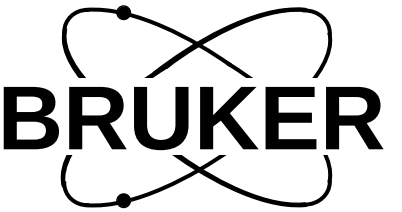


BLAXH50
200-400MHz

TECHNICAL MANUAL

Version 003

Sadis BRUKER SPECTROSPIN

This manual was written by

M.Dominique WURTZ

Wissembourg, FRANCE
P/N: W1302172

Updated for BASH 2.0 by U. Roos - December 1996

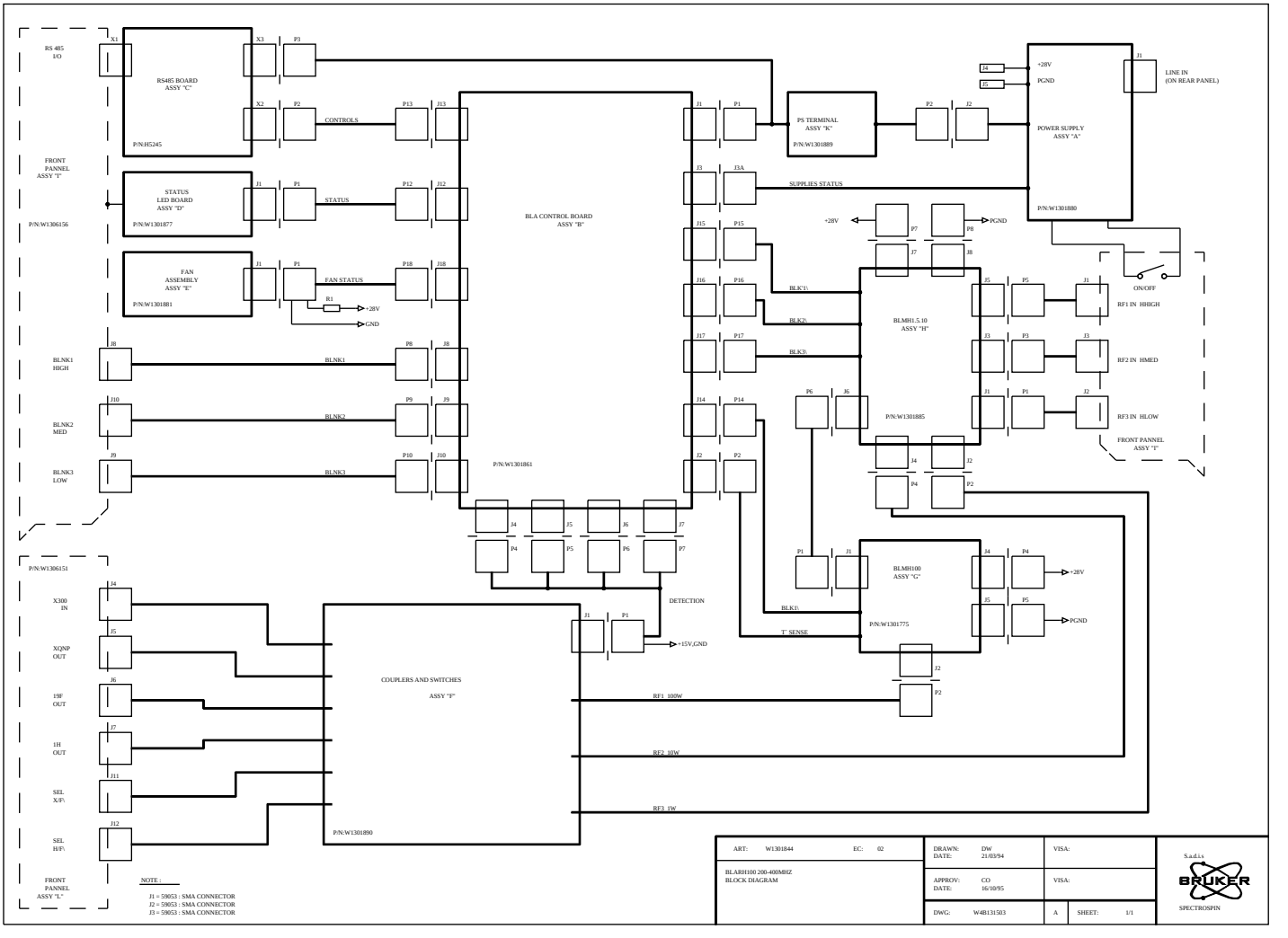
Manual P/N: Z31267
DWG-No: 980 003

Contents

Block diagram

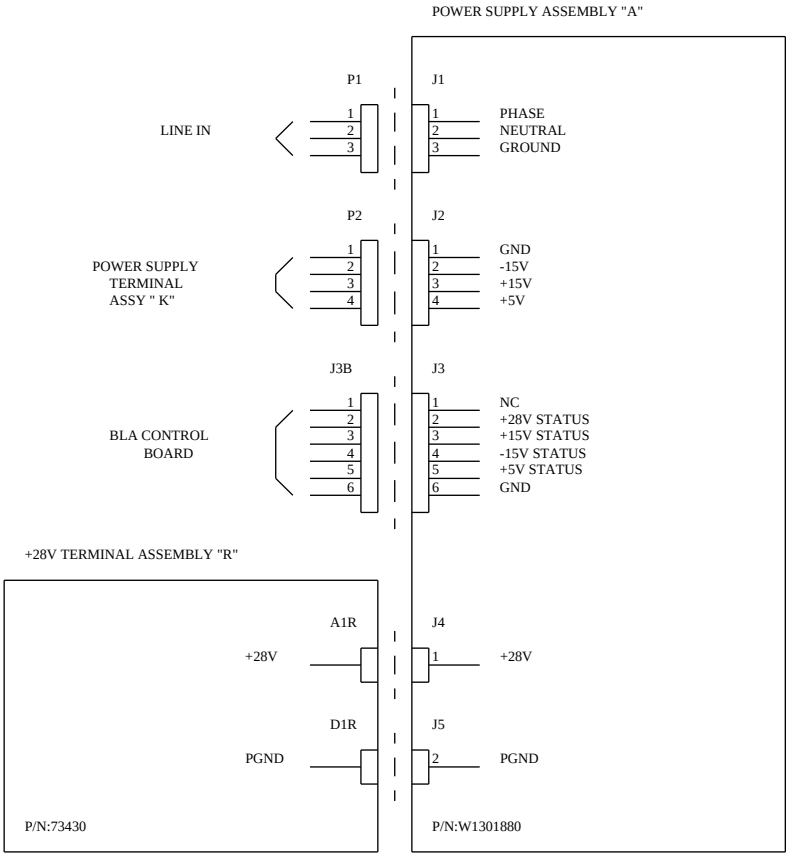
1

Figure 1.1. Block diagram



Power supply 2

Figure 2.1. Wiring diagram



ART: W1301880 EC:	DRAWN: DW DATE: 03/01/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA POWER ASSEMBLY ASSY "A" INTERCONNECT DRAWING	APPROV: CO DATE: 01/06/94	VISA:	
	DWG: W4W131518	SHEET: 1/1	

Figure 2.2. Power supply diagram

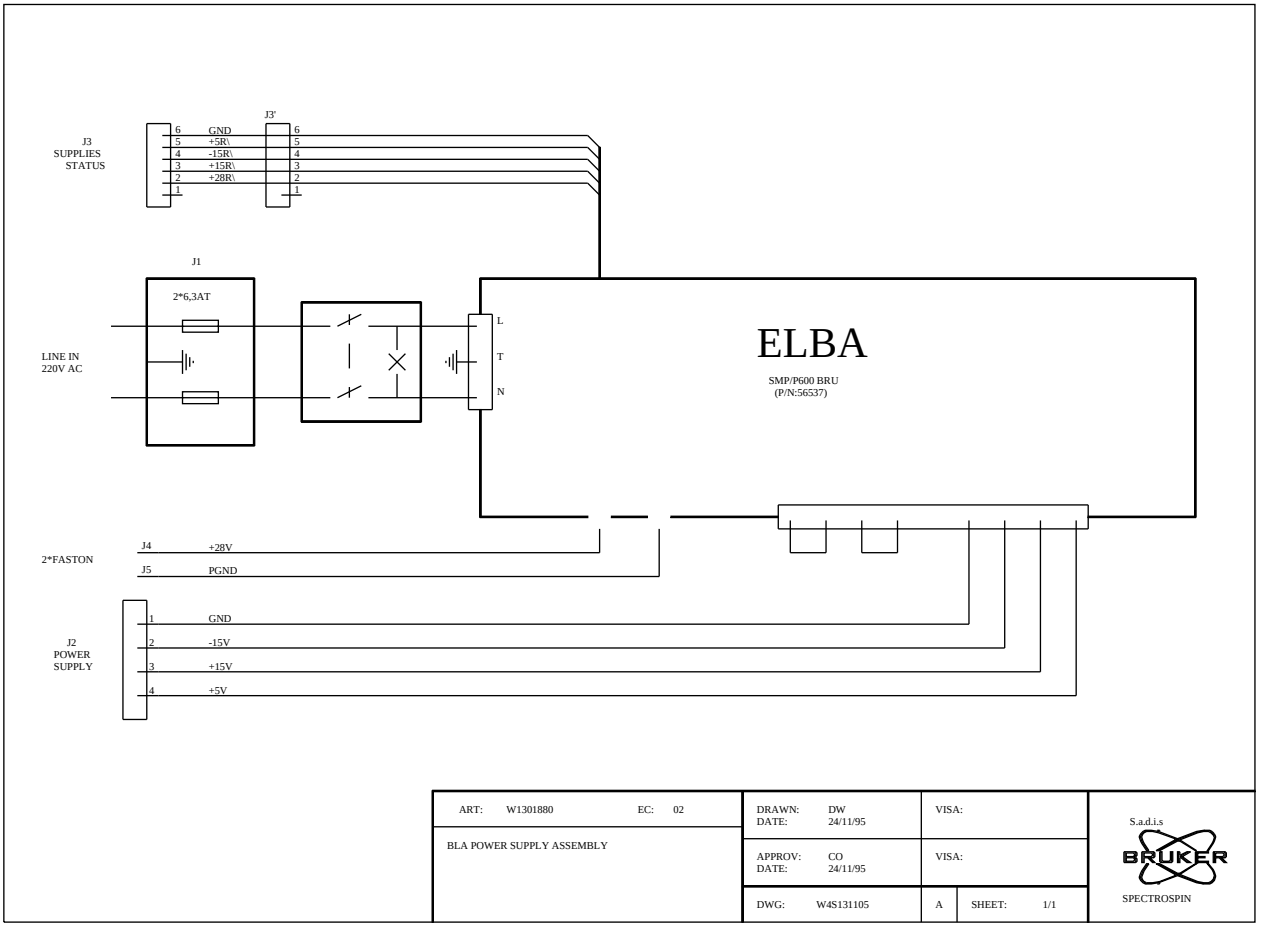
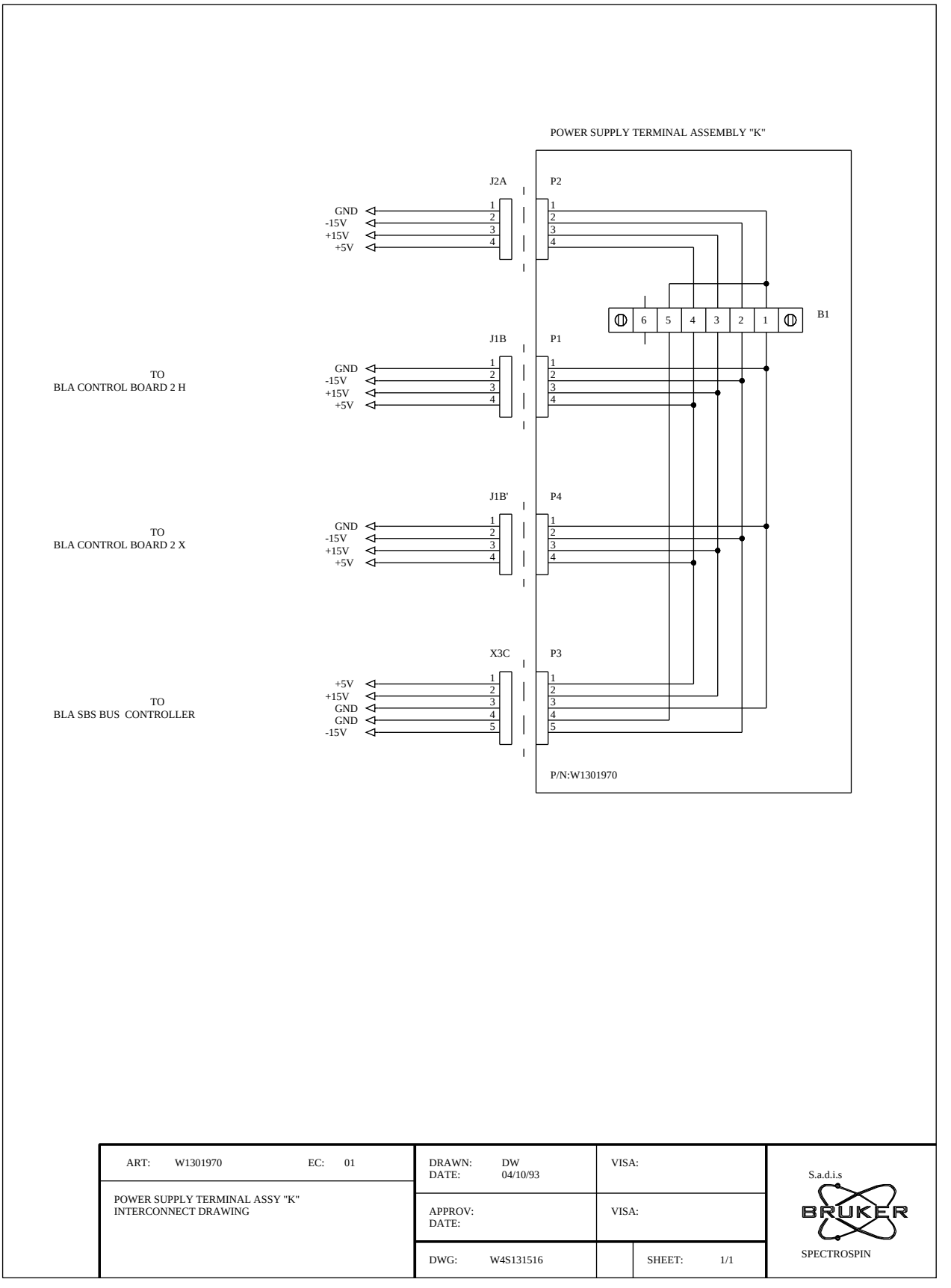
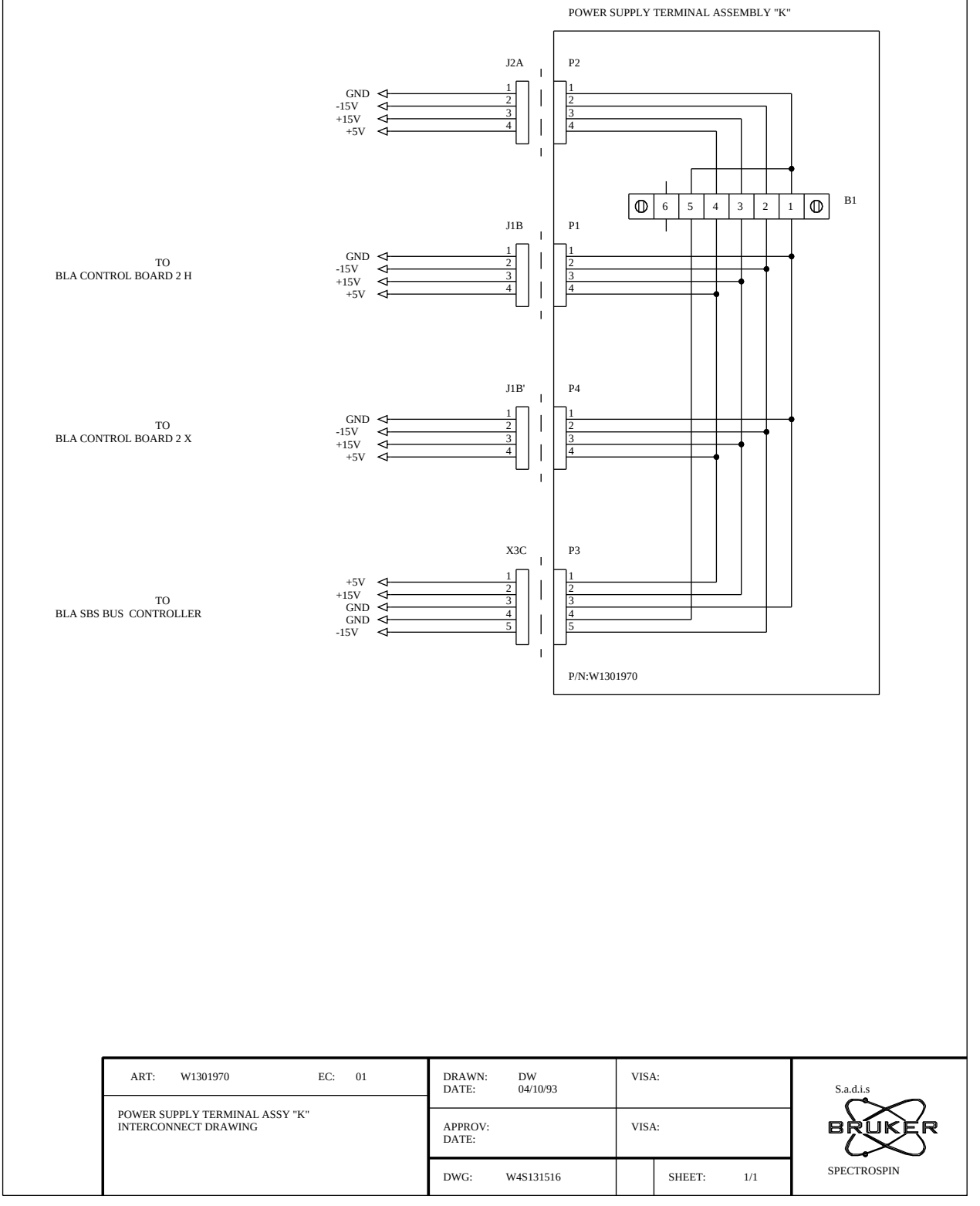


Figure 2.3. Power supply terminal



ART: W1301970 EC: 01	DRAWN: DW DATE: 04/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
POWER SUPPLY TERMINAL ASSY "K" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4S131516	SHEET: 1/1	

Figure 2.4. Power supply terminal



ART: W1301970 EC: 01	DRAWN: DW DATE: 04/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
POWER SUPPLY TERMINAL ASSY "K" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4S131516	SHEET: 1/1	

