

LAB.GRUPPEN

IP1150Q

SERVICE MANUAL

Version 2

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iP1150Q

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OUT4

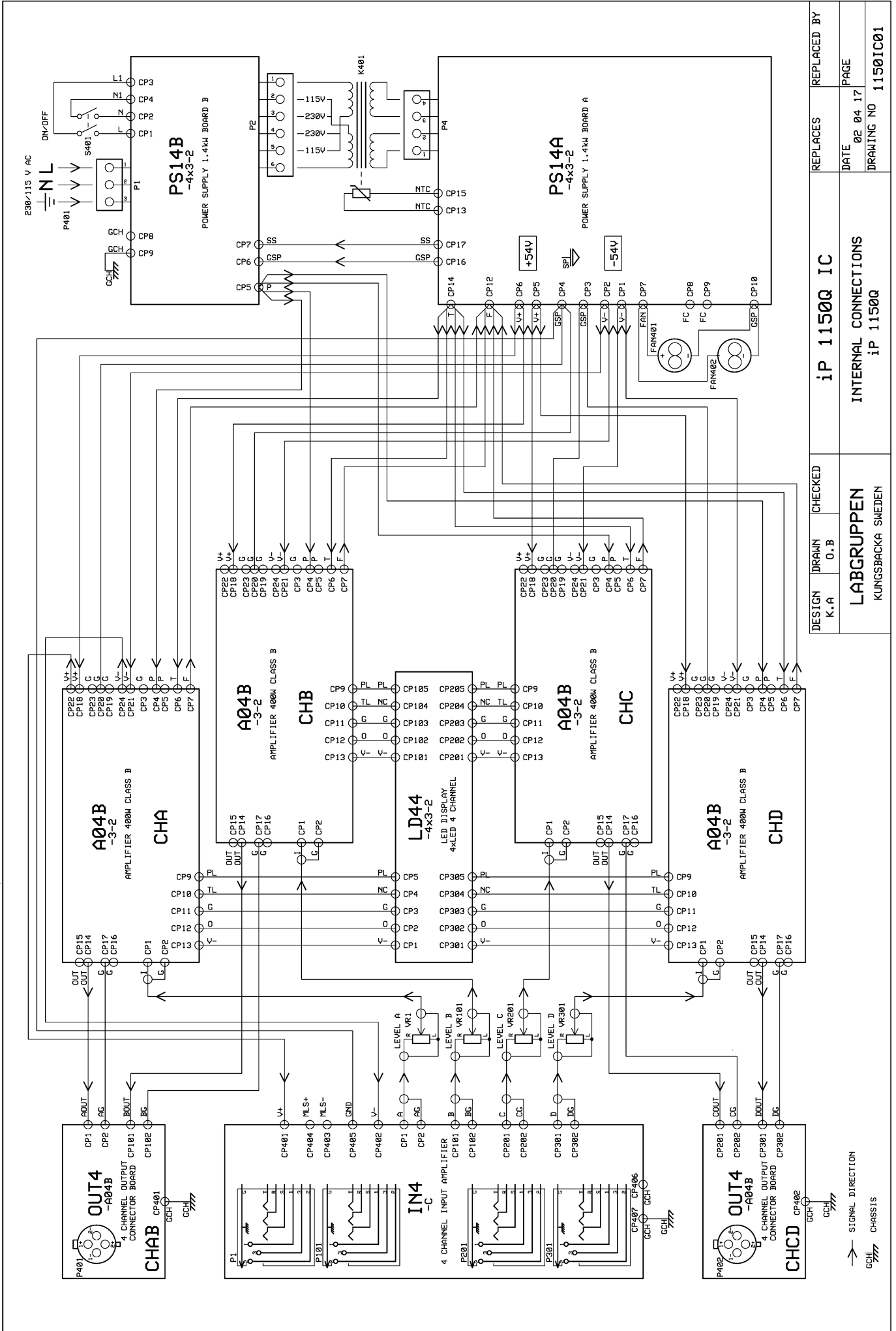
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DESIGN K.A	DRAWN O. B	CHECKED	iP 1150Q IC		REPLACES	REPLACED BY
LABGRUPPEN KUNGSBACKA SWEDEN			INTERNAL CONNECTIONS iP 1150Q		DATE 02 04 17	PAGE
					DRAWING NO 1150IC01	

→	SIGNAL DIRECTION
GCH	CHASSIS

Component list

⚠ - Safety critical component. Should only be replaced with the specified type.

	Position	Partnumber	Description	Comment
⚠	FAN401	F80x25-24HS	Fan 80x80x25mm 24VDC high speed	
⚠	FAN402	F80x25-24HS	Fan 80x80x25mm 24VDC high speed	
⚠	K401	1K2TOd145h75_LAB	Transformer 1.2kW toridial dy145mm h 75mm LAB. Rev01	
⚠	P401		Variant dependent, see separate list	
⚠	S401	RK2-0-16A25x33	Switch Rocker Double Pole Single Trough on - off 16A 25x33mm	
	VR1	VR10KLIN31_TOK	Potentiometer 10K LIN 31step TOKOS B103 TP96N08 Y4929 Rev1	
	VR101	VR10KLIN31_TOK	Potentiometer 10K LIN 31step TOKOS B103 TP96N08 Y4929 Rev1	
	VR201	VR10KLIN31_TOK	Potentiometer 10K LIN 31step TOKOS B103 TP96N08 Y4929 Rev1	
	VR301	VR10KLIN31_TOK	Potentiometer 10K LIN 31step TOKOS B103 TP96N08 Y4929 Rev1	

