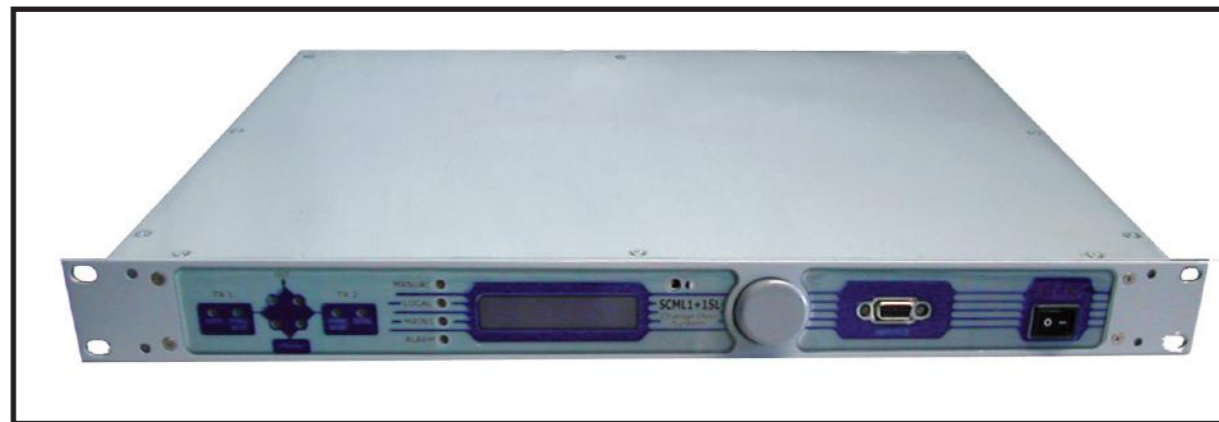

SCML1+1SL



User Manual
Volume 2: Technical Appendix

Appendix A Piani di montaggio, schemi elettrici, liste componenti / *Component layouts, schematics, bills of material*

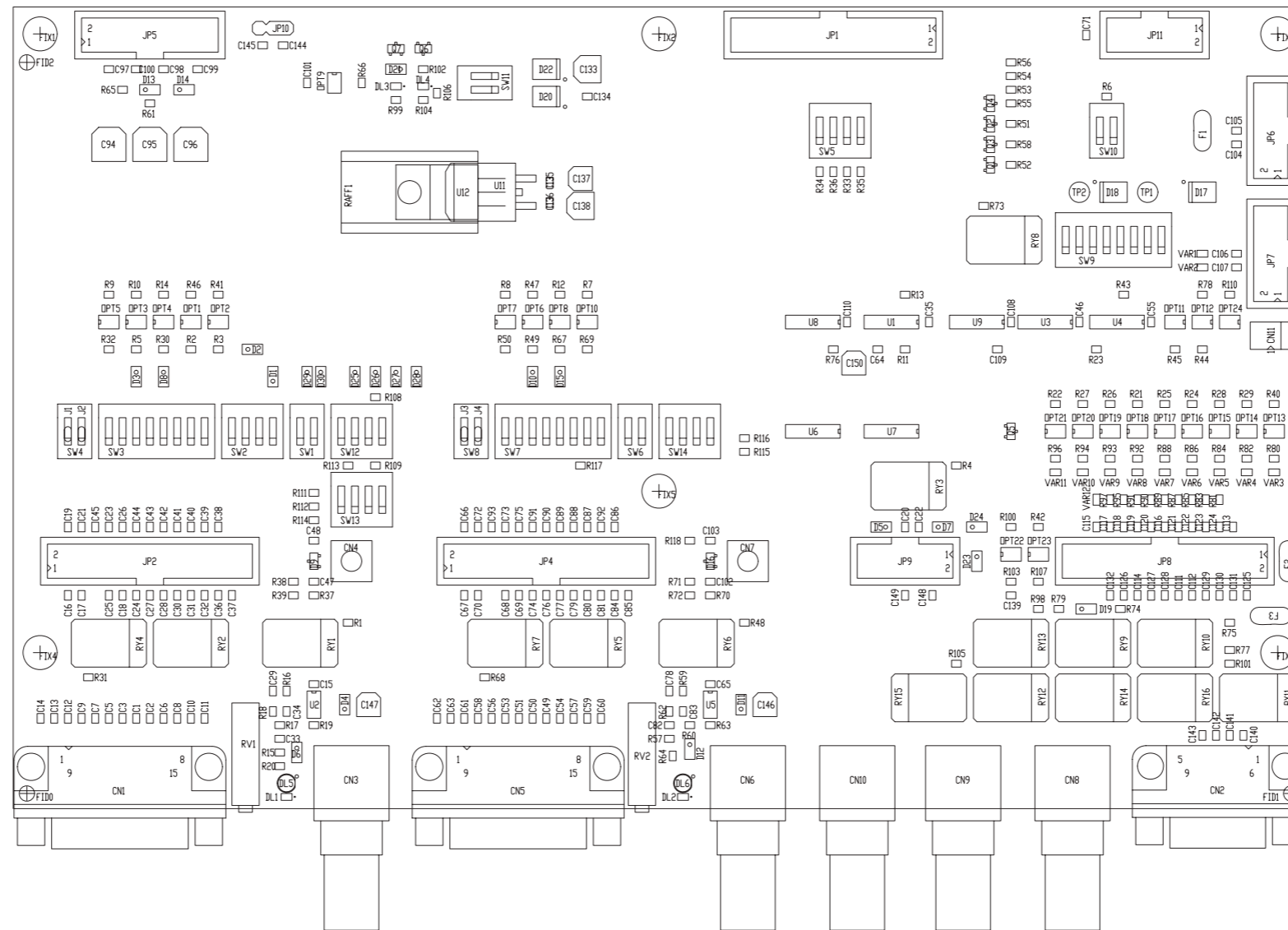
Questa parte del manuale contiene i dettagli tecnici riguardanti la costruzione delle singole schede componenti il SCML1+1SL. L'appendice è composta dalle seguenti sezioni:

This part of the manual contains the technical details about the different boards of the SCML1+1SL. This appendix is composed of the following sections:

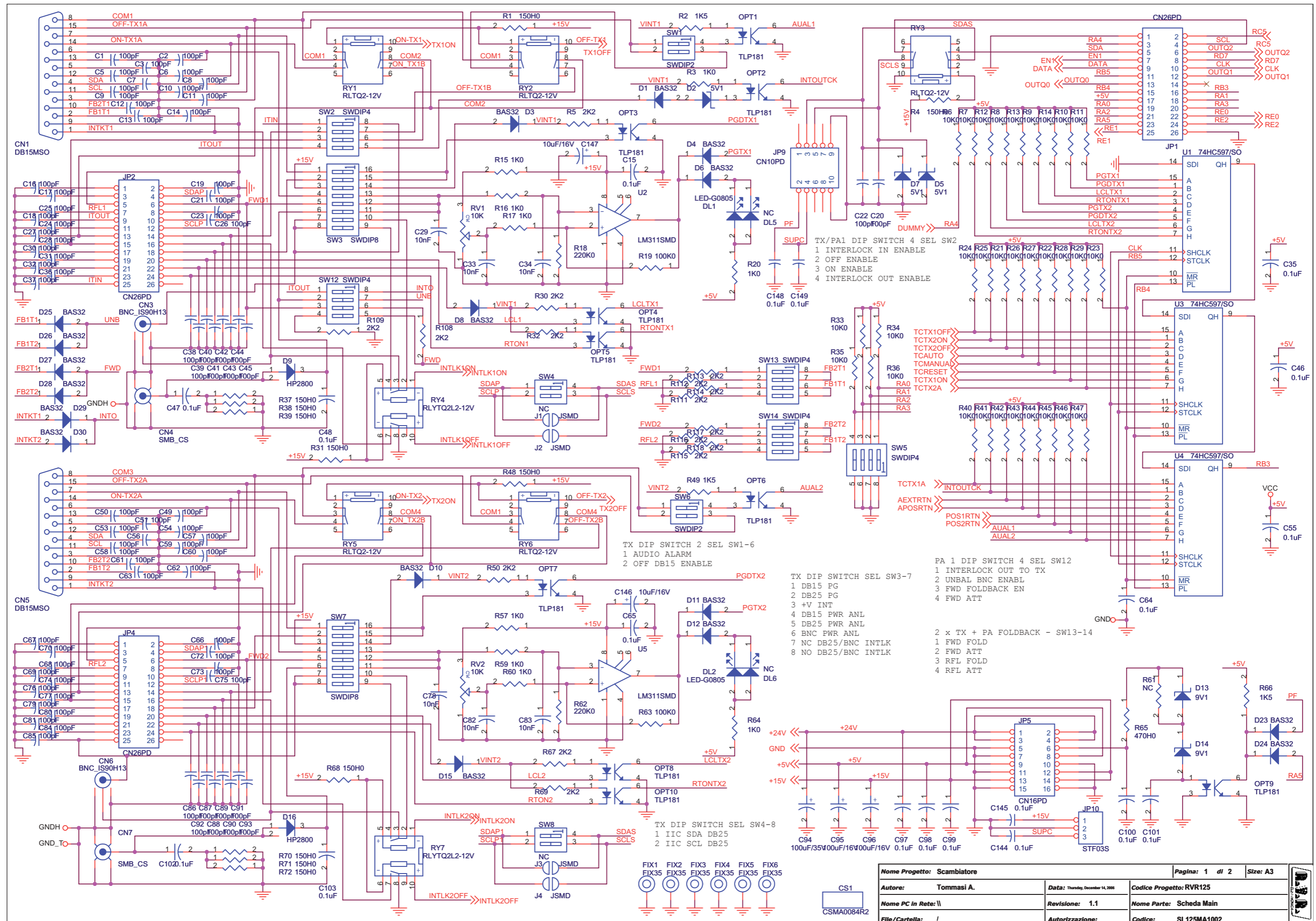
Description	RVR Code	Vers. Page	
Main Board	SL125MA1002	1.0	1
Synoptic Panel Card	SL125PC1001	1.0	5
Panel Card	SL125PC2001	1.0	7
Power Supply	FLYRXRL1U-11	1.0	10

Document History

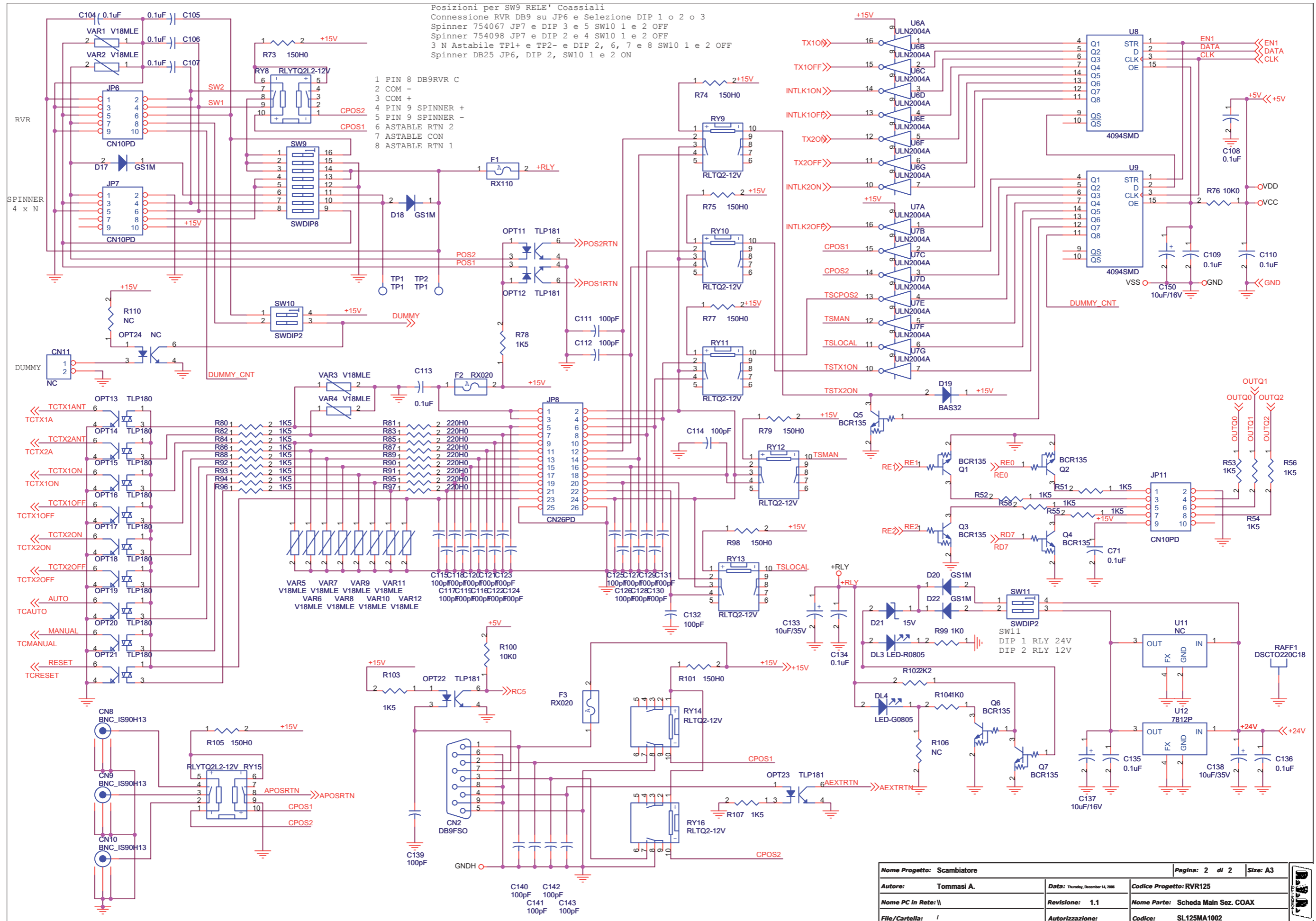
Date	Version	Reason	Code	Editor
16/10/2009	1.0	First Release	/	J.H. Berti



