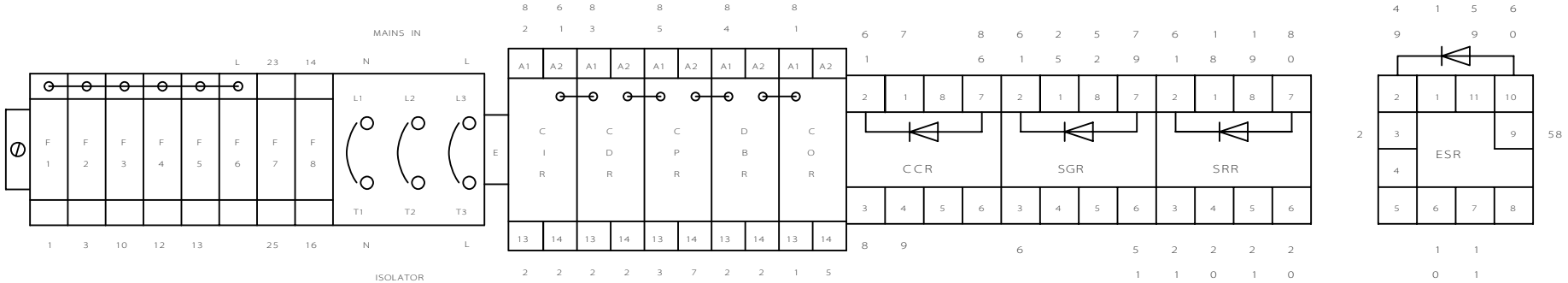
SHEET 3
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 27-3-96 | GR-03 A

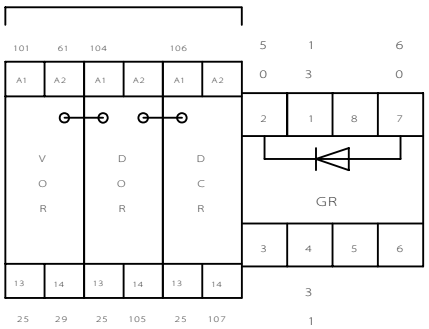
IF IN DOUBT ASK

132.5mm FROM EDGE OF BACKPLATE
TO CENTRE OF ISOLATOR

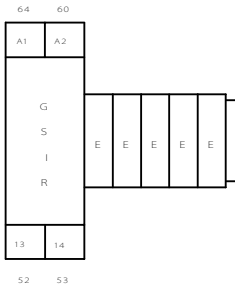
USE LINKS WITH
RELAY TYPE 51851



RELAYS FOR
OPTIONS



GIR



SUPPRESSOR
(RS 210-364)

RC

(OPTION)
REMOVE LINK IF
REMOTE E-STOP
FITTED

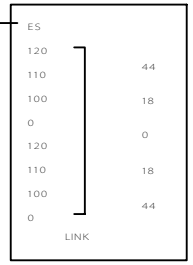
LINK (0.5mm GREY)

1.5mm
EARTH

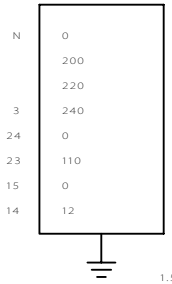
1.5mm
EARTH

SPINDLE DRIVE
SEE SHEET 11
FOR DETAILS

1.5mm
EARTH



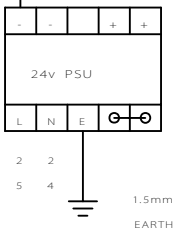
LINK 52 + 53
LINK 13 + 31
ADD LINKS IF GUARD
INTERLOCK IS NOT FITTED



75 VA
CONTROL
TRANS

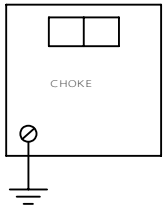
1.5mm EARTH

6mm EARTH



1.5mm
EARTH

F1	SPINDLE DRIVE	10 AMP
F2	CONTROL TRANS	3.15 AMP
F3	DRIVES TRANS	6.3 AMP
F4	COOLANT PUMP	3.15 AMP
F5	ATC MOTOR	3.15 AMP
(F6	COMPUTER ON TRIAC VMC)	
F7	110v CIRCUIT	3.15 AMP
F8	WORKLIGHT	3.15 AMP

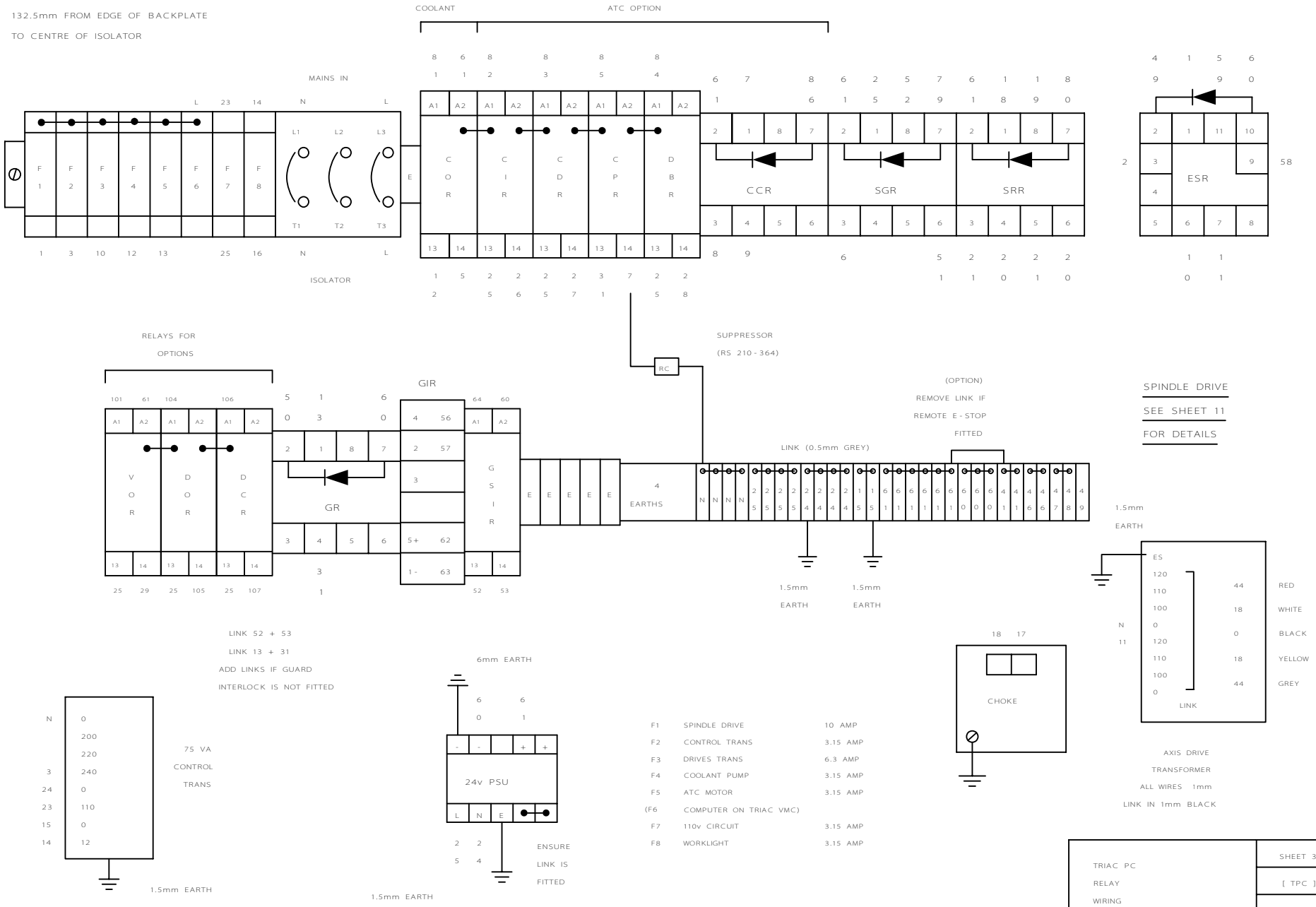


AXIS DRIVE
TRANSFORMER
ALL WIRES 1mm
LINK IN 1mm BLACK

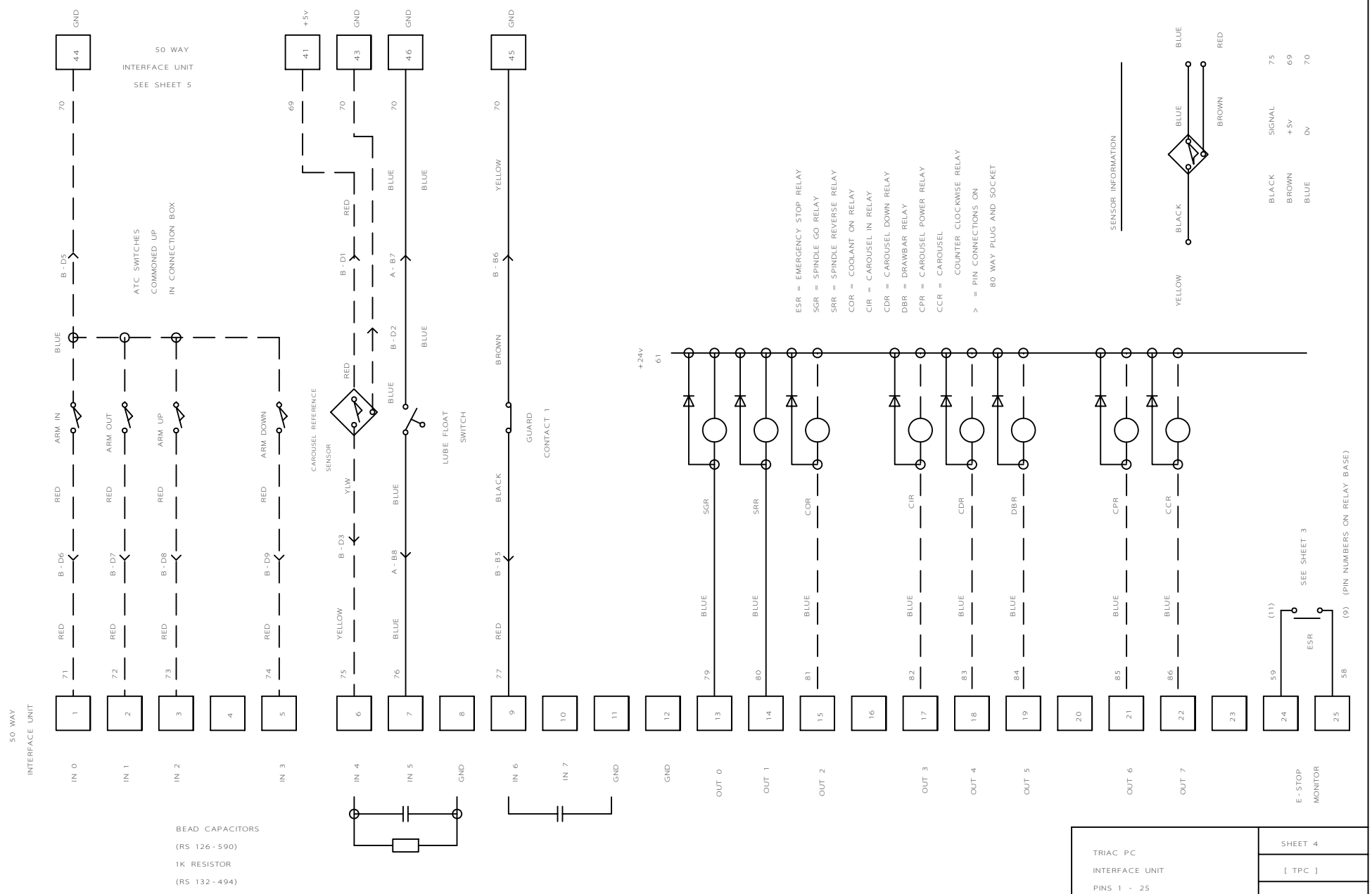
TRIAC PC
RELAY
WIRING

SHEET 3
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 9-9-96 | GR-03 B



DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 10-12-96 | GR-03 C

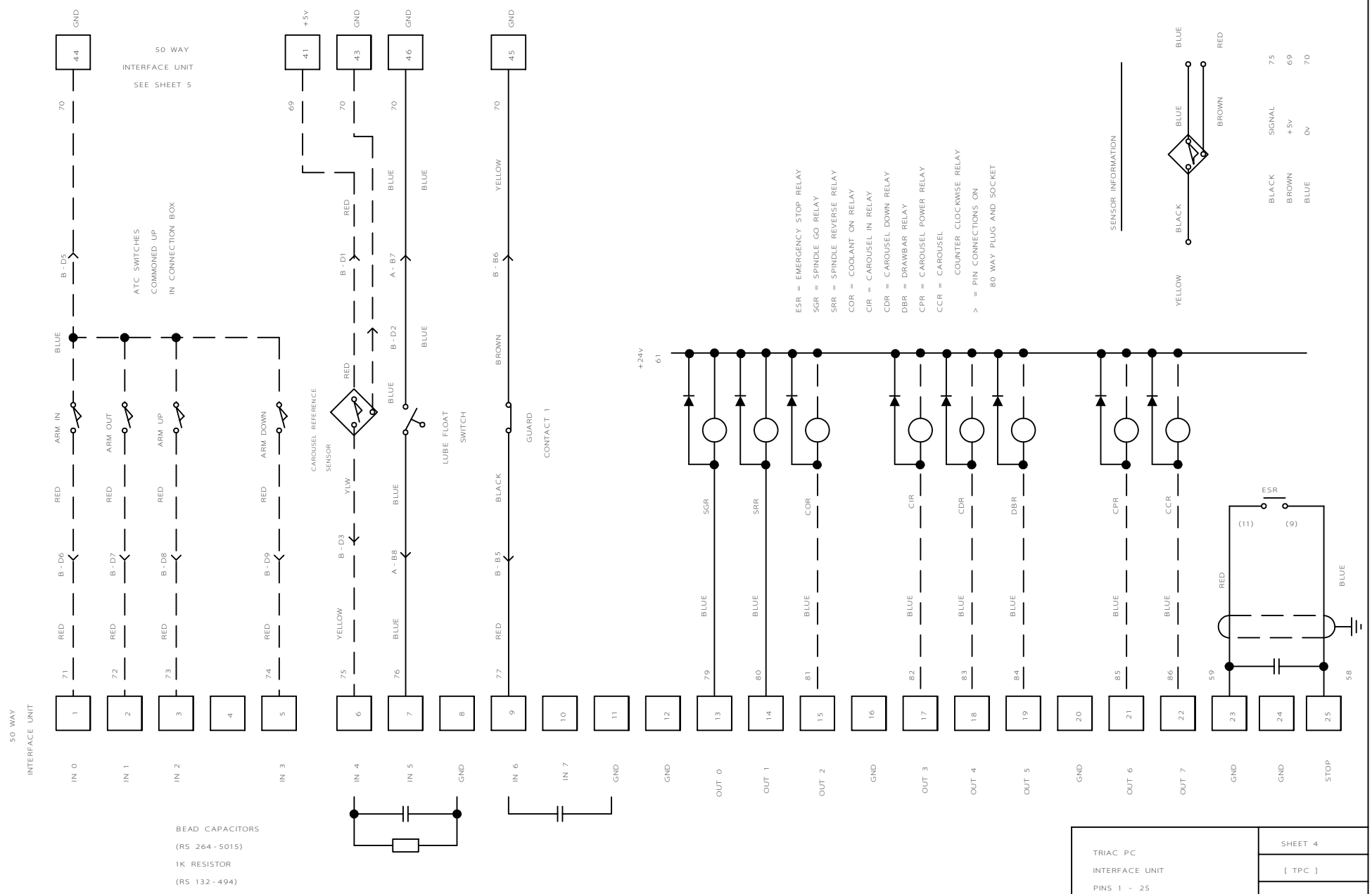


TRIAC PC
INTERFACE UNIT
PINS 1 - 25

SHEET 4
[TPC]
[GR4]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

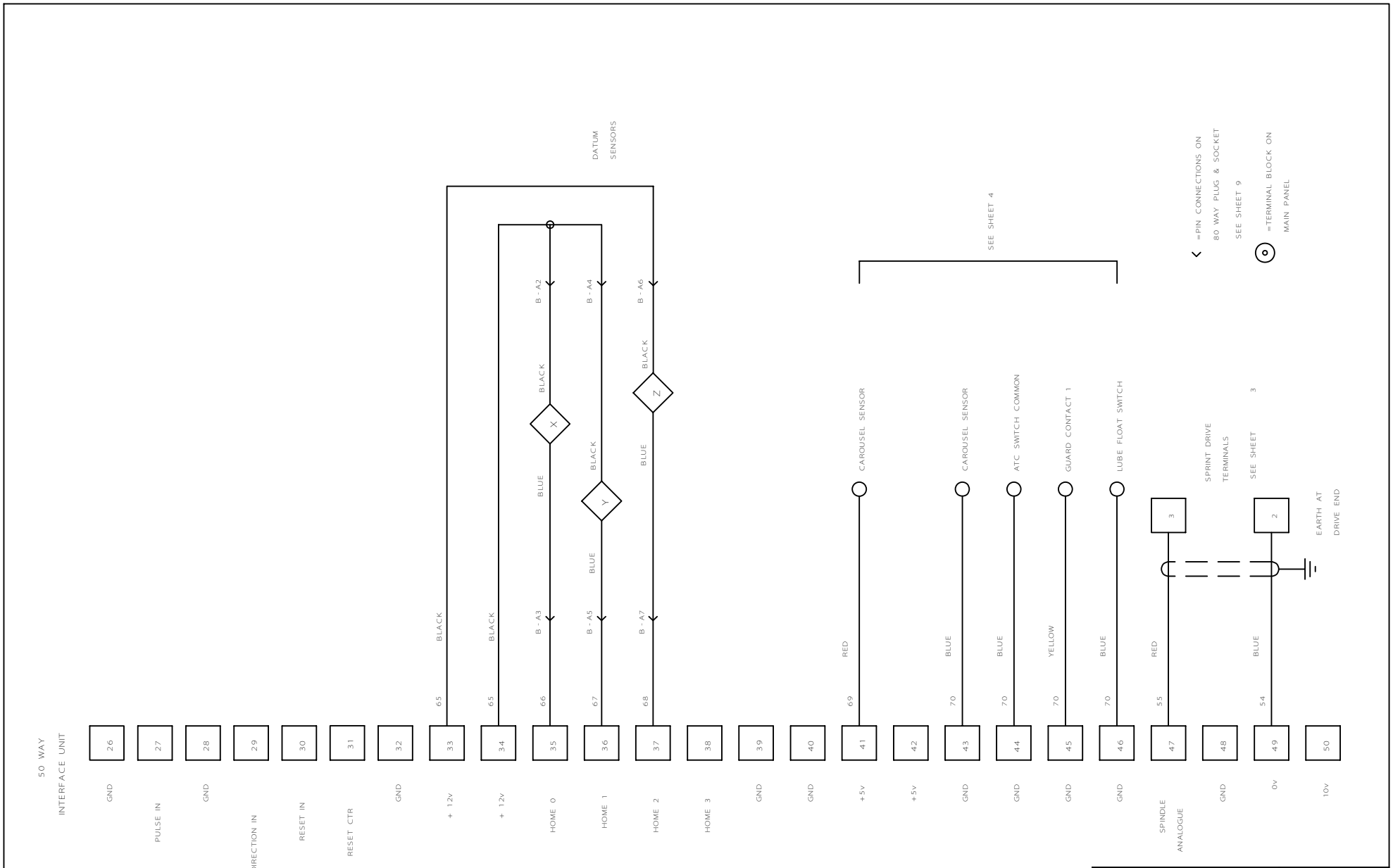
DRN BY A McHENRY | DATE 23-2-95 | A3 - 400181 D



TRIAC PC
INTERFACE UNIT
PINS 1 - 25

SHEET 4
[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 25-3-96 | GR-04 A



TRIAC PC
STANDARD I/O UNIT
PINS 26 - 50

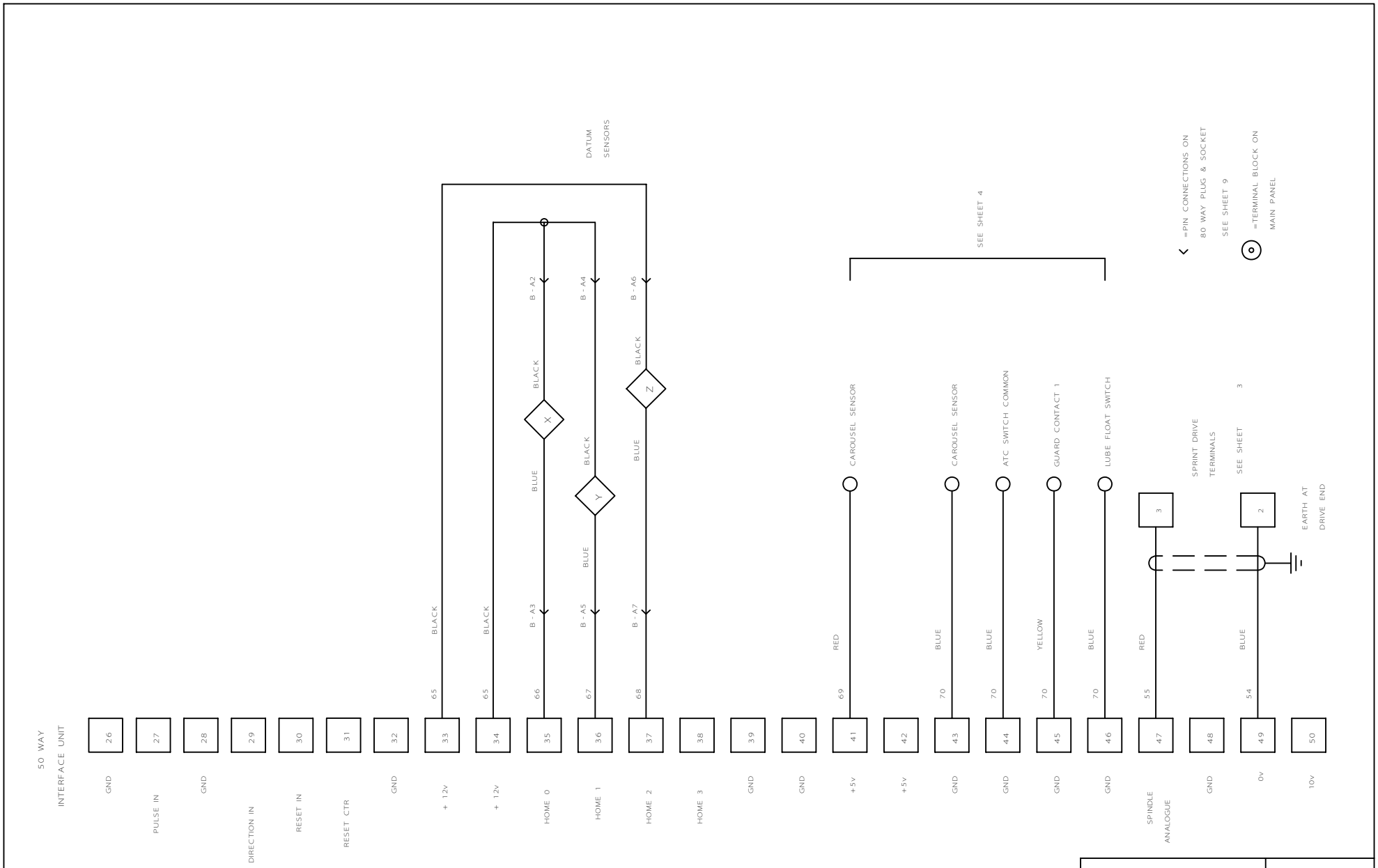
SHEET 5
[TPC]
[GR5]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 24-2-95

A3 - 400182 F



TRIAC PC
STANDARD I/O UNIT
PINS 26 - 50

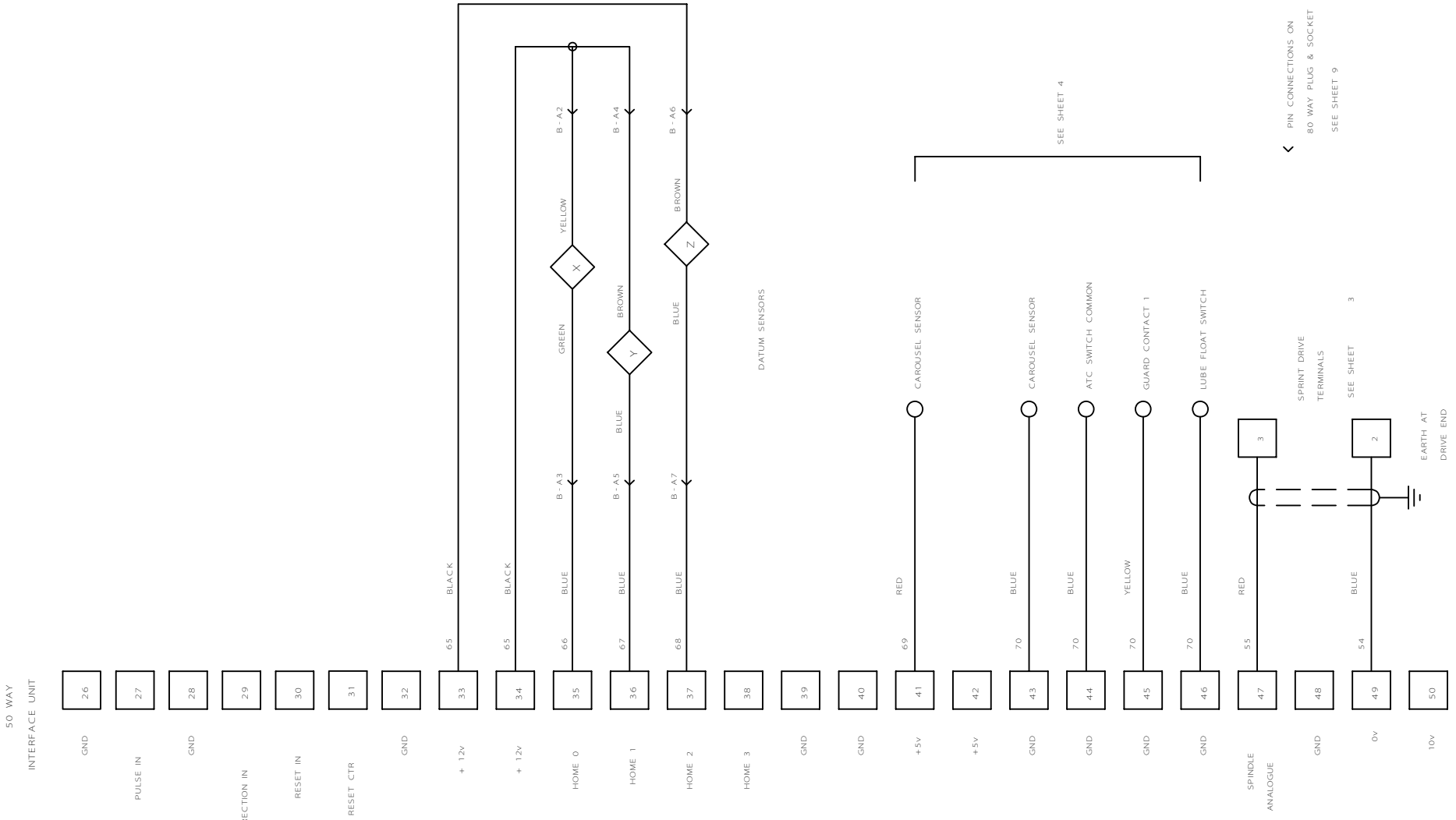
SHEET 5
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 25 - 3 - 96

GR - 05 A

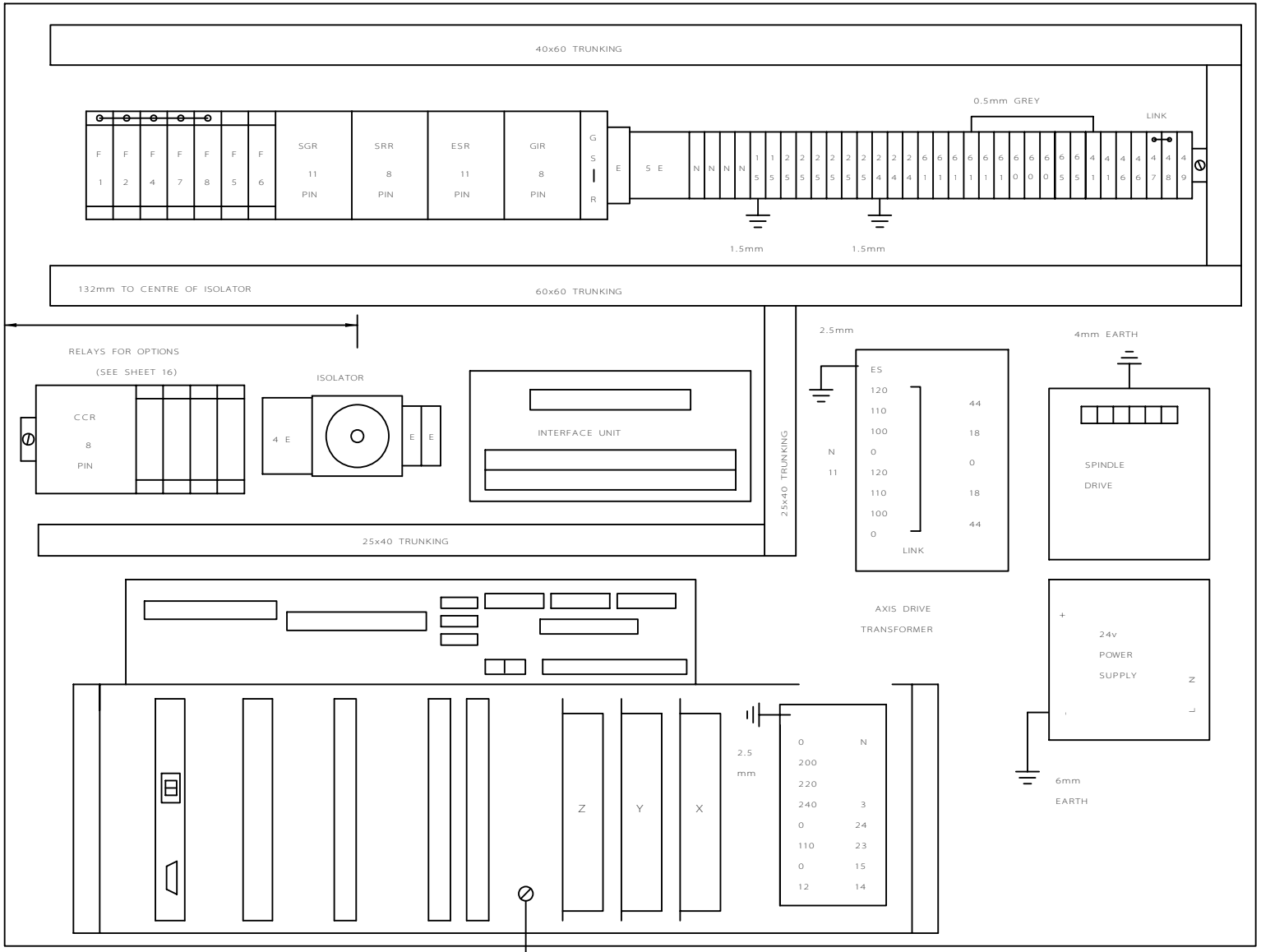


TRIAC PC
STANDARD I/O UNIT
PINS 26 - 50

SHEET 5
[TPC]

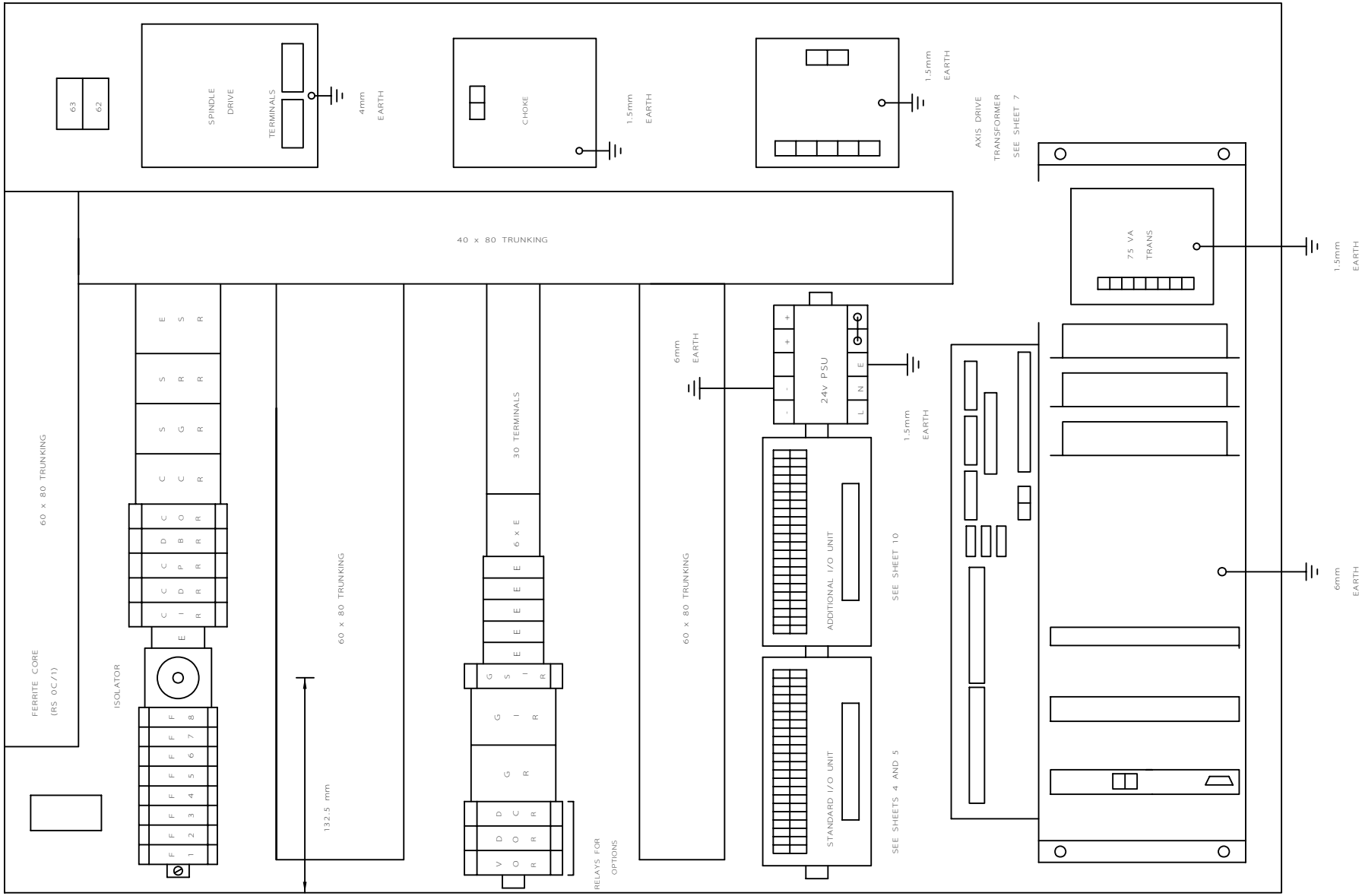
DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-5-96 | GR-05 B

IF IN DOUBT ASK



TRIAC PC PANEL LAYOUT	SHEET 6
	[TPC]
	[GR6]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 23-2-95 | A3- 400178 L



IF IN DOUBT ASK

TRIAC PC
PANEL LAYOUT

SHEET 6

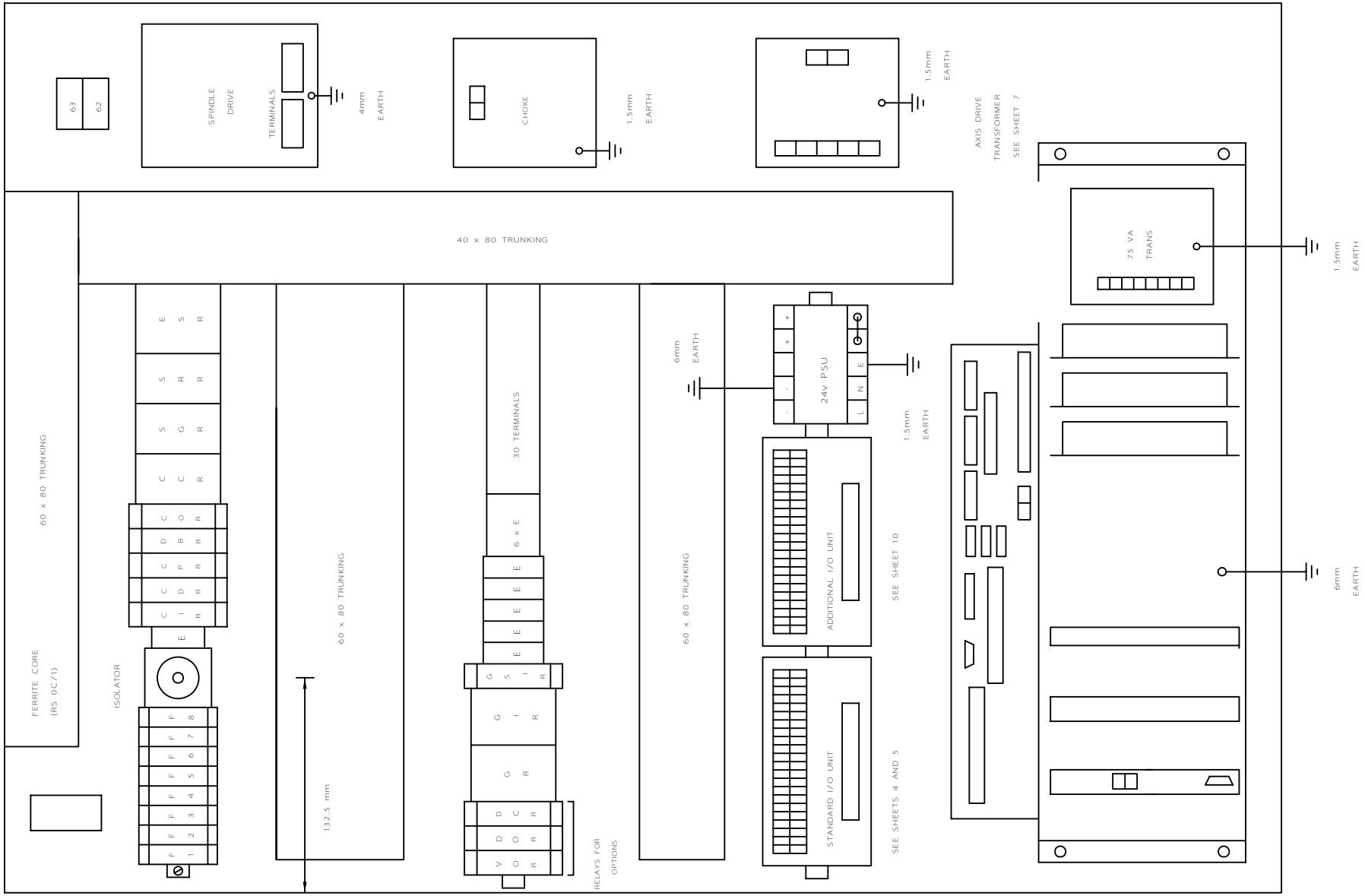
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 27-3-96

GR-06 A



IF IN DOUBT ASK

TRIAC PC
PANEL LAYOUT

SHEET 6

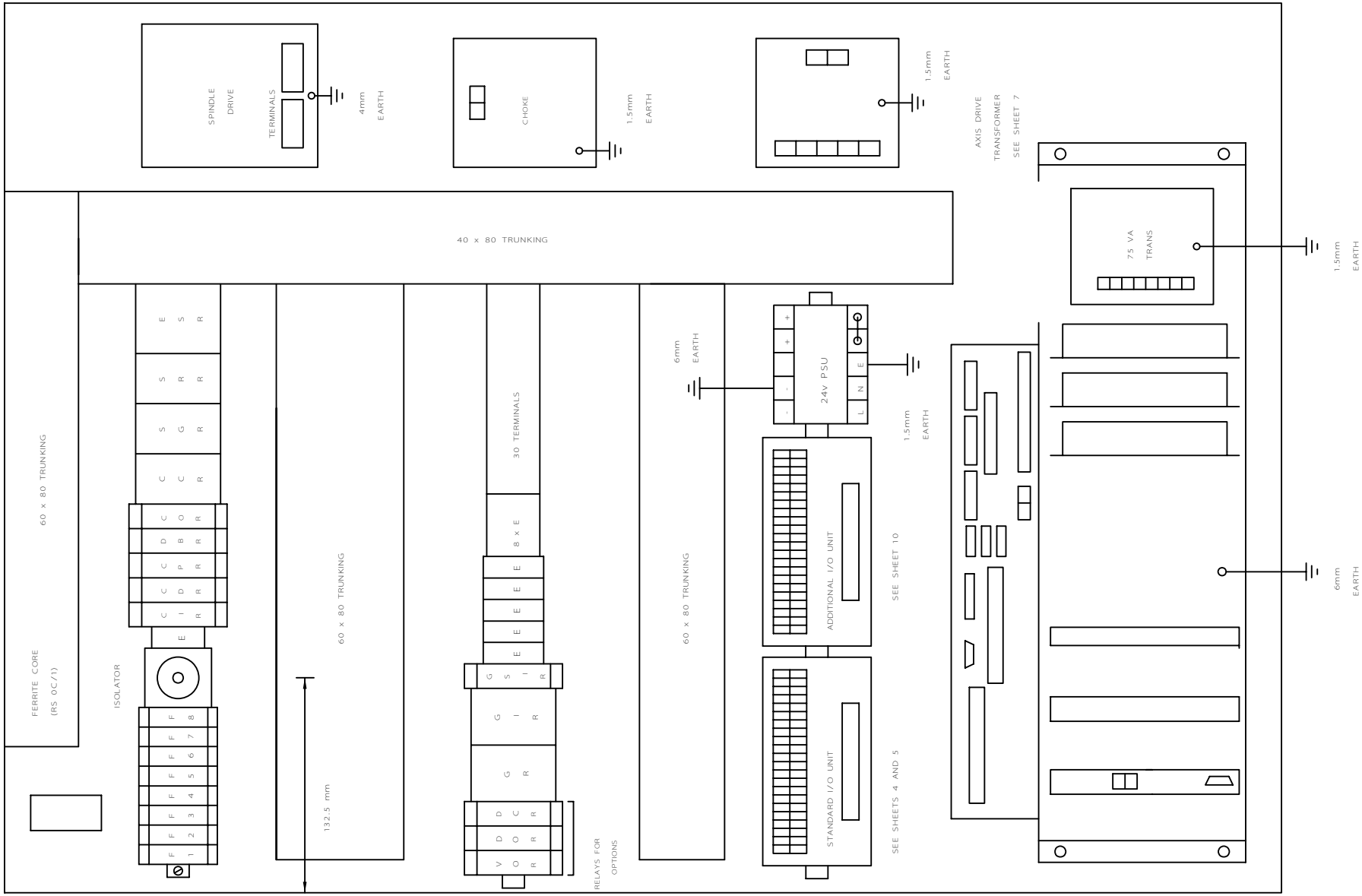
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 20-6-96

GR-06 B



IF IN DOUBT ASK

TRIAC PC PANEL LAYOUT

SHEET 6

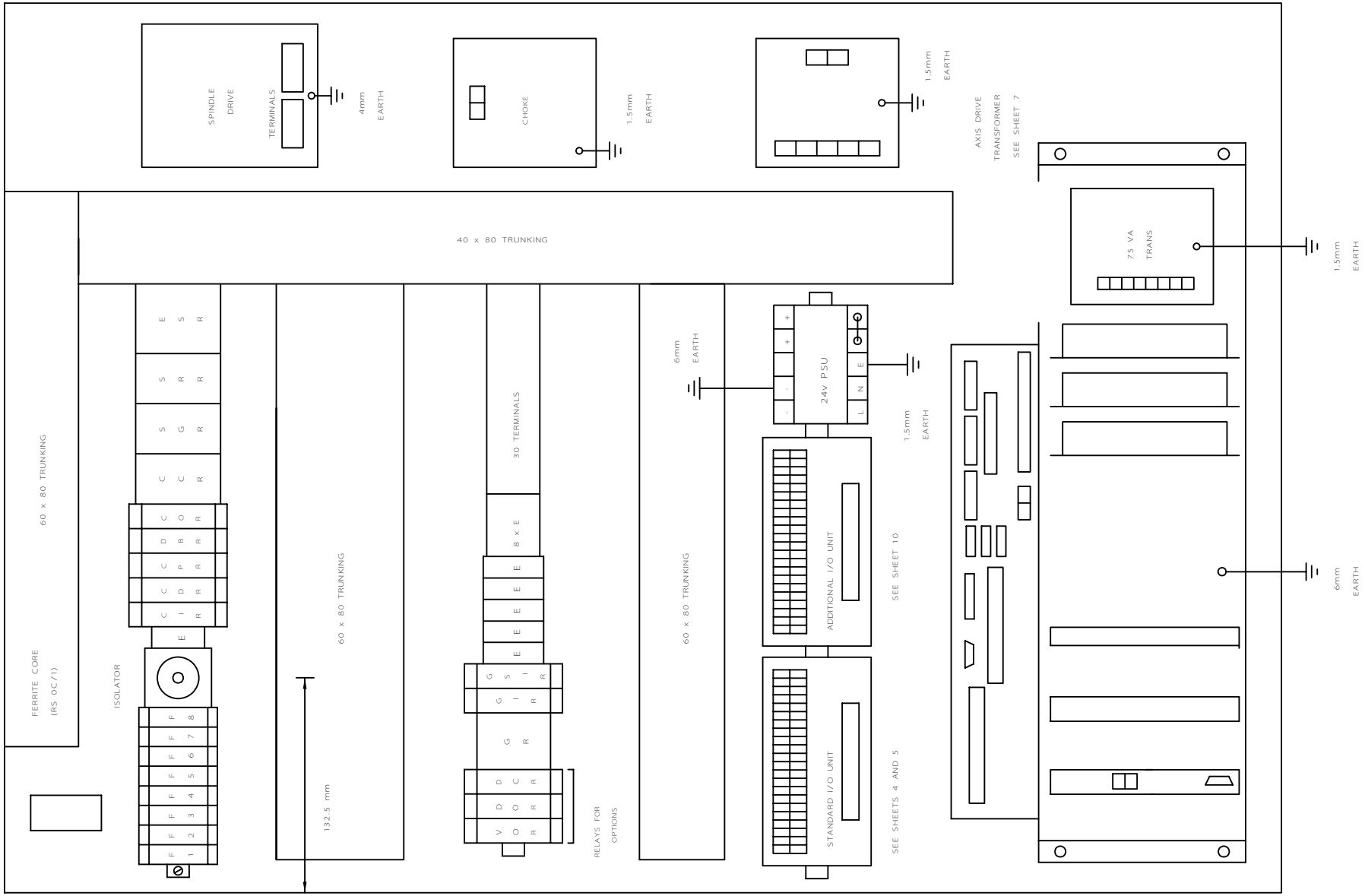
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 17-6-96

GR-06 C



IF IN DOUBT ASK

TRIAC PC PANEL LAYOUT

SHEET 6

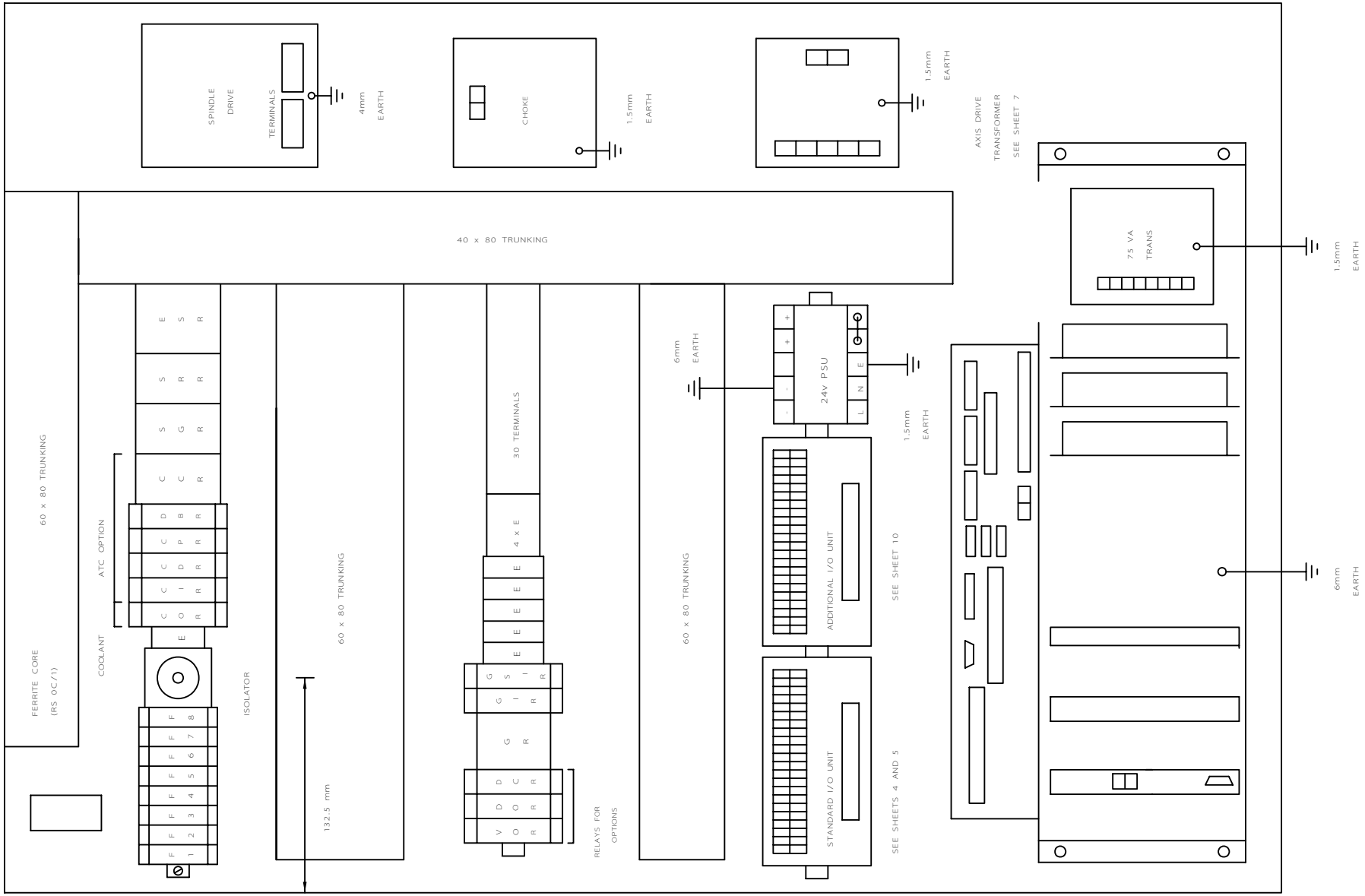
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 9-9-96

GR-06 D



IF IN DOUBT ASK

TRIAC PC PANEL LAYOUT

SHEET 6

[TPC]

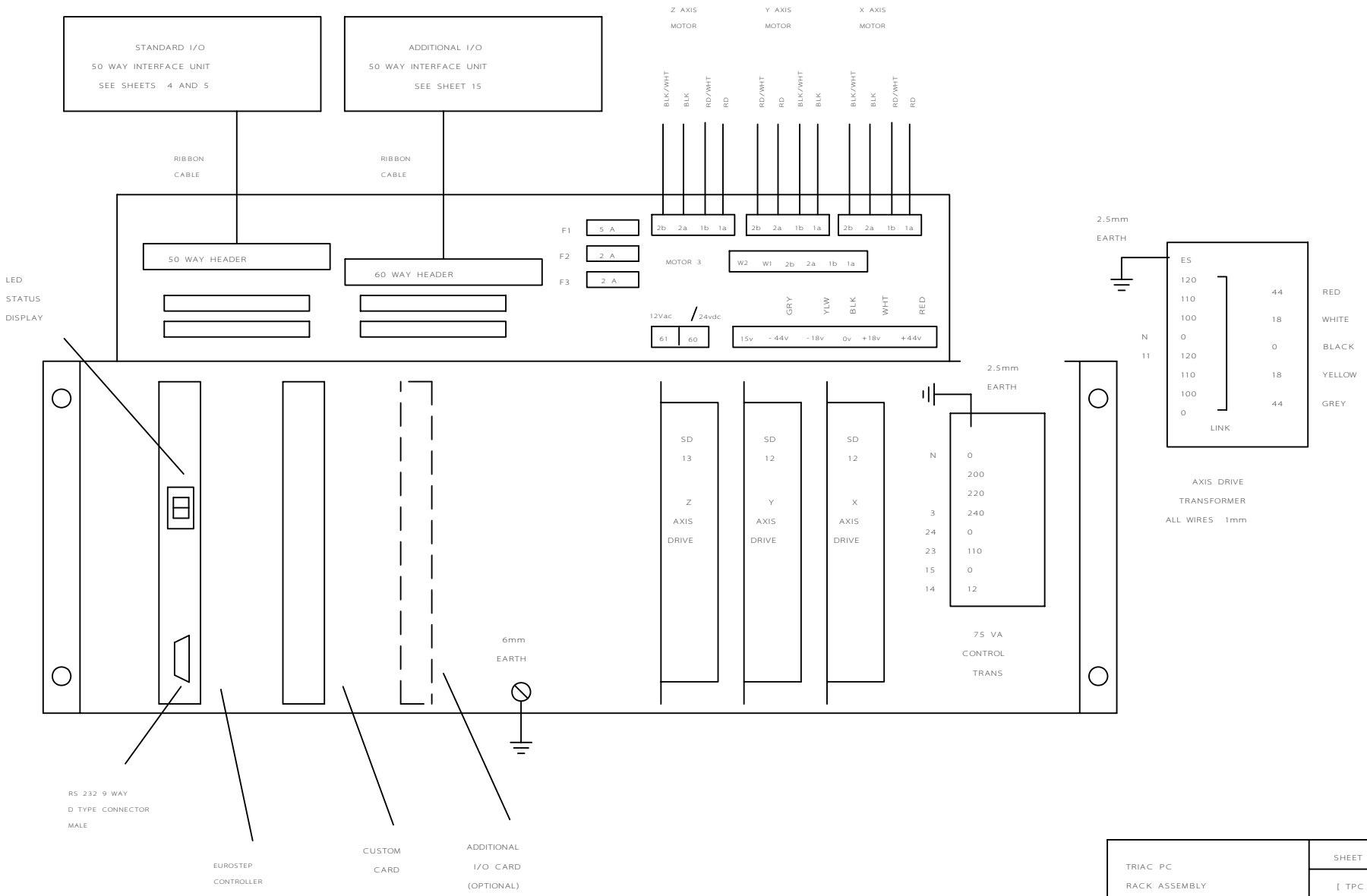
DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 10-12-96

GR-06 E

IF IN DOUBT ASK



TRIAC PC
RACK ASSEMBLY
SD12, 13 DRIVES

SHEET 7

[TPC]

[GR7]

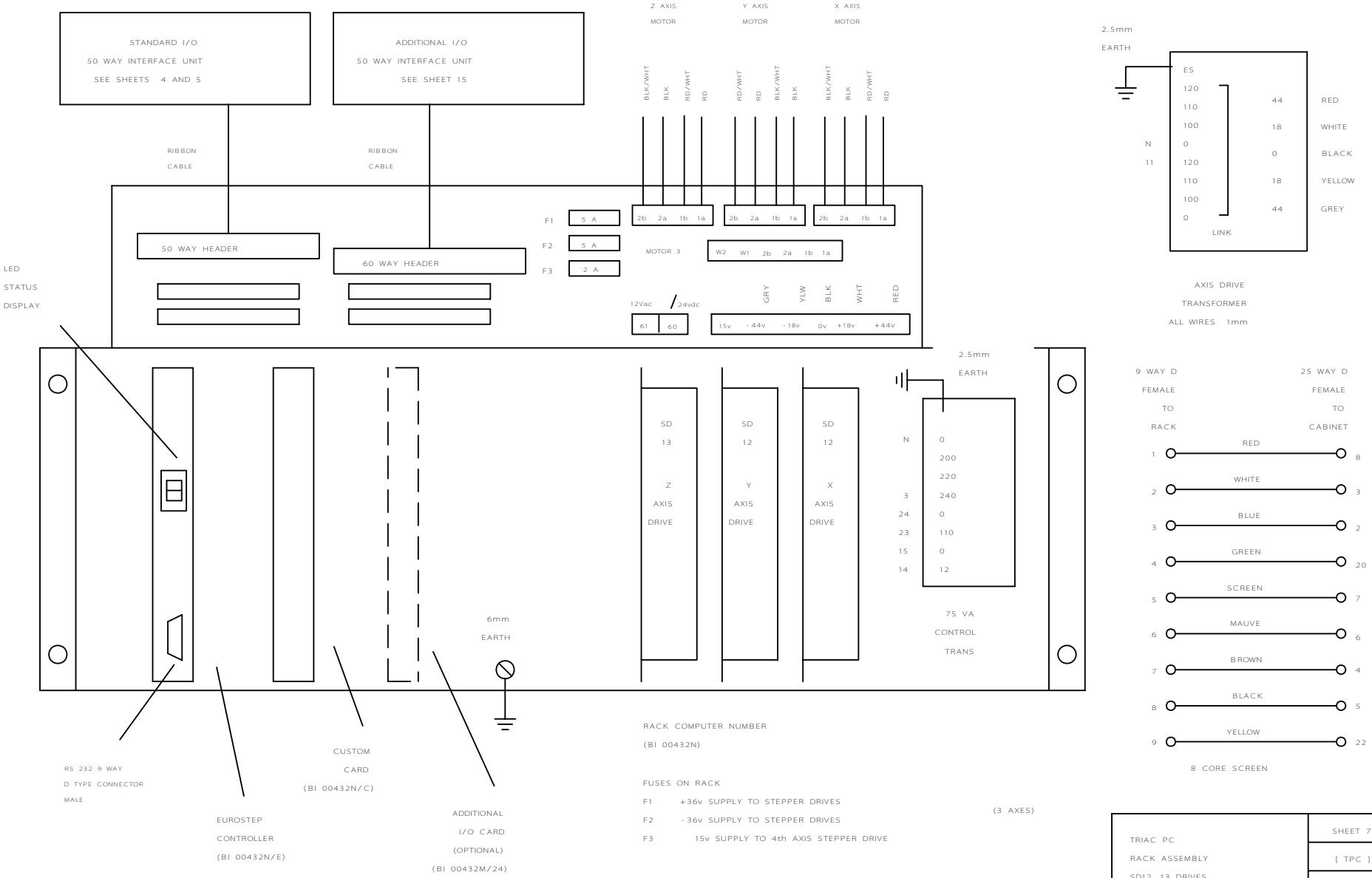
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 24-2-95