Variant specific components

	Position	230V	115V
⚠	P401	MLEU3x.752mBLK	MLEU3x1.52.5mBLK

Description for variant dependent components

Partnumber	Description
MLEU3x.752mBLK	Mains lead EU Plug type CEE7/VII 3x.75mm ² 2m Black
MLEU3x1.52.5mBLK	Mains lead EU Plug type CEE7/VII 3x1.5mm ² 2.5m Black

Sparepart list for iP1150Q

Completed modules

Partnumber	Description
A04B-3-2	Amplifier 400W class B, variant 3-2
IN4-C	4 channel input amplifier, variant C
LD44-4x3-2	Led display 4 x led 4 channel, variant 4x3-2
OUT4CHAB-A04B	4 channel output connector board channel AB, variant A04B
OUT4CHCD-A04B	4 channel output connector board channel CD, variant A04B
PS14A-4x3-2	Powersupply 1.4kW board A, variant 4x3-2
PS14B-4x3-2	Powersupply 1.4kW board B, variant 4x3-2, 230V
PS14B-4x3-2U	Powersupply 1.4kW board B, variant 4x3-2U, 115V

Mecanical parts

⚠ - Safety critical component. Should only be replaced with the specified type.

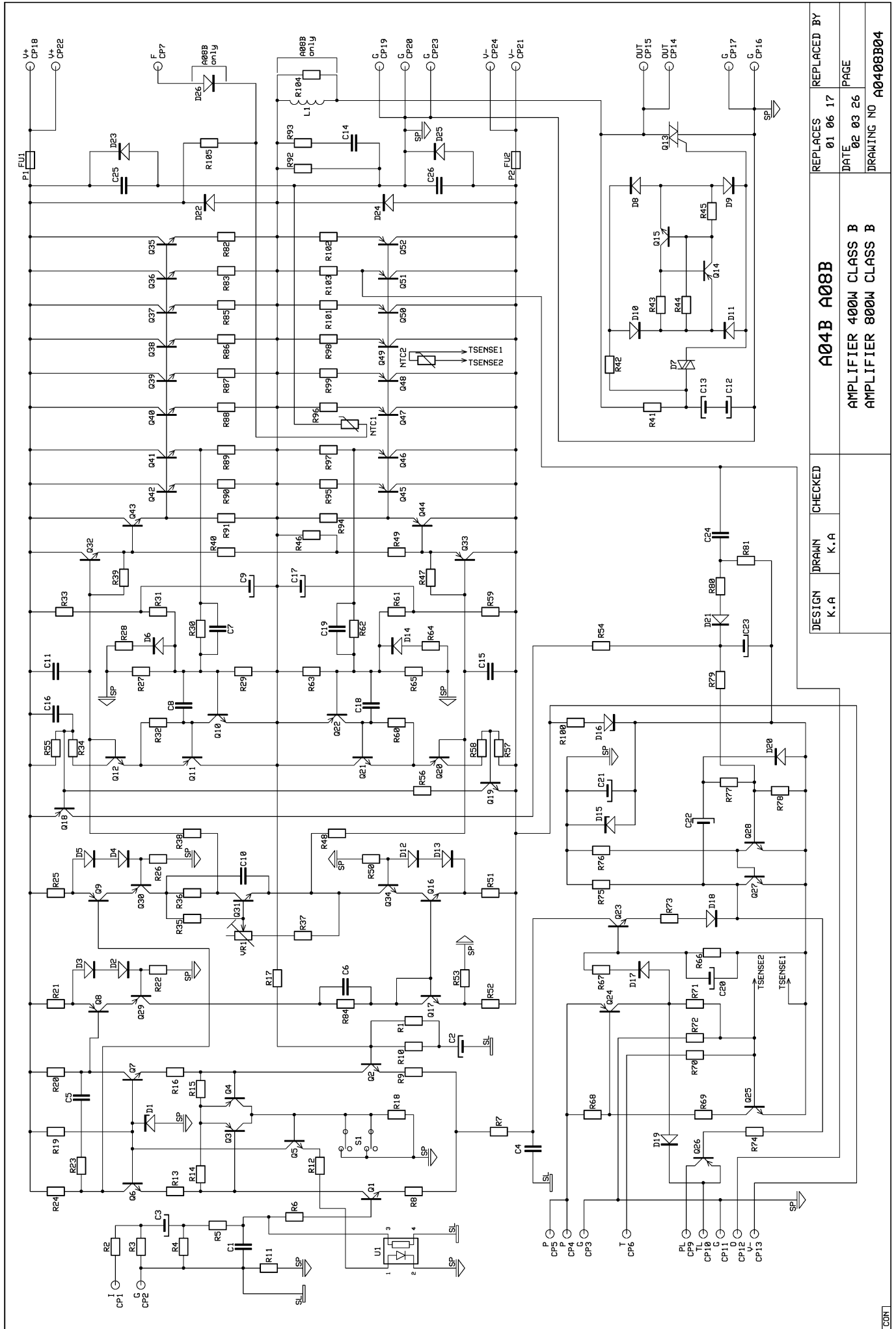
Partnumber	Description
TC06S-PBLK	Top cover
BC06S-PBLK	Bottom cover
AECHS-ANBLK	Aluminium edging
RP-IP1150Q	Rear panel 230V
RP-IP1150QU	Rear panel 115V
HDL2HEM4_PEN	Handle
DCS2-PBLK	Dustfilter clip
DF233x62x5-20 ⚠	Dustfilter
KNBD11.1_TAI	Gain potentiometer knob