	NOME PROGETTO: SCMLCD1+1SL	NOME PARTE: SCHEMA MAIN
	AUTORE: A. TOMMASI	DATA: 26/09/2006 REVISIONE: 1.0
ARCHIVIAZIONE ELETTRONICA: "CARTELLA RILASCIATI" SU "UTSRV"	CODICE PROGETTO: 125	SCALA: 1:1 SIZE: A3 PAGINA: 1 DI 1
MATERIALE: <>	TRATTAMENTO: <>	CODICE DISEGNO: SL125MA1002
		PROFILO: <> STATO: ESECUTIVO



Nome Progetto: Scambiatore		Pagina: 1 di 2		Size: A3	
Autore: Tommasi A.	Data: Thursday, December 14, 2008	Codice Progetto: RVR125		Nome Parte: Scheda Main	
Nome PC in Rete: \\		Revisione: 1.1	Codice: SL125MA1002		
File/Cartella: /		Autorizzazione:			

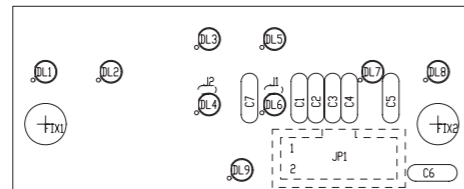


Nome Progetto: Scambiatore		Pagina: 2 di 2		Size: A3
Autore: Tommasi A.	Data: Thursday, December 14, 2008	Codice Progetto: RVR125		
Nome PC in Rete: \\	Revisione: 1.1	Nome Parte: Scheda Main Sez. COAX		
File/Cartella: /	Autorizzazione:	Codice: SL125MA1002		

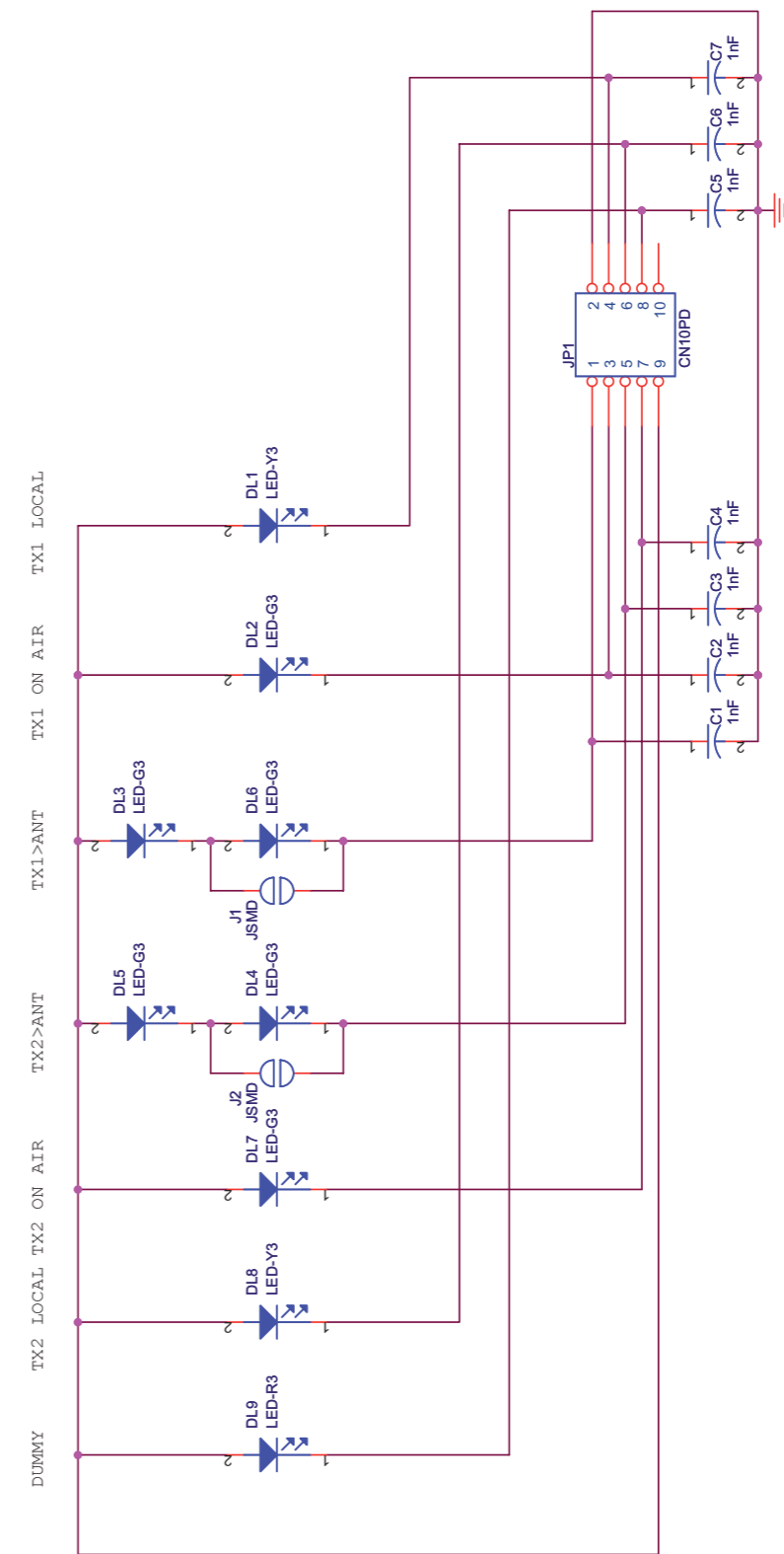
Scheda Main Revised: 14/12/2006
SL125MA1002 Revision: 1.1
Scambiatore
RVR125
Tommasi A.

