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UNSPECIFIED TOLERANCES
X ± 0.4 ANGULAR
X.X ± 0.2 TOLERANCE
X.XX ± 0.1 ± 0.5'

DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

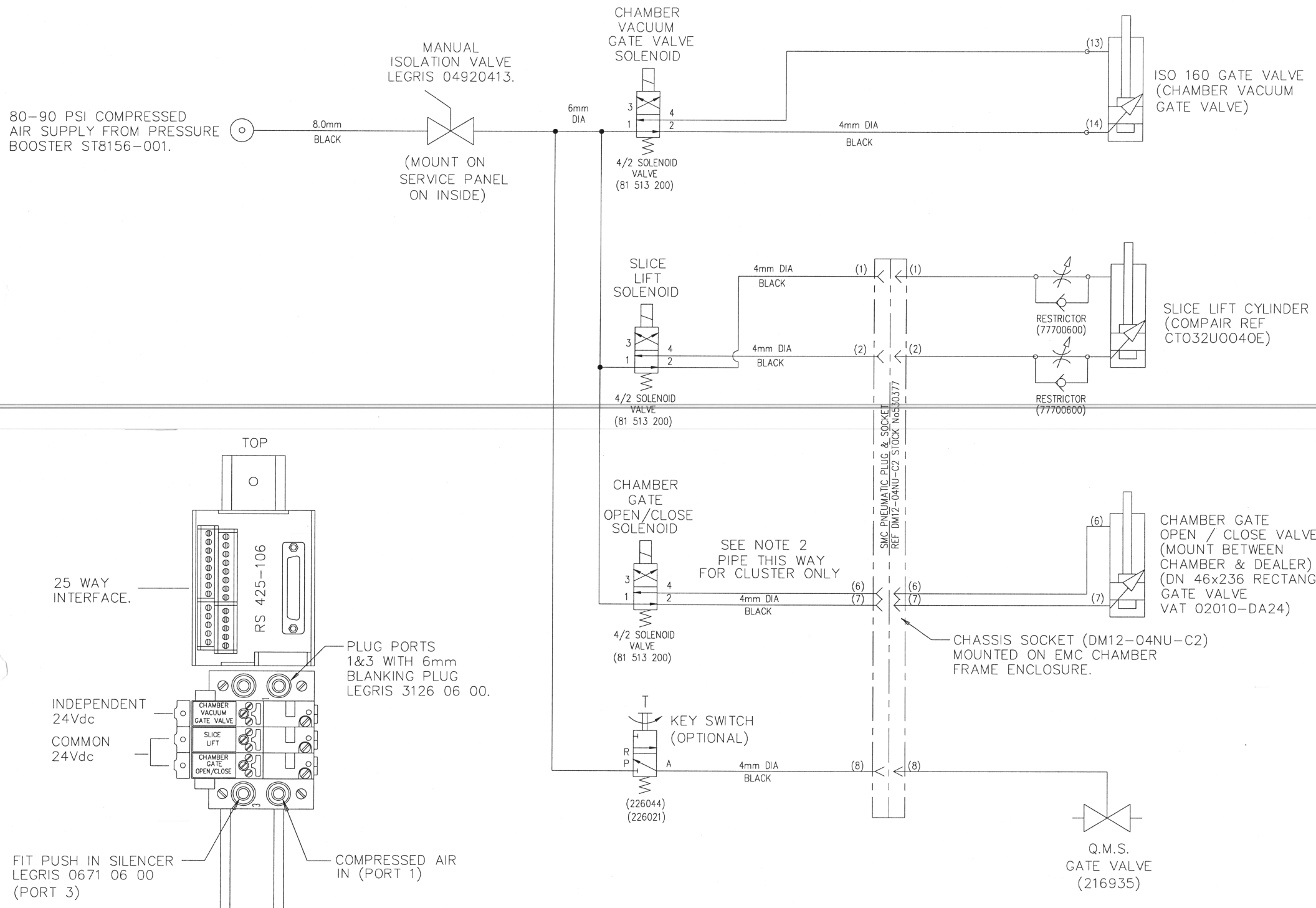
3rd ANGLE PROJECTION

DO NOT SCALE---IF IN DOUBT 'ASK'

DRG NO: PD301781 REV 03

REVISIONS

REV	DESCRIPTION	DATE	
02	EC 3139	14/6/99	I.D.G.
03	EC 3261	10/01/00	W.J.M.



SOLENOID DIN RAIL MOUNTING DETAILS.

NOTES.

1. UNLESS STATED OTHERWISE:-
   ALL VALVE REFS ARE "CROUZET"
   CYLINDER REFS ARE "COMPAIR MAXAM".
   ALL FITINGS ARE "LEGRIS".

2. CHAMBER GATE VALVE PIPEWORK DETAILS.
   CLUSTER:- AS PER DRAWING.
   MULTIPLEX:-
   INTERNAL LINES (6) AND (7) ARE TO BE REMOVED, AND PLUGGED OFF AT THE SOLENOID OUTLETS AT PORTS 2 & 4.
   EXTERNAL LINES (6) AND (7) ARE TO BE ROUTED TO THE LOADLOCK.

PIPE IDENTIFICATION CHART

(1) = SLICE LIFT DOWN
(2) = SLICE LIFT UP
(3) =
(4) =
(5) =
(6) = CHAMBER GATE OPEN (VAT)
(7) = CHAMBER GATE CLOSED (VAT)
(8) = Q.M.S. GATE VALVE (OPTIONAL)
(9) =
(10) =
(11) =
(12) =
(13) = CHAMBER VACUUM GATE VALVE OPEN
(14) = CHAMBER VACUUM GATE VALVE CLOSED
(15) =

SURFACE TECHNOLOGY SYSTEMS

MATERIAL:
FINISH:
APP: DATE:
CHK: DATE:
DRN: W.J.M. DATE: 15/04/97

MESC CLUSTER / MULTIPLEX C.V.D. CHAMBER PNEUMATIC DETAILS.

FIRST USED ON: SERIAL No

SCALE ON A1 N.T.S. DWG NO: PD301781 SHEET 1 OF 1 REV 03

14

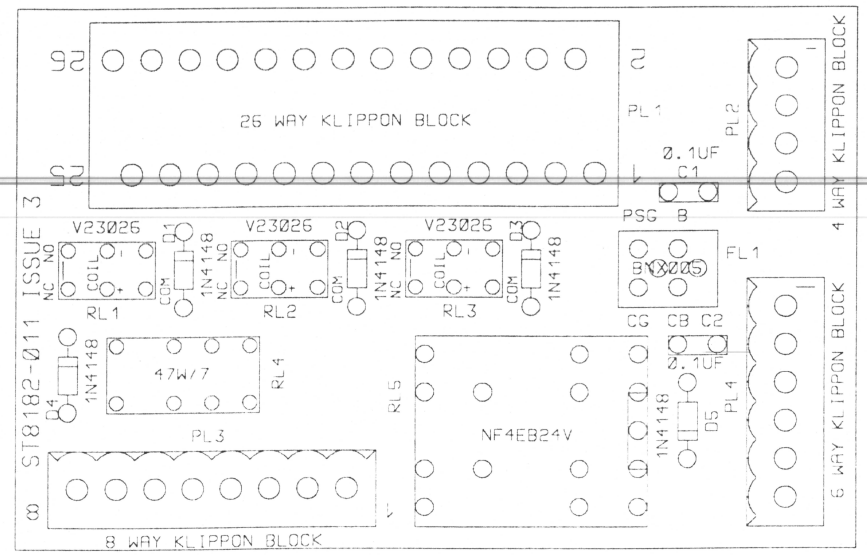
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tolerance unless stated: +/- 0.50 millimeter; ANGLE +/- 0.5 degree

3rd ANGLE PROJECTION

DRAWING No. ST8182-011CB

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
2	REDESIGNED	20/7/95	
3	E.C. 2920	7 MAY 99	



ORIGINAL

STS	MATERIAL:-	
	FINISH:-	
CUSTOMER:-	MESC. INTERLOCK SENSE PCB	
SAFETY APPROVED. NA		
APPROVED:	FIRST USED:-	SERIAL No.
DRAWN: M.Mc.	STOCK No	DWG NO. ST8182-011 REV.
DATE: 7 MAY 99	SCALE	SHEET