Control board 2

3

Figure 3.1. Interconnect drawing sheet 1/3

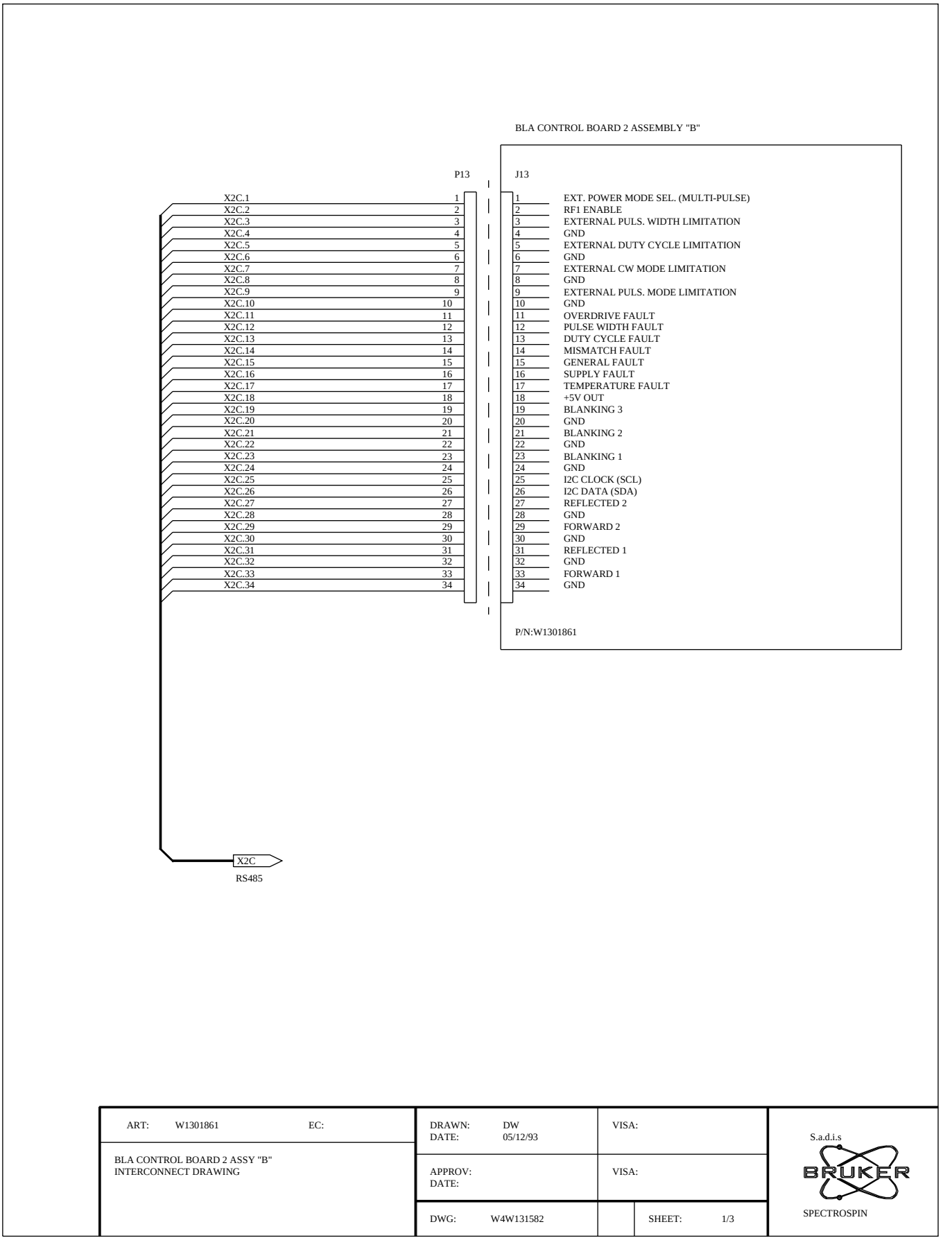
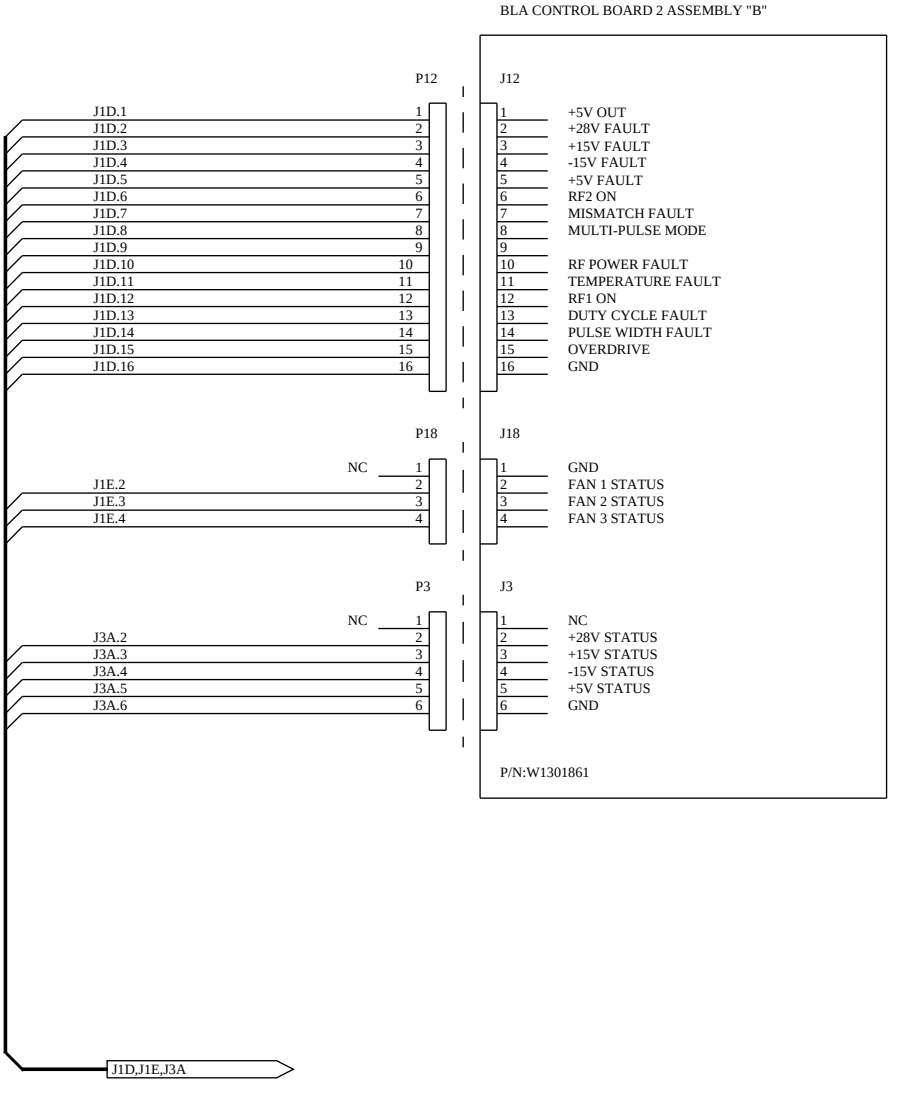
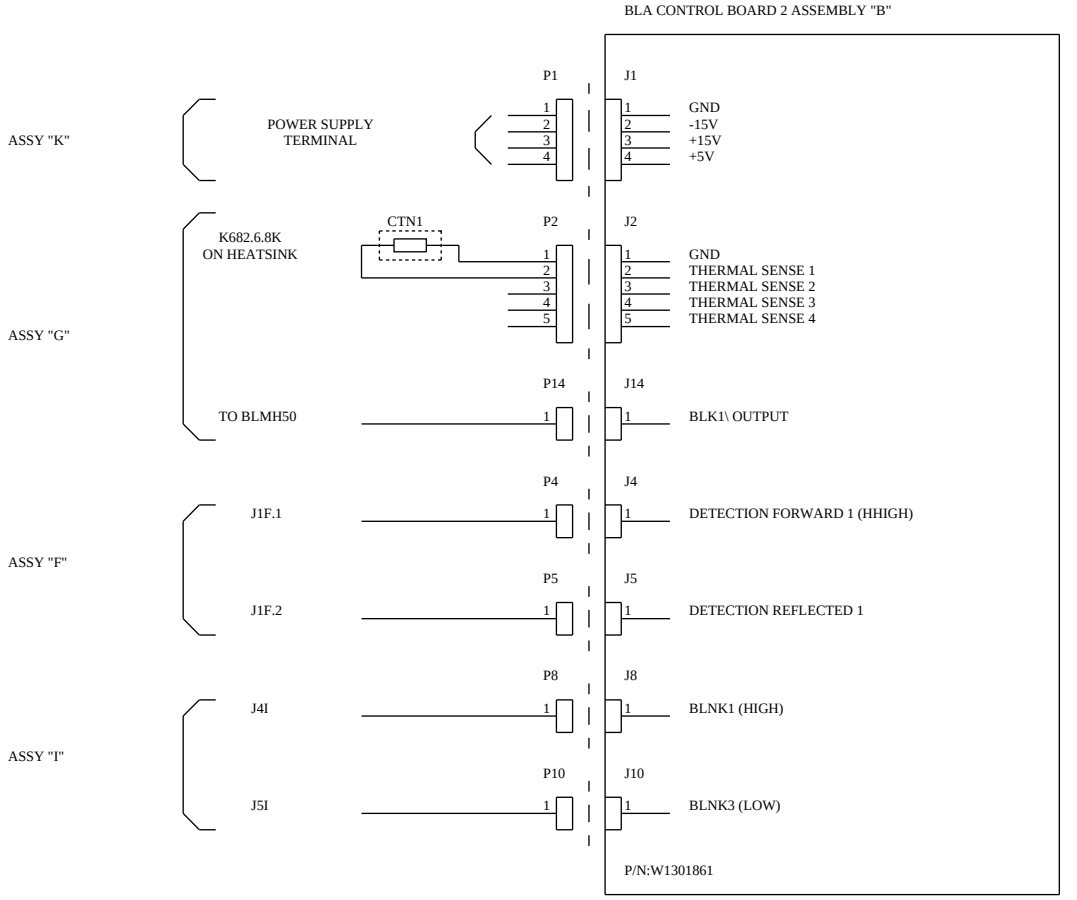


Figure 3.2. Interconnect drawing sheet 2/3



ART: W1301861 EC:	DRAWN: DW DATE: 05/12/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131583	SHEET: 2/3	

Figure 3.3. Interconnect drawing sheet 3/3



ART: W1301861 EC:	DRAWN: DW DATE: 29/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131522	SHEET: 3/3	