A3- 400177 F

IF IN DOUBT ASK

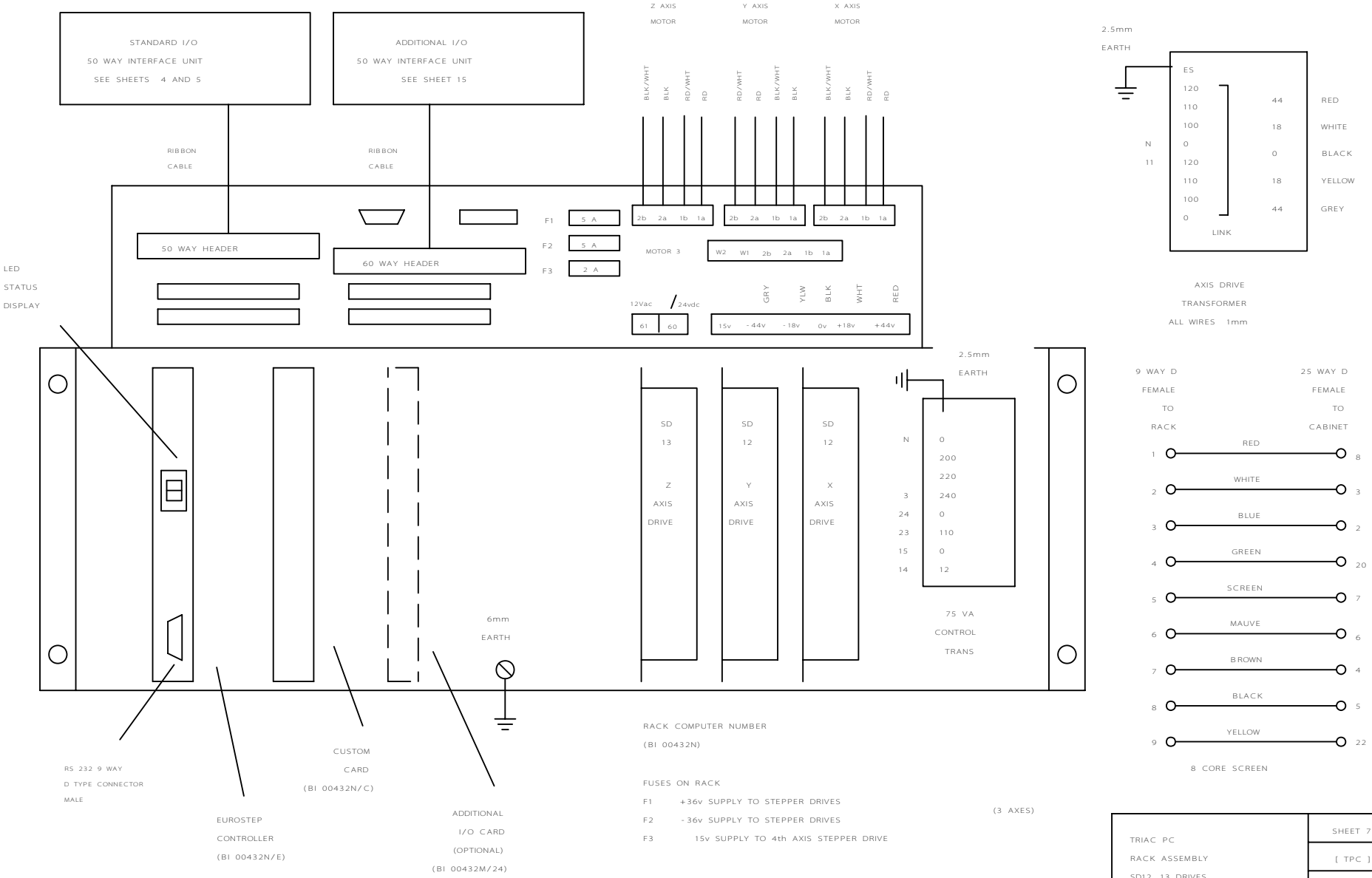


TRIAC PC
RACK ASSEMBLY
SD12, 13 DRIVES

SHEET 7
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 25-3-96 | GR-07 A

IF IN DOUBT ASK

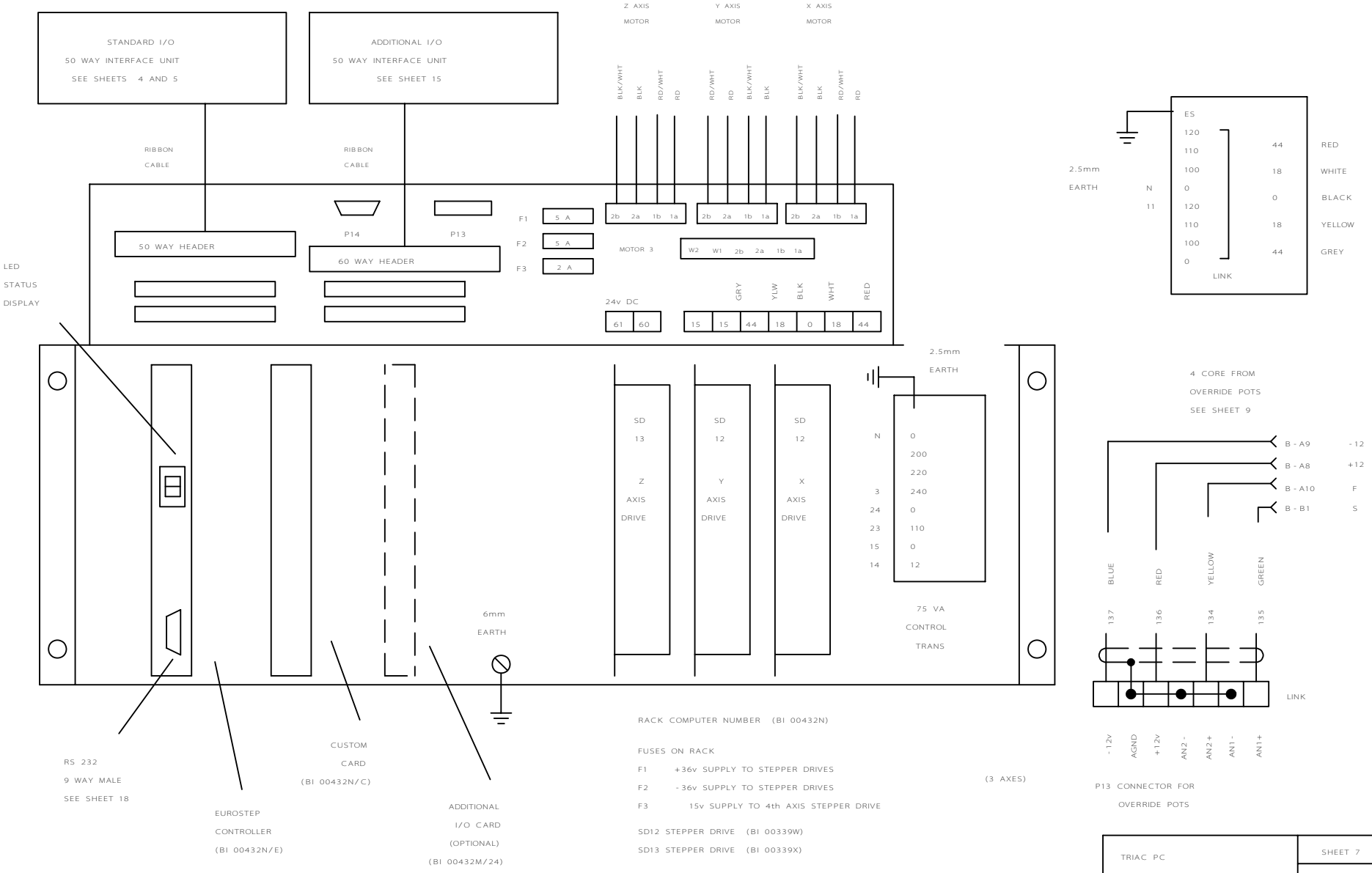


TRIAC PC
RACK ASSEMBLY
SD12, 13 DRIVES

SHEET 7
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 20-5-96 | GR-07 B

IF IN DOUBT ASK



TRIAC PC RACK DETAILS	SHEET 7 [TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 13 - 6 - 96	GR - 07C

PLUG A

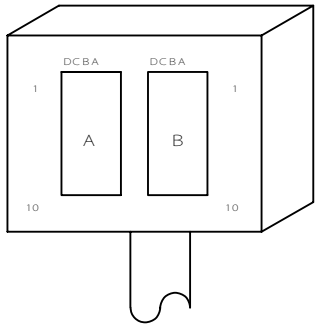
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	BROWN	20	SPINDLE MOTOR	4 CORE SCREEN 1.5mm
2	BLUE	21		
3	EARTH	E		
4	SCREEN	E		
5	RED	46	THERMAL	2 CORE SCREEN
6	BLUE	47		
7	RED	61	E-STOP CONTACT 1	4 CORE SCREEN
8	BLUE	56		
9	YELLOW	48	E-STOP CONTACT 2	
10	GREEN	49		

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	RED		TACHO	2 CORE SCREEN
2	BLUE			
3	SCREEN	E		
4	BLACK	6	LUBE PUMP	0.5mm SINGLES
5	BLACK	24		
6	EARTH	E		
7	BLUE	70	LUBE FLOAT SWITCH	0.5mm SINGLES
8	BLUE	76		
9	RED	41	AXIS OVERRIDE SWITCH	0.5mm SINGLES
10	BLUE	46		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

ROW C

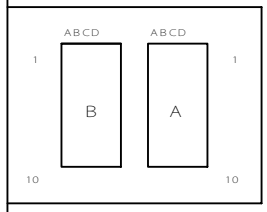
PIN	COLOUR	WIRE	DESTINATION	
1	BROWN	5	COOLANT	1mm SINGLES
2	BLUE	N		
3	EARTH	E		
4	BROWN	16	LOVO LIGHT	0.5mm SINGLES
5	BLUE	15		
6	EARTH	E		
7	RED		X AXIS MOTOR	0.2mm SINGLES
8	RED/WHITE			
9	BLACK			
10	BLACK/WHITE			

⊘ 4mm EARTH

ROW D

PIN	COLOUR	WIRE	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	RED	103	GUARD FULLY OPEN SWITCH	0.5mm SINGLES
10	BLUE	61		

(MALE PINS)



VIEW OF MACHINE SOCKET

TRIAC PC
PLUG A

SHEET 8
[TPC]
[GR8]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 23-2-95 | A3- 400184 G

PLUG A

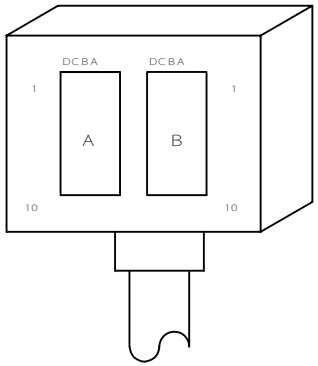
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	BROWN	20	SPINDLE MOTOR	4 CORE SCREEN 1.5mm
2	BLUE	21		
3	EARTH	E		
4	SCREEN	E		
5	RED	46	THERMAL	2 CORE SCREEN
6	BLUE	47		
7	RED	61	E-STOP CONTACT 1	4 CORE SCREEN
8	BLUE	56		
9	YELLOW	48	E-STOP CONTACT 2	
10	GREEN	49		

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	RED		TACHO	2 CORE SCREEN
2	BLUE			
3	SCREEN	E		
4	BLACK	6	LUBE PUMP	0.5mm SINGLES
5	BLACK	24		
6	EARTH	E		
7	BLUE	70	LUBE FLOAT SWITCH	0.5mm SINGLES
8	BLUE	76		
9	RED	41	AXIS OVERRIDE SWITCH	0.5mm SINGLES
10	BLUE	46		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

80 WAY HOOD
(BI 00357)

TWO 40 WAY INSERTS
FEMALE PINS
(BI 00357B)

TWO GLANDS
(BI 00411K)

BULKHEAD ADAPTOR
(BI 00410D)

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BROWN	5	COOLANT	1mm SINGLES
2	BLUE	N		
3	EARTH	E		
4	BROWN	16	LOVO LIGHT	0.5mm SINGLES
5	BLUE	15		
6	EARTH	E		
7	RED		X AXIS MOTOR	0.2mm SINGLES
8	RED/WHITE			
9	BLACK			
10	BLACK/WHITE			

ROW D

PIN	COLOUR	WIRE	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	RED	103	GUARD FULLY OPEN SWITCH	0.5mm SINGLES
10	BLUE	61		

⊘ 4mm EARTH

TRIAC PC
PLUG A

SHEET 8
[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 25-3-96 | GR-08 A

PLUG A

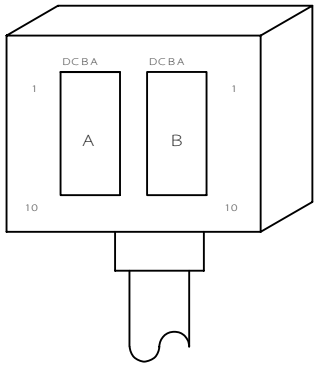
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	BROWN	20	SPINDLE MOTOR	4 CORE SCREEN 1.5mm
2	BLUE	21		
3	EARTH	E		
4	SCREEN	E		
5	RED	46	THERMAL	2 CORE SCREEN
6	BLUE	47		
7	RED	61	E-STOP CONTACT 1	4 CORE SCREEN
8	BLUE	56		
9	YELLOW	48	E-STOP CONTACT 2	
10	GREEN	49		

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	RED		TACHO	2 CORE SCREEN
2	BLUE			
3	SCREEN	E		
4	BLACK	6	LUBE PUMP	0.5mm SINGLES
5	BLACK	24		
6	EARTH	E		
7	BLUE	70	LUBE FLOAT SWITCH	0.5mm SINGLES
8	BLUE	76		
9	RED	41	AXIS OVERRIDE SWITCH	0.5mm SINGLES
10	BLUE	46		

(FEMALE PINS)



PG 36 FLEX TO CONTROL BOX

80 WAY HOOD
BI 357

TWO 40 WAY INSERTS
FEMALE PINS
BI 357B

TWO GLANDS
BI 411K

BULKHEAD ADAPTOR
BI 410D

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BROWN	5	COOLANT	1mm SINGLES
2	BLUE	N		
3	EARTH	E		
4	BROWN	16	LOVO LIGHT	0.5mm SINGLES
5	BLUE	15		
6				
7	RED		X AXIS MOTOR	0.2mm SINGLES
8	RED/WHITE			
9	BLACK			
10	BLACK/WHITE			

ROW D

PIN	COLOUR	WIRE	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	RED	103	GUARD FULLY OPEN SWITCH	0.5mm SINGLES
10	BLUE	61		

⊘ 4mm EARTH

TRIAC PC
PLUG A

SHEET 8
TPC

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 20-1-98 | GR - 8 B

IF IN DOUBT ASK

PLUG B

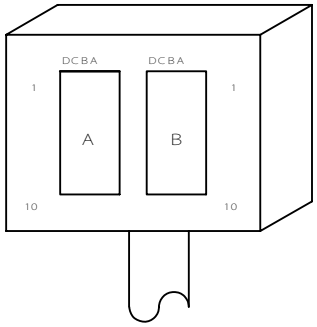
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	YELLOW	41	X LIMIT	0.2mm SINGLES
2	BLACK	65	X DATUM	0.2mm SINGLES
3	BLUE	66		
4	BLACK	65	Y DATUM	0.2mm SINGLES
5	BLUE	67		
6	BLACK	65	Z DATUM	0.2mm SINGLES
7	BLUE	68		
8				
9				
10				

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1				
2	YELLOW	46	Z LIMIT	0.2mm SINGLES
3	RED	57	GUARD SOLENOID	0.2mm SINGLES
4	BLUE	60		
5	RED	77	(N/C) GUARD CONTACT 1	0.2mm SINGLES
6	YELLOW	70		
7	RED	61	(N/C) GUARD CONTACT 2	0.2mm SINGLES
8	YELLOW	64		
9	RED	61	(N/O) GUARD CONTACT 3	0.2mm SINGLES
10	BLUE	50		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

ROW C

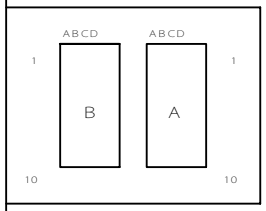
PIN	COLOUR	WIRE	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4	BLACK	26	ARM IN SOL.	0.5mm SINGLES
5	BLACK	27	ARM DOWN SOL.	
6	BLACK	28	DRAWBAR SOL.	
7	BLACK	29	VICE SOL.	
8	BLACK	105	GUARD OPEN SOL.	
9	BLACK	107	GUARD CLOSE SOL.	
10	BLACK	24	SOLENOID COMMON	

⊘ 4mm EARTH

ROW D

PIN	COLOUR	WIRE	DESTINATION	
1	RED	69	ATC SENSOR	4 CORE SCREEN
2	BLUE	70		
3	YELLOW	75		
4	SCREEN	E		
5	BLUE	70	SWITCH COMMON	0.5mm SINGLES
6	RED	71	ARM IN SW.	
7	RED	72	ARM OUT SW.	
8	RED	73	ARM UP SW.	
9	RED	74	ARM DOWN SW.	
10				

(MALE PINS)



VIEW OF MACHINE SOCKET

TRIAC PC
PLUG A

SHEET 9
[TPC]
[GR9]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 23-2-95 | A3- 400183 G

IF IN DOUBT ASK

PLUG B

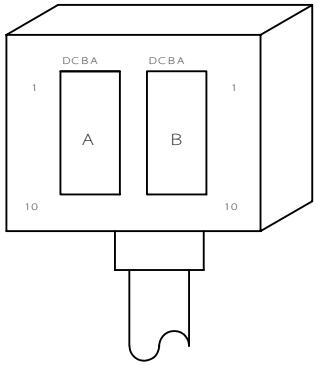
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	YELLOW	41	X LIMIT	0.2mm SINGLES
2	BLACK	65	X DATUM	0.2mm SINGLES
3	BLUE	66		
4	BLACK	65	Y DATUM	0.2mm SINGLES
5	BLUE	67		
6	BLACK	65	Z DATUM	0.2mm SINGLES
7	BLUE	68		
8				
9				
10				

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1				
2	YELLOW	46	Z LIMIT	0.2mm SINGLES
3	RED	57	GUARD SOLENOID	0.2mm SINGLES
4	BLUE	60		
5	RED	77	(N/C) GUARD CONTACT 1	0.2mm SINGLES
6	YELLOW	70		
7	RED	61	(N/C) GUARD CONTACT 2	0.2mm SINGLES
8	YELLOW	64		
9	RED	61	(N/O) GUARD CONTACT 3	0.2mm SINGLES
10	BLUE	50		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

80 WAY HOOD
(BI 00357)

TWO 40 WAY INSERTS
FEMALE PINS
(BI 00357B)

TWO GLANDS
(BI 00411K)

BULKHEAD ADAPTOR
(BI 00410D)

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4	BLACK	26	ARM IN SOL.	0.5mm SINGLES
5	BLACK	27	ARM DOWN SOL.	
6	BLACK	28	DRAWBAR SOL.	
7	BLACK	29	VICE SOL.	
8	BLACK	105	GUARD OPEN SOL.	
9	BLACK	107	GUARD CLOSE SOL.	
10	BLACK	24	SOLENOID COMMON	

ROW D

PIN	COLOUR	WIRE	DESTINATION	
1	RED	69	ATC SENSOR	4 CORE SCREEN
2	BLUE	70		
3	YELLOW	75		
4	SCREEN	E		
5	BLUE	70	SWITCH COMMON	0.5mm SINGLES
6	RED	71	ARM IN SW.	
7	RED	72	ARM OUT SW.	
8	RED	73	ARM UP SW.	
9	RED	74	ARM DOWN SW.	
10				

⊘ 4mm EARTH

TRIAC PC
PLUG B

SHEET 9

[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 25-3-96 | GR-09 A

IF IN DOUBT ASK

PLUG B

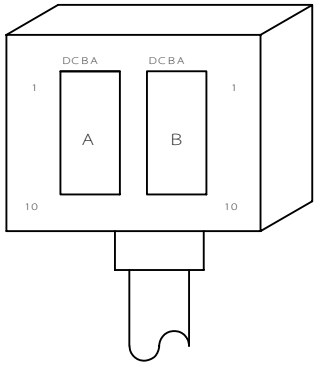
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	YELLOW	41	X LIMIT	0.2mm SINGLES
2	BLACK	65	X DATUM	0.2mm SINGLES
3	BLUE	66		
4	BLACK	65	Y DATUM	0.2mm SINGLES
5	BLUE	67		
6	BLACK	65	Z DATUM	0.2mm SINGLES
7	BLUE	68		
8	RED	136	OVERRIDE POTS	4 CORE SCREEN
9	BLUE	137		
10	YELLOW	134		

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	GREEN	135	OVERRIDE POTS	4 CORE SCREEN
2	YELLOW	46	Z LIMIT	0.2mm SINGLES
3	RED	57	GUARD SOLENOID	0.2mm SINGLES
4	BLUE	60		
5	RED	77	(N/C) GUARD CONTACT 1	0.2mm SINGLES
6	YELLOW	70		
7	RED	61	(N/C) GUARD CONTACT 2	0.2mm SINGLES
8	YELLOW	64		
9	RED	61	(N/O) GUARD CONTACT 3	0.2mm SINGLES
10	BLUE	50		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

80 WAY HOOD
(BI 00357)

TWO 40 WAY INSERTS
FEMALE PINS
(BI 00357B)

TWO GLANDS
(BI 00411K)

BULKHEAD ADAPTOR
(BI 00410D)

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4	BLACK	26	ARM IN SOL.	0.5mm SINGLES
5	BLACK	27	ARM DOWN SOL.	
6	BLACK	28	DRAWBAR SOL.	
7	BLACK	29	VICE SOL.	
8	BLACK	105	GUARD OPEN SOL.	
9	BLACK	107	GUARD CLOSE SOL.	
10	BLACK	24	SOLENOID COMMON	

ROW D

PIN	COLOUR	WIRE	DESTINATION	
1	RED	69	ATC SENSOR	4 CORE SCREEN
2	BLUE	70		
3	YELLOW	75		
4	SCREEN	E		
5	BLUE	70	SWITCH COMMON	0.5mm SINGLES
6	RED	71	ARM IN SW.	
7	RED	72	ARM OUT SW.	
8	RED	73	ARM UP SW.	
9	RED	74	ARM DOWN SW.	
10				

⊘ 4mm EARTH

TRIAC PC
PLUG B

SHEET 9
[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 13-6-96 | GR-09 B

IF IN DOUBT ASK

PLUG B

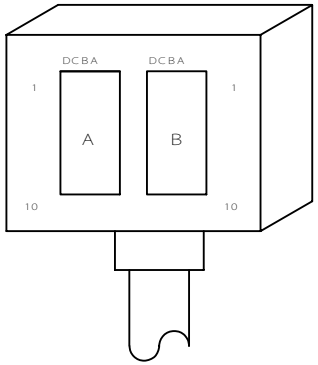
ROW A

PIN	COLOUR	WIRE	DESTINATION	
1	YELLOW	41	X LIMIT	0.2mm SINGLE
2	BLACK	65	X DATUM	0.2mm SINGLES
3	BLUE	66		
4	BLACK	65	Y DATUM	0.2mm SINGLES
5	BLUE	67		
6	BLACK	65	Z DATUM	0.2mm SINGLES
7	BLUE	68		
8	RED	136	OVERRIDE POTS	4 CORE SCREEN
9	BLUE	137		
10	YELLOW	134		

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	GREEN	135	OVERRIDE POTS	4 CORE SCREEN
2	YELLOW	46	Z LIMIT	0.2mm SINGLE
3	RED	57	GUARD SOLENOID	0.2mm SINGLES
4	BLUE	60		
5	RED	77	(N/C) GUARD CONTACT 1	0.2mm SINGLES
6	YELLOW	70		
7	RED	61	(N/C) GUARD CONTACT 2	0.2mm SINGLES
8	YELLOW	64		
9	RED	61	(N/O) GUARD CONTACT 3	0.2mm SINGLES
10	BLUE	50		

(FEMALE PINS)



PG 36 FLEX TO CONTROL BOX

80 WAY HOOD
BI 357

TWO 40 WAY INSERTS
FEMALE PINS
BI 357B

TWO GLANDS
BI 411K

BULKHEAD ADAPTOR
BI 410D

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4	BLACK	26	ARM IN SOL.	0.5mm SINGLES
5	BLACK	27	ARM DOWN SOL.	
6	BLACK	28	DRAWBAR SOL.	
7	BLACK	29	VICE SOL.	
8	BLACK	105	GUARD OPEN SOL.	
9	BLACK	107	GUARD CLOSE SOL.	
10	BLACK	24	SOLENOID COMMON	

⊘ 4mm EARTH

ROW D

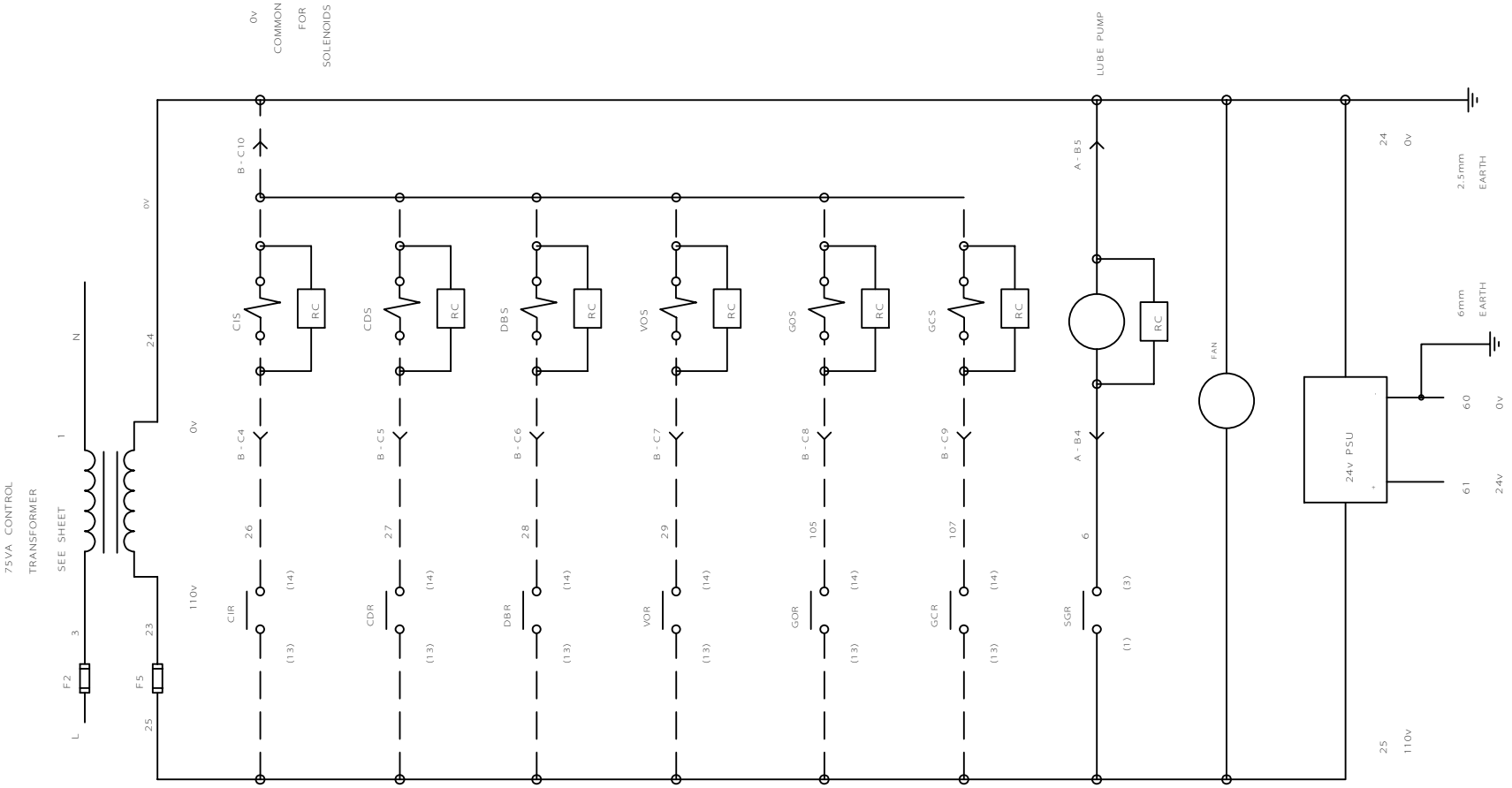
PIN	COLOUR	WIRE	DESTINATION	
1	RED	69	ATC SENSOR	4 CORE SCREEN
2	BLUE	70		
3	YELLOW	75		
4	SCREEN	E		
5	BLUE	70	SWITCH COMMON	0.5mm SINGLES
6	RED	71	ARM IN SW.	
7	RED	72	ARM OUT SW.	
8	RED	73	ARM UP SW.	
9	RED	74	ARM DOWN SW.	
10	BLUE	106	GUARD CLOSE P/B	0.5mm SINGLE

TRIAC PC
PLUG B

SHEET 9
TPC

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 16-5-97 | GR - 9 C

IF IN DOUBT ASK



CIS	CAROUSEL IN SOLENOID
CDS	CAROUSEL DOWN SOLENOID
DBS	DRAWBAR SOLENOID
VOS	VICE OPEN SOLENOID
GOS	GUARD OPEN SOLENOID
GCS	GUARD CLOSE SOLENOID
SGR	SPINDLE GO RELAY

< PIN CONNECTIONS ON 80 WAY PLUG

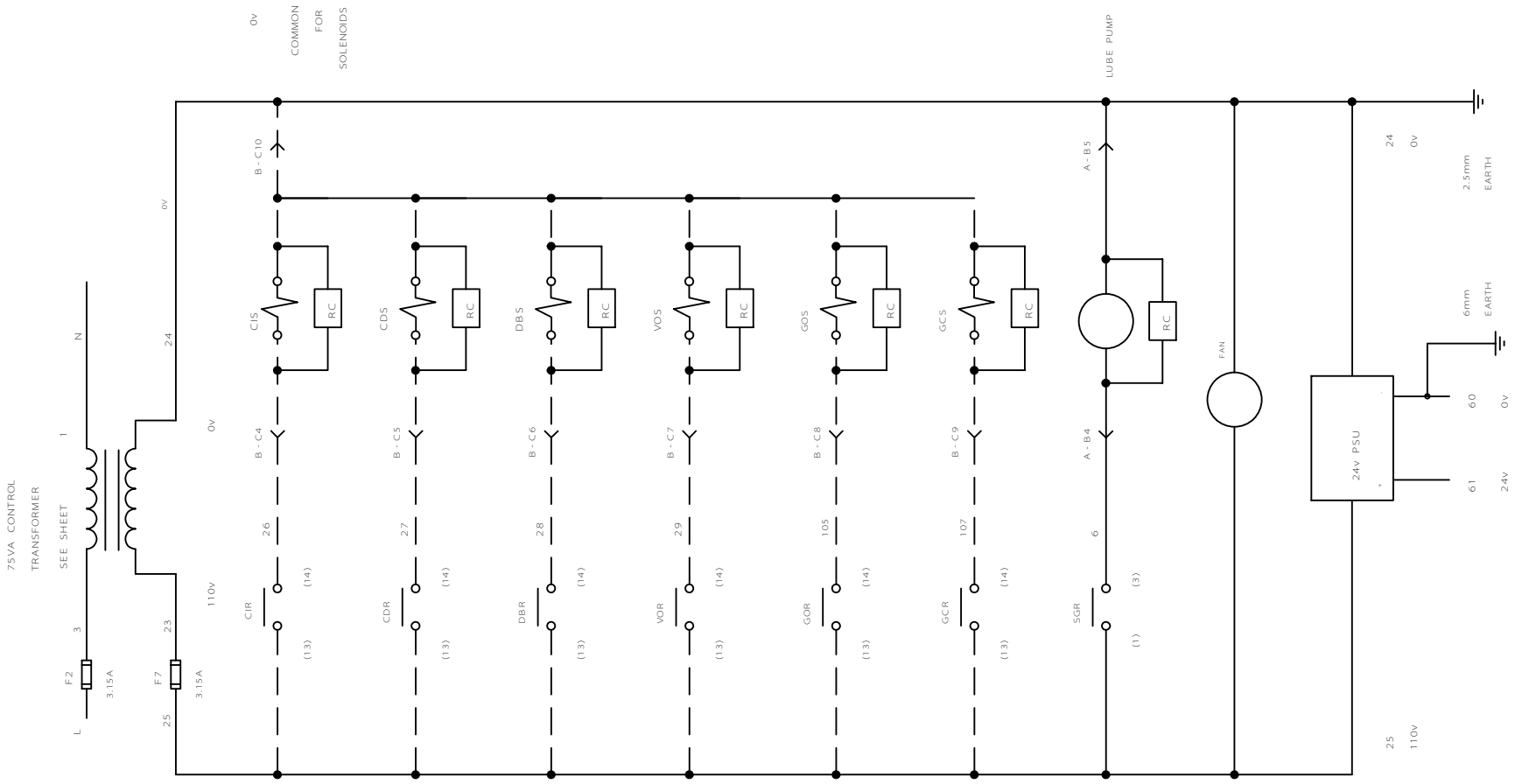
TRIAC PC
110v SCHEMATIC

SHEET 10
[TPC]
[GR10]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 24-2-95 | A3 - 400195 H

IF IN DOUBT ASK



CIS	CAROUSEL IN SOLENOID
CDS	CAROUSEL DOWN SOLENOID
DBS	DRAWBAR SOLENOID
VOS	VICE OPEN SOLENOID
GOS	GUARD OPEN SOLENOID
GCS	GUARD CLOSE SOLENOID
SGR	SPINDLE GO RELAY

< PIN CONNECTIONS ON 80 WAY PLUG

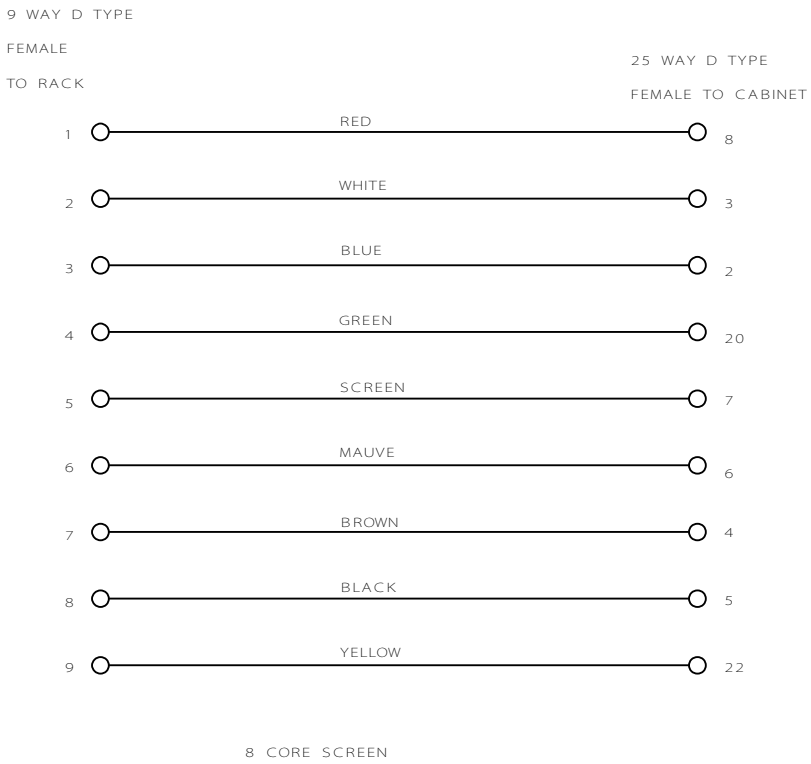
TRIAC PC
110v SCHEMATIC

SHEET 10

[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 25 - 3 - 96	GR - 10 A

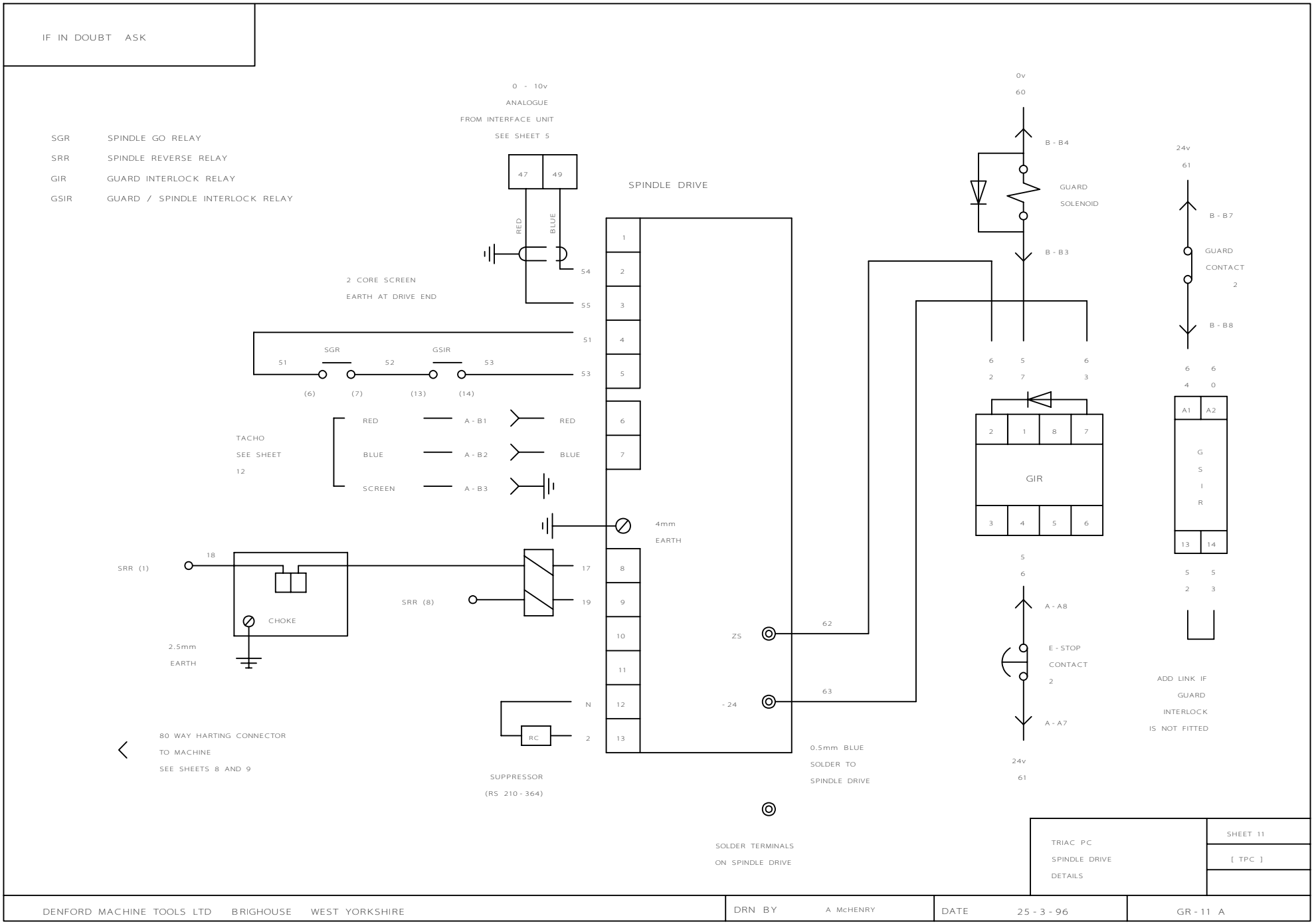
IF IN DOUBT ASK



TRIAC PC RS 232 CONNECTION	SHEET 11 [TPC] [GR11]

DENFORD MACHINE TOOLS LTD	DATE 07-05-91	DRN BY A McHENRY	DRN No A4 — 400185 A

IF IN DOUBT ASK



TRIAC PC
SPINDLE DRIVE
DETAILS

SHEET 11

[TPC]

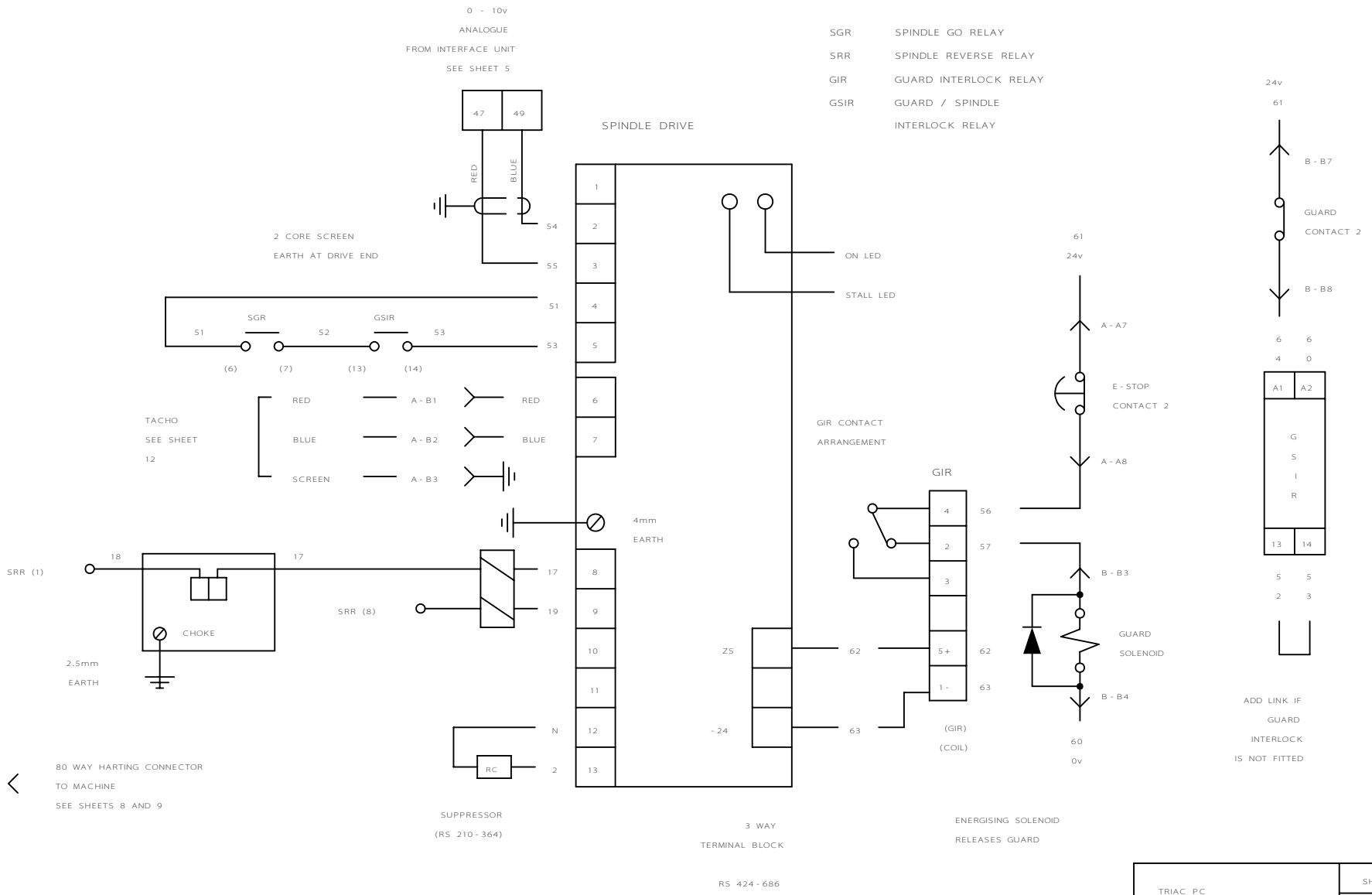
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 25 - 3 - 96

GR - 11 A

IF IN DOUBT ASK

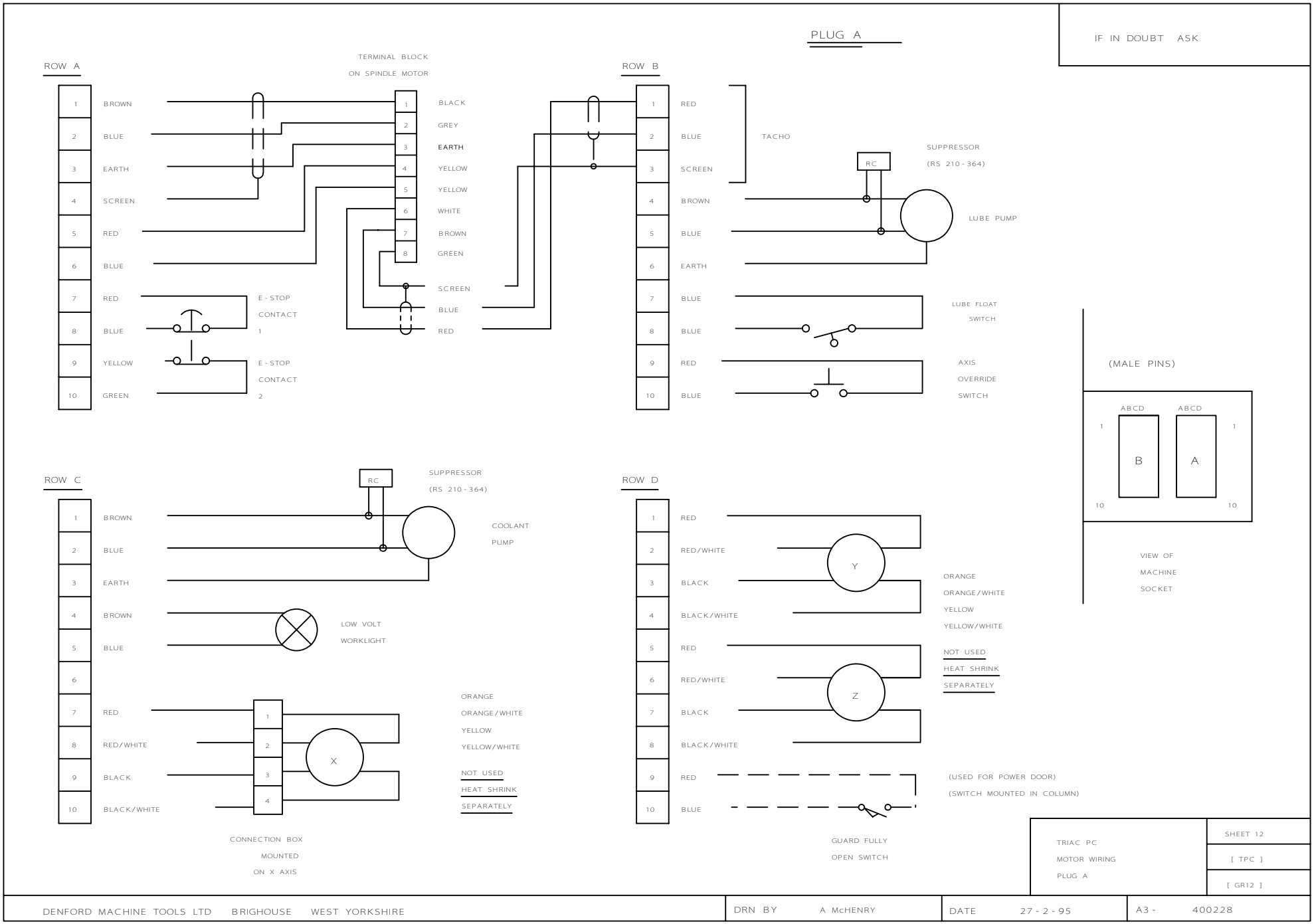


TRIAC PC
SPINDLE DRIVE
DETAILS

SHEET 11

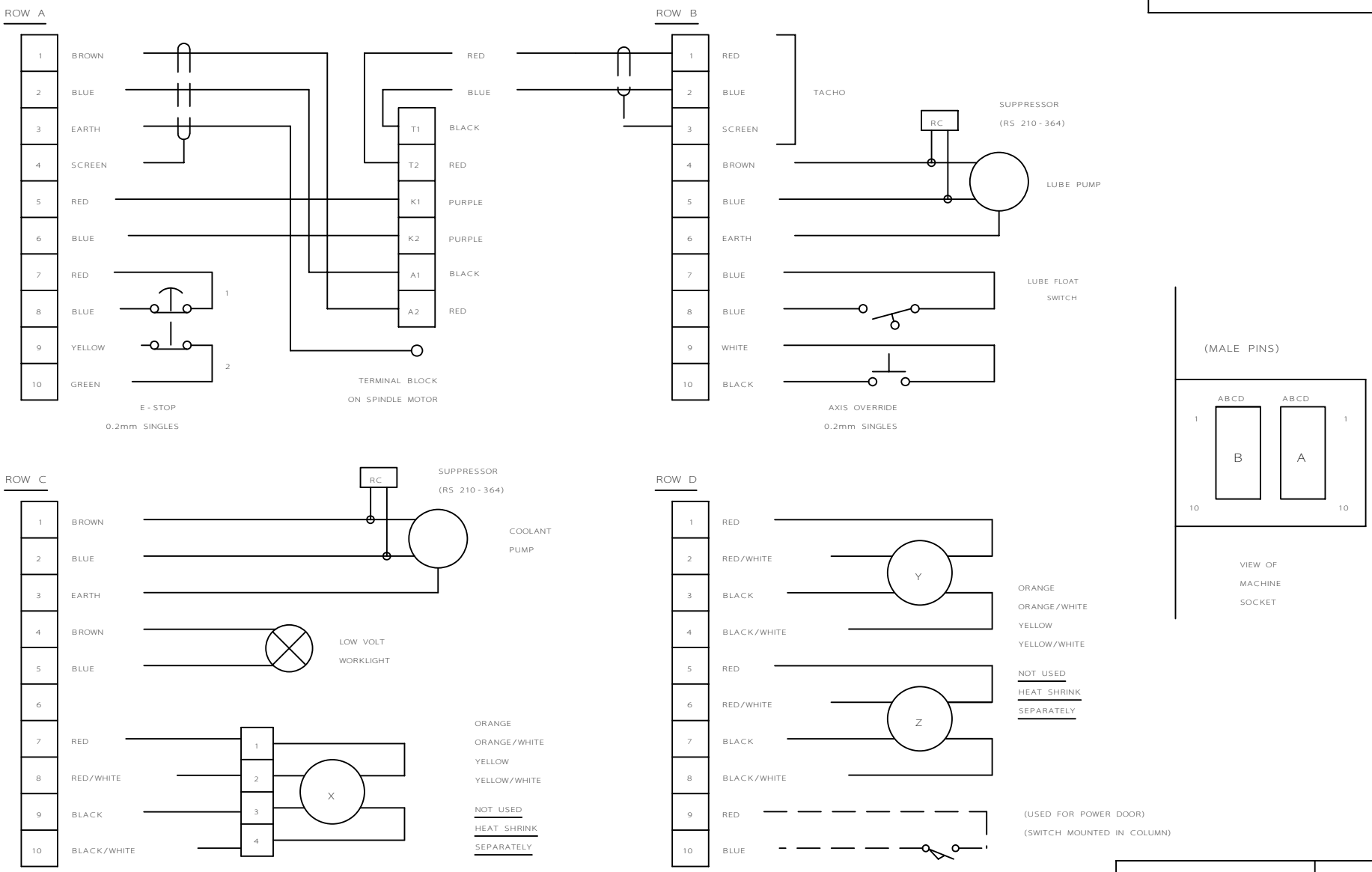
[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 9 - 9 - 96 | GR - 11 B


PLUG A
IF IN DOUBT ASK
ROW A
TERMINAL BLOCK
ON SPINDLE MOTOR
1 BROWN
2 BLUE
3 EARTH
4 SCREEN
5 RED
6 BLUE
7 RED
8 BLUE
9 YELLOW
10 GREEN
E - STOP
CONTACT
1
E - STOP
CONTACT
2
1 BLACK
2 GREY
3 EARTH
4 YELLOW
5 YELLOW
6 WHITE
7 BROWN
8 GREEN
SCREEN
BLUE
RED
ROW B
1 RED
2 BLUE
3 SCREEN
4 BROWN
5 BLUE
6 EARTH
7 BLUE
8 BLUE
9 RED
10 BLUE
TACHO
RC
SUPPRESSOR
(RS 210 - 364)
LUBE PUMP
LUBE FLOAT
SWITCH
AXIS
OVERRIDE
SWITCH
(MALE PINS)
ABCD
ABCD
1
1
B
A
10
10
VIEW OF
MACHINE
SOCKET
ROW C
RC
SUPPRESSOR
(RS 210 - 364)
1 BROWN
2 BLUE
3 EARTH
4 BROWN
5 BLUE
6
7 RED
8 RED/WHITE
9 BLACK
10 BLACK/WHITE
COOLANT
PUMP
LOW VOLT
WORKLIGHT
1
2
3
4
X
ORANGE
ORANGE/WHITE
YELLOW
YELLOW/WHITE
NOT USED
HEAT SHRINK
SEPARATELY
CONNECTION BOX
MOUNTED
ON X AXIS
ROW D
1 RED
2 RED/WHITE
3 BLACK
4 BLACK/WHITE
5 RED
6 RED/WHITE
7 BLACK
8 BLACK/WHITE
9 RED
10 BLUE
Y
Z
ORANGE
ORANGE/WHITE
YELLOW
YELLOW/WHITE
NOT USED
HEAT SHRINK
SEPARATELY
(USED FOR POWER DOOR)
(SWITCH MOUNTED IN COLUMN)
GUARD FULLY
OPEN SWITCH
TRIAC PC
MOTOR WIRING
PLUG A
SHEET 12
[TPC]
[GR12]
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE
DRN BY A McHENRY
DATE 27 - 2 - 95
A3 - 400228

PLUG A

IF IN DOUBT ASK



TRIAC PC
MOTOR WIRING
PLUG A

SHEET 12

[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

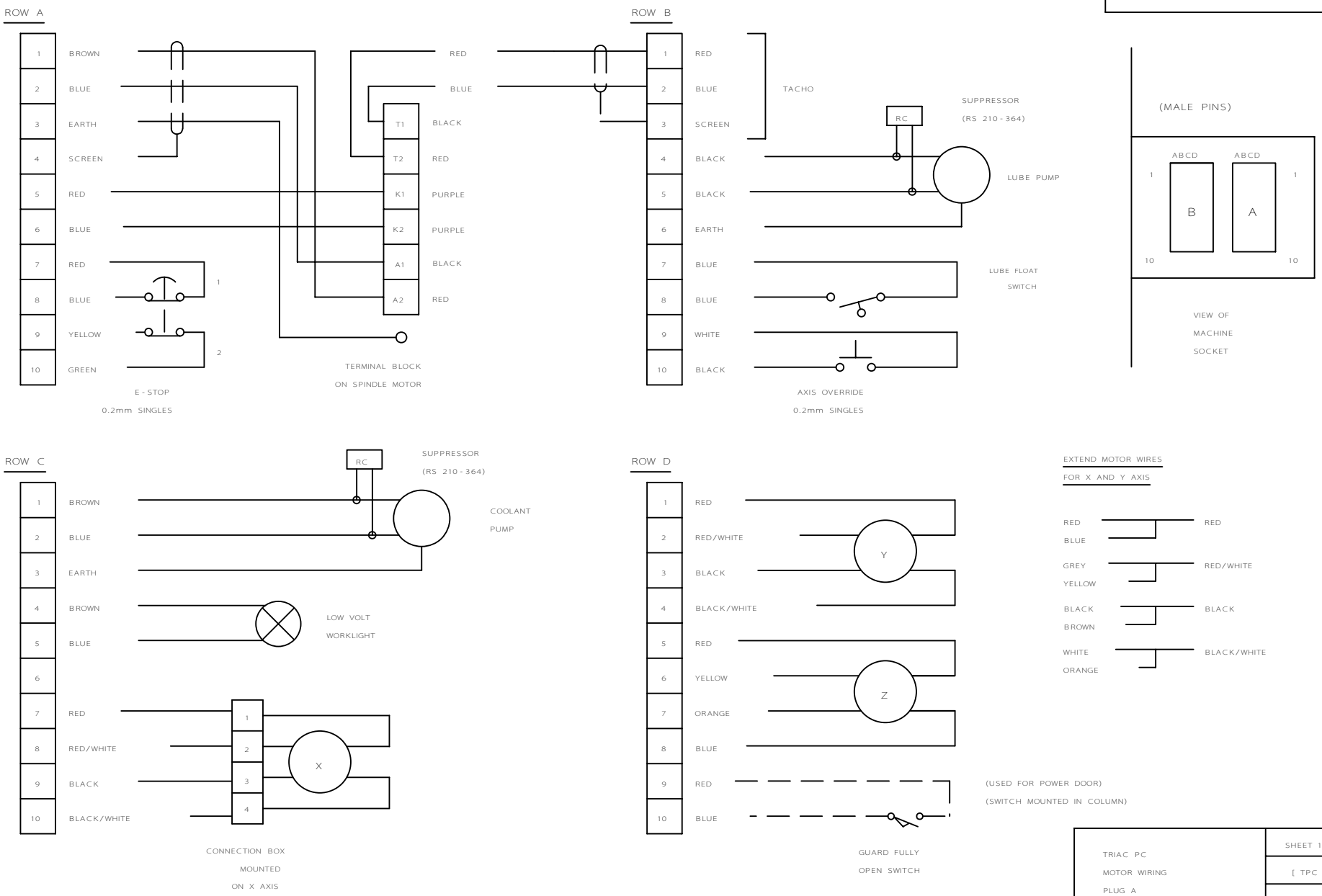
DRN BY A McHENRY

DATE 26 - 3 - 96

GR - 12 A

PLUG A

IF IN DOUBT ASK



TRIAC PC
MOTOR WIRING
PLUG A

SHEET 12

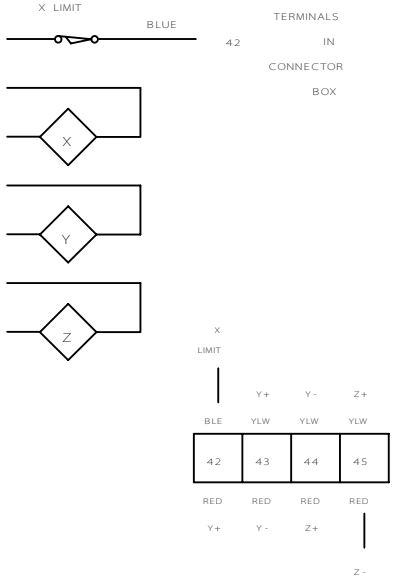
[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 15 - 5 - 97	GR - 12 B