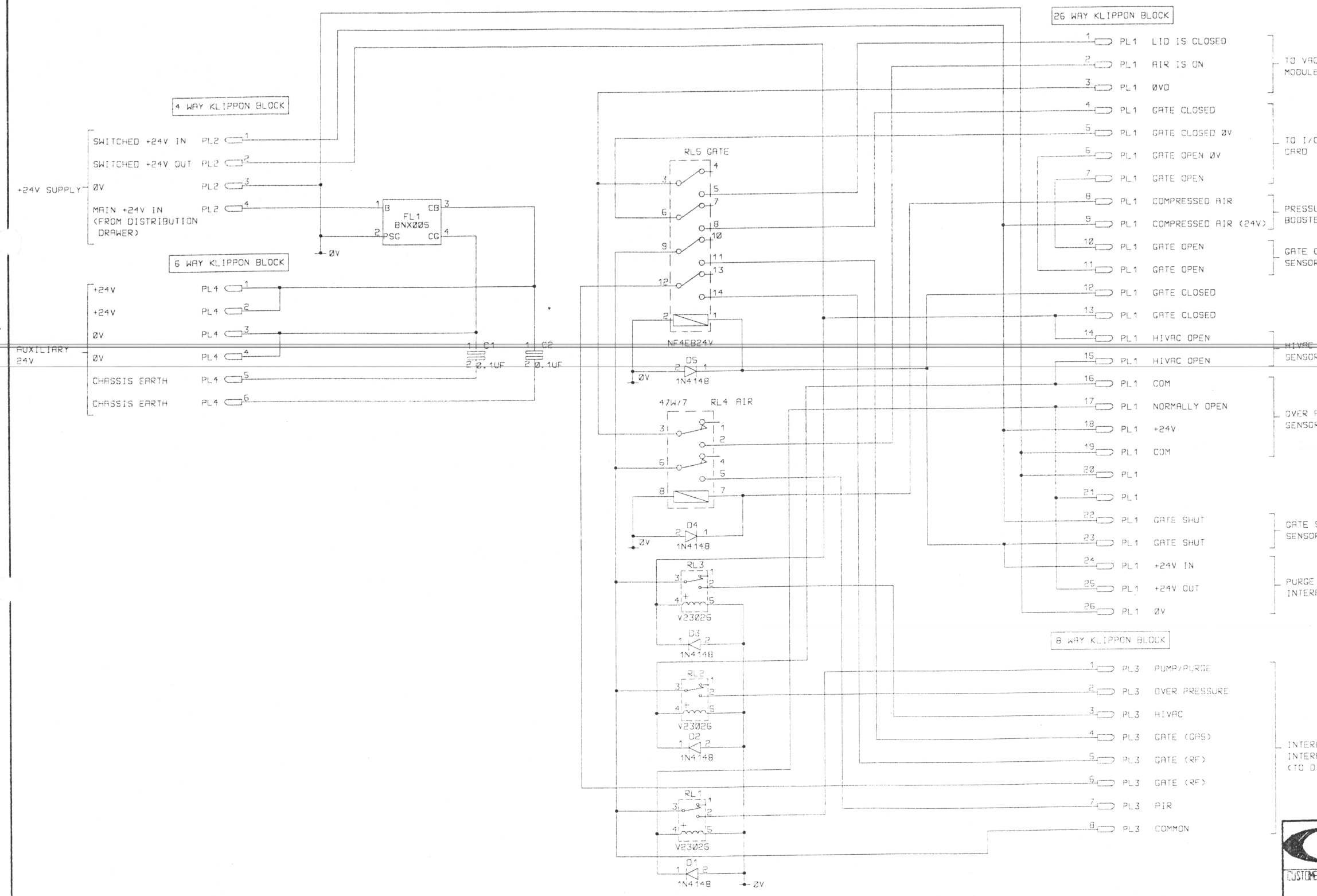
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tolerance unless stated +/- 0.50 millimeter ANGLE +/- 0.5 degree

3rd ANGLE PROJECTION

DRAWING No. ST8182-011CD

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
2	REDESIGNED	20/7/95	
3	E.C. 2920	7 MAY 99	



ORIGINAL

STS	MATERIAL:-
	FINISH:-
CUSTOMER:-	MESC. INTERLOCK SENSE PCB
SAFETY APPROVED: NA	
APPROVED: J.ah	FIRST USED:- SERIAL No.
DRAWN: M.Mc.	STOCK No DWG NO ST8182-011 REV
DATE: 7 MAY 99	SCALE SHEET

DRG No: ED301313 REV A02

MESC. C.V.D. CHAMBER ELECTRONICS ENCLOSURE
(PART OF, SEE SHEET 2 AND 3)

PL6 MEASUREMENTS AND CONTROLS ⚠2

25 WAY IDC D TYPE CHASSIS PLUG

(301) 25 CORE FLAT RIBBON CONNECT 1 – 1

25 WAY IDC D TYPE LINE SKT

SCREEN TO CONNECTOR CASE

SCREEN TO CONNECTOR CASE

25 WAY I/FACE 561237

MEASUREMENT AND CONTROLS

1	+15V	RED
2	+15V	
3	0V	BLK
4	0V	
5	-15V	BLU
6	-15V	
7	BARATRON +	YEL
8	BARATRON –	GRN
9	MOTOR –	BLK
10	MOTOR +	RED
11	SERVO POT WIPER	WH
12	SERVO POT	YEL
13	SERVO POT	GRN
14	VPP	
15	V BIAS	
16	VPP / VBIAS RTN	
17	LID IS CLOSED	RED
18	AIR IS ON	BLU
19	OVD	GRN
20	HIVAC OVERRIDE	RED
21	HIVAC OVERRIDE	BLU
22		
23		
24		
25		

(308)

(309)

(309) 3 CORE SCND 7/0.2 ⚠2

PART OF INTERLOCK SENSE MODULE ST8182-013 AC4727 (SEE SHEET 2 AND 3)

HIVAC OVERRIDE	20	RED
HIVAC OVERRIDE	21	BLU
LID IS CLOSED	17	RED
AIR IS ON	18	BLU
OVD	19	GRN

⚠2

3 CORE SCND 7/0.2

(321) 6 CORE SCND 7/0.2

BLU

RED

SCREEN TO EARTH BLOCK

PG9 METAL CABLE GLAND

(321)

(322) 6 CORE SCND 7/0.2

RED

BLU

GRN

YEL

GRN

BLK

SCREEN TO EARTH BLOCK

PG9 METAL CABLE GLAND

(322)

(307) 3 CORE SCND 7/0.2

SCREEN TO EARTH BLOCK

PG9 METAL CABLE GLAND

(356) 6 CORE SCND 7/0.2

SCREEN TO EARTH BLOCK

15 WAY D TYPE LINE SKT 530006 530167

SCREEN TO CONNECTOR CASE & PIN 15

RED	7	+15V
BLK	5	0V
BLU	6	-15V
YEL	2	O/P
GRN	2	COM
	5	CHASSIS GND

CHAMBER BARATRON

IF REQUIRED

5 WAY DIN LINE PLUG (180) 530708

SCREEN TO CONNECTOR CASE

BLK	1	MOTOR –
RED	2	MOTOR +
WH	3	WIPER
YEL	4	SERVO POT
GRN	5	SERVO POT

A.P.C.

IF REQUIRED

7 WAY DIN LINE PLUG

(307)

SCREEN TO CONNECTOR CASE

YEL	4	BIAS
YEL	5	
YEL	6	VPP
GRN	7	RTN

GAS BOX PEAK – PEAK / DC BIAS

IF REQUIRED

(356)

9 WAY D TYPE CHASSIS SKT

SCREEN TO CONNECTOR CASE

RED	1	MANOMETER O/P
	2	
	3	
GRN	4	BIAS
	5	
YEL	6	VPP
BLK	7	VPP / BIAS RTN
	8	
BLU	9	MANOMETER 0V

TEST SKT

REV	CHANGE	DATE	NAME		
02	BOM 1914 TEXT	30.03.99	D.G.	ISSUED	
01	BOM 688 TEXT	07.01.99	D.G.	CHECKED	
				DRAWN	W.J.M.
				DATE	01.03.97

SAFETY APPROVED
1. N/A
2. N/A
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE
MESC. MULTIPLEX / CLUSTER C.V.D. CHAMBER EMC ENCLOSURE WIRING

DRG No: ED301313

REV A02

page 1 of 1 pages

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DRG No: ED301313 REV B05

MESC C.V.D. CHAMBER ELECTRONICS ENCLOSURE PART OF SHEET 1 AND 3.

HIVAC OPEN SENSOR

PART OF MEASUREMENT & CONTROL SIGNALS I/F BLOCK (SEE SHEET 1)

LID IS CLOSED
AIR IS ON
0VD
HIVAC OVERRIDE
HIVAC OVERRIDE

(308) 3 CORE 7/0.2 SCND
(309) 3 CORE 7/0.2 SCND
(314) 2 CORE 7 / 0.2 SCND

PL8 +24V SUPPLY
SWITCHED 24V IN
SCREEN
0V
MAIN +24V (FROM PPD)

SK1 GAS BOX 24V DISTRIBUTION
SWITCHED 24V OUT
MAIN +24V
MAIN +24V
MAIN +24V
0V
0V

4 WAY R / LOCK CHASSIS PLUG
8 WAY R / LOCK CHASSIS SKT
4 WAY R / LOCK CHASSIS SKT

(340) 1.0 VIO
(342) 1.0 BR
(343) 1.0 VIO
(354) 1.0 BRN
(355) 1.0 VIO
(341) 1.0 VIO
(400) 1.0 VIO
(349) 1.0 VIO
(401) 1.0 VIO
(350) 1.0 BR
(402) 1.0 BR
(344) 1.0 VIO
(345) 1.0 BR
(346) 1.0 G/Y
(347) 1.0 G/Y

TB2-1
TB2-2
TB2-9
TB2-10
EARTH TERMINALS

4 WAY KLIPPON
PL2
6 WAY KLIPPON
PL4

DC POWER FILTER
B PSC
BNX002-01
CB CG

0.1uF
0.1uF
0v

RL5
RL4
RL3
RL2
RL1
1N4148
0V

PL1 26 WAY KLIPPON
(308)
(311)
(312)
(313)
(309) BLU
BLU RED
RED
(315)
(403)
(316) 3 CORE SCND 7/0.2

8 WAY KLIPPON
PL3
PUMP/PURGE OVER PRESS.
HIVAC
GATE (GAS)
GATE (RF)
GATE (RF)
AIR
COMMON

(311) 4 CORE 7/0.2 SCND
(317)

INTERLOCK SENSE MODULE
ST8182-013 AC4727 (ISSUE 2 PCB)

SCREEN TO EARTH BLOCK

REFER TO ED305179 FOR WIRING GATE INTERLOCK / PRESSURE SWITCH

25 WAY D TYPE CHASSIS PLUG (NOT SOLDER) (BUCKET)

SCREEN TO CONNECTOR CASE

SK12

INTELLIGENT PUMP OPTION REFER TO DRG ED307372

PG9 METAL CABLE GLAND
(312) 2 CORE 7/0.2 SCND
3 WAY DIN LINE PLUG 530706
COMPRESSED AIR
COMPRESSED AIR
PNEUMATICS DRAWER
SCREEN TO CONNECTOR CASE