Figure 3.4. Control board top side

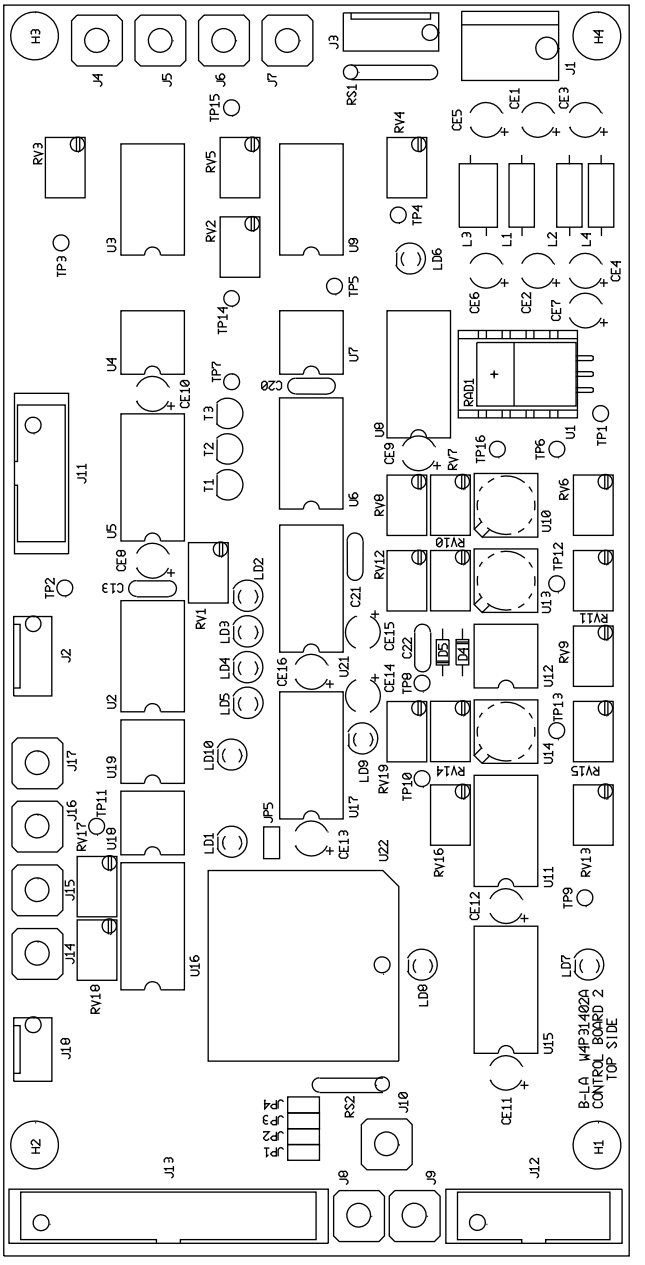


Figure 3.5. Control board bottom side

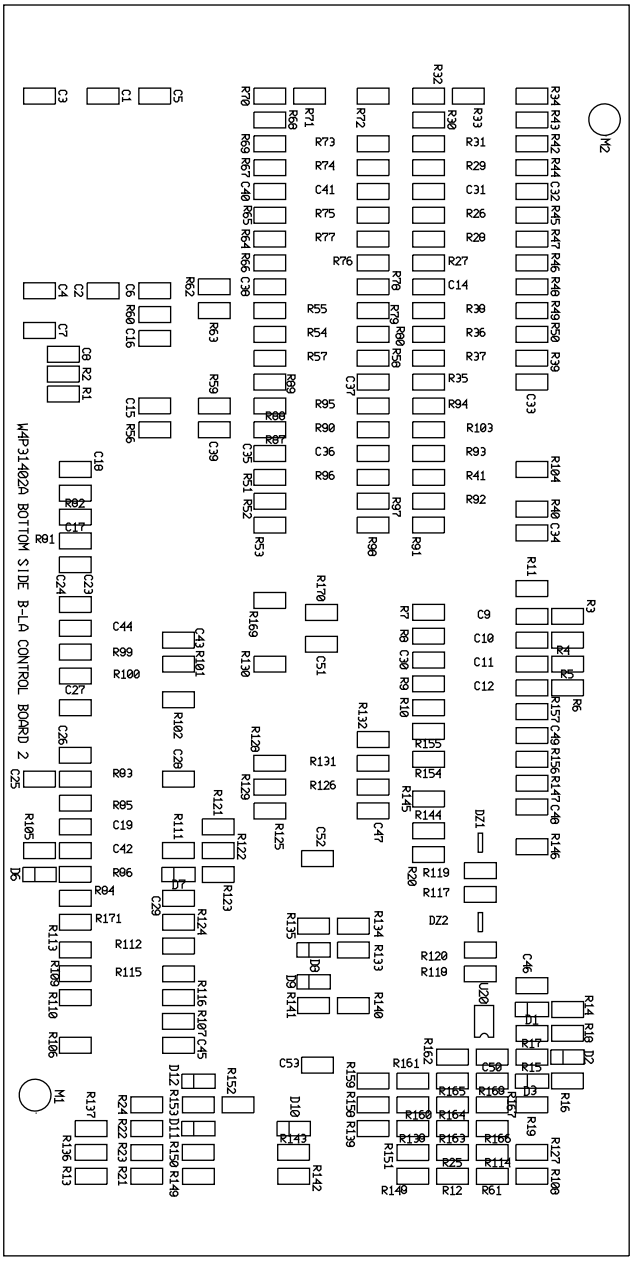


Figure 3.6. Control board 1/7 - power supply & reference

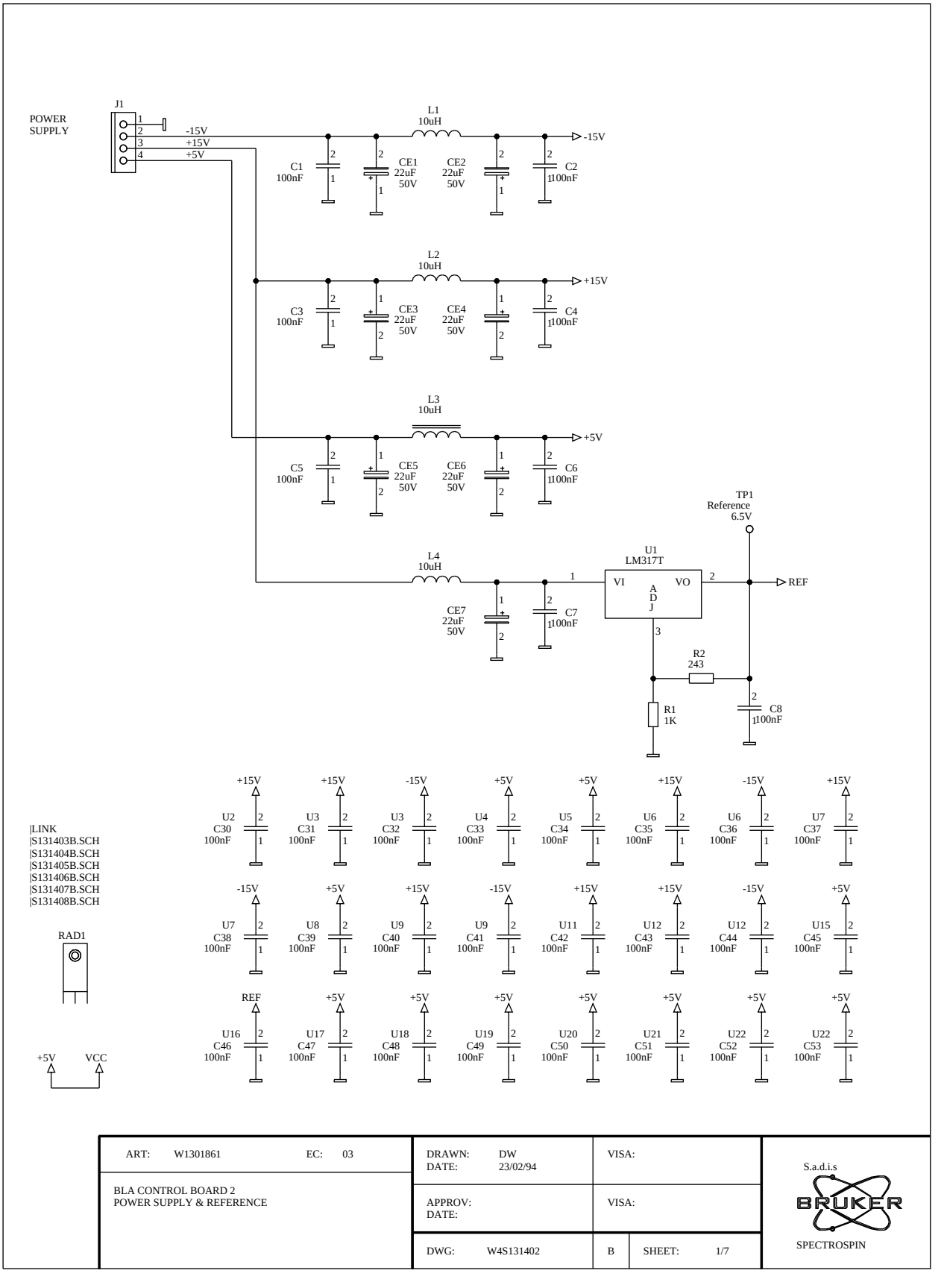


Figure 3.7. Control board 2/7 - Thermal sense, supply & fan control

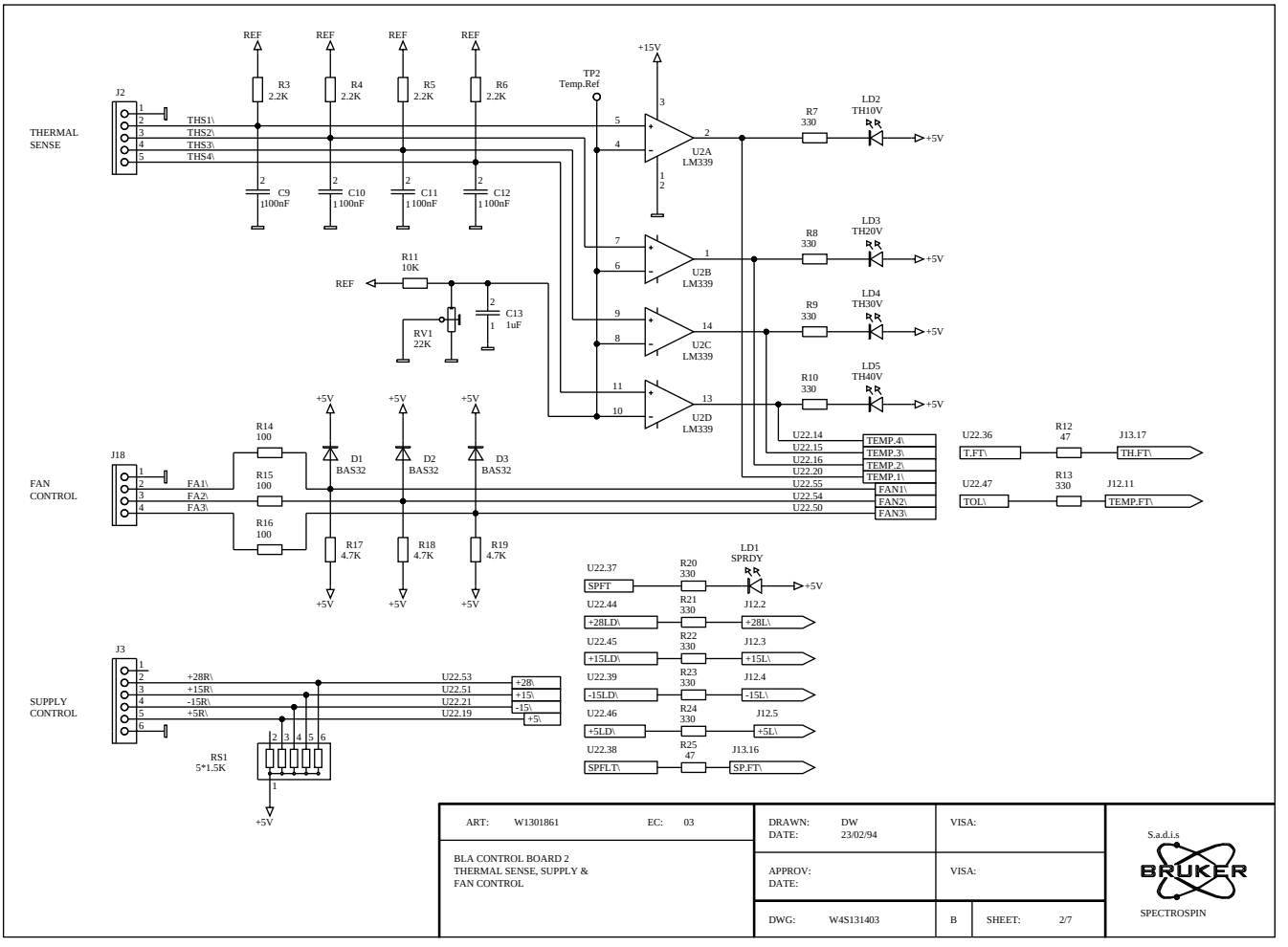


Figure 3.8. Control board 3/7 - Forward & reflected

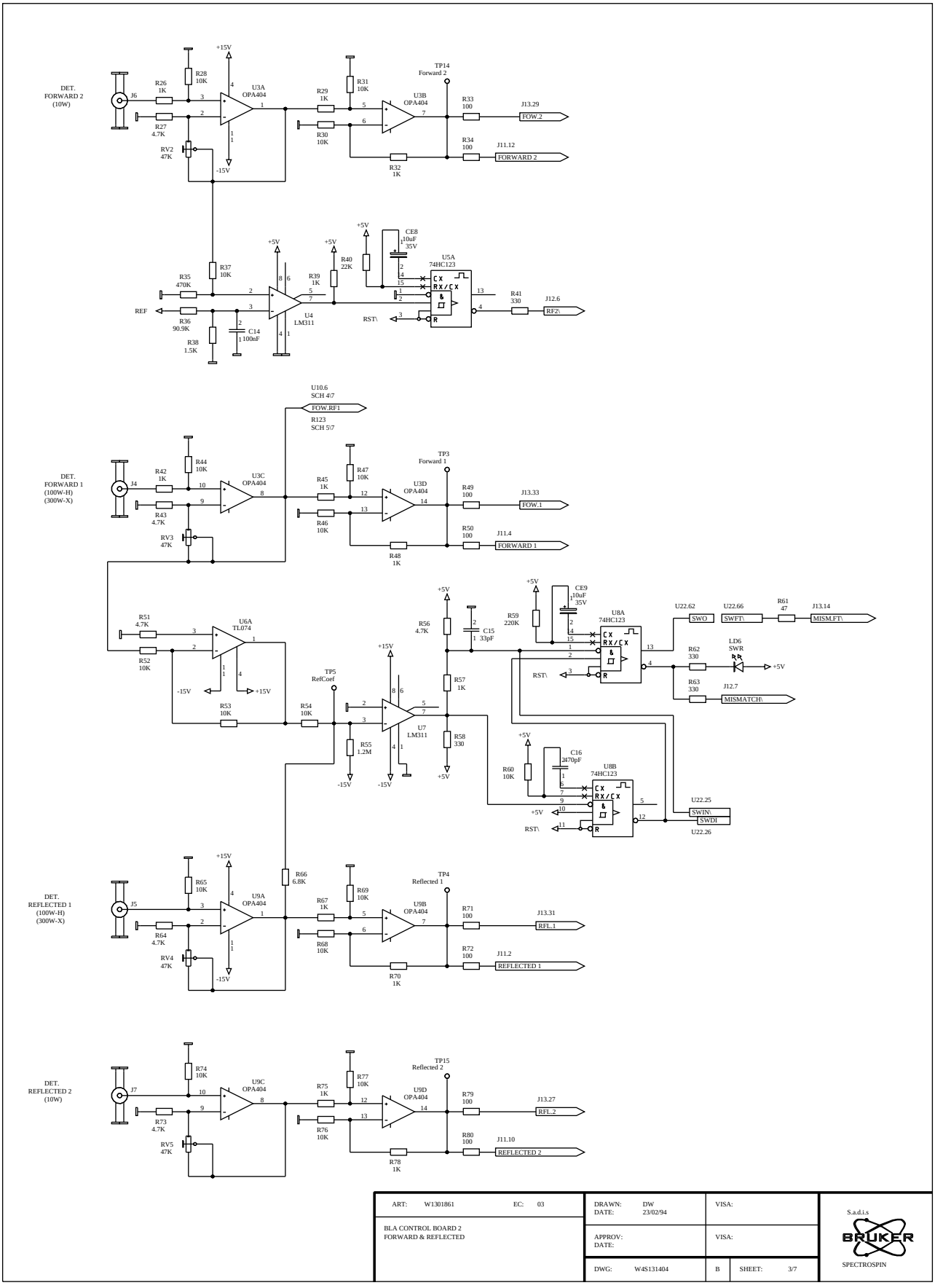


Figure 3.9. Control board 4/7 - Duty cycle & pulse width limiter

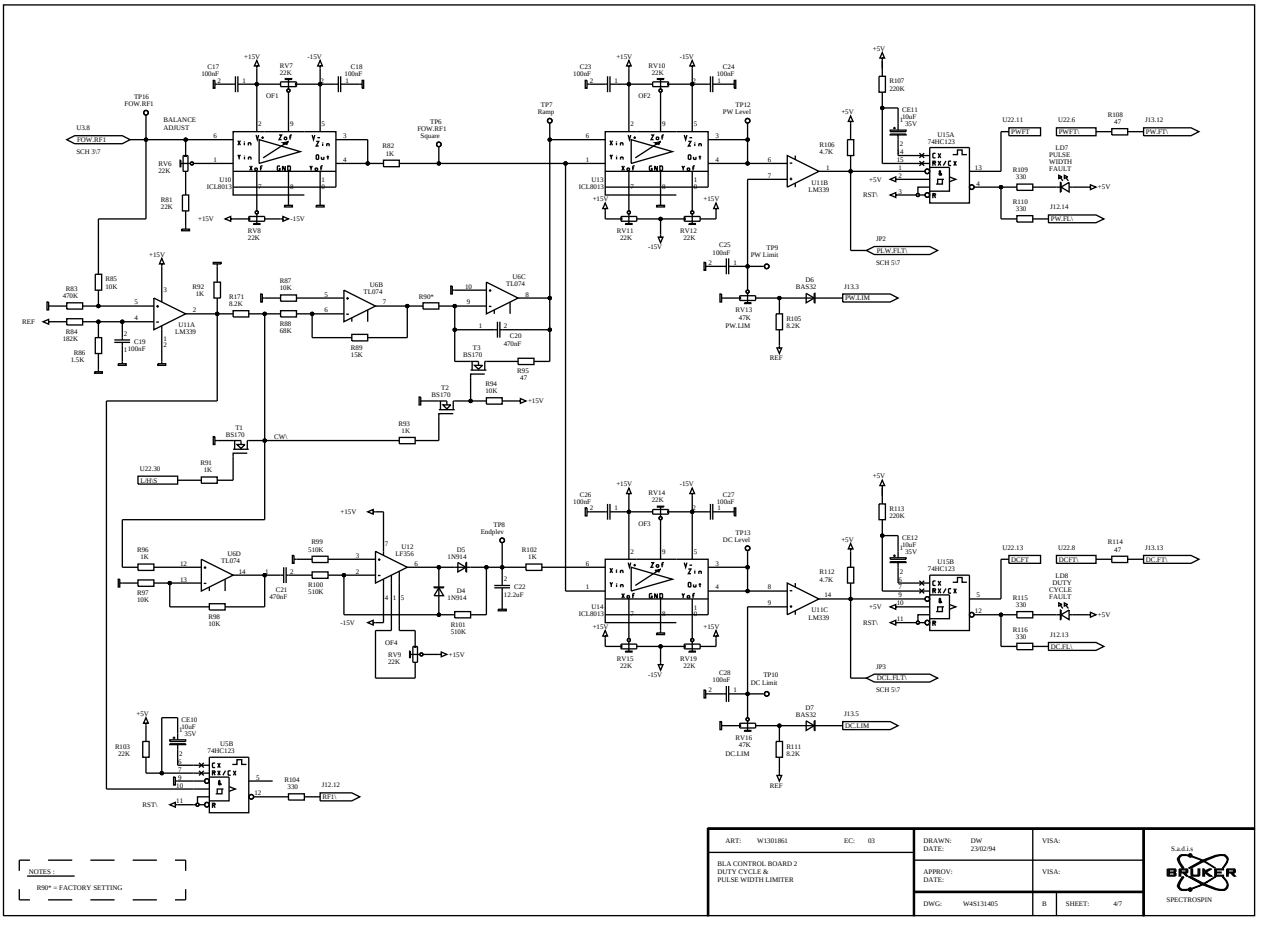


Figure 3.10. Control board 5/7 - Power limitation

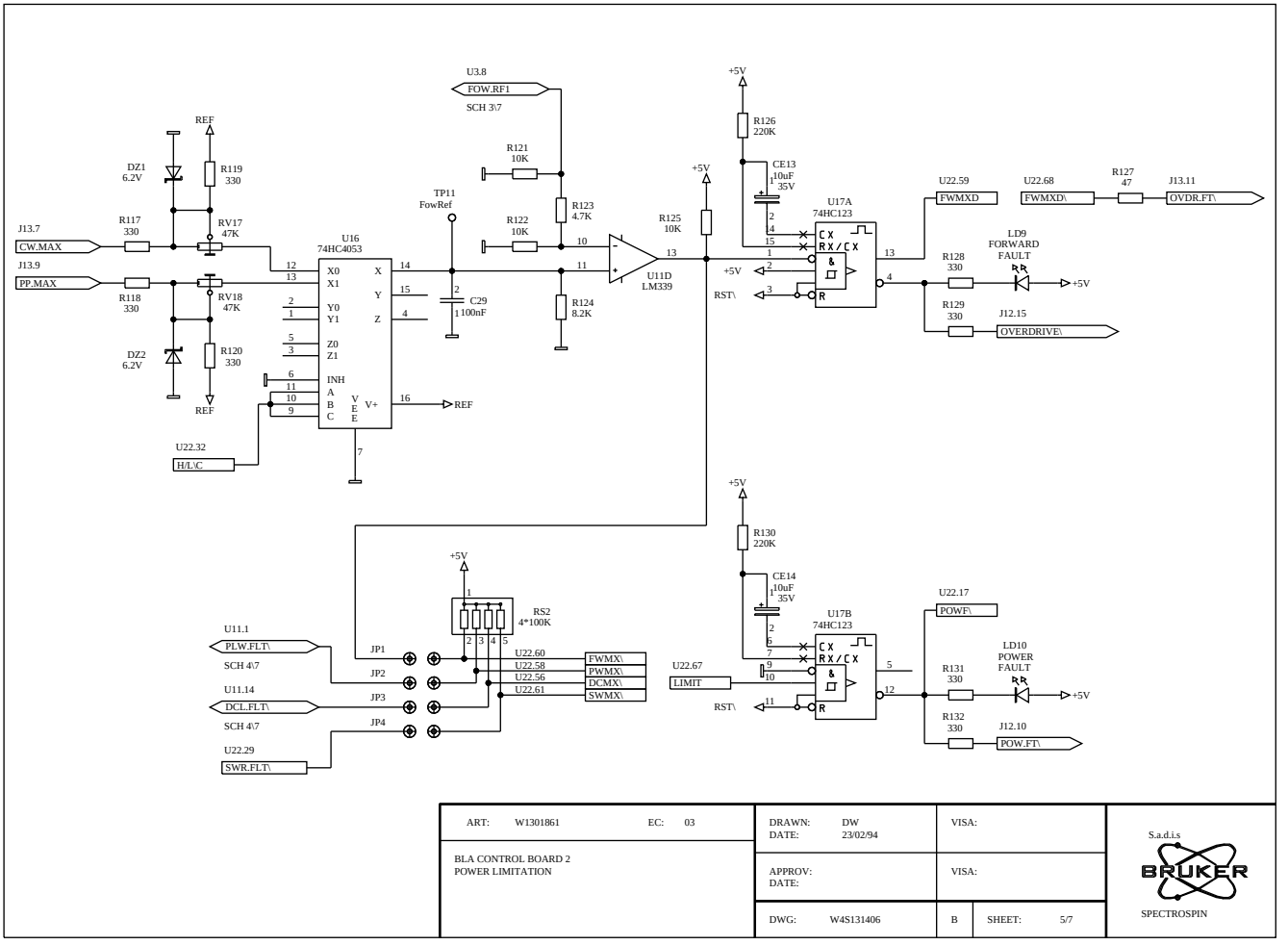


Figure 3.11. Control board 6/7 - Blanking circuit

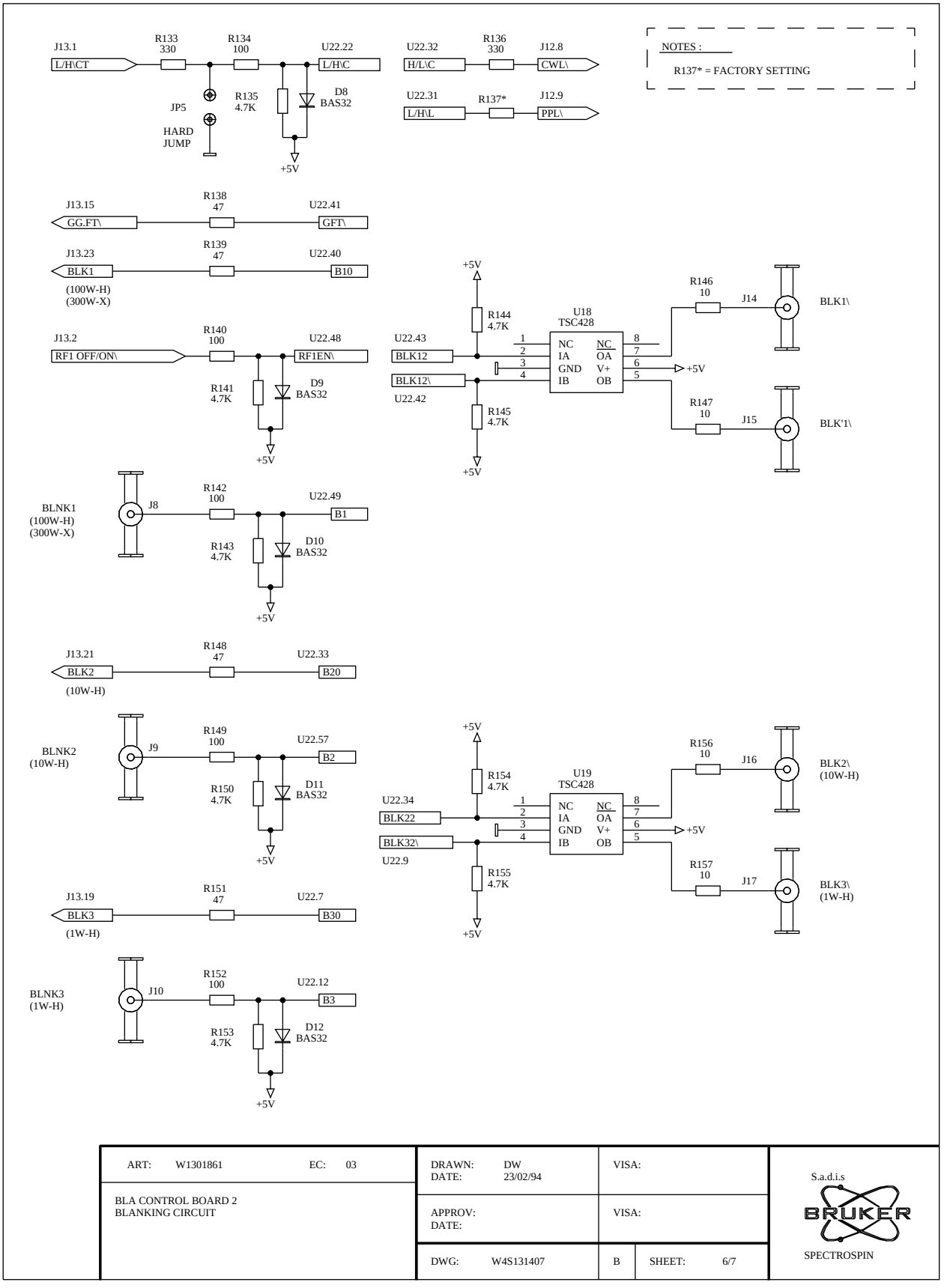
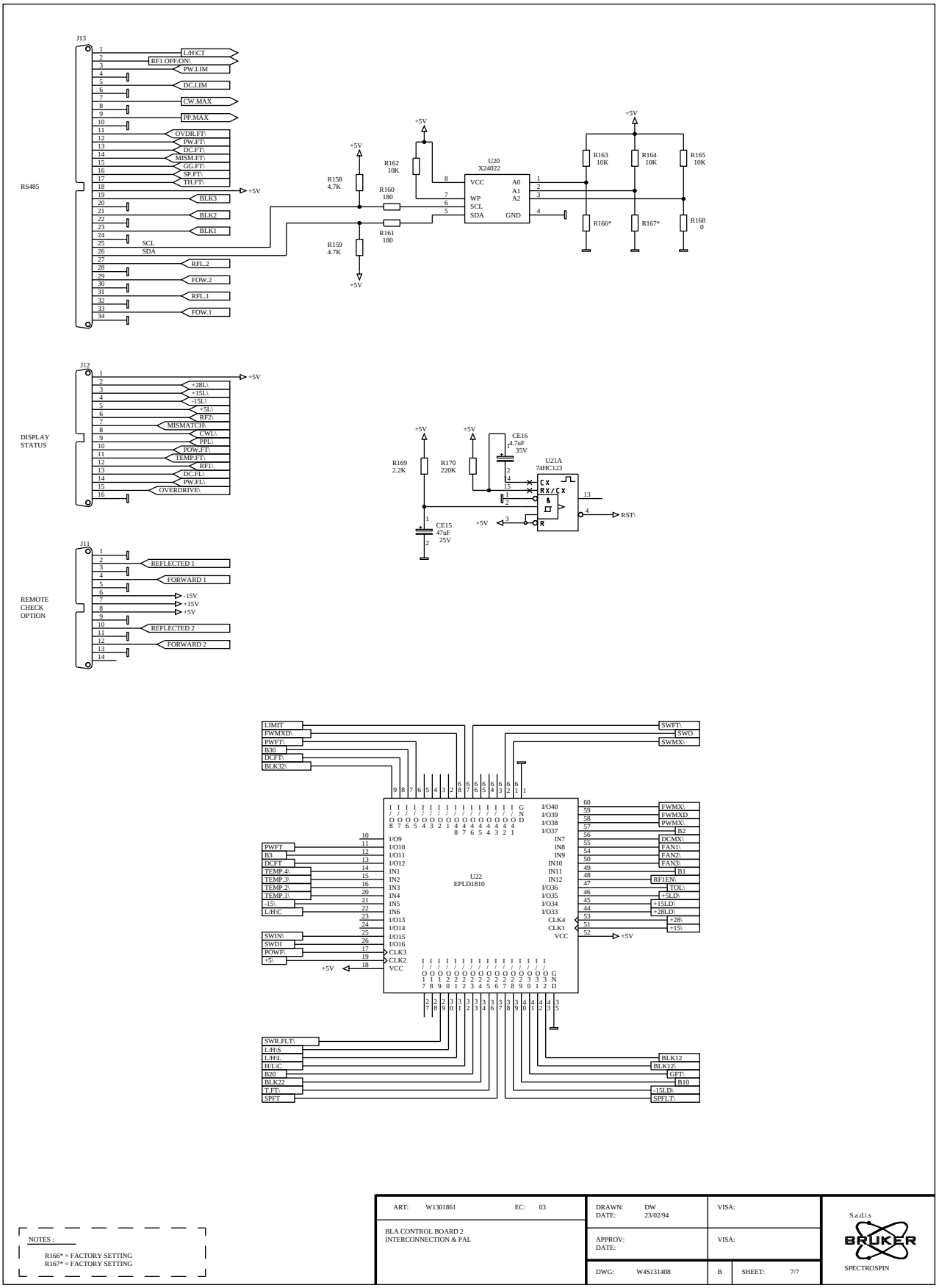


Figure 3.12. Control board 7/7 - Interconnection & pal



NOTES :

R166* = FACTORY SETTING
R167* = FACTORY SETTING

ART: W1301861 EC: 03	DRAWN: DW DATE: 23/02/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 INTERCONNECTION & PAL	APPROV: DATE:	VISA:	
	DWG: W4S131408	B	SHEET: 7/7