Screws

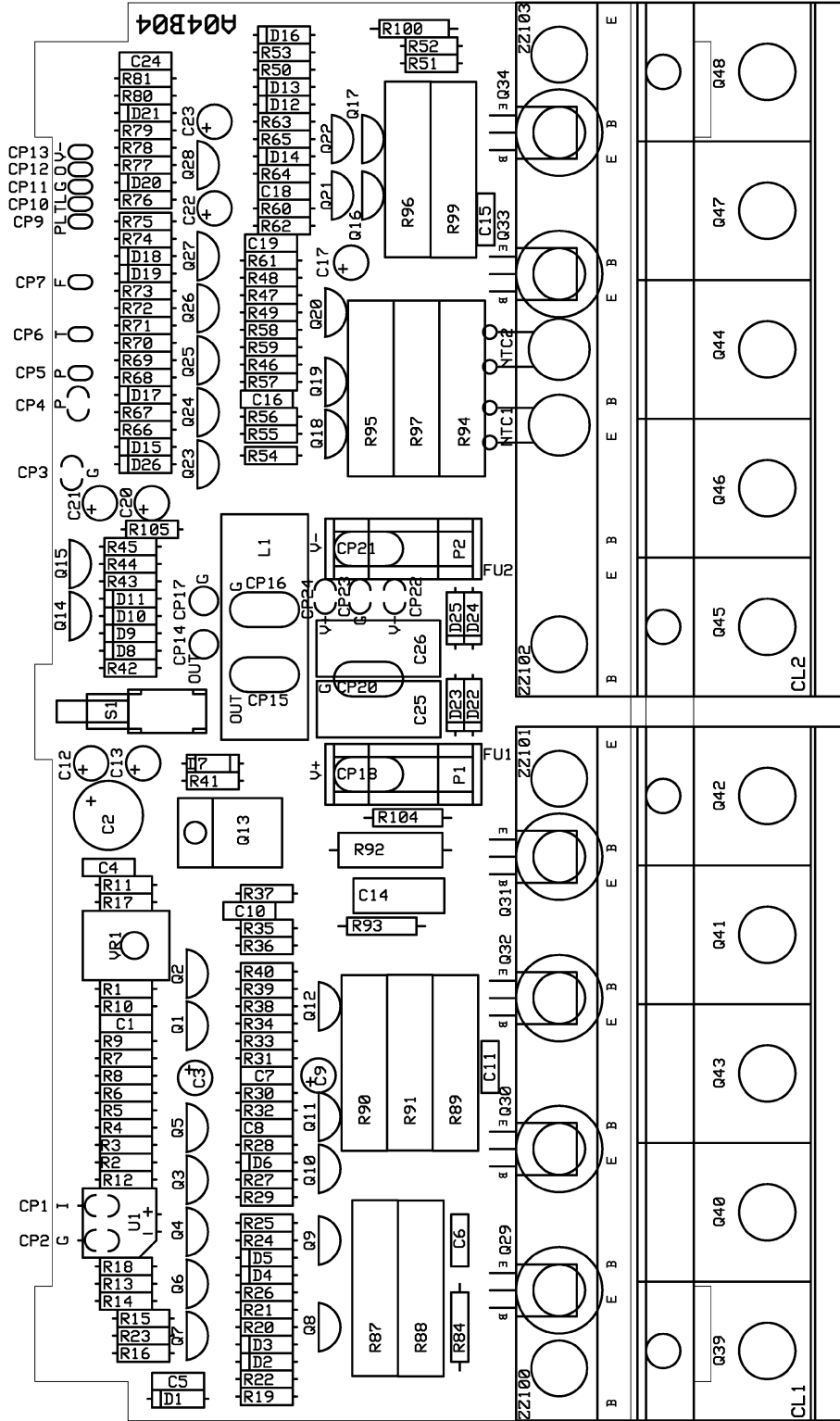
Partnumber	Description
MRX3x10SV	Machine screw, pan head, phillips, M3x10, black
MFX3x12SV	Machine screw, countersunk head, phillips, M3x12, black
RTS-HST2.9x9.5SV	Self tapping screw, pan head, torx, 2.9x9.5mm, black
FXS-HST2.9x9.5SV	Self tapping screw, countersunk head, phillips, 2.9x9.5mm, black

A04B / A08B

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K.A	K.A		Ø1 06 17	
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			Ø2 03 26	
			DRAWING NO A0408B04	
A04B A08B				
AMPLIFIER 400W CLASS B				
AMPLIFIER 800W CLASS B				



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K.A	K.A		01 08 20	01 08 20
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			DRAWING NO	A04B04-P

A04B

AMPLIFIER 400W CLASS B

Component list for A04B, A08B - rev 04A

⚠ - Safety critical component. Should only be replaced with the specified type.