(313) 4 CORE 7/0.2 SCND
GATE OPEN
GATE OPEN
GATE CLOSED
GATE CLOSED
GND
GATE POSITION SENSOR
(VAT GATE VALVE)
SCREEN TO CONNECTOR CASE

PG9 METAL CABLE GLAND
(332) 2 CORE SCND 7/0.2
(360) 2 CORE SCND 7/0.2
GATE OPEN
GATE CLOSED
S.T.S. GATE VALVE WIRING OPTION

25 WAY D TYPE LINE PLUG 531711 530181 530168
3 WAY DIN LINE PLUG 530706
(567) 3 CORE SCND 7/0.2
+24V IN
+24V OUT
0V
PURGE PANEL INTERFACE NON-INTELLIGENT PUMP
SCREEN TO CONNECTOR CASE

AUXILIARY +24V SUPPLY
MULTIPLEX: LOADLOCK SUPPLY
CLUSTER: PURGE PANEL SUPPLY
PL8
+24V
0V

4 WAY R/LOCK LINE SKT
PURGE PANEL 24V SUPPLY (MULTIPLEX ONLY)
(353) 2 CORE OLFLEX SCND 1.0mm
SCREEN TO CONNECTOR CASE

4 WAY R/LOCK LINE SKT
SHOWERHEAD R.F. ENCLOSURE FAN
(352) 2 CORE SCND 16/0.2
SCREEN TO CONNECTOR CASE

4 WAY R/LOCK LINE SKT
PLATEN R.F. ENCLOSURE FAN (IF REQUIRED)
(351) 2 CORE SCND 16/0.2
SCREEN TO CONNECTOR CASE

(362) 1.0 VIO
(363) 1.0 BRN

2 WAY MOLEX LINE PLUG 256854 256857
2 WAY MOLEX LINE SKT 256855 256856
(358)
(359)
2 CORE SCND 16/0.2
BLK2 BLK1
TB2-3
TB2-4
TB2-5
TB2-6
TB2-7
TB2-8
1.0mm BRN
TERMINAL BLOCKS (MOUNTED ON DIN RAIL)

EARTH TERMINALS ALL SCREENS TO BE TERMINATED AT TB2 TERMINALS 9 TO 13
TB2-11
TB2-12
TB2-13
TB2-14

CHAMBER GATE DRIVE MODULE AS302645
(407) 16/0.2 GREY
REFER TO ED305179

PL2 SOLENOID DRIVES
HIVAC SOLENOID
+24V

9 WAY D TYPE CHASSIS PLUG (NOT SOLDER BUCKET)
(331) 16/0.2 GRY
(336) 16/0.2 VIO
(327) 2 CORE SCND 7/0.2
PART OF (328) 4 CORE
TO SHEET 3

HIVAC SOLENOID
GATE SOLENOID
LIFT SOLENOID
A1
A2

(317) 8 CORE 7/0.2
TO SHEET 3

25 WAY D TYPE CHASSIS PLUG (NOT SOLDER BUCKET)
PL5 SENSORS / SOLENOIDS
GATE OPEN
GATE OPEN 0V
GATE CLOSED
GATE CLOSED 0V
SLICE LIFT UP 0V
SLICE LIFT DOWN
SLICE LIFT DOWN 0V
0V
GATE SOLENOID DRIVE
LIFT SOLENOID DRIVE
+24V
(410) 16/0.2 BR
(329) 16/0.2 GRY
(330) 16/0.2 GRY
(332) 16/0.2 VIO
(411) 16/0.2 VIO
REFER TO ED305179

(320) (320) CABLE SUPPLIED SLICE LIFT DOWN
(319) (319) CABLE SUPPLIED SLICE LIFT UP
PG9 METAL CABLE GLANDS
REFER TO M/C EARTHING DIAGRAMS FOR CABLE NUMBER 16mm SQ G/Y
TO E-RACK SAFETY EARTH BAR

REV	CHANGE	DATE	NAME	DATE
05	EC3241	9/7/98	W.J.M.	
04	EC 3139	11.06.99	I.D.G.	ISSUED
03	BOM 1914 TEXT	01.01.99	W.J.M.	CHECKED
02	BOM 1688 TEXT	01.01.99	D.G.	DRAWN
				W.J.M. 18-06-97

SAFETY APPROVED
1. N/A
2. N/A
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE
MESC MULTIPLEX / CLUSTER C.V.D. CHAMBER EMC ENCLOSURE WIRING

DRG No: ED301313

REV B05

page 2 of 3 pages

18

1 of 1

DRG No: ED301313 REV C02

INTERLOCK SENSE MODULE

SEE SHEET 2

8 WAY KLIPPON
PUMP PURGE 1 RED
OVER PRESS 2 BLU
HIVAC 3 GRN
GATE (GAS) 4 YEL
GATE (RF) 5 BLK
GATE (RF) 6 WH
AIR 7 BR
COMMON 8 VIO

SCREEN TO EARTH BLOCK

(317) 8 CORE SCND 7/0.2

25 WAY IDC D TYPE CHASSIS SKT

25 WAY IDC D TYPE LINE PLUG

SK2 INTERLOCK INTERFACE

(318) 25 WAY ROUND RIBBON CABLE

INTERLOCK INTERFACE 25 WAY I/F SKT
GATE (GAS) 1 YEL
PUMP PURGE 2 RED
OVER PRESSURE 3 BLU
HIVAC 4 GRN
AIR 5 BRN
6
LKS 7
8
COMMON VIO 9
GATE (R.F.) BLK 10
GATE (R.F.) WHT 11
RS425-112 12 LK
PLATTEN M.U. LID 14 RED / 15 BLU
PLATTEN M.U. LID 16 RED / 17 BLU
TOP M.U. LID 18 RED / 19 BLU
TOP M.U. LID 20 LK
R.F. ENCLOSURE 21 RED
R.F. ENCLOSURE 22 RED
COOLANT (2) 23 RED
COOLANT (2) 24 BLU
COOLANT (1) 25
COOLANT (1)

ALL LINKS TO BE GREY 7/0.2mm

(323) 2 CORE SCND 7/0.2

(324) 2 CORE SCND 7/0.2

(333) 2 CORE SCND 7/0.2

SCREENS TO EARTH BLOCK

(366) 2 CORE SCND 7/0.2

(318) SINGLE CORE 7 / 0.2

SCREEN TO EARTH BLOCK

LK GRY / BLU

TB1-1 FLOW SWITCH
TB1-2 CONNECTIONS
TB1-3 IF USED

TERMINAL BLOCK MOUNTED ADJACENT TO INTERLOCK INTERFACE

PL6 RF CONTROL

25 WAY D TYPE CHASSIS PLUG
RED 1
BLU 2

25 WAY D TYPE LINE SOCKET
1 RED
2 BLU

IF NO PLATEN RF ENCLOSURE LINK PINS 1 AND 2 IN MATING CONNECTOR

(323) 2 CORE SCND 7/0.2

(334) 2 CORE SCND 7/0.2

3 WAY DIN LINE PLUG
RED 1
BLU 3

PLATEN HIGH FREQUENCY M.U. IF REQUIRED

4 WAY R/LOCK LINE PLUG
RED A
BLU B
BLU C
RED D

PLATEN RF BOX AS302009 IF REQUIRED

PG9 METAL GLAND

(324) 2 CORE SCND 7/0.2

4 WAY R/LOCK LINE PLUG
RED B
BLU D

SHOWERHEAD R.F. ENCLOSURE AS302146

PG9 METAL GLAND

(333) 2 CORE SCND 7/0.2

7 WAY DIN LINE PLUG
RED 1
BLU 7

L.F. FREQUENCY M.U. AS301250 OR AS301493 IF REQUIRED
IF NO LF MATCHING UNIT LINK TERMS. 18 AND 19 ON INTERLOCK I/F

15 WAY D TYPE CHASSIS PLUG
RED 1
GRY 2
LK 3
BLU 4
5
6
7
8
9
10
11
12
13
14
15

PL4 COOLANT INTER;OCK

REFER TO THE RELEVENT CHILLER AND D.I. WATER INTERLOCK DRAWING.
IF HOUSE WATER IS USED LINK 1 AND 4 IN MATING CONNECTOR

MESC C.V.D. CHAMBER ELECTRONICS ENCLOSURE PART OF SHEET 1 AND SHEET 2

PART OF (328) 24v DC
RED
BLU
YEL
GRN

(328) 4 CORE SCND 7/0.2

PG9 METAL GLAND

SCREEN TO EARTH BLOCK

PART OF (327) 24v DC
RED
BLU
YEL
GRN

(327) 4 CORE SCND 7/0.2

PG9 METAL GLAND

SCREEN TO EARTH BLOCK

REFER TO THE RELEVENT CHILLER AND D.I. WATER INTERLOCK DRAWING FOR FLOW SWITCH CONNECTIONS IF REQUIRED

REV	CHANGE	DATE	NAME		
02	BOM 1914 TEXT	31.03.99	W.J.M.	ISSUED	
01	BOM 1688 TEXT	07.01.99	D.G.	CHECKED	
				DRAWN	W.J.M.
				DATE	18-6-97

SAFETY APPROVED
1. N/A
2. N/A
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE
MESC MULTIPLEX / CLUSTER C.V.D. CHAMBER EMC ENCLOSURE WIRING