Item	Quantity	Reference	Part	Description	Code
1	2	CN1,CN5	DB15MSO	Connettore DB15 mas. cs 90°	CNTDB15MCSA
2	1	CN2	DB9FSO	Connettore DB9 femm. cs 90°	CNTDB9FCSA
3	5	CN3,CN6,CN8,CN9,CN10	BNC_IS90H13	Connettore BNC isolato 90° h 13mm	CNTBNCFCAPSAPR
4	2	CN4,CN7	SMB_CS	Connettore SMB cs	CNTSMBMCSA
5	1	CN11	NC	Connettore 2 poli Mascon	
6	1	CS1	CSMA0084R2	Circuito stampato	CSMA0084R2
7	102	C1,C2,C3,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28,C30,C31,C32,C36,C37,C38,C39,C40,C41,C42,C43,C44,C45,C49,C50,C51,C53,C54,C56,C57,C58,C59,C60,C61,C62,C63,C66,C67,C68,C69,C70,C72,C73,C74,C75,C76,C77,C79,C80,C81,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C111,C112,C114,C115,C116,C117,C118,C119,C120,C121,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C139,C140,C141,C142,C143	100pF	Cond. SMD 0805	CCC085101JCC
8	31	C15,C35,C46,C47,C48,C55,C64,C65,C71,C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C113,C134,C135,C136,C144,C145,C148,C149	0.1uF	Cond. SMD 0805	CCC085104KXC
9	6	C29,C33,C34,C78,C82,C83	10nF	Cond. SMD 0805	CCC085103KXC
10	1	C94	100uF/35V	Cond. Elett. SMD d. 6.3mm	CES107E350
11	2	C95,C96	100uF/16V	Cond. Elett. SMD d. 6.3mm	CES107C160
12	2	C133,C138	10uF/35V	Cond. Elett. SMD d. 5mm	CES106B350
13	4	C137,C146,C147,C150	10uF/16V	Cond. Elett. SMD d. 4mm	CES106A160
14	3	DL1,DL2,DL4	LED-G0805	LED SMD 0805	LEDV0805
15	1	DL3	LED-R0805	LED SMD 0805	LEDR0805
16	2	DL5,DL6	NC	LED Verde dia. 3mm	
17	18	D1,D3,D4,D6,D8,D10,D11,D12,D15,D19,D23,D24,D25,D26,D27,D28,D29,D30	BAS32	MINIMELF SMD Diode	DISBAS32MINI
18	3	D2,D5,D7	5V1	MINIMELF SMD Zener Diode	DIZ5V1MINI
19	2	D9,D16	HP2800	Diode SMD SOT23	DISHSMS2800
20	2	D13,D14	9V1	MINIMELF SMD Zener Diode	DIZ9V1MINI
21	4	D17,D18,D20,D22	GS1M	Diode SMD cont. SMB	DIS4004MELF
22	1	D21	15V	MINIMELF SMD Zener Diode	DIZ15VMINI
23	6	FIX1,FIX2,FIX3,FIX4,FIX5,FIX6	FIX35	Foro fissaggio 3.5mm	
24	1	F1	RX110	Fusibile autorip. RUE p5mm	FUSAUTRX110A
25	2	F2,F3	RX020	Fusibile autorip. RUE p5mm	FUSAUTRX020
26	4	JP1,JP2,JP4,JP8	CN26PD	Connettore 26 poli Flat cs	CNTMCS26A
27	1	JP5	CN16PD	Connettore 16 poli Flat cs	CNTMCS10A
28	4	JP6,JP7,JP9,JP11	CN10PD	Connettore 10 poli Flat cs	CNTMCS16A
29	1	JP10	STF03S	Strip femmina 3 pin	STRIP
30	4	J1,J2,J3,J4	J5MD	Pad SMD a saldare	
31	14	OPT1,OPT2,OPT3,OPT4,OPT5,OPT6,OPT7,OPT8,OPT9,OPT10,OPT11,OPT12,OPT22,OPT23	TLP181	Optoisolatore SMD SO6	LEDTLP181
32	9	OPT13,OPT14,OPT15,OPT16,OPT17,OPT18,OPT19,OPT20,OPT21	TLP180	Optoisolatore SMD SO6	LEDTLP180
33	1	OPT24	NC	Optoisolatore SMD SO6	
34	7	Q1,Q2,Q3,Q4,Q5,Q6,Q7	BCR135	Trans./Res. NPN SOT23	TRNBCR135
35	1	RAFF1	DSCTO220C18	Dissipatore TO220	DSCTO220C18
36	2	RV1,RV2	10K	Trimmer Rg H 3006	RVT3006PK010