	Position	Partnumber	Description	Comment	Side
	C1	150p100VNP05%5	Capacitor ceramic 150p 100V NP0 5% 5mm		Top
	C2	470u16V	Capacitor electrolytic 470u 16V 5mm		Top
	C3	47u25V	Capacitor electrolytic 47u 25V 5mm		Top
	C4	1n250VMMK5	Capacitor polyester 1n 250V MMK 5mm		Top
	C5	680p400VK20005%5	Capacitor ceramic 680p 400V K2000 5% 5mm		Top
	C6	10n250VMMK5	Capacitor polyester 10n 250V MMK 5mm		Top
	C7	1n250VMMK5	Capacitor polyester 1n 250V MMK 5mm		Top
	C8	470p200VNP05%5	Capacitor ceramic 470p 200V NP0 5% 5mm		Top
	C9	2u2100V	Capacitor electrolytic 2u2 100V 5mm		Top
	C10	10n250VMMK5	Capacitor polyester 10n 250V MMK 5mm		Top
	C11	100p200VNP05%5	Capacitor ceramic 100p 200V NP0 5% 5mm		Top
	C12	10u50V	Capacitor electrolytic 10u 50V 5mm		Top
	C13	10u50V	Capacitor electrolytic 10u 50V 5mm		Top
	C14	22n250VMMK10	Capacitor polyester 22n 250V MMK 10mm		Top
	C15	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C16	33n100VMMK5	Capacitor polyester 33n 100V MMK 5mm		Top
	C17	2u2100V	Capacitor electrolytic 2u2 100V 5mm		Top
	C18	470p200VNP05%5	Capacitor ceramic 470p 200V NP0 5% 5mm		Top
	C19	1n250VMMK5	Capacitor polyester 1n 250V MMK 5mm		Top
	C20	10u50V	Capacitor electrolytic 10u 50V 5mm		Top
	C21	10u50V	Capacitor electrolytic 10u 50V 5mm		Top
	C22	10u50V	Capacitor electrolytic 10u 50V 5mm		Top
	C23	4u750V	Capacitor electrolytic 4u7 50V 5mm		Top
	C24	39p200VNP05%5	Capacitor ceramic 39p 200V NP0 5% 5mm		Top
⚠	C25	2u2100VMMK15	Capacitor polyester 2u2 100V MMK 15mm		Top
⚠	C26	2u2100VMMK15	Capacitor polyester 2u2 100V MMK 15mm		Top
	D1	15V.4W5%	Diode zener 15V .4W 5%		Top
	D2	1N4148	Diode signal 1N4148		Top
	D3	1N4148	Diode signal 1N4148		Top
	D4	1N4148	Diode signal 1N4148		Top
	D5	1N4148	Diode signal 1N4148		Top
	D6	BAV21	Diode signal BAV21		Top
	D7	-	Not used		Top
	D8	1N4148	Diode signal 1N4148		Top
	D9	1N4148	Diode signal 1N4148		Top
	D10	1N4148	Diode signal 1N4148		Top
	D11	1N4148	Diode signal 1N4148		Top
	D12	1N4148	Diode signal 1N4148		Top
	D13	1N4148	Diode signal 1N4148		Top
	D14	BAV21	Diode signal BAV21		Top
	D15	15V.4W5%	Diode zener 15V .4W 5%		Top
	D16	15V.4W5%	Diode zener 15V .4W 5%		Top
	D17	1N4148	Diode signal 1N4148		Top
	D18	1N4148	Diode signal 1N4148		Top
	D19	1N4148	Diode signal 1N4148		Top
	D20	1N4148	Diode signal 1N4148		Top
	D21	BAV21	Diode signal BAV21		Top
	D22	1N4004	Diode power 1N4004		Top
	D23	1N4004	Diode power 1N4004		Top
	D24	1N4004	Diode power 1N4004		Top
	D25	1N4004	Diode power 1N4004		Top
	D26		Variant dependent, see separate list		Top