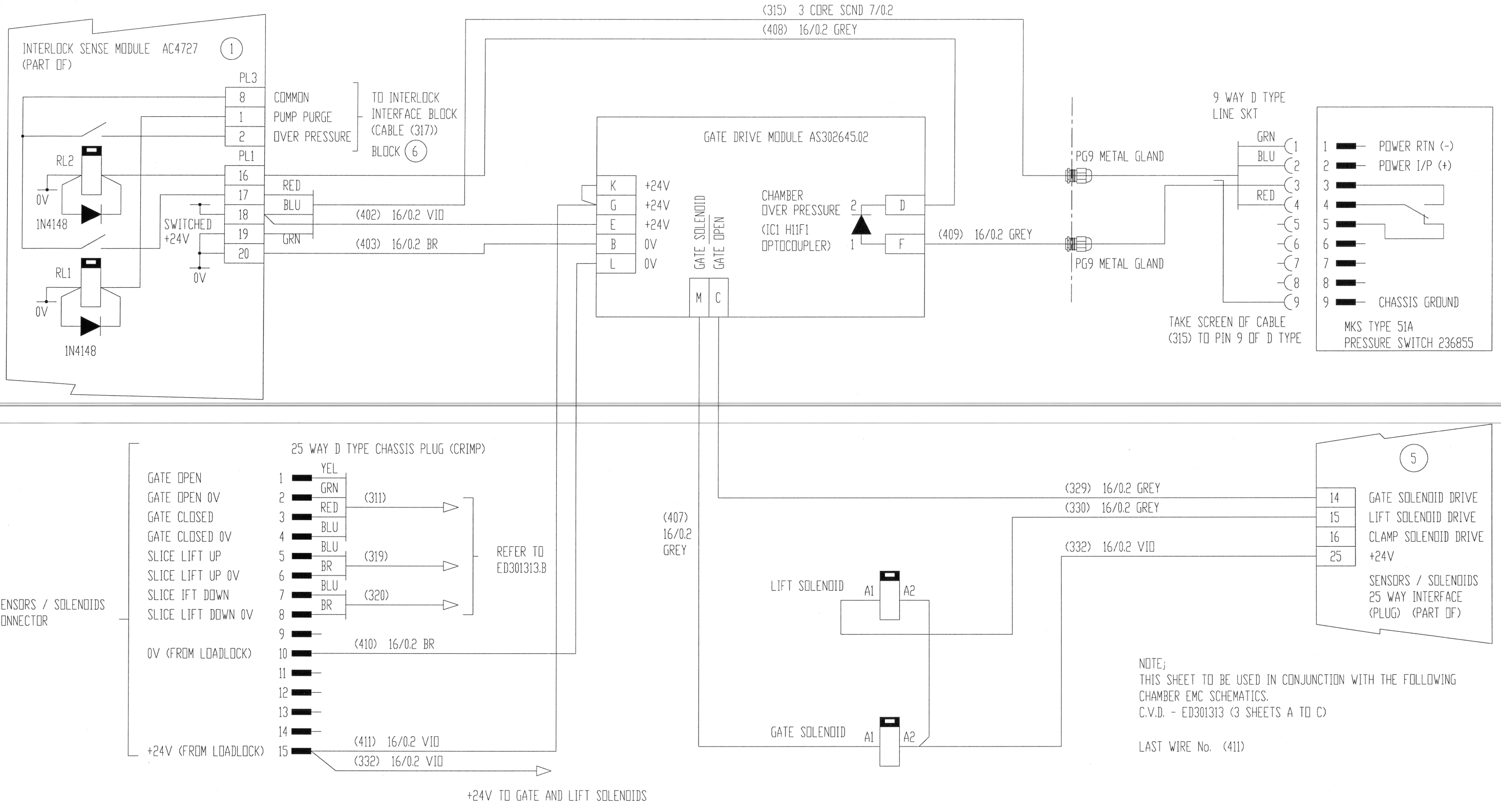
DRG No: ED301313

REV C02

page 3 of 3 pages

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COPYRIGHT - NOT TO BE USED WITHOUT THE COMPANYS PERMISSION	UNSPECIFIED TOLERANCES X ± 0.4 X.X ± 0.2 X.XX ± 0.1 ANGULAR TOLERANCE ± 0.5°	DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED	3rd ANGLE PROJECTION — REMOVE SHARP EDGES	DO NOT SCALE IF IN DOUBT 'ASK'	DRAWING NUMBER: ED305179.01	REV: 01



REV	DESCRIPTION	DATE	ACT'ND	CH'KED	ECN

APPROVED:
CHECKED:

SURFACE TECHNOLOGY SYSTEMS

TITLE: CHAMBER GATE INTERLOCK WIRING (C.V.D. SYSTEMS)

DRAWN: T.W.
DATE: 24.06.98
MATERIAL:
SCALE ON A3
DRAWING NUMBER: ED305179.01
FINISH:
SHEET 1 OF 1
REV: 01

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UNSPECIFIED TOLERANCES		
X	±0.4	ANGULAR
X.X	±0.2	TOLERANCE
X.XX	±0.1	±0.25

DIMENSIONS IN MILLIMETRES
UNLESS OTHERWISE STATED

3rd ANGLE PROJECTION

REMOVE SHARP EDGES

DO NOT SCALE IF IN DOUBT 'ASK'

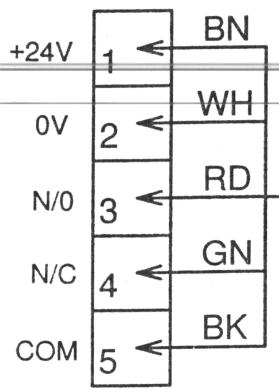
DWG NO. ED311248

REV 01

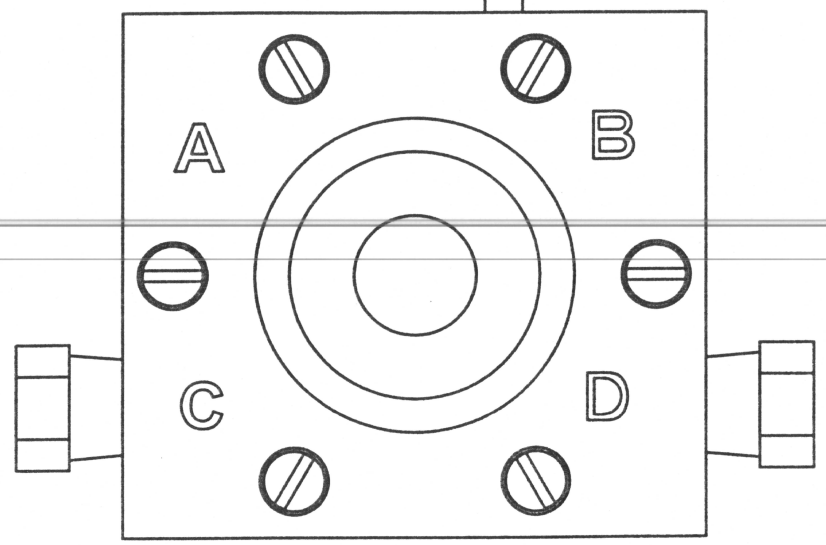
REV	DESCRIPTION	DATE	ACTIONED

ORIGINAL

5 WAY DIN PLUG (180) LATCHING



CABLE AS SUPPLIED
(CUT TO APPROX. 300mm)



SURFACE TECHNOLOGY SYSTEMS

MATERIAL:-

FINISH:-

CUSTOMER:

TITLE:- PROTEUS FLOW SWITCH WIRING DETAIL

APPROVED:

CHECKED:

USED ON:- SERIAL No

DRAWN: M.Douglas

DRG No:- ED311248 REV: 01

DATE: 19.07.2000

SCALE SIZE: A3 SHEET

21

1 2 3 4 5 6 7 8 9 10

DRG No: ED303430 REV 2

E-RACK
REAR SERVICE PANEL
PA6

SK10
LID LIFT EMERGENCY STOP

3 WAY DIN
LINE PLUG
530706

1 RED
2
3 BLU

SCREENS TO
CONNECTOR CASE

(392) 2 CORE 16/0.2 SCND (10M)

PG13.5
GLAND
561229
561230

LID LIFT
EMERGENCY STOP

RED 1 2
BLU

INSULATE SCREEN

550524
550199

E-RACK
EXTERNAL AUXILLARY
PA5

SK4

400V / 200V
PHASE 1 / PHASE 2
NEUTRAL / PHASE 2
EARTH

IEC LINE PLUG
535046

L BLK1
N BLK2
E G/Y

(390) 3 CORE OLFLEX 1.0mm (10M)
544122

BLK1 L1
BLK2 L2
G/Y E
BLK2 N
BLK1 L3
BLK3

LIFTING PILLAR
226035

(391)
4 CORE
OLFLEX
1.0mm (1M)
544000

BLK1 3 UP 4
BLK2 3 4 LINK 1.0mm BLK
BLK3 DOWN

CONTROL PENDANT
571285

REV	CHANGE	DATE	NAME		
				ISSUED	
				CHECKED	
2	EC2944	21-4-99	W.J.M.	DRAWN	W.J.M.
				DATE	13-11-97

SAFETY APPROVED
1. N/A
2. N/A
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE
LID LIFT SCHEMATIC

DRG No: ED303430

REV 2

g:\issued\302100\ed302146.a04.dwg

DRG No: ED302146 REV A04

PL 1
15W D TYPE
CHASSIS PLUG
530025 530007

MAG + 9 RED (31)
MAG − 10 YEL (34)
PHASE + 11 BLU (33)
PHASE − 12 GRN (35)
(3) 4 CORE SCREEN 7/0.2 (3)

PL 5
5W DIN
180 deg

RED (31) 1
BLU (34) 3
YEL (33) 4
GRN (35) 5

MAG/PHASE
AC1617

SK1
HF RF IN ← RF IN
HF RF OUT

(4) URM 67

SK4
HF IN
N TYPE

LF IN
C TYPE
PART OF aC3050
SK2

L3
10T
aC3050

ELECTRODE

C2
350pF
TUNE

L1
4.5T

C3
350pF
1KV

C1
1000pF
LOAD

LOAD MOTOR + 7 RED (21)
LOAD MOTOR − 8 BLK (22)
LOAD POSITION 4 GRN (24)
REFERENCE(−0.1V) 2 WHI (25)
YEL (23)
(2) 6 CORE SCREEN 7/0.2 (2)