IF IN DOUBT ASK

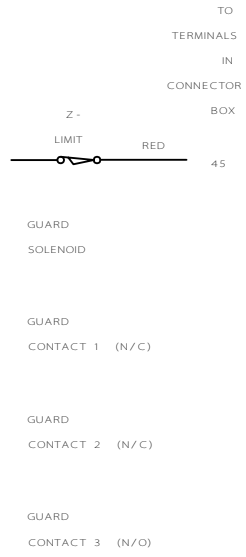
ROW A

1	RED	41
2	YELLOW	65
3	GREEN	66
4	BLACK	65
5	BLUE	67
6	BLACK	65
7	BLUE	68
8		
9		
10		



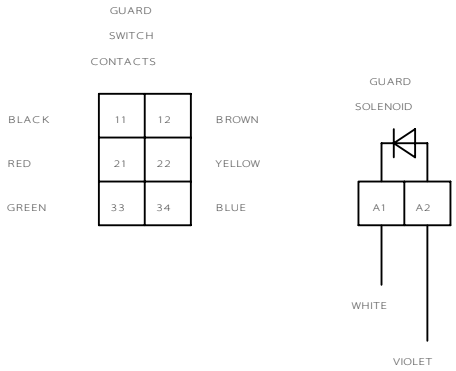
ROW B

1		
2	YELLOW	46
3	WHITE	57
4	VIOLET	60
5	BLACK	77
6	BROWN	70
7	RED	61
8	YELLOW	64
9	GREEN	61
10	BLUE	50



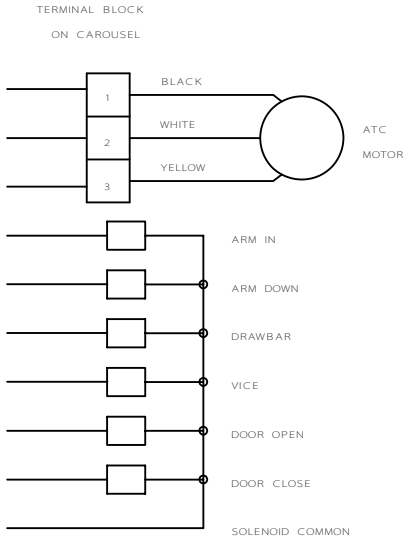
GUARD INTERLOCK WITH SOLENOID

(REMOVE LINK 12 - 41)



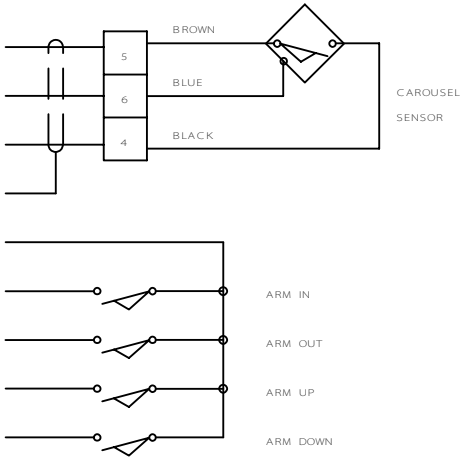
ROW C

1	BLACK	N
2	WHITE	9
3	YELLOW	8
4	BLACK	26
5	BLACK	27
6	BLACK	28
7	BLACK	29
8	BLACK	105
9	BLACK	107
10	BLACK	24

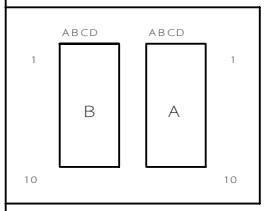


ROW D

1	RED	69
2	BLUE	70
3	YELLOW	75
4	SCREEN	
5	BLUE	70
6	RED	71
7	RED	72
8	RED	73
9	RED	74
10		



(MALE PINS)



VIEW OF MACHINE SOCKET

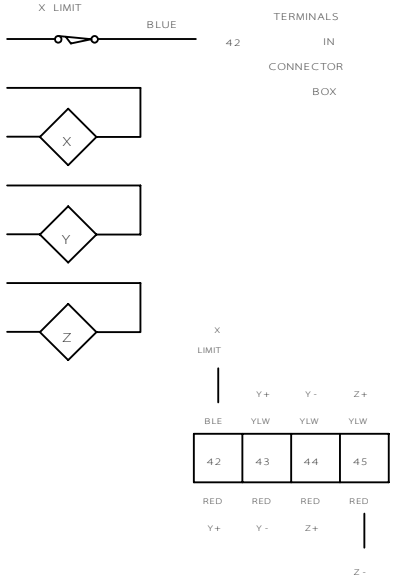
TRIAC PC DATUM AND LIMIT SWITCH WIRING PLUG B	SHEET 13
	[TPC]
	[GR13]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 27-2-95	A3 - 400229

IF IN DOUBT ASK

ROW A

1	RED	41
2	YELLOW	65
3	GREEN	66
4	BLACK	65
5	BLUE	67
6	BLACK	65
7	BLUE	68
8		
9		
10		

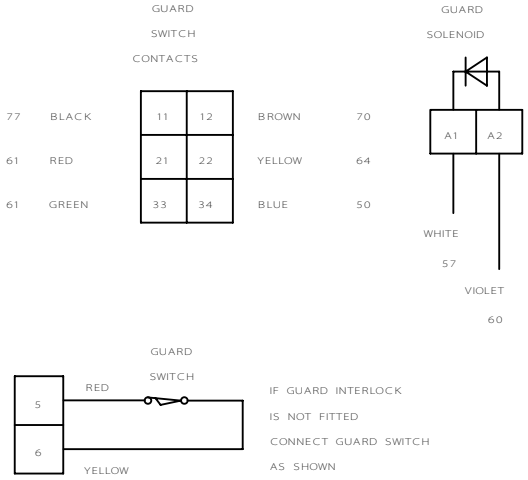


ROW B

1		
2	YELLOW	46
3	WHITE	57
4	VIOLET	60
5	BLACK	77
6	BROWN	70
7	RED	61
8	YELLOW	64
9	GREEN	61
10	BLUE	50

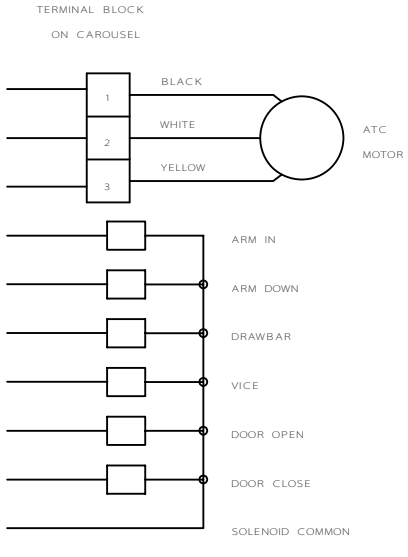
GUARD INTERLOCK WITH SOLENOID

(REMOVE LINK 12 - 41)



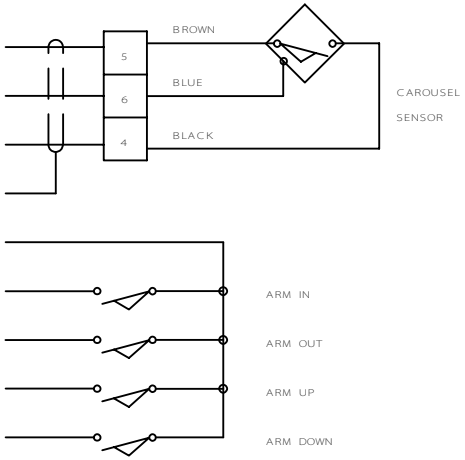
ROW C

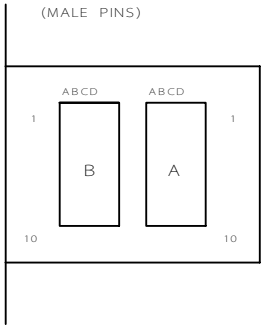
1	BLACK	N
2	WHITE	9
3	YELLOW	8
4	BLACK	26
5	BLACK	27
6	BLACK	28
7	BLACK	29
8	BLACK	105
9	BLACK	107
10	BLACK	24



ROW D

1	RED	69
2	BLUE	70
3	YELLOW	75
4	SCREEN	
5	BLUE	70
6	RED	71
7	RED	72
8	RED	73
9	RED	74
10		





TRIAC PC
DATUM AND LIMIT
SWITCH WIRING
PLUG B

SHEET 13

[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

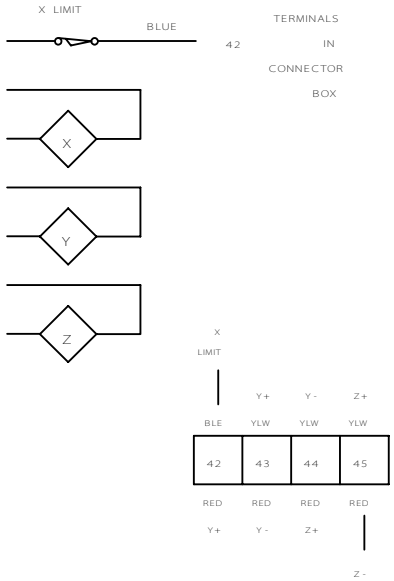
DATE 26 - 3 - 96

GR - 13 A

IF IN DOUBT ASK

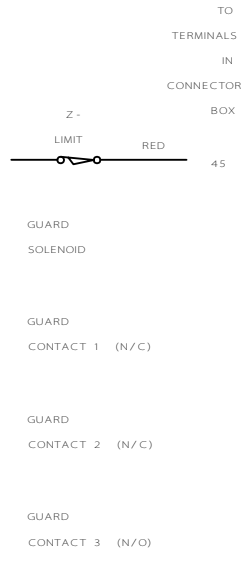
ROW A

1	RED	41
2	YELLOW	65
3	GREEN	66
4	BROWN	65
5	BLUE	67
6	BROWN	65
7	BLUE	68
8		
9		
10		



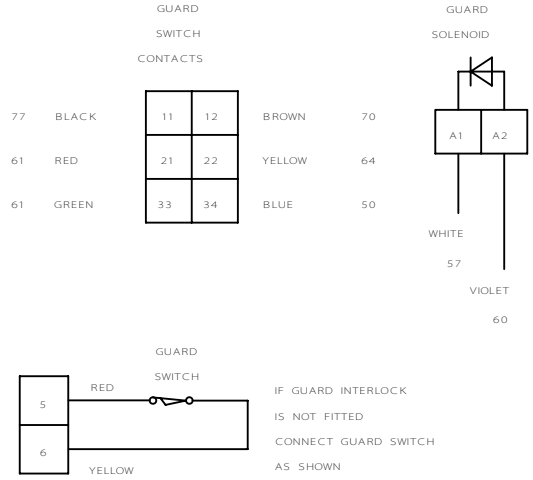
ROW B

1		
2	YELLOW	46
3	WHITE	57
4	VIOLET	60
5	BLACK	77
6	BROWN	70
7	RED	61
8	YELLOW	64
9	GREEN	61
10	BLUE	50



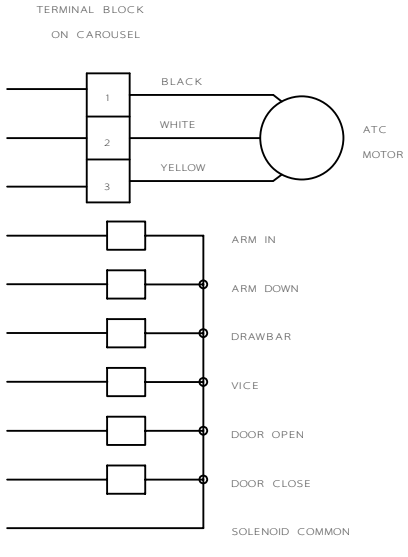
GUARD INTERLOCK WITH SOLENOID

(REMOVE LINK 12 - 41)



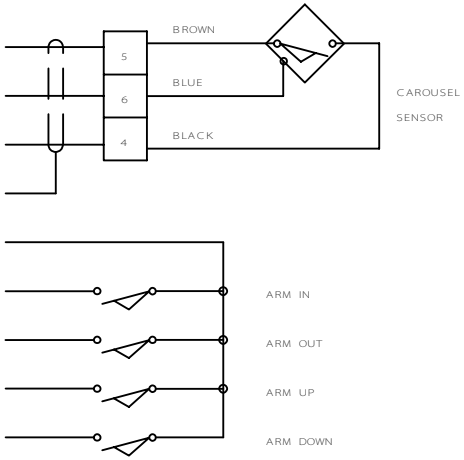
ROW C

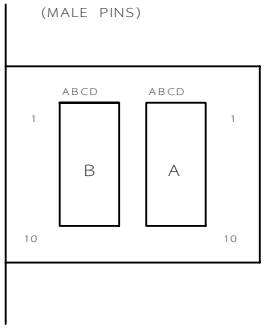
1	BLACK	N
2	WHITE	9
3	YELLOW	8
4	BLACK	26
5	BLACK	27
6	BLACK	28
7	BLACK	29
8	BLACK	105
9	BLACK	107
10	BLACK	24



ROW D

1	RED	69
2	BLUE	70
3	YELLOW	75
4	SCREEN	
5	BLUE	70
6	RED	71
7	RED	72
8	RED	73
9	RED	74
10		





TRIAC PC DATUM AND LIMIT SWITCH WIRING PLUG B

SHEET 13

[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-5-96 | GR-13 B

IF IN DOUBT ASK

ROW A

1	RED	41
2	YELLOW	65
3	GREEN	66
4	BROWN	65
5	BLUE	67
6	BROWN	65
7	BLUE	68
8	RED *	136
9	BLUE *	137
10	YELLOW *	134

X LIMIT — BLUE — 42 — TO TERMINALS IN CONNECTOR BOX

X

Y

Z

OVERRIDE POTS SEE SHEET 17

X LIMIT

BLE	Y+ YLW	Y- YLW	Z+ YLW
42	43	44	45
RED Y+	RED Y-	RED Z+	RED Z-

ROW B

1	GREEN *	135
2	YELLOW	46
3	WHITE	57
4	VIOLET	60
5	BLACK	77
6	BROWN	70
7	RED	61
8	YELLOW	64
9	GREEN	61
10	BLUE	50

Z- LIMIT — RED — 45 — TO TERMINALS IN CONNECTOR BOX

GUARD SOLENOID

GUARD CONTACT 1 (N/C)

GUARD CONTACT 2 (N/C)

GUARD CONTACT 3 (N/O)

GUARD INTERLOCK WITH SOLENOID

(REMOVE LINK 12 - 41)

GUARD SWITCH CONTACTS

77	BLACK	11	12	BROWN	70
61	RED	21	22	YELLOW	64
61	GREEN	33	34	BLUE	50

GUARD SOLENOID

A1 A2

WHITE 57

VIOLET 60

GUARD SWITCH

5 — RED

6 — YELLOW

IF GUARD INTERLOCK IS NOT FITTED CONNECT GUARD SWITCH AS SHOWN

ROW C

1	BLACK	N
2	WHITE	9
3	YELLOW	8
4	BLACK	26
5	BLACK	27
6	BLACK	28
7	BLACK	29
8	BLACK	105
9	BLACK	107
10	BLACK	24

TERMINAL BLOCK ON CAROUSEL

1 — BLACK

2 — WHITE

3 — YELLOW

ATC MOTOR

ARM IN

ARM DOWN

DRAWBAR

VICE

DOOR OPEN

DOOR CLOSE

SOLENOID COMMON

ROW D

1	RED	69
2	BLUE	70
3	YELLOW	75
4	SCREEN	
5	BLUE	70
6	RED	71
7	RED	72
8	RED	73
9	RED	74
10		

TERMINAL BLOCK ON CAROUSEL

5 — BROWN

6 — BLUE

4 — BLACK

CAROUSEL SENSOR

ARM IN

ARM OUT

ARM UP

ARM DOWN

(MALE PINS)

ABCD ABCD

1 1

B A

10 10

VIEW OF MACHINE SOCKET

TRIAC PC DATUM AND LIMIT SWITCH WIRING PLUG B

SHEET 13

[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

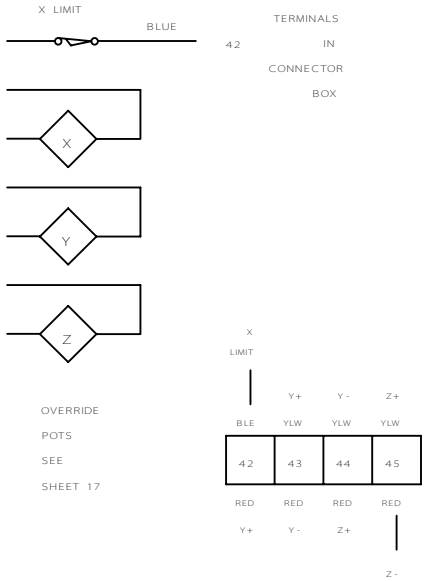
DATE 13-6-96

GR-13 C

IF IN DOUBT ASK

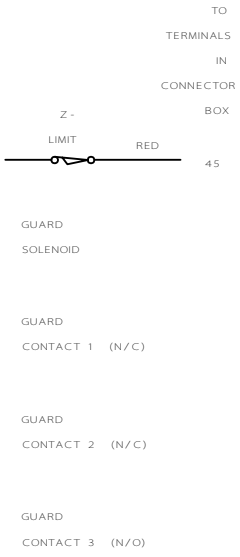
ROW A

1	RED	41
2	YELLOW	65
3	GREEN	66
4	BROWN	65
5	BLUE	67
6	BROWN	65
7	BLUE	68
8	RED *	136
9	BLUE *	137
10	YELLOW *	134



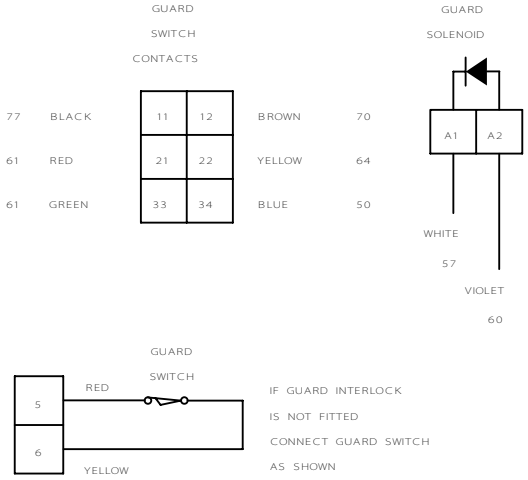
ROW B

1	GREEN *	135
2	YELLOW	46
3	WHITE	57
4	VIOLET	60
5	BLACK	77
6	BROWN	70
7	RED	61
8	YELLOW	64
9	GREEN	61
10	BLUE	50



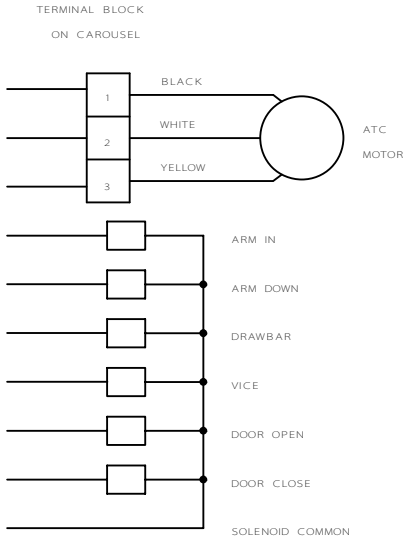
GUARD INTERLOCK WITH SOLENOID

(REMOVE LINK 12 - 41)



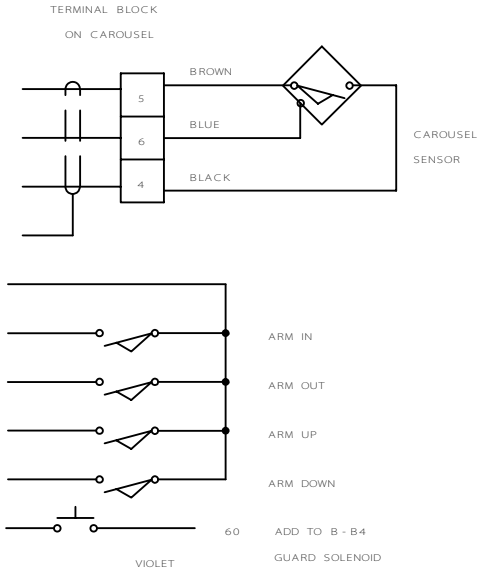
ROW C

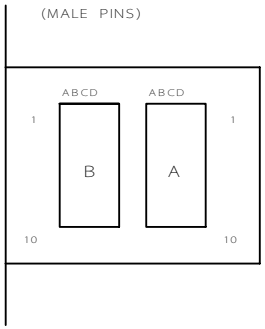
1	BLACK	N
2	WHITE	9
3	YELLOW	8
4	BLACK	26
5	BLACK	27
6	BLACK	28
7	BLACK	29
8	BLACK	105
9	BLACK	107
10	BLACK	24



ROW D

1	RED	69
2	BLUE	70
3	YELLOW	75
4	SCREEN	
5	BLUE	70
6	RED	71
7	RED	72
8	RED	73
9	RED	74
10	BROWN	106





TRIAC PC DATUM AND LIMIT SWITCH WIRING PLUG B

SHEET 13

[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 16-5-97

GR-13 D

IF IN DOUBT ASK

ROW A

1	RED	41
2	YELLOW	65
3	GREEN	66
4	BROWN	65
5	BLUE	67
6	BROWN	65
7	BLUE	68
8	RED *	136
9	BLUE *	137
10	YELLOW *	134

X LIMIT — BLUE — 42 — TO TERMINALS IN CONNECTOR BOX

X

Y — (BLACK) — (WHITE) — ALTERNATE SENSOR WIRING

Z

OVERRIDE POTS SEE SHEET 17

X LIMIT

BLE	Y+ YLW	Y- YLW	Z+ YLW
42	43	44	45
RED Y+	RED Y-	RED Z+	RED Z-

ROW B

1	GREEN *	135
2	YELLOW	46
3	WHITE	57
4	VIOLET	60
5	BLACK	77
6	BROWN	70
7	RED	61
8	YELLOW	64
9	GREEN	61
10	BLUE	50

Z- LIMIT — RED — 45 — TO TERMINALS IN CONNECTOR BOX

GUARD SOLENOID

GUARD CONTACT 1 (N/C)

GUARD CONTACT 2 (N/C)

GUARD CONTACT 3 (N/O)

GUARD INTERLOCK WITH SOLENOID

(REMOVE LINK 12 - 41)

GUARD SWITCH CONTACTS

77	BLACK	11	12	BROWN	70
61	RED	21	22	YELLOW	64
61	GREEN	33	34	BLUE	50

GUARD SOLENOID

A1 A2

WHITE 57

VIOLET 60

GUARD SWITCH

5 — RED

6 — YELLOW

IF GUARD INTERLOCK IS NOT FITTED CONNECT GUARD SWITCH AS SHOWN

ROW C

1	BLACK	N
2	WHITE	9
3	YELLOW	8
4	BLACK	26
5	BLACK	27
6	BLACK	28
7	BLACK	29
8	BLACK	105
9	BLACK	107
10	BLACK	24

TERMINAL BLOCK ON CAROUSEL

1 — WHITE

2 — GREY

3 — BLACK

NEW ATC MOTOR

ARM IN

ARM DOWN

DRAWBAR

VICE

DOOR OPEN

DOOR CLOSE

SOLENOID COMMON

ROW D

1	RED	69
2	BLUE	70
3	YELLOW	75
4	SCREEN	
5	BLUE	70
6	RED	71
7	RED	72
8	RED	73
9	RED	74
10	BROWN	106

TERMINAL BLOCK ON CAROUSEL

5 — BROWN

6 — BLUE

4 — BLACK

CAROUSEL SENSOR

ARM IN

ARM OUT

ARM UP

ARM DOWN

60 — VIOLET — ADD TO B-B4 GUARD SOLENOID

(MALE PINS)

ABCD ABCD

1 1

B A

10 10

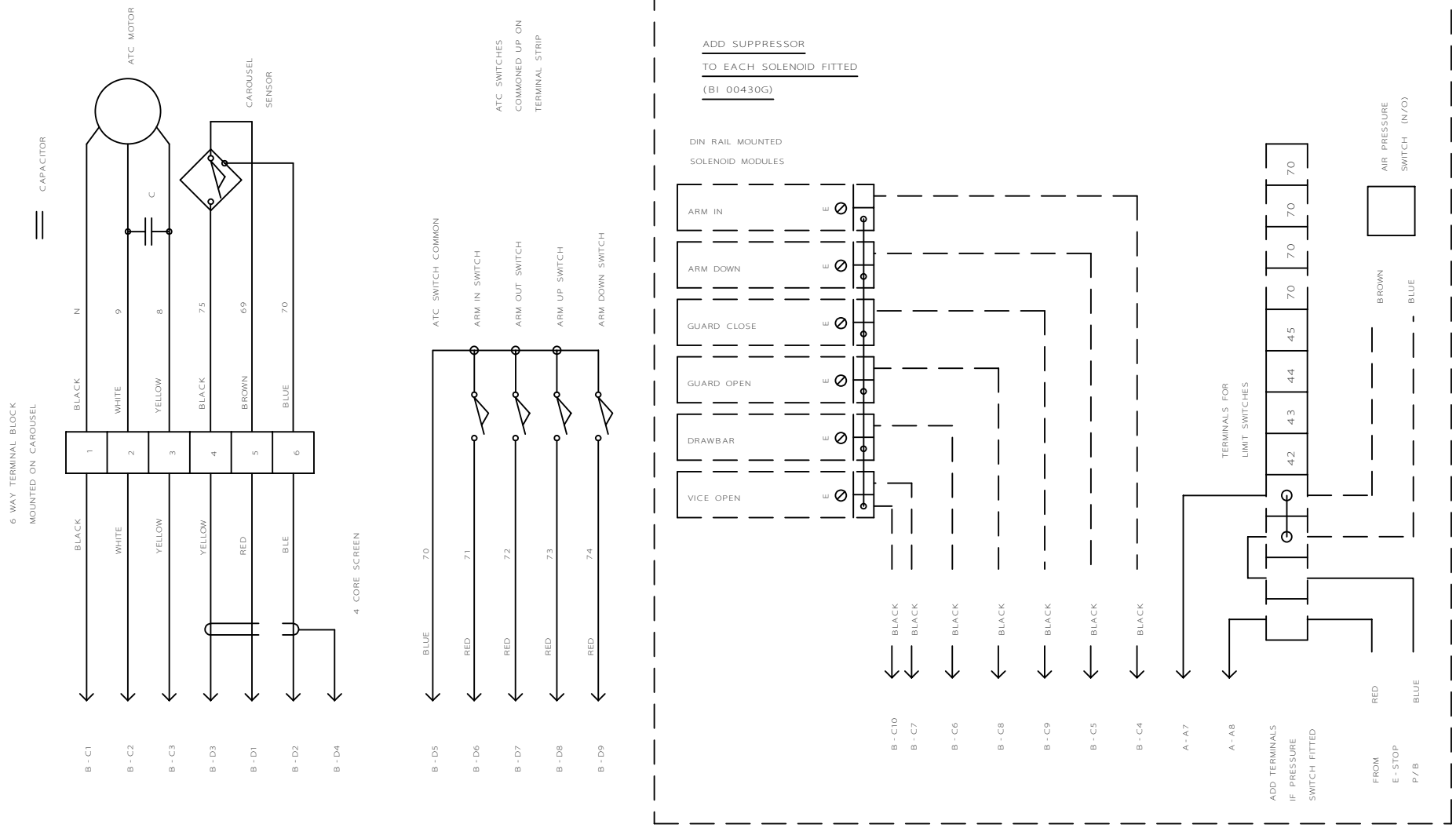
VIEW OF MACHINE SOCKET

TRIAC PC DATUM AND LIMIT SWITCH WIRING PLUG B

SHEET 13

[TPC]

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 26-10-98 | GR-13 E

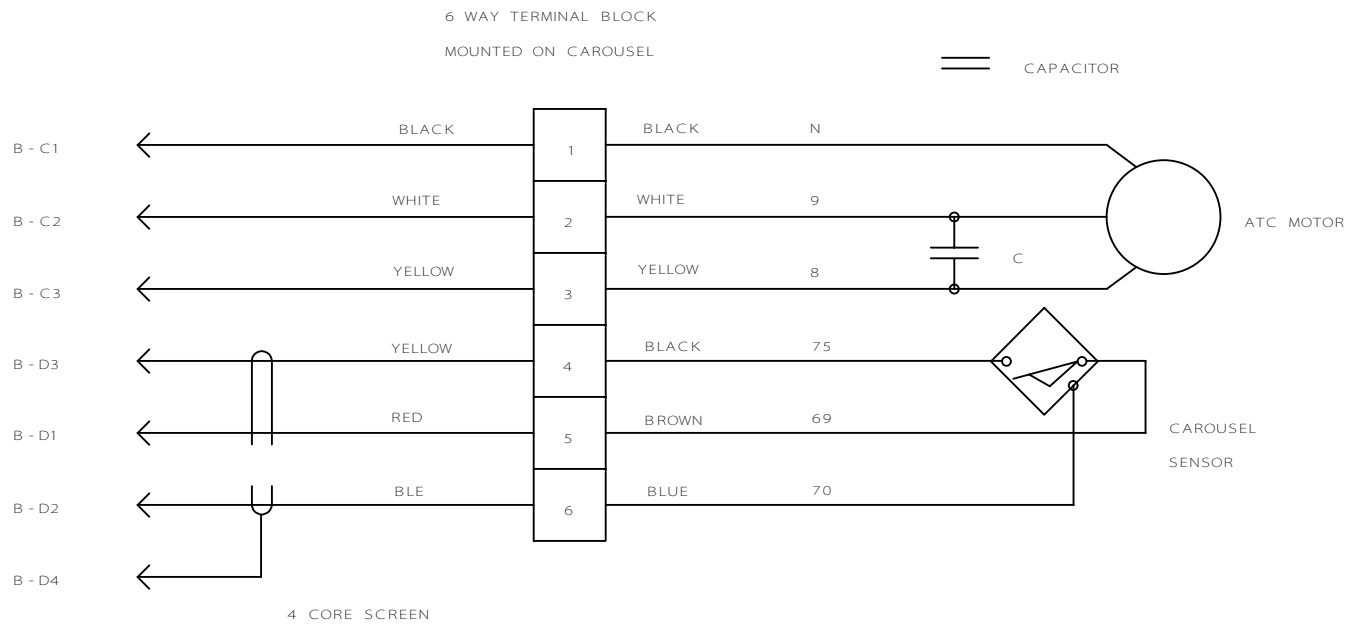


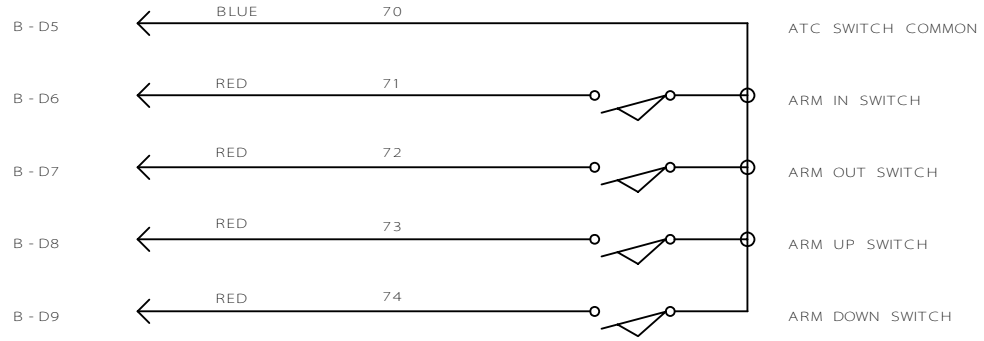
TRIAC PC ATC + SOLENOID WIRING	SHEET 14 [TPC] [GR14]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 2 - 3 - 95	A3 - 400231

IF IN DOUBT

ASK





ATC SWITCHES
COMMONED UP ON
TERMINAL STRIP
IN SOLENOID BOX
SEE SHEET 16

PIN CONNECTIONS ON
80 WAY PLUG AND SOCKET

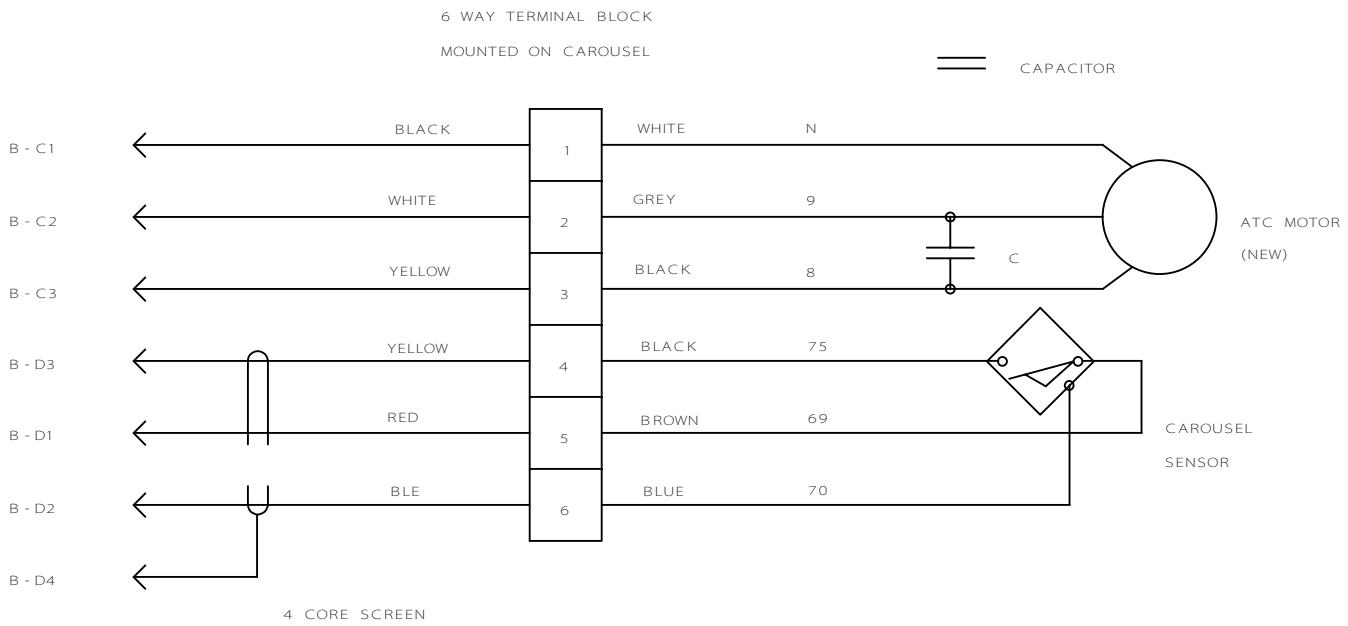
SHEET 14

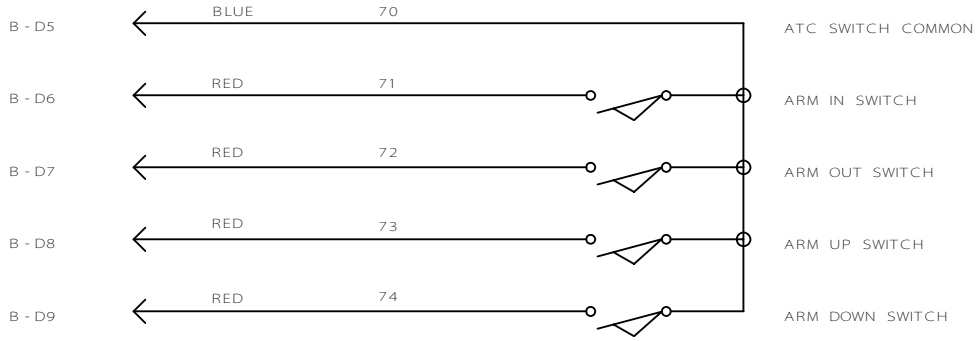
[TPC]

TRIAC PC ATC WIRING

DENFORD LIMITED	DATE 26 - 3 - 96	DRN BY A McHENRY	GR - 14 A

IF IN DOUBT
ASK





ATC SWITCHES
COMMONED UP ON
TERMINAL STRIP
IN SOLENOID BOX
SEE SHEET 16

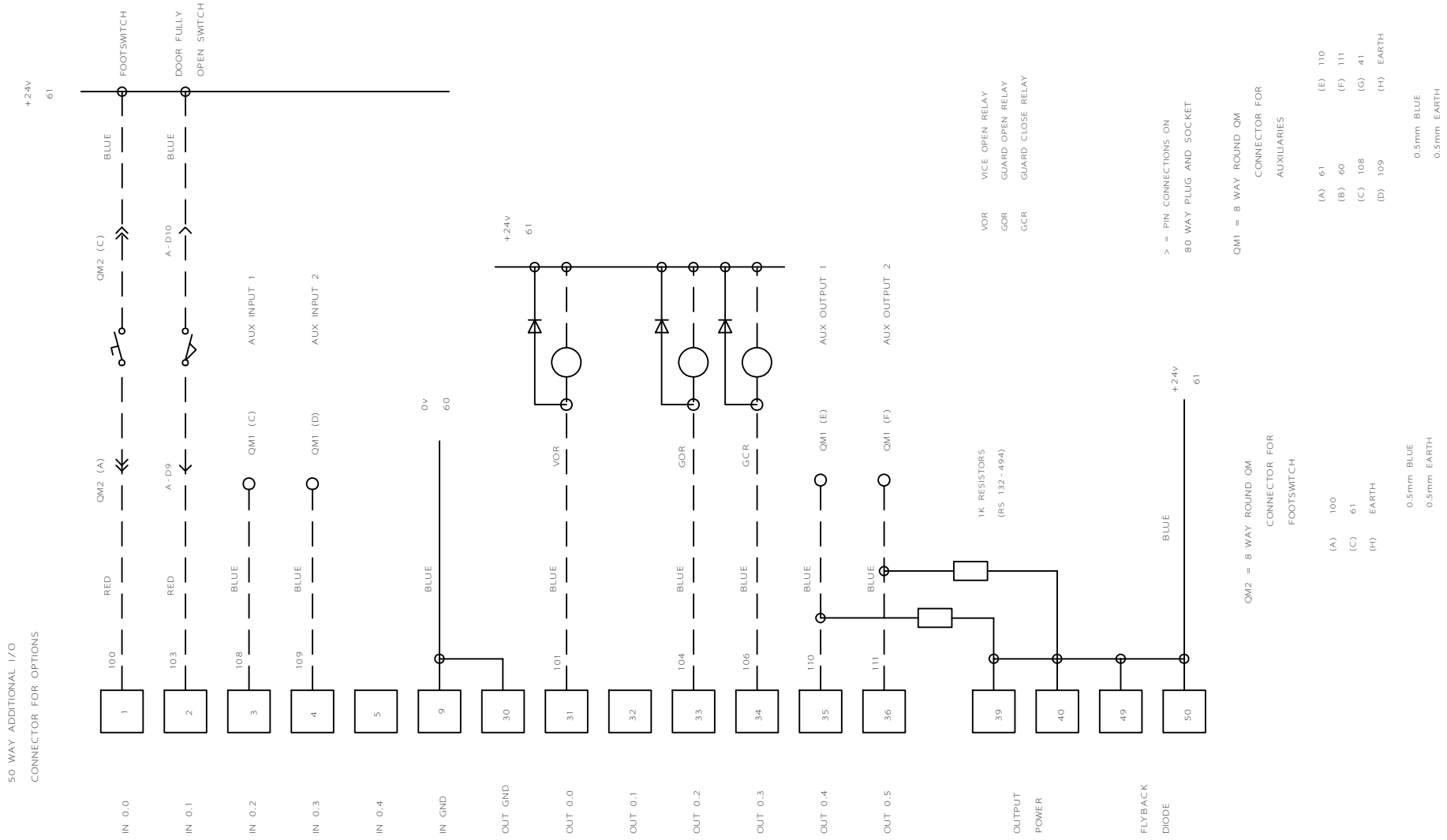
< PIN CONNECTIONS ON
80 WAY PLUG AND SOCKET

SHEET 14

[TPC]

TRIAC PC ATC WIRING

DENFORD LIMITED	DATE 26 - 10 - 98	DRN BY A McHENRY	GR - 14 B



IF IN DOUBT ASK

TRIAC PC
ADDITIONAL I/O
FOR OPTIONS

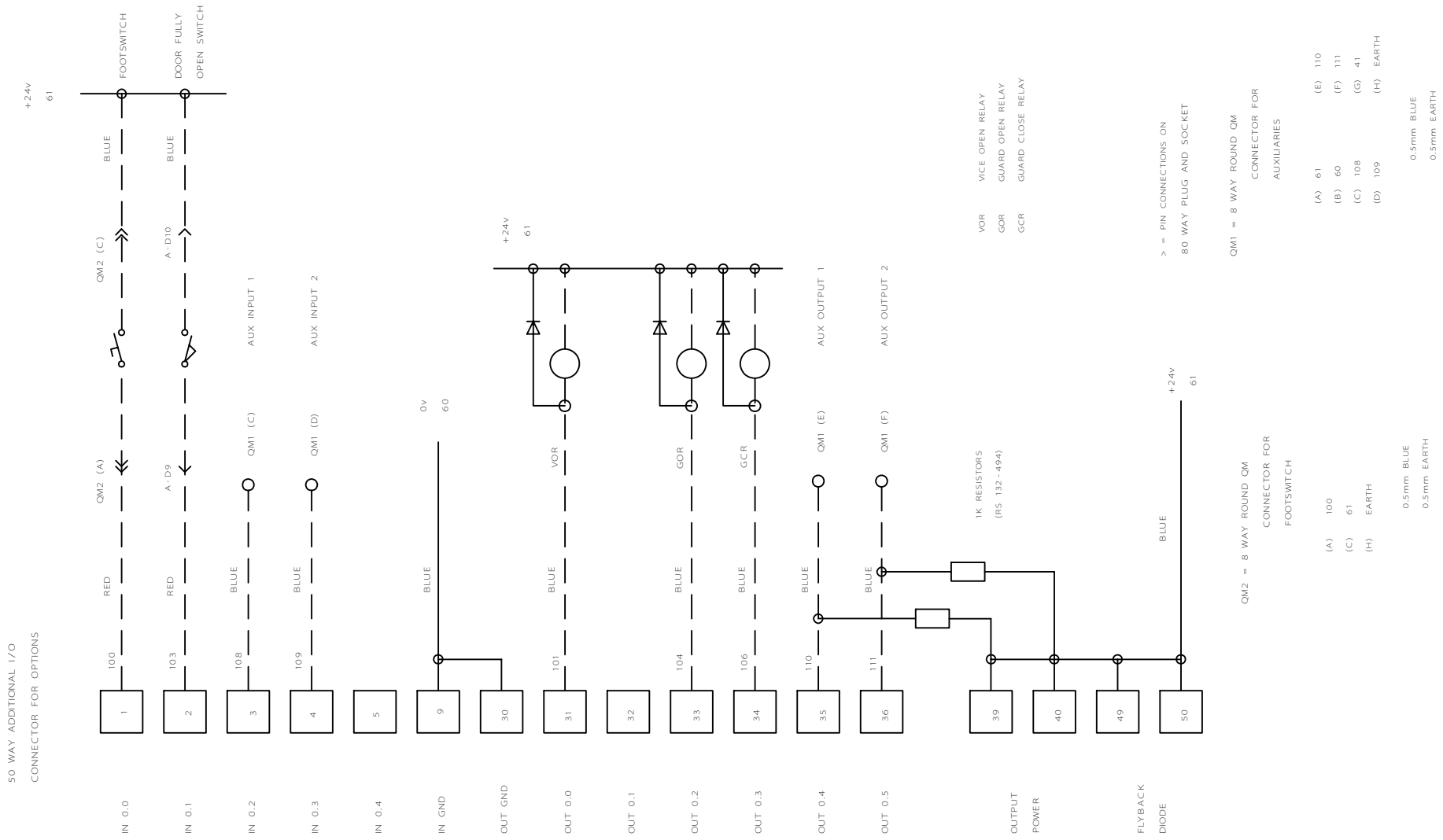
SHEET 15
[TPC]
[GR15]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 24-2-95

A3- 400196 D



IF IN DOUBT ASK

TRIAC PC
ADDITIONAL I/O
FOR OPTIONS

SHEET 15

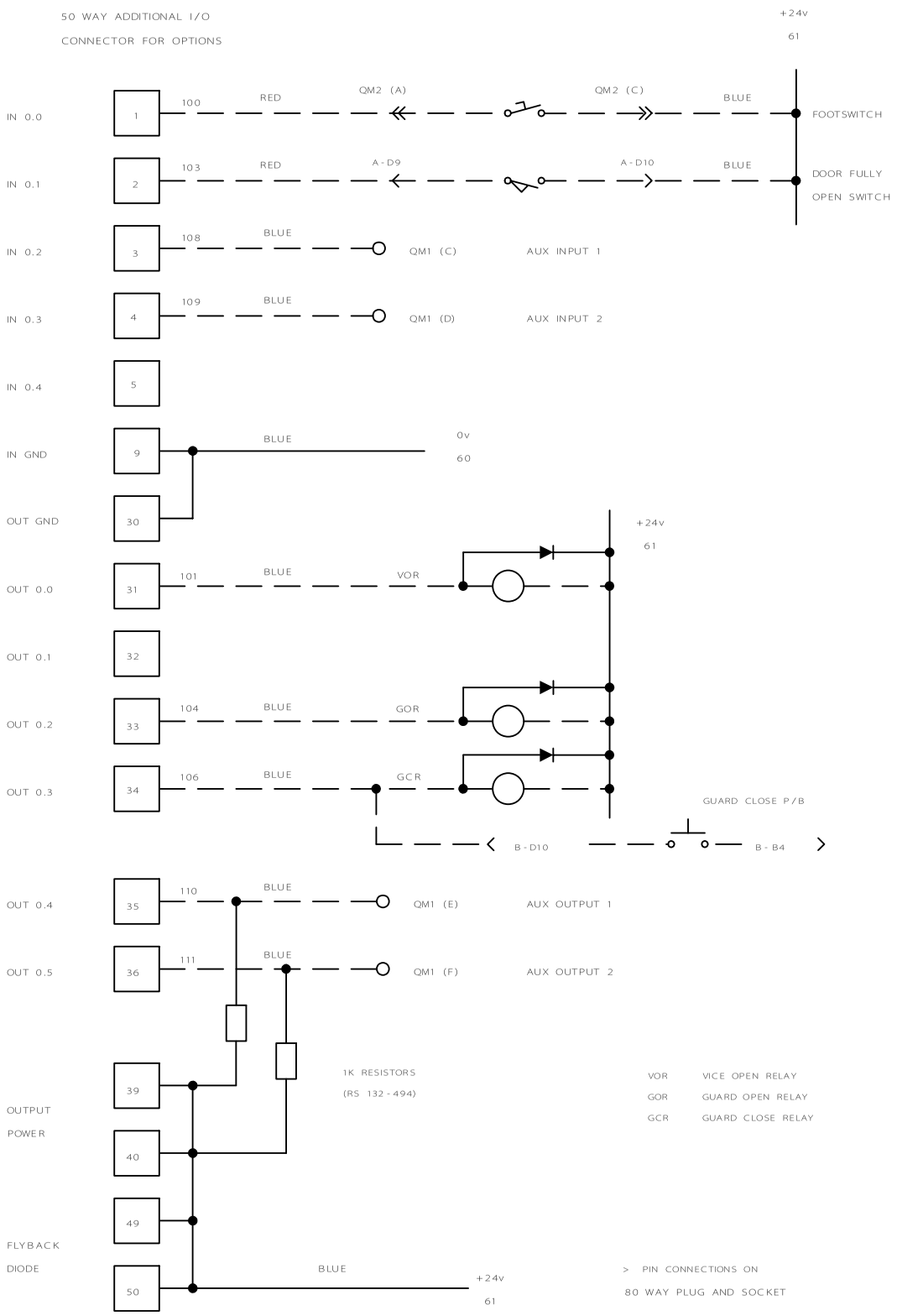
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 26-3-96

GR-15 A



DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

IF IN DOUBT ASK

DRN BY A McHENRY

DATE 16-5-97

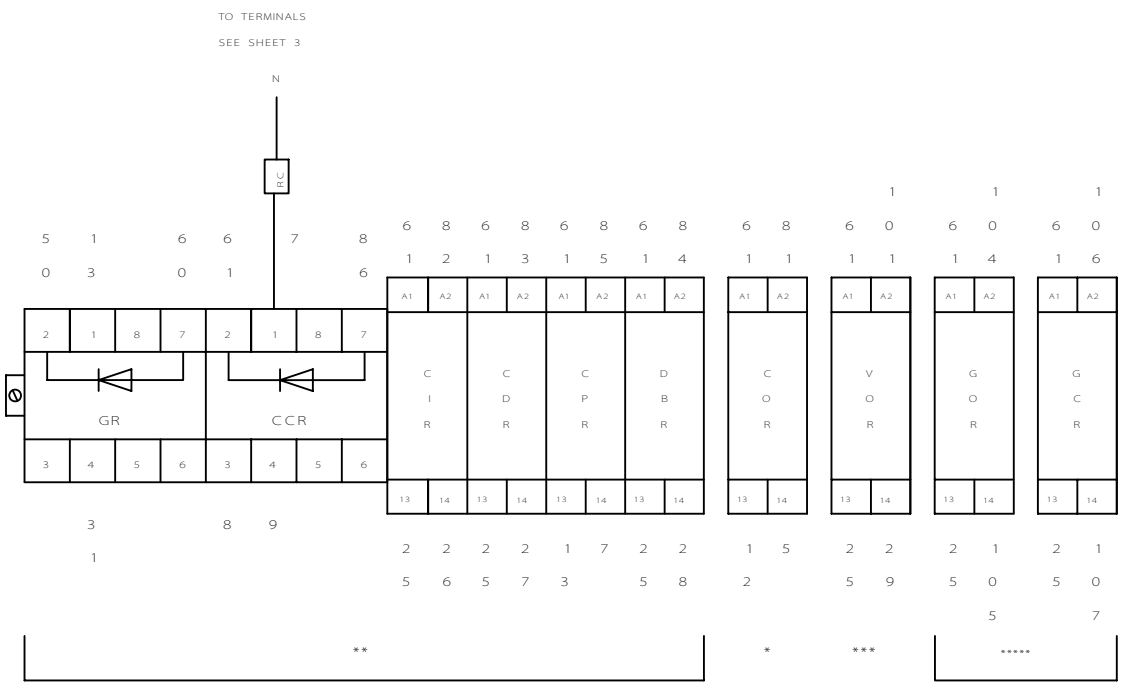
GR-15 B

TRIAC PC
ADDITIONAL I/O
FOR OPTIONS

[TPC]

SHEET 15

IF IN DOUBT ASK



RELAYS FOR OPTIONS

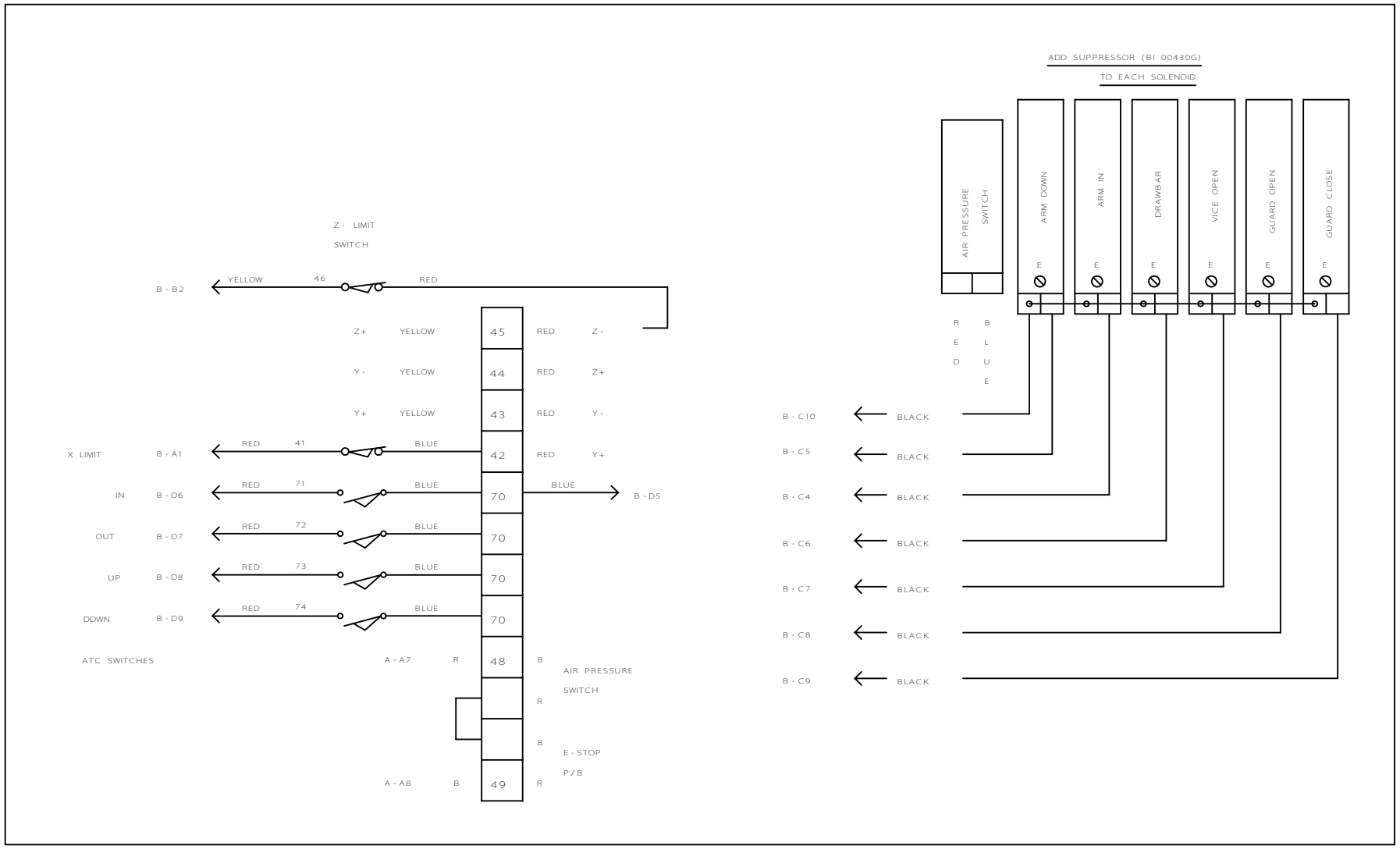
GR	GUARD RELAY
CCR	CAROUSEL COUNTER-CLOCKWISE RELAY
CIR	CAROUSEL IN RELAY
CDR	CAROUSEL DOWN RELAY
CPR	CAROUSEL POWER RELAY
DBR	DRAWBAR RELAY
COR	COOLANT ON RELAY
VOR	VICE OPEN RELAY
GOR	GUARD OPEN RELAY
GCR	GUARD CLOSE RELAY

*	ADD IF SPRAY MIST FITTED
**	ADD IF TOOLCHANGER FITTED
***	ADD IF POWER VICE FITTED
*****	ADD IF POWER GUARD FITTED

TRIAC PC
OPTIONAL RELAY
WIRING

SHEET 16
[TPC]
[GR16]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 24-2-95 | A3- 400226 A



IF IN DOUBT ASK

TRIAC PC
SOLENOID BOX
WIRING

SHEET 16

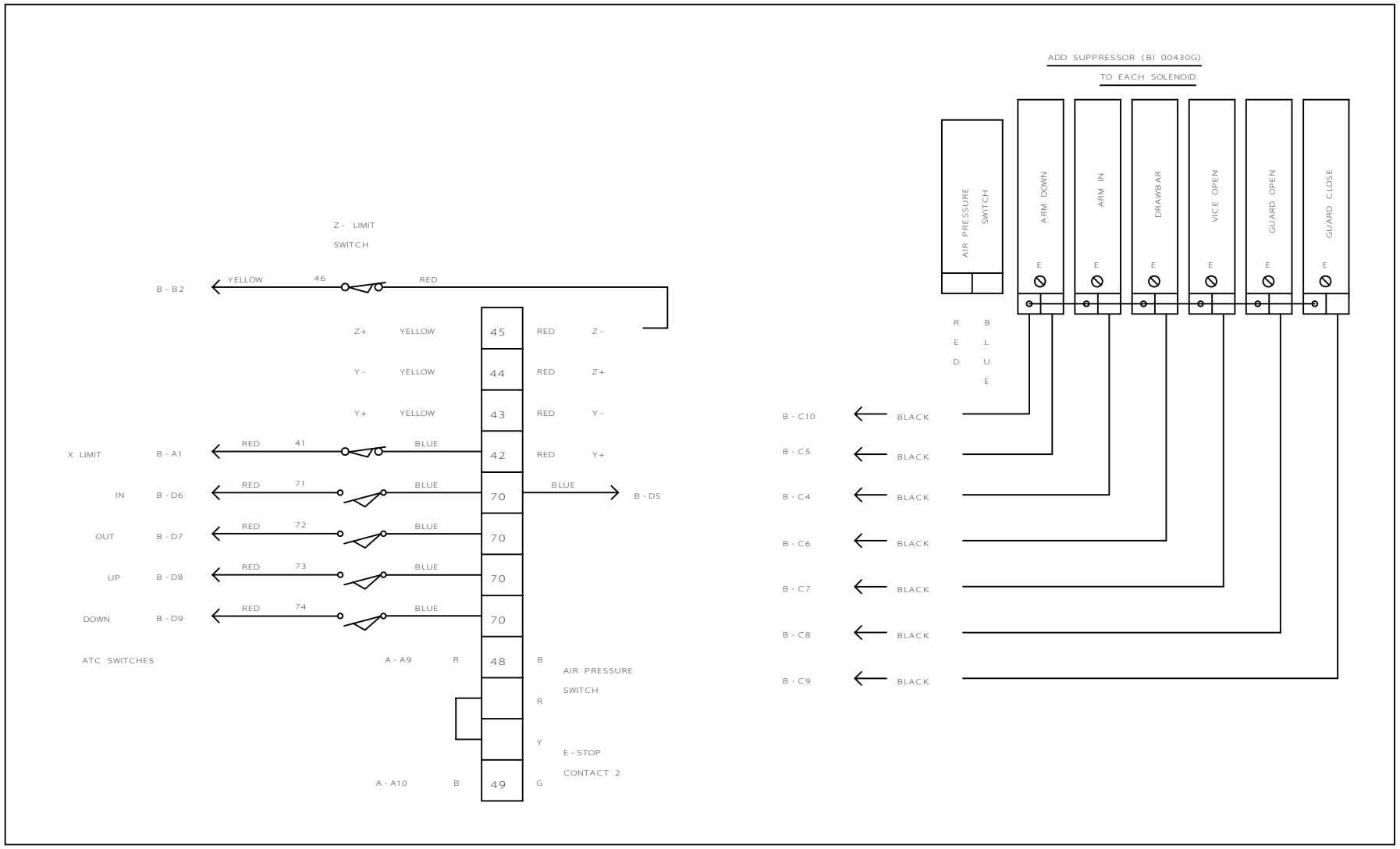
[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 26 - 3 - 96