	Position	Partnumber	Description	Comment	Side
⚠	FU1		Variant dependent, see separate list		Top
⚠	FU2		Variant dependent, see separate list		Top
	L1		Variant dependent, see separate list		Top
	NTC1	NTC150KM3_EPC	Resistor NTC 150K M3 EPCOS B57045-K154-K		Top
	NTC2	NTC150KM3_EPC	Resistor NTC 150K M3 EPCOS B57045-K154-K		Top
	P1	FBPC5x209M	Fuseblock PCB 5x20mm fuse 9 modules		Top
	P2	FBPC5x209M	Fuseblock PCB 5x20mm fuse 9 modules		Top
	Q1	BC549C	Transistor bipolar signal BC549C		Top
	Q2	BC549C	Transistor bipolar signal BC549C		Top
	Q3	BC557B	Transistor bipolar signal BC557B		Top
	Q4	BC557B	Transistor bipolar signal BC557B		Top
	Q5	BC547B	Transistor bipolar signal BC547B		Top
	Q6	MPSA42	Transistor bipolar signal MPSA42		Top
	Q7	MPSA42	Transistor bipolar signal MPSA42		Top
	Q8	BC557B	Transistor bipolar signal BC557B		Top
	Q9	BC557B	Transistor bipolar signal BC557B		Top
	Q10	BC547B	Transistor bipolar signal BC547B		Top
	Q11	BC557B	Transistor bipolar signal BC557B		Top
	Q12	MPSA42	Transistor bipolar signal MPSA42		Top
	Q13	Q6015L5LY	Triac Q6015L5 lying		Top
	Q14	BC557B	Transistor bipolar signal BC557B		Top
	Q15	BC547B	Transistor bipolar signal BC547B		Top
	Q16	BC547B	Transistor bipolar signal BC547B		Top
	Q17	BC547B	Transistor bipolar signal BC547B		Top
	Q18	MPSA92	Transistor bipolar signal MPSA92		Top
	Q19	MPSA42	Transistor bipolar signal MPSA42		Top
	Q20	MPSA92	Transistor bipolar signal MPSA92		Top
	Q21	BC547B	Transistor bipolar signal BC547B		Top
	Q22	BC557B	Transistor bipolar signal BC557B		Top
	Q23	BC547B	Transistor bipolar signal BC547B		Top
	Q24	BC557B	Transistor bipolar signal BC557B		Top
	Q25	BC547B	Transistor bipolar signal BC547B		Top
	Q26	BC557B	Transistor bipolar signal BC557B		Top
	Q27	BC547B	Transistor bipolar signal BC547B		Top
	Q28	BC547B	Transistor bipolar signal BC547B		Top
	Q29	MJE350LY	Transistor bipolar power MJE350 lying		Top
	Q30	MJE350LY	Transistor bipolar power MJE350 lying		Top
	Q31	BD329LY	Transistor bipolar power BD329 lying		Top
	Q32	MJE340LY	Transistor bipolar power MJE340 lying		Top
	Q33	MJE350LY	Transistor bipolar power MJE350 lying		Top
	Q34	MJE340LY	Transistor bipolar power MJE340 lying		Top
	Q35	-	Not used		Bot.
	Q36		Variant dependent, see separate list	May have different value	Bot.
	Q37		Variant dependent, see separate list	May have different value	Bot.
	Q38		Variant dependent, see separate list	May have different value	Bot.
	Q39	-	Not used		Bot.
	Q40	MJL21194_SA	Transistor bipolar power MJL21194 surface mounted	May have different value	Bot.
	Q41	MJL21194_SA	Transistor bipolar power MJL21194 surface mounted	May have different value	Bot.
	Q42		Variant dependent, see separate list	May have different value	Bot.

	Position	Partnumber	Description	Comment	Side
	Q43	MJL3281_SA	Transistor bipolar power MJL3281 surface mounted	May have different value	Bot.
	Q44	MJL1302_SA	Transistor bipolar power MJL1302 surface mounted	May have different value	Bot.
	Q45		Variant dependent, see separate list	May have different value	Bot.
	Q46	MJL21193_SA	Transistor bipolar power MJL21193 surface mounted	May have different value	Bot.
	Q47	MJL21193_SA	Transistor bipolar power MJL21193 surface mounted	May have different value	Bot.
	Q48	-	Not used		Bot.
	Q49		Variant dependent, see separate list	May have different value	Bot.
	Q50		Variant dependent, see separate list	May have different value	Bot.
	Q51		Variant dependent, see separate list	May have different value	Bot.
	Q52	-	Not used		Bot.
	R1	-	Not used		Top
	R2	2K7.7W1%	Resistor Metal Film 2K7.7W1%		Top
	R3	1K8.7W1%	Resistor Metal Film 1K8.7W1%		Top
	R4	15K.7W1%	Resistor Metal Film 15K.7W1%		Top
	R5	6K8.7W1%	Resistor Metal Film 6K8.7W1%		Top
	R6	1K.25W5%	Resistor Carbon Film 1K.25W5%		Top
	R7	2K2.7W1%	Resistor Metal Film 2K2.7W1%		Top
	R8	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R9	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R10	309R.7W1%	Resistor Metal Film 309R.7W1%		Top
	R11	10R.25W5%	Resistor Carbon Film 10R.25W5%		Top
	R12	1K8.25W5%	Resistor Carbon Film 1K8.25W5%		Top
	R13	6K8.7W1%	Resistor Metal Film 6K8.7W1%		Top
	R14	47K.25W5%	Resistor Carbon Film 47K.25W5%		Top
	R15	47K.25W5%	Resistor Carbon Film 47K.25W5%		Top
	R16	6K8.7W1%	Resistor Metal Film 6K8.7W1%		Top
	R17	22K.7W1%	Resistor Metal Film 22K.7W1%		Top
	R18	150K.7W1%	Resistor Metal Film 150K.7W1%	May have different value	Top
	R19	10K.7W1%SO5	Resistor Metal Film 10K.7W1% 5mm stand off		Top
	R20	3K3.7W1%	Resistor Metal Film 3K3.7W1%		Top
	R21	100R.7W1%	Resistor Metal Film 100R.7W1%		Top
	R22	82K.25W5%	Resistor Carbon Film 82K.25W5%		Top
	R23	1K8.25W5%	Resistor Carbon Film 1K8.25W5%		Top
	R24	3K3.7W1%	Resistor Metal Film 3K3.7W1%		Top
	R25	100R.7W1%	Resistor Metal Film 100R.7W1%		Top
	R26	82K.25W5%	Resistor Carbon Film 82K.25W5%		Top
	R27	294K.7W1%	Resistor Metal Film 294K.7W1%		Top
	R28	150K.7W1%	Resistor Metal Film 150K.7W1%		Top
	R29	499R.7W1%	Resistor Metal Film 499R.7W1%		Top
	R30	3K3.7W1%	Resistor Metal Film 3K3.7W1%		Top
	R31	68K.7W1%	Resistor Metal Film 68K.7W1%		Top
	R32	5K6.25W5%	Resistor Carbon Film 5K6.25W5%		Top
	R33	68K.7W1%	Resistor Metal Film 68K.7W1%		Top
	R34	47K.25W5%	Resistor Carbon Film 47K.25W5%		Top
	R35	3K3.7W1%	Resistor Metal Film 3K3.7W1%		Top
	R36	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R37	560R.25W5%	Resistor Carbon Film 560R.25W5%		Top