RED (21)
M2
BLK (22)
YEL (23)
GRN (24) 2
WHI (25) 3
VR2
LOAD ASSY

4 WAY MOLEX
LINE PLUG

PCB1
AC1763

YEL (13) 1 1
YEL (23) 3 3
VIO 2 2
BRN 4 4

TUNE
VR1 5K
LOAD
VR2 5K
24V+
REG
0V

REAR VIEW
1 3
2
VR 1/2

YEL (13)
WHI (15)
(1)
TUNE MOTOR + 6 RED (11)
TUNE MOTOR − 5 BLK (12)
TUNE POSITION 3 GRN (14)
6 CORE SCREEN 7/0.2 (1)

RED (11)
M1
BLK (12)
YEL (13)
GRN (14) 2
WHI (15) 3
VR1
TUNE ASSY

24V + 14 VIO 7/0.2 (26)
0V RETURN 15 BRN 7/0.2 (27)

END VIEW

(2) LOAD ASSY
(1) TUNE ASSY
(3)
(4)
CABLE LOOM
PL1
PCB1
MAG PHASE ASSY.3
RF IN
RF OUT

REV	CHANGE	DATE	NAME		
4	EC2845	28-3-99	W.J.M.		
3	EC1672	24-8-98	W.J.M.	ISSUED	
2	REFER TO SHEET 2, REVISED AC1763 ADDED AND EC1452	17-8-98	W.J.M.	CHECKED	
				DRAWN	A.G.M.
				DATE	9-11-97

SAFETY APPROVED
1. N/A
2. N/A
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE CVD HF MU SHOWERHEAD WITH HF+LF FEEDS

DRG No: ED302146

REV A04
page 1
of 2 pages

23

g:\archived\302100\ed302146.b04.dwg

DRG No: ED302146 REV B04

4W AMPH CHASSIS PLUG 18-10P 530216

PL3 — LIVE, NEUTRAL, EARTH

A (5) BLK
B (6) BLK
C
E (7) 32/0.2 G/Y

CORES (5), (6), (8), (9), (10), (11), (12), (13), (20) AND (21) ARE TWISTED PAIRS PTFE 19/0.3 BLK (541284)

FAN CHOKE
3 OFF FERRITE CORES
MX797/20/P
(MOUNTED ON FAN)

(8) BLK S1 F1 (10) BLK
(9) BLK S2 F2 (11)
AS304039

BLK

CHOKE L2
ST8109-014

(12) BLK (20) BLK
(13) BLK (21) BLK

HEATERS

WIRES (20) AND (21) TO 600mm LONG

ST8109-071 P.C.B.
AC6094

PL1 PL3 PL2 PL4 PL5 PL7 PL6 PL8

C1 C2 C3 C4 C5 C6 C7 C8

4.7nF CERAMIC 400V

P.C.B. 2 ST8109-071 ISSUE 1

4W R/LOCK CHASSIS PLUG 530553

PL2 — +24V, 0V

A (4) RED
B (5) BLK
C
D

0.1uF CERAMIC C3
C4 0.1uF CERAMIC

16/0.2

24V DC FAN

10 FERRITE BEADS ON EACH FAN WIRE STOCK No. 560289

9 WAY D TYPE CHASSIS PLUG 530375 530025

PL4 — WHITE PIN, GREEN PIN

1 BRN
5 BLU

(16) TYPE K THERMOCOUPLE CABLE

THERMOCOUPLE PROBE (TYPE K)

4W R/LOCK CHASSIS SKT 530550

SK3

A (14) 16/0.2 GRY
B
C (15) 16/0.2 GRY
D

MICROSWITCHES

SW 1 N/O C N/C
SW 2 N/O C N/C
SW 3 N/O N/C
SW 4 N/O N/C

(17)16/0.2 GRY
(18)16/0.2
(19)16/0.2

MICROSWITCHES CLOSED WHEN COVERS ARE FITTED

ADDITIONAL MICROSWITCHES ARE CONNECTED IN SERIES (IF FITTED)

NOTE :- LAST IDENT = (21)

S2 F2

PL2 C3 C4 PL4 PL6 C5 C6 PL8

NEUTRAL
PHASE (LIVE)

CHOKE L2

PL1 C1 C2 PL3 PL5 C7 C8 PL7

ST8109-071 ISSUE 1

S1 F1

FAN CHOKE

AMPHENOL PLUG VIEWED FROM WIRING END

(GREEN/YELLOW) EARTH
TO PL 1 FILTER PCB (BLACK)
TO PL 2 FILTER PCB (BLACK)

D C A B

SIDE VIEW

CONTROL PL1
TUNE
LOAD
HF IN SK1
INTERLOCK
FAN HEATER PL3
PL2
SK3
SHOWERHEAD MU
IDENT LABEL
LF IN SK2
PL4 THERMOCOUPLE
COOLANT IN
COOLANT OUT

REV	CHANGE	DATE	NAME		
4	EC2845	28-3-99	W.J.M.		
3	EC1672	24-8-98	W.J.M.	ISSUED	
2	REFER TO SHEET 2, REVISED AC1763 ADDED AND EC1452	17-8-98	W.J.M.	CHECKED	
				DRAWN	A.G.M.
				DATE	9-6-97

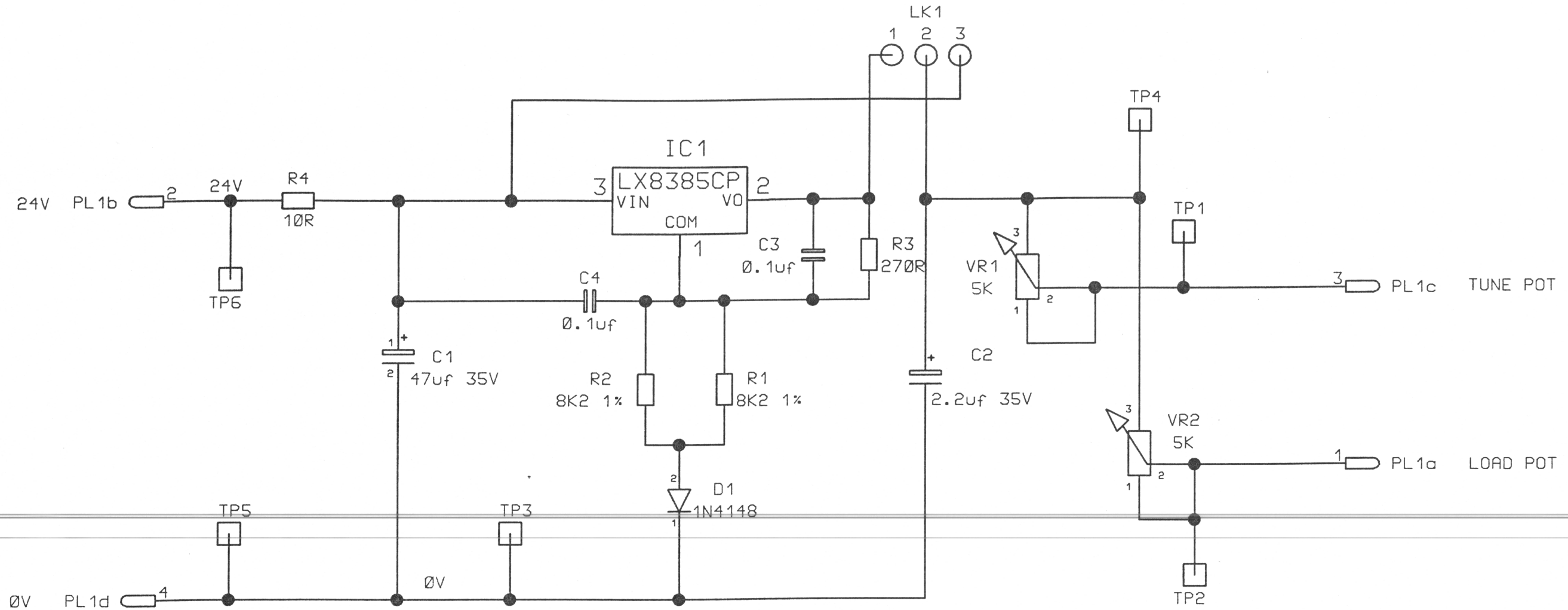
SAFETY APPROVED
1. N/A
2. N/A
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE CVD HF MU SHOWERHEAD WITH HF+LF FEEDS

DRG No: ED302146

REV B04



NOTE FIT LINK 1 : PINS 2 TO 3 FOR VACUUM CAPACITORS
PINS 1 TO 2 FOR AIR CAPACITORS

APPROVED:	ISSUE NO. 03 EC1577 16JAN98 04 EC2630 28JAN99 05 EC3129 14JUN99	MATERIAL:	SCALE:	TITLE: CAPACITOR ADJUST PCB	STOCK No. AC1763
CHECKED: G. Atkin	DATE: 28 FEB 97	FINISH:		DRAWING NO. ST8063-003	SHEET 1 OF 1 SHEETS
DRAWN BY: N.Mc.					