37	12	RY1,RY2,RY3,RY5,RY6,RY9,RY10,RY11,RY12,RY13,RY14,RY16	RLTQ2-12V	Rele' TQ2	RLD2V12V05AM
38	4	RY4,RY7,RY8,RY15	RLYTQ2L2-12V	Rele' TQ2L2	RLS2V12V05AM
39	19	R1,R4,R31,R37,R38,R39,R48,R68,R70,R71,R72,R73,R74,R75,R77,R79,R98,R101,R105	150H0	Res. SMD 0805	RCH085F0150H
40	22	R2,R49,R51,R52,R53,R54,R55,R56,R58,R66,R78,R80,R82,R84,R86,R88,R92,R93,R94,R96,R103,R107	1K5	Res. SMD 0805	RCH085F001K5
41	11	R3,R15,R16,R17,R20,R57,R59,R60,R64,R99,R104	1K0	Res. SMD 0805	RCH085F0001K
42	17	R5,R30,R32,R50,R67,R69,R102,R108,R109,R111,R112,R113,R114,R115,R116,R117,R118	2K2	Res. SMD 0805	RCH085F002K2
43	32	R6,R7,R8,R9,R10,R11,R12,R13,R14,R21,R22,R23,R24,R25,R26,R27,R28,R29,R33,R34,R35,R36,R40,R41,R42,R43,R44,R45,R46,R47,R76,R100	10K0	Res. SMD 0805	RCH085F0010K
44	2	R18,R62	220K0	Res. SMD 0805	RCH085F0220K
45	2	R19,R63	100K0	Res. SMD 0805	RCH085F0100K
46	3	R61,R106,R110	NC	Res. SMD 0805	
47	1	R65	470H0	Res. SMD 0805	RCH085F0470H
48	9	R81,R83,R85,R87,R89,R90,R91,R95,R97	220H0	Res. SMD 0805	RCH085F0220H
49	4	SW1,SW6,SW10,SW11	SWDIP2	Dip switch 2 vie	DSW2VO
50	5	SW2,SW5,SW12,SW13,SW14	SWDIP4	Dip switch 4 vie	DSW4VO
51	3	SW3,SW7,SW9	SWDIP8	Dip switch 8 vie	DSW8VO
52	2	SW4,SW8	NC	Dip switch 2 vie	
53	2	TP1,TP2	TP1	Test point	
54	3	U1,U3,U4	74HC597/SO	Shift Reg. SMD SO16	CID74HC597S
55	2	U2,U5	LM311SMD	Comp. SMD SO8	CILLM311SMD
56	2	U6,U7	ULN2004A	Seven Inv. Buffer OC	CIDULN2004SMD
57	2	U8,U9	4094SMD	Shift Reg. SMD SO16	CIDCD4094S
58	1	U11	NC	Stabilizzatore SMD D2PAK	
59	1	U12	7812P	Stabilizzatore TO220	CIL7812P
60	12	VAR1,VAR2,VAR3,VAR4,VAR5,VAR6,VAR7,VAR8,VAR9,VAR10,VAR11,VAR12	V18MLE	ESD SMD protector	MOV018V085



	NOME PROGETTO: SCMLCD1+1SL	NOME PARTE: PANNELLO SINOTTICO
	AUTORE: A. TOMMASI	DATA: 03/08/2006 REVISIONE: 1.0 SCALA: 1:1 SIZE: A4 PAGINA: 1 DI 1
ARCHIVIAZIONE ELETTRONICA: "CARTELLA RILASCIATI" SU "UTSRV"		CODICE PROGETTO: 125 CODICE DISEGNO: SL125PC1001
MATERIALE: <>	TRATTAMENTO: <>	PROFILO: <> STATO: ESECUTIVO

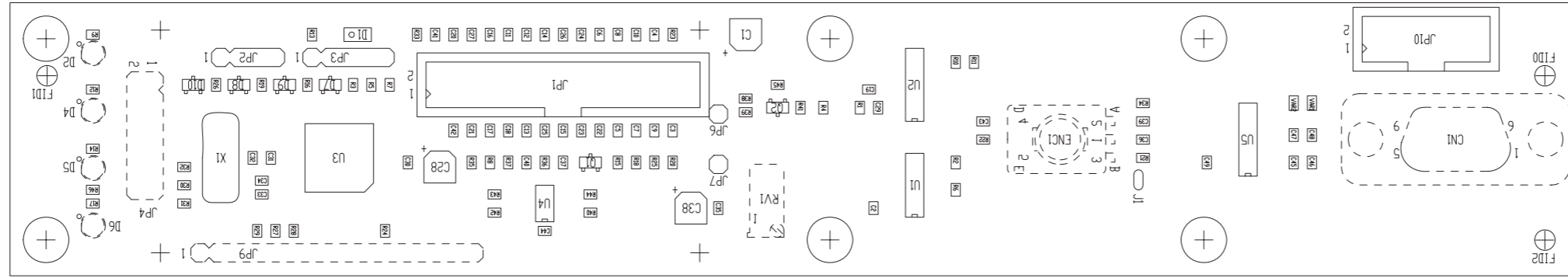


Project Name: Scambiatore	Page: 1 of 1	Size: A4
Designer: Tommasi A.	Project Code: RVR125	
File Location: \\	Date: Monday, 04/01/2006	Description: Pannello sinottico
Folder/File: /	Revision: 1.0	Part No.: SL125PC1001
	Approval:	

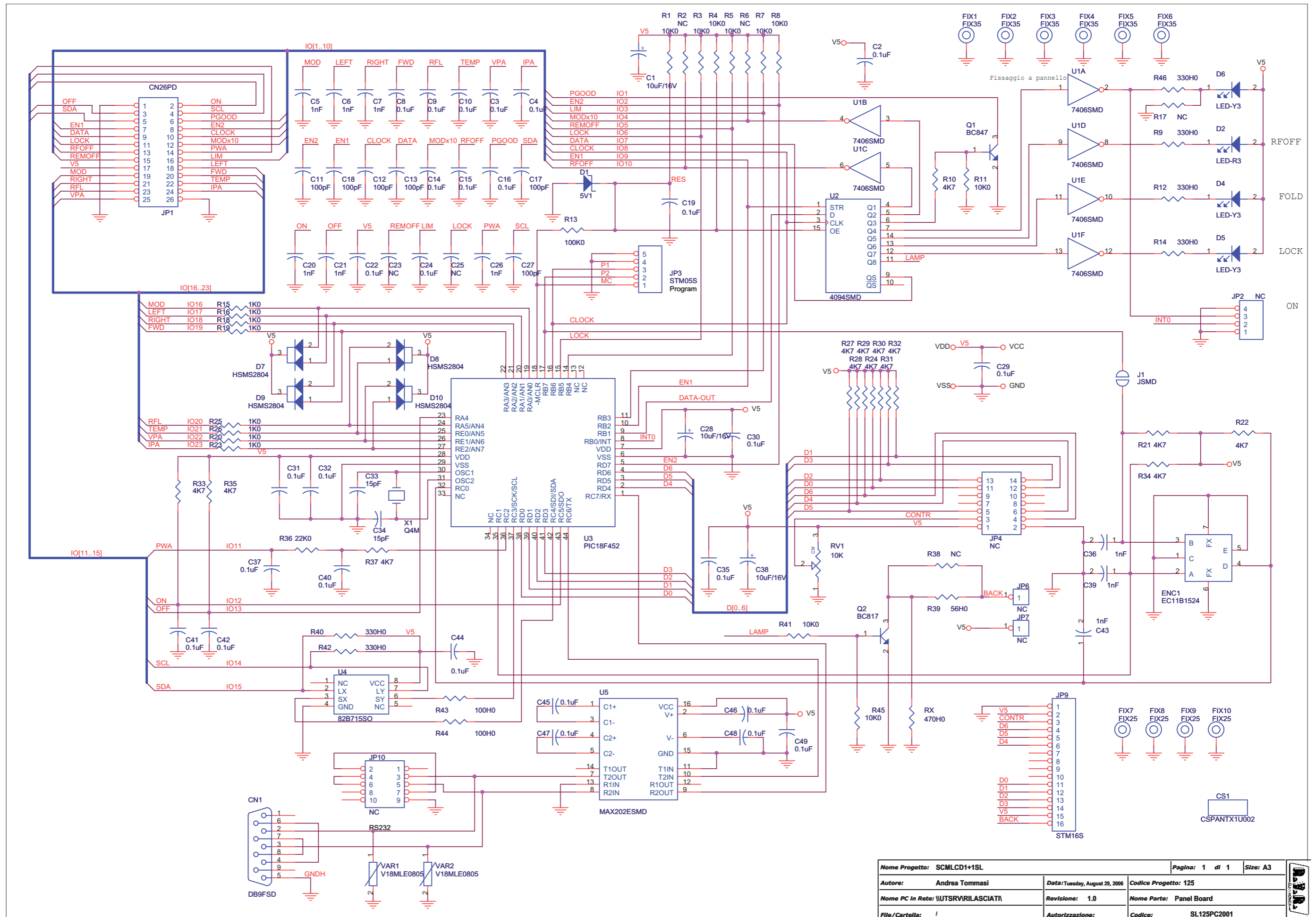
Pannello sinottico
 SL125PC1001
 Rev.1.0 31/07/2006
 Scambiatore
 RVR125
 Tommasi A.