GR - 16 A



IF IN DOUBT ASK

TRIAC PC
SOLENOID BOX
WIRING

SHEET 16

[TPC]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

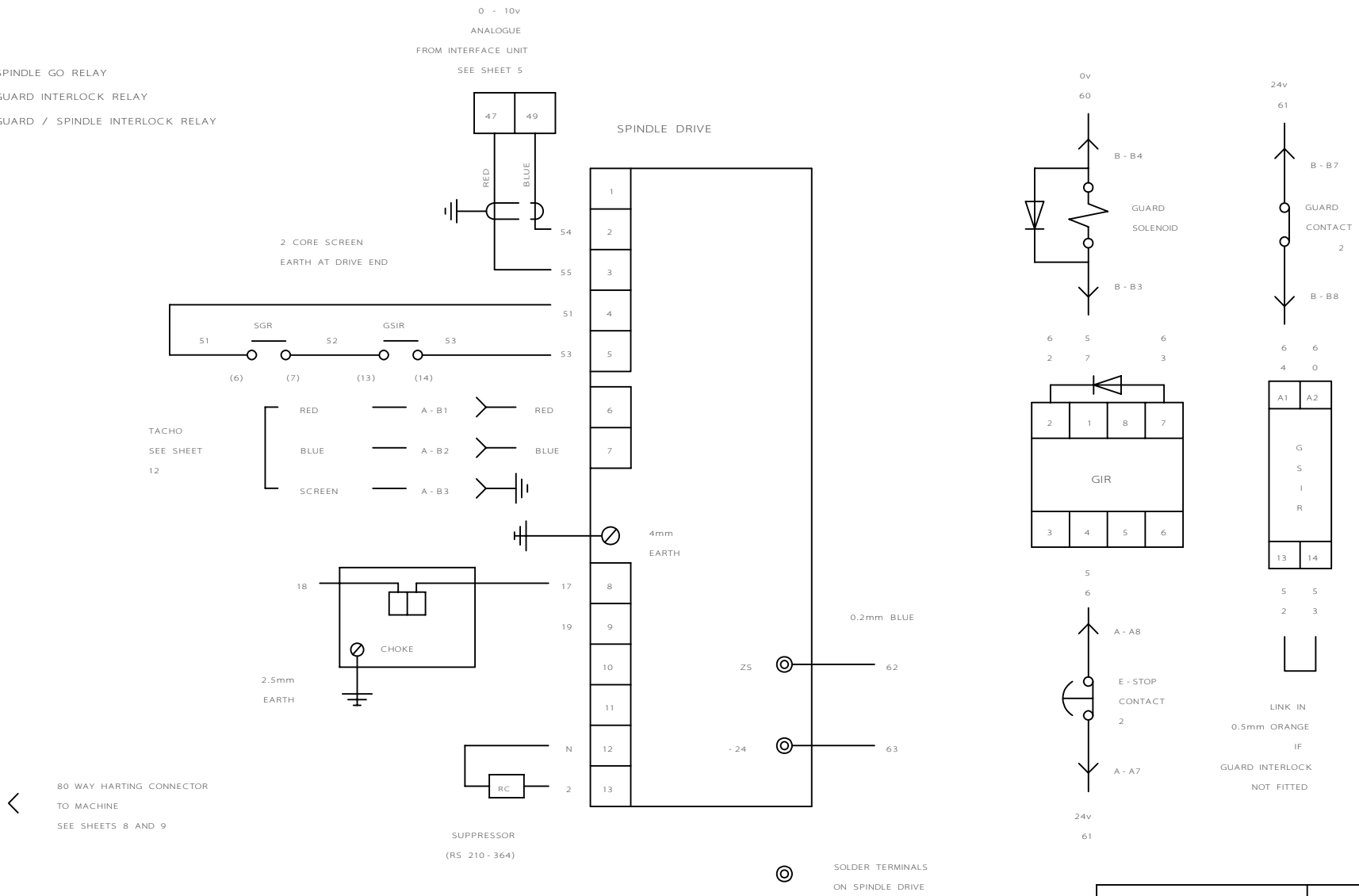
DRN BY A McHENRY

DATE 20 - 3 - 97

GR - 16 B

IF IN DOUBT ASK

SGR SPINDLE GO RELAY
GIR GUARD INTERLOCK RELAY
GSIR GUARD / SPINDLE INTERLOCK RELAY

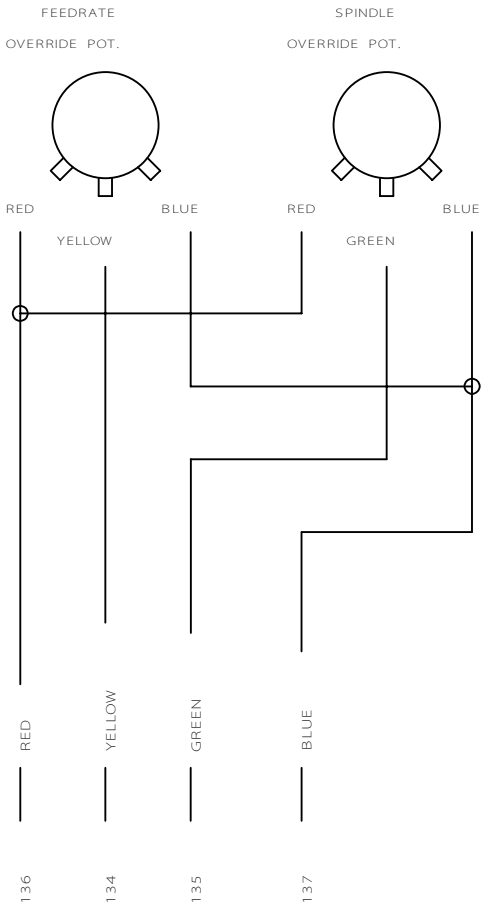


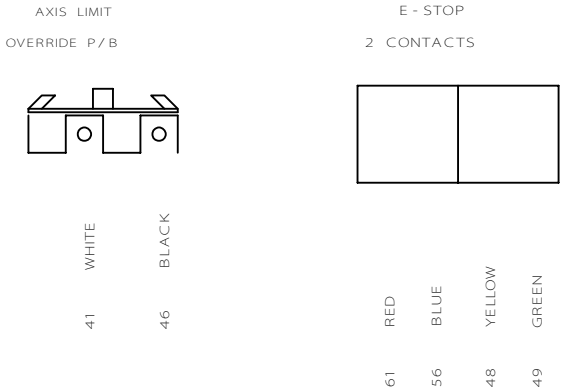
TRIAC PC SPINDLE DRIVE DETAILS	SHEET 17 [TPC] [GR17]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 1 - 3 - 95 | A3 - 400230

IF IN DOUBT ASK

FRONT VIEW OF PLATE





A-A7	RED
A-A8	BLUE
A-A9	YELLOW
A-A10	GREEN
A-B9	WHITE
A-B10	BLACK

0.2mm SINGLES FROM
E-STOP P/B AND
AXIS OVERRIDE P/B

B-A8	RED
B-A9	BLUE
B-A10	YELLOW
B-B1	GREEN

4 CORE SCREEN
FROM OVERRIDE POTS

TRIAC PC
E-STOP AND
OVERRIDE POTS

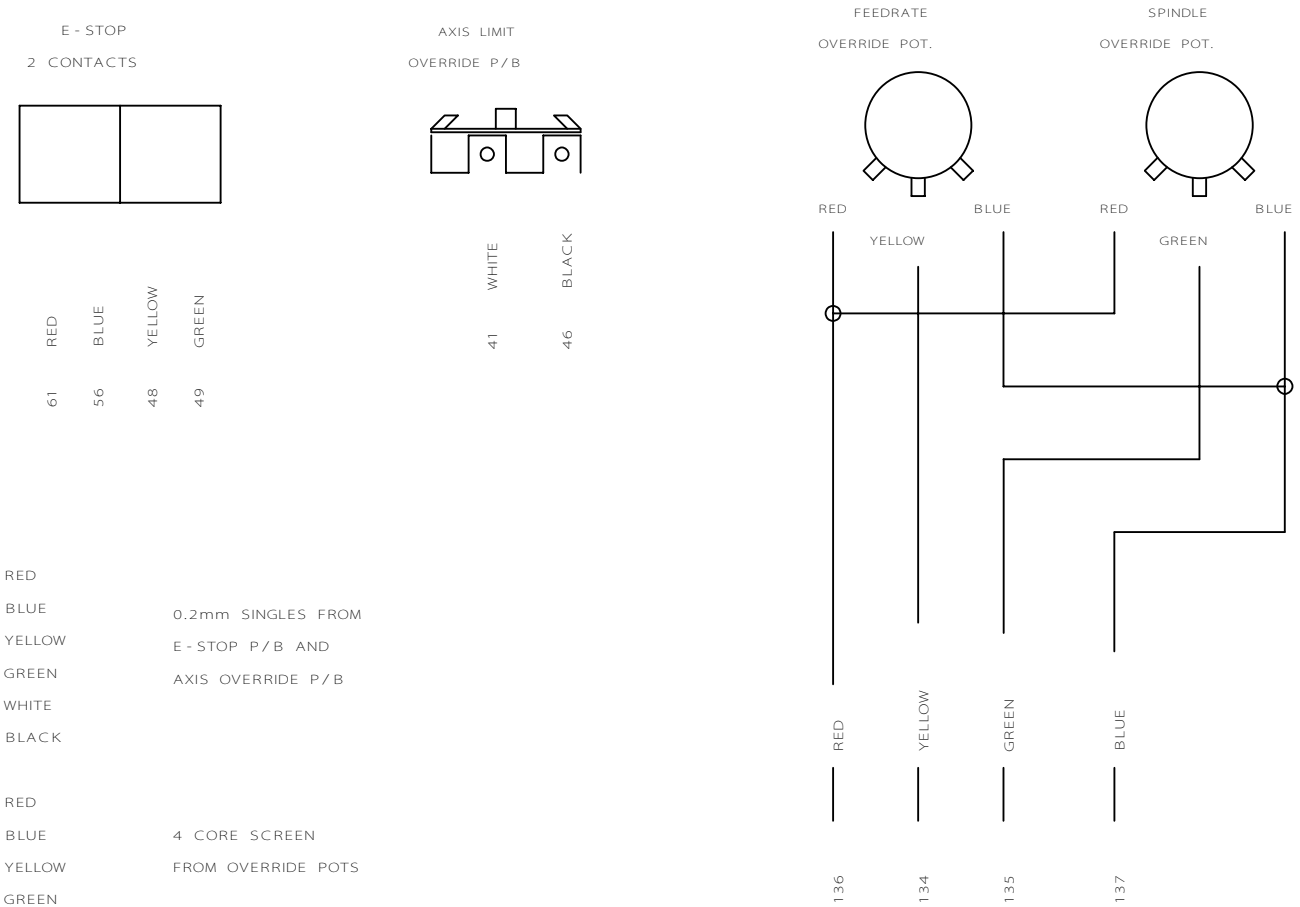
SHEET 17

[TPC]

DENFORD MACHINE TOOLS LTD | DATE 6-8-96 | DRN BY A McHENRY | GR-17A

IF IN DOUBT ASK

REAR VIEW OF PLATE



A - A7	RED	
A - A8	BLUE	0.2mm SINGLES FROM
A - A9	YELLOW	E - STOP P/B AND
A - A10	GREEN	AXIS OVERRIDE P/B
A - B9	WHITE	
A - B10	BLACK	
B - A8	RED	
B - A9	BLUE	4 CORE SCREEN
B - A10	YELLOW	FROM OVERRIDE POTS
B - B1	GREEN	

TRIAC PC
E - STOP AND
OVERRIDE POTS

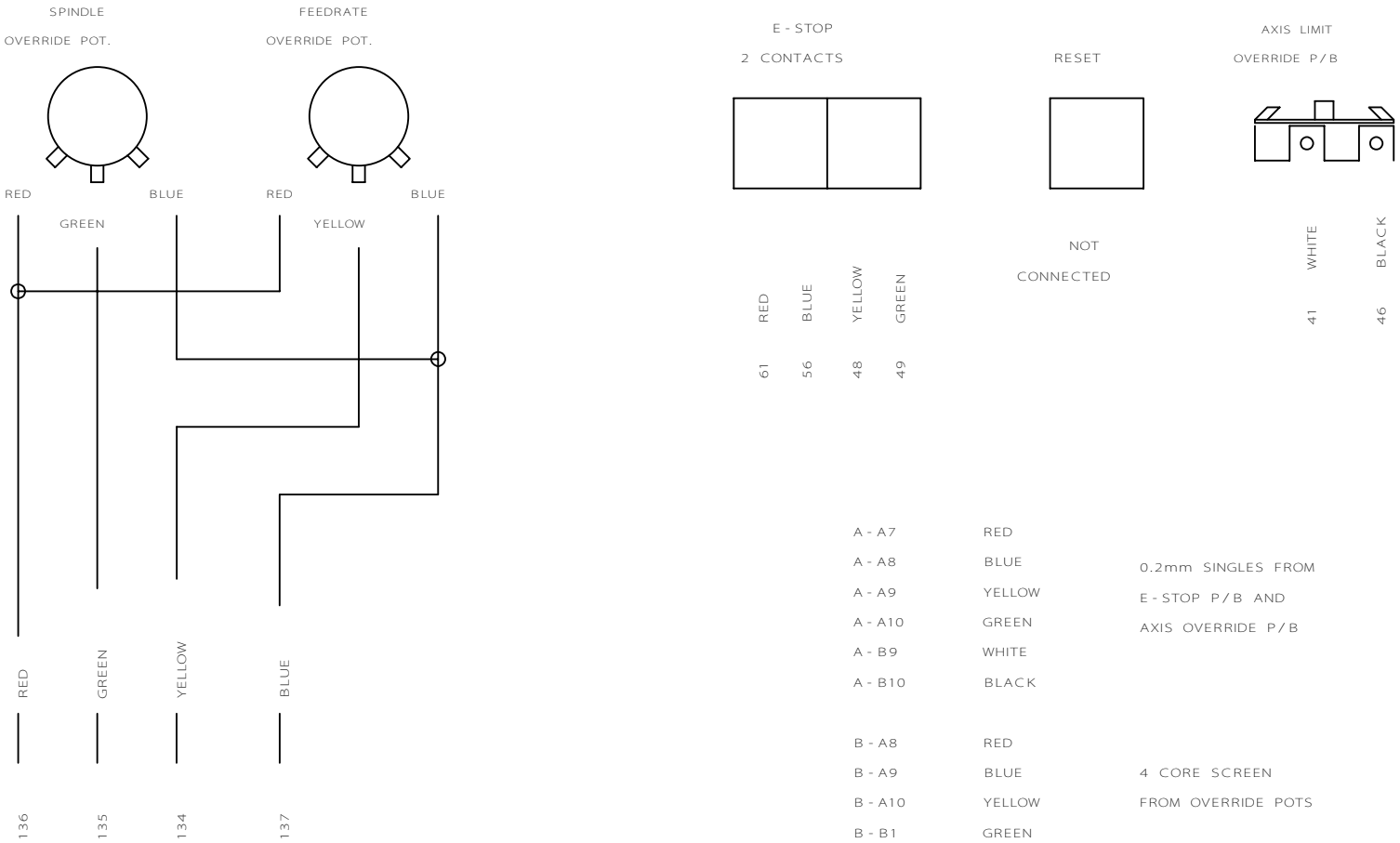
SHEET 17

[TPC]

DENFORD MACHINE TOOLS LTD	DATE 26 - 8 - 96	DRN BY A McHENRY	GR - 17B

IF IN DOUBT ASK

REAR VIEW OF PLATE



A - A7	RED
A - A8	BLUE
A - A9	YELLOW
A - A10	GREEN
A - B9	WHITE
A - B10	BLACK

0.2mm SINGLES FROM
E - STOP P/B AND
AXIS OVERRIDE P/B

B - A8	RED
B - A9	BLUE
B - A10	YELLOW
B - B1	GREEN

4 CORE SCREEN
FROM OVERRIDE POTS

TRIAC PC
E - STOP AND
OVERRIDE POTS

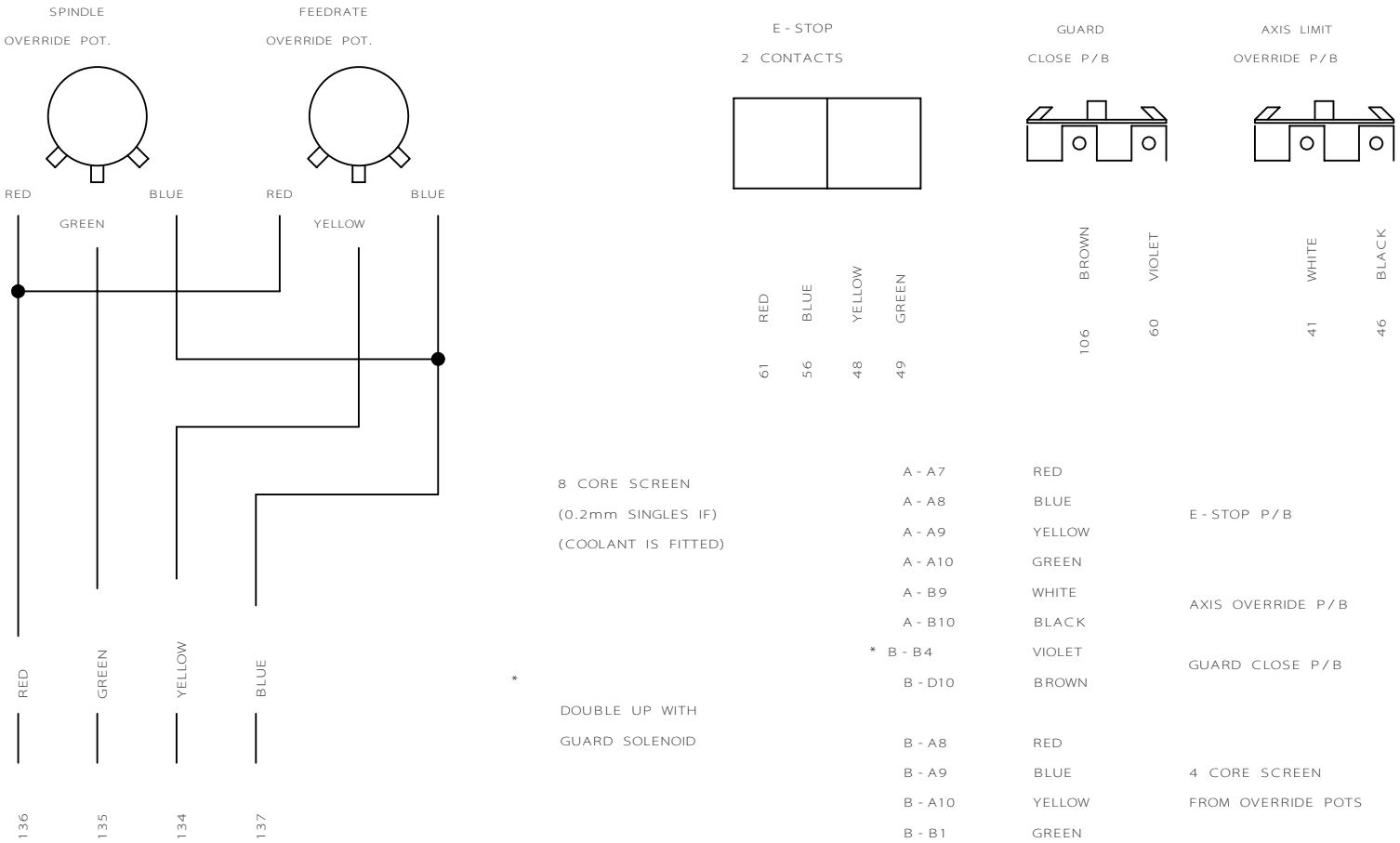
SHEET 17

[TPC]

DENFORD MACHINE TOOLS LTD | DATE 11 - 9 - 96 | DRN BY A McHENRY | GR - 17C

IF IN DOUBT ASK

REAR VIEW OF PLATE



8 CORE SCREEN
(0.2mm SINGLES IF)
(COOLANT IS FITTED)

A - A7	RED	E - STOP P/B
A - A8	BLUE	
A - A9	YELLOW	
A - A10	GREEN	
A - B9	WHITE	AXIS OVERRIDE P/B
A - B10	BLACK	
* B - B4	VIOLET	GUARD CLOSE P/B
B - D10	BROWN	
B - A8	RED	4 CORE SCREEN FROM OVERRIDE POTS
B - A9	BLUE	
B - A10	YELLOW	
B - B1	GREEN	

* DOUBLE UP WITH GUARD SOLENOID

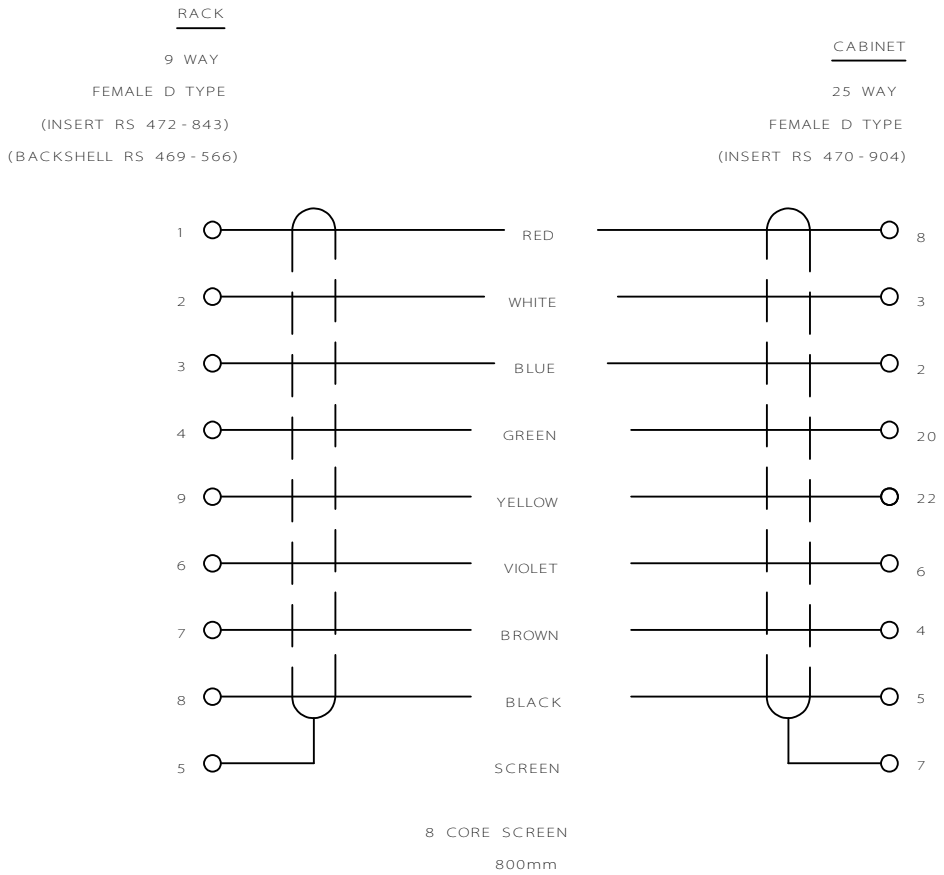
TRIAC PC
E - STOP AND
OVERRIDE POTS

SHEET 17

[TPC]

DENFORD LIMITED	DATE 16 - 5 - 97	DRN BY A McHENRY	GR - 17D

IF IN DOUBT ASK

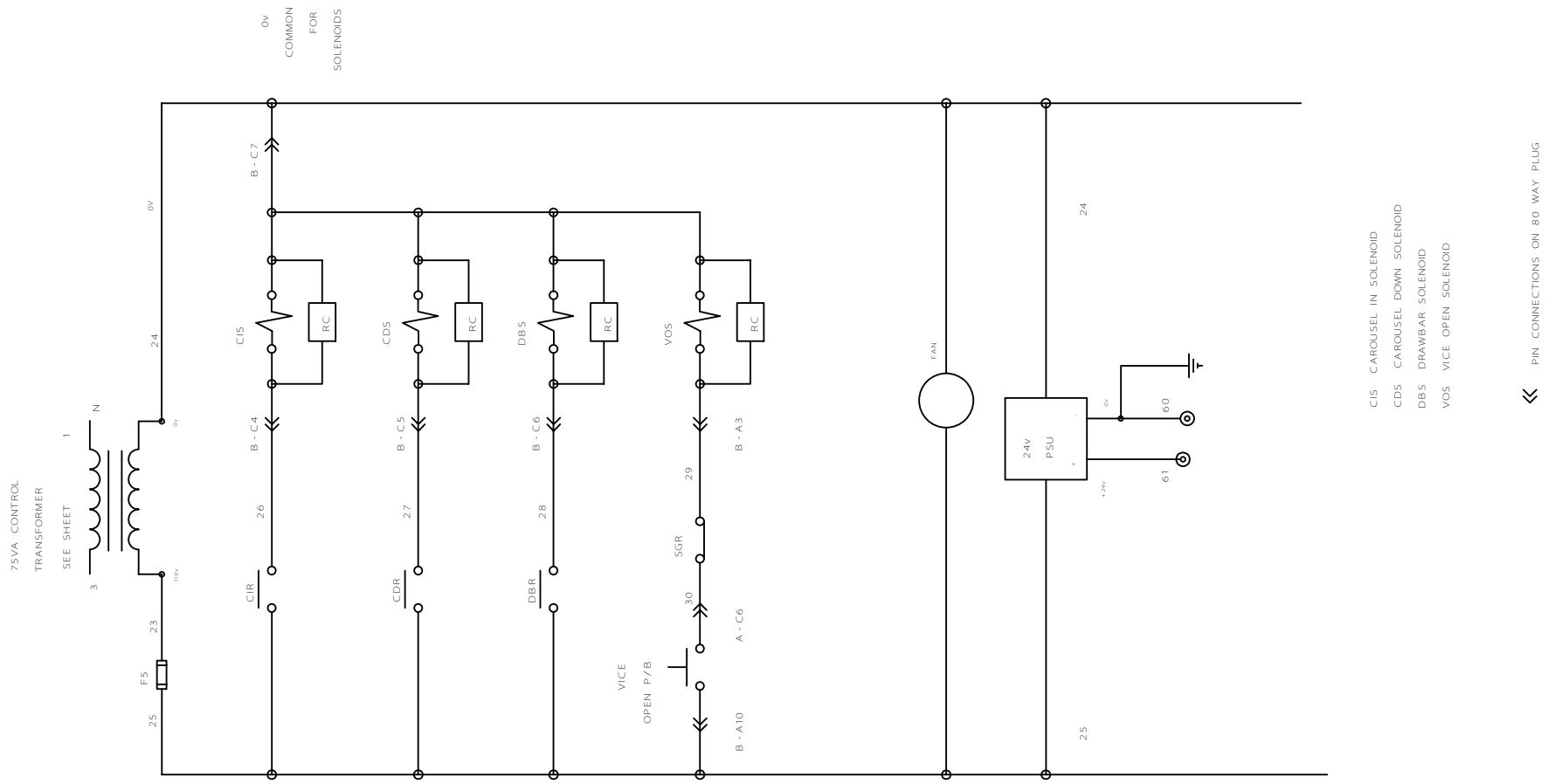


NOTE

RUN RS232 CABLE UNDERNEATH
FRONT OF RACK

TRIAC PC RS 232 CONNECTION	SHEET 18 [TPC]

DENFORD LIMITED	DATE 13-6-96	DRN BY A McHENRY	GR-18

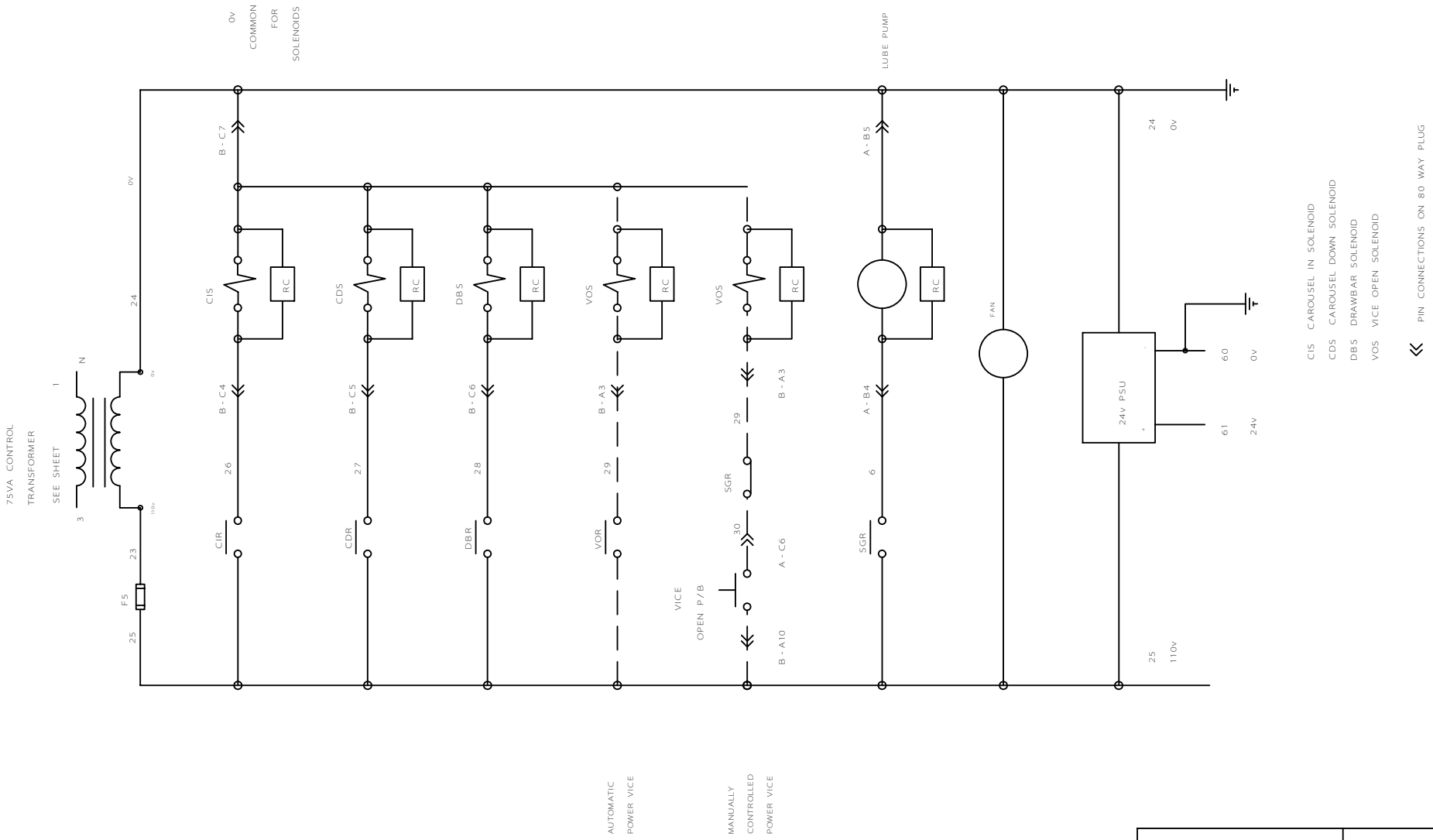


TRIAC PC
110v SCHEMATIC

SHEET 10
OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 6-5-92	A3 - 400195 B

IF IN DOUBT ASK



TRIAC PC
110v SCHEMATIC

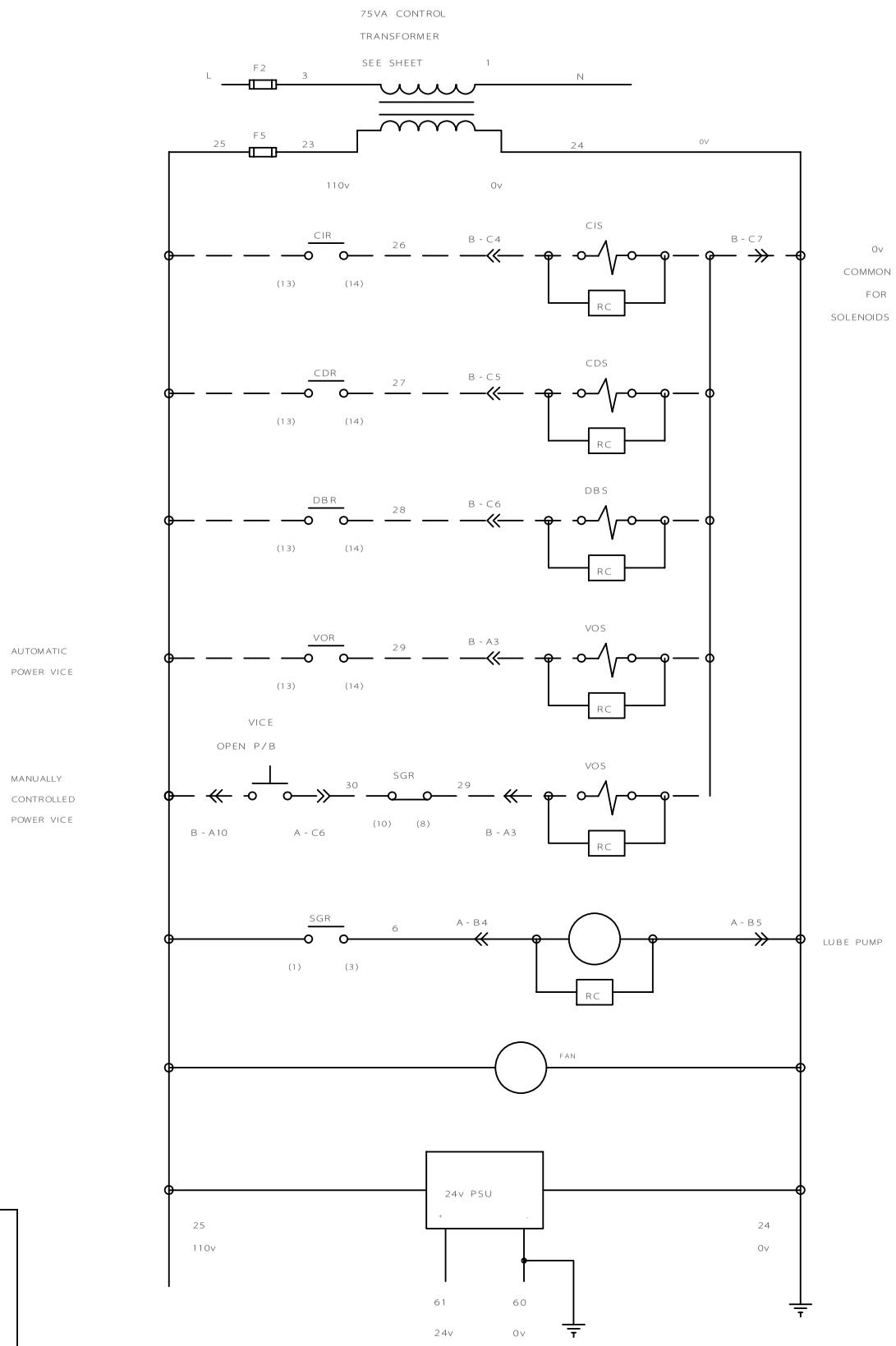
SHEET 10
[TPC]
[S10D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 11 - 08 - 93

A3 - 400195 D



CIS CAROUSEL IN SOLENOID

CDS CAROUSEL DOWN SOLENOID

DBS DRAWBAR SOLENOID

VOS VICE OPEN SOLENOID

SGR SPINDLE GO RELAY

« PIN CONNECTIONS ON 80 WAY PLUG

IF IN DOUBT ASK

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

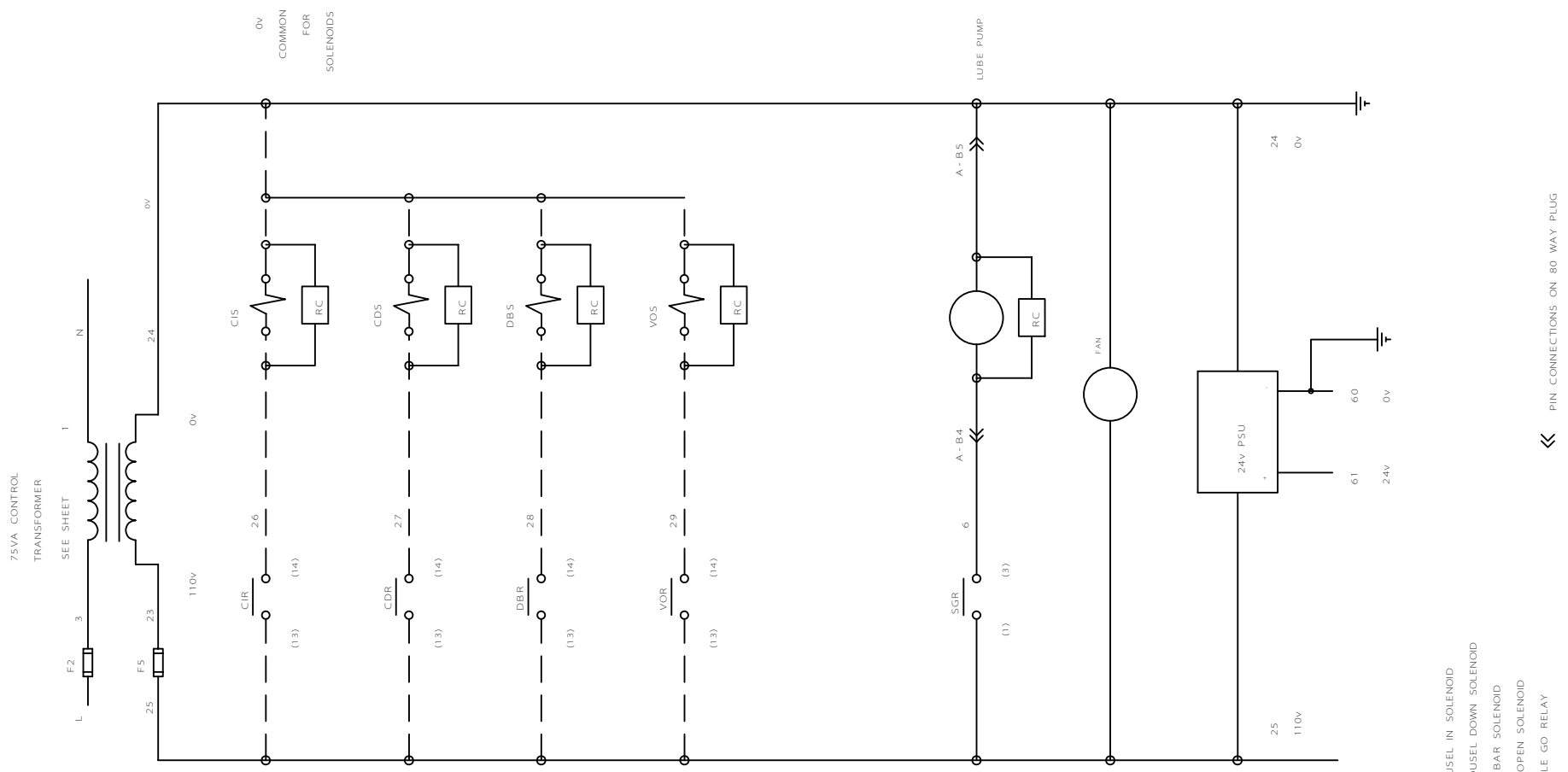
DATE 29 - 3 - 94

A3 - 400195 E

TRIAC PC
110v SCHEMATIC

[S10E] [TPC] SHEET 10

IF IN DOUBT ASK



CIS CAROUSEL IN SOLENOID
CDS CAROUSEL DOWN SOLENOID
DBS DRAWBAR SOLENOID
VOS VICE OPEN SOLENOID
SGR SPINDLE GO RELAY

TRIAC PC
110v SCHEMATIC

SHEET 10
[TPC]
[S10F]

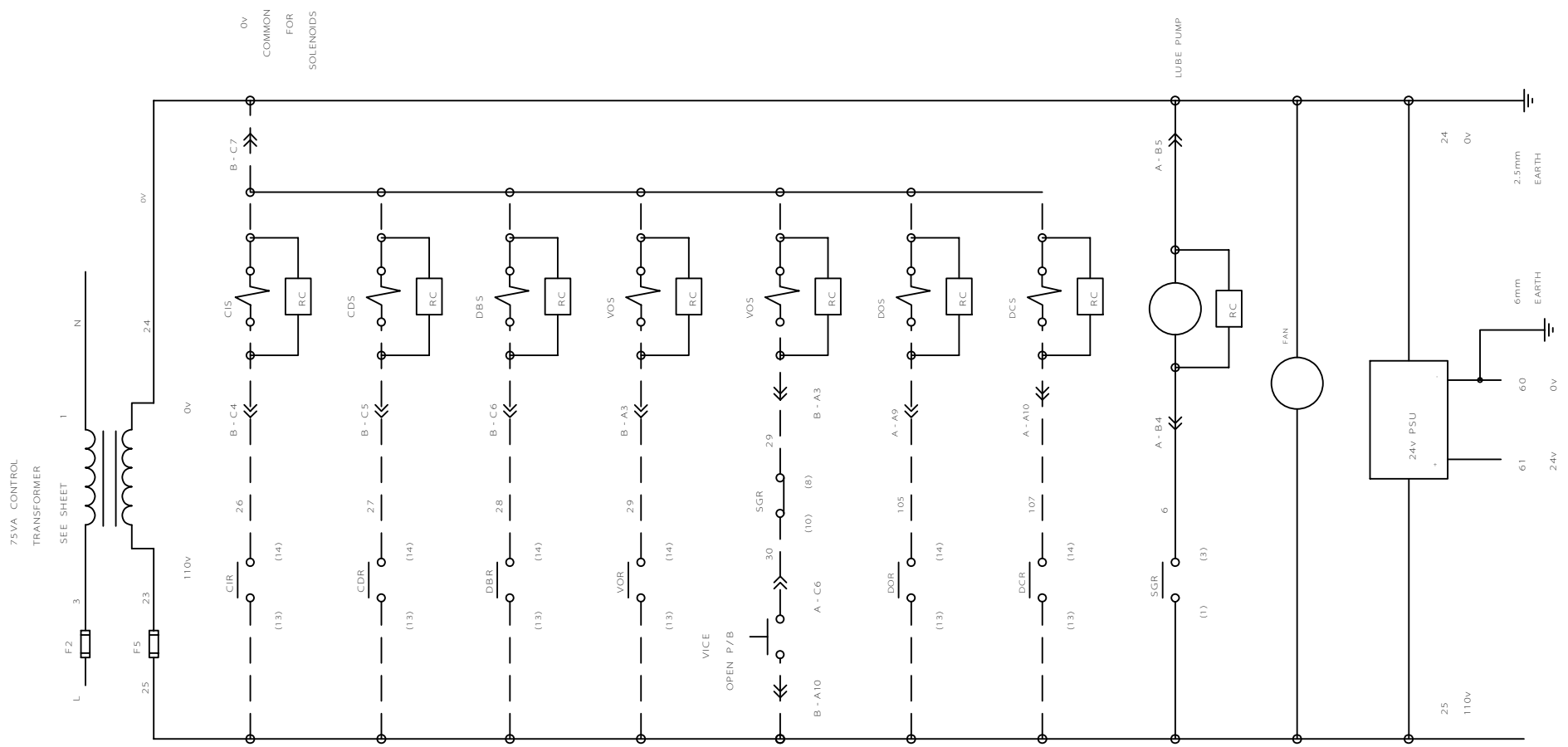
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 18-8-94

A3 - 400195 F

IF IN DOUBT ASK



TRIAC PC
110v SCHEMATIC

SHEET 10
[TPC]
[S10G]

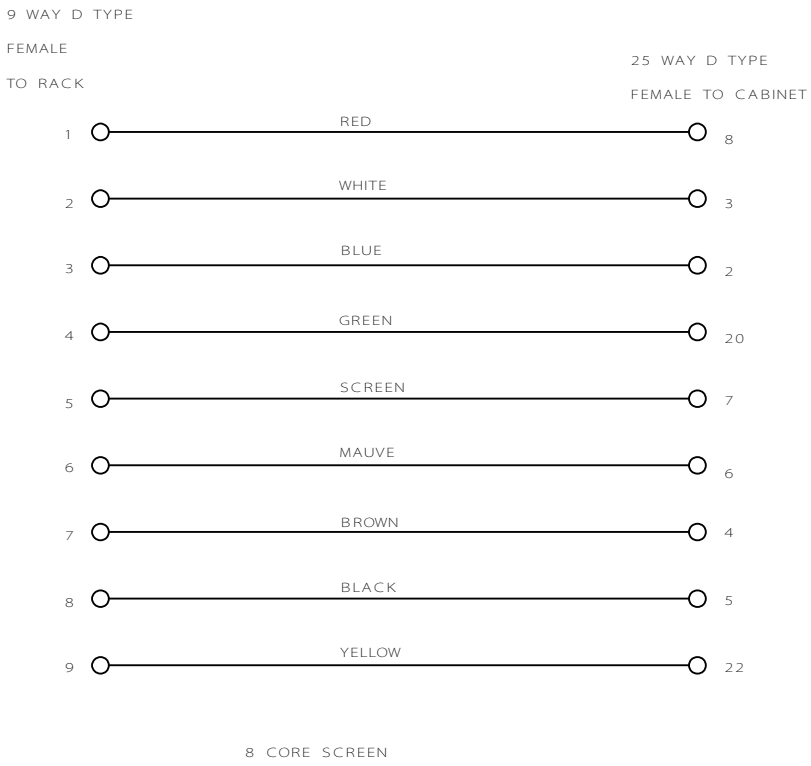
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 18 - 8 - 94

A3 - 400195 G

IF IN DOUBT ASK

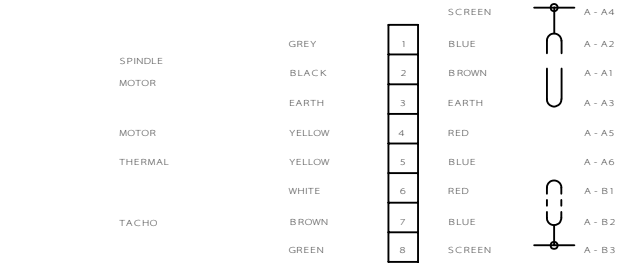


SHEET No 11

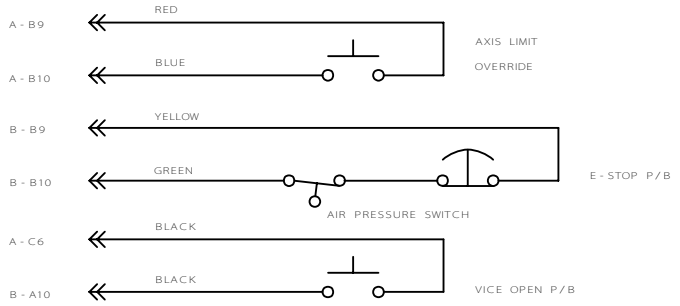
TRIAC PC
RS 232
CONNECTION

DENFORD MACHINE TOOLS LTD	DATE 07-05-91	DRN BY A McHENRY	DRN No A4 — 400185 A

IF IN DOUBT ASK

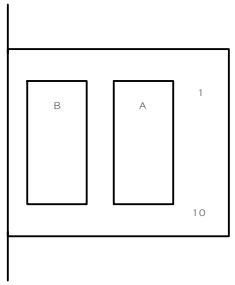


TERMINAL BLOCK
ON SPINDLE MOTOR

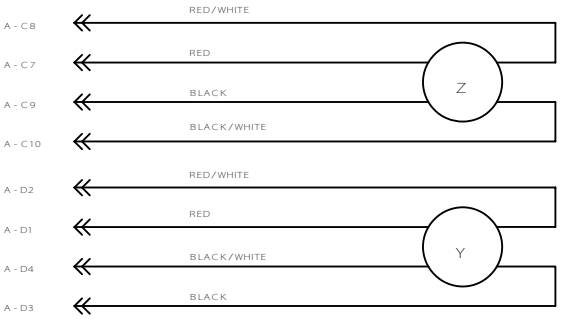


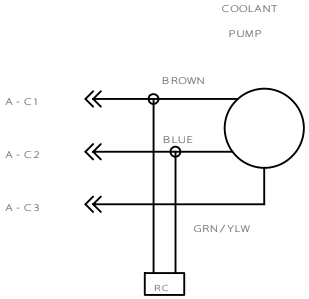
8 CORE FROM X AXIS
DATUM AND O/TRAVELS

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

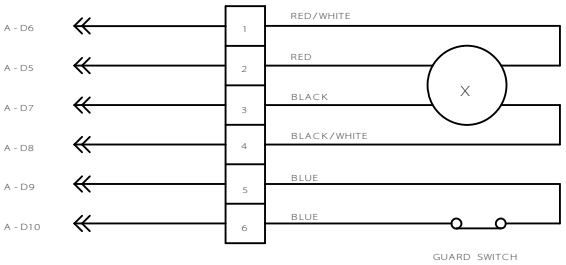


PLUG ARRANGEMENT
OUTSIDE VIEW OF
MACHINE END

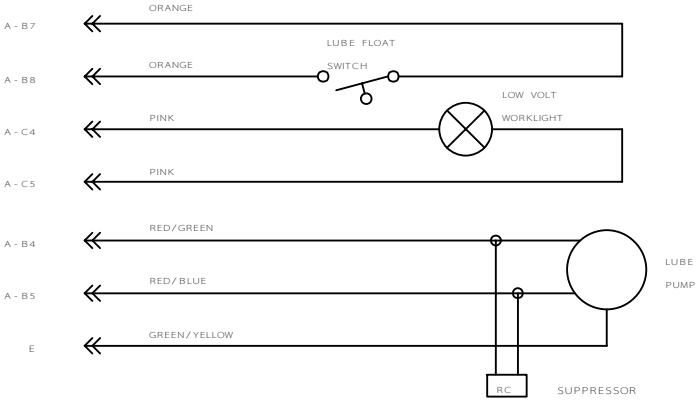




SUPPRESSOR



CONNECTION BOX
MOUNTED
ON X AXIS



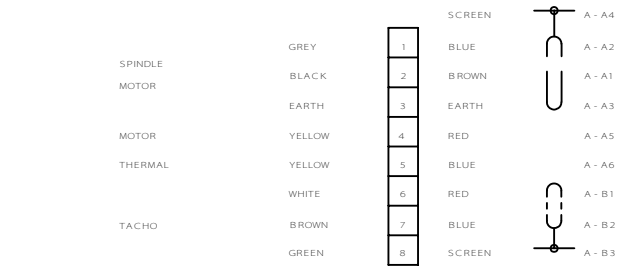
SUPPRESSOR

E EARTH POINT
AT MACHINE END

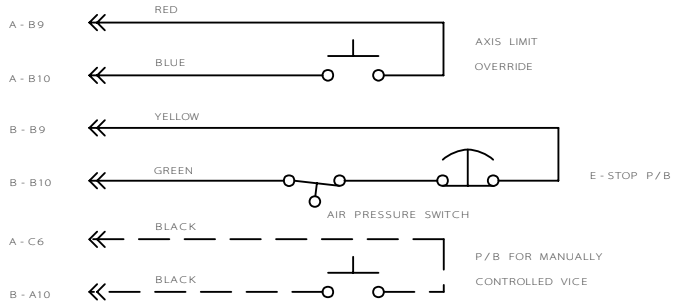
TRIAC PC MACHINE WIRING (MANUAL VICE P/B) (NO SPINDLE SENSOR)	SHEET 12 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 9-11-92 | A3 - 400211 D

IF IN DOUBT ASK

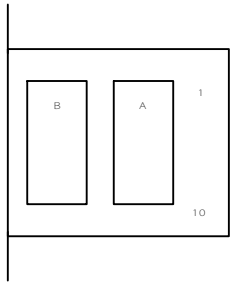


TERMINAL BLOCK
ON SPINDLE MOTOR



8 CORE FROM X AXIS
DATUM AND O/TRAVELS

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



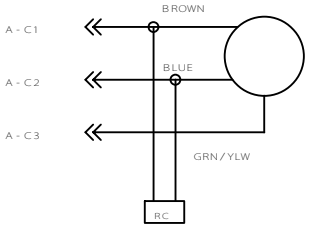
PLUG ARRANGEMENT
OUTSIDE VIEW OF
MACHINE END

STEPPER MOTORS

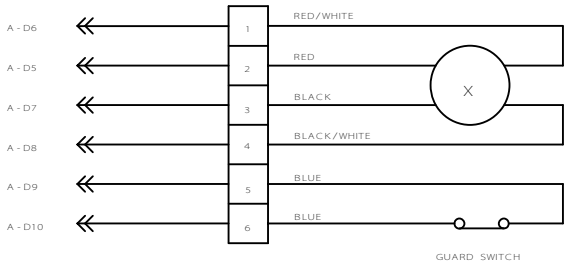
CUT OUT

ORANGE
ORANGE/WHITE
YELLOW
YELLOW/WHITE

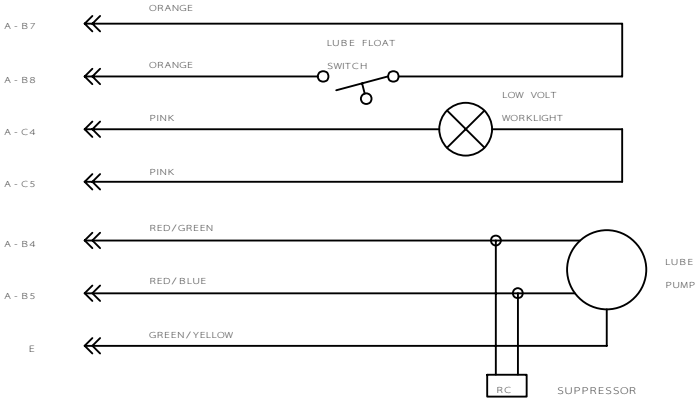
COOLANT
PUMP



SUPPRESSOR



CONNECTION BOX
MOUNTED
ON X AXIS



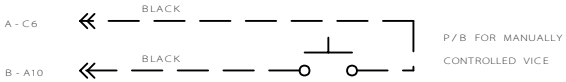
SUPPRESSOR

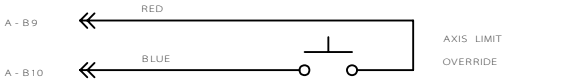
E EARTH POINT
AT MACHINE END

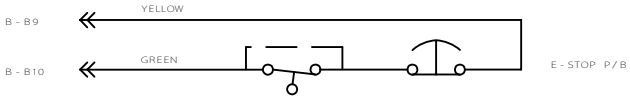
TRIAC PC MACHINE WIRING (NO SPINDLE SENSOR)	SHEET 12 [TPC] [S12D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 11 - 08 - 93 | A3 - 400211 E

IF IN DOUBT ASK





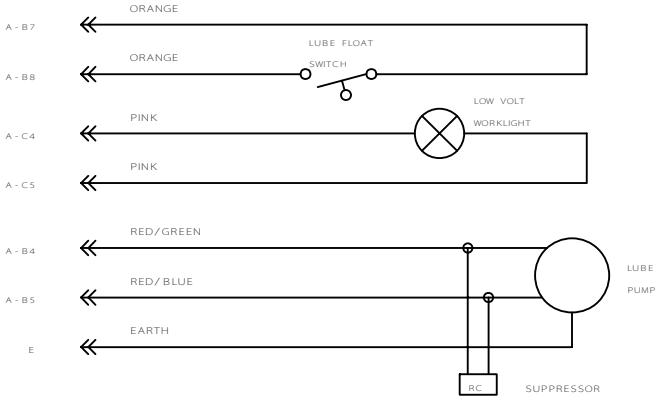


AIR PRESSURE SWITCH

REMOVE LINK IF FITTED

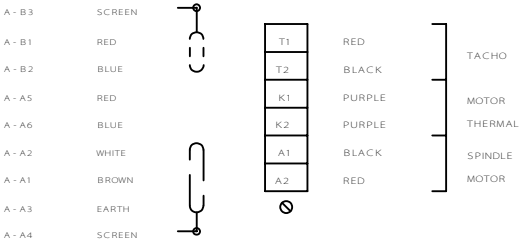
NEW GUARD ARRANGEMENT

GUARD SWITCHES MOUNTED IN COLUMN



E EARTH POINT
AT MACHINE END

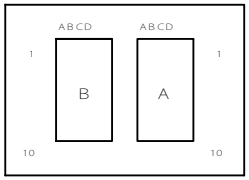
WORKLIGHT AND LUBE
WIRING 0.2mm SINGLES



TERMINAL BLOCK
ON SPINDLE MOTOR

(FEMALE INSERT)

(MALE PINS)

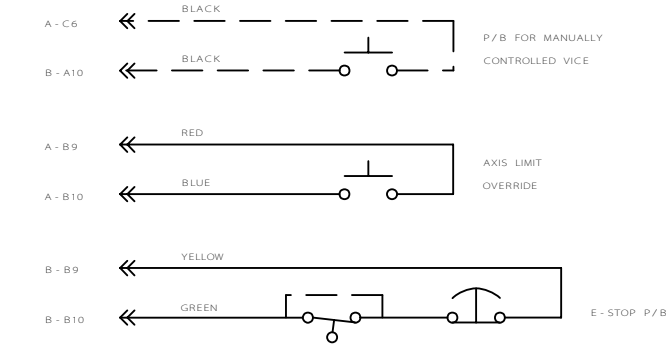


EXTERNAL VIEW OF
MACHINE SOCKET

TRIAC PC MACHINE WIRING	SHEET 12 [TPC] [S12E]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 23-8-94	A3 - 400211 F

IF IN DOUBT ASK

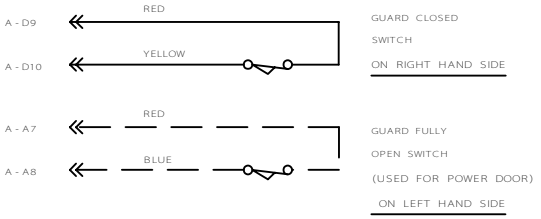


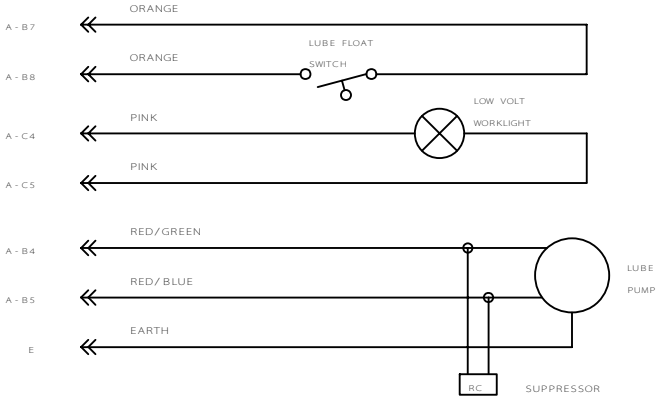
AIR PRESSURE SWITCH

REMOVE LINK IF FITTED

NEW GUARD ARRANGEMENT

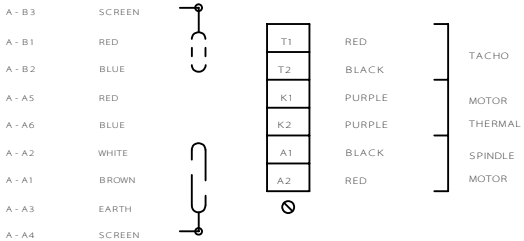
GUARD SWITCHES MOUNTED IN COLUMN





E EARTH POINT
AT MACHINE END

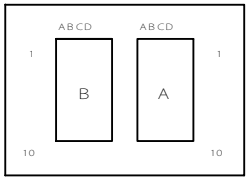
WORKLIGHT AND LUBE
WIRING 0.2mm SINGLES



TERMINAL BLOCK
ON SPINDLE MOTOR

(FEMALE INSERT)

(MALE PINS)



EXTERNAL VIEW OF
MACHINE SOCKET

TRIAC PC MACHINE WIRING	SHEET 12 [TPC] [S12F]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 22-9-94	A3 - 400211 G