25

DRG No: ED301435 REV E

15W D TYPE CHASSIS PLUG 530010 530025

PL 5 5W DIN 180 deg

MAG + 9 RED (31) — RED (31) 1
MAG − 10 YEL (34) — BLU (33) 3
PHASE + 11 BLU (33) — YEL (34) 4
PHASE − 12 GRN (35) — GRN (35) 5

(3) 4 CORE SCREEN 7/0.2 (3)

SCREEN TO CASE

MAG +
PHASE +
MAG −
PHASE −

380 KHz L.F. MAG/PHASE AS301792

SK5 LF IN ← RF IN

SK6 LF OUT

N TYPE 535001

(4) URM 67

NOTE:
ALL WIRING THIS SIDE OF THE PARTITION TO BE 19/0.45 PTFE WIRE

SK7 N TYPE 535000 535002

C1 3000 pF TUNE

L1 230mH

C2 3000pF LOAD

RL1/1 NC NO

SK3 LF OUT TOP ELECTRODE C TYPE 535274

SK4 LF OUT BOTTOM ELECTRODE C TYPE 535274

PL 1 MATCHING UNIT CONTROL

LOAD MOTOR + 7 RED (21)
LOAD MOTOR − 8 BLK (22)
LOAD POSITION REFERENCE(−0.1V) 4 GRN (24)
2 WHI (25)
YEL (23)

(2) 6 CORE SCREEN 7/0.2 (2)

RED (21)
BLK (22)
YEL (23)
GRN (24)
WHI (25)

M2 LOAD ASSY

VR2 1 2 3

REAR VIEW 1 2 3 VR 1/2

REFERENCE + 1 YEL (13)
WHI (15)
TUNE MOTOR + 6 RED (11) (1)
TUNE MOTOR − 5 BLK (12)
TUNE POSITION + 3 GRN (14)
BLU (16)
BRN (17)

8 CORE SCREEN 7/0.2 (1)

RED (11)
BLK (12)
YEL (13)
GRN (14)
WHI (15)
BLU (16)
BRN (17)

M1 TUNE ASSY

VR1 1 2 3

SW 1 N/O MICROSWITCHES SW 2 N/O
C N/C C N/C

NOTE
IF SW2 IS FITTED WIRE IN SERIES WITH SW1

MICROSWITCHES CLOSED WHEN COVERS ARE FITTED

ELEC SEL 13 GRY 16/0.2 (51)
24V 14 VIO 16/0.2 (52)
0V RETURN 15 BRN 16/0.2 (53)

5 WAY DIN 240 CHASSIS SOCKET 530702

SK2 ELECTRODE SELECT

4 BRN 16/0.2 (53)
0V RETURN
5 VIO 16/0.2 (52)
24V VIO 16/0.2 (52)
ELEC SEL 1 GRY 16/0.2 (51)
GRY 16/0.2 (51)

VIO 16/0.2 (52)
D1 1N4148
RL1
GRY 16/0.2 (51)

7 WAY DIN CHASSIS SOCKET 530703

SK1

1 BLU (16)
INTERLOCK
7 BRN (17)

REV	CHANGE	DATE	NAME		
E	EC2301	14-1-99	W.J.M.		
D	EC2047	25-6-98	W.J.M.	ISSUED	
C	SECOND MICROSWITCH ADDED	17-11-97	W.J.M.	CHECKED	
B	MICROSWITCH CHANGE	22-5-97	W.J.M.	DRAWN	A.G.M.
				DATE	21-02-97

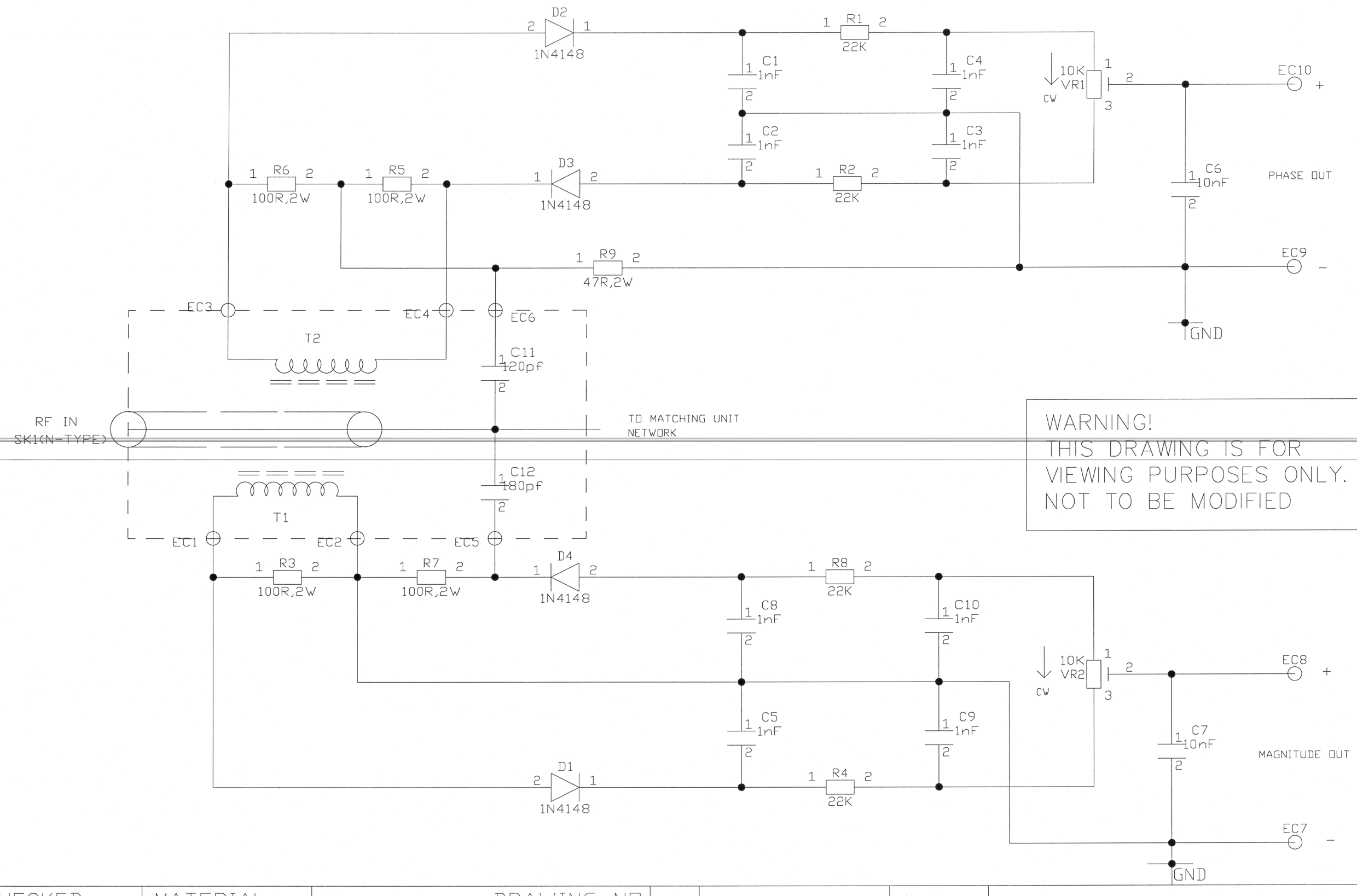
USED ON
CUSTOMER
SERIAL No:

SURFACE TECHNOLOGY SYSTEMS

TITLE 380 KHz LF MU (DELTA) OPTION 1

DRG No: ED301435

REV E



WARNING!
THIS DRAWING IS FOR VIEWING PURPOSES ONLY. NOT TO BE MODIFIED

CHECKED	MATERIAL	DRAWING NO. CD301413.02			380KHz MAGNITUDE AND PHASE DETECTOR SCHEMATIC
DRAWN BY VISIBLE SOUND	FINISH	DATE 26-9-1996	2 ISS	E.C. 1376 CHANGE NOTE No.	18DEC97 DATE
					1 OF 1

STS LTD

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G:\ISSUED\301400\CB301413.02.DWG

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UNSPECIFIED TOLERANCES
X ± 0.4
X.X ± 0.2
X.XX ± 0.1
ANGULAR TOLERANCE ± 0.5°

DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

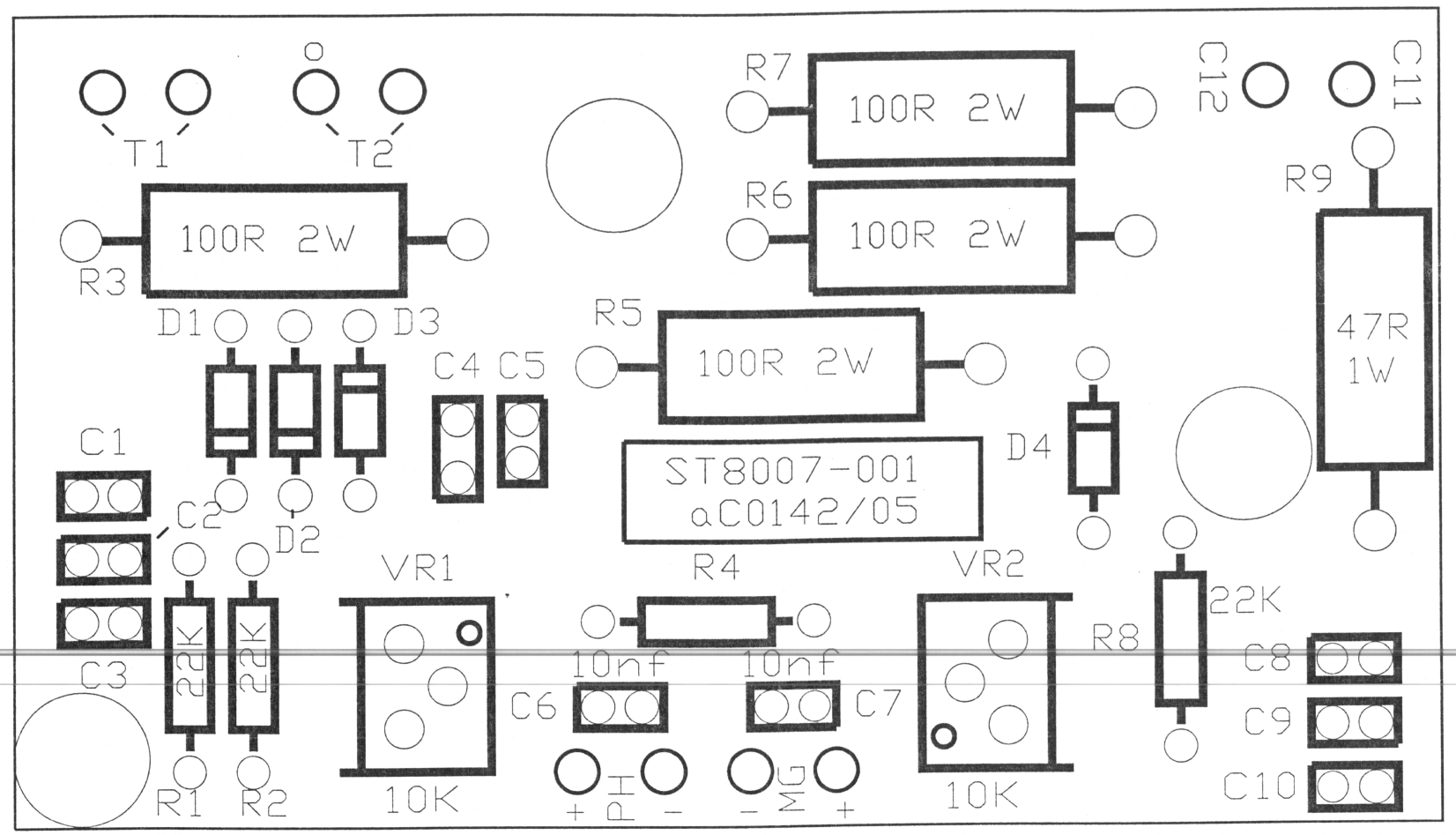
3rd ANGLE PROJECTION

REMOVE SHARP EDGES

DO NOT SCALE
IF IN DOUBT 'ASK'