Figure 3.13. Pal interconnection

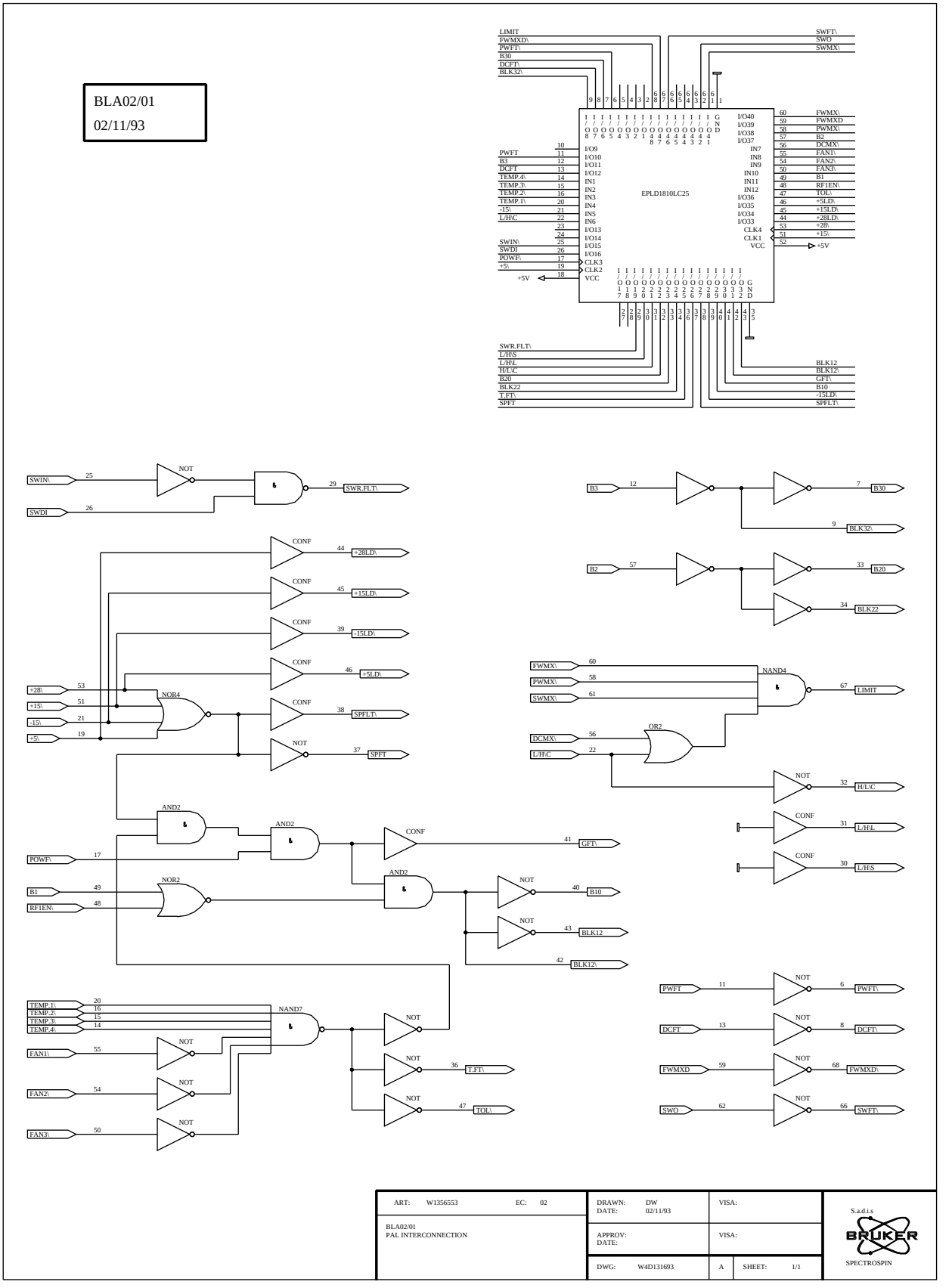


Figure 3.14. Wiring diagram

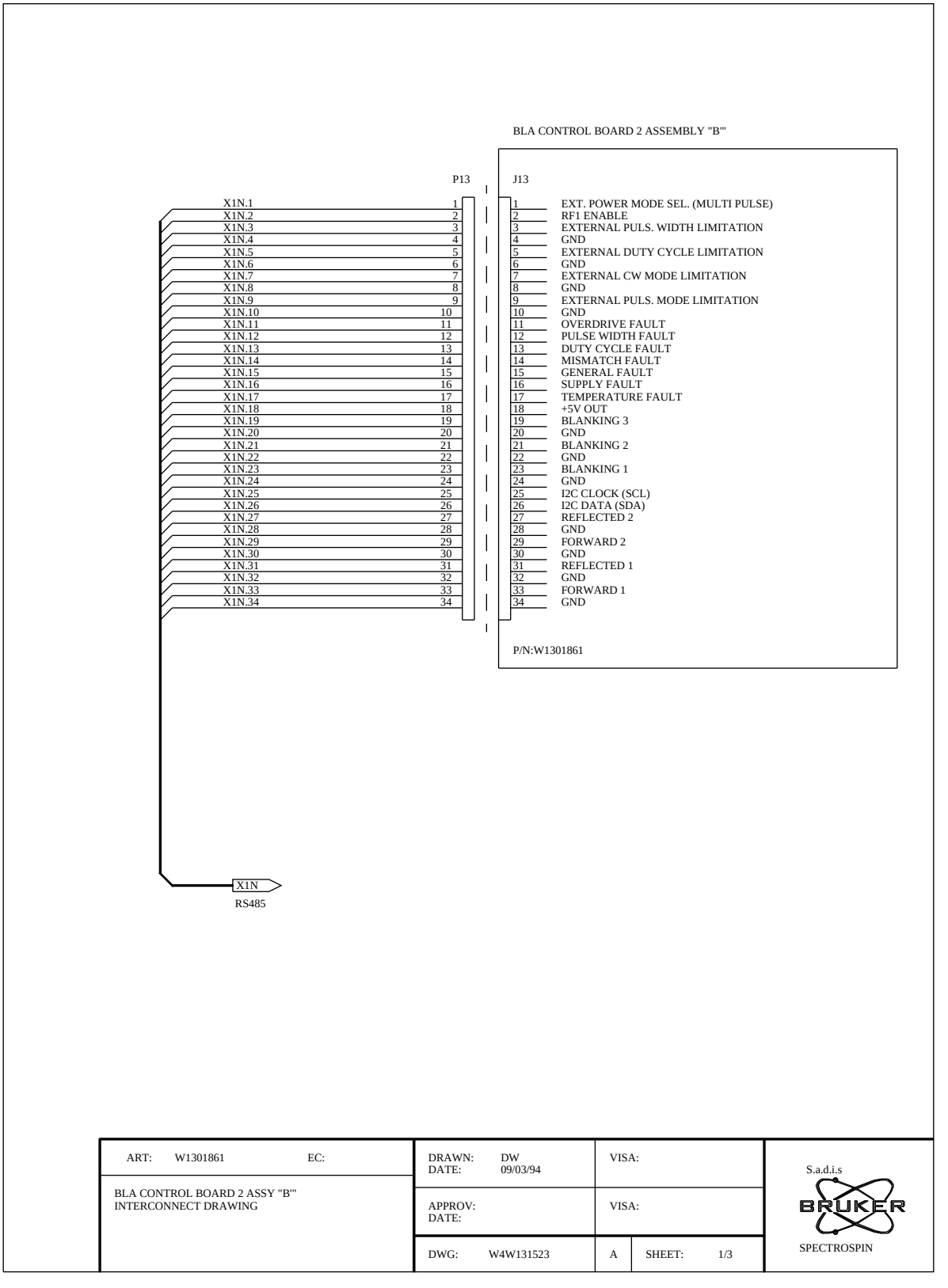
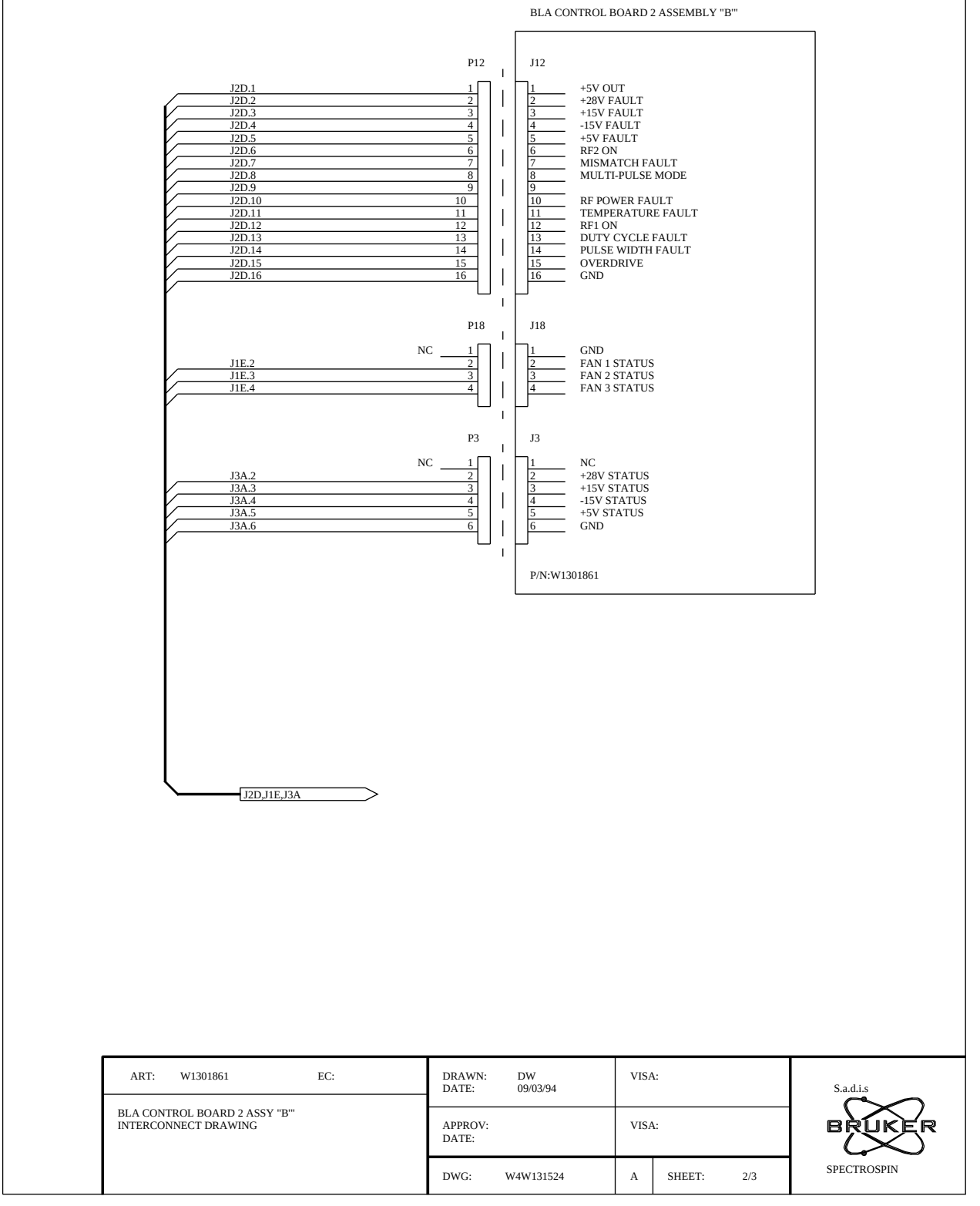
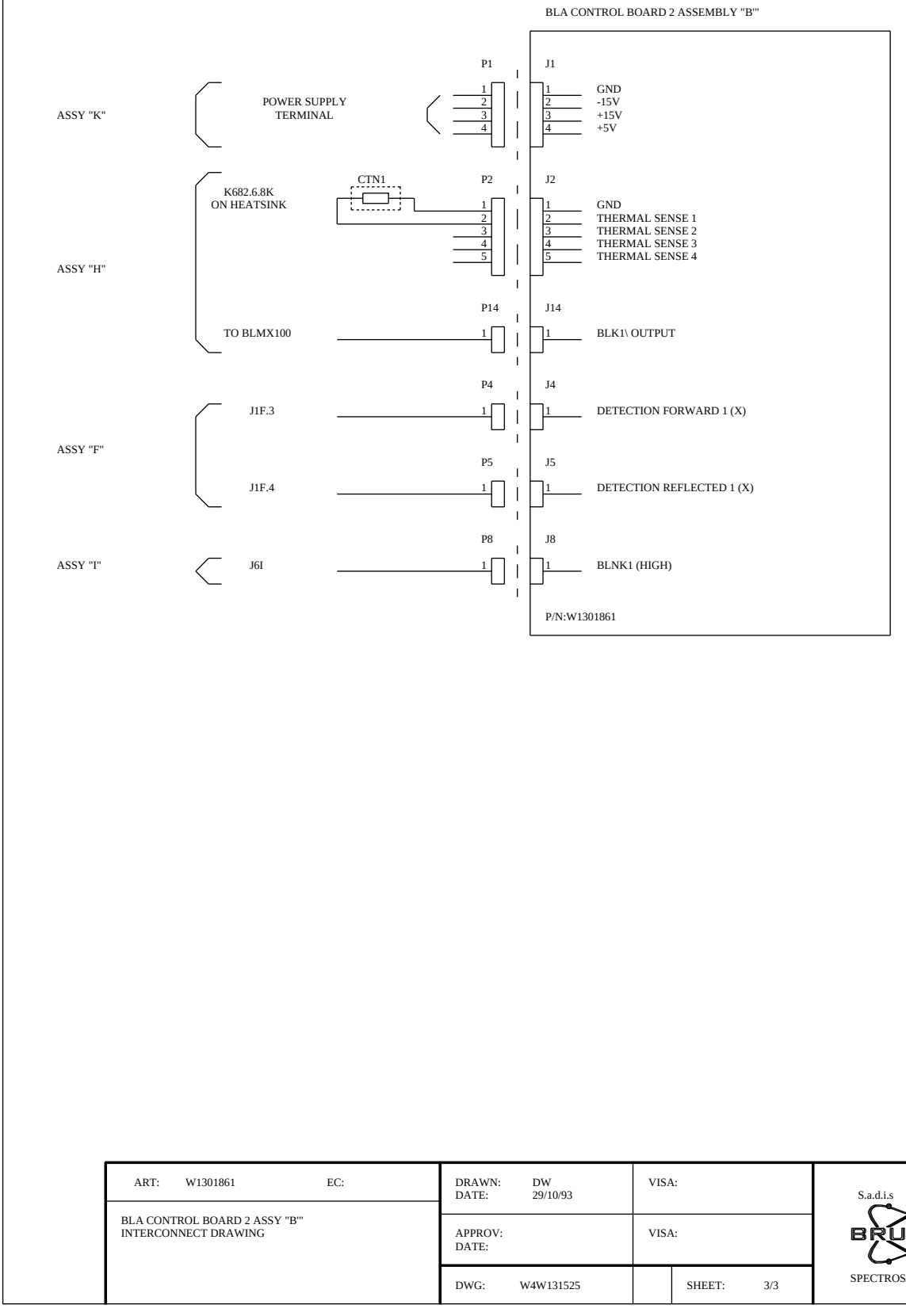


Figure 3.15. Wiring diagram



ART: W1301861 EC:	DRAWN: DW DATE: 09/03/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B'" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131524	A SHEET: 2/3	

Figure 3.16. Wiring diagram



ART: W1301861 EC:	DRAWN: DW DATE: 29/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B'" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131525	SHEET: 3/3	

Status board

4

Figure 4.17. Interconnect drawing

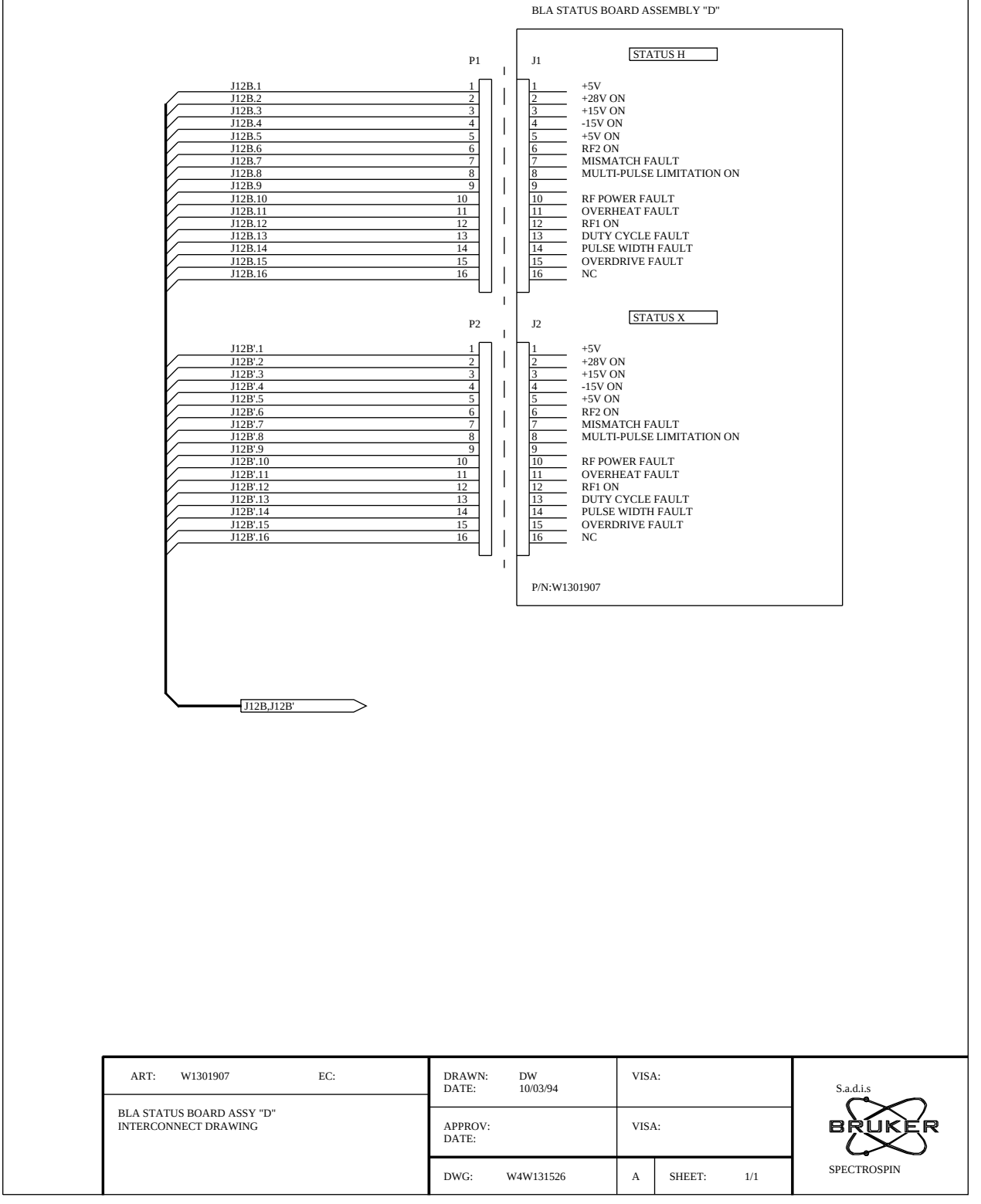


Figure 4.18. Status led board

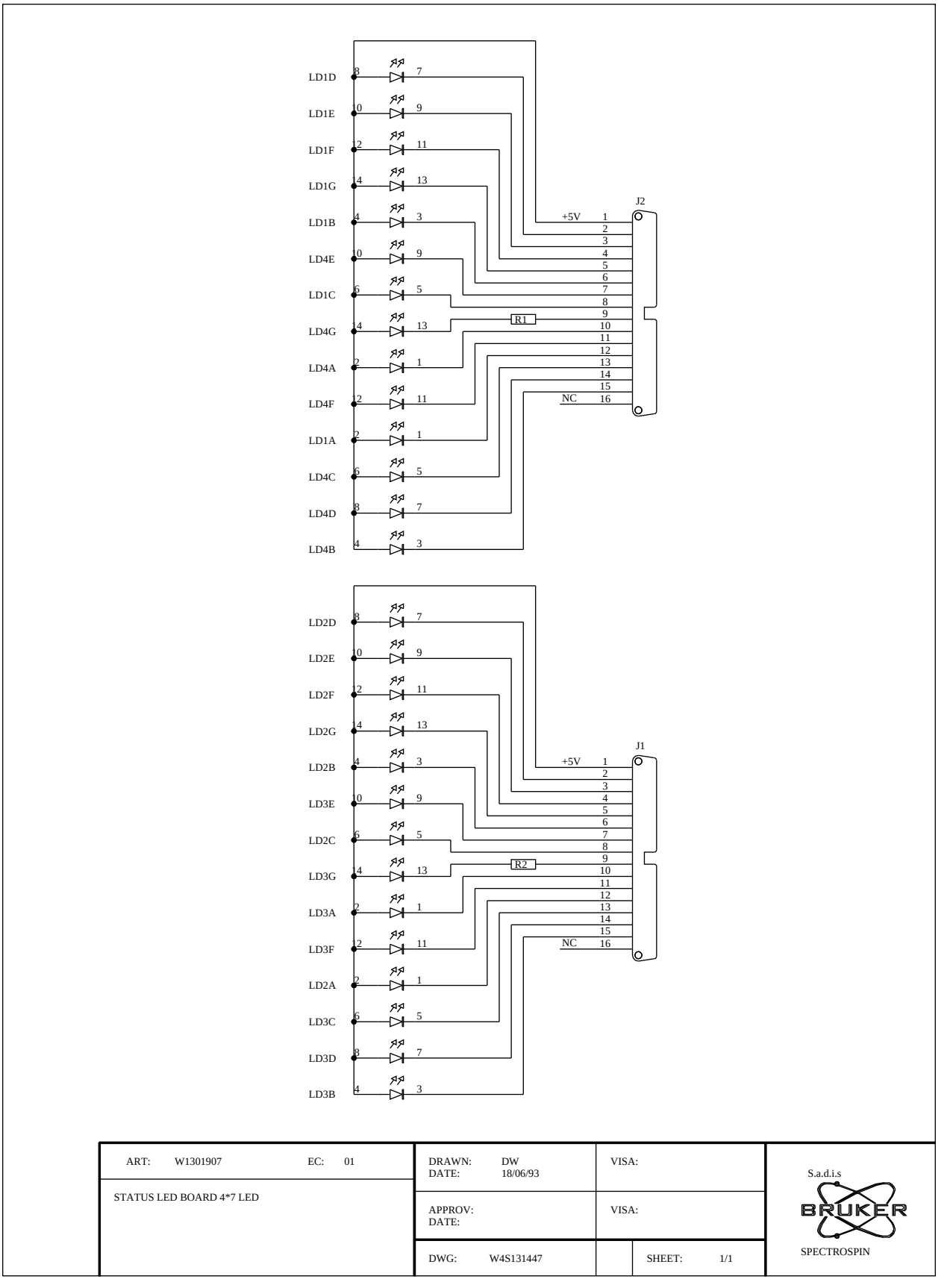
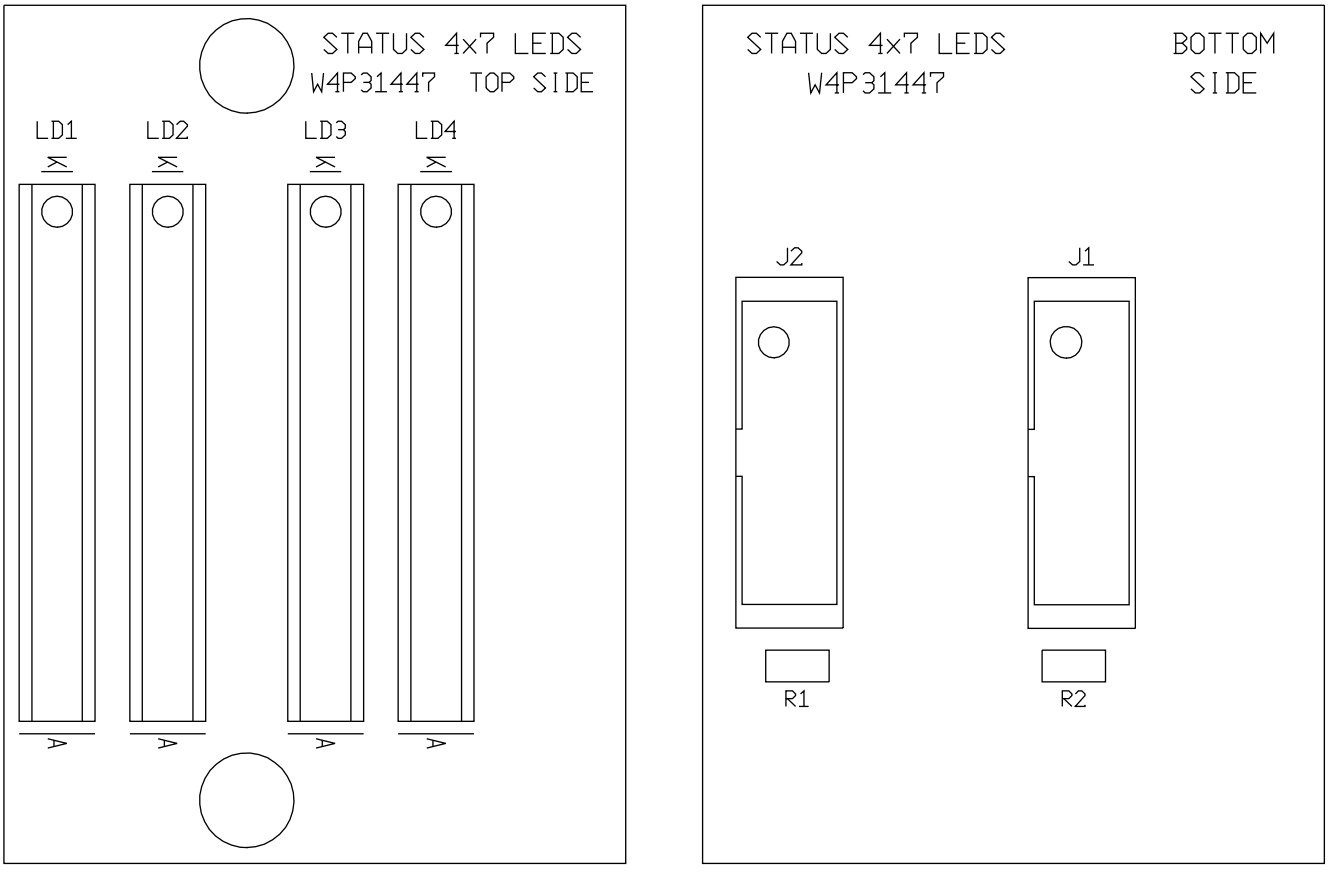


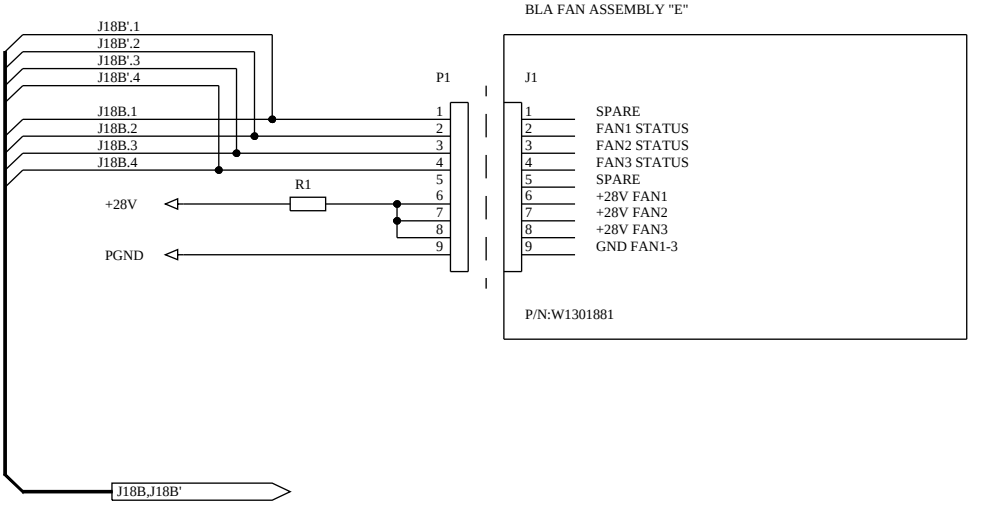
Figure 4.19. Status led board - location



Fan assembly

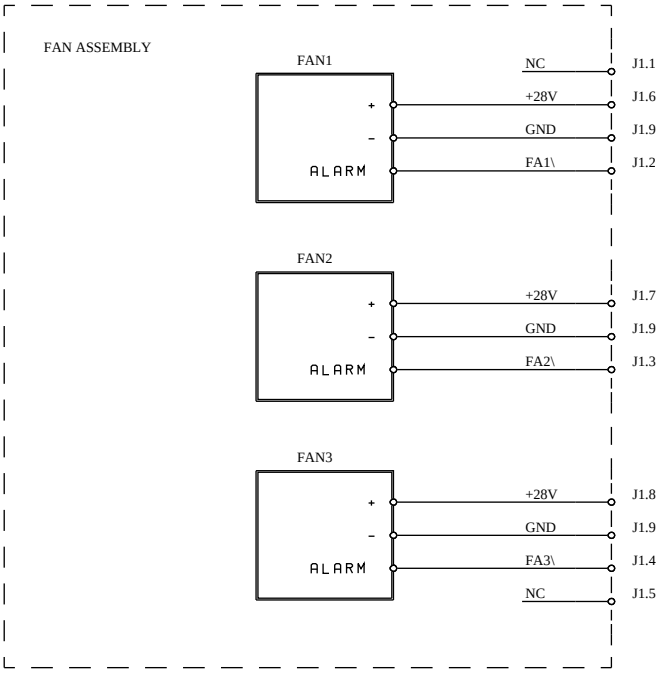
5

Figure 5.1. Interconnect drawing



ART: W1301881 EC:	DRAWN: DW DATE: 10/03/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA FAN ASSEMBLY ASSY "E" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131527	A SHEET: 1/1	

Figure 5.2. Fan assembly



ART: W1301881 EC: 01	DRAWN: DW DATE: 05/05/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
FAN ASSEMBLY	APPROV: DATE:	VISA:	
	DWG: W4S131424	SHEET: 1/1	

BLMH0.5/50

6

Figure 6.1. BLMH0.5 assy "M"