IF IN DOUBT ASK

STEPPER MOTORS

CUT OUT

ORANGE

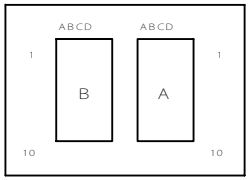
ORANGE/WHITE

YELLOW

YELLOW/WHITE

(FEMALE INSERT)

(MALE PINS)

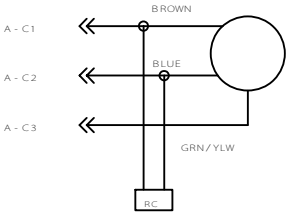


EXTERNAL VIEW OF

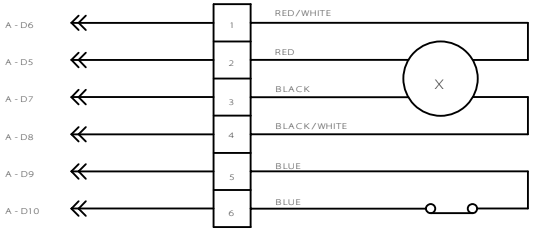
MACHINE SOCKET

COOLANT

PUMP



SUPPRESSOR



GUARD SWITCH

CONNECTION BOX

MOUNTED

ON X AXIS

IF TOTALLY ENCLOSED

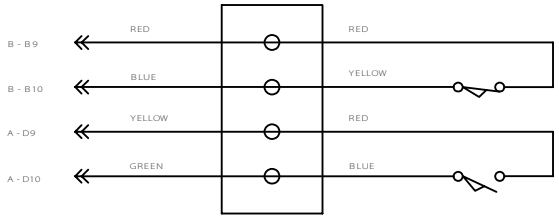
GUARDING IS FITTED

WIRE GUARD SWITCH AS BELOW

GUARD SWITCH WIRING

IF POWER DOOR

IS FITTED



GUARD FULLY

OPEN SWITCH

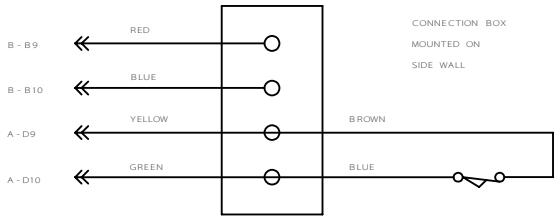
GUARD CLOSED

SWITCH

GUARD SWITCH WIRING

FOR STANDARD

MACHINE



CONNECTION BOX

MOUNTED ON

SIDE WALL

GUARD CLOSED

SWITCH

TRIAC PC

MACHINE WIRING

SHEET 13

[TPC]

[S13]

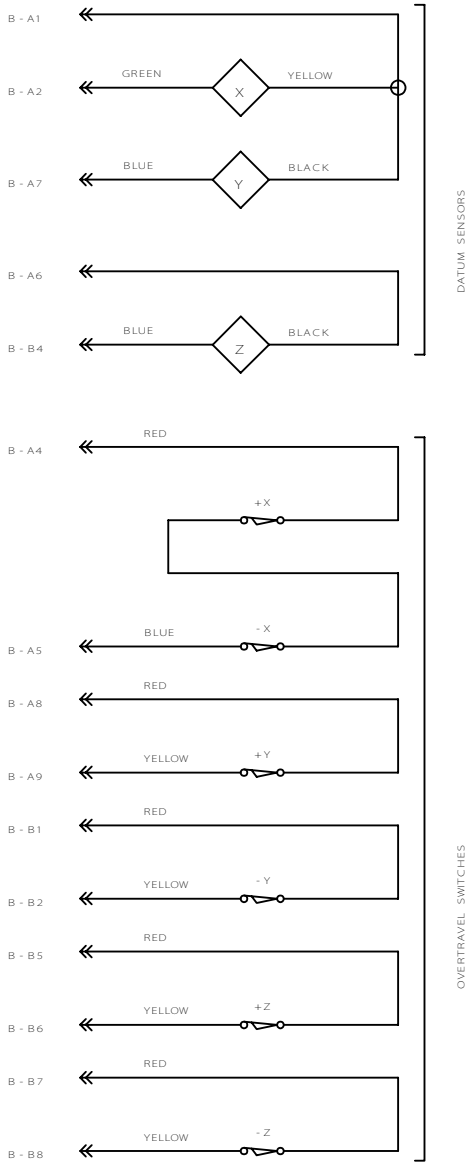
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

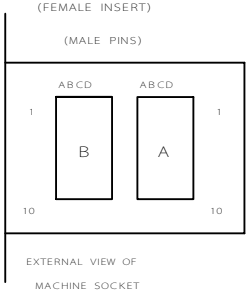
DRN BY A McHENRY

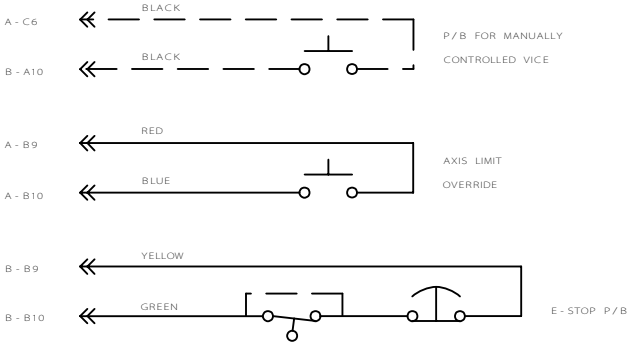
DATE 29 - 3 - 94

A3 - 400211 F

IF IN DOUBT ASK

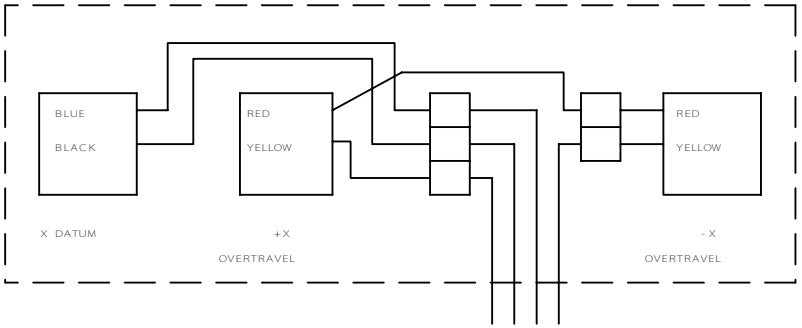






AIR PRESSURE SWITCH

REMOVE LINK IF FITTED



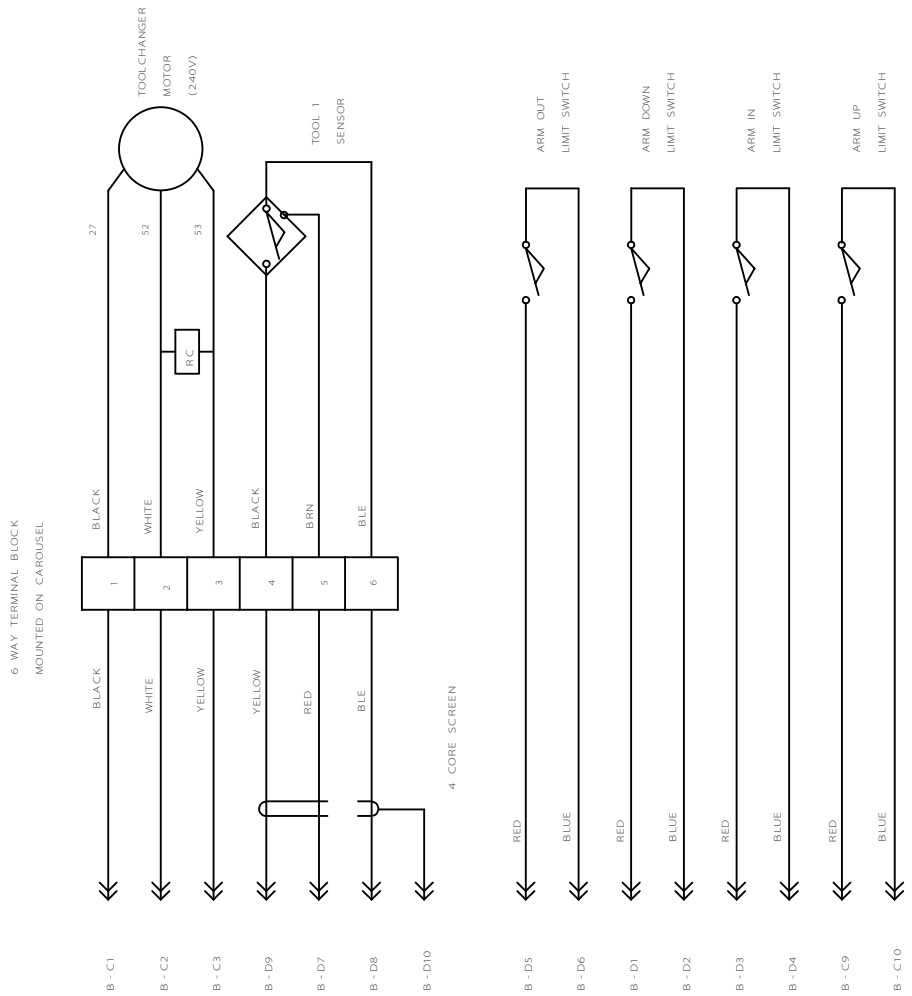
4 CORE SCREEN
2m LONG

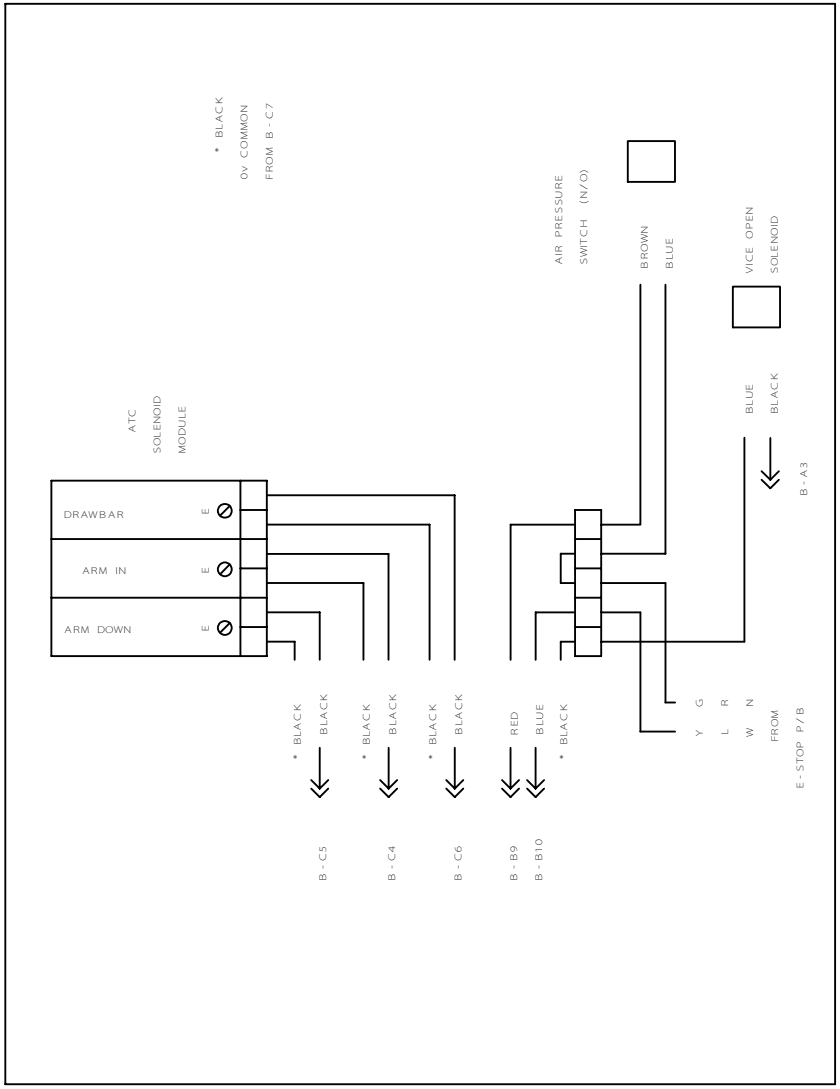
RED	B - A4
YELLOW	B - A1
GREEN	B - A2
BLUE	B - A5

TRIAC PC
LIMIT SWITCH &
DATUM WIRING

SHEET 13
[TPC]
[S13B]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 23 - 8 - 94 | A3 - 400211 G



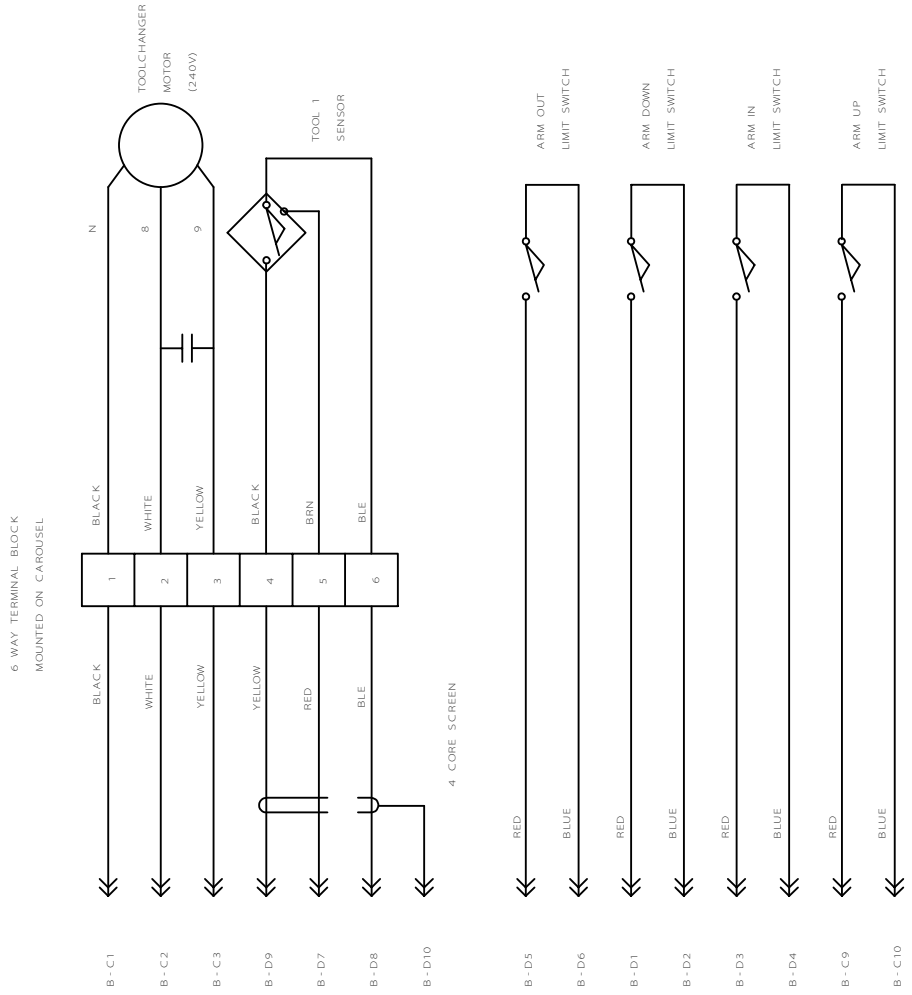


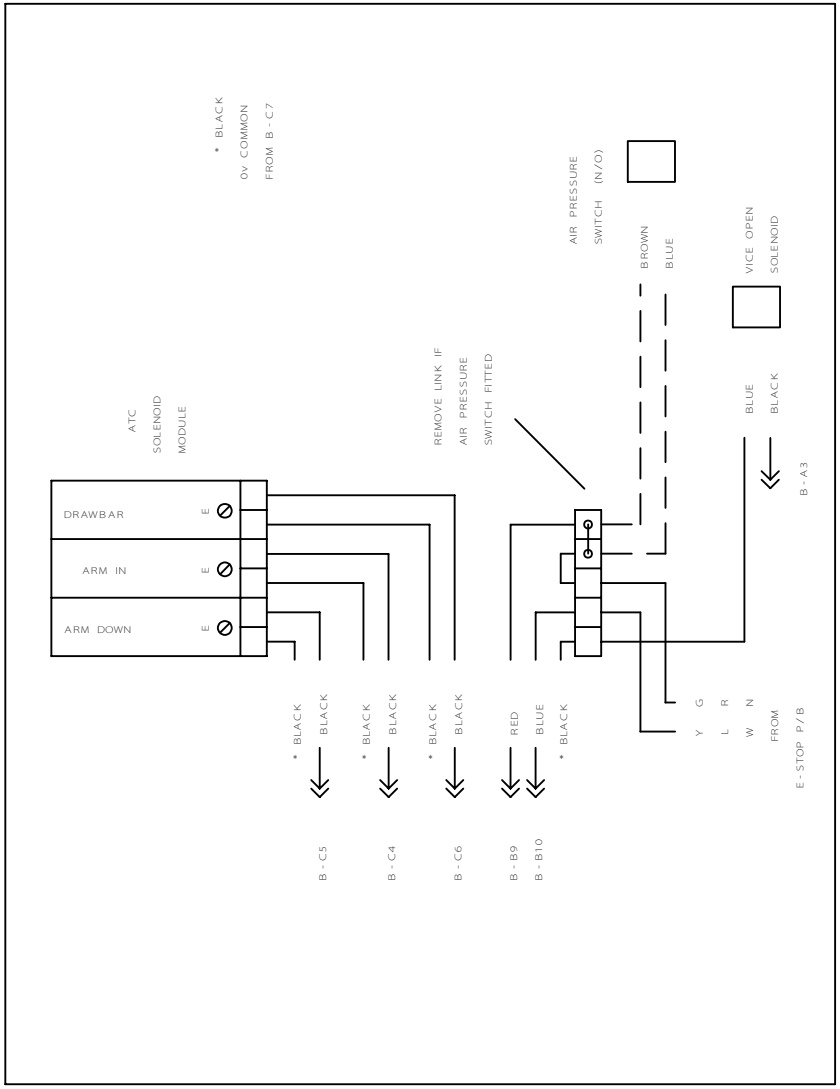
TRIAC PC ATC AND SOLENOID WIRING (MANUAL VICE P/B)	SHEET 13 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY	A McHENRY	DATE 18 - 5 - 92	A3 - 400215

IF IN DOUBT ASK





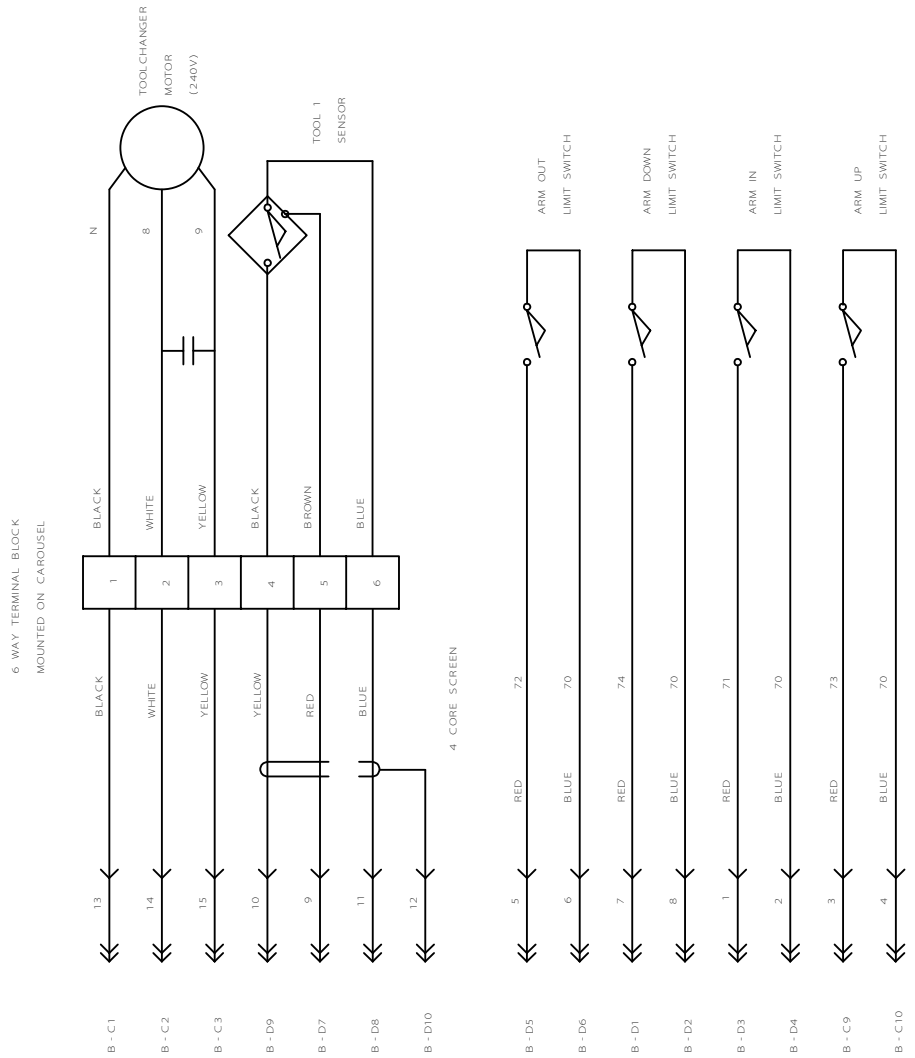
TRIAC PC
ATC AND SOLENOID
WIRING

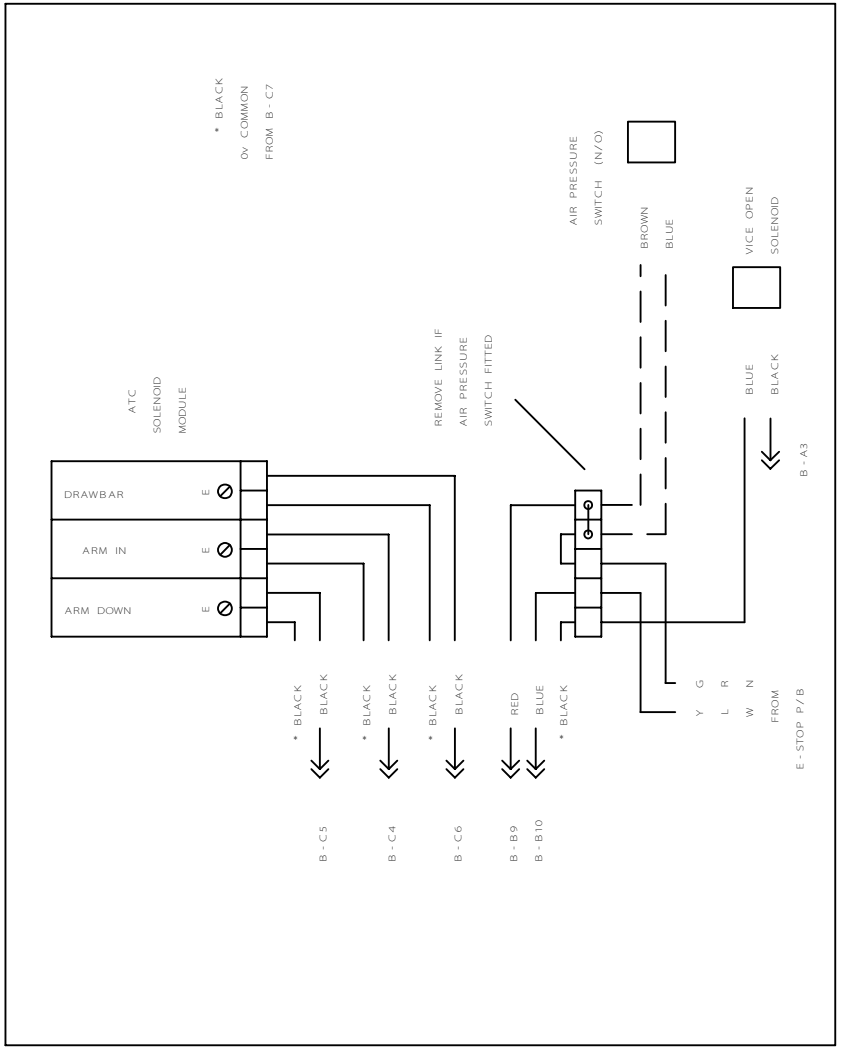
SHEET 13
[TPC]
[S13B]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 11 - 08 - 93 | A3 - 400215 A

IF IN DOUBT ASK





80 WAY HARTING PLUG AND SOCKET CONNECTIONS

24 WAY QM CONNECTOR (USED FOR RETRO-FITTING TOOLCHANGER)

TRIAC PC
ATC AND SOLENOID WIRING

SHEET 14
[TPC]
[S14]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

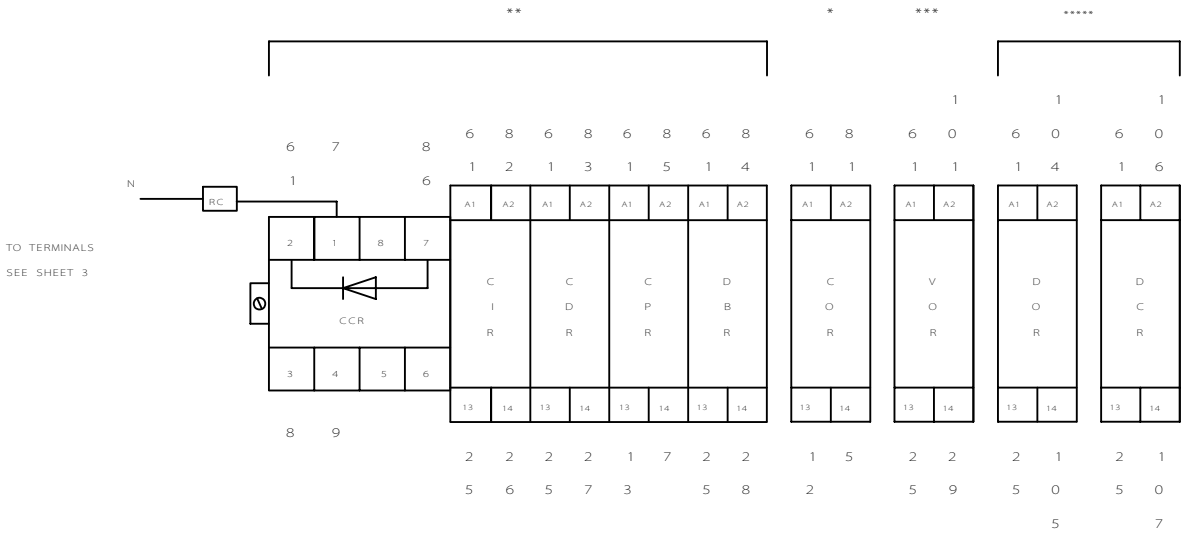
DRN BY A McHENRY

DATE 30 - 3 - 94

A3 - 400215 B

IF IN DOUBT ASK

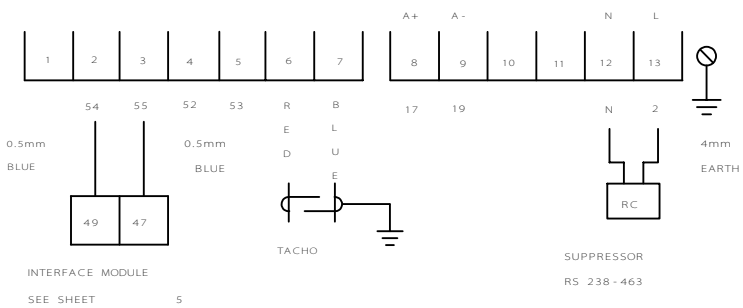
RELAYS FOR OPTIONS



CCR	CAROUSEL COUNTER-CLOCKWISE RELAY
CIR	CAROUSEL IN RELAY
CDR	CAROUSEL DOWN RELAY
CPR	CAROUSEL POWER RELAY
DBR	DRAWBAR RELAY
COR	COOLANT ON RELAY
VOR	VICE OPEN RELAY
DOR	DOOR OPEN RELAY
DCR	DOOR CLOSE RELAY

*	ADD IF SPRAY MIST FITTED
**	ADD IF TOOLCHANGER FITTED
***	ADD IF POWER VICE IS AUTOMATIC
*****	ADD IF POWER GUARD FITTED

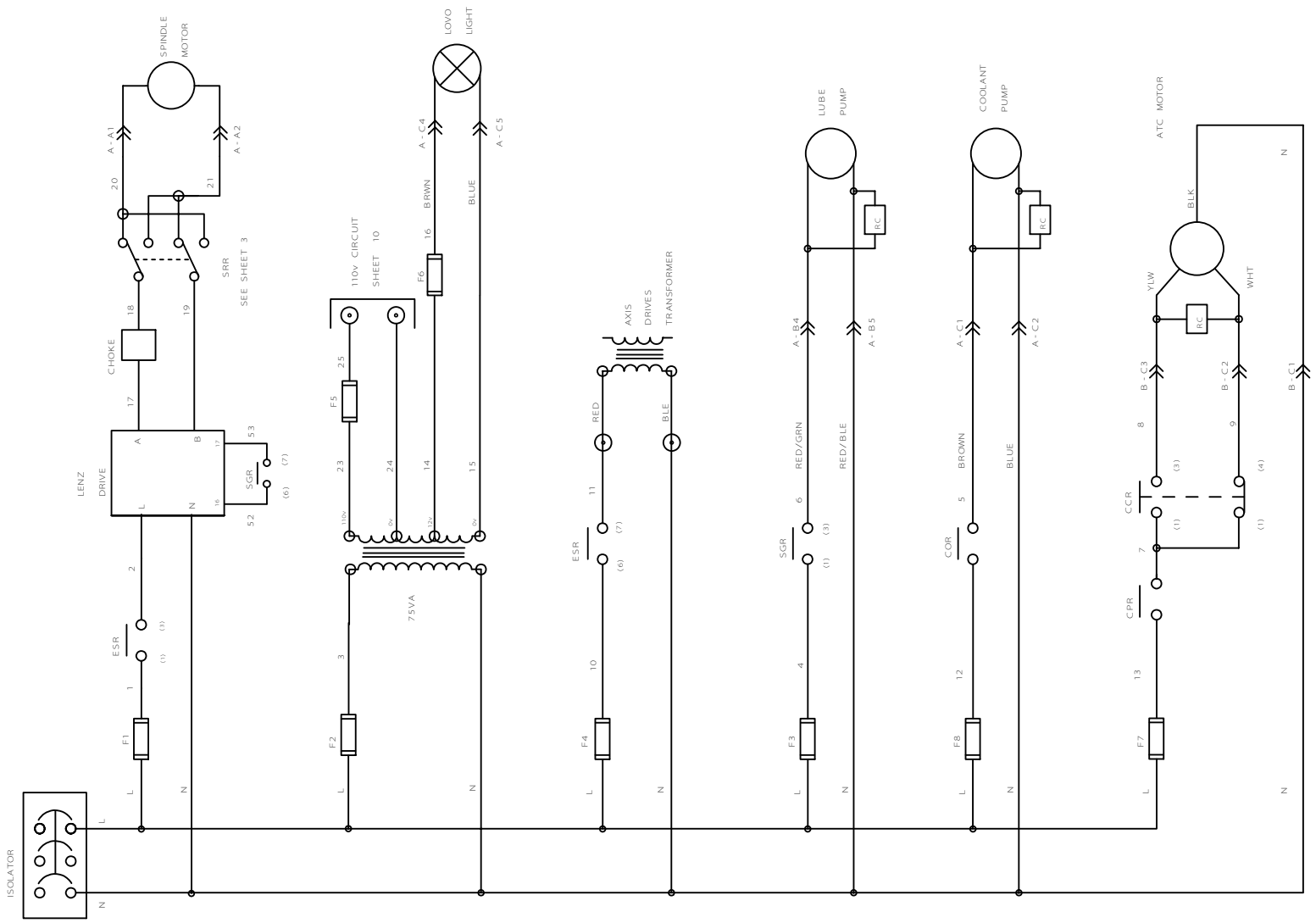
SPRINT DRIVE CONNECTIONS



TRIAC PC
OPTIONAL RELAYS
AND SPINDLE
DRIVE

SHEET 16
[TPC]
[S16]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 19-8-94 | A3 - 400226



F1=6.3 AMP
F2=3.15 AMP
F3=3.15 AMP
F4=6.3 AMP

F5=3.15 AMP
F6=3.15 AMP
F7=3.15 AMP
F8=3.15 AMP

⊙ =TERMINALS ON MAIN PANEL

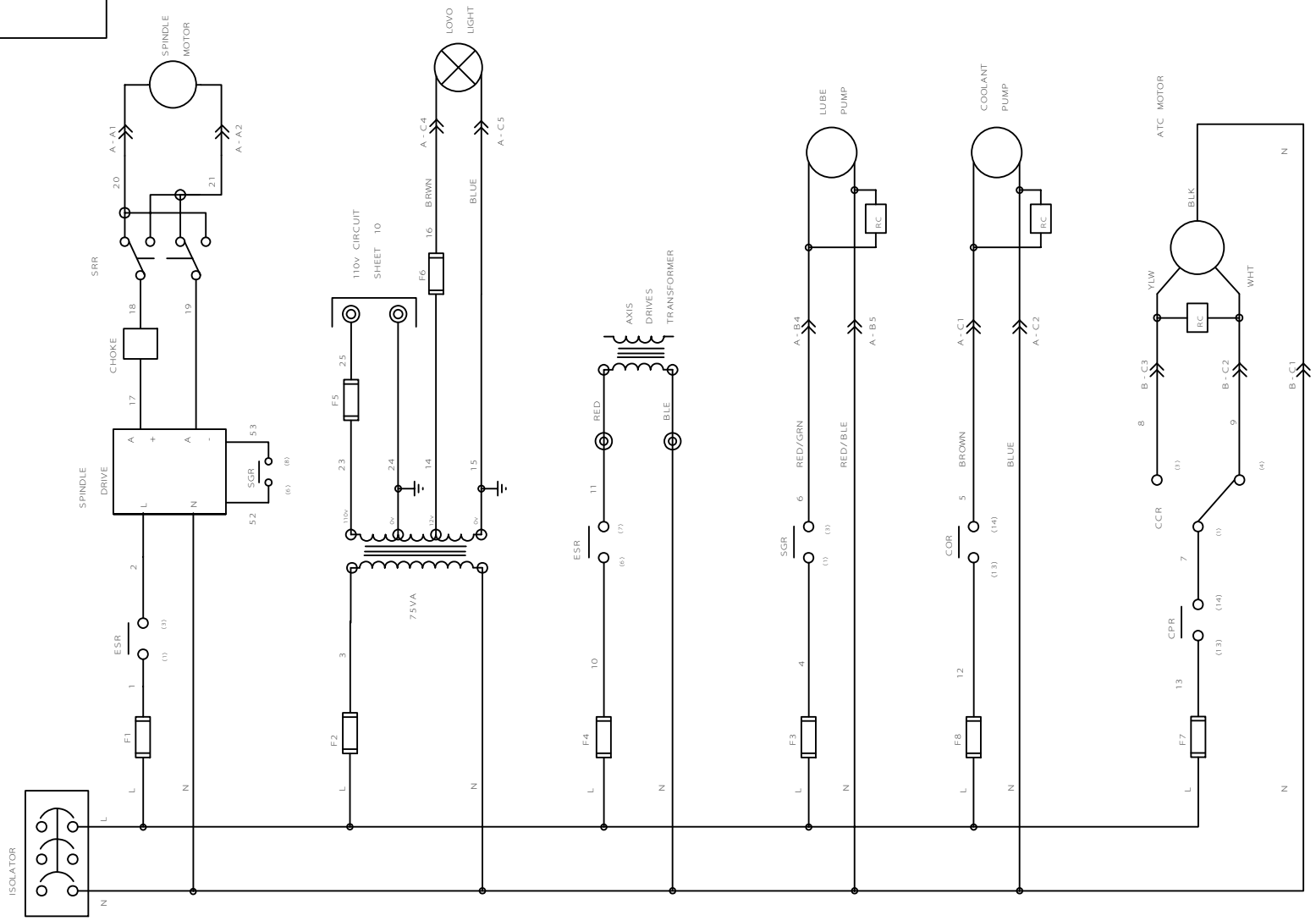
NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

» REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC POWER SCHEMATIC (GREECE)	SHEET 1 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 6-5-92	A3 - 100176 B

IF IN DOUBT ASK



F1=6.3 AMP
F2=3.15 AMP
F3=3.15 AMP
F4=6.3 AMP
F5=3.15 AMP
F6=3.15 AMP
F7=3.15 AMP
F8=3.15 AMP

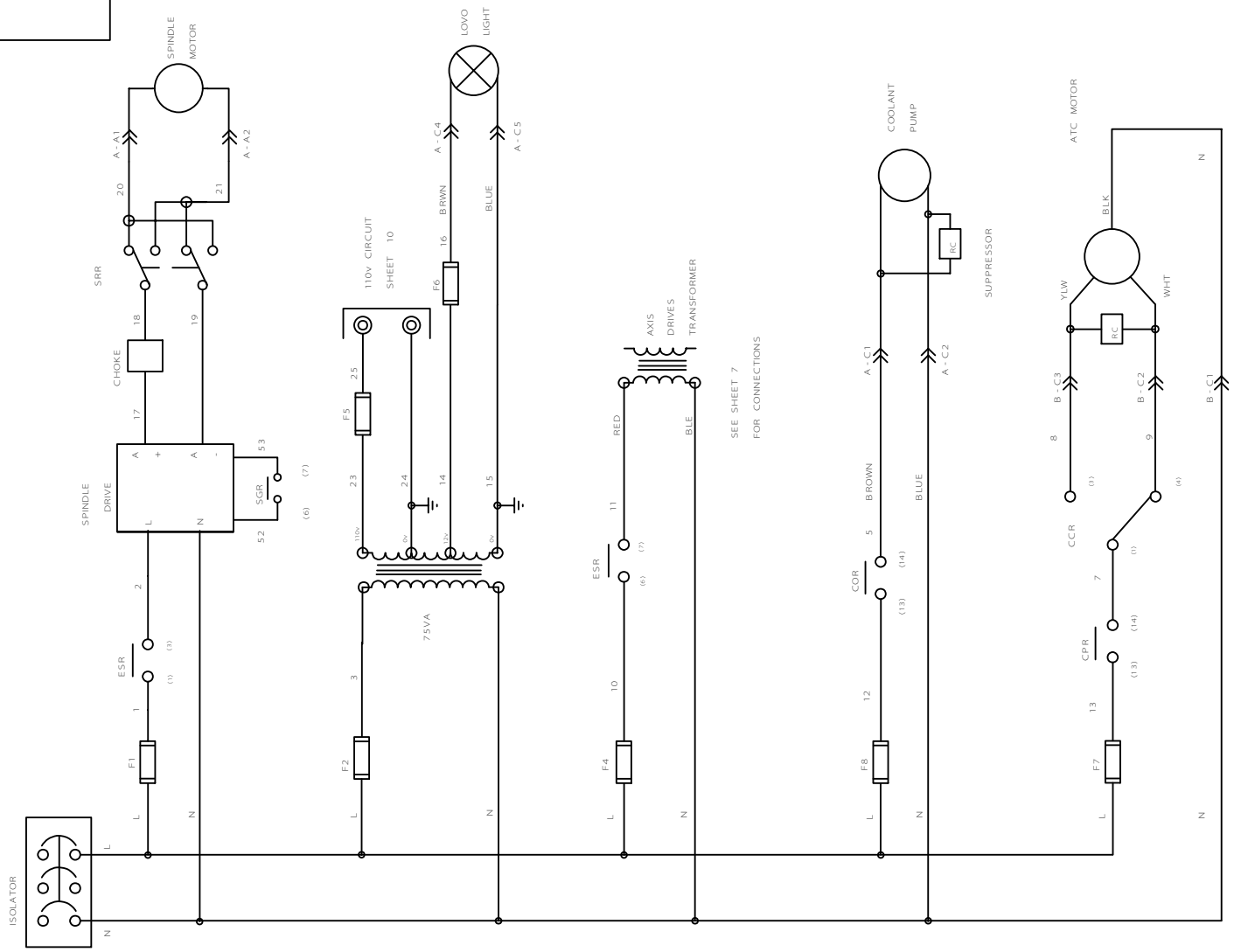
NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

» REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC MAIN POWER SCHEMATIC (SPRINT DRIVE)	SHEET 1 OF [S1A]	

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 12-8-92	A3 - 400176 C

IF IN DOUBT ASK



F1=6.3 AMP
F2=3.15 AMP
F4=6.3 AMP
F5=3.15 AMP
F6=3.15 AMP
F7=3.15 AMP
F8=3.15 AMP

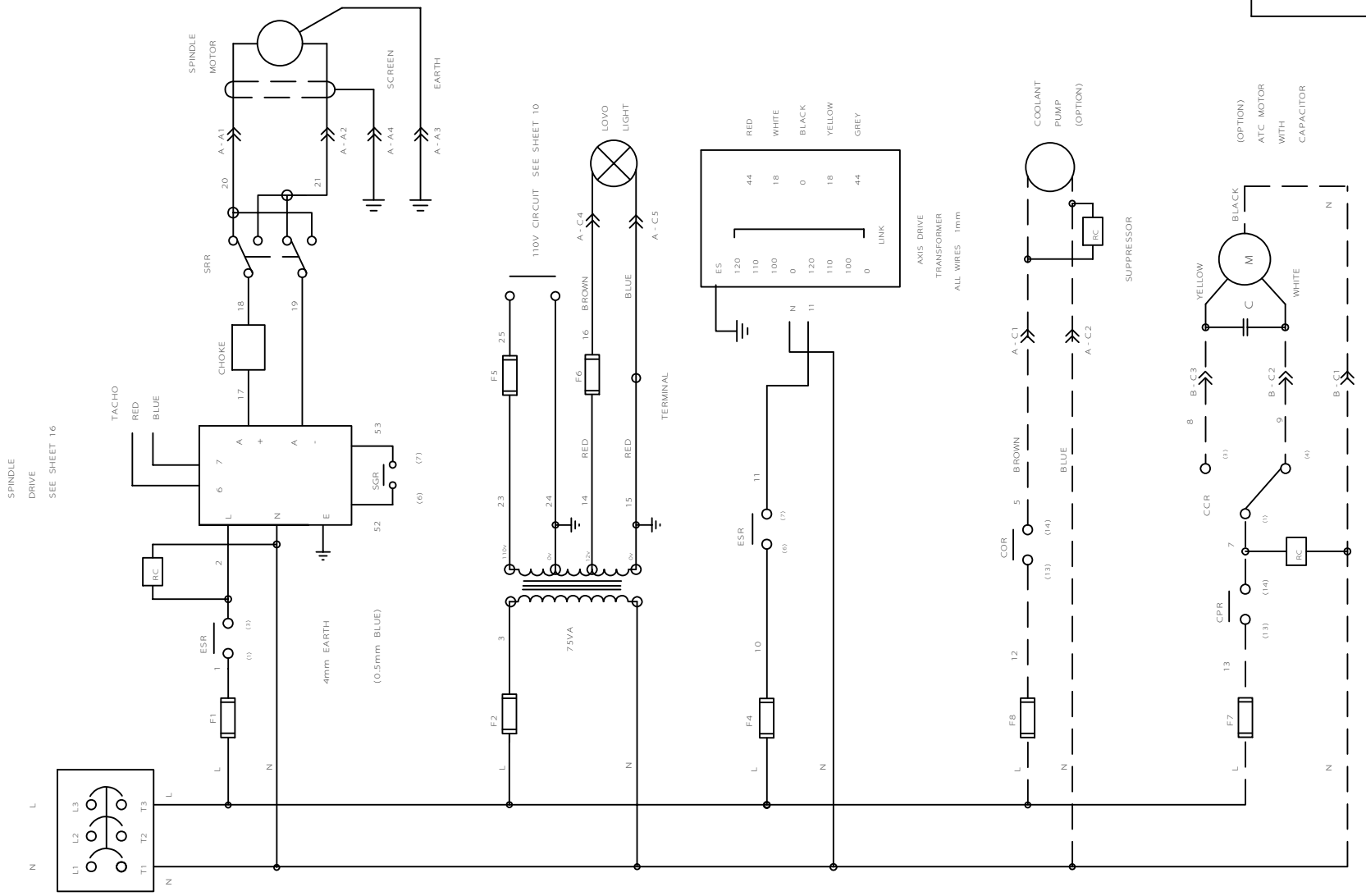
NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

» REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC POWER SCHEMATIC (SPRINT DRIVE) (MANUAL VICE P/B)	SHEET 1 OF [S1 F]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 20-11-92	A3 - 400176 F

IF IN DOUBT ASK



F1=6.3 AMP
F2=3.15 AMP
F4=6.3 AMP
F5=3.15 AMP
F6=3.15 AMP
F7=3.15 AMP
F8=3.15 AMP

NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

» REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC
POWER SCHEMATIC
SD12, 13 DRIVES

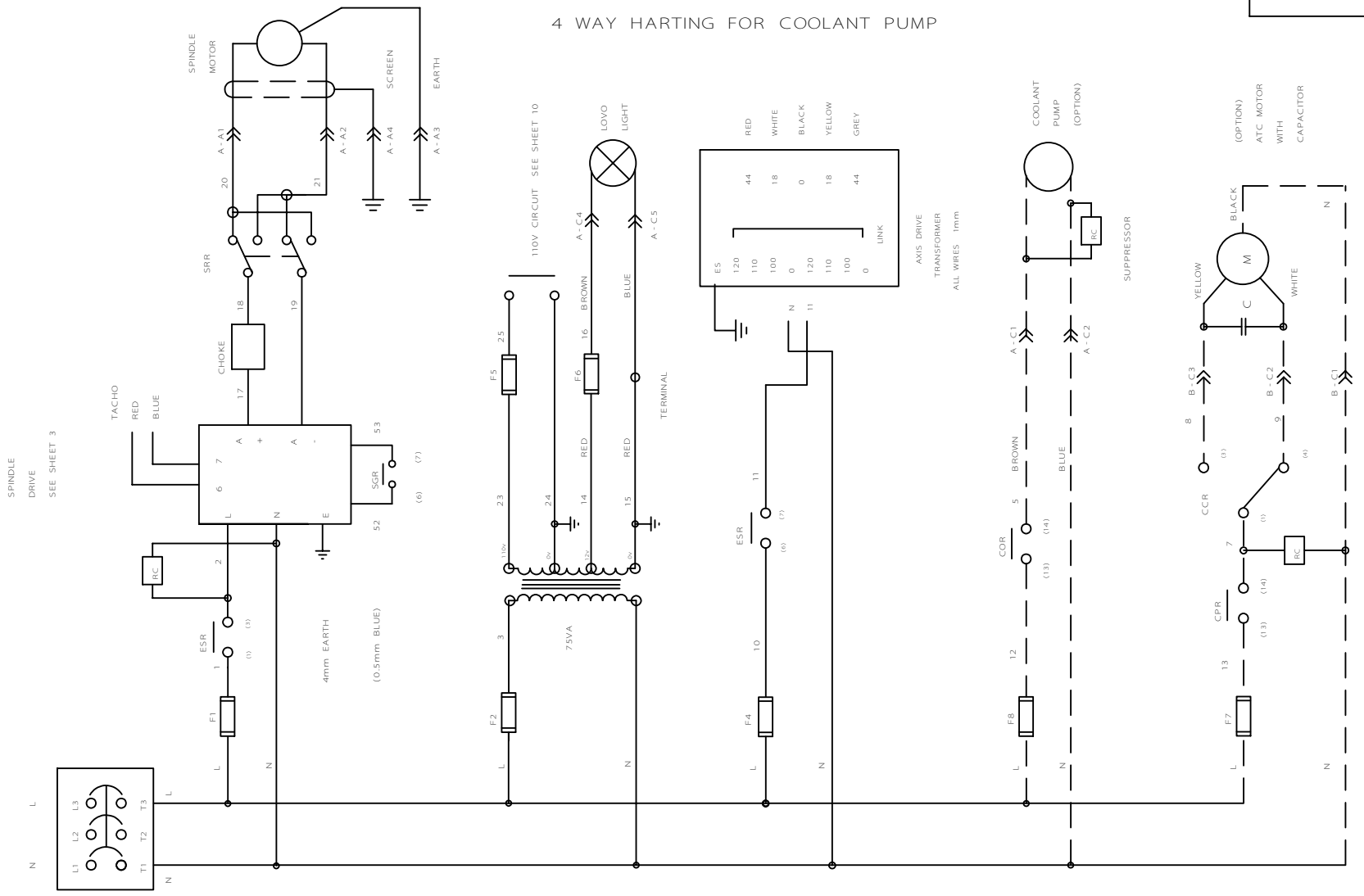
SHEET 1
[TPC]
[S1H]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 17-3-94 | A3 - 400176 H

IF IN DOUBT ASK

4 WAY HARTING FOR COOLANT PUMP



F1=6.3 AMP
F2=3.15 AMP
F4=6.3 AMP
F5=3.15 AMP
F6=3.15 AMP
F7=3.15 AMP
F8=3.15 AMP

NUMBERS IN BRACKETS REFER TO RELAY CONNECTIONS

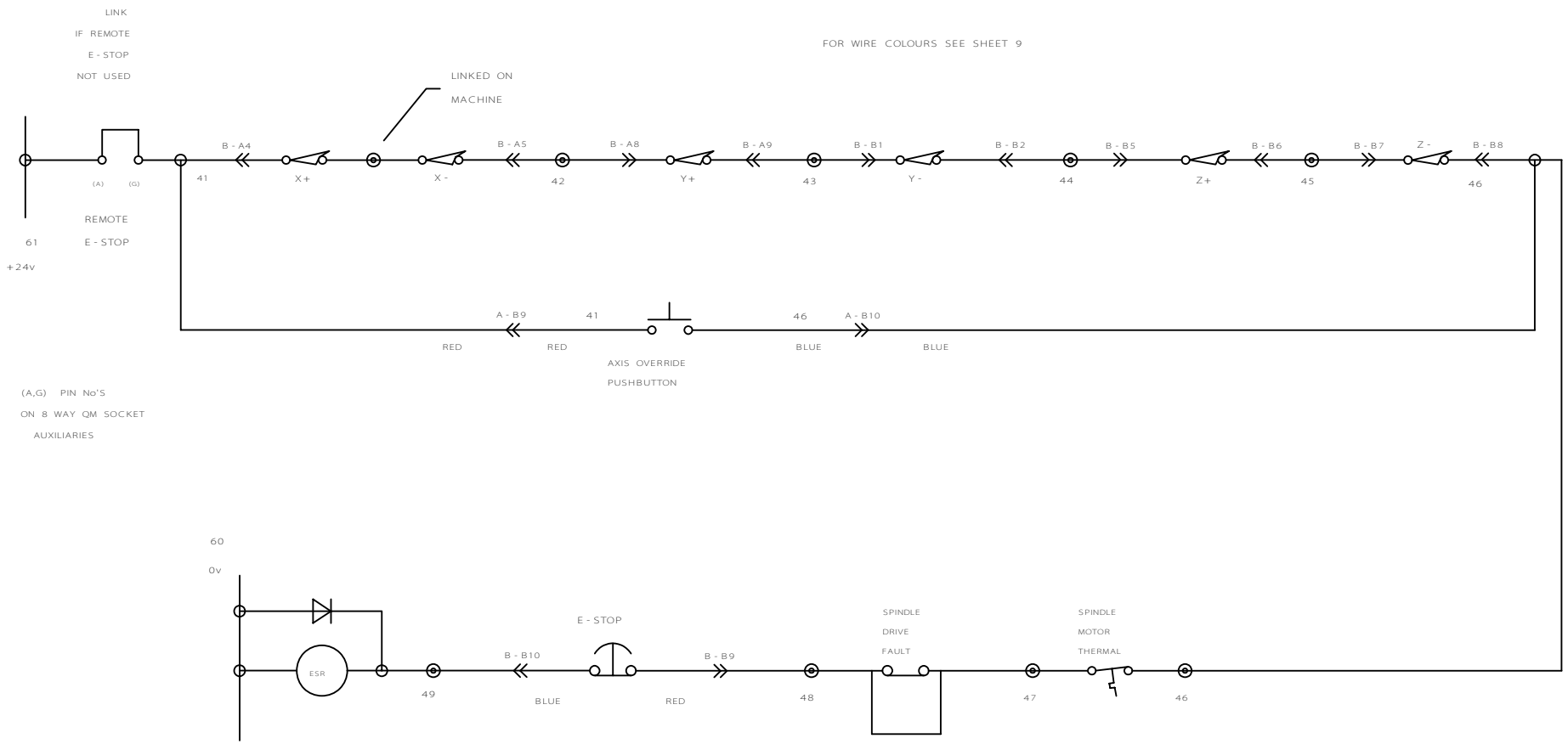
» REFERS TO PIN NOs ON PLUG AND SOCKET ASSEMBLY

TRIAC PC
POWER SCHEMATIC
SD12, 13 DRIVES

SHEET 1
[TPC]
[S1J]

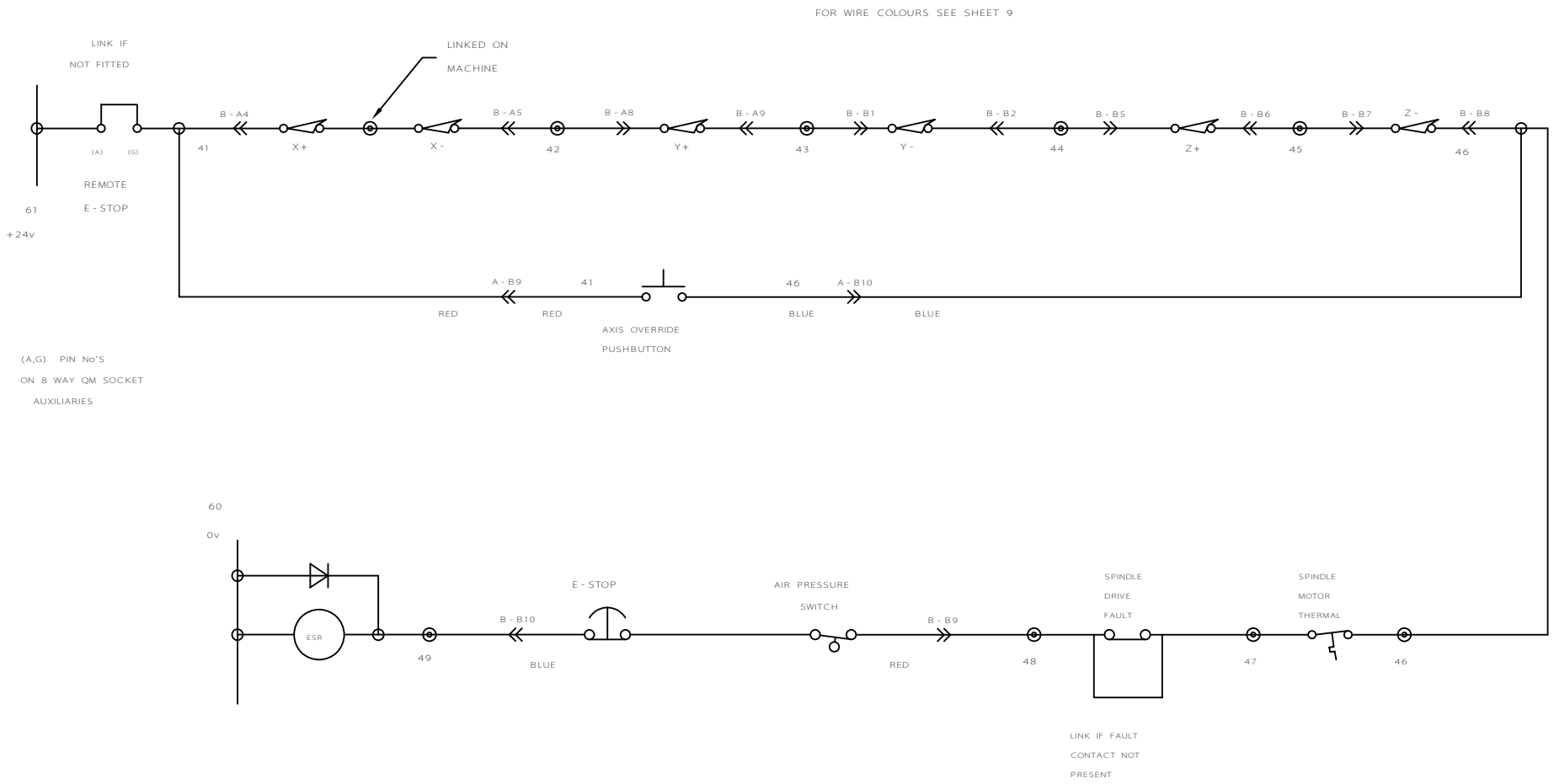
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 17-8-94 | A3 - 400176 J



TRIAC PC EMERGENCY STOP CIRCUIT	SHEET 2 OF

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



⊙ TERMINALS ON MAIN PANEL

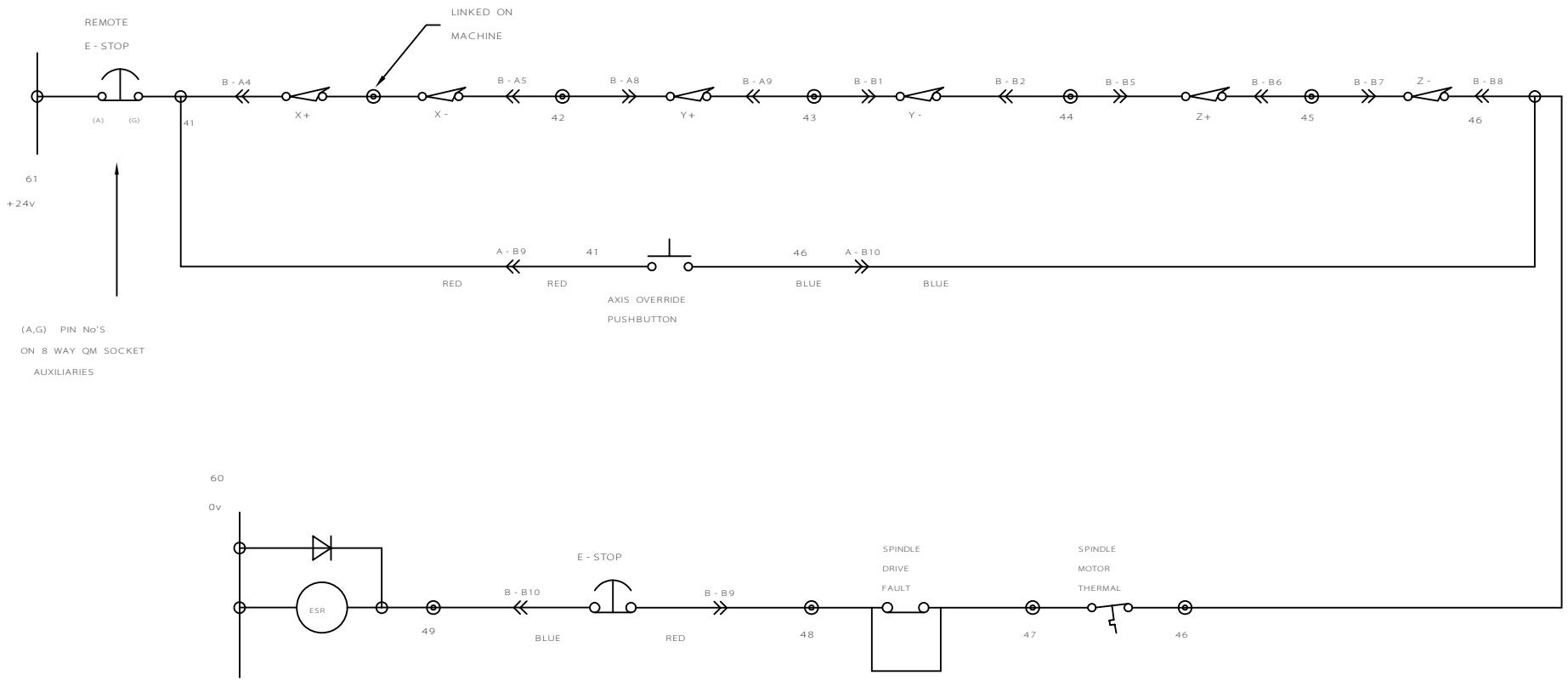
« PIN CONNECTIONS ON 80 WAY PLUG

TRIAC PC EMERGENCY STOP CIRCUIT (MANUAL VICE P/B)	SHEET 2 OF

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

IF REMOTE E - STOP
NOT REQUIRED
USE DUMMY PLUG
LINK PINS (A) & (G)