DWG NO. CB301413 REV 02

REV	DATE	E C No.	ACTIONED
02	18DEC97	1376	



NOTES:
1. D1-D4 ARE 1N4148 DIODES
2. C1-C5, C8-C10 ARE 1nf 100V CAPACITORS
3. PLACE A SPOT OF ARALDITE UNDER VR1 AND VR2 TO HALT MOVEMENT WHEN ADJUSTING.

WARNING!
THIS DRAWING IS FOR VIEWING PURPOSES ONLY.
NOT TO BE MODIFIED

SURFACE TECHNOLOGY SYSTEMS

MATERIAL:-

FINISH:-

CUSTOMER:-

CHECKED:-

380KHz MAG AND PHASE DETECTOR PCB ASSEMBLY

APPROVED

USED ON:-

SERIAL No

DRAWN: N.Mc.

DWG NO. CB301413 REV 02

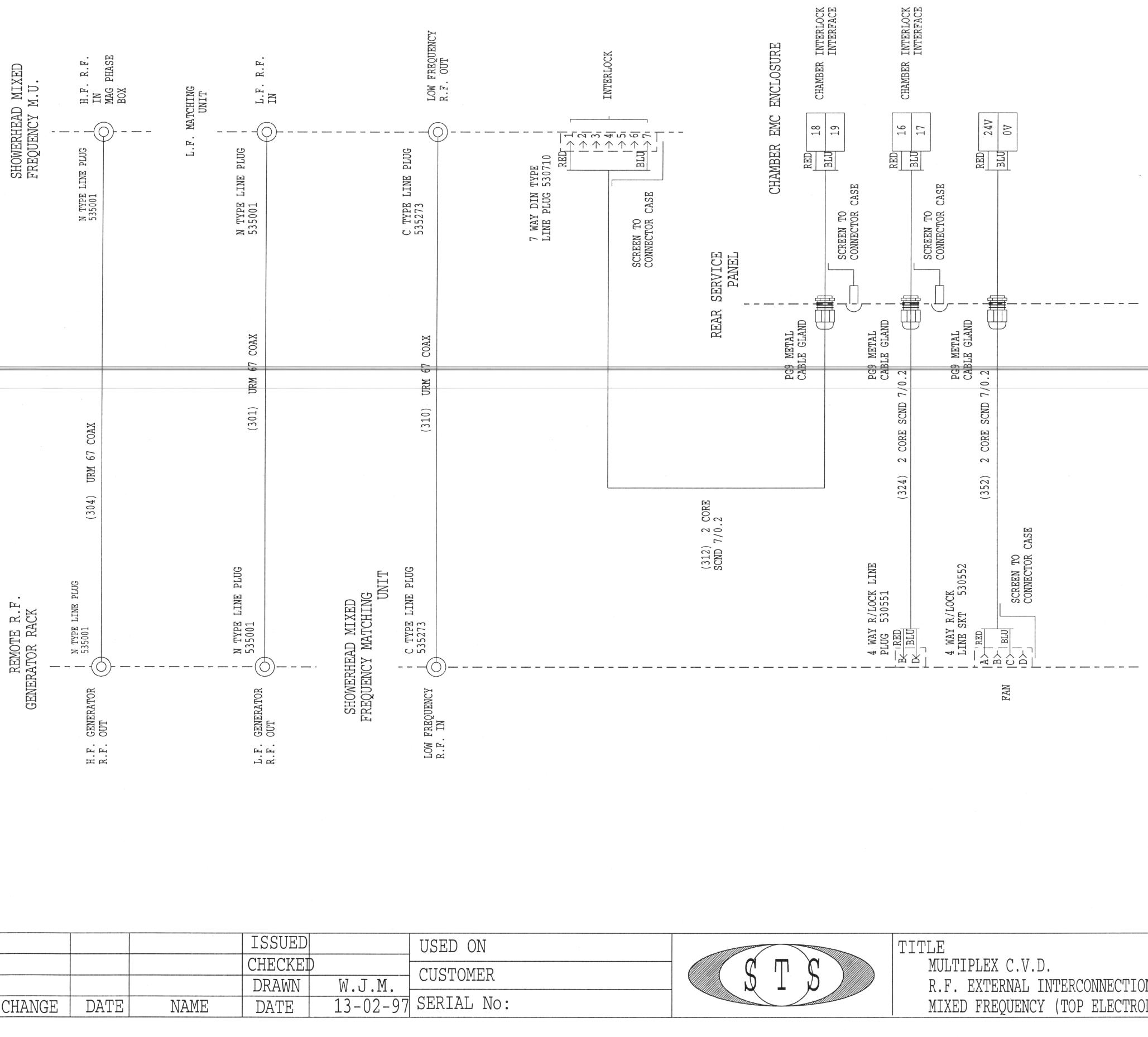
DATE: 20 FEB 97

SCALE

SHEET 1 OF 1

28

REV	CHANGE	DATE	NAME
B	MAG PHASE BOX REMOVED	26-6-97	W.J.M.



				ISSUED	
				CHECKED	
				DRAWN	W.J.M.
REV	CHANGE	DATE	NAME	DATE	13-02-97

USED ON

CUSTOMER

SERIAL No:

STS

TITLE
MULTIPLEX C.V.D.
R.F. EXTERNAL INTERCONNECTIONS
MIXED FREQUENCY (TOP ELECTRODE)

DRG No: ED301555.0B

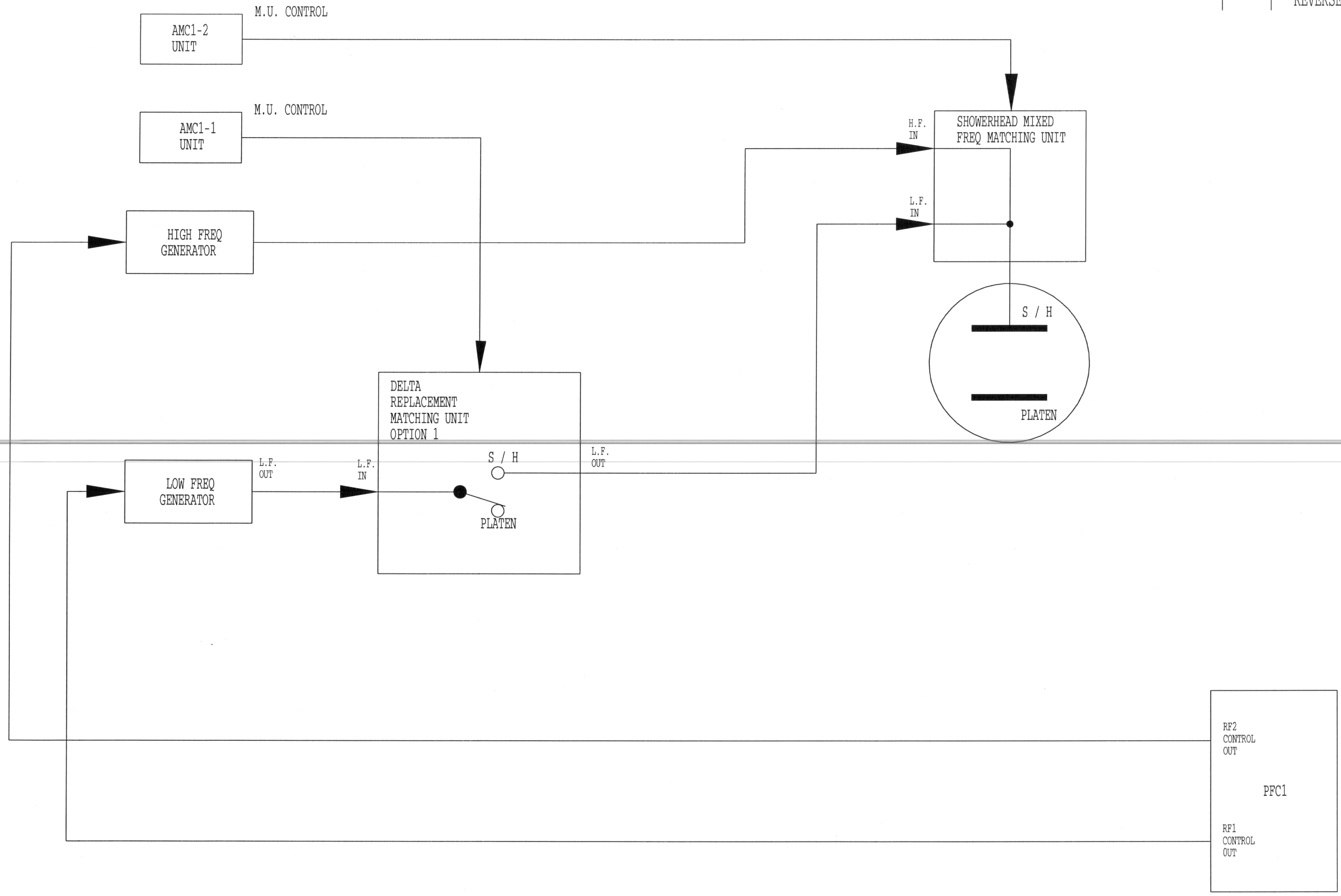
REV B

page 1

of 1 pages

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REV	CHANGE	DATE	NAME
B	RF1 & RF2 O/P REVERSED	26-6-97	W.J.M.