	Position	Partnumber	Description	Comment	Side
	R38	180R.25W5%	Resistor Carbon Film 180R.25W5%		Top
	R39	1K8.25W5%	Resistor Carbon Film 1K8.25W5%		Top
	R40	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R41	330K.7W1%	Resistor Metal Film 330K.7W1%		Top
	R42	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R43	22K.25W5%	Resistor Carbon Film 22K.25W5%		Top
	R44	390K.25W5%	Resistor Carbon Film 390K.25W5%		Top
	R45	22K.25W5%	Resistor Carbon Film 22K.25W5%		Top
	R46	220R.25W5%	Resistor Carbon Film 220R.25W5%		Top
	R47	1K8.25W5%	Resistor Carbon Film 1K8.25W5%		Top
	R48	220R.25W5%	Resistor Carbon Film 220R.25W5%		Top
	R49	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R50	82K.25W5%	Resistor Carbon Film 82K.25W5%		Top
	R51	100R.7W1%	Resistor Metal Film 100R.7W1%		Top
	R52	100R.7W1%	Resistor Metal Film 100R.7W1%		Top
	R53	82K.25W5%	Resistor Carbon Film 82K.25W5%		Top
	R54	33K.7W1%	Resistor Metal Film 33K.7W1%		Top
	R55	1K8.25W5%	Resistor Carbon Film 1K8.25W5%		Top
	R56	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R57	1K8.25W5%	Resistor Carbon Film 1K8.25W5%		Top
	R58	47K.25W5%	Resistor Carbon Film 47K.25W5%		Top
	R59	68K.7W1%	Resistor Metal Film 68K.7W1%		Top
	R60	5K6.25W5%	Resistor Carbon Film 5K6.25W5%		Top
	R61	68K.7W1%	Resistor Metal Film 68K.7W1%		Top
	R62	3K3.7W1%	Resistor Metal Film 3K3.7W1%		Top
	R63	499R.7W1%	Resistor Metal Film 499R.7W1%		Top
	R64	150K.7W1%	Resistor Metal Film 150K.7W1%		Top
	R65	294K.7W1%	Resistor Metal Film 294K.7W1%		Top
	R66	56K.7W1%	Resistor Metal Film 56K.7W1%		Top
	R67	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R68	5K6.25W5%	Resistor Carbon Film 5K6.25W5%		Top
	R69	33K.7W1%	Resistor Metal Film 33K.7W1%		Top
	R70		Variant dependent, see separate list		Top
	R71	2M2.25W5%	Resistor Carbon Film 2M2.25W5%		Top
	R72		Variant dependent, see separate list		Top
	R73	4K32.7W1%	Resistor Metal Film 4K32.7W1%		Top
	R74	33K.7W1%	Resistor Metal Film 33K.7W1%		Top
	R75	56K.7W1%	Resistor Metal Film 56K.7W1%		Top
	R76	56K.7W1%	Resistor Metal Film 56K.7W1%		Top
	R77	180K.7W1%	Resistor Metal Film 180K.7W1%		Top
	R78	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R79	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R80	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R81	5K6.25W5%	Resistor Carbon Film 5K6.25W5%		Top
	R82	-	Not used		Top
	R83		Variant dependent, see separate list		Top
	R84	6K82W5%SO5	Resistor metal film 6K8 2W 5% 5mm stand off		Top
	R85		Variant dependent, see separate list		Top
	R86		Variant dependent, see separate list		Top
	R87	-	Not used		Top
	R88	R335W10%	Resistor wirewound R33 5W 10%		Top
	R89	R335W10%	Resistor wirewound R33 5W 10%		Top
	R90		Variant dependent, see separate list		Top
	R91	4R75W5%	Resistor wirewound 4R7 5W 5%		Top
	R92	4K73W5%	Resistor metal film 4K7 3W 5%		Top

	Position	Partnumber	Description	Comment	Side
	R93	10R2W5%	Resistor metal film 10R 2W 5%		Top
	R94	4R75W5%	Resistor wirewound 4R7 5W 5%		Top
	R95		Variant dependent, see separate list		Top
	R96	R335W10%	Resistor wirewound R33 5W 10%		Top
	R97	R335W10%	Resistor wirewound R33 5W 10%		Top
	R98		Variant dependent, see separate list		Top
	R99	-	Not used		Top
	R100		Variant dependent, see separate list		Top
	R101		Variant dependent, see separate list		Top
	R102	-	Not used		Top
	R103		Variant dependent, see separate list		Top
	R104		Variant dependent, see separate list		Top
	R105		Variant dependent, see separate list		Top
	S1	SPPJ32F29A_ALP	Switch inter locking PCB DPDT ALPS SPPJ32F29A		Top
	U1	VTL5C4	IC photocoupler VTL5C4		Top
	VR1	VR220RLY2X3M	Trim potentiometer 220R lying 2x3modules		Top