FOR WIRE COLOURS SEE SHEET 9



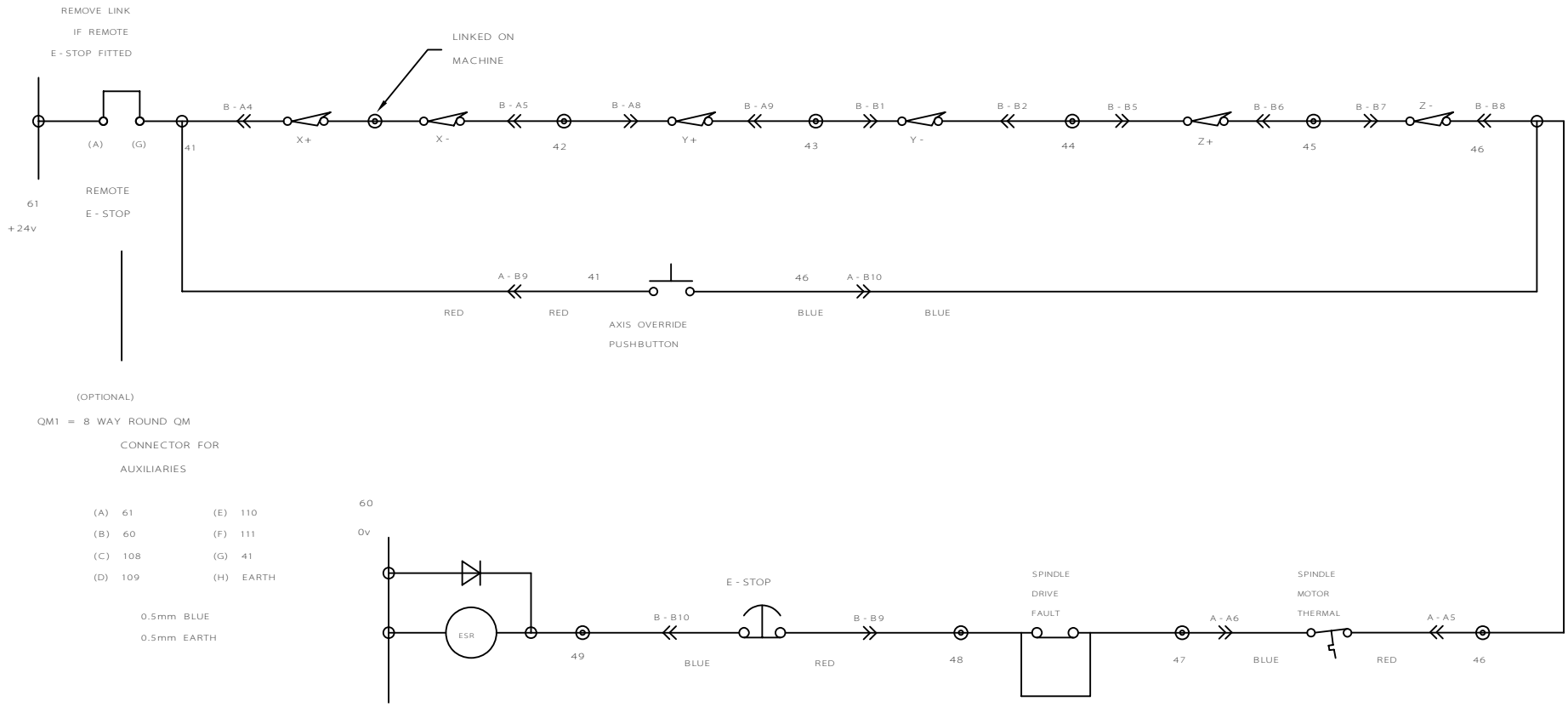
⊙ TERMINALS ON MAIN PANEL

« PIN CONNECTIONS ON 80 WAY PLUG

TRIAC PC EMERGENCY STOP CIRCUIT	SHEET No 2 OF

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

IF IN DOUBT ASK



(OPTIONAL)

QM1 = 8 WAY ROUND QM
CONNECTOR FOR
AUXILIARIES

(A) 61	(E) 110
(B) 60	(F) 111
(C) 108	(G) 41
(D) 109	(H) EARTH

0.5mm BLUE
0.5mm EARTH

⊙ TERMINALS ON MAIN PANEL

« PIN NUMBERS ON 80 WAY PLUG AND SOCKET (CABINET TO MACHINE)

TRIAC PC
EMERGENCY STOP
CIRCUIT

SHEET 2
[TPC]
[S2C]

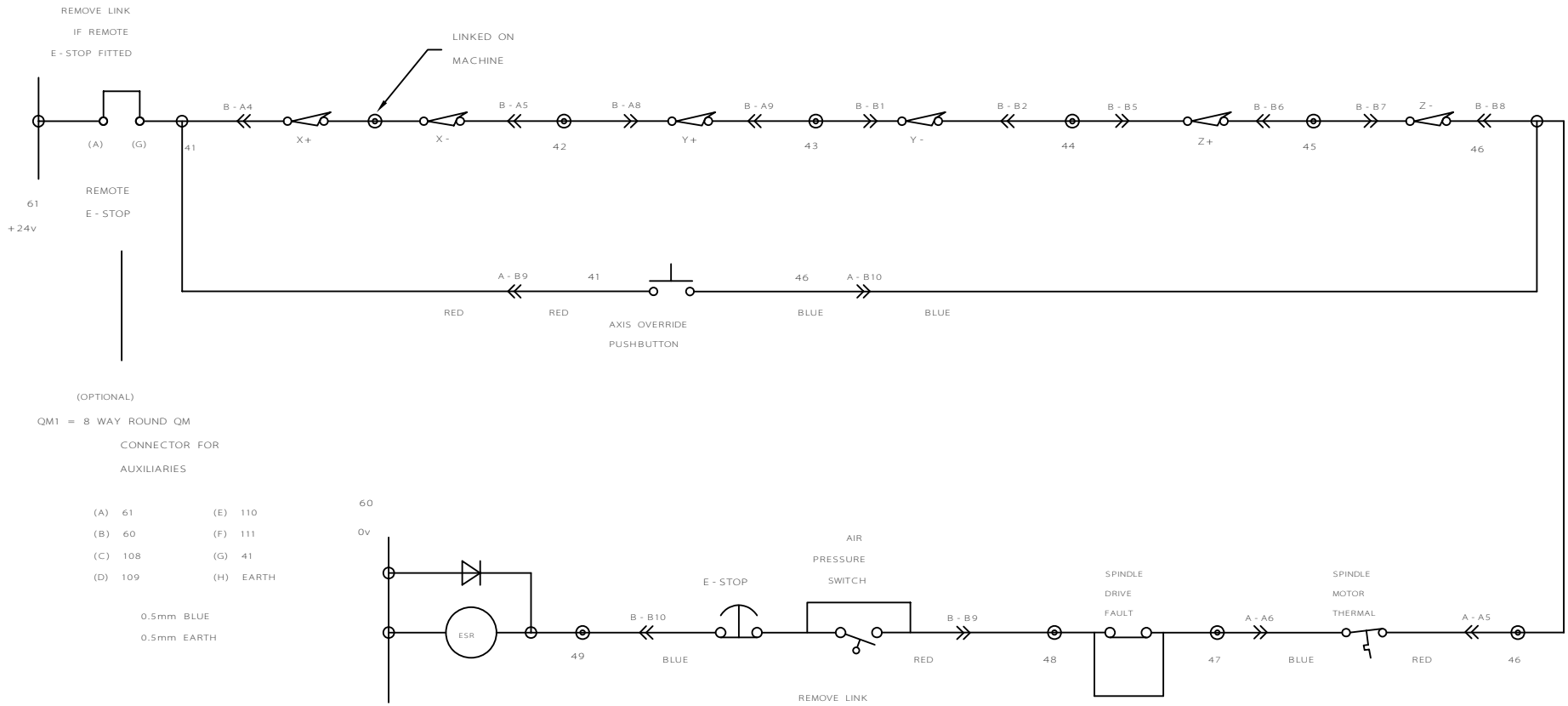
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 1 - 11 - 93

A3 - 400191 B

IF IN DOUBT ASK



(OPTIONAL)

QM1 = 8 WAY ROUND QM
CONNECTOR FOR
AUXILIARIES

(A) 61	(E) 110
(B) 60	(F) 111
(C) 108	(G) 41
(D) 109	(H) EARTH

0.5mm BLUE
0.5mm EARTH

⊙ TERMINALS ON MAIN PANEL

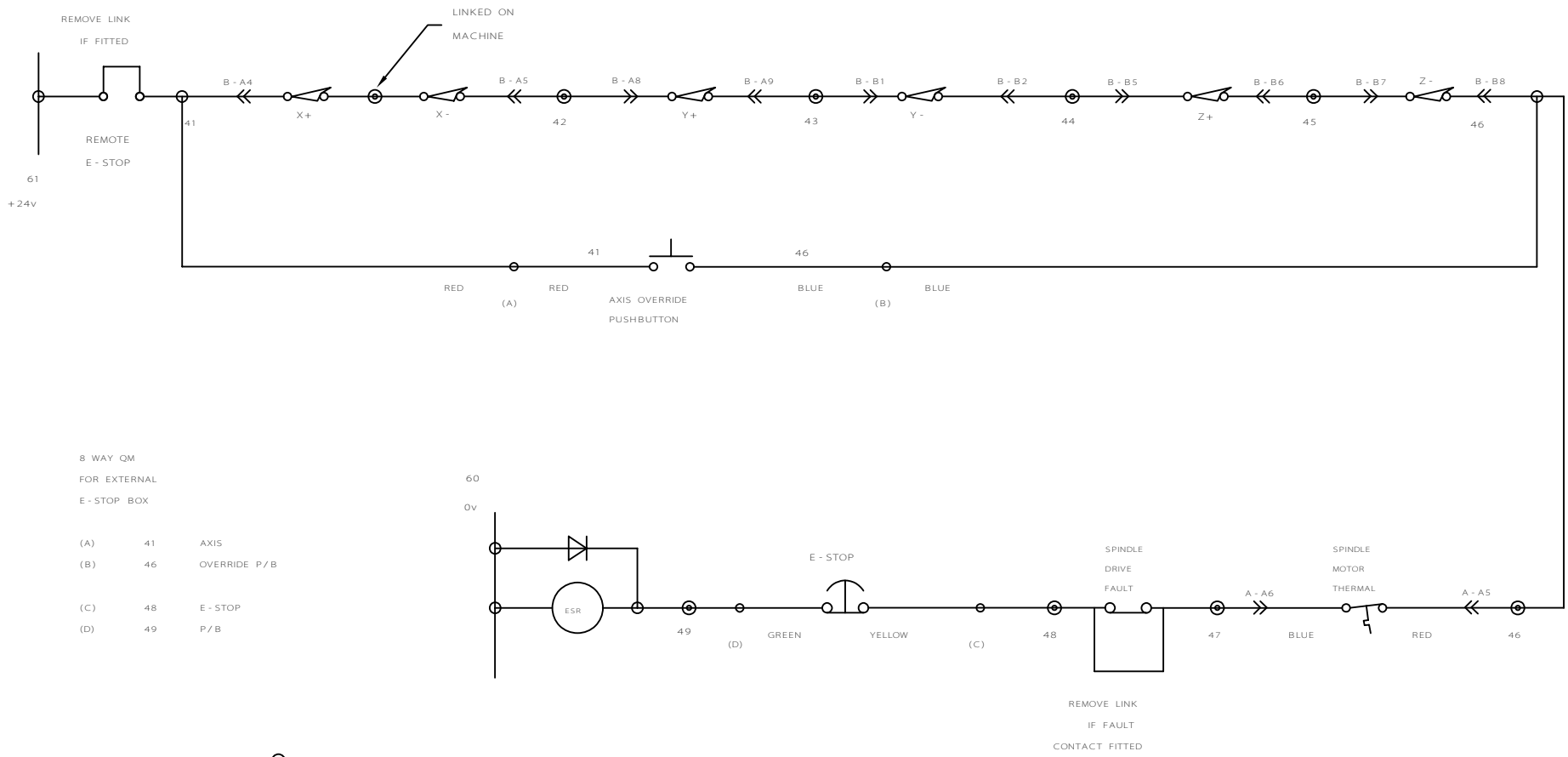
« PIN NUMBERS ON 80 WAY PLUG AND SOCKET
(CABINET TO MACHINE)

TRIAC PC
EMERGENCY STOP
CIRCUIT

SHEET 2
[TPC]
[S2D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 18 - 8 - 94 | A3 - 400191 C

IF IN DOUBT ASK



8 WAY QM
FOR EXTERNAL
E - STOP BOX

(A)	41	AXIS
(B)	46	OVERRIDE P/B
(C)	48	E - STOP
(D)	49	P/B

⊙ TERMINALS ON MAIN PANEL

« PIN NUMBERS ON 80 WAY PLUG AND SOCKET (CABINET TO MACHINE)

TRIAC PC
EMERGENCY STOP
CIRCUIT

SHEET 2
[TPC]
[S2E]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

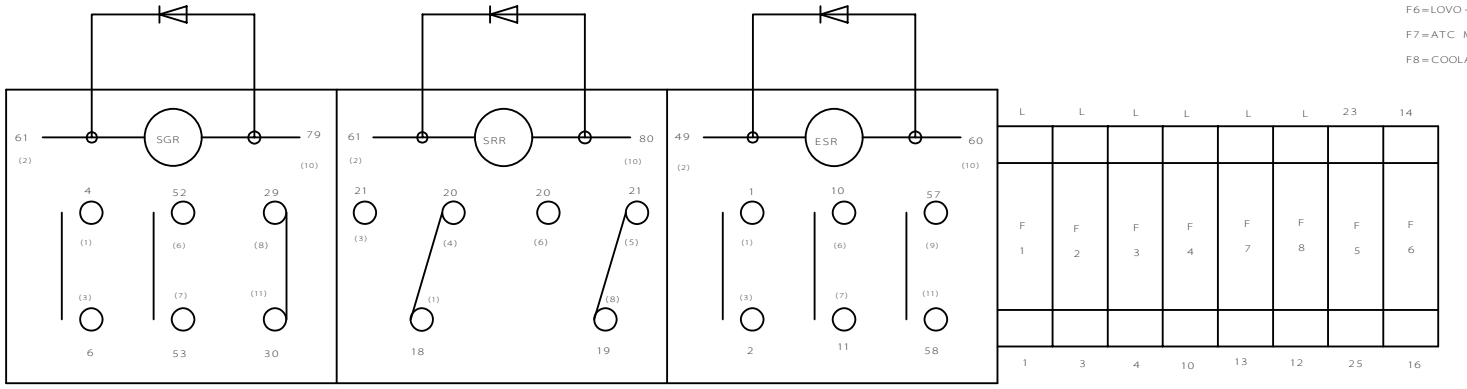
DRN BY A McHENRY

DATE 18 - 8 - 94

A3 - 400191 D

F1=SPINDLE DRIVE
F2=CONTROL TRANS
F3=LUBE PUMP
F4=DRIVES TRANSFORMER
F5=110v CIRCUIT
F6=LOVO-LIGHT
F7=ATC MOTOR
F8=COOLANT PUMP

(OPTIONS)

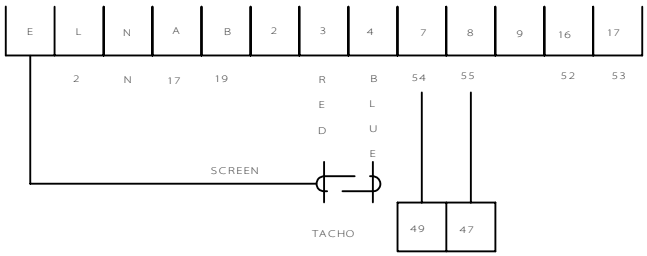


11 PIN RELAY

8 PIN RELAY

11 PIN RELAY

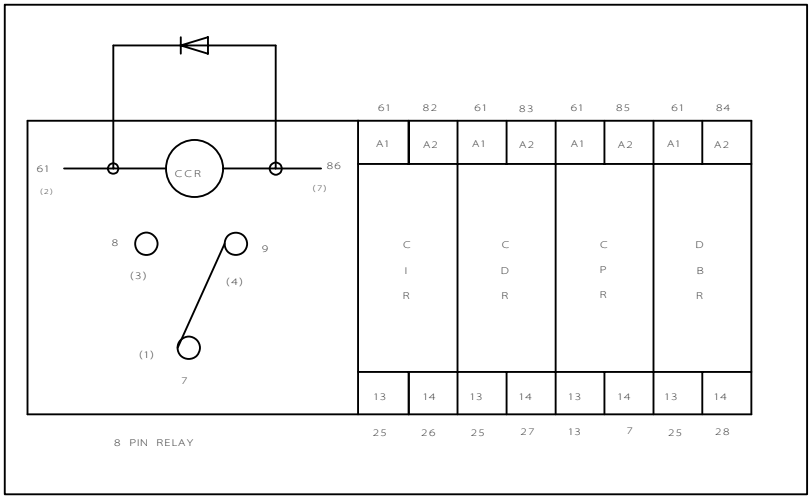
LENZ DRIVE CONNECTIONS



INTERFACE MODULE

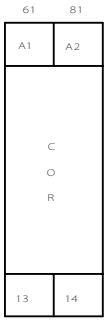
SEE SHEET 5

RELAYS REQUIRED WHEN ATC IS FITTED



8 PIN RELAY

RELAY
FOR COOLANT



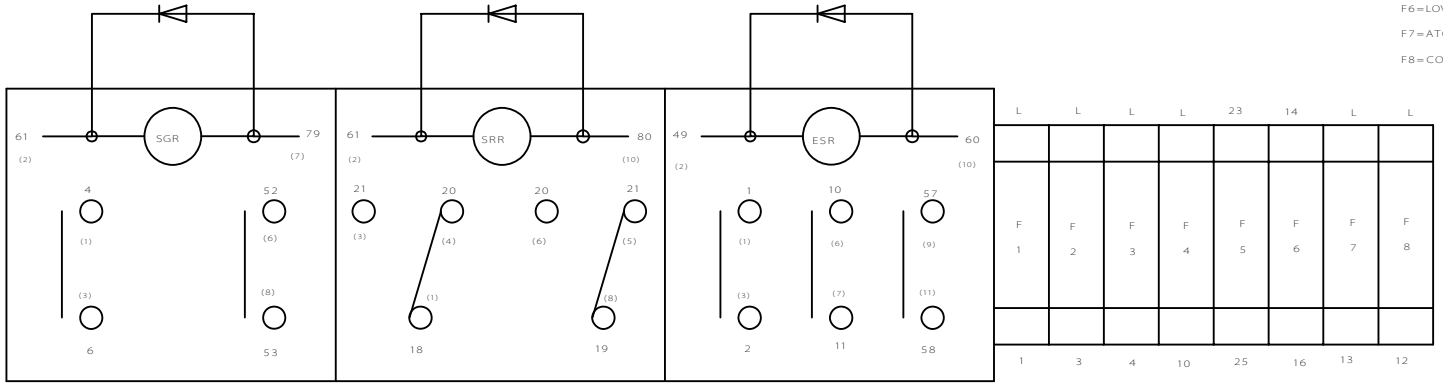
SHEET 3	
OF	

TRIAC PC
RELAY WIRING
(MANUAL VICE P/B)

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 6-5-92	A3- 400179 B

F1=SPINDLE DRIVE
F2=CONTROL TRANS
F3=LUBE PUMP
F4=DRIVES TRANSFORMER
F5=110v CIRCUIT
F6=LOVO - LIGHT
F7=ATC MOTOR
F8=COOLANT PUMP

(OPTIONS)



8 PIN RELAY

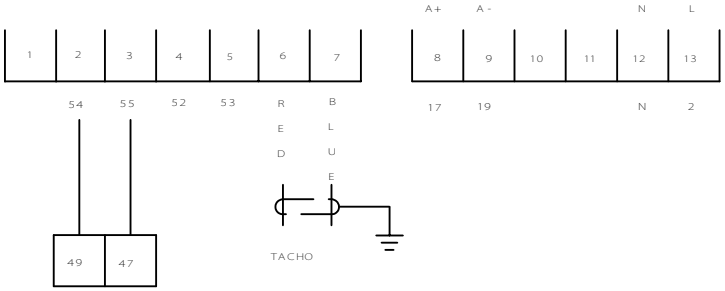
8 PIN RELAY

11 PIN RELAY

RELAYS REQUIRED WHEN ATC IS FITTED

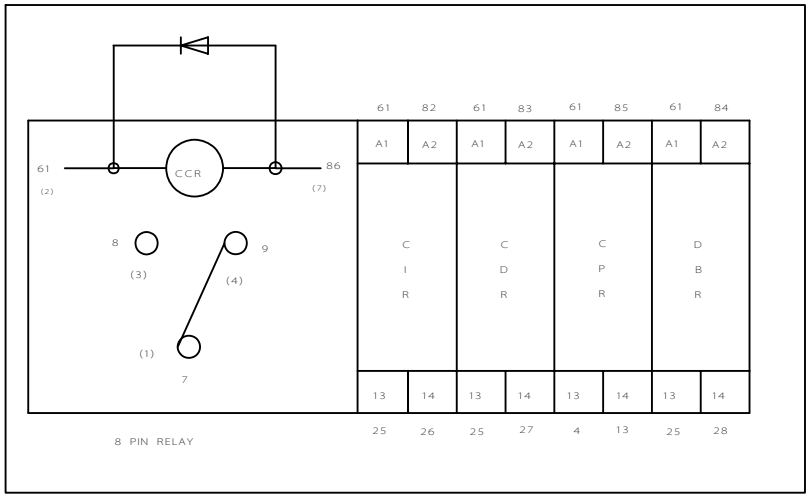
RELAY
FOR COOLANT

SPRINT DRIVE CONNECTIONS



INTERFACE MODULE

SEE SHEET 5



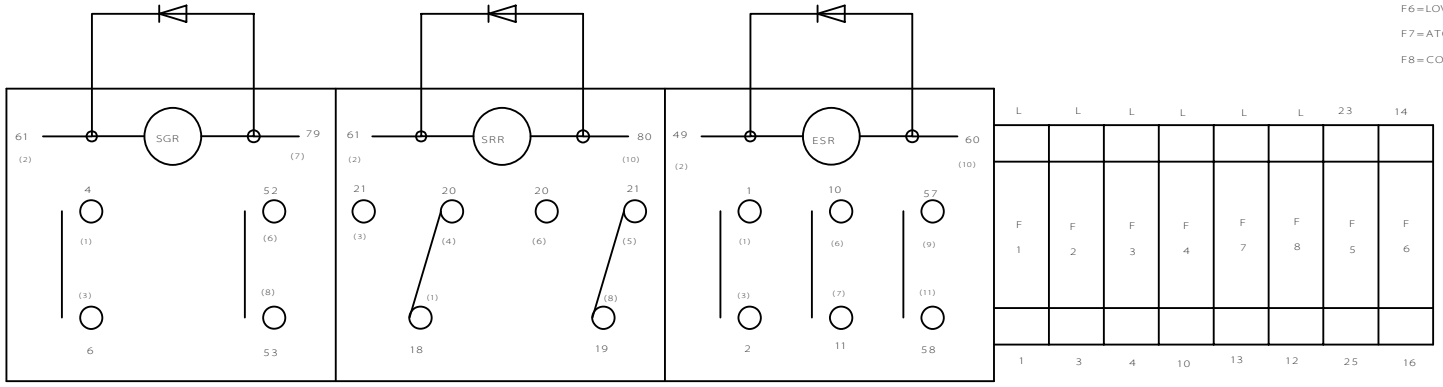
TRIAC PC RELAY CONNECTIONS & ATC OPTION	SHEET 3 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 12-8-92	A3 - 400179 B

IF IN DOUBT ASK

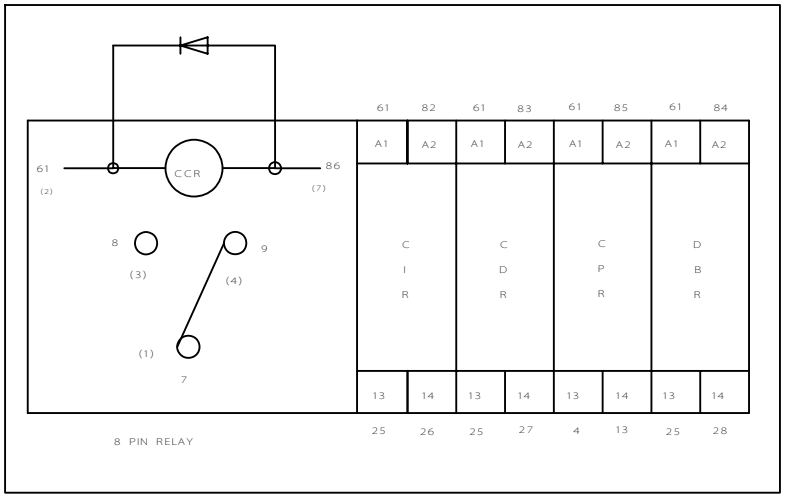
F1=SPINDLE DRIVE
F2=CONTROL TRANS
F3=LUBE PUMP
F4=DRIVES TRANSFORMER
F5=110v CIRCUIT
F6=LOVO - LIGHT
F7=ATC MOTOR
F8=COOLANT PUMP

(OPTIONS)



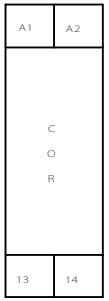
8 PIN RELAY 8 PIN RELAY 11 PIN RELAY

RELAYS REQUIRED WHEN ATC IS FITTED

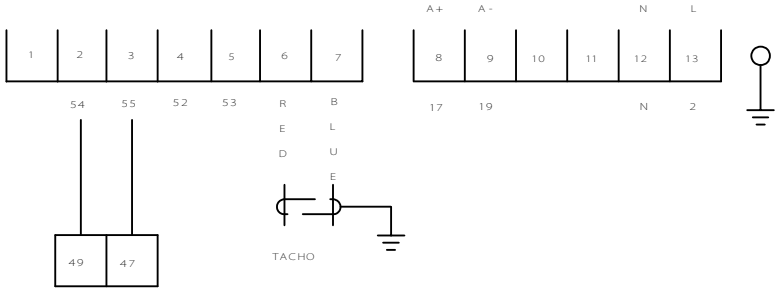


RELAY FOR VICE

RELAY FOR COOLANT



SPRINT DRIVE CONNECTIONS



INTERFACE MODULE

SEE SHEET 5

TRIAC PC
RELAY CONNECTIONS
& ATC OPTION

SHEET 3
OF
[S3C]

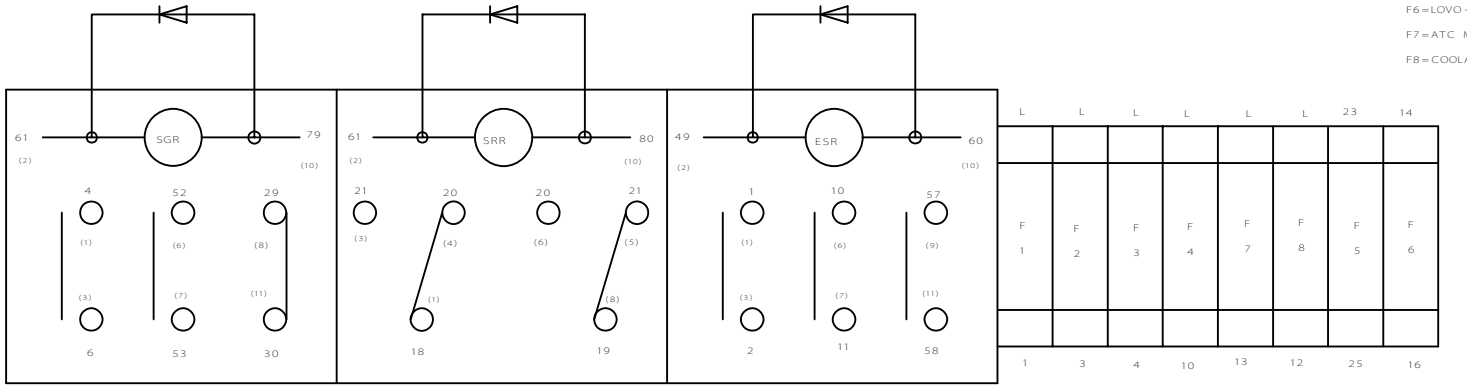
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY | DATE 12-8-92 | A3 - 400179 C

IF IN DOUBT ASK

F1=SPINDLE DRIVE
F2=CONTROL TRANS
F3=LUBE PUMP
F4=DRIVES TRANSFORMER
F5=110v CIRCUIT
F6=LOVO-LIGHT
F7=ATC MOTOR
F8=COOLANT PUMP

(OPTIONS)



11 PIN RELAY

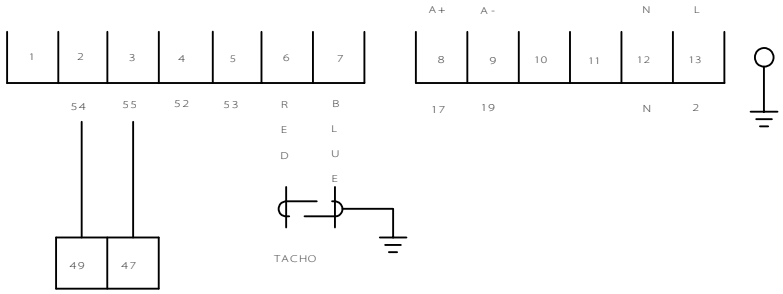
8 PIN RELAY

11 PIN RELAY

RELAYS REQUIRED WHEN ATC IS FITTED

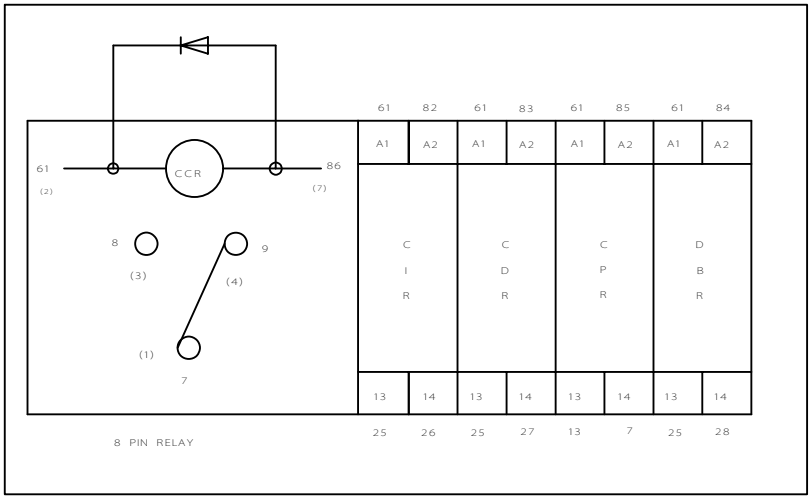
RELAY
FOR COOLANT

SPRINT DRIVE CONNECTIONS



INTERFACE MODULE

SEE SHEET 5



8 PIN RELAY

SHEET 3

OF

TRIAC PC
RELAY WIRING
(MANUAL VICE P/B)

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

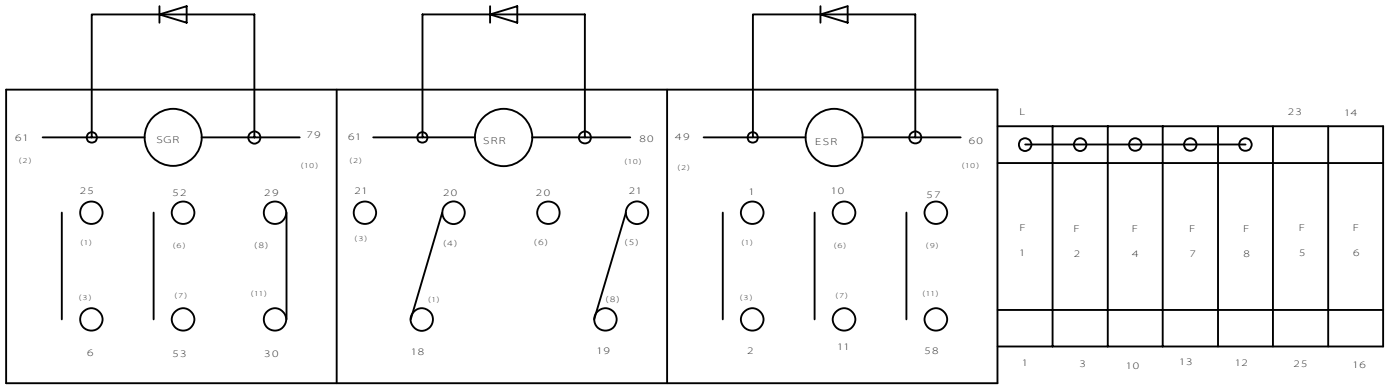
DATE 9-11-92

A3- 400179 D

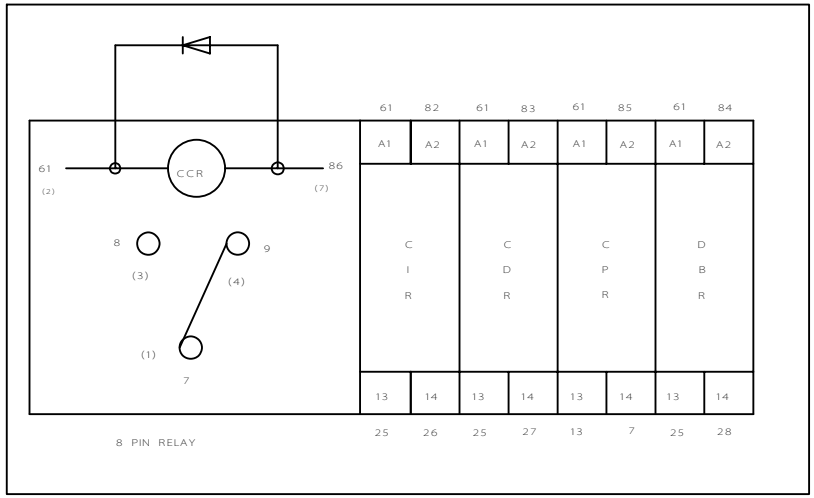
IF IN DOUBT ASK

F1=SPINDLE DRIVE
F2=CONTROL TRANS
F4=DRIVES TRANSFORMER
F5=110v CIRCUIT
F6=LOVO - LIGHT
F7=ATC MOTOR
F8=COOLANT PUMP

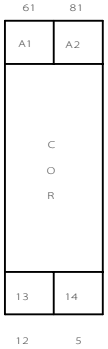
(OPTIONS)



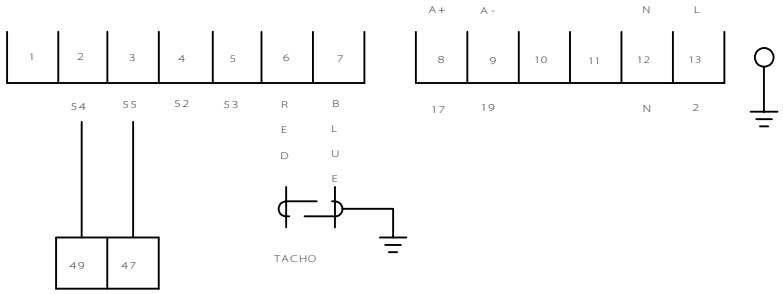
RELAYS REQUIRED WHEN ATC IS FITTED



RELAY
FOR COOLANT



SPRINT DRIVE CONNECTIONS



INTERFACE MODULE

SEE SHEET 5

SHEET 3

OF

[S3 F]

TRIAC PC
RELAY WIRING
(MANUAL VICE P/B)

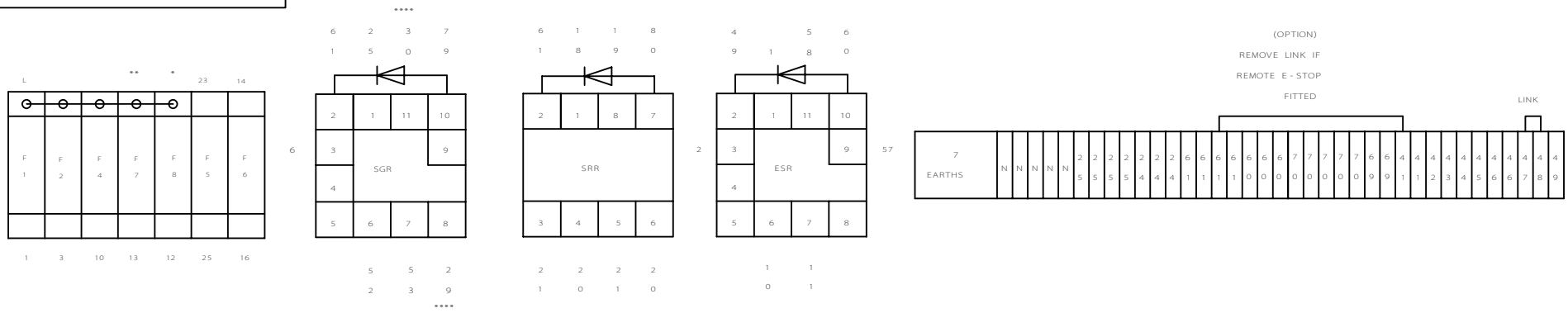
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

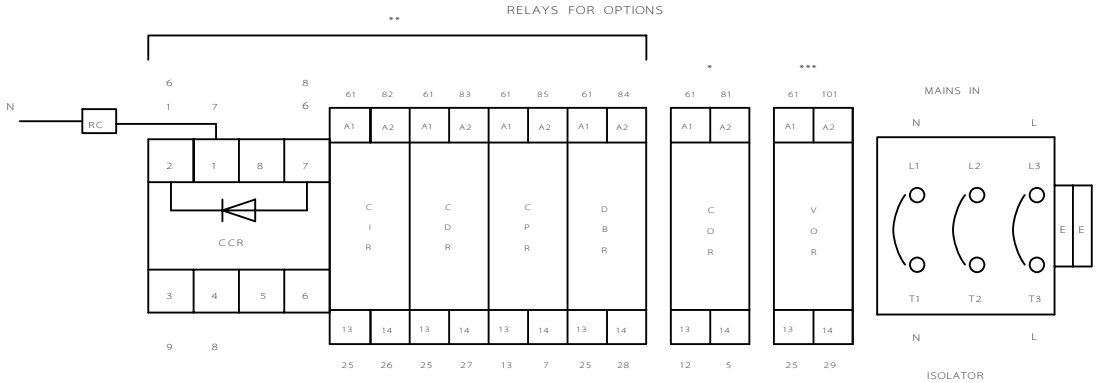
DATE 9-11-92

A3- 400179 F

IF IN DOUBT ASK



RELAYS FOR OPTIONS

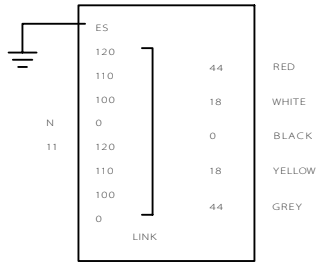


* ADD IF SPRAY MIST FITTED

** ADD IF TOOLCHANGER FITTED

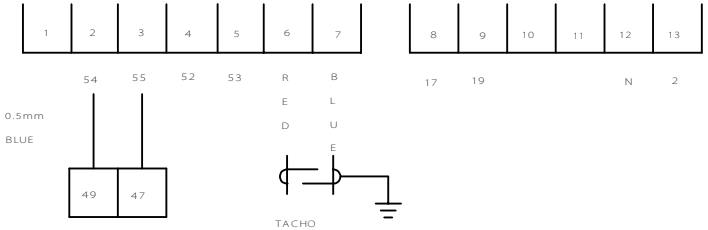
*** ADD IF POWER VICE IS AUTOMATIC

**** ADD IF POWER VICE IS MANUALLY CONTROLLED



AXIS DRIVE
TRANSFORMER
ALL WIRES 1mm

SPRINT DRIVE CONNECTIONS



F1	SPINDLE DRIVE	10 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

TRIAC PC
RELAY CONNECTIONS

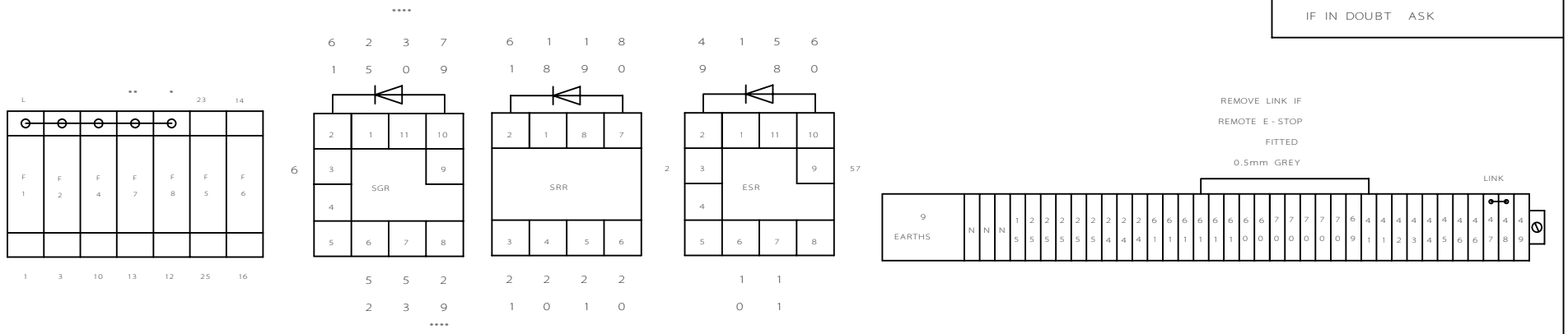
SHEET 3

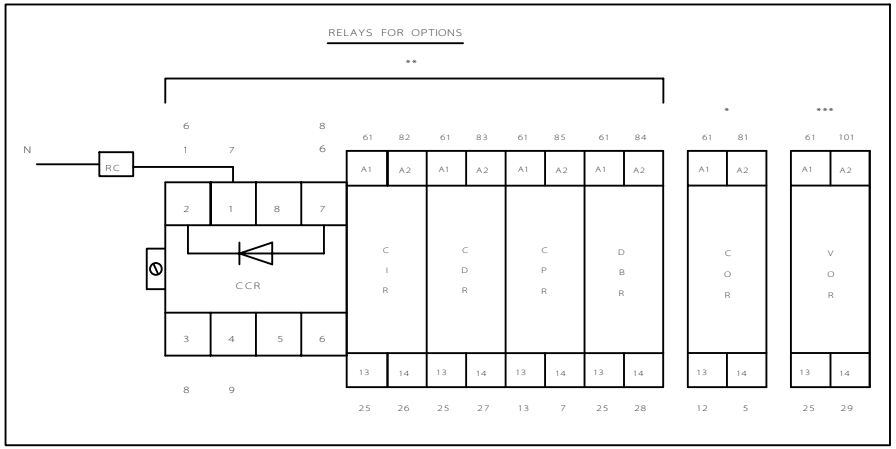
[TPC]

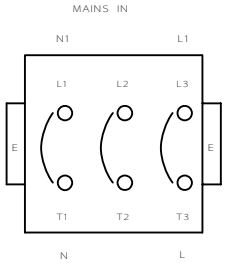
[S3G]

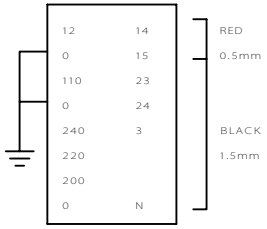
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 10-8-93 | A3 - 400179 G

IF IN DOUBT ASK









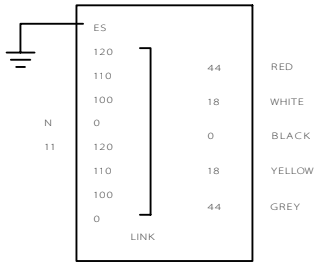
75VA
TRANS
(MOUNTED ON
BOTTOM OF
CABINET)

* ADD IF SPRAY MIST FITTED

** ADD IF TOOLCHANGER FITTED

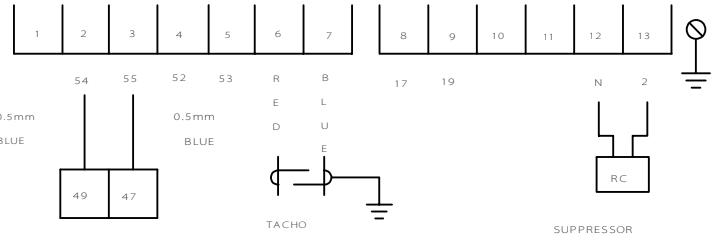
*** ADD IF POWER VICE IS AUTOMATIC

**** ADD IF POWER VICE IS MANUALLY CONTROLLED



AXIS DRIVE
TRANSFORMER
ALL WIRES 1mm

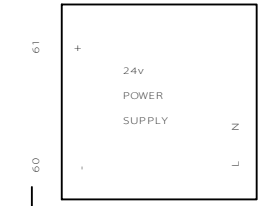
SPRINT DRIVE CONNECTIONS



INTERFACE MODULE
SEE SHEET 5

TACHO

SUPPRESSOR
RS 238-463



F1	SPINDLE DRIVE	10 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

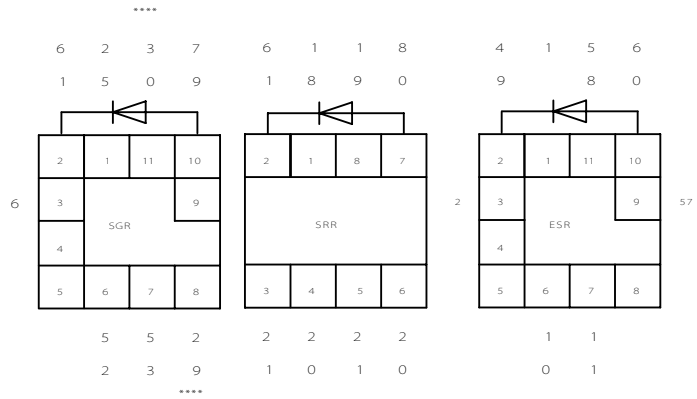
TRIAC PC
PANEL WIRING
DETAILS

SHEET 3
[TPC]
[S3H]

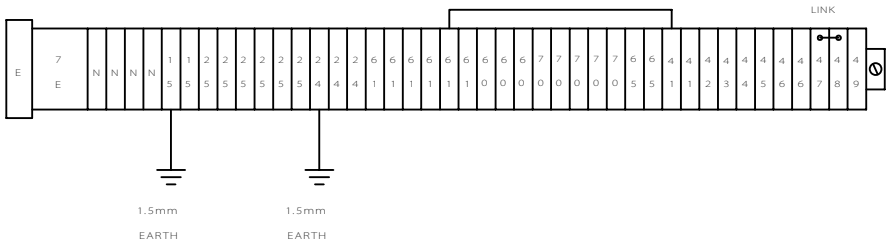
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-3-94 | A3 - 400179 H

IF IN DOUBT ASK

SEE SHEET 16
FOR OPTIONAL RELAYS

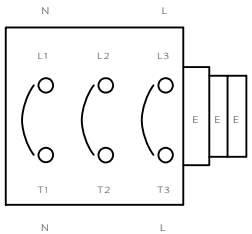


REMOVE LINK IF
REMOTE E-STOP
FITTED
0.5mm GREY

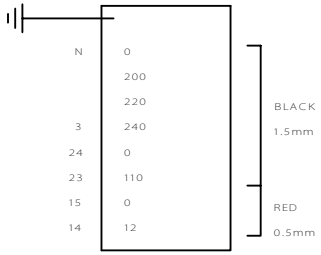


* ADD IF SPRAY MIST FITTED
** ADD IF TOOLCHANGER
FITTED
*** IF POWER VICE
IS AUTOMATIC
ADD VOR (SHEET 16)
**** ADD IF POWER VICE
IS MANUALLY CONTROLLED

MAINS IN

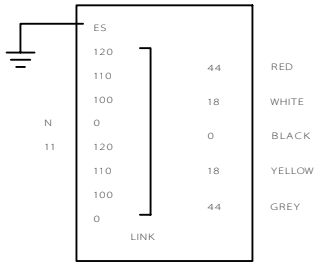


2.5mm EARTH

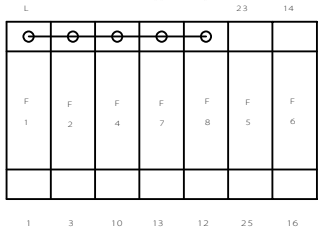


75 VA
CONTROL
TRANS

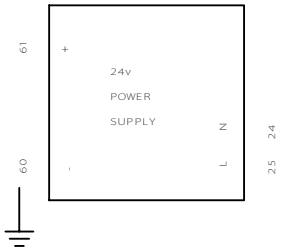
2.5mm
EARTH



AXIS DRIVE
TRANSFORMER
ALL WIRES 1mm



F1	SPINDLE DRIVE	10 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



TRIAC PC
PANEL WIRING
DETAILS

SHEET 3
[TPC]
[S3J]

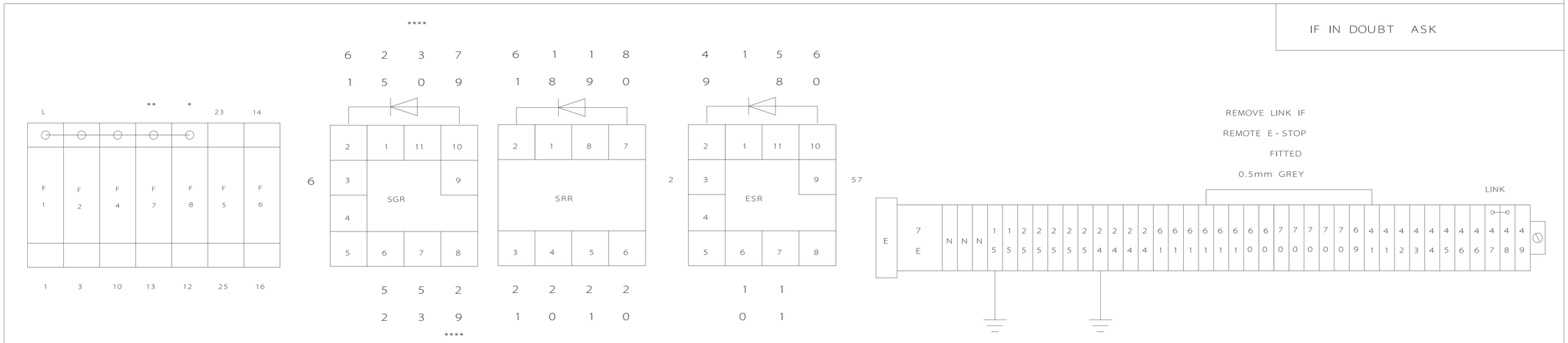
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-8-94 | A3 - 400179 J

INDUSTRIAL CABINET MACHINE

DOR DCR

DIFFERENT TERMINALS

IF IN DOUBT ASK

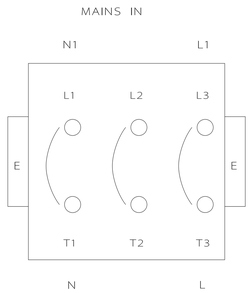


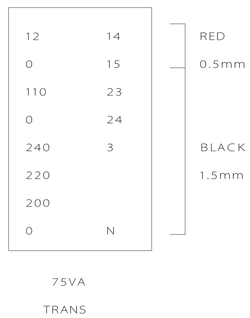
* ADD IF SPRAY MIST FITTED

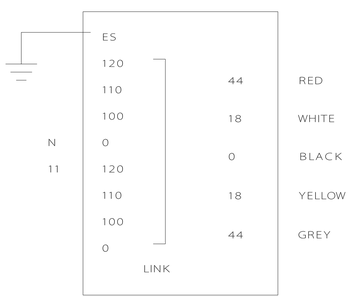
** ADD IF TOOLCHANGER FITTED

*** ADD IF POWER VICE IS AUTOMATIC

**** ADD IF POWER VICE IS MANUALLY CONTROLLED

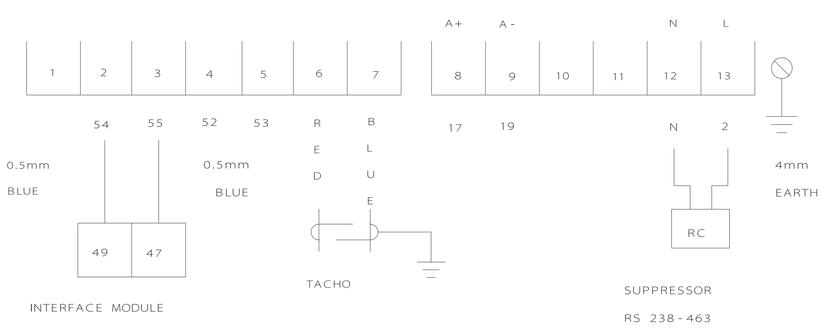




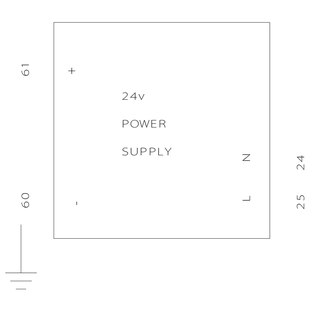


AXIS DRIVE
TRANSFORMER
ALL WIRES 1mm

SPRINT DRIVE CONNECTIONS



F1	SPINDLE DRIVE	10 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



TRIAC PC
PANEL WIRING
DETAILS

SHEET 3

[TPC]

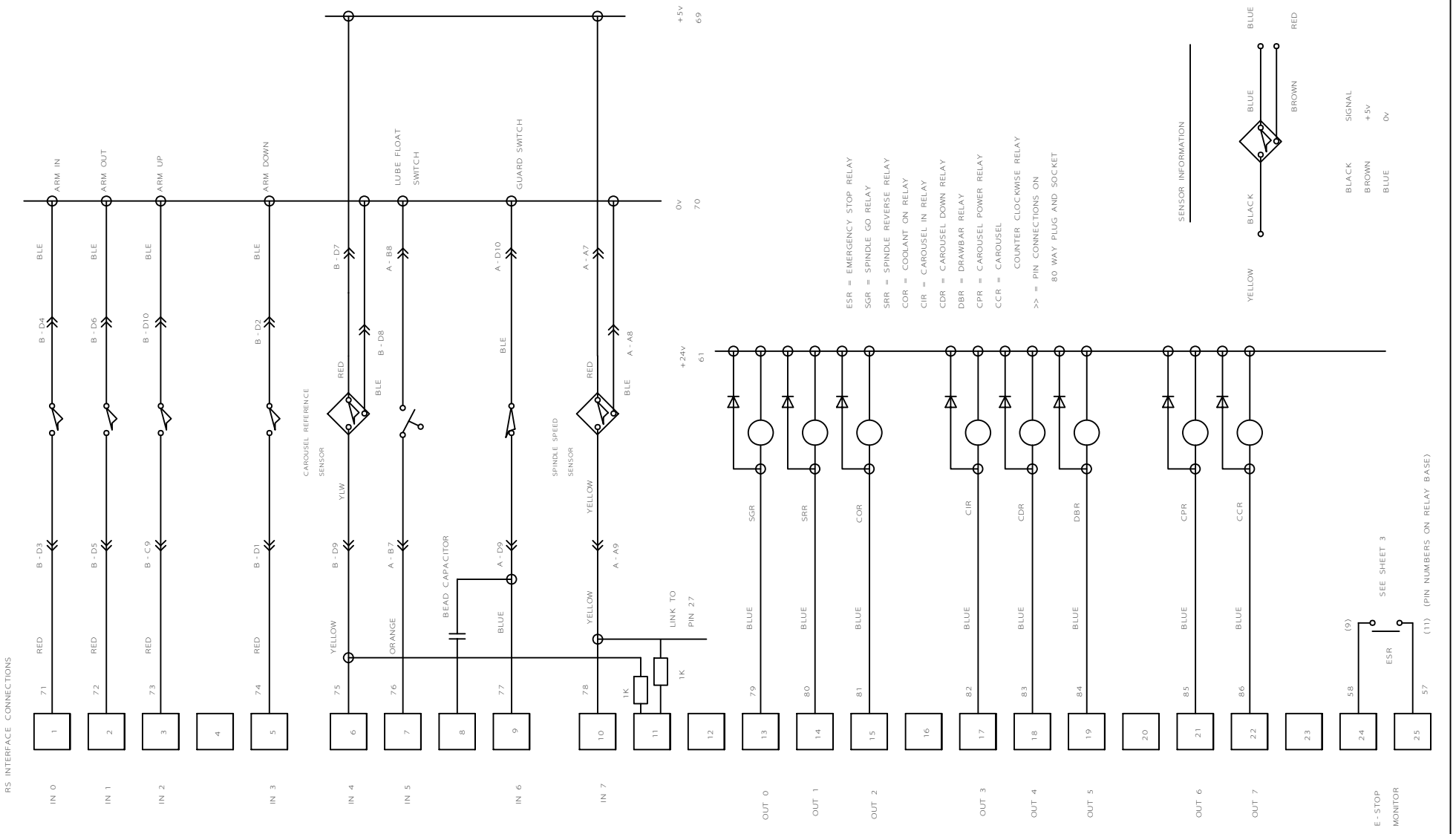
[S3K]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