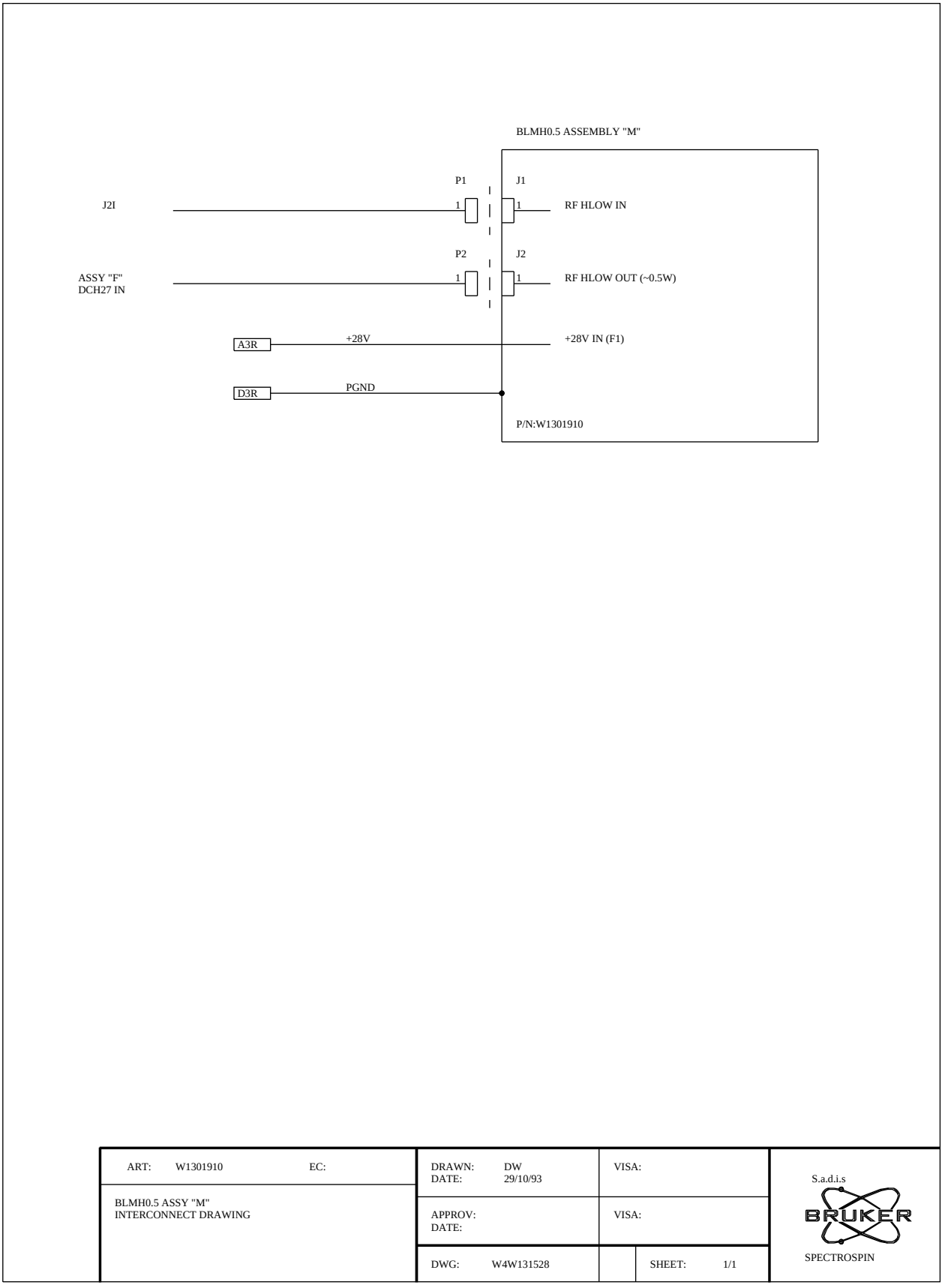


Figure 6.2. BLMH0.5

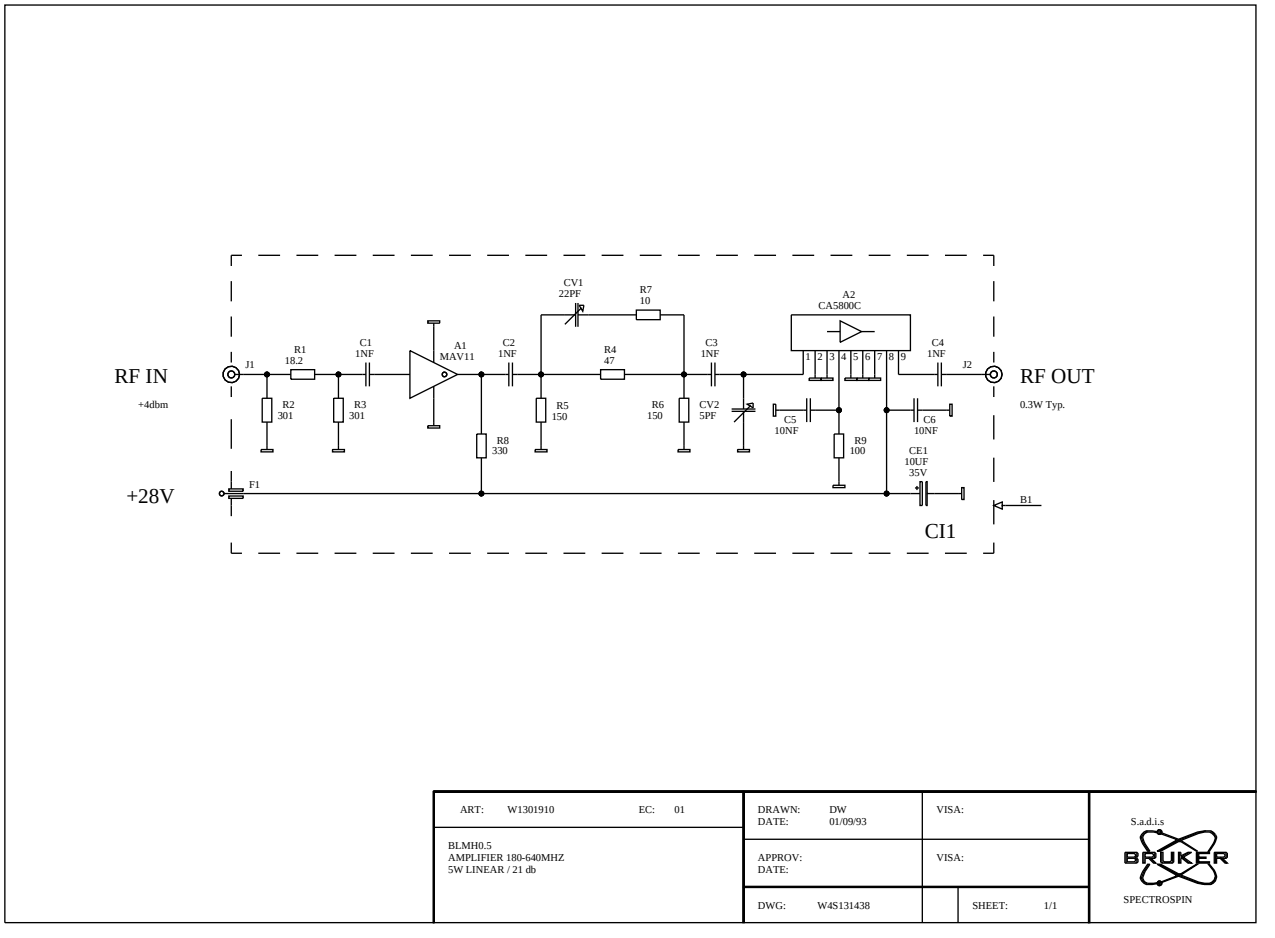
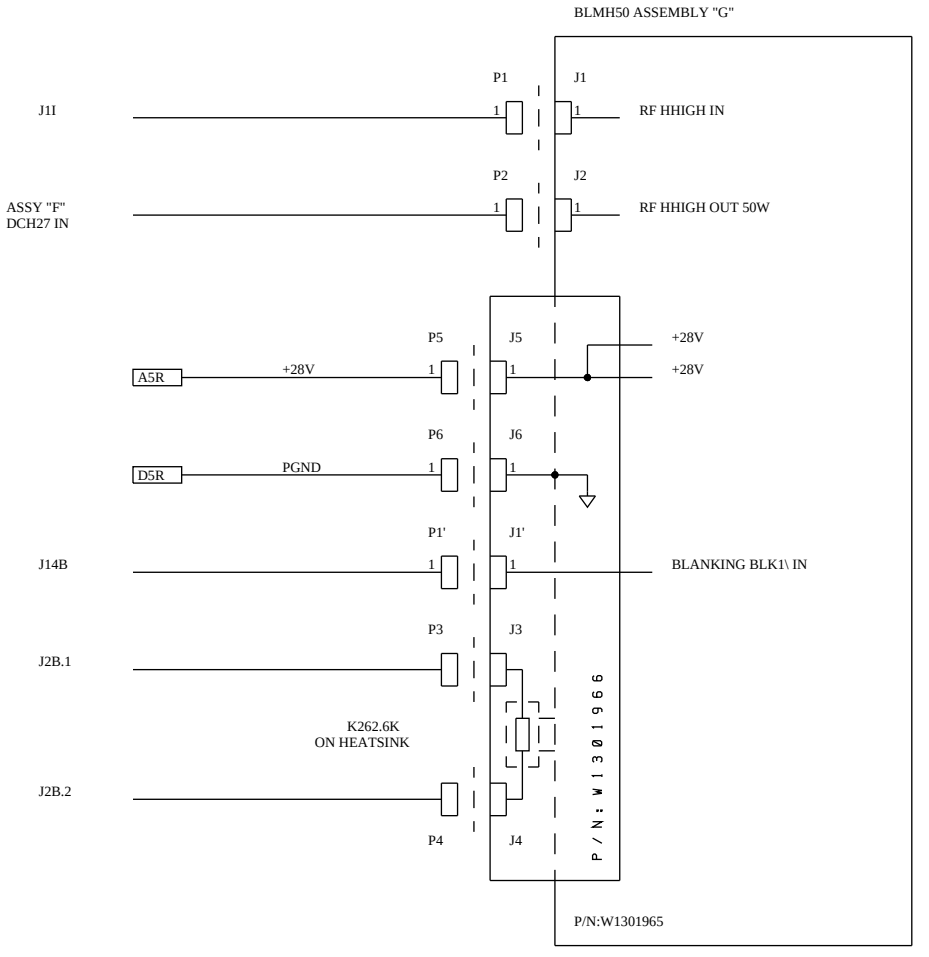


Figure 6.3. BLMH50 assy "G"



ART: W1301965 EC:	DRAWN: DW DATE: 29/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLMH50 ASSY "G" INTERCONNECT DRAWING	APPROV: SB DATE: 19/02/96	VISA:	
	DWG: W4W131529	SHEET: 1/1	

Figure 6.4. BLMH50

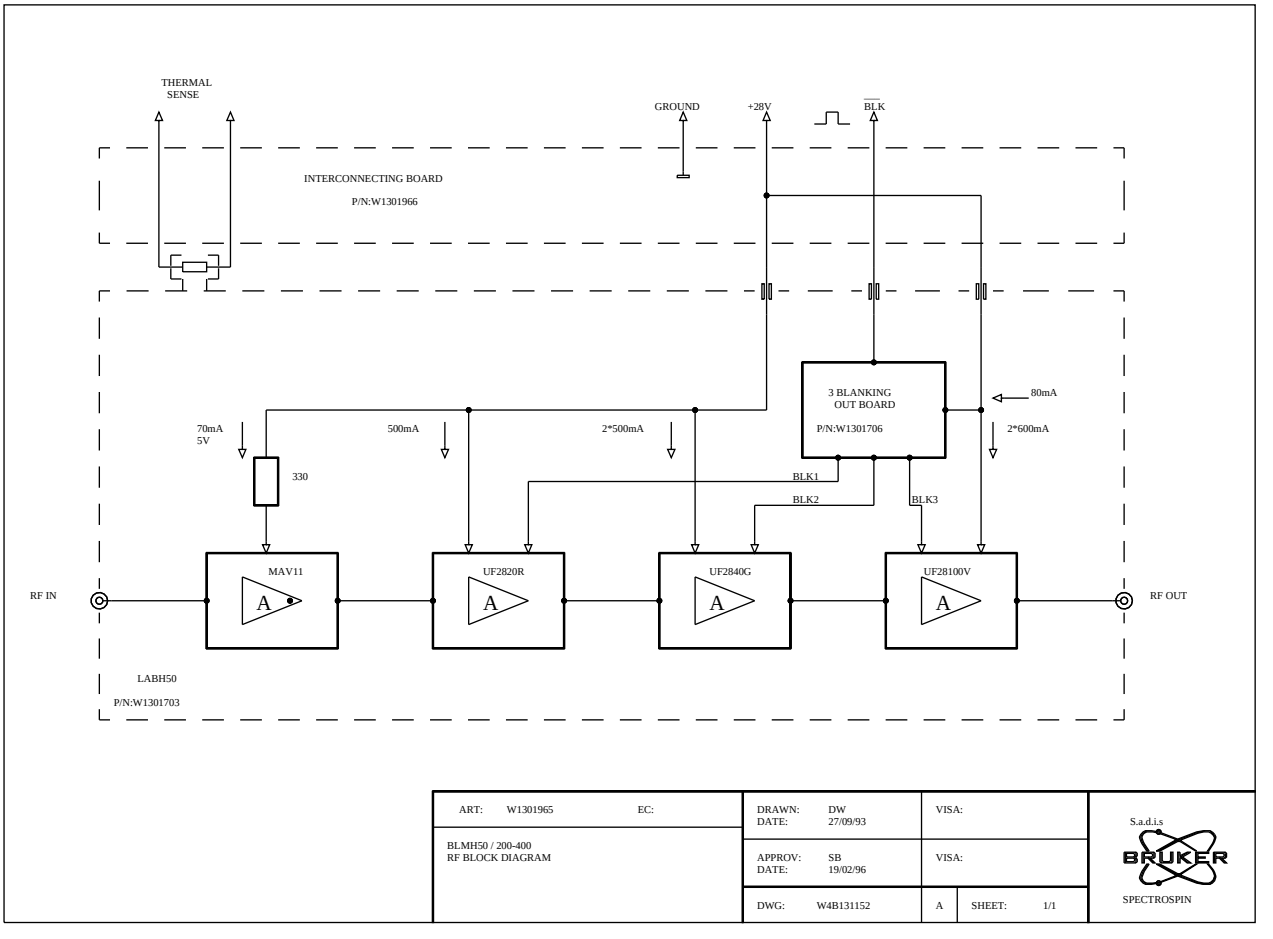


Figure 6.5. LABH50

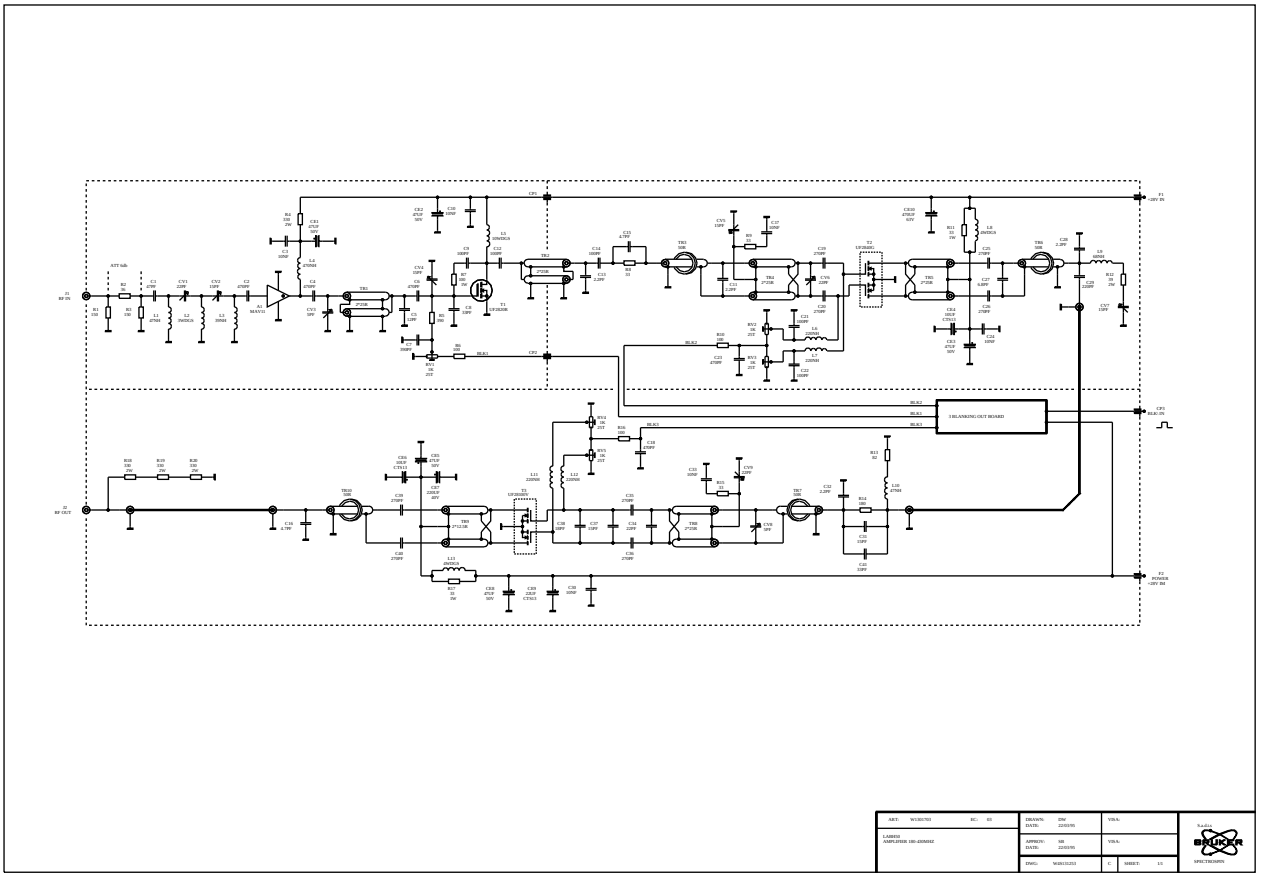


Figure 6.6. Blanking board

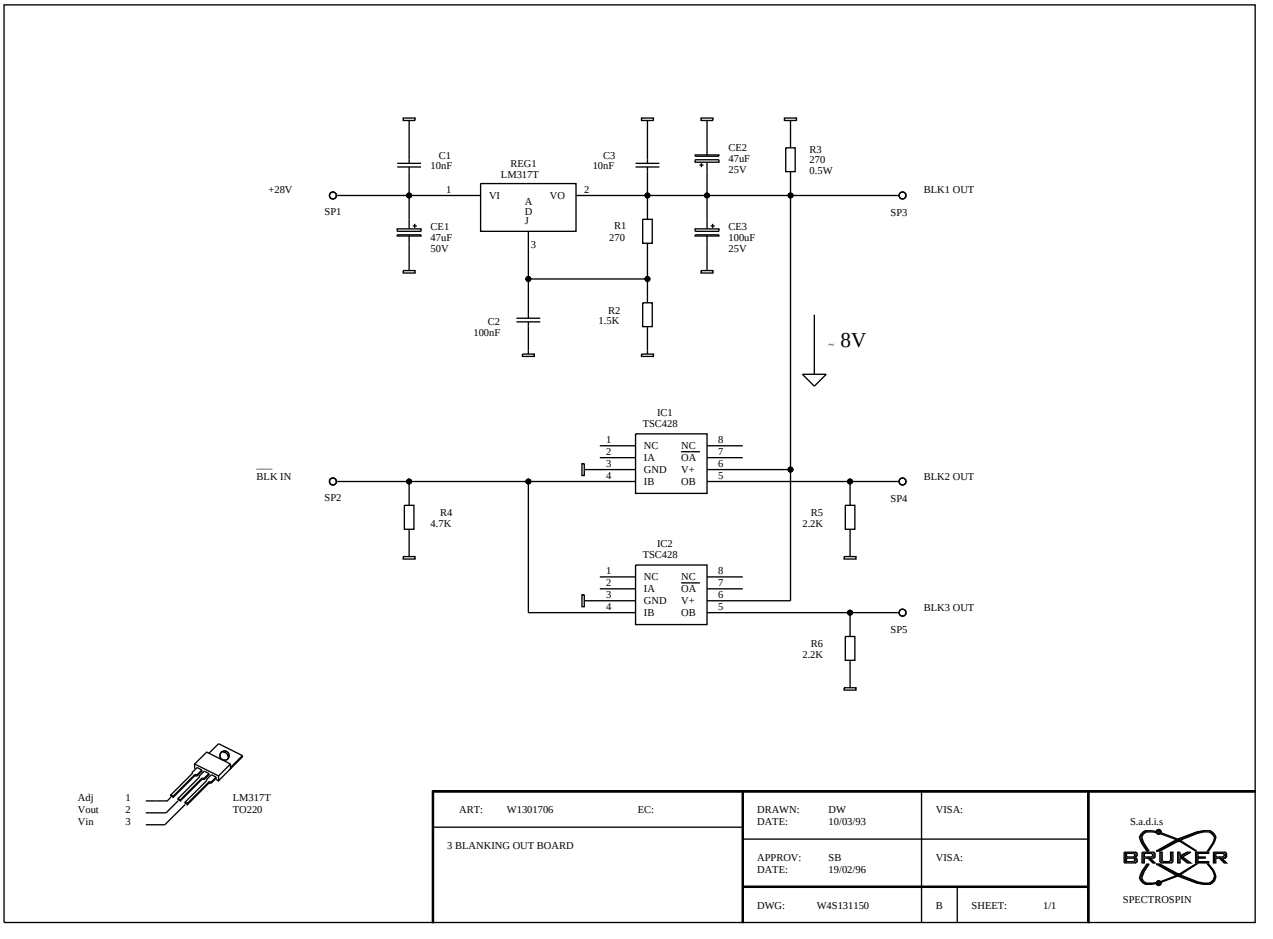


Figure 6.7. Blanking board layouf

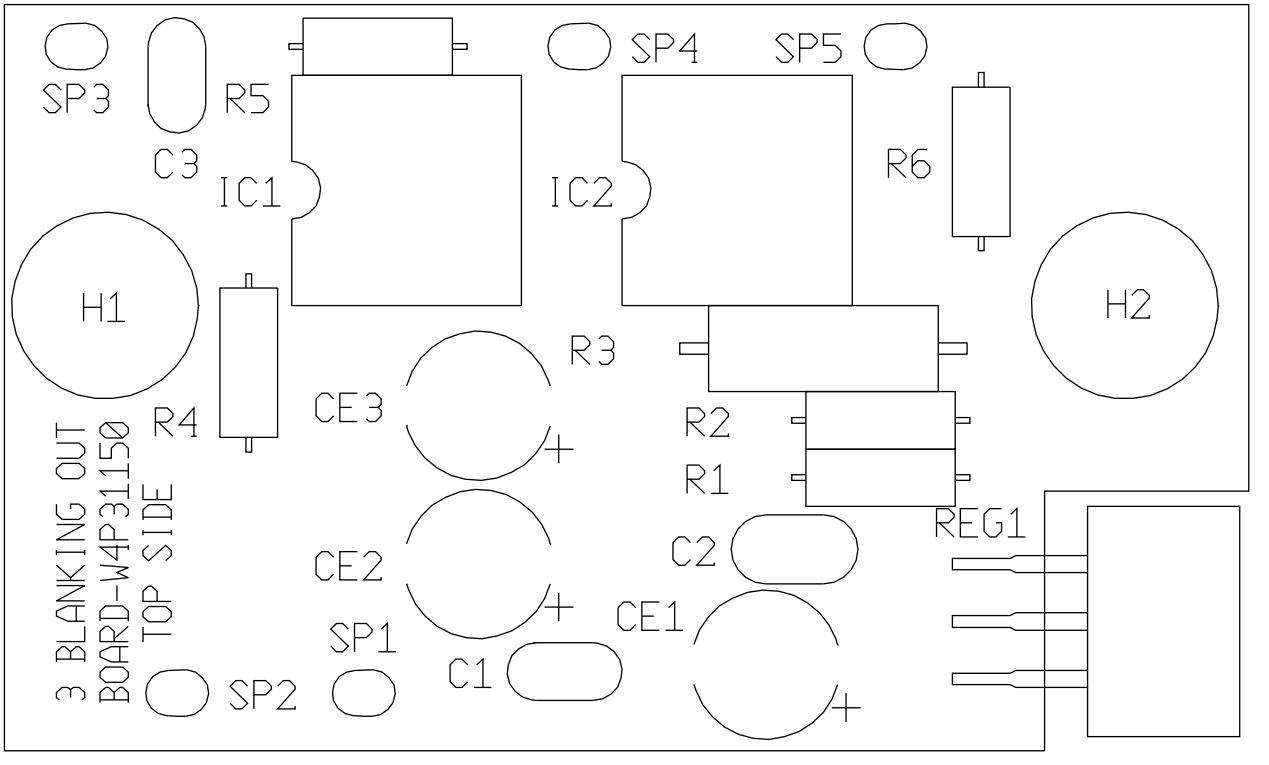
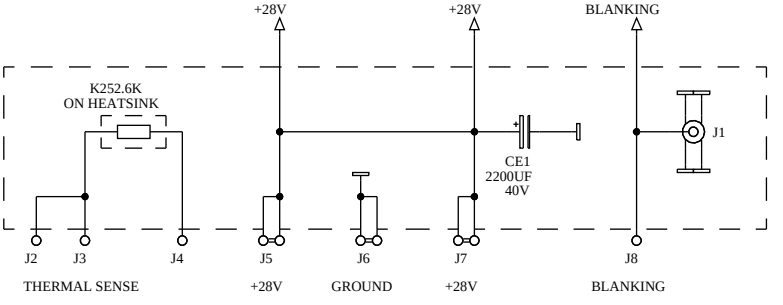