Variant specific components for A04B versions - rev 04A

	Position	A04B-3-2	A04B-4.5-2	A04B-6-2
	D26	1N4148	1N4148	1N4148
⚠	FU1	T6A3250-5x20	T10A250-5x20	T10A250-5x20
⚠	FU2	T6A3250-5x20	T10A250-5x20	T10A250-5x20
	L1	1u2HD1.4_LAB	1u2HD1.4_LAB	1u2HD1.4_LAB
	Q36	-	-	-
	Q37	-	-	-
	Q38	-	-	-
	Q42	-	MJL21194_SA	MJL21194_SA
	Q45	-	MJL21193_SA	MJL21193_SA
	Q49	-	-	-
	Q50	-	-	-
	Q51	-	-	-
	R70	200K.7W1%	294K.7W1%	294K.7W1%
	R72	-	-	270K.7W1%
	R83	-	-	-
	R85	-	-	-
	R86	-	-	-
	R90	-	R335W10%	R335W10%
	R95	-	R335W10%	R335W10%
	R98	-	-	-
	R100	5K62W5%	5K62W5%	5K62W5%
	R101	-	-	-
	R103	-	-	-
	R104	10R2W5%	10R2W5%	10R2W5%
	R105	390K.7W1%	390K.7W1%	390K.7W1%

Variant specific components for A08B versions - rev 04A

	Position	A08B-6.5-2	A08B-10-2	A08B-11-2	A08B-13-2
	D26	-	-	-	-
⚠	FU1	T10A250-5x20	T15A250-5x20	T10A250-5x20	T15A250-5x20
⚠	FU2	T10A250-5x20	T15A250-5x20	T10A250-5x20	T15A250-5x20
	L1	-	-	-	-

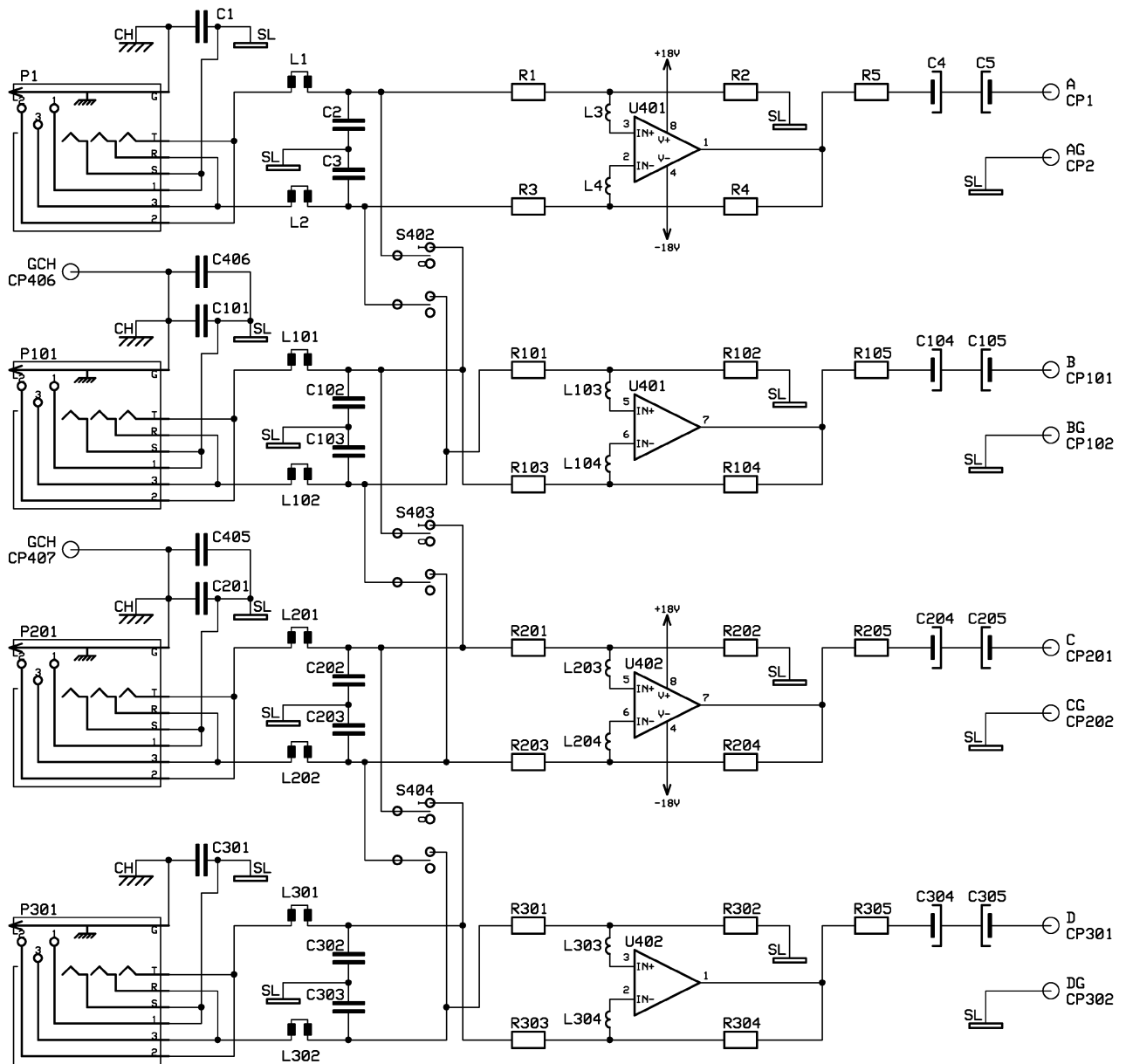
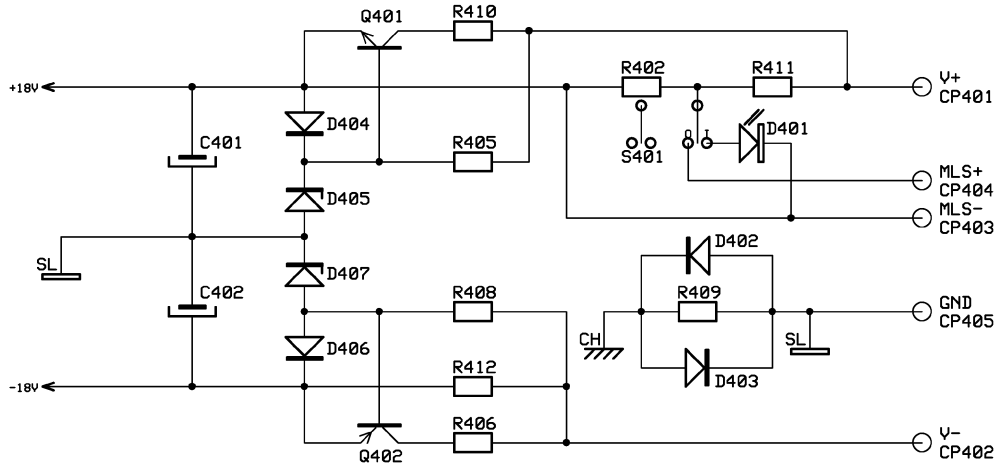
	Position	A08B-6.5-2	A08B-10-2	A08B-11-2	A08B-13-2
	Q36	MJL21194_SA	MJL21194_SA	MJL21194_SA	MJL21194_SA
	Q37	MJL21194_SA	MJL21194_SA	MJL21194_SA	MJL21194_SA
	Q38	-	MJL21194_SA	MJL21194_SA	MJL21194_SA
	Q42	-	MJL21194_SA	-	MJL21194_SA
	Q45	-	MJL21193_SA	-	MJL21193_SA
	Q49	-	MJL21193_SA	MJL21193_SA	MJL21193_SA
	Q50	MJL21193_SA	MJL21193_SA	MJL21193_SA	MJL21193_SA
	Q51	MJL21193_SA	MJL21193_SA	MJL21193_SA	MJL21193_SA
	R70	220K.7W1%	180K.7W1%	220K.7W1%	180K.7W1%
	R72	-	-	220K.7W1%	270K.7W1%
	R83	R335W10%	R335W10%	R335W10%	R335W10%
	R85	R335W10%	R335W10%	R335W10%	R335W10%
	R86	-	R335W10%	R335W10%	R335W10%
	R90	-	R335W10%	-	R335W10%
	R95	-	R335W10%	-	R335W10%
	R98	-	R335W10%	R335W10%	R335W10%
	R100	12K2W5%	12K2W5%	12K2W5%	12K2W5%
	R101	R335W10%	R335W10%	R335W10%	R335W10%
	R103	R335W10%	R335W10%	R335W10%	R335W10%
	R104	-	-	-	-
	R105	-	-	-	-