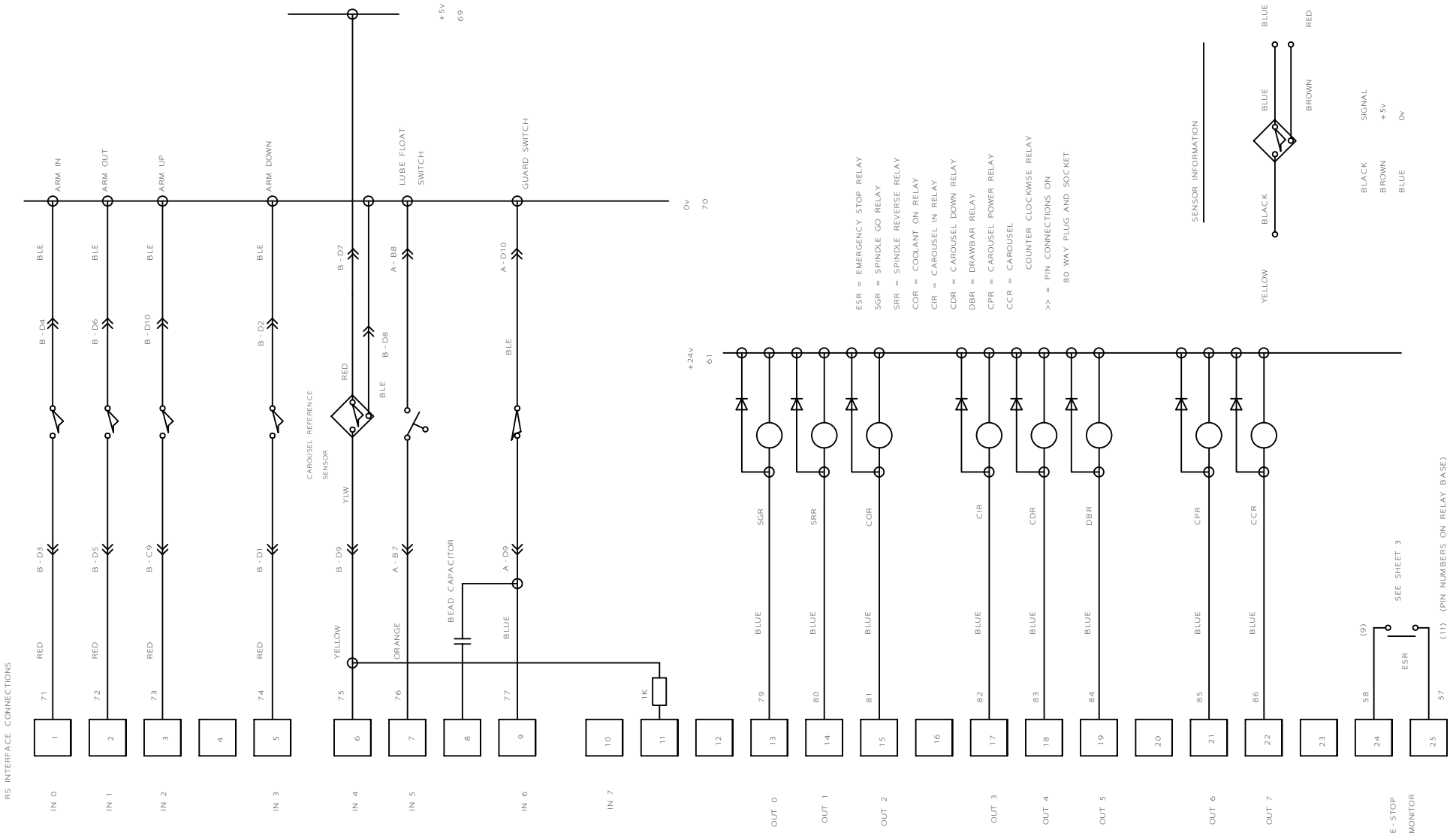
DATE 17-8-94

A3- 400179 K



TRIAC PC / VMC INPUT & OUTPUT CONNECTIONS	SHEET No 4
	OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A. NEWSOME | DATE 29-10-90 | A3 - 400181 A



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

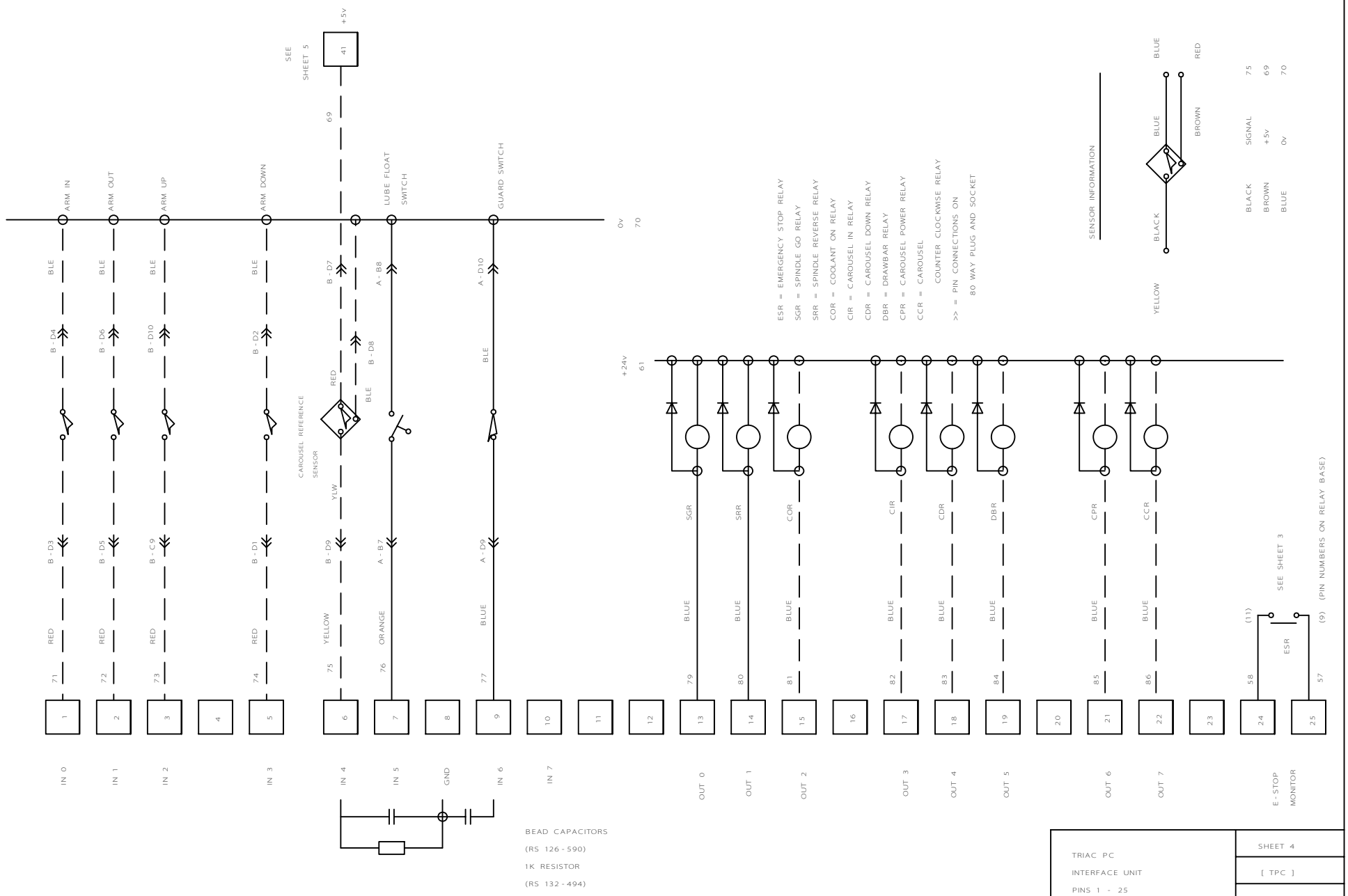
SHEET 4
OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 11-6-92

A3 - 400181 B



TRIAC PC
INTERFACE UNIT
PINS 1 - 25

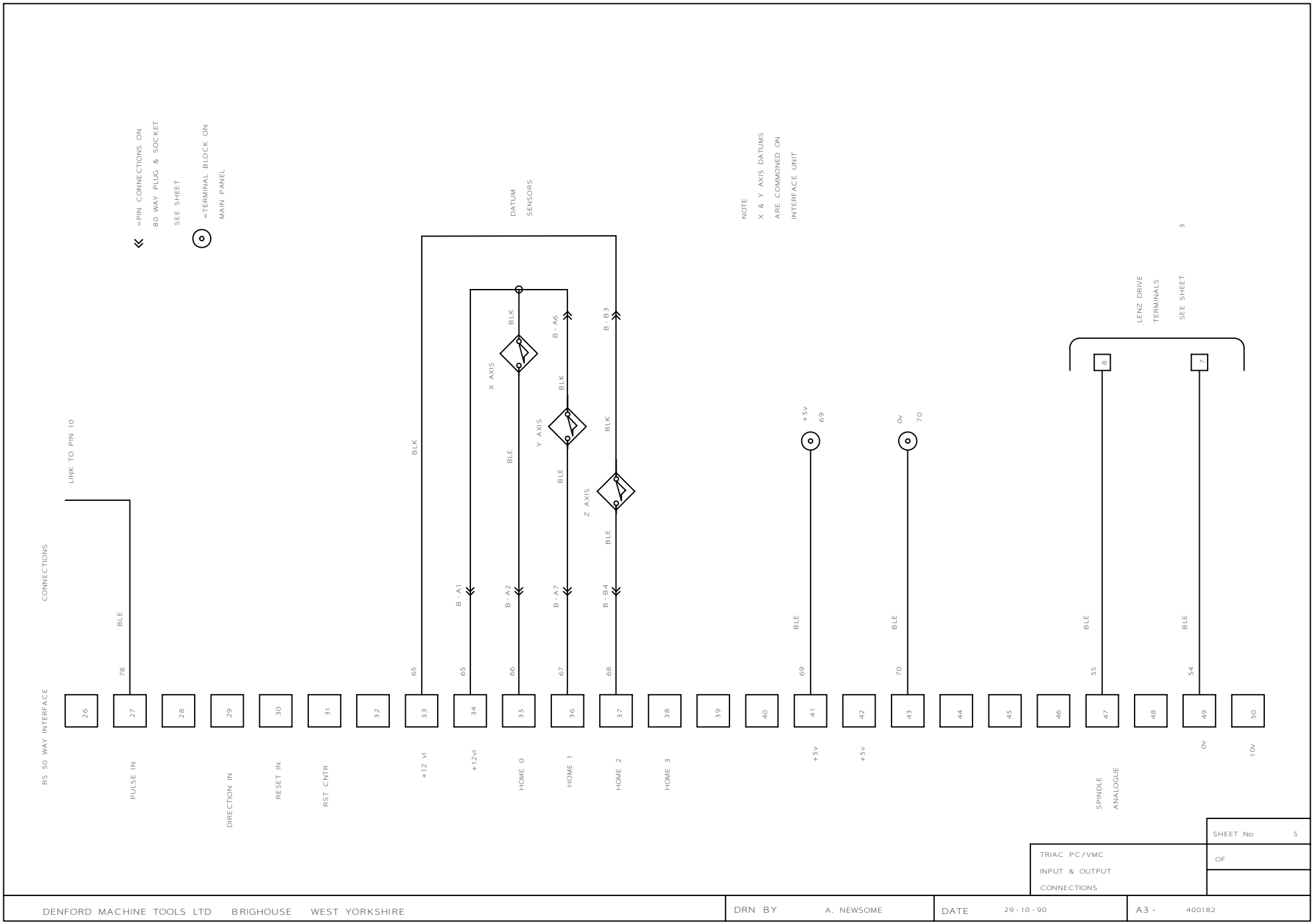
SHEET 4
[TPC]
[S4C]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

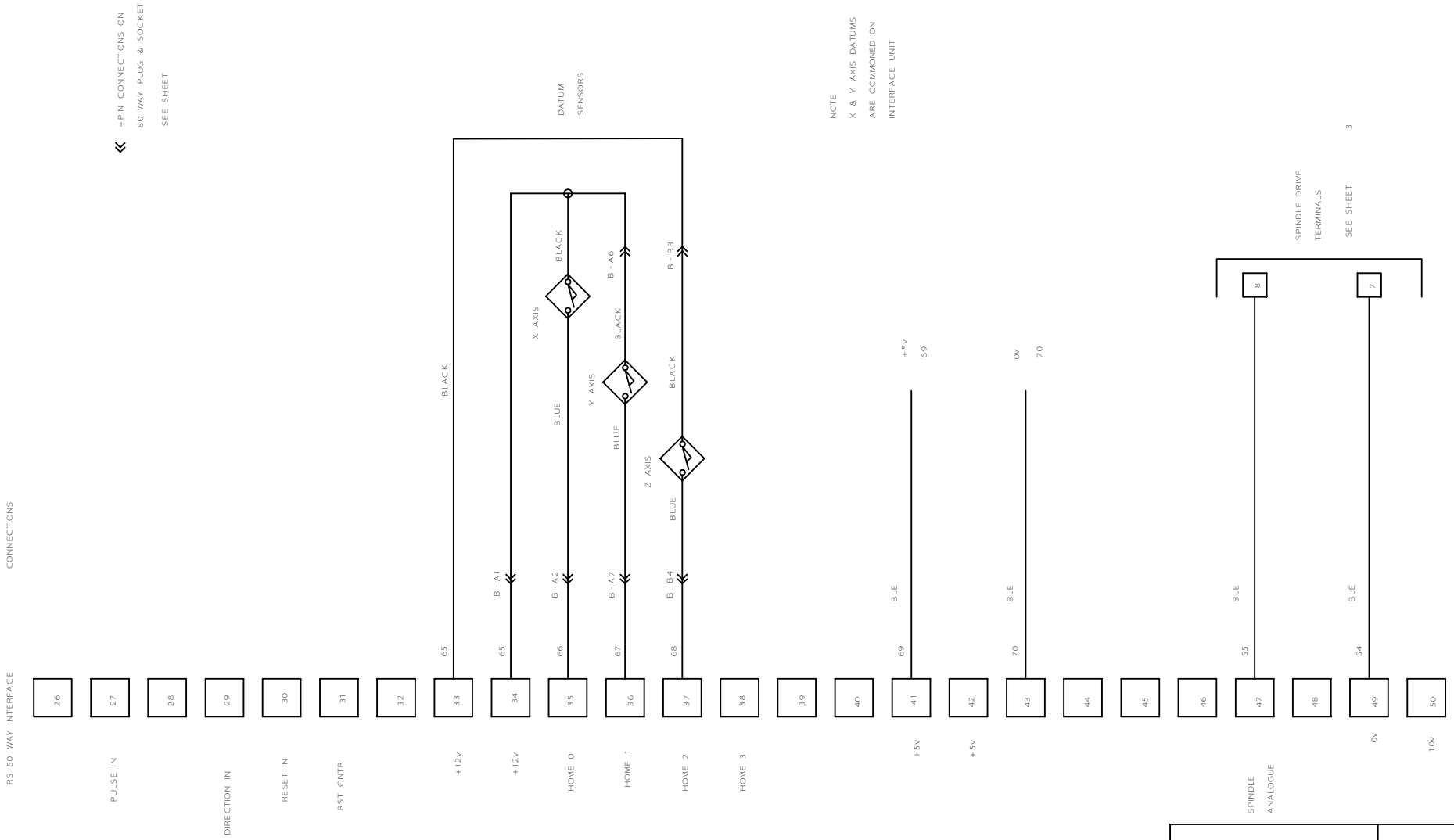
DATE 21 - 7 - 94

A3 - 400181 C



TRIAC PC/VMC INPUT & OUTPUT CONNECTIONS	SHEET No 5 OF		
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A. NEWSOME	DATE 29-10-90	A3 - 400182

IF IN DOUBT ASK



TRIAC PC
I/O WIRING
PINS 26 - 50

SHEET 5
[TPC]
[SSA]

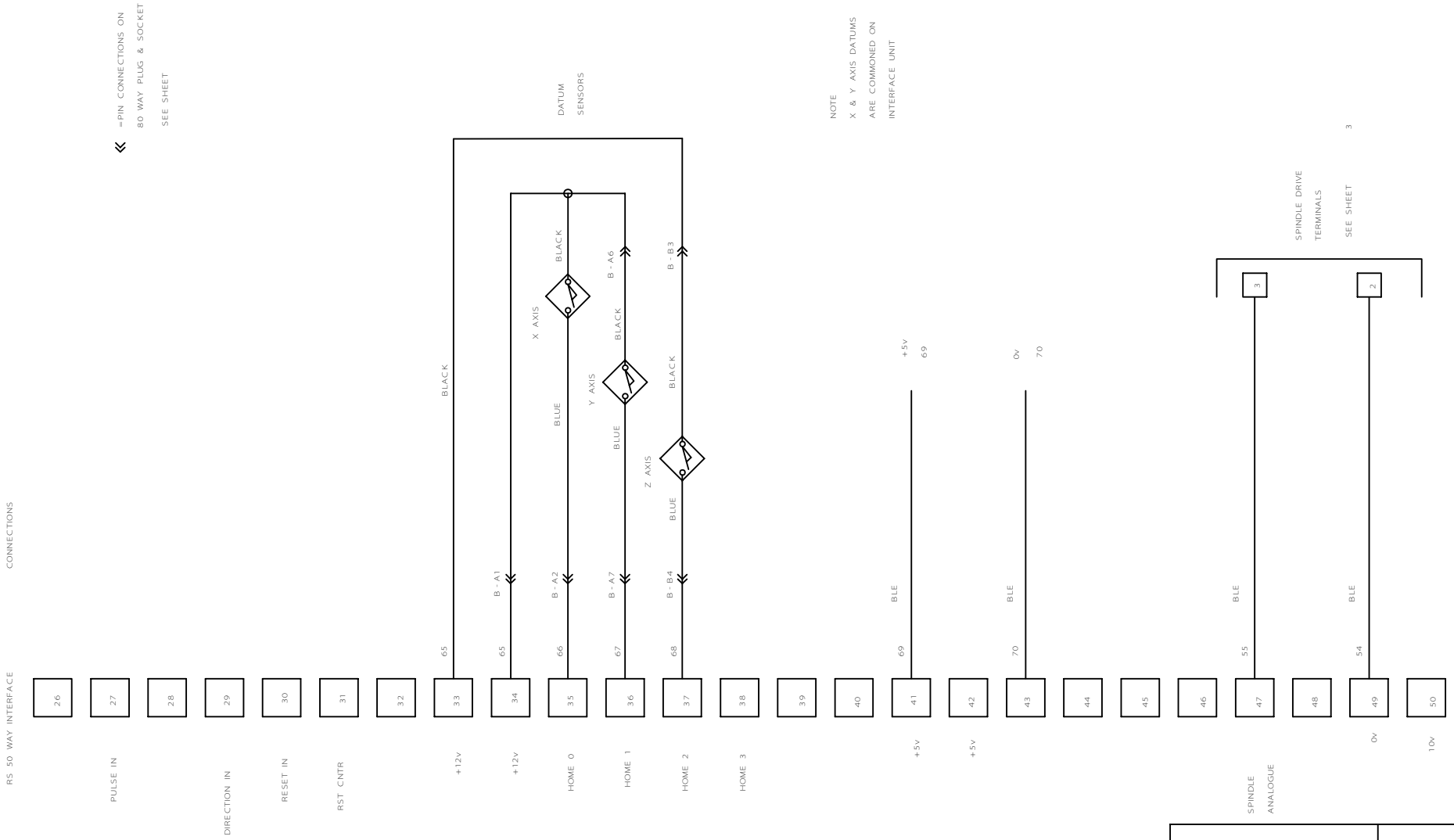
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 29-10-90

A3 - 400182 B

IF IN DOUBT ASK



TRIAC PC
I/O WIRING
PINS 26 - 50

SHEET 5
[TPC]
[S5B]

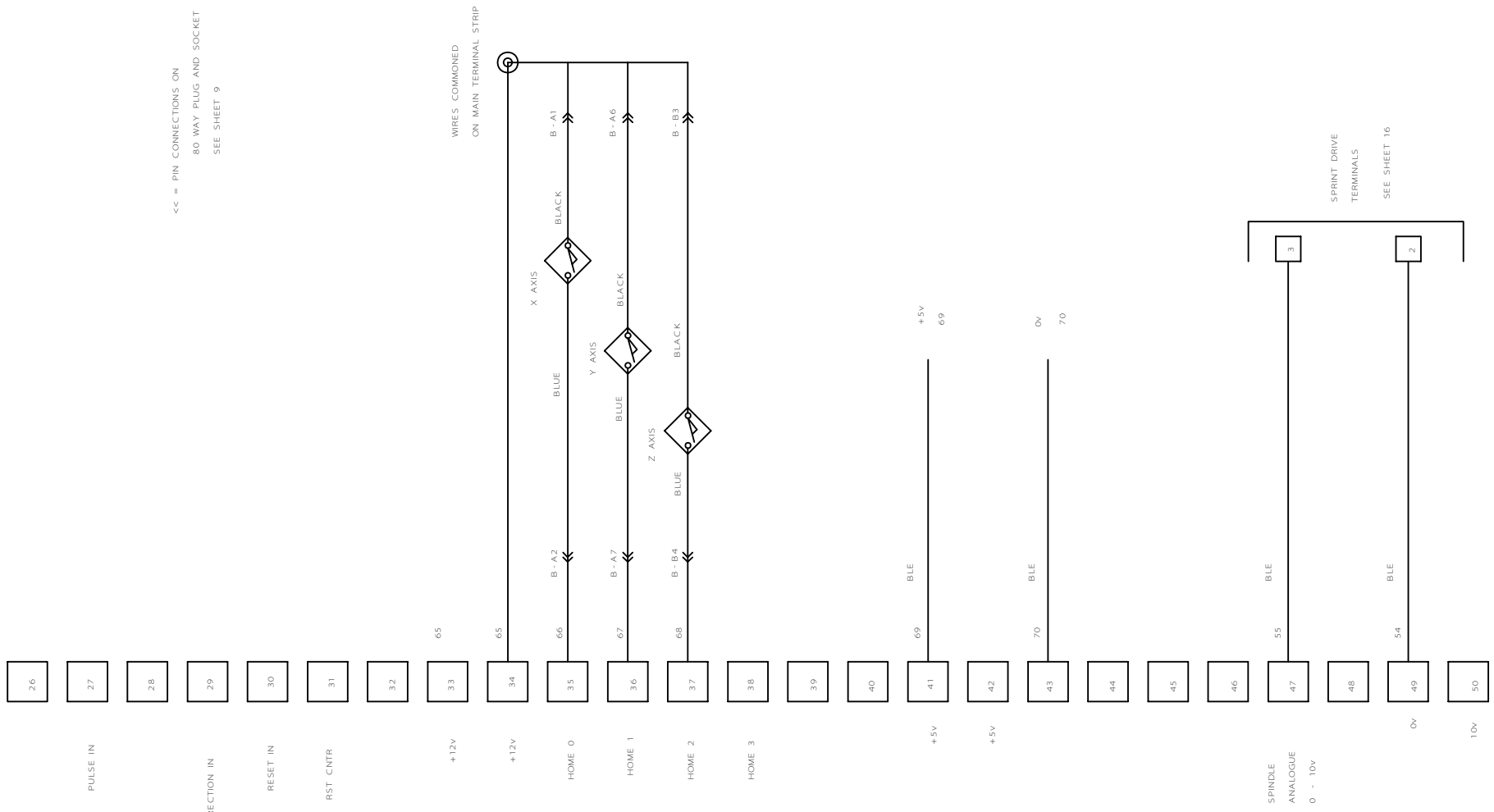
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 20-11-92

A3 - 400182 C

IF IN DOUBT ASK



TRIAC PC
INTERFACE UNIT
PINS 26 - 50

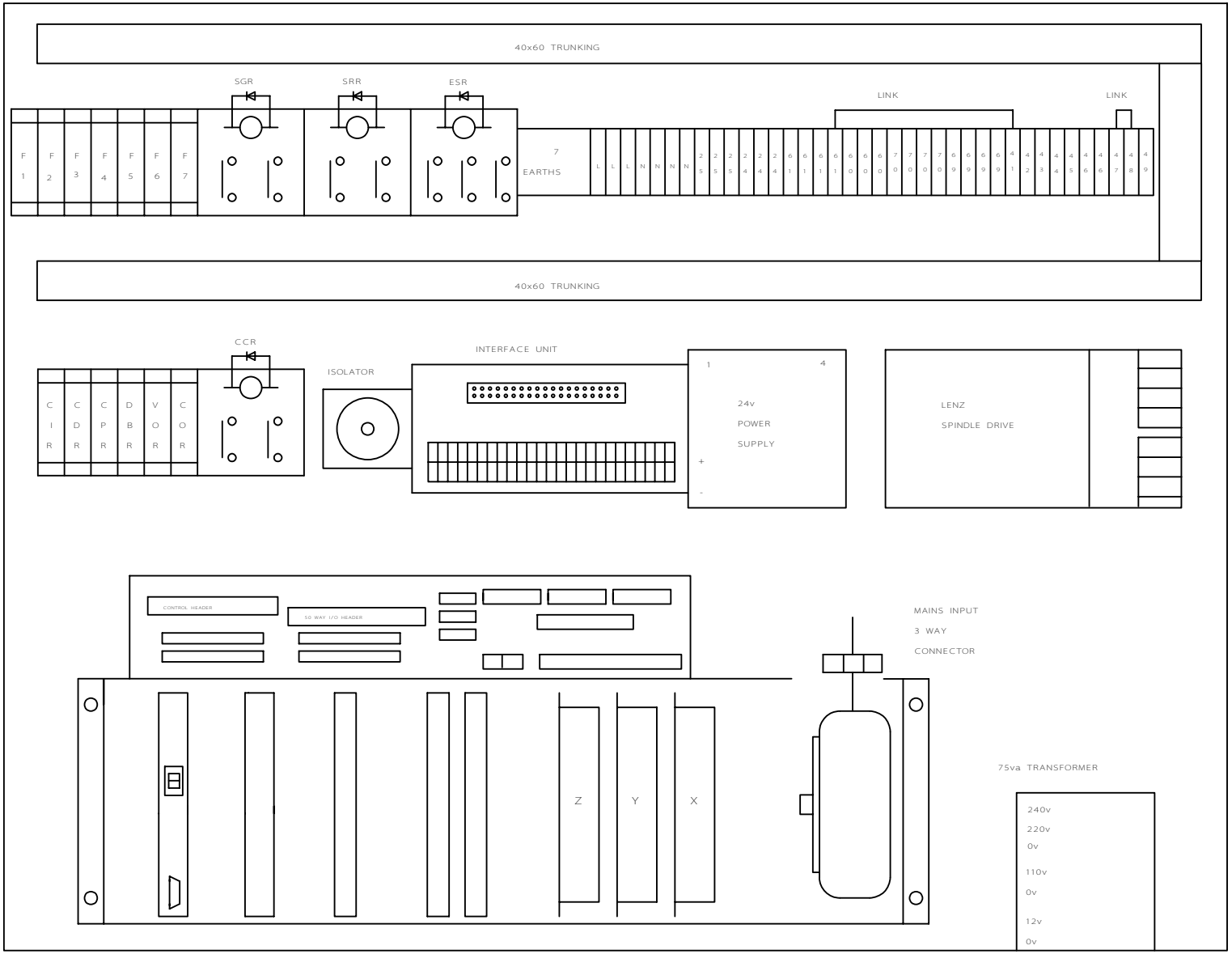
SHEET 5
[TPC]
[S5C]

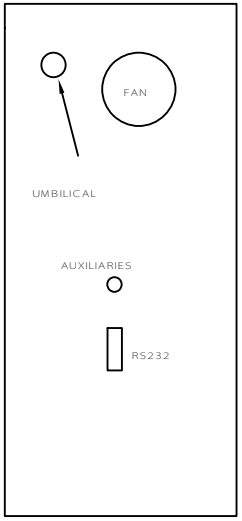
DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 21 - 3 - 94

A3 - 400182 D



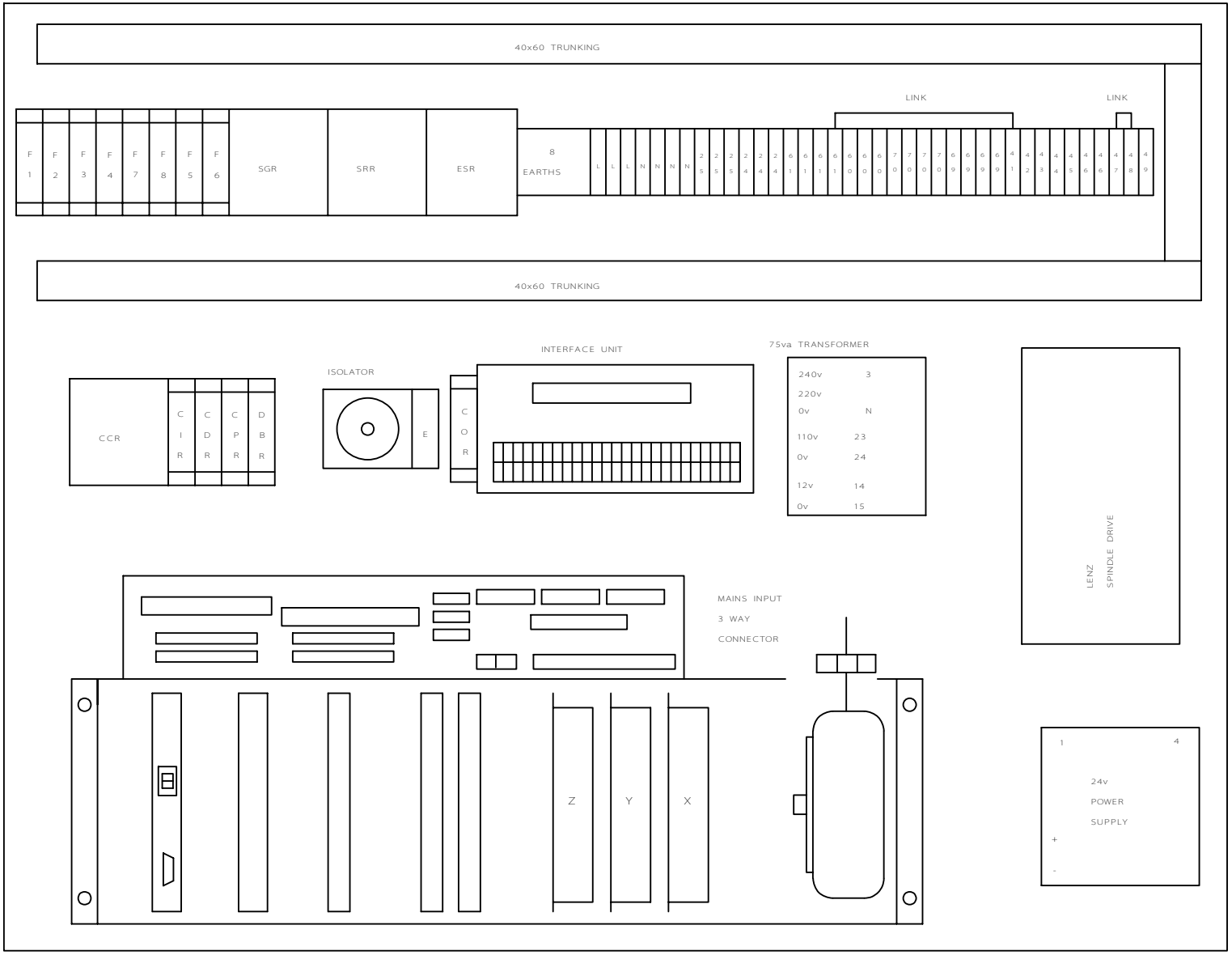


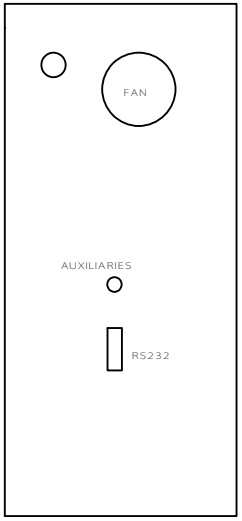
SIDE VIEW OF
PANEL ENCLOSURE

TRANSFORMER MOUNTED
ON BOTTOM OF CABINET

TRIAC PC PANEL LAYOUT (WITH OPTIONS)	SHEET 6 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 11-12-90	A3 - 400178 A



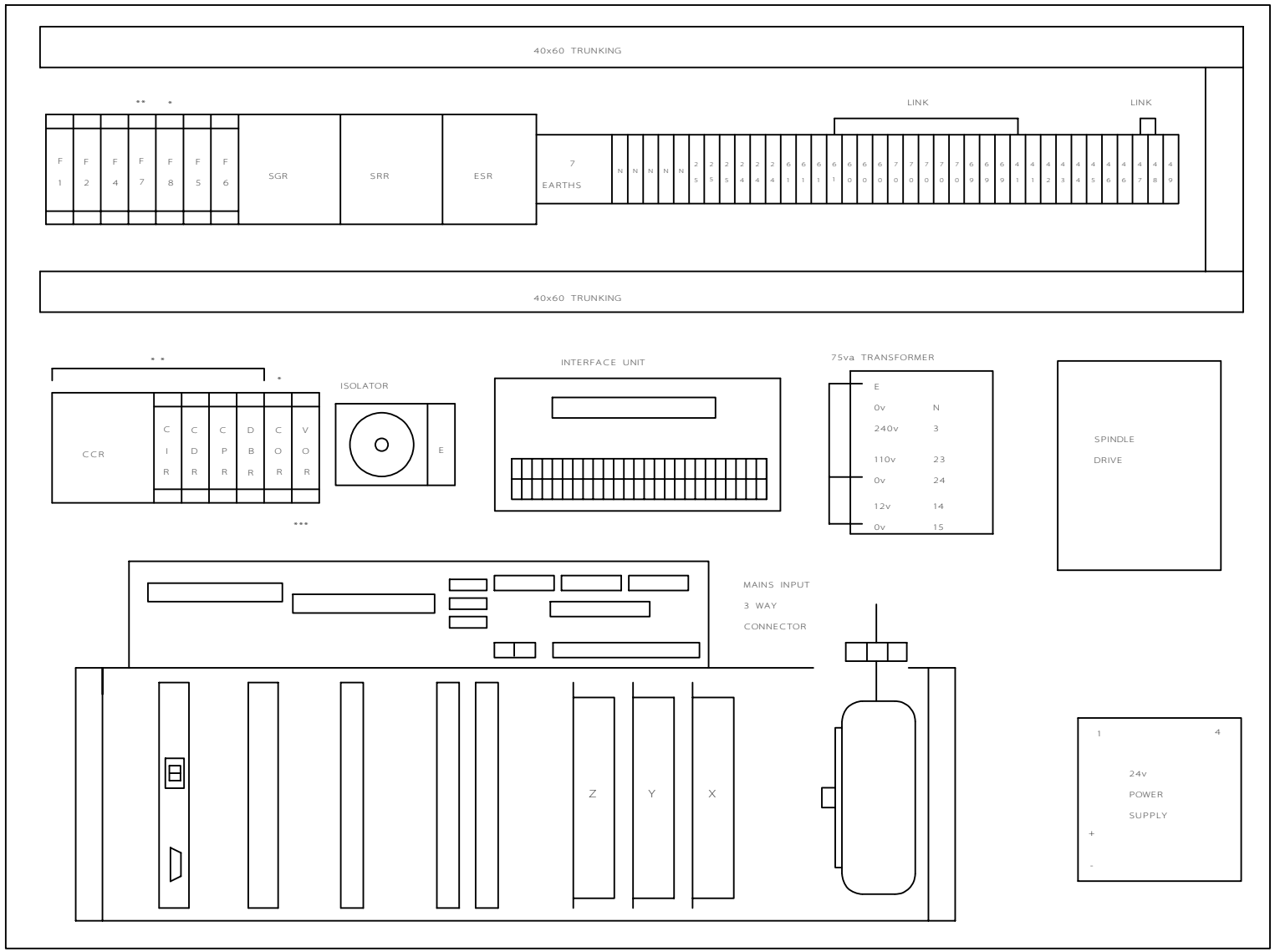


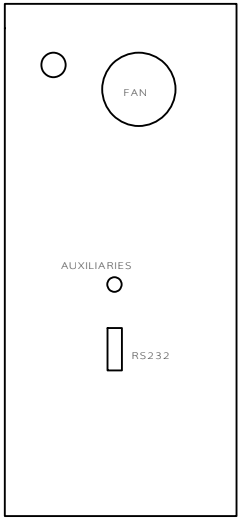
SIDE VIEW OF
PANEL ENCLOSURE

TRIAC PC PANEL LAYOUT (GREECE)	SHEET 6 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 7-5-92	A3 - 400178 B

IF IN DOUBT ASK





SIDE VIEW OF PANEL ENCLOSURE

* ADD IF SPRAY MIST FITTED

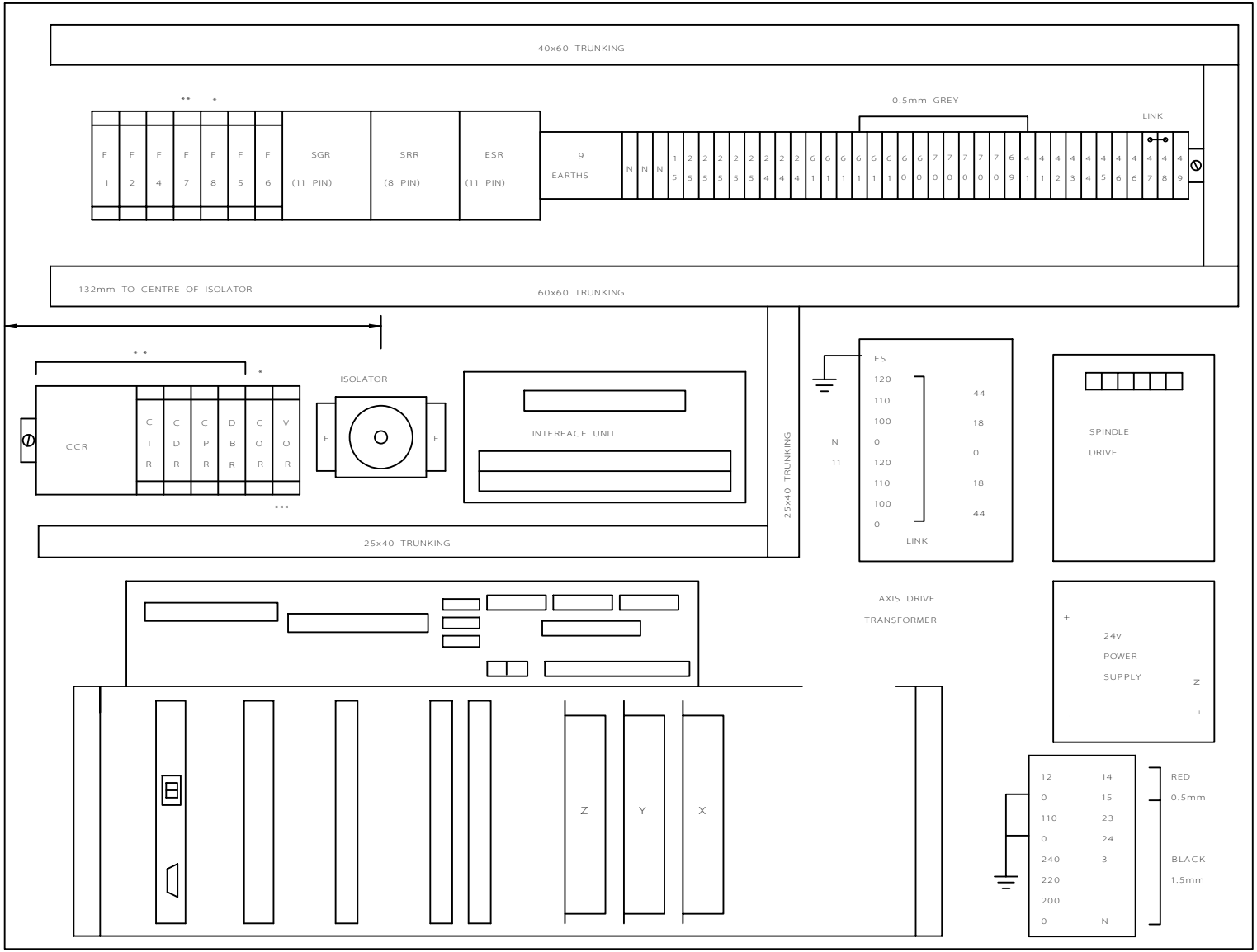
** ADD IF TOOLCHANGER FITTED

*** ADD IF VICE FITTED

TRIAC PC PANEL LAYOUT	SHEET 6 OF [S6 D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 11-11-92	A3 - 400178 D

IF IN DOUBT ASK

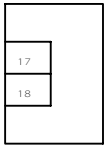


RELAYS FOR OPTIONS

* ADD IF SPRAY MIST FITTED

** ADD IF TOOLCHANGER FITTED

*** ADD IF POWER VICE FITTED



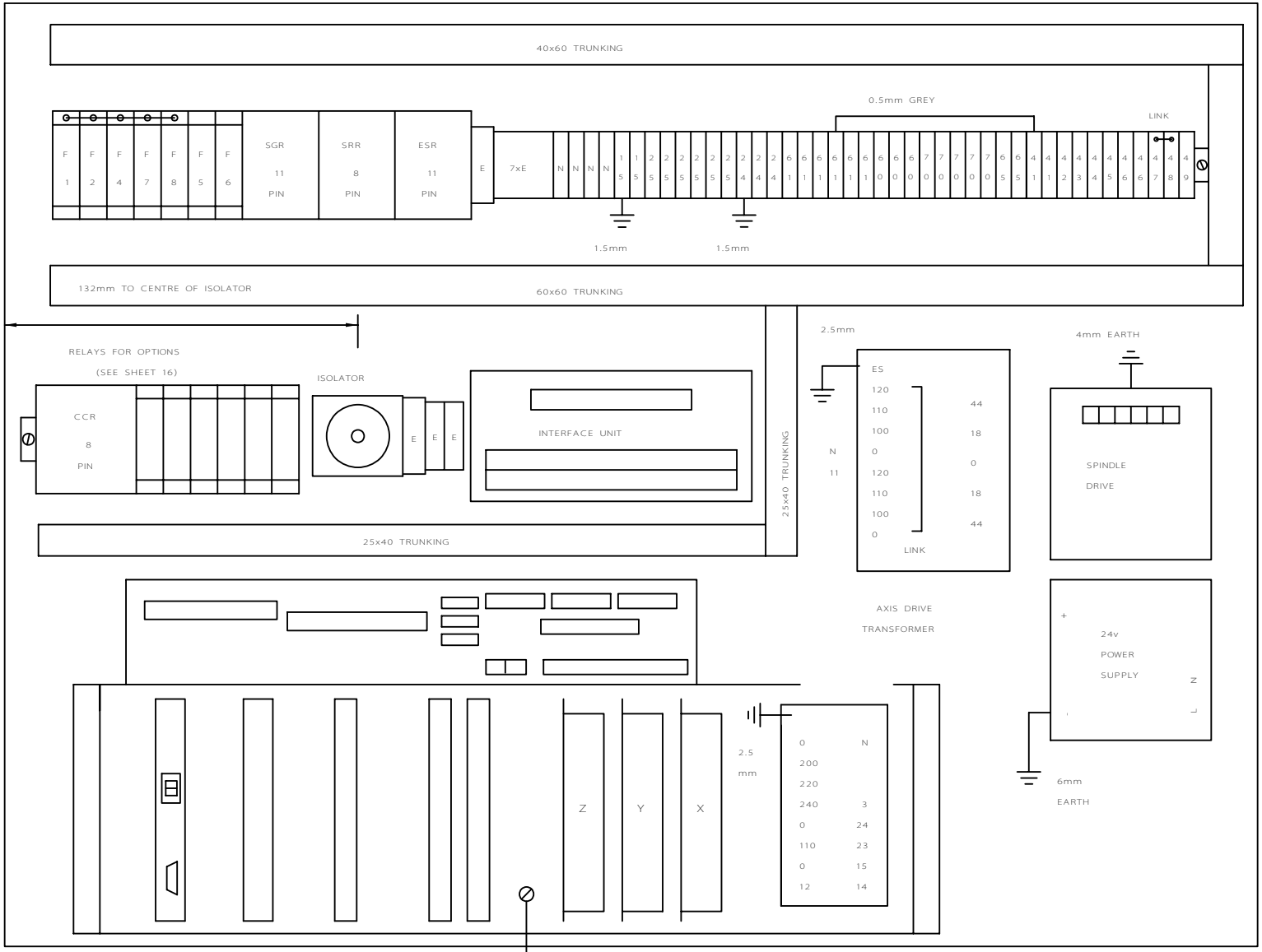
CHOKE MOUNTED ON RIGHT HAND SIDE OF CABINET

75 VA TRANS ON BOTTOM OF CABINET

TRIAC PC PANEL LAYOUT	SHEET 6
	[TPC]
	[S6G]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 29-3-94	A3 - 400178 G

IF IN DOUBT ASK



TRIAC PC PANEL LAYOUT

SHEET 6

[TPC]

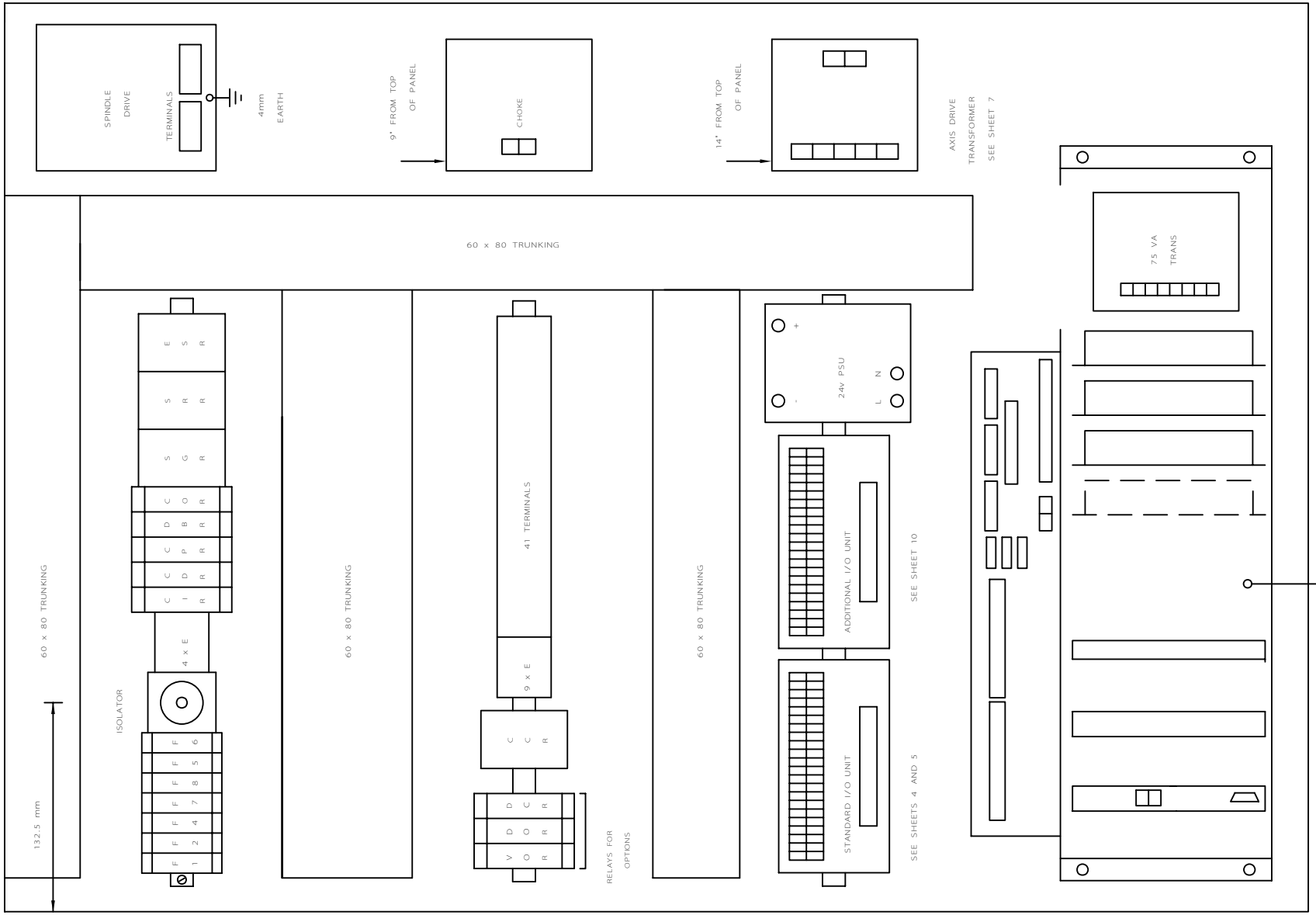
[S6H]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 18-8-94

A3 - 400178 H



IF IN DOUBT ASK

TRIAC PC
PANEL LAYOUT

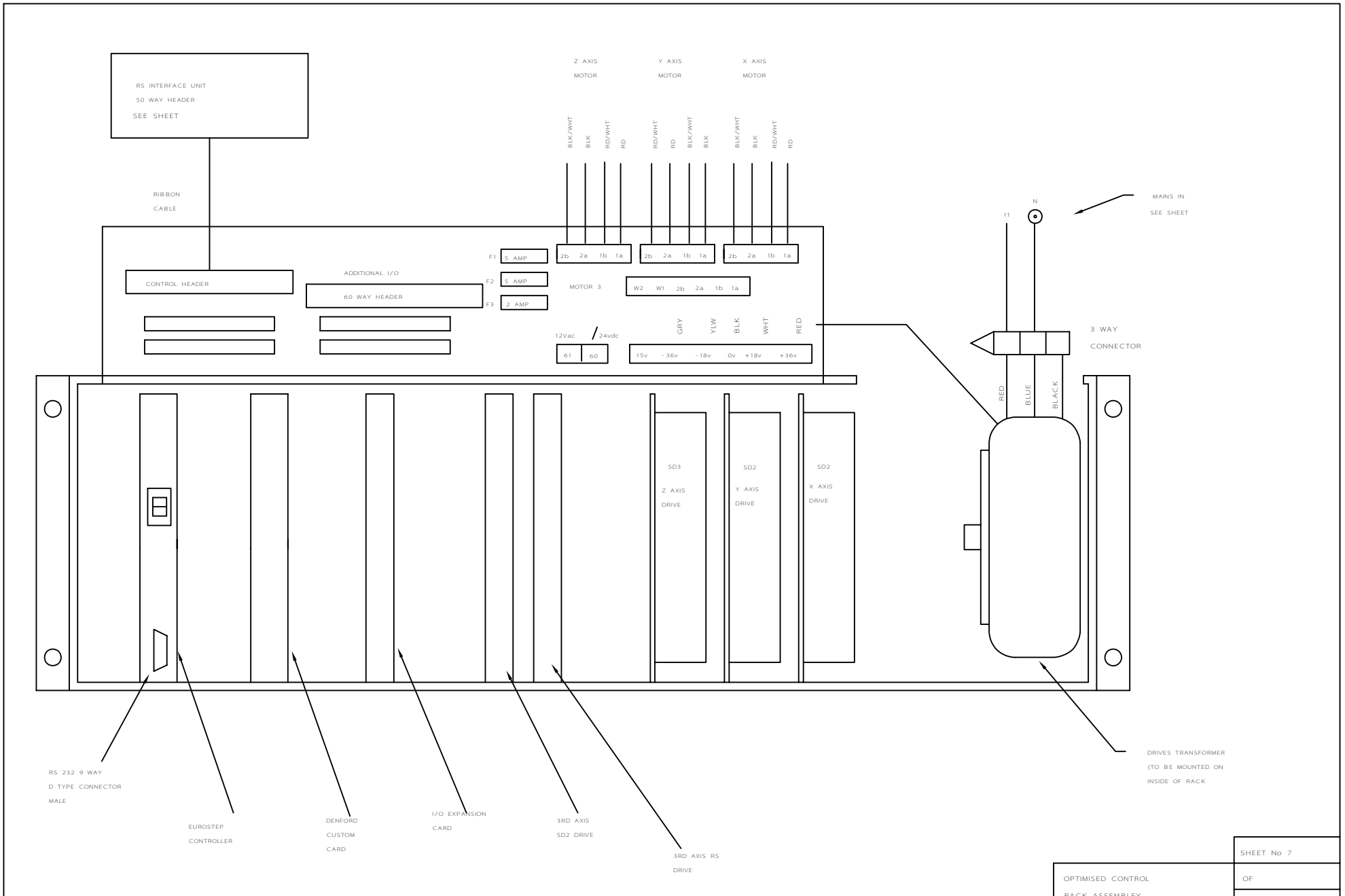
SHEET 6
[TPC]
[S6K]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 17-8-94

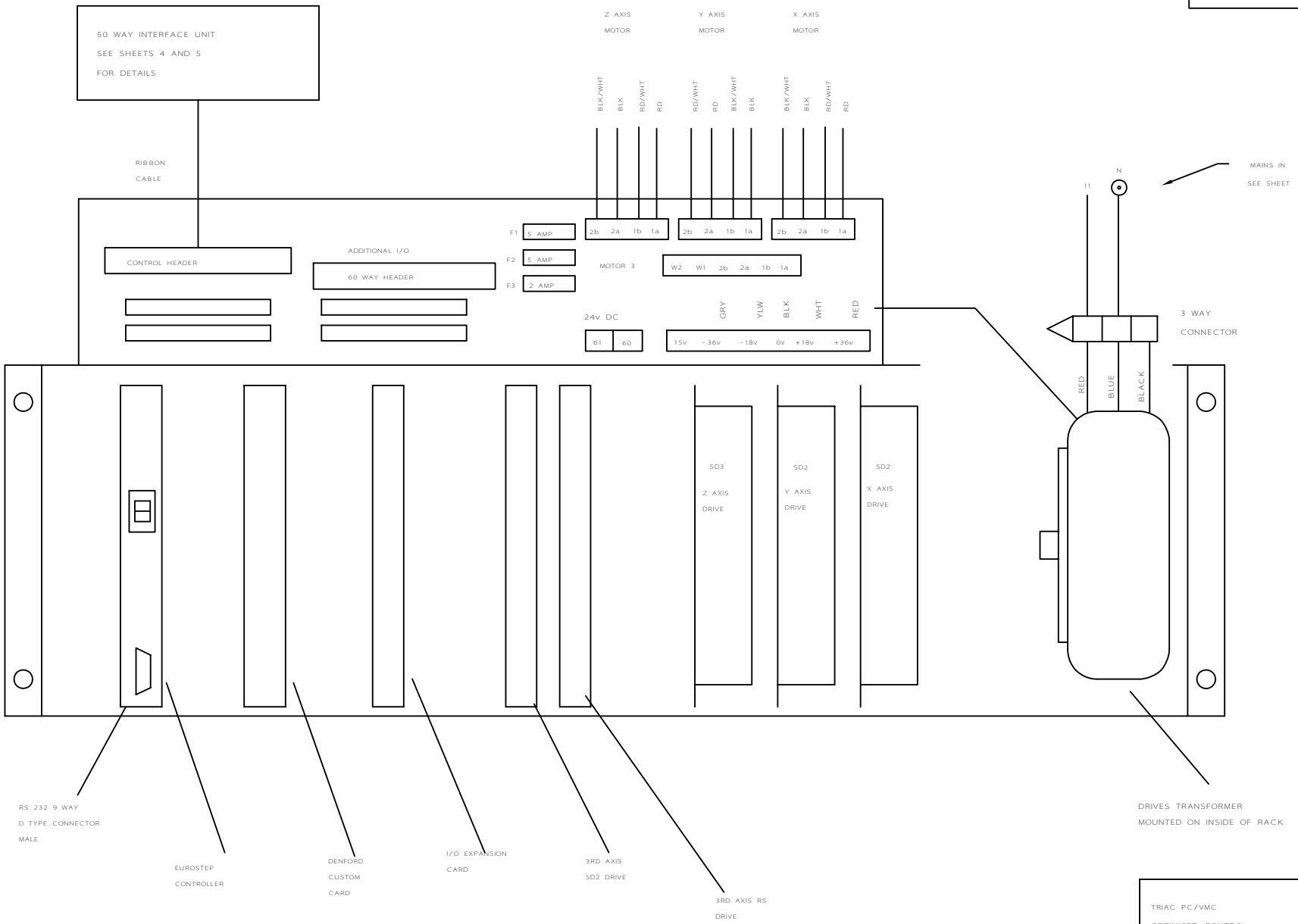
A3 - 400178 K



OPTIMISED CONTROL RACK ASSEMBLEY	SHEET No 7
	OF

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

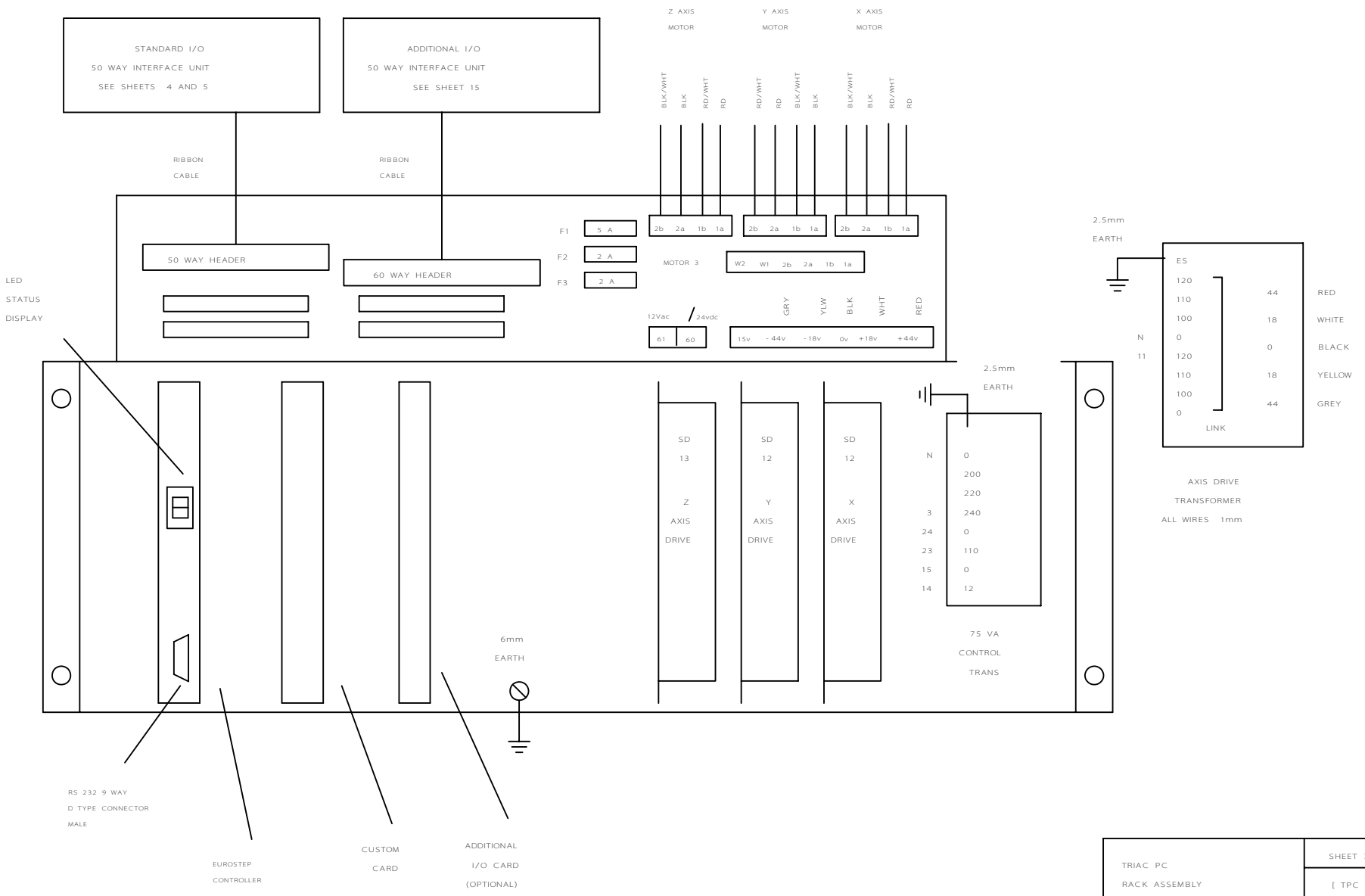
IF IN DOUBT ASK



TRIAC PC/VMC OPTIMISED CONTROL RACK ASSEMBLEY	SHEET 7 OF [S7 B]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 20-1-93	A3 - 400177 B