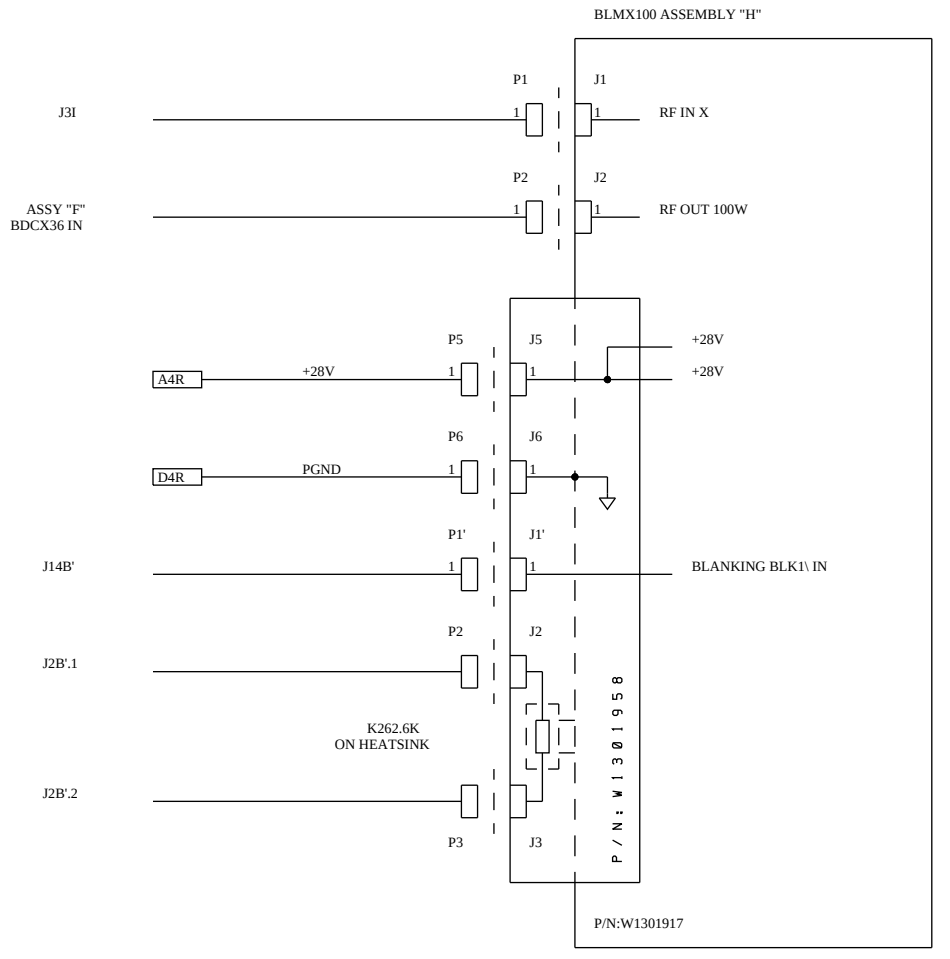
Figure 6.8. Interconnecting board



ART: W1301966 EC:	DRAWN: DW DATE: 01/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
INTERCONNECTING BOARD	APPROV: SB DATE: 19/02/96	VISA:	
	DWG: W4S131514	SHEET: 1/1	

BLMX100 amplifier module

Figure 7.1. Wiring diagram



ART: W1301917 EC:	DRAWN: DW DATE: 29/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLMX100 ASSY "H" INTERCONNECT DRAWING	APPROV: CO DATE: 19/02/96	VISA:	
	DWG: W4W131530	SHEET: 1/1	

Figure 7.2. Block diagram

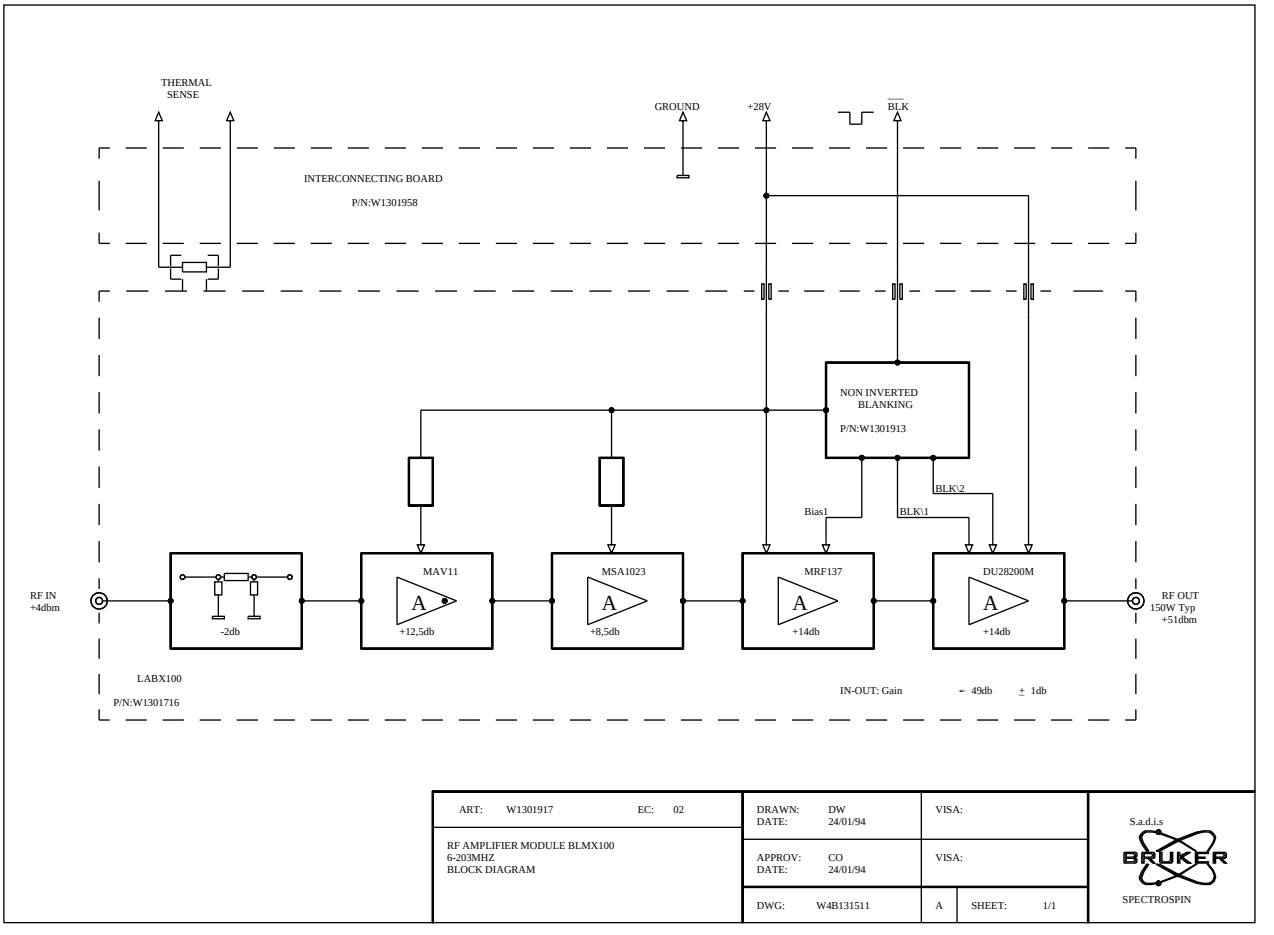
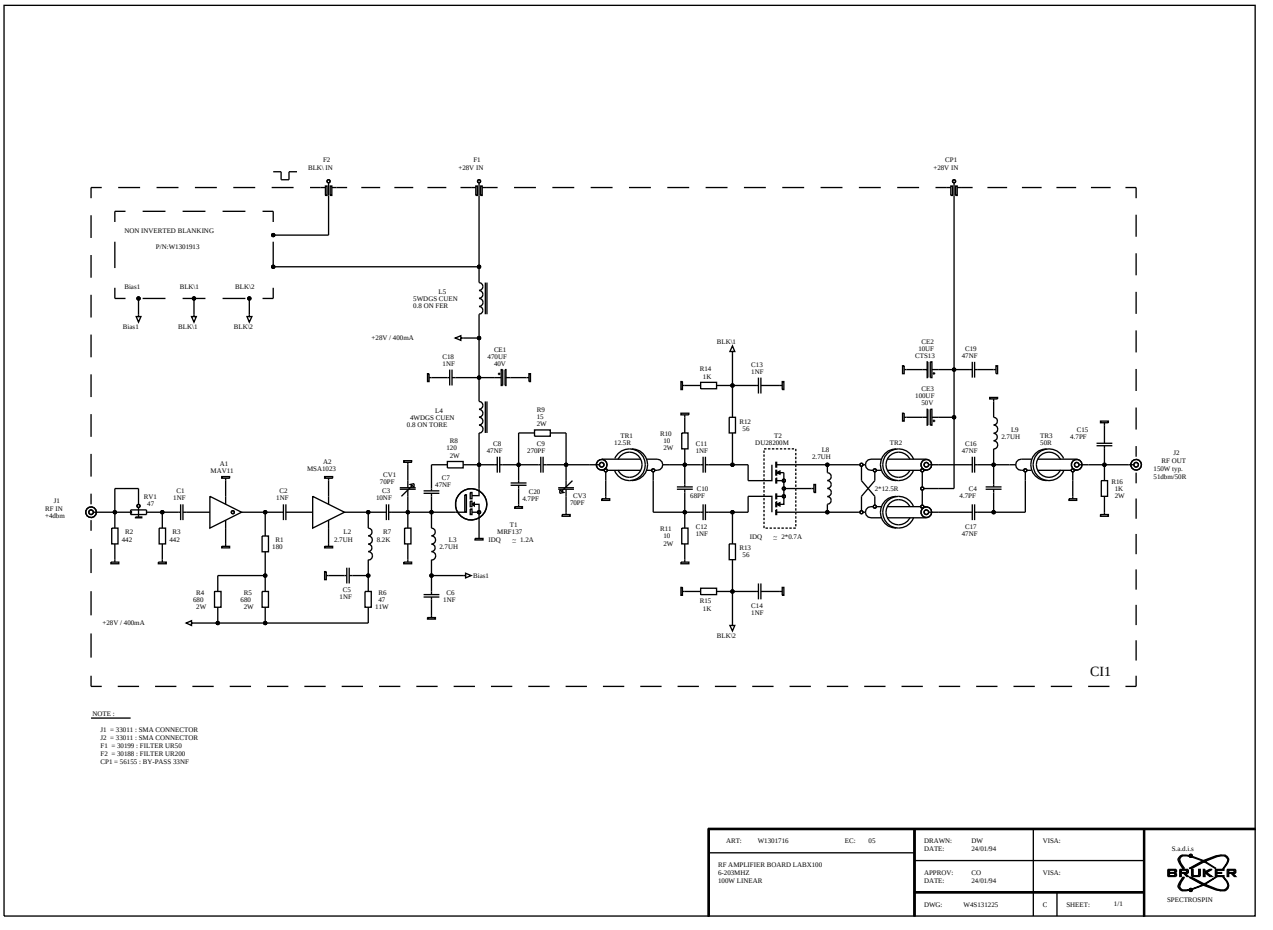


Figure 7.3. LABH100

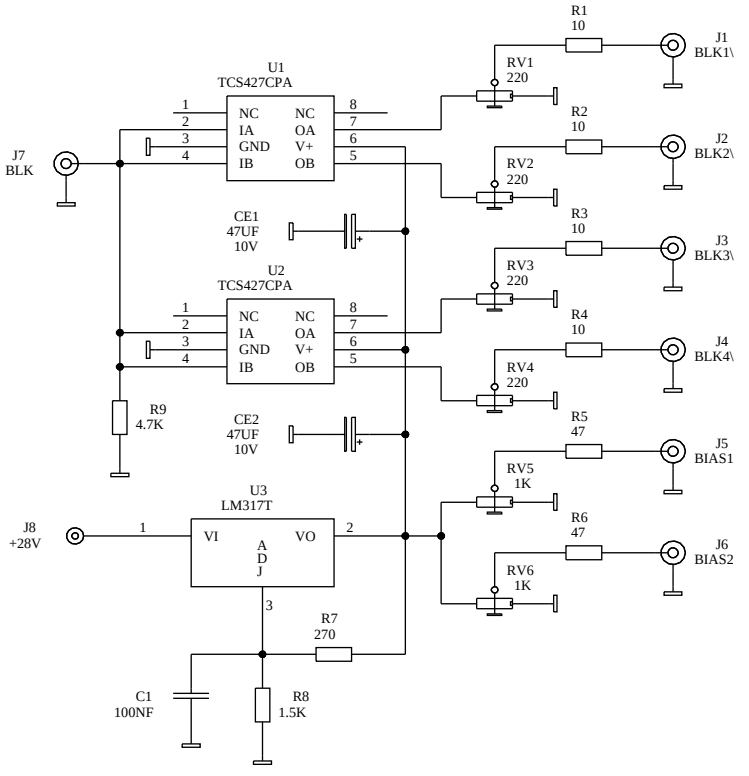


NOTE :

J1 = 33011 : SMA CONNECTOR
J2 = 33011 : SMA CONNECTOR
F1 = 30199 : FILTER UR50
F2 = 30188 : FILTER UR200
CP1 = 56155 : BY-PASS 33NF

ART: W1301716 EC: 05	DRAWN: DW DATE: 24/01/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
RF AMPLIFIER BOARD LABX100 6-203MHZ 100W LINEAR	APPROV: CO DATE: 24/01/94	VISA:	
	DWG: W4S131225	C SHEET: 1/1	

Figure 7.4. Non inverted blanking



ART: W1301913 EC: 01	DRAWN: DW DATE: 13/09/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
NON INVERTED BLANKING	APPROV: CO DATE: 13/09/93	VISA:	
	DWG: W4S131508	SHEET: 1/1	

Figure 7.5. Blanking layout

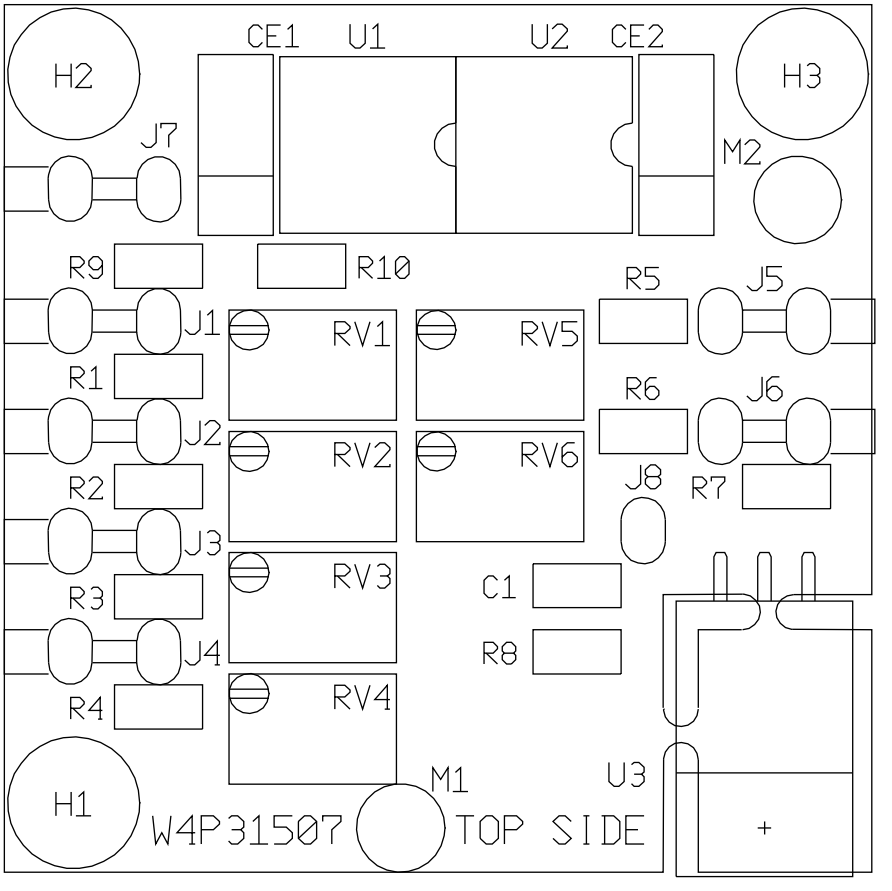
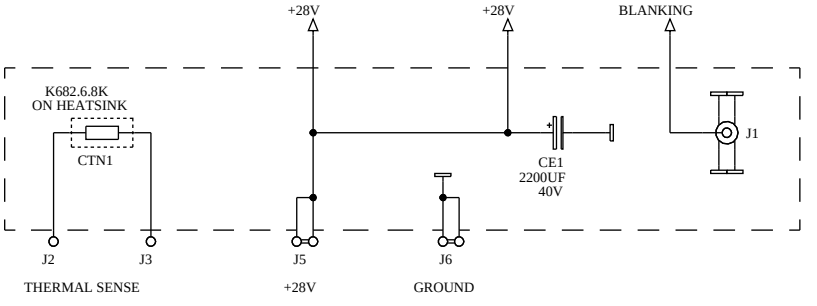


Figure 7.6. RF amplifier bias layout



NOTE :

CTN1 = 56521 : CTN 6K8 K682

ART: W1301958 EC: 01	DRAWN: DW DATE: 25/11/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
INTERCONNECTING BOARD	APPROV: CO DATE: 25/11/93	VISA:	
	DWG: W4S131512	SHEET: 1/1	

Couplers, switches

Figure 8.7. Couplers and switches assy "F"