Item	Quantity	Reference	Part	Description	Code
1	1	CS1	CSPC0093R1	Circuito stampato	CSPC0093R1
2	7	C1,C2,C3,C4,C5,C6,C7	1nF	Cond. ceramico p 5mm	CKM102KC600P
3	2	DL1,DL8	LED-Y3	LED Giallo dia. 3mm	LEDG03
4	6	DL2,DL3,DL4,DL5,DL6,DL7	LED-G3	LED Verde dia. 3mm	LEDV03
5	1	DL9	LED-R3	LED Rosso dia. 3mm	LEDR03
6	2	FIX1,FIX2	FIX35	Foro fissaggio 3.5mm	
7	1	JP1	CN10PD	Connettore 10 poli Flat cs	CNTMCS10A
8	2	J1,J2	JSMD	Pad SMD a saldare	

NOTA Nella versione V2 saldare i PAD J1 e J2



	NOME PROGETTO: SCMLCD1+1SL	NOME PARTE: SCHEDA PANNELLO
ARCHIVIAZIONE ELETTRONICA: "CARTELLA RILASCIATI" SU "UTSRV"	AUTORE: A. TOMMASI	DATA: 29/08/2006
MATERIALE: <>	TRATTAMENTO: <>	REVISIONE: 1.0
		SCALA: 1:1
		SIZE: A4
		PAGINA: 1 DI 1
		CODICE PROGETTO: 125
		CODICE DISEGNO: SL125PC2001
		PROFILO: <>
		STATO: ESECUTIVO



Nome Progetto: SCMLCD1+1SL		Pagina: 1 di 1		Size: A3
Autore: Andrea Tommasi		Data: Tuesday, August 29, 2006	Codice Progetto: 125	
Nome PC in Rete: \UTSRV\RILASCIATI		Revisione: 1.0	Nome Parte: Panel Board	
File/ Cartella: /		Autorizzazione:	Codice: SL125PC2001	