IF IN DOUBT ASK



TRIAC PC
RACK ASSEMBLY
SD12, 13 DRIVES

SHEET 7
[TPC]
[S7D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 18-8-94 | A3- 400177 F

PLUG A

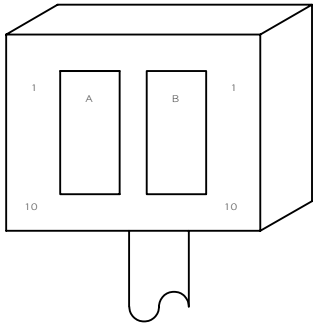
ROW A

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	RED	69	SPINDLE SENSOR	4 CORE SCREEN
8	BLUE	70		
9	YELLOW	78		
10	SCREEN			

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	N		
6	EARTH			
7	ORANGE	76	LUBE FLOAT SWITCH	0.2mm SINGLES
8	ORANGE	70		
9	RED	41	AXIS OVERRIDE B/BUTTON	2 CORE SCREEN
10	BLUE	46		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

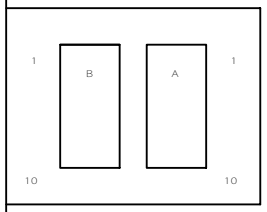
ROW C

PIN No	COLOUR	CABLE No	DESTINATION	
1	BROWN	5	COOLANT	1mm SINGLES
2	BLUE	N		
3	EARTH			
4	BROWN	16	LOVO LIGHT	0.2mm SINGLES
5	BLUE	15		
6	EARTH			
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	1mm SINGLES
10	BLUE	70		

(MALE PINS)



VIEW OF MACHINE SOCKET

TRIAC PC PLUG & SOCKET CONNECTIONS	SHEET 8 OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE	DRN BY A McHENRY	DATE 24-04-91	A3 - 400184

IF IN DOUBT ASK

PLUG A

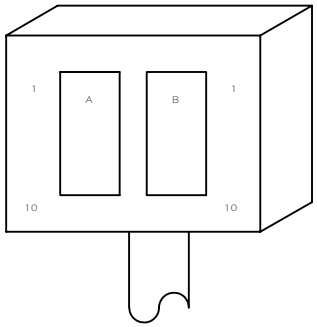
ROW A

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	N		
6	EARTH			
7	ORANGE	76	LUBE FLOAT SWITCH	0.2mm SINGLES
8	ORANGE	70		
9	RED	41	AXIS OVERRIDE B/BUTTON	2 CORE SCREEN
10	BLUE	46		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

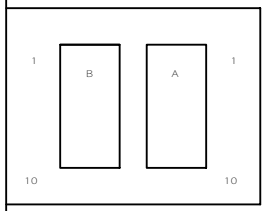
ROW C

PIN No	COLOUR	CABLE No	DESTINATION	
1	BROWN	5	COOLANT	1mm SINGLES
2	BLUE	N		
3	EARTH			
4	BROWN	16	LOVO LIGHT	0.2mm SINGLES
5	BLUE	15		
6	BLACK	30	VICE P/B	1mm SINGLE
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	1mm SINGLES
10	BLUE	70		

(MALE PINS)



VIEW OF MACHINE SOCKET

TRIAC PC
PLUG A
(MANUAL VICE P/B)
(NO SPINDLE SENSOR)

SHEET 8
OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 9-11-92 | A3 - 400184 D

IF IN DOUBT ASK

PLUG A

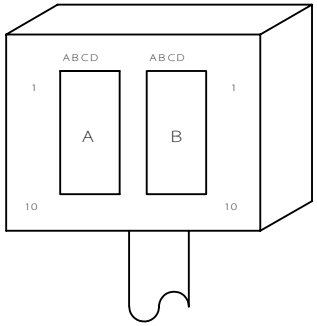
ROW A

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	RED	41	AXIS OVERRIDE B/BUTTON	2 CORE SCREEN
10	BLUE	46		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

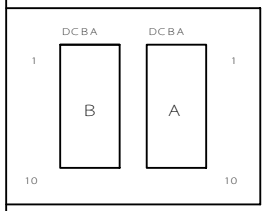
ROW C

PIN No	COLOUR	CABLE No	DESTINATION	
1	BROWN	5	COOLANT	1mm SINGLES
2	BLUE	N		
3	EARTH			
4	BROWN	16	LOVO LIGHT	0.2mm SINGLES
5	BLUE	15		
6	BLACK	30	VICE P/B	1mm SINGLE
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	1mm SINGLES
10	BLUE	70		

(MALE PINS)



VIEW OF MACHINE SOCKET

⊘ 2.5mm EARTH

TRIAC PC
PLUG A

SHEET 8
[TPC]
[S8D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 15-1-93 | A3 - 400184 E

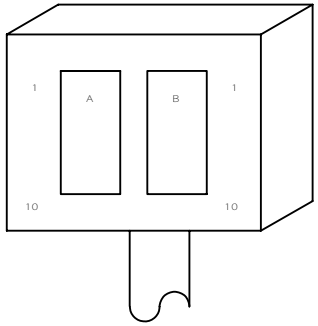
ROW A

PLUG B

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	61	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	BLACK	25	110v	1mm 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	48	E - STOP P/BUTTON	2 CORE SCREEN
10	BLUE	49		



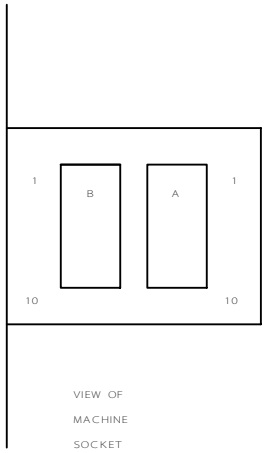
ADAPTAFLEX TO CONTROL BOX

ROW C

PIN No	COLOUR	CABLE No	DESTINATION	
1	BLACK	9	ATC MOTOR	1mm SINGLES
2	WHITE	N		
3	YELLOW	8		
4	BLACK	26	ARM IN SOLENOID	1mm SINGLES
5	BLACK	27	ARM DOWN SOLENOID	
6	BLACK	28	DRAWBAR SOLENOID	
7	BLACK	24	SOLENOID COMMON	
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			



VIEW OF MACHINE SOCKET

TRIAC PC
HARTING PINOUTS

SHEET 9
OF

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 6-5-92 | A3 - 400183 B

IF IN DOUBT ASK

PLUG B

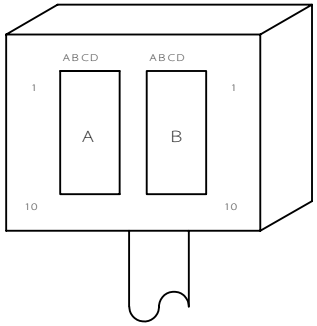
ROW A

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	BLACK	25	110v	1mm 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	48	E - STOP P/BUTTON	2 CORE SCREEN
10	BLUE	49		

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

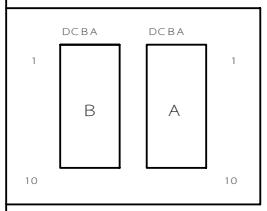
ROW C

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	1mm SINGLES
5	BLACK	27	ARM DOWN SOLENOID	
6	BLACK	28	DRAWBAR SOLENOID	
7	BLACK	24	SOLENOID COMMON	
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 PC
PLUG B

SHEET 9
[TPC]
[S9D]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 9-11-92 | A3 - 400183 D

IF IN DOUBT ASK

PLUG B

ROW A

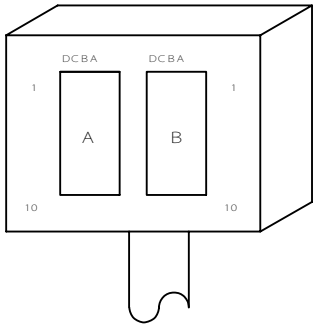
PIN	COLOUR	WIRE	DESTINATION	
1	YELLOW	65	X DATUM	4 CORE SCREEN ** (0.2mm)
2	GREEN	66		
3	BROWN	29	VICE SOLENOID	1mm SINGLE
4	RED	41	X +/- O/TRAVEL	**
5	BLUE	42		
6	BLACK	65	Y DATUM	0.5mm SINGLES
7	BLUE	67		
8	RED	42	Y+ O/TRAVEL	0.5mm SINGLES
9	YELLOW	43		
10	BLACK	25	110v	1mm SINGLE

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	RED	43	Y- O/TRAVEL	0.5mm SINGLES
2	YELLOW	44		
3	BLACK	65	Z DATUM	0.5mm SINGLES
4	BLUE	68		
5	RED	44	Z+ O/TRAVEL	0.5mm SINGLES
6	YELLOW	45		
7	RED	45	Z- O/TRAVEL	0.5mm SINGLES
8	YELLOW	46		
9	RED	48	E-STOP P/BUTTON	0.5mm SINGLES
10	BLUE	49		

(MALE INSERT)

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4	BLACK	26	ARM IN SOLENOID	1mm SINGLES
5	BLACK	27	ARM DOWN SOLENOID	
6	BLACK	28	DRAWBAR SOLENOID	
7	BLACK	24	SOLENOID COMMON	
8	EARTH	E		
9	RED	73	ARM UP LIMIT SWITCH	0.5mm SINGLES
10	BLUE	70		

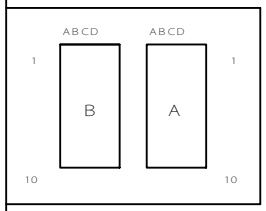
⊘ 4mm EARTH

ROW D

PIN	COLOUR	WIRE	DESTINATION	
1	RED	74	ARM DOWN LIMIT SWITCH	0.5mm SINGLES
2	BLUE	70		
3	RED	71	ARM IN LIMIT SWITCH	0.5mm SINGLES
4	BLUE	70		
5	RED	72	ARM OUT LIMIT SWITCH	0.5mm SINGLES
6	BLUE	70		
7	RED	69	ATC SENSOR	4 CORE SCREEN
8	BLUE	70		
9	YELLOW	75		
10	SCREEN	E		

(FEMALE INSERT)

(MALE PINS)



EXTERNAL VIEW OF MACHINE SOCKET

TRIAC PC
PLUG B

SHEET 9
[TPC]
[S9E]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 28-3-94 | A3 - 400183 E

IF IN DOUBT ASK

PLUG B

ROW A

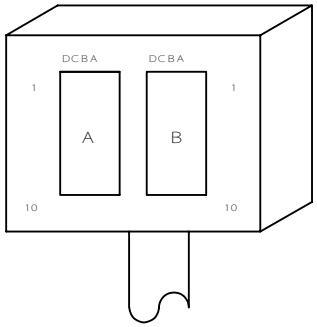
PIN	COLOUR	WIRE	DESTINATION	
1	YELLOW	65	X DATUM	4 CORE SCREEN ** (0.5mm)
2	GREEN	66		
3				
4	RED	41	X +/- O/TRAVEL	**
5	BLUE	42		
6	BLACK	65	Y DATUM	0.5mm SINGLES
7	BLUE	67		
8	RED	42	Y+ O/TRAVEL	0.5mm SINGLES
9	YELLOW	43		
10	BLACK	25	110v	1mm SINGLE

ROW B

PIN	COLOUR	WIRE	DESTINATION	
1	RED	43	Y- O/TRAVEL	0.5mm SINGLES
2	YELLOW	44		
3	BLACK	65	Z DATUM	0.5mm SINGLES
4	BLUE	68		
5	RED	44	Z+ O/TRAVEL	0.5mm SINGLES
6	YELLOW	45		
7	RED	45	Z- O/TRAVEL	0.5mm SINGLES
8	YELLOW	46		
9	RED	48	E-STOP P/BUTTON	0.5mm SINGLES
10	BLUE	49		

(MALE INSERT)

(FEMALE PINS)



ADAPTAFLEX TO CONTROL BOX

ROW C

PIN	COLOUR	WIRE	DESTINATION	
1	BLACK	N	ATC MOTOR	1mm SINGLES
2	WHITE	9		
3	YELLOW	8		
4				
5				
6				
7				
8	EARTH	E		
9	RED	73	ARM UP LIMIT SWITCH	0.5mm SINGLES
10	BLUE	70		

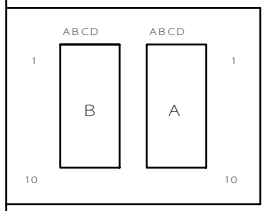
⊘ 2.5mm EARTH

ROW D

PIN	COLOUR	WIRE	DESTINATION	
1	RED	74	ARM DOWN LIMIT SWITCH	0.5mm SINGLES
2	BLUE	70		
3	RED	71	ARM IN LIMIT SWITCH	0.5mm SINGLES
4	BLUE	70		
5	RED	72	ARM OUT LIMIT SWITCH	0.5mm SINGLES
6	BLUE	70		
7	RED	69	ATC SENSOR	4 CORE SCREEN
8	BLUE	70		
9	YELLOW	75		
10	SCREEN	E		

(FEMALE INSERT)

(MALE PINS)



EXTERNAL VIEW OF MACHINE SOCKET

TRIAC PC
PLUG B

SHEET 9
[TPC]
[S9F]

DENFORD MACHINE TOOLS LTD BRIGHOUSE WEST YORKSHIRE | DRN BY A McHENRY | DATE 17-8-94 | A3 - 400183 F

PLUG A

ROW A

1	BROWN	20	SRR 4	SPINDLE MOTOR
2	BLUE	21	SRR 3	
3	EARTH	E	TB4 11t	
4	SCREEN	E	TB4 11t	
5	RED	46	TB5 46 2t	SPINDLE MOTOR THERMAL
6	BLUE	47	TB5 47 1t	
7	RED	61	TB5 61 3b	E - STOP CONTACT 1
8	BLUE	56	GIR 4	
9	YELLOW	48	TB5 48b	E - STOP CONTACT 2
10	GREEN	49	TB5 49b	

ROW B

1	RED		SPINDLE DRIVE 6	TACHO
2	BLUE		SPINDLE DRIVE 7	
3	SCREEN	E	TB4 7t	
4	BLACK	6	SGR 3	LUBE PUMP
5	BLACK	24	TB5 24 1t	
6	EARTH	E	TB4 10t	
7	BLUE	70	STD I/O 46	LUBE FLOAT SWITCH
8	BLUE	76	STD I/O 7	
9	RED	41	TB5 41 1b	AXIS OVERRIDE SWITCH
10	BLUE	46	TB5 46 1b	

ROW C

1	BROWN	5	COR 14	COOLANT
2	BLUE	N	TB5 N 3t	
3	EARTH	E	TB4 9t	
4	BROWN	16	F8 b	LOVO LIGHT
5	BLUE	15	TB5 15 1t	
6	EARTH	E	TB4 8t	
7	RED		TB11 4	X AXIS MOTOR
8	RED/WHITE		TB11 3	
9	BLACK		TB11 2	
10	BLACK/WHITE		TB11 1	

ROW D

1	RED		TB12 2	Y AXIS MOTOR
2	RED/WHITE		TB12 1	
3	BLACK		TB12 4	
4	BLACK/WHITE		TB12 3	
5	RED		TB13 4	Z AXIS MOTOR
6	RED/WHITE		TB13 3	
7	BLACK		TB13 2	
8	BLACK/WHITE		TB13 1	
9	RED	103	ADD I/O 2	GUARD FULLY OPEN SWITCH
10	BLUE	61	TB5 61 1t	

⊘ 4mm EARTH TB4 2b

TRIAC PC BADGED HARNESS PLUG A 22-3-96

SCH 1A

PLUG A

ROW A

1	BROWN	20	SRR 4	SPINDLE MOTOR
2	BLUE	21	SRR 3	
3	EARTH	E	ETB2 11t	
4	SCREEN	E	ETB2 11t	
5	RED	46	TB5 46 2t	SPINDLE MOTOR THERMAL
6	BLUE	47	TB5 47 1t	
7	RED	61	TB5 61 3b	E - STOP CONTACT 1
8	BLUE	56	GIR 4	
9	YELLOW	48	TB5 48b	E - STOP CONTACT 2
10	GREEN	49	TB5 49b	

ROW B

1	RED		SPINDLE DRIVE 6	TACHO
2	BLUE		SPINDLE DRIVE 7	
3	SCREEN	E	ETB2 7t	
4	BLACK	6	SGR 3	LUBE PUMP
5	BLACK	24	TB5 24 1t	
6	EARTH	E	ETB2 10t	
7	BLUE	70	STD I/O 46	LUBE FLOAT SWITCH
8	BLUE	76	STD I/O 7	
9	RED	41	TB5 41 1b	AXIS OVERRIDE SWITCH
10	BLUE	46	TB5 46 1b	

ROW C

1	BROWN	5	COR 14	COOLANT
2	BLUE	N	TB5 N 3t	
3	EARTH	E	ETB2 9t	
4	BROWN	16	F8 b	LOVO LIGHT
5	BLUE	15	TB5 15 1t	
6	EARTH	E	TB4 8t	
7	RED		TB13 4	X AXIS MOTOR
8	RED/WHITE		TB13 3	
9	BLACK		TB13 2	
10	BLACK/WHITE		TB13 1	

ROW D

1	RED		TB12 2	Y AXIS MOTOR
2	RED/WHITE		TB12 1	
3	BLACK		TB12 4	
4	BLACK/WHITE		TB12 3	
5	RED		TB11 4	Z AXIS MOTOR
6	RED/WHITE		TB11 3	
7	BLACK		TB11 2	
8	BLACK/WHITE		TB11 1	
9	RED	103	ADD I/O 2	GUARD FULLY OPEN SWITCH
10	BLUE	61	TB5 61 1t	

⊘ 4mm EARTH ETB4 3t

PLUG A

ROW A

1	BROWN	20	SRR 4
2	BLUE	21	SRR 3
3	EARTH	E	EARTH 9tl
4	SCREEN	E	EARTH 9tu
5	RED	46	TB5 46 2t
6	BLUE	47	TB5 47 1t
7	RED	61	TB5 61 3b
8	BLUE	56	GIR 4
9	YELLOW	48	TB5 48b
10	GREEN	49	TB5 49b

SPINDLE MOTOR
1.5mm 4 CORE SCREEN

SPINDLE MOTOR THERMAL
2 CORE SCREEN

E-STOP
CONTACT 1

E-STOP
CONTACT 2

4 CORE
SCREEN

ROW B

1	RED		SPINDLE DRIVE 6
2	BLUE		SPINDLE DRIVE 7
3	SCREEN	E	EARTH 7tu
4	BLACK	6	SGR 3
5	BLACK	24	TB5 24 1t
6	EARTH	E	EARTH 6b
7	BLUE	70	STD I/O 46
8	BLUE	76	STD I/O 7
9	RED	41	TB5 41 1b
10	BLUE	46	TB5 46 1b

TACHO

2 CORE
SCREEN

LUBE PUMP
0.5mm SINGLES

LUBE FLOAT SWITCH
0.5mm SINGLES

AXIS LIMIT
OVERRIDE SWITCH
0.5mm SINGLES

ROW C

1	BROWN	5	COR 14
2	BLUE	N	TB5 N 3t
3	EARTH	E	EARTH 8tu
4	BROWN	16	F8 b
5	BLUE	15	TB5 15 1t
6			
7	RED		TB13 4
8	RED/WHITE		TB13 3
9	BLACK		TB13 2
10	BLACK/WHITE		TB13 1

COOLANT PUMP
1mm SINGLES

WORKLIGHT
0.5mm SINGLES

X AXIS MOTOR
0.2mm SINGLES

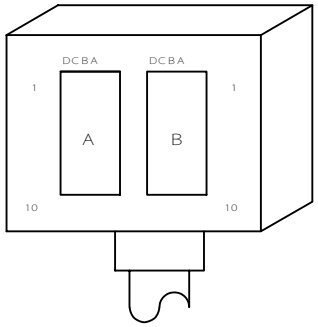
ROW D

1	RED		TB12 2
2	RED/WHITE		TB12 1
3	BLACK		TB12 4
4	BLACK/WHITE		TB12 3
5	RED		TB11 4
6	RED/WHITE		TB11 3
7	BLACK		TB11 2
8	BLACK/WHITE		TB11 1
9	RED	103	ADD I/O 2
10	BLUE	61	TB5 61 1t

Y AXIS
MOTOR

Z AXIS
MOTOR

GUARD FULLY
OPEN SWITCH



80 WAY HOOD
(BI 357)

TWO 40 WAY INSERTS
FEMALE PINS
(BI 357B)

TWO GLANDS
(BI 411K)

BULKHEAD ADAPTOR
(BI 410D)

⊘ 4mm EARTH 4t

TRIAC PC BADGED HARNESS PLUG A 9-12-96

SCH 1C

PLUG B

ROW A

1	YELLOW	41	TB5 41 1t	X LIMIT
2	BLACK	65	STD I/O 34	X DATUM
3	BLUE	66	STD I/O 35	
4	BLACK	65	STD I/O 34	Y DATUM
5	BLUE	67	STD I/O 36	
6	BLACK	65	STD I/O 33	Z DATUM
7	BLUE	68	STD I/O 37	
8				
9				
10				

ROW B

1				
2	YELLOW	46	TB5 46 1t	Z LIMIT
3	RED	57	GIR 1	GUARD SOLENOID
4	BLUE	60	TB5 60 1b	
5	RED	77	STD I/O 9	(N/C) GUARD CONTACT 1
6	YELLOW	70	STD I/O 45	
7	RED	61	TB5 61 2b	(N/C) GUARD CONTACT 2
8	YELLOW	64	GSIR A1	
9	RED	61	TB5 61 1b	(N/O) GUARD CONTACT 3
10	BLUE	50	GR 2	

ROW C

1	BLACK	N	TB5 N 2t	ATC MOTOR
2	WHITE	9	CCR 4	
3	YELLOW	8	CCR 3	
4	BLACK	26	CIR 14	ARM IN SOL.
5	BLACK	27	CDR 14	ARM DOWN SOL.
6	BLACK	28	DBR 14	DRAWBAR SOL.
7	BLACK	29	VOR 14	VICE SOL.
8	BLACK	105	GOR 14	GUARD OPEN SOL.
9	BLACK	107	GCR 14	GUARD CLOSE SOL.
10	BLACK	24	TB5 24 3t	SOLENOID COMMON

ROW D

1	RED	69	STD I/O 41	ATC SENSOR
2	BLUE	70	STD I/O 43	
3	YELLOW	75	STD I/O 6	
4	SCREEN	E	TB4 13t	
5	BLUE	70	STD I/O 44	SWITCH COMMON
6	RED	71	STD I/O 1	ARM IN SW.
7	RED	72	STD I/O 2	ARM OUT SW.
8	RED	73	STD I/O 3	ARM UP SW.
9	RED	74	STD I/O 5	ARM DOWN SW.
10				

⊘ 4mm EARTH TB4 4t

PLUG B

ROW A

1	YELLOW	41	TB5 41 1t	X LIMIT
2	BLACK	65	STD I/O 34	X DATUM
3	BLUE	66	STD I/O 35	
4	BLACK	65	STD I/O 34	Y DATUM
5	BLUE	67	STD I/O 36	
6	BLACK	65	STD I/O 33	Z DATUM
7	BLUE	68	STD I/O 37	
8	RED	136	P13 3	OVERRIDE POTS
9	BLUE	137	P13 1	
10	YELLOW	134	P13 5	4 CORE SCREEN SCREEN TO P13 2

ROW B

1	GREEN	135	P13 7	OVERRIDE POTS
2	YELLOW	46	TB5 46 1t	Z LIMIT
3	RED	57	GIR 1	GUARD SOLENOID
4	BLUE	60	TB5 60 1b	
5	RED	77	STD I/O 9	(N/C) GUARD CONTACT 1
6	YELLOW	70	STD I/O 45	
7	RED	61	TB5 61 2b	(N/C) GUARD CONTACT 2
8	YELLOW	64	GSIR A1	
9	RED	61	TB5 61 1b	(N/O) GUARD CONTACT 3
10	BLUE	50	GR 2	

ROW C

1	BLACK	N	TB5 N 2t	ATC MOTOR
2	WHITE	9	CCR 4	
3	YELLOW	8	CCR 3	
4	BLACK	26	CIR 14	ARM IN SOL.
5	BLACK	27	CDR 14	ARM DOWN SOL.
6	BLACK	28	DBR 14	DRAWBAR SOL.
7	BLACK	29	VOR 14	VICE SOL.
8	BLACK	105	GOR 14	GUARD OPEN SOL.
9	BLACK	107	GCR 14	GUARD CLOSE SOL.
10	BLACK	24	TB5 24 3t	SOLENOID COMMON

ROW D

1	RED	69	STD I/O 41	ATC SENSOR
2	BLUE	70	STD I/O 43	
3	YELLOW	75	STD I/O 6	
4	SCREEN	E	TB4 13t	
5	BLUE	70	STD I/O 44	SWITCH COMMON
6	RED	71	STD I/O 1	ARM IN SW.
7	RED	72	STD I/O 2	ARM OUT SW.
8	RED	73	STD I/O 3	ARM UP SW.
9	RED	74	STD I/O 5	ARM DOWN SW.
10				

⊘ 4mm EARTH TB4 4t

PLUG B

ROW A

1	YELLOW	41	TB5 41 1t	X LIMIT
2	BLACK	65	STD I/O 34	X DATUM
3	BLUE	66	STD I/O 35	
4	BLACK	65	STD I/O 34	Y DATUM
5	BLUE	67	STD I/O 36	
6	BLACK	65	STD I/O 33	Z DATUM
7	BLUE	68	STD I/O 37	
8	RED	136	P13 3	OVERRIDE POTS
9	BLUE	137	P13 1	
10	YELLOW	134	P13 5	4 CORE SCREEN SCREEN TO P13 2

ROW B

1	GREEN	135	P13 7	OVERRIDE POTS
2	YELLOW	46	TB5 46 1t	Z LIMIT
3	RED	57	GIR 1	GUARD SOLENOID
4	BLUE	60	TB5 60 1b	
5	RED	77	STD I/O 9	(N/C) GUARD CONTACT 1
6	YELLOW	70	STD I/O 45	
7	RED	61	TB5 61 2b	(N/C) GUARD CONTACT 2
8	YELLOW	64	GSIR A1	
9	RED	61	TB5 61 1b	(N/O) GUARD CONTACT 3
10	BLUE	50	GR 2	

ROW C

1	BLACK	N	TB5 N 2t	ATC MOTOR
2	WHITE	9	CCR 4	
3	YELLOW	8	CCR 3	
4	BLACK	26	CIR 14	ARM IN SOL.
5	BLACK	27	CDR 14	ARM DOWN SOL.
6	BLACK	28	DBR 14	DRAWBAR SOL.
7	BLACK	29	VOR 14	VICE SOL.
8	BLACK	105	GOR 14	GUARD OPEN SOL.
9	BLACK	107	GCR 14	GUARD CLOSE SOL.
10	BLACK	24	TB5 24 3t	SOLENOID COMMON

ROW D

1	RED	69	STD I/O 41	ATC SENSOR
2	BLUE	70	STD I/O 43	
3	YELLOW	75	STD I/O 6	
4	SCREEN	E	ETB2 13t	
5	BLUE	70	STD I/O 44	SWITCH COMMON
6	RED	71	STD I/O 1	ARM IN SW.
7	RED	72	STD I/O 2	ARM OUT SW.
8	RED	73	STD I/O 3	ARM UP SW.
9	RED	74	STD I/O 5	ARM DOWN SW.
10				

⊘ 4mm EARTH ETB2 4t

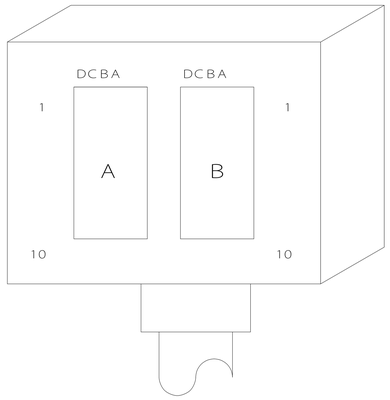
PLUG B

ROW A

YELLOW	41	TB5 41 1t		X LIMIT 0.2mm SINGLE
BLACK	65	STD I/O 34		X DATUM
BLUE	66	STD I/O 35		0.2mm SINGLES
BLACK	65	STD I/O 34		Y DATUM
BLUE	67	STD I/O 36		0.2mm SINGLES
BLACK	65	STD I/O 33		Z DATUM
BLUE	68	STD I/O 37		0.2mm SINGLES
RED	136	P13 3		OVERRIDE POTS
BLUE	137	P13 1		4 CORE SCREEN
YELLOW	134	P13 5		SCREEN TO P13 2

ROW B

1	GREEN	135	P13 7	OVERRIDE POTS 4 CORE SCREEN
2	YELLOW	46	TB5 46 1t	Z LIMIT 0.2mm SINGLE
3	RED	57	GIR 2	GUARD SOLENOID
4	BLUE	60	TB5 60 1b	0.2mm SINGLES
5	RED	77	STD I/O 9	GUARD CONTACT 1
6	YELLOW	70	STD I/O 45	0.2mm SINGLES
7	RED	61	TB5 61 2b	GUARD CONTACT 2
8	YELLOW	64	GSIR A1	0.2mm SINGLES
9	RED	61	TB5 61 1b	GUARD CONTACT 3
10	BLUE	50	GR 2	0.2mm SINGLES



80 WAY HOOD

(BI 357)

TWO 40 WAY INSERTS

FEMALE PINS

(BI 357B)

TWO GLANDS

(BI 411K)

BULKHEAD ADAPTOR

(BI 410D)

ROW C

BLACK	N	TB5 N 2t		
WHITE	9	CCR 4		ATC MOTOR
YELLOW	8	CCR 3		1mm SINGLES
BLACK	26	CIR 14		ARM IN SOLENOID
BLACK	27	CDR 14		ARM DOWN SOLENOID
BLACK	28	DBR 14		DRAWBAR SOLENOID
BLACK	29	VOR 14		VICE SOLENOID
BLACK	105	GOR 14		GUARD OPEN SOLENOID
BLACK	107	GCR 14		GUARD CLOSE SOLENOID
BLACK	24	TB5 24 3t		SOLENOID COMMON

SOLENOID WIRING

0.5mm SINGLES

ROW D

1	RED	69	STD I/O 41	
2	BLUE	70	STD I/O 43	
3	YELLOW	75	STD I/O 6	ATC SENSOR
4	SCREEN	E	EARTH 10tl	4 CORE SCREEN
5	BLUE	70	STD I/O 44	SWITCH COMMON
6	RED	71	STD I/O 1	ARM IN SWITCH
7	RED	72	STD I/O 2	ARM OUT SWITCH
8	RED	73	STD I/O 3	ARM UP SWITCH
9	RED	74	STD I/O 5	ARM DOWN SWITCH
10				SWITCH WIRING
				0.5mm SINGLES

⊘ 4mm EARTH 5t

TRIAC PC BADGED HARNESS PLUG B 9-12-96

SCH-2D

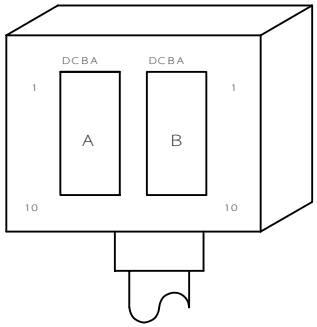
PLUG B

ROW A

1	YELLOW	41	TB5 41 1t	X LIMIT 0.2mm SINGLE
2	BLACK	65	STD I/O 34	X DATUM 0.2mm SINGLES
3	BLUE	66	STD I/O 35	
4	BLACK	65	STD I/O 34	Y DATUM 0.2mm SINGLES
5	BLUE	67	STD I/O 36	
6	BLACK	65	STD I/O 33	Z DATUM 0.2mm SINGLES
7	BLUE	68	STD I/O 37	
8	RED	136	P13 3	OVERRIDE POTS 4 CORE SCREEN SCREEN TO P13 2
9	BLUE	137	P13 1	
10	YELLOW	134	P13 5	

ROW B

1	GREEN	135	P13 7	OVERRIDE POTS 4 CORE SCREEN
2	YELLOW	46	TB5 46 1t	Z LIMIT 0.2mm SINGLE
3	RED	57	GIR 2	GUARD SOLENOID 0.2mm SINGLES
4	BLUE	60	TB5 60 1b	
5	RED	77	STD I/O 9	GUARD CONTACT 1 0.2mm SINGLES
6	YELLOW	70	STD I/O 45	
7	RED	61	TB5 61 2b	GUARD CONTACT 2 0.2mm SINGLES
8	YELLOW	64	GSIR A1	
9	RED	61	TB5 61 1b	GUARD CONTACT 3 0.2mm SINGLES
10	BLUE	50	GR 2	



80 WAY HOOD
(BI 357)

TWO 40 WAY INSERTS
FEMALE PINS
(BI 357B)

TWO GLANDS
(BI 411K)

BULKHEAD ADAPTOR
(BI 410D)

ROW C

1	BLACK	N	TB5 N 2t	ATC MOTOR 1mm SINGLES
2	WHITE	9	CCR 4	
3	YELLOW	8	CCR 3	
4	BLACK	26	CIR 14	ARM IN SOLENOID
5	BLACK	27	CDR 14	ARM DOWN SOLENOID
6	BLACK	28	DBR 14	DRAWBAR SOLENOID
7	BLACK	29	VOR 14	VICE SOLENOID
8	BLACK	105	DOR 14	GUARD OPEN SOLENOID
9	BLACK	107	DCR 14	GUARD CLOSE SOLENOID
10	BLACK	24	TB5 24 3t	SOLENOID COMMON

SOLENOID WIRING
0.5mm SINGLES

ROW D

1	RED	69	STD I/O 41	ATC SENSOR 4 CORE SCREEN
2	BLUE	70	STD I/O 43	
3	YELLOW	75	STD I/O 6	
4	SCREEN	E	EARTH 10tl	
5	BLUE	70	STD I/O 44	SWITCH COMMON
6	RED	71	STD I/O 1	ARM IN SWITCH
7	RED	72	STD I/O 2	ARM OUT SWITCH
8	RED	73	STD I/O 3	ARM UP SWITCH
9	RED	74	STD I/O 5	ARM DOWN SWITCH
10	BLUE	106	ADD I/O 34	GUARD CLOSE P/B 0.5mm SINGLE

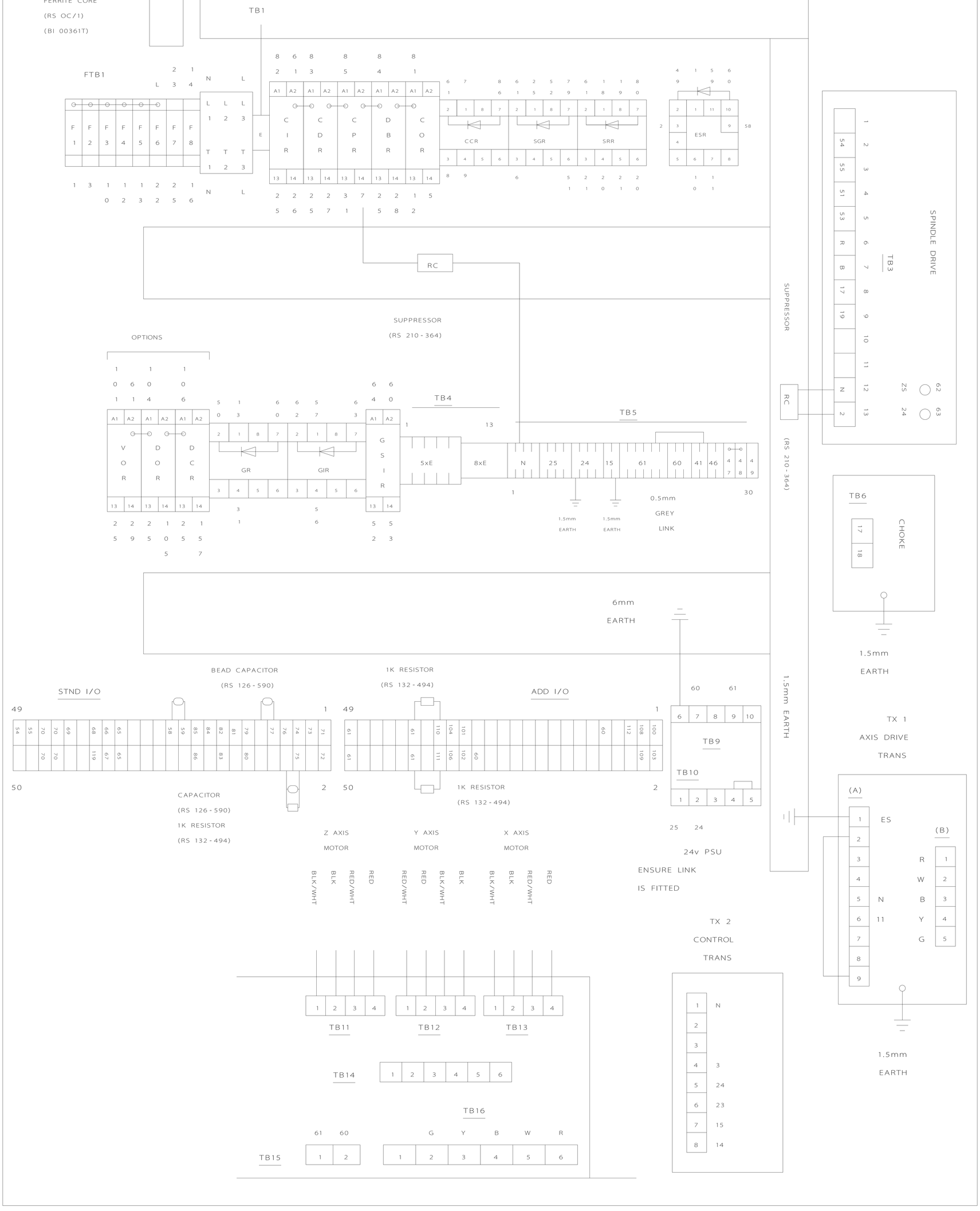
0.5mm SINGLES

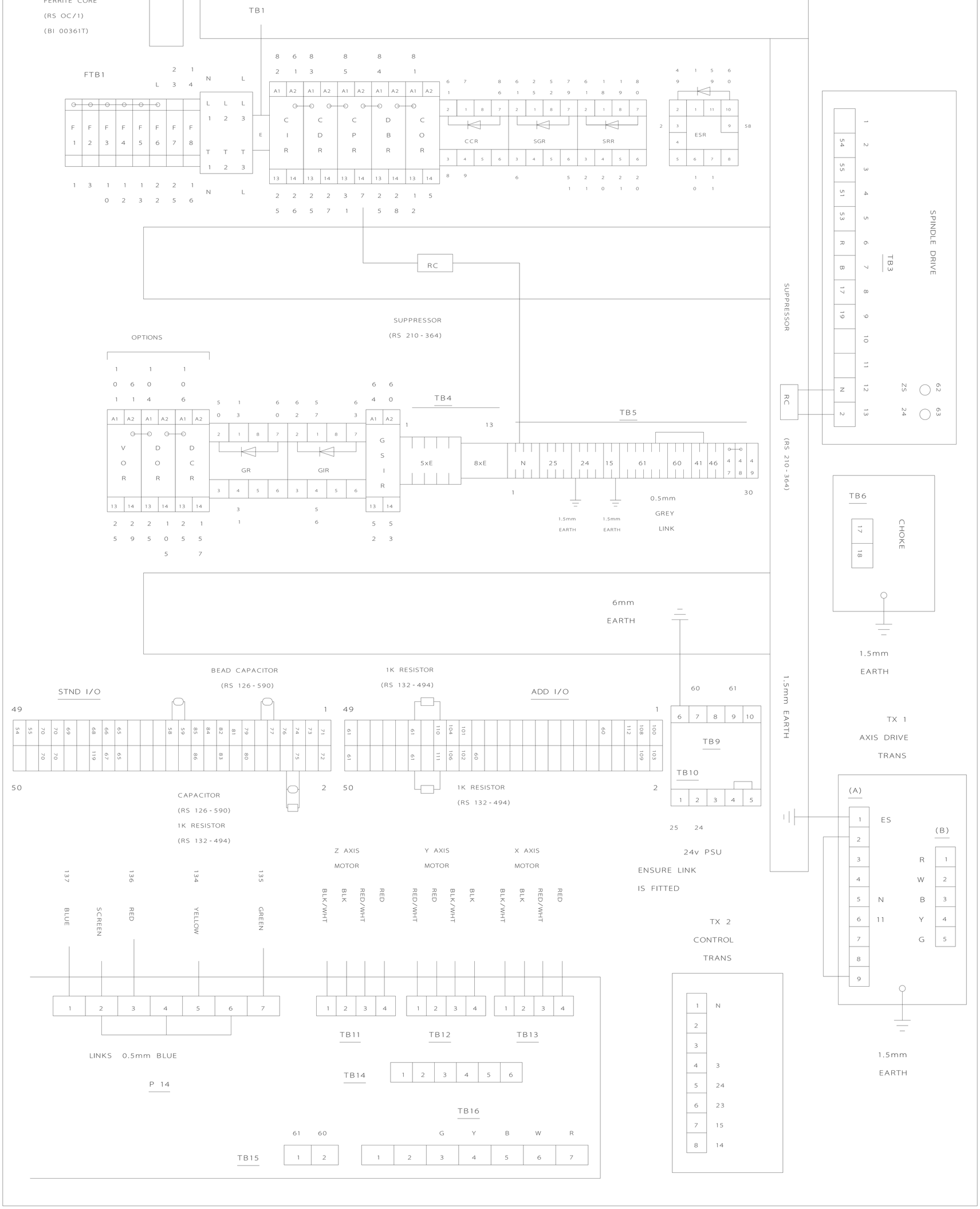
⊘ 4mm EARTH 5t

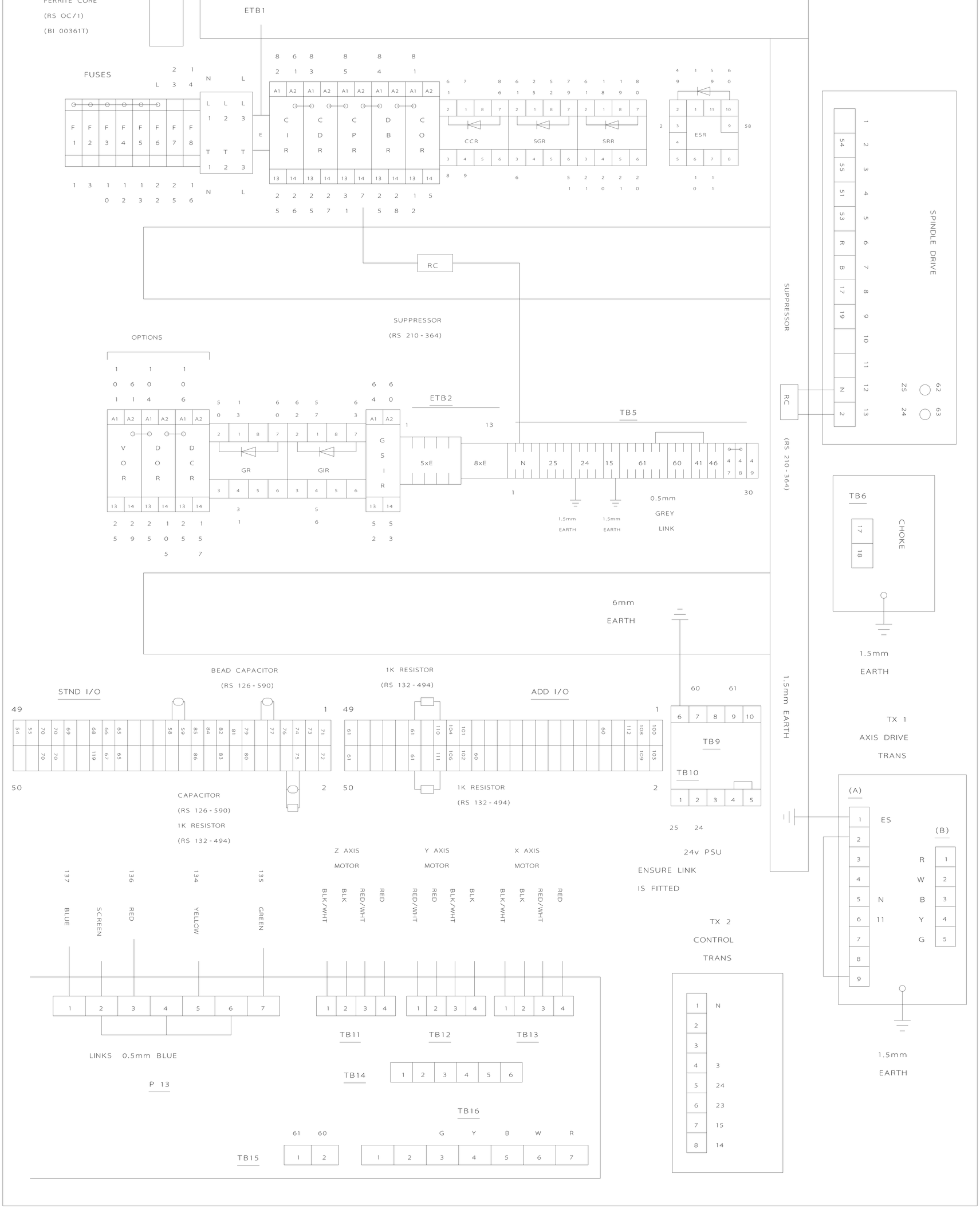
TRIAC PC BADGED HARNESS PLUG B 20-1-98

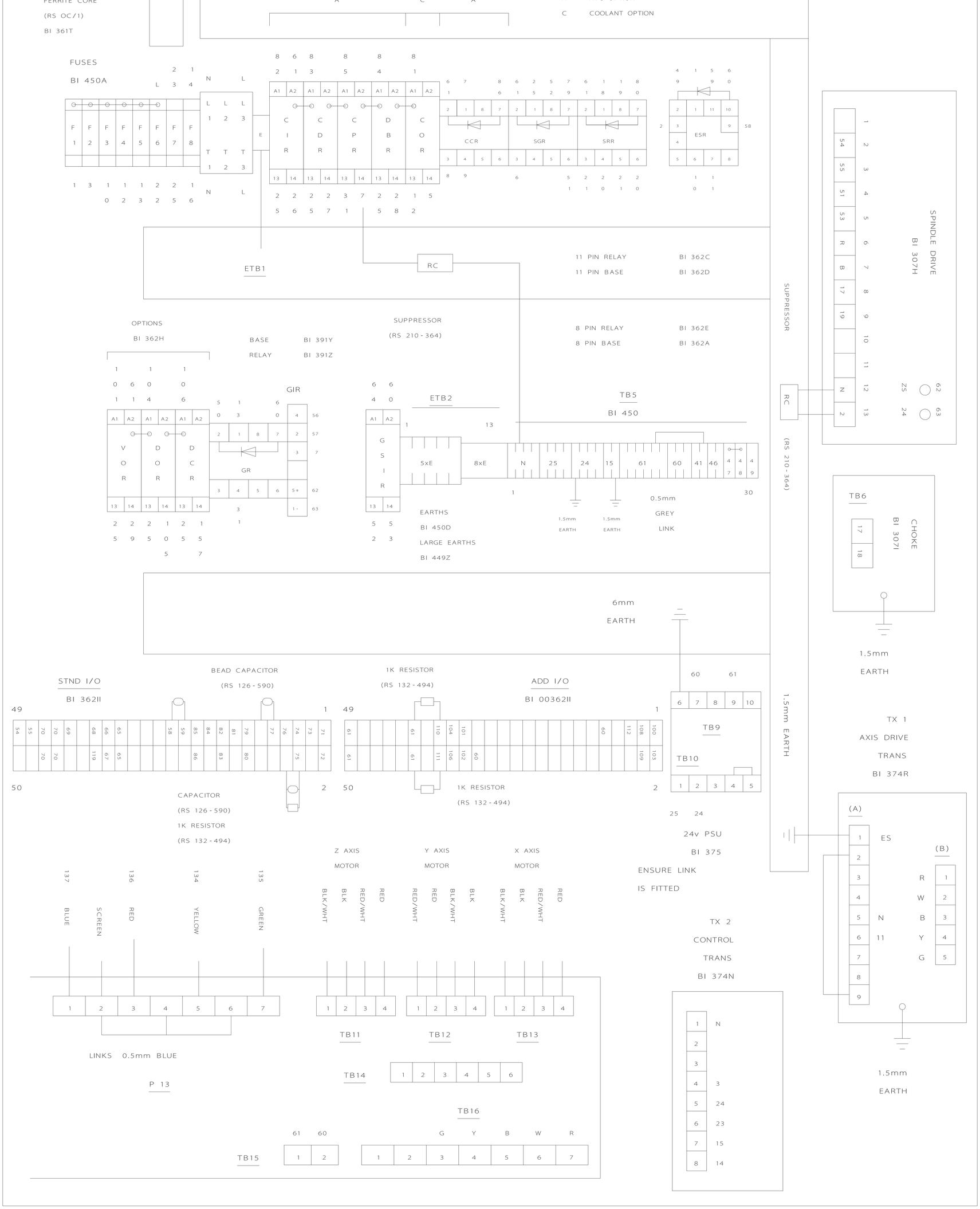
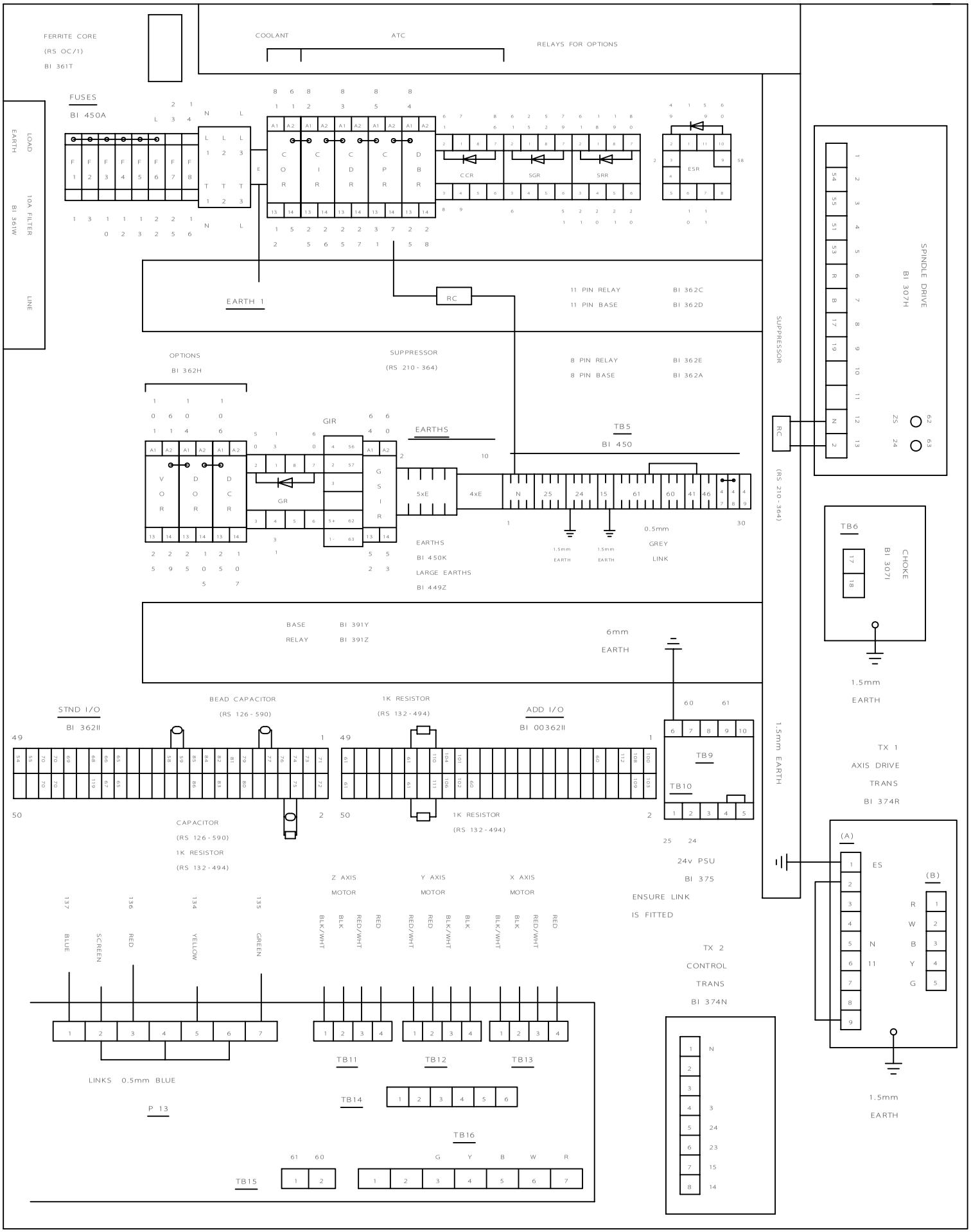
SCH-2E

SCH 3B
TB11
TB12
TB13
TB14
TB15
TB16
OPTIONS
SUPPRESSOR
(RS 210-364)
TB4
TB5
RC
FTB1
TB1
FERRITE
CORE
(RS OC/1)
STND I/O
(RS 126-590)
BEAD CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
ADD I/O
(RS 132-494)
1K RESISTOR
(RS 132-949)
CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
Z AXIS
MOTOR
Y AXIS
MOTOR
X AXIS
MOTOR
6mm
EARTH
TB9
TB10
1.5mm EARTH
24v PSU
ENSURE LINK
IS FITTED
TX 2
CONTROL
TRANS
TX 1
AXIS DRIVE
TRANS
1.5mm
EARTH
0.5mm
GREY
LINK
TB6
CHOKE
TB3
SPINDLE DRIVE
TB2


FERRITE CORE
(RS OC/1)
(BI 00361T)
TB1
FTB1
CIR
CDR
CPR
DBR
COR
CCR
SGR
SRR
ESR
RC
SUPPRESSOR
(RS 210-364)
OPTIONS
VOR
DOR
DCR
GR
GIR
GSIR
TB4
TB5
5xE
8xE
0.5mm
GREY
LINK
1.5mm
EARTH
6mm
EARTH
SPINDLE DRIVE
TB3
TB6
CHOKE
1.5mm EARTH
BEAD CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
STND I/O
ADD I/O
CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
TB9
TB10
24v PSU
ENSURE LINK
IS FITTED
TX 1
AXIS DRIVE
TRANS
ES
Z AXIS
MOTOR
Y AXIS
MOTOR
X AXIS
MOTOR
BLK/WHT
BLK
RED/WHT
RED
TX 2
CONTROL
TRANS
TB11
TB12
TB13
TB14
TB15
TB16


FERRITE CORE
(RS OC/1)
(BI 00361T)
TB1
FTB1
CIR
CDR
CPR
DBR
COR
CCR
SGR
SRR
ESR
RC
SUPPRESSOR
(RS 210-364)
OPTIONS
VOR
DOR
DCR
GR
GIR
GSIR
TB4
TB5
5xE
8xE
0.5mm
GREY
LINK
1.5mm
EARTH
6mm
EARTH
SPINDLE DRIVE
TB3
TB6
CHOKE
BEAD CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
STND I/O
ADD I/O
CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
TB9
TB10
24v PSU
ENSURE LINK
IS FITTED
TX 1
AXIS DRIVE
TRANS
TX 2
CONTROL
TRANS
Z AXIS
MOTOR
Y AXIS
MOTOR
X AXIS
MOTOR
BLUE
SCREEN
RED
YELLOW
GREEN
LINKS 0.5mm BLUE
TB11
TB12
TB13
TB14
TB15
TB16
P 14


FERRITE CORE
(RS OC/1)
(BI 00361T)
ETB1
FUSES
F1 F2 F3 F4 F5 F6 F7 F8
CIR CDR CPR DBR COR
CCR SGR SRR
ESR
RC
SUPPRESSOR
(RS 210-364)
OPTIONS
VOR DOR DCR
GR GIR
GSIR
ETB2
5xE
8xE
TB5
N 25 24 15 61 60 41 46
1.5mm EARTH
0.5mm GREY LINK
SUPPRESSOR
RC
(RS 210-364)
SPINDLE DRIVE
TB6
CHOKE
1.5mm EARTH
6mm EARTH
1.5mm EARTH
BEAD CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
STND I/O
ADD I/O
CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
TB9
TB10
24v PSU
ENSURE LINK
IS FITTED
TX 1
AXIS DRIVE
TRANS
(A)
(B)
ES
N
11
R W B Y G
1.5mm EARTH
Z AXIS MOTOR
Y AXIS MOTOR
X AXIS MOTOR
BLK/WHT BLK RED/WHT RED
RED/WHT RED BLK/WHT BLK
BLK/WHT BLK RED/WHT RED
137 BLUE
136 SCREEN RED
134 YELLOW
135 GREEN
TB11
TB12
TB13
LINKS 0.5mm BLUE
P 13
TB14
TB15
TB16
G Y B W R
TX 2
CONTROL
TRANS
N
3
24
23
15
14


FERRITE CORE
(RS OC/1)
BI 361T
COOLANT OPTION
FUSES
BI 450A
CCR
SGR
SRR
ESR
ETB1
RC
11 PIN RELAY
11 PIN BASE
BI 362C
BI 362D
SPINDLE DRIVE
BI 307H
SUPPRESSOR
(RS 210-364)
OPTIONS
BI 362H
BASE
RELAY
BI 391Y
BI 391Z
8 PIN RELAY
8 PIN BASE
BI 362E
BI 362A
GIR
GR
ETB2
TB5
BI 450
EARTHS
BI 450D
LARGE EARTHS
BI 449Z
0.5mm
GREY
LINK
TB6
CHOKE
BI 3071
6mm
EARTH
1.5mm
EARTH
STND I/O
BI 362II
BEAD CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
ADD I/O
BI 00362II
TB9
TB10
TX 1
AXIS DRIVE
TRANS
BI 374R
CAPACITOR
(RS 126-590)
1K RESISTOR
(RS 132-494)
24v PSU
BI 375
ENSURE LINK
IS FITTED
Z AXIS
MOTOR
Y AXIS
MOTOR
X AXIS
MOTOR
BLUE
SCREEN
RED
YELLOW
GREEN
LINKS 0.5mm BLUE
P 13
TB11
TB12
TB13
TB14
TB15
TB16
TX 2
CONTROL
TRANS
BI 374N

TRIAC PC BADGED PANEL LAYOUT 10-12-96 SCH-3F