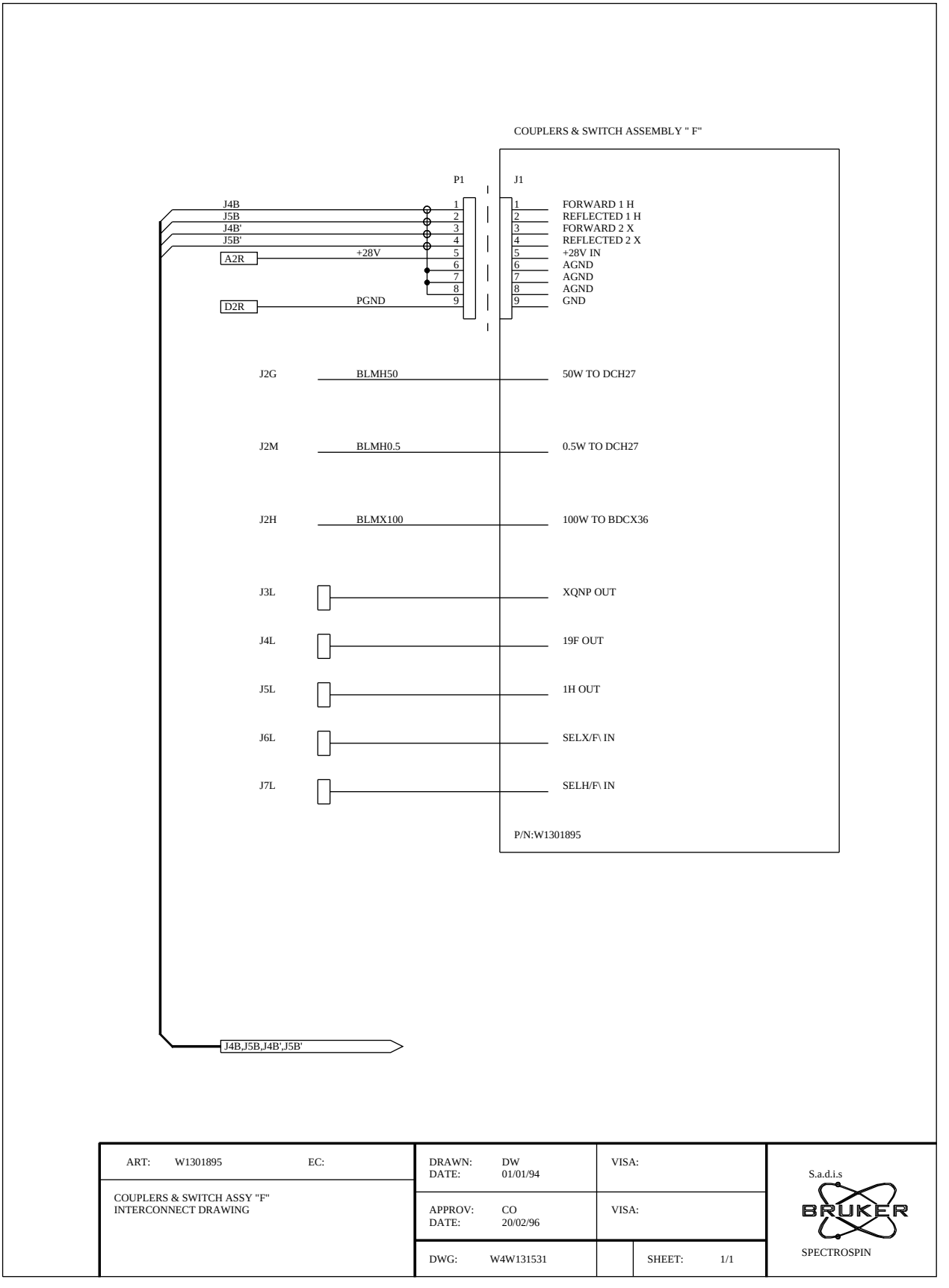
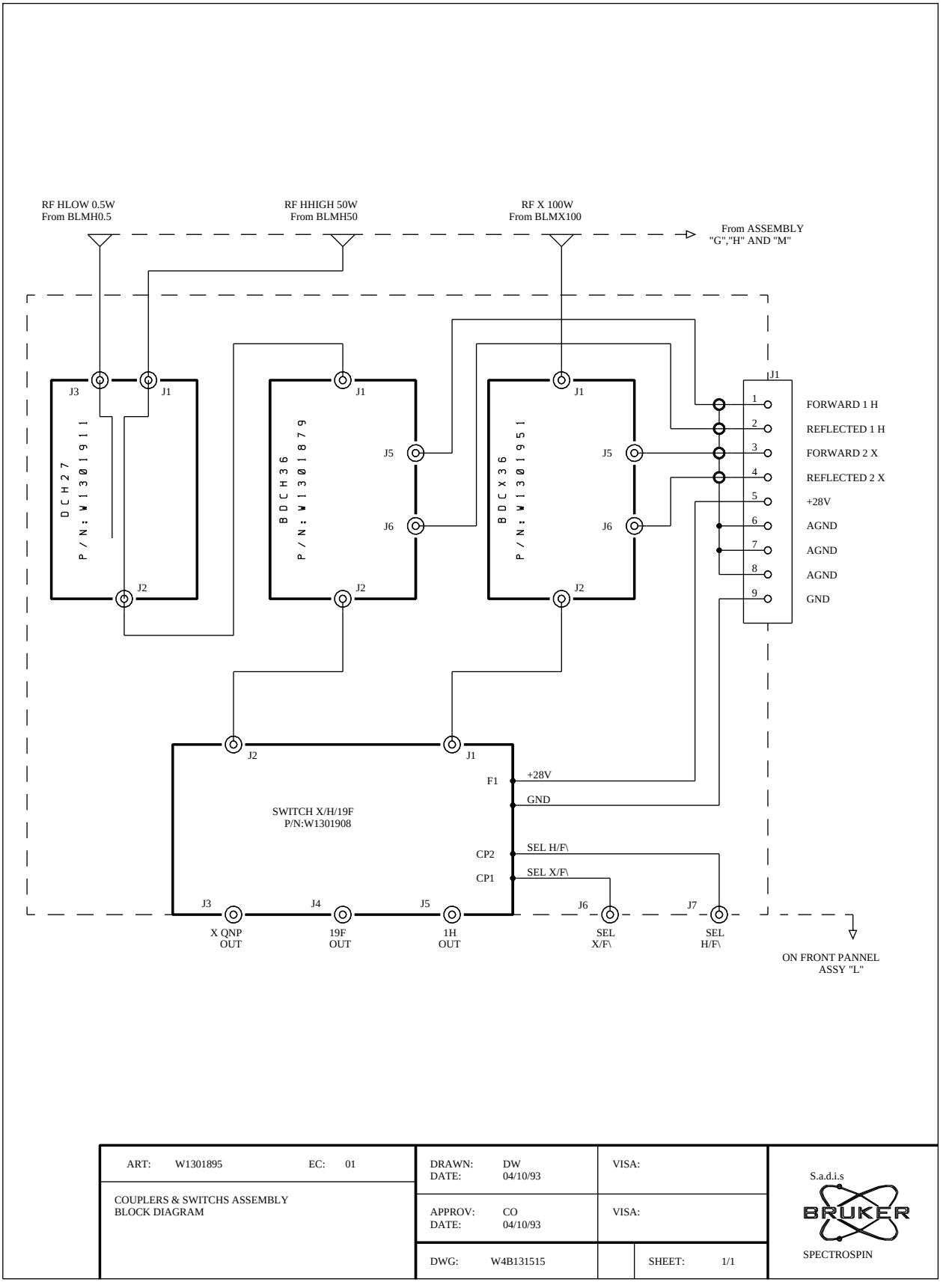
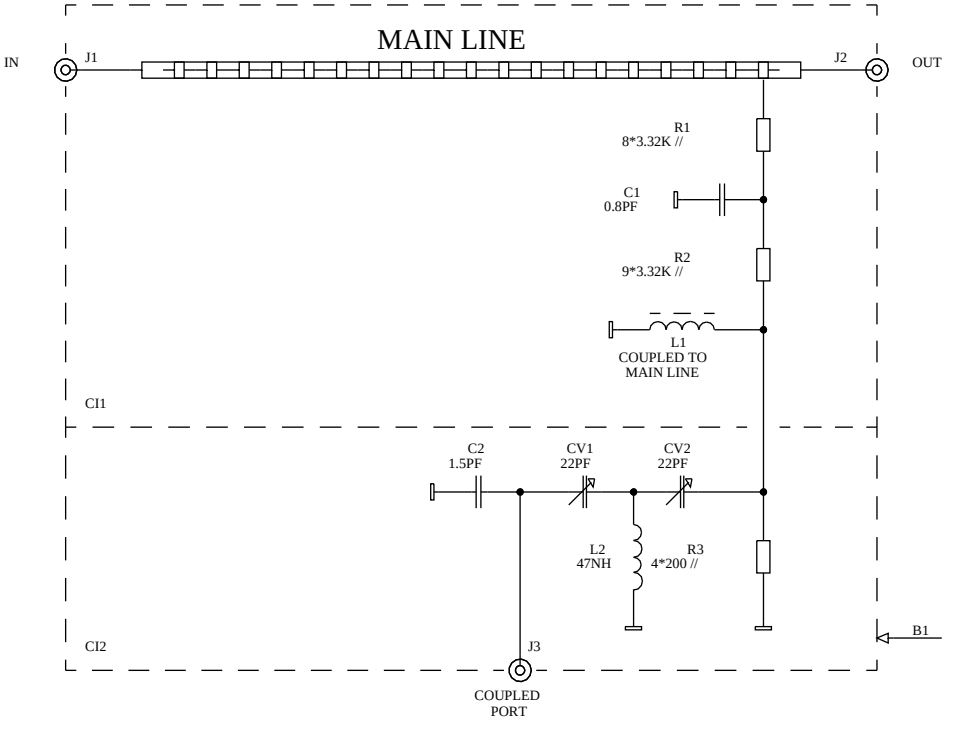


Figure 8.8. Block diagram



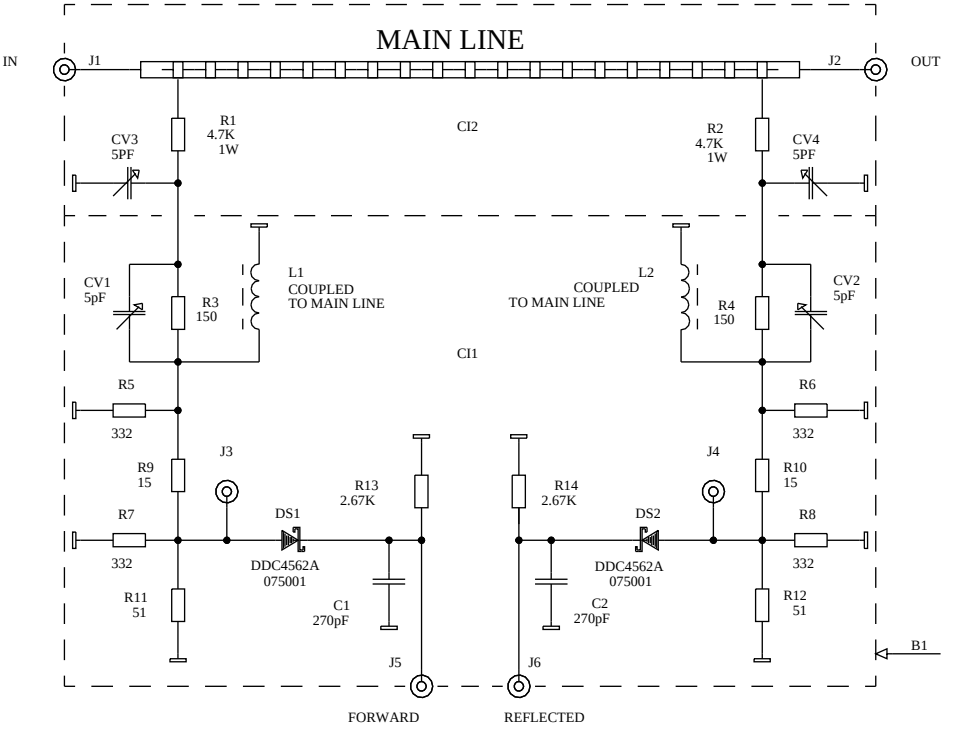
ART: W1301895 EC: 01	DRAWN: DW DATE: 04/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
COUPLERS & SWITCHS ASSEMBLY BLOCK DIAGRAM	APPROV: CO DATE: 04/10/93	VISA:	
	DWG: W4B131515	SHEET: 1/1	

Figure 8.9. DCH27 bidirectionnal coupler



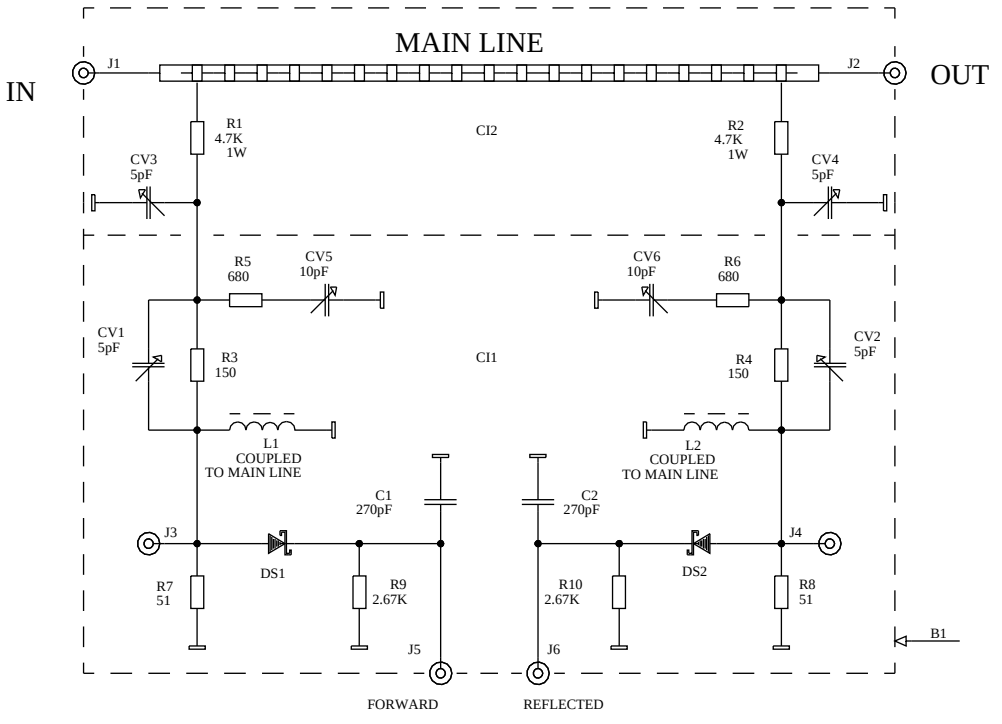
ART: W1301911 EC: 02	DRAWN: DW DATE: 11/10/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
DCH27 DIRECTIONNAL COUPLER	APPROV: CO DATE: 01/06/94	VISA:	
(SMA.C-SMA)	DWG: W4S131439	A SHEET: 1/1	

Figure 8.10. BDCH36 bidirectionnal coupler



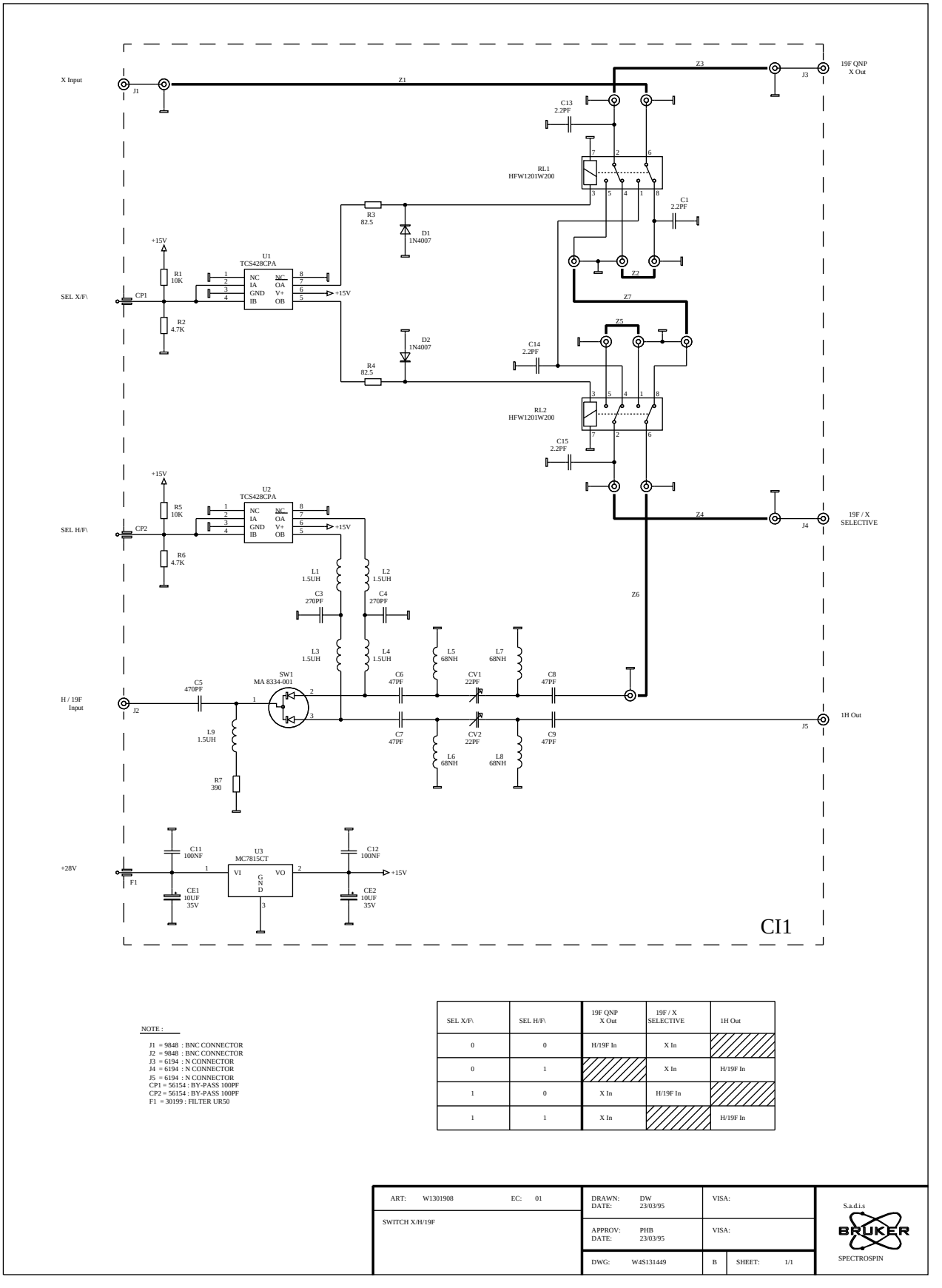
ART: W1301879 EC: 01	DRAWN: DW DATE: 07/06/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BDCH36 BI-DIRECTIONNAL COUPLER	APPROV: DATE:	VISA:	
(SMB-SMA)	DWG: W4S131444	SHEET: 1/1	

Figure 8.11. BDCX36 bidirectionnal coupler



ART: W1301951 EC: 01	DRAWN: DW DATE: 03/09/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BDCX36 BI-DIRECTIONAL COUPLER	APPROV: CO DATE: 08/06/95	VISA:	
(SMB-SMA)	DWG: W4S131502	SHEET: 1/1	

Figure 8.12. Switch 1H/19F/X



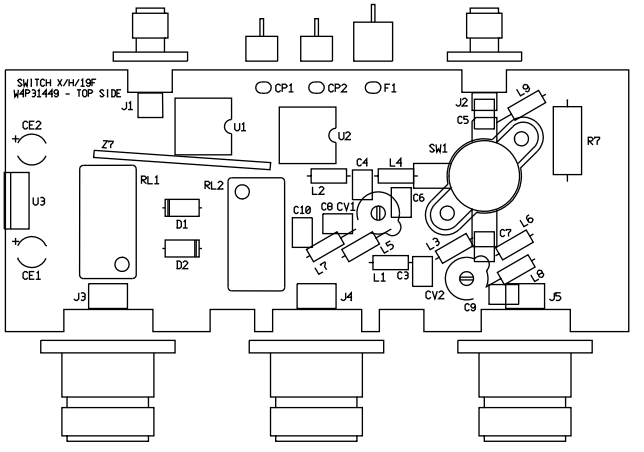
NOTE :

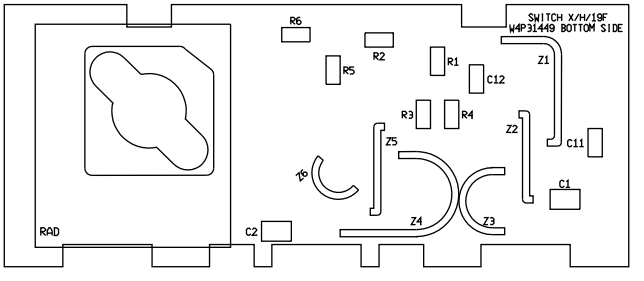
J1 = 9848 : BNC CONNECTOR
J2 = 9848 : BNC CONNECTOR
J3 = 6194 : N CONNECTOR
J4 = 6194 : N CONNECTOR
J5 = 6194 : N CONNECTOR
CP1 = 56154 : BY-PASS 100PF
CP2 = 56154 : BY-PASS 100PF
F1 = 30199 : FILTER UR50

SEL X/F\	SEL H/F\	19F QNP X Out	19F / X SELECTIVE	1H Out
0	0	H/19F In	X In	
0	1		X In	H/19F In
1	0	X In	H/19F In	
1	1	X In		H/19F In

ART: W1301908 EC: 01		DRAWN: DW DATE: 23/03/95	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
SWITCH X/H/19F		APPROV: PHB DATE: 23/03/95	VISA:	
		DWG: W4S131449	B SHEET: 1/1	

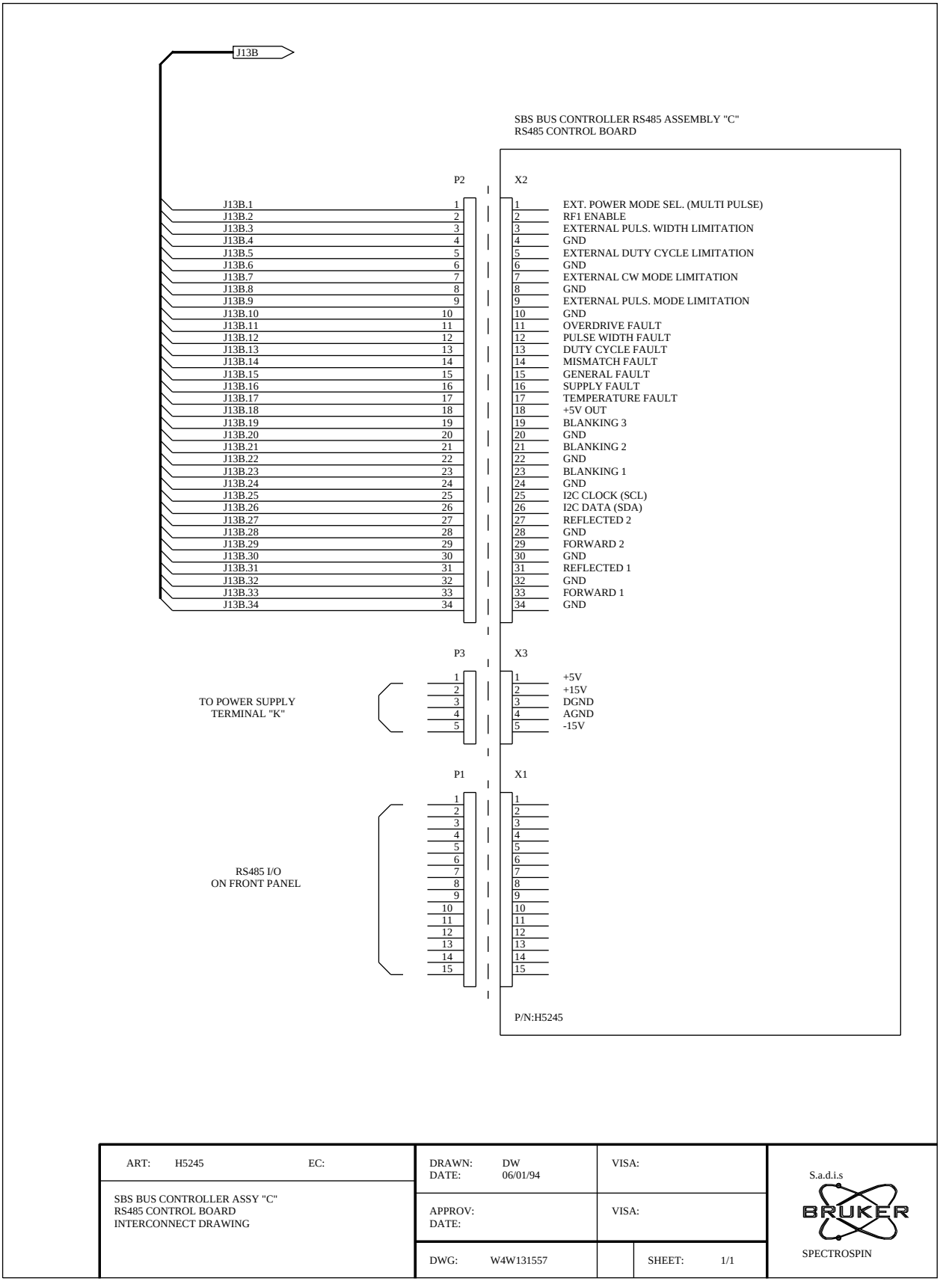
Figure 8.13. Switch layout





SBS controller

Figure 9.1. Wiring diagram



ART: H5245 EC:	DRAWN: DW DATE: 06/01/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
SBS BUS CONTROLLER ASSY "C" RS485 CONTROL BOARD INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131557	SHEET: 1/1	