REV	CHANGE	DATE	NAME		
				ISSUED	
				CHECKED	
				DRAWN	W.J.M.
				DATE	13-03-97

USED ON

CUSTOMER

SERIAL No:

STS

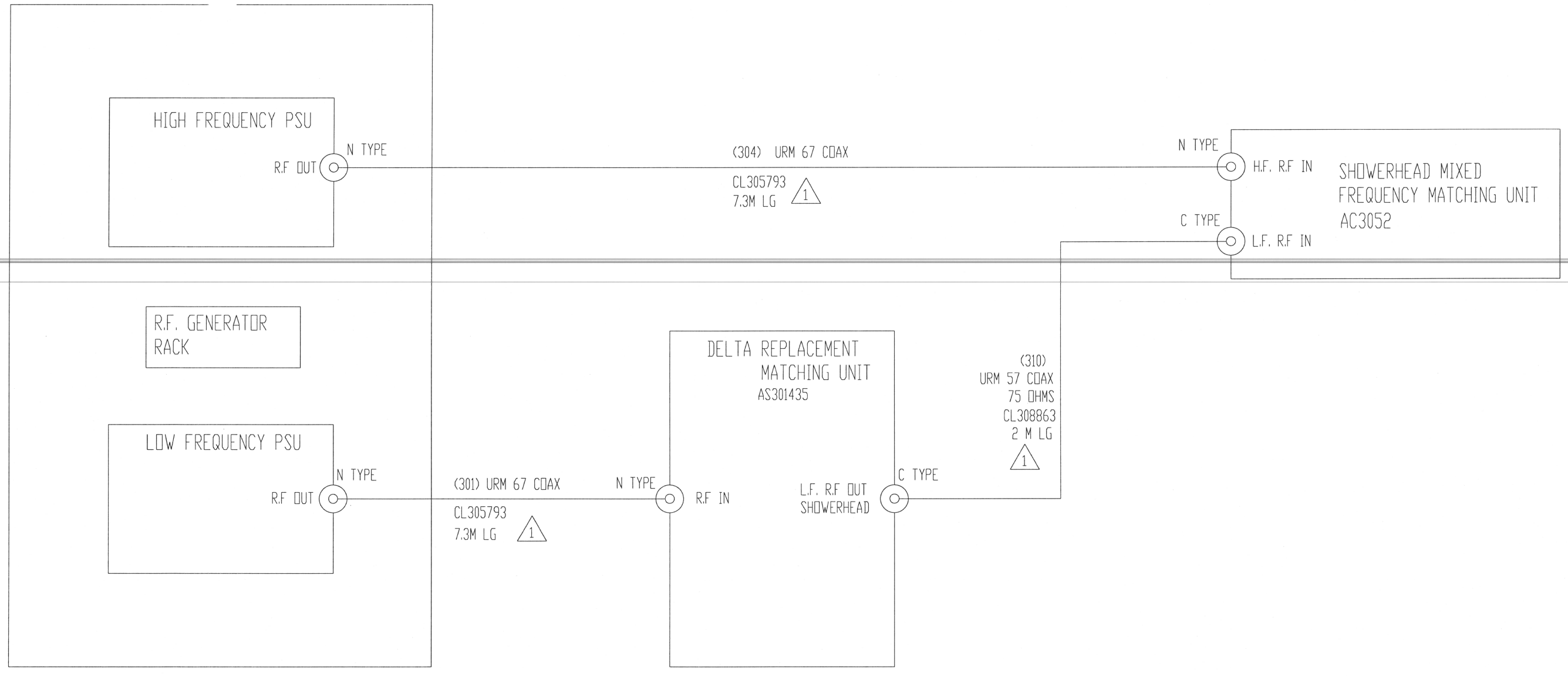
TITLE R.F. BLOCK DIAGRAM
MULTIPLEX / CLUSTER C.V.D.
MIXED FREQUENCY (TOP ELECTRODE)

DRG No: BD301561

REV B

page 1 of 1 pages

DRAWING NUMBER: ED301553 | REV: 01



APPROVED:
CHECKED:
SURFACE TECHNOLOGY SYSTEMS
TITLE: R.F. CONNECTION OVERVIEW
MIXED FREQUENCY (TOP ELECTRODE)

REV	DESCRIPTION	DATE	ACTIONED	ECN
01	TEXT ADDITIONS BOM 2277	11:10:99	J.M.G.	****

DRAWN: W.J.M.
DATE: 11:02:97
MATERIAL:
FINISH:
SCALE ON A3
DRAWING NUMBER: ED301553
SHEET1 OF1
REV: 01

REV		DATE	NAME
B	A.M.C. I / D's ADDED	26-6-97	W.J.M.

CHAMBER SIDE

REMOTE R.F. GENERATOR RACK
AS301095

HIGH FREQUENCY PSU
R.F OUT — N TYPE

LOW FREQUENCY PSU
R.F OUT — N TYPE

(304) URM 67 COAX

(301) URM 67 COAX

SHOWERHEAD MIXED FREQUENCY MATCHING UNIT
AC3052/04

N TYPE — MAG PHASE BOX HIGH FREQUENCY R.F. IN

15 WAY IDC D TYPE LINE SKT

1	+ REFERENCE
2	- REFERENCE
3	TUNE FEEDBACK
4	LOAD FEEDBACK
5	- TUNE MOTOR
6	+ TUNE MOTOR
7	+ LOAD MOTOR
8	- LOAD MOTOR
9	+ MAG INPUT
10	- MAG INPUT
11	+ PHASE INPUT
12	- PHASE INPUT
13	ELECTRODE SELECT
14	+ 24V
15	RETURN

MATCHING UNIT CONTROL

(261) 15 WAY ROUND RIBBON

SCREEN TO CONNECTOR CASE

(305) 3 CORE SCND 7/0.2

ELECTRONICS RACK
AD300932

A.M.C.1-2 HIGH FREQUENCY MATCHING UNIT CONTROL
SK1

15 WAY IDC D TYPE LINE SKT

+ REFERENCE	1
- REFERENCE	2
TUNE FEEDBACK	3
LOAD FEEDBACK	4
- TUNE MOTOR	5
+ TUNE MOTOR	6
+ LOAD MOTOR	7
- LOAD MOTOR	8
+ MAG INPUT	9
- MAG INPUT	10
+ PHASE INPUT	11
- PHASE INPUT	12
ELECTRODE SELECT	13
+ 24V	14
RETURN	15

PG9 GLAND — PA6 G13

SCREEN TO CON CASE

LOW FREQUENCY MATCHING UNIT
AS301435

N TYPE — L.F. R.F IN

C TYPE — L.F. R.F OUT

(310) URM 67 COAX

C TYPE — L.F. R.F IN — LOW FREQUENCY R.F. IN

EMC MODULE HOUSING
REFER TO ED301219

A.M.C.1-1 LOW FREQUENCY MATCHING UNIT CONTROL
SK2

15 WAY IDC D TYPE LINE SKT

+ REFERENCE	1
- REFERENCE	2
TUNE FEEDBACK	3
LOAD FEEDBACK	4
- TUNE MOTOR	5
+ TUNE MOTOR	6
+ LOAD MOTOR	7
- LOAD MOTOR	8
+ MAG INPUT	9
- MAG INPUT	10
+ PHASE INPUT	11
- PHASE INPUT	12
ELECTRODE SELECT	13
+ 24V	14
RETURN	15

PG9 GLAND — PA6 G12

(260) 15 WAY ROUND RIBBON

SCREEN TO CONNECTOR CASE

15 WAY IDC D TYPE LINE SKT — MATCHING UNIT CONTROL

1	+ REFERENCE
2	- REFERENCE
3	TUNE FEEDBACK
4	LOAD FEEDBACK
5	- TUNE MOTOR
6	+ TUNE MOTOR
7	+ LOAD MOTOR
8	-LOAD MOTOR
9	+ MAG I/P
10	-MAG I/P
11	+ PHASE I/P
12	- PHASE I/P
13	ELCTRODE SELECT
14	+24V
15	RETURN

SCREEN TO CONNECTOR CASE

MICROSWITCH — INTERLOCKS

7 WAY DIN LINE PLUG

1	RED
2	
3	
4	
5	
6	
7	BLU

4 WAY R/LOCK LINE PLUG

RED	1
	2
	3
BLU	4

INTERLOCK

SCREEN TO CONNECTOR CASE

(324) 2 CORE SCND 7/0.2

CHAMBER EMC ENCLOSURE

PG9 METAL CABLE GLAND — RED 16, BLU 17

PG9 METAL CABLE GLAND — RED 18, BLU 19

INTERLOCK INTERFACE

(312) 2 CORE SCND 7/0.2

REV	CHANGE	DATE	NAME		
				ISSUED	
				CHECKED	
				DRAWN	W.J.M.
				DATE	13-03-97

USED ON

CUSTOMER

SERIAL No:

S T S

TITLE
MATCHING UNITS CONTROL WIRING
MIXED FREQUENCY (TOP ELECTRODE)

DRG No: ED301554.0B

REV B

page 1 of 1 pages