Panel Board - SL125PC2001
29/08/2006 Revision: 1.0
SCMLCD1+1SL
125

Andrea Tommasi

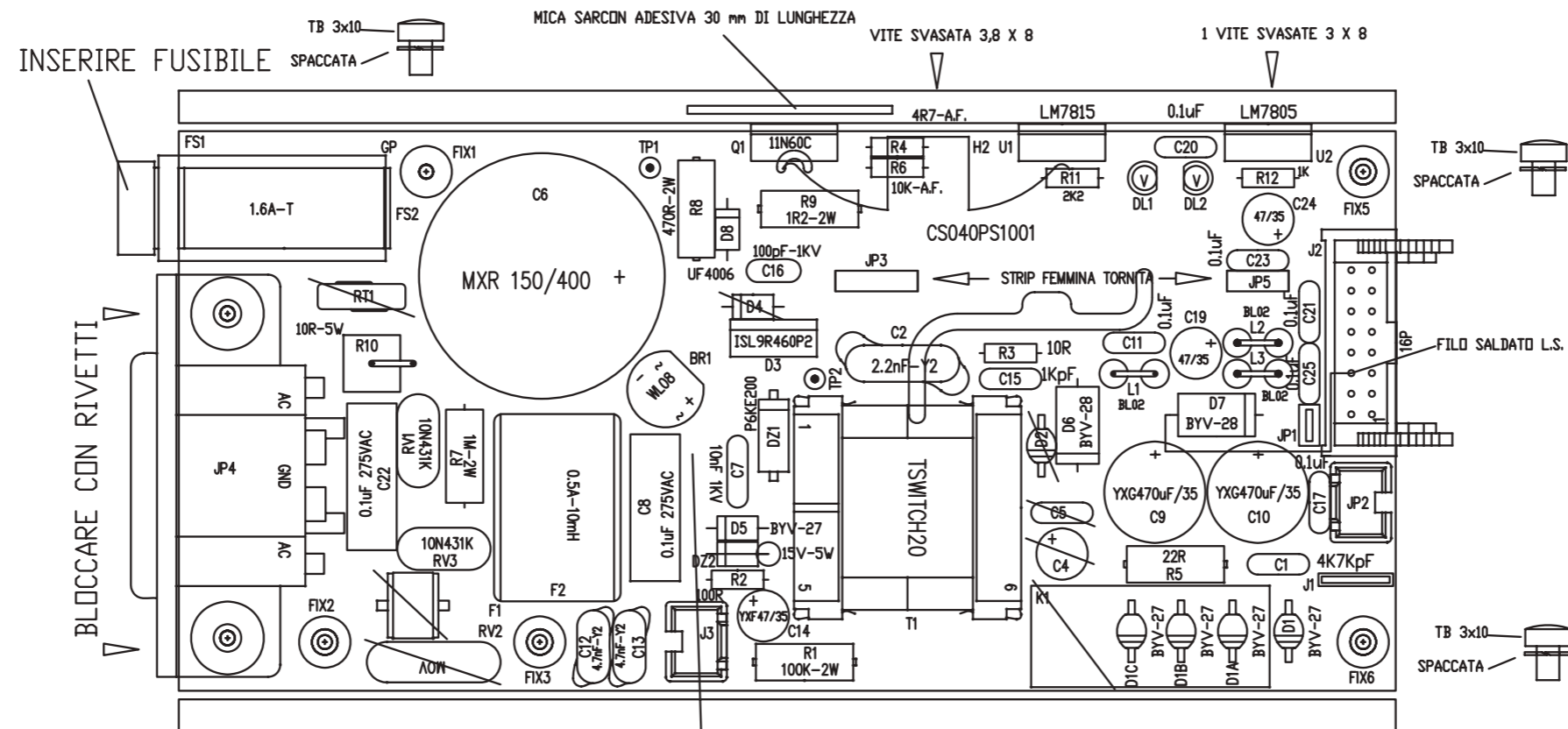
Item	Quantity	Reference	Part	Description	Code
1	1	CN1	DB9FSD	Connettore DB9 femm. cs	CNTDB9FCS01
2	1	CS1	CSPANTX1U002	Circuito stampato	CSPANTX1U002
3	3	C1, C28, C38	10uF/16V	Cond. Elett. SMD d. 4mm	CES106A160
4	27	C2, C3, C4, C8, C9, C10, C14, C15, C16, C19, C22, C24, C29, C30, C31, C32, C35, C37, C40, C41, C42, C44, C45, C46, C47, C48, C49	0.1uF	Cond. SMD 0805	CCC085104KXC
5	9	C5, C6, C7, C20, C21, C26, C36, C39, C43	1nF	Cond. SMD 0805	CCC085102KXC
6	6	C11, C12, C13, C17, C18, C27	100pF	Cond. SMD 0805	CCC085101JCC
7	2	C33, C34	15pF	Cond. SMD 0805	CCC085150JCC
8	1	D1	5V1	MINIMELF SMD Zener Diode	DIZ5V1MINI
9	3	D4, D5, D6	LED-Y3	LED dia. 3mm	LEDG03
10	1	D2	LED-R3	LED dia. 3mm	LEDR03
11	4	D7, D8, D9, D10	HSMS2804	Doppio Diode SMD SOT23	DISHSMS2804
12	1	ENC1	EC11B1524	Incremental encoder ALPS EC11	CMMRALPS
13	6	FIX1, FIX2, FIX3, FIX4, FIX5, FIX6	FIX35	Foro fissaggio	
14	4	FIX7, FIX8, FIX9, FIX10	FIX25	Foro fissaggio 2.5mm	NOTA 2
15	1	JP1	CN26PD	Connettore 26 poli Flat cs	CNTMCS26A
16	1	JP2	NC	Strip maschio 4 pin	
17	1	JP3	STM05S	Strip maschio 5 pin	NOTA 1
18	1	JP4	NC	Strip maschio 14 pin doppia fila	
19	2	JP6, JP7	NC	Strip femmina 1 pin	
20	1	JP9	STM16S	Strip maschio 16 pin	NOTA 1
21	1	JP10	NC	Connettore 10 poli Flat cs	
22	1	J1	JSMD	Pad SMD a saldare	
23	1	Q1	BC847	Trans. NPN SOT23	TRNBC847
24	1	Q2	BC817	Trans. NPN SOT23	TRNBC817
25	1	RV1	10K	Trimmer Rg V 3296W	RVT3296WK010
26	1	RX NOTA3	470H0	Res. SMD 0805	RCH085F0470H
27	9	R1, R3, R4, R5, R7, R8, R11, R41, R45	10K0	Res. SMD 0805	RCH085F0010K
28	1	R13	100K0	Res. SMD 0805	RCH085F0100K
29	6	R9, R12, R14, R40, R42, R46	330H0	Res. SMD 0805	RCH085F0330H
30	14	R10, R21, R22, R24, R27, R28, R29, R30, R31, R32, R33, R34, R35, R37	4K7	Res. SMD 0805	RCH085F004K7
31	8	R15, R16, R18, R19, R20, R23, R25, R26	1K0	Res. SMD 0805	RCH085F0001K
32	4	R2, R6, R17, R38	NC	Res. SMD 0805	
33	1	R36	22K0	Res. SMD 0805	RCH085F0022K
34	1	R39	56H0	Res. SMD 0805	RCH085F0056H
35	2	R43, R44	100H0	Res. SMD 0805	RCH085F0100H
36	1	U1	7406SMD	Hex inv OC SMD SO14	CID7406S
37	1	U2	4094SMD	Shift Reg. SMD SO16	CIDCD4094S
38	1	U3	PIC18F452	TQFP44 SMD Microprocessor	CIDPIC18F452
39	1	U4	82B715SO	IIC Bus driver SMD SO8	CID82B715S
40	1	U5	MAX202ESMD	RS232 Driver SMD SO16	CIDMX202ESDS
41	2	VAR1, VAR2	V18MLE0805	ESD SMD protector	MOV018V085
42	1	X1	Q4M	Quarzo SMD HC49SMD	QRZ000004MC
43	2	C23, C25	NC	Cond. SMD 0805	

NOTA 1 Spezzoni strip maschio, la 16 pin per collegare il display

NOTA 2 Fissare il display con 2 torrette isolate DSTPH6X2,9 montate dalla parte opposta della strip
Il display dovrebbe essere quello BLU APEX RC162051BNHDWB-V1 oppure SDEC (Mectronic) SSC2P16DLNW-E