Figure 9.2. CPU board

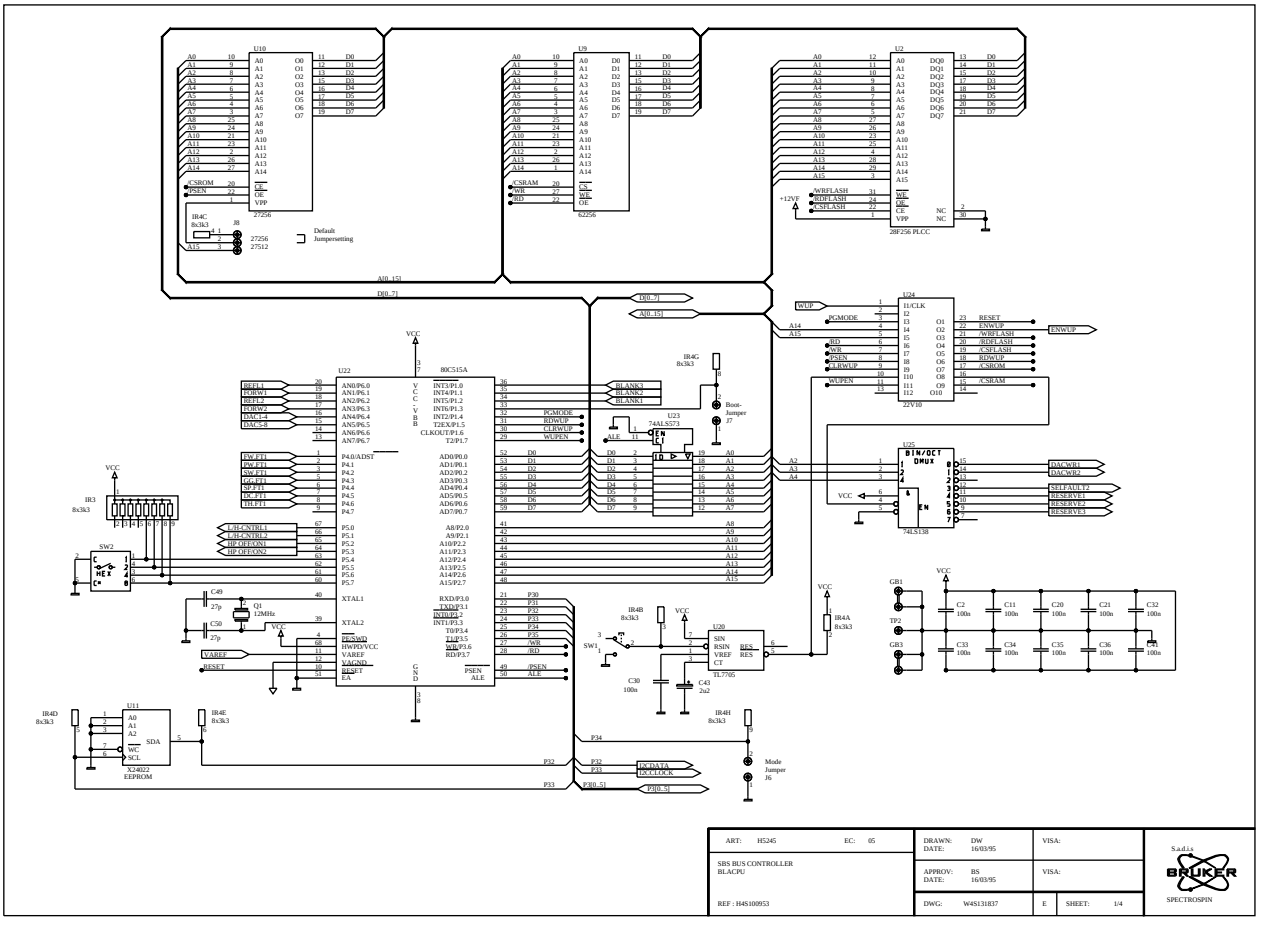


Figure 9.3. Sbs controller dac

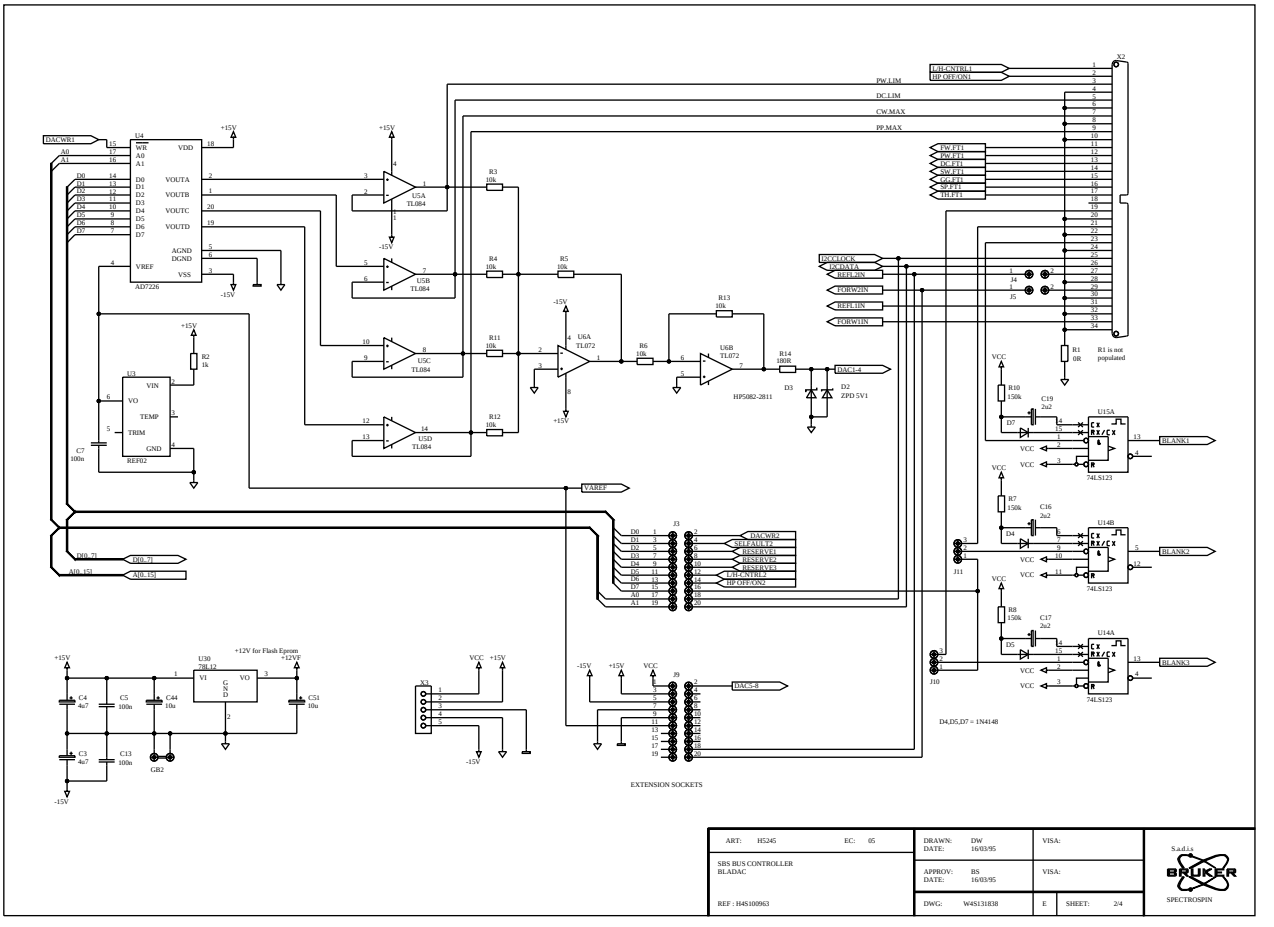


Figure 9.4. Sbs controller driver rs485

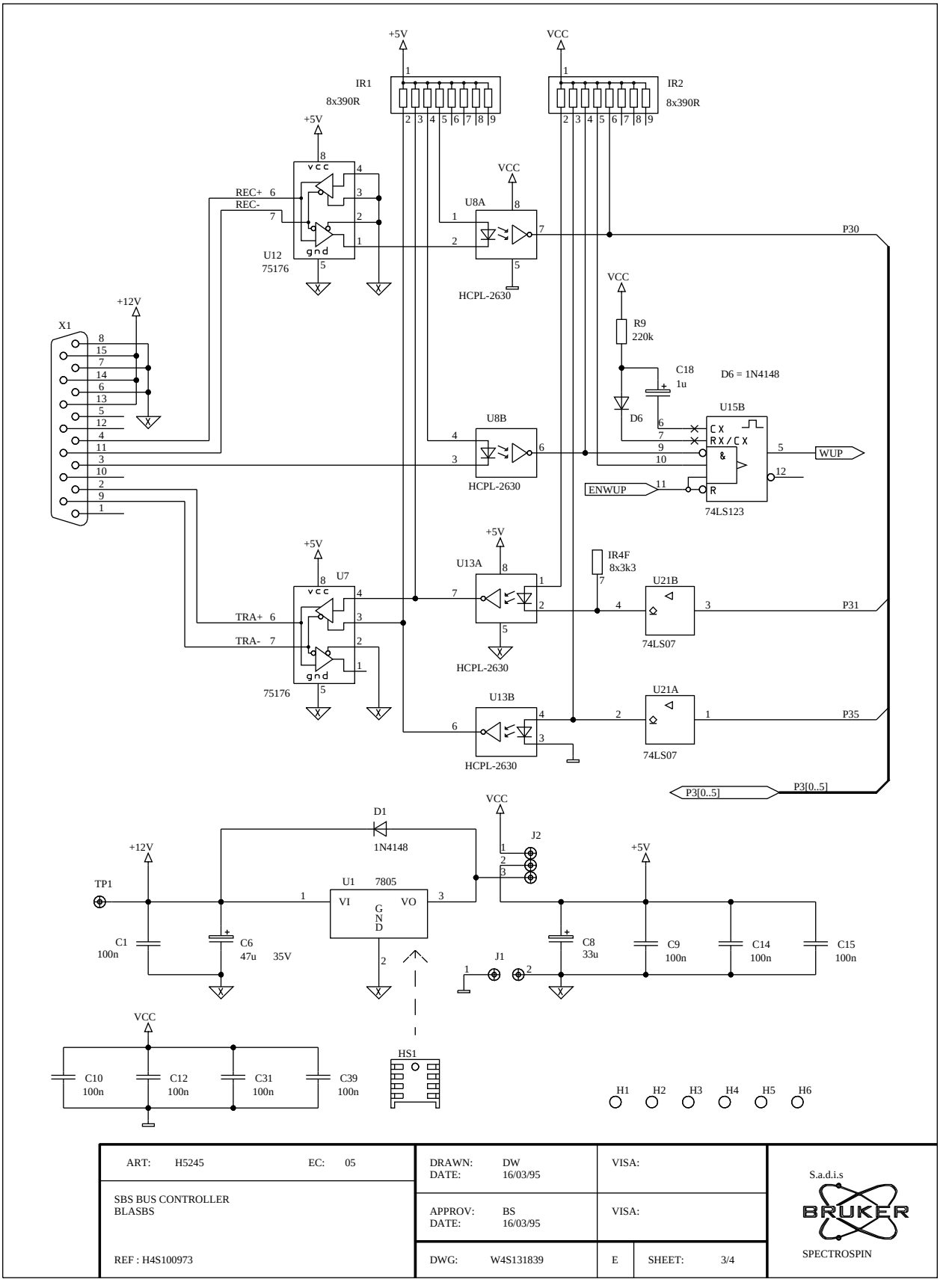


Figure 9.5. Sbs controller sample/hold

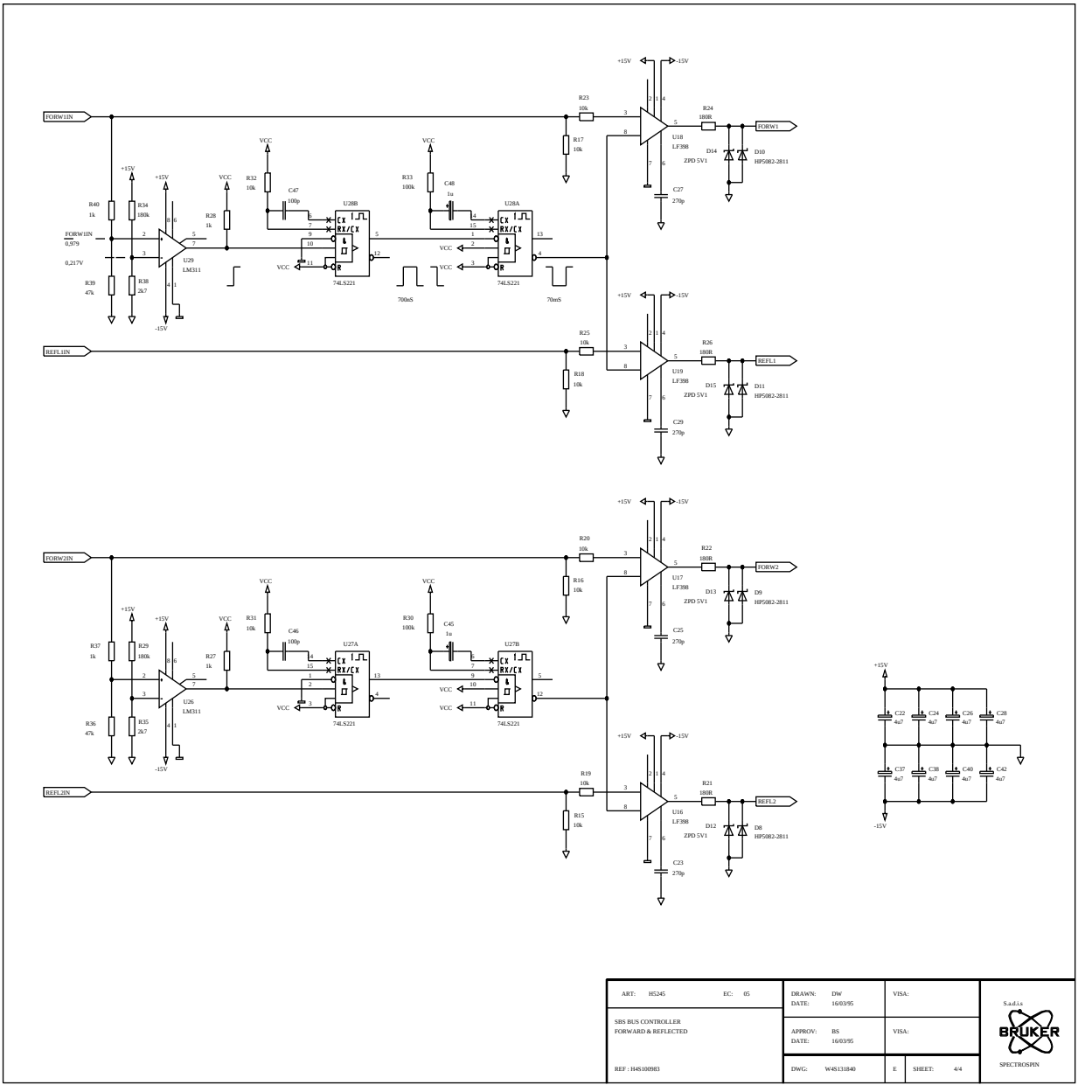


Figure 9.6. RS485 extension board

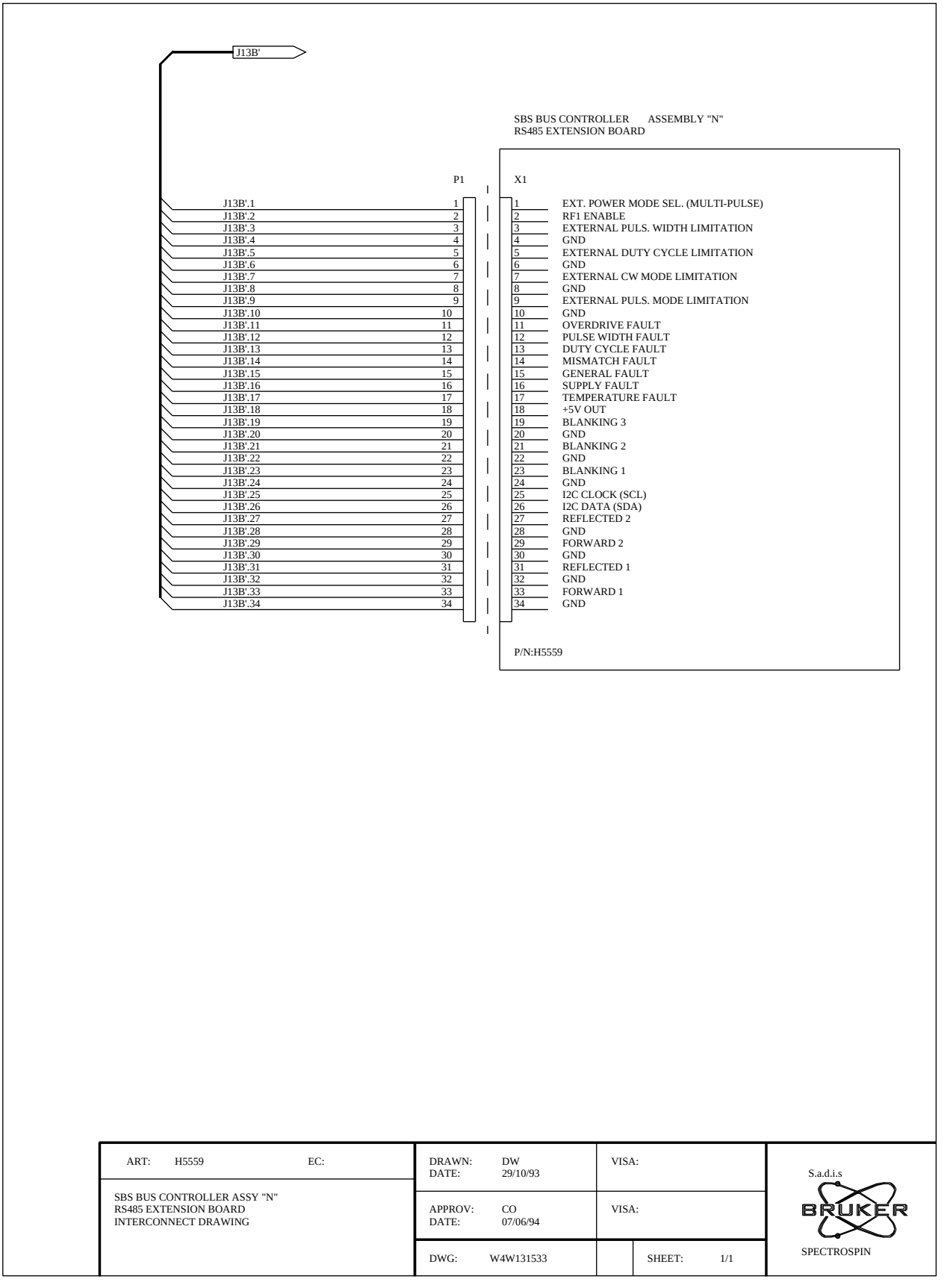
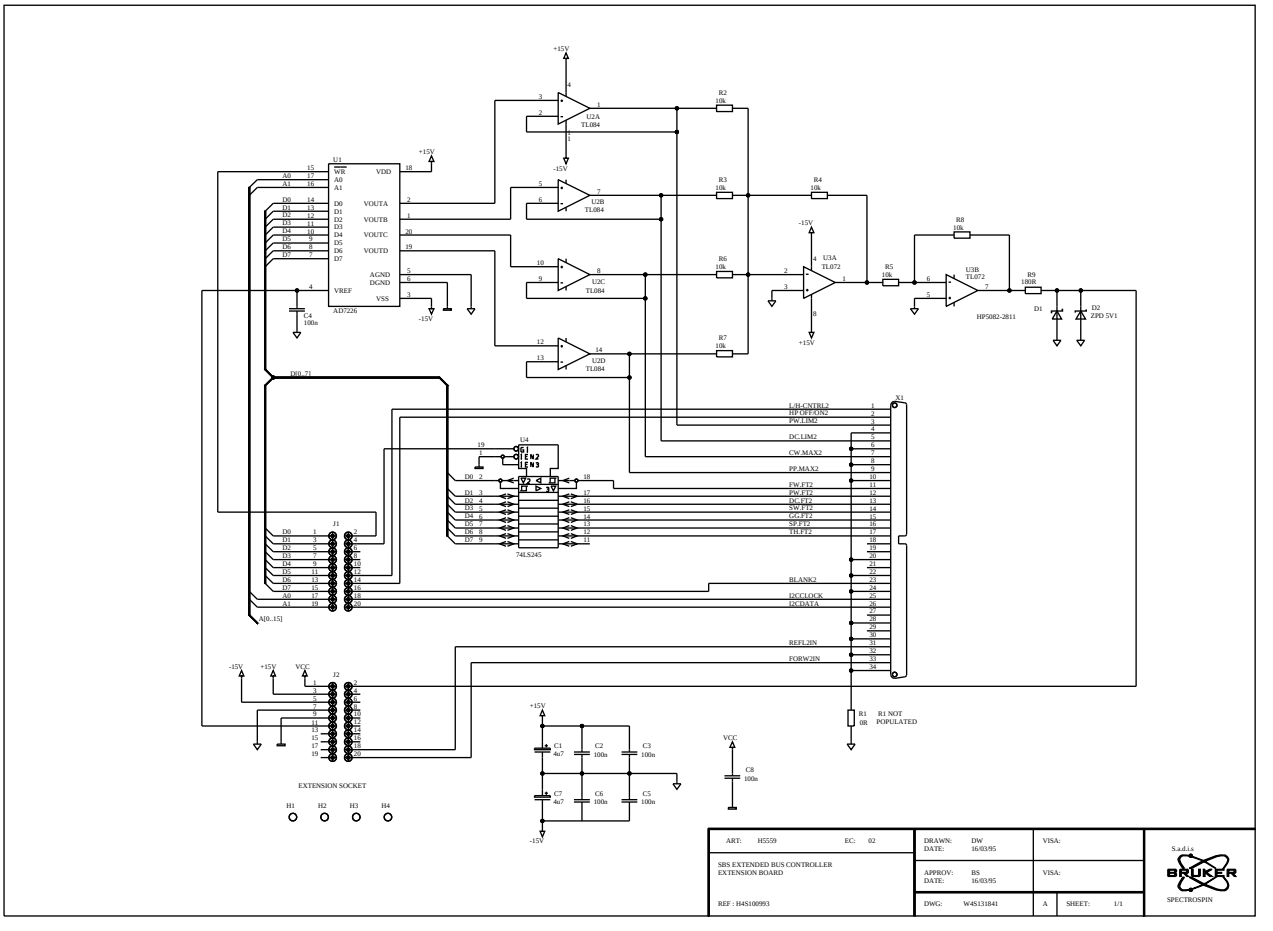


Figure 9.7. Extended bus controller



Figures