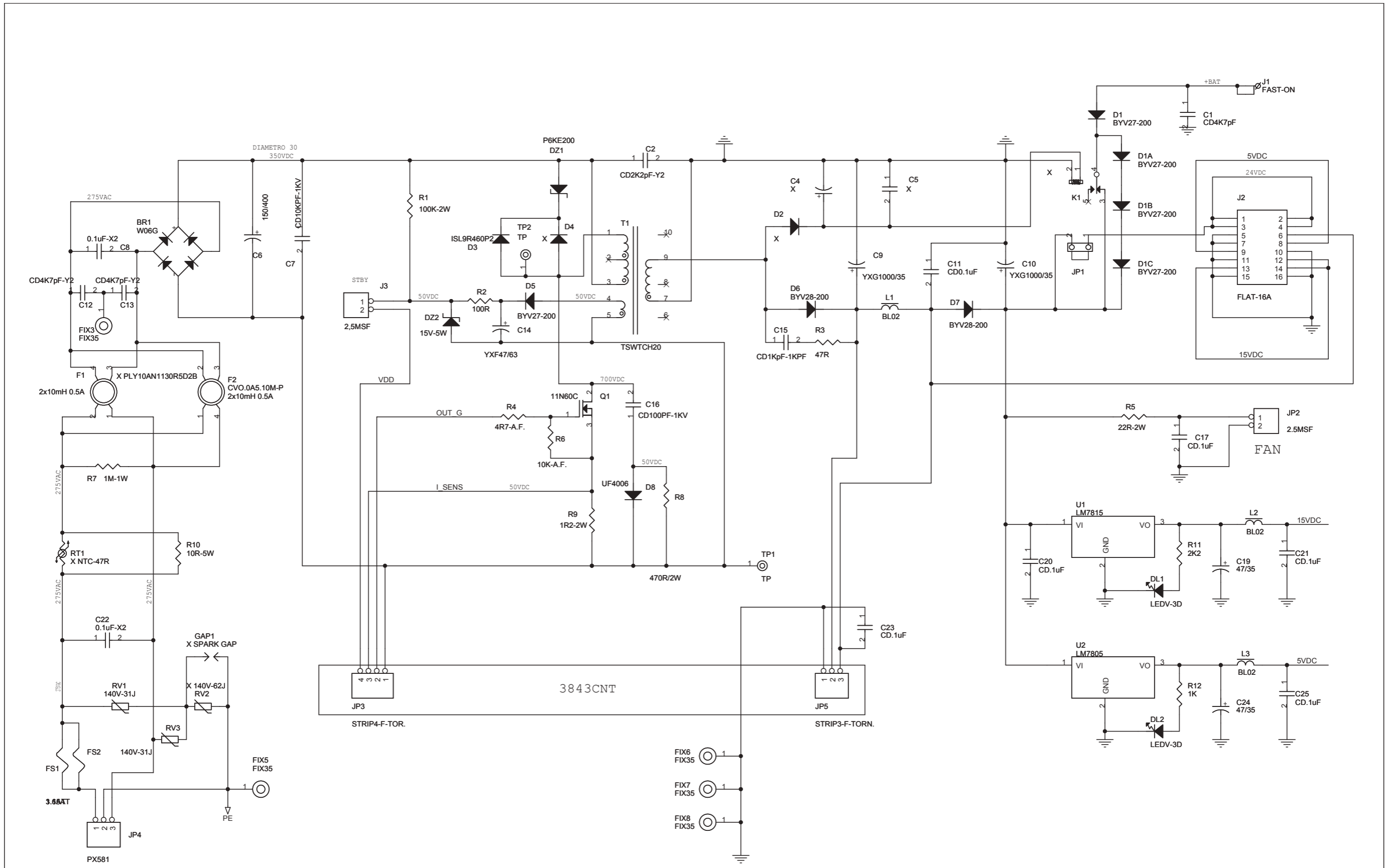
NOTA 3 Montata a mano sotto il CS vedi foto

PIANO DI MONTAGGIO FLYRXRL1U_11A



I SEGUENTI COMPONENTI DEVONO ESSERE MONTATI SOLLEVATI
DZ1, DZ2, R1, R9, C16, R4, R6, BR1

ARCHIVIO: X:\WORKDWG\	
TITLE POWER SUPPLY PNT RX	
DOCUMENT NUMBER FLYRXRL1U_11A_MNT. DWG	REV 1.1
DATE: 2 MARZO 2009	



Nome Progetto:	POWER SUPPLY 5-18-24VC	Pagina:	1 di 1	Size:	A3
Autore:	GRIPTECH	Data:	26/10/06	Codice Progetto:	040
Nome PC in Rete:	\\UTSRV\riasciati	Revisione:	1.1	Nome Parte:	POWER SUPPLY
File/Cartella:	\	Autorizzazione:		Codice:	FLYRXRL1U

Revised: Monday, March 02, 2009
Revision:

Item	Quantity	Reference	Part
1	1	BR1	W06G
2	1	C1	CD4K7pF
3	1	C2	CD2K2pF-Y2
4	5	K1D2D4C4C5	X
5	1	C6	150/400
6	1	C7	CD10KPF-1KV
7	2	C22C8	0.1uF-X2
8	2	C9C10	YXG1000/35
9	1	C11	CD0.1uF
10	2	C12C13	CD4K7pF-Y2
11	1	C14	YXF47/63
12	1	C15	CD1KpF-1KPF
13	1	C16	CD100PF-1KV
14	5	C17C20C21C23C25	CD.1uF
15	2	C19C24	47/35
16	2	DL1DL2	LEDV-3D
17	1	DZ1	P6KE200
18	1	DZ2	15V-5W
19	5	D1CD1BD1AD1D5	BYV27-200
20	1	D3	ISL9R460P2
21	2	D7D6	BYV28-200
22	1	D8	UF4006
23	5	FIX3FIX5FIX6FIX7FIX8	FIX35
24	1	FS1	1.6AT
25	1	FS2	3.15AT
26	1	F1	X PLY10AN1130R5D2B
27	1	F2	CVO.0A5.10M-P
28	1	GAP1	X SPARK GAP
29	1	JP1	
30	1	JP2	2.5MSF
31	1	JP3	STRIP4-F-TOR.
32	1	JP4	PX581
33	1	JP5	STRIP3-F-TORN.
34	1	J1	FAST-ON
35	1	J2	FLAT-16A
36	1	J3	2,5MSF
37	3	L1L2L3	BL02
38	1	Q1	11N60C
39	1	RT1	X NTC-47R
40	2	RV1RV3	140V-31J
41	1	RV2	X 140V-62J
42	1	R1	100K-2W
43	1	R2	100R
44	1	R3	47R
45	1	R4	4R7-A.F.
46	1	R5	22R-2W
47	1	R6	10K-A.F.
48	1	R7	1M-1W
49	1	R8	470R/2W
50	1	R9	1R2-2W
51	1	R10	10R-5W
52	1	R11	2K2
53	1	R12	1K
54	2	TP2TP1	TP
55	1	T1	TSWTCH20
56	1	U1	LM7815
57	1	U2	LM7805