Description for variant dependent components

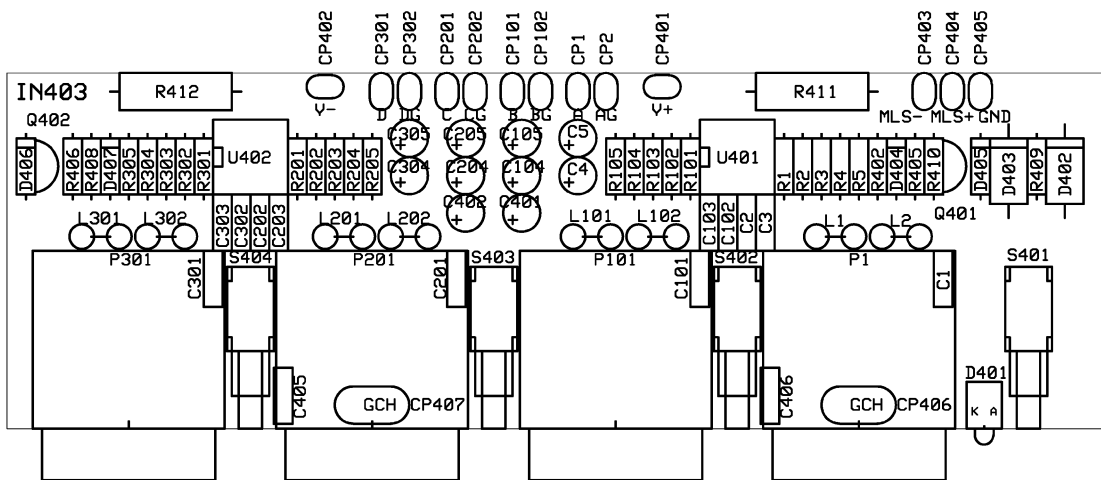
Partnumber	Description
10R2W5%	Resistor metal film 10R 2W 5%
12K2W5%	Resistor metal film 12K 2W 5%
180K.7W1%	Resistor Metal Film 180K.7W1%
1N4148	Diode signal 1N4148
1u2HD1.4_LAB	Inductor 1,2uH axial LAB. Rev 01
200K.7W1%	Resistor Metal Film 200K.7W1%
220K.7W1%	Resistor Metal Film 220K.7W1%
270K.7W1%	Resistor Metal Film 270K.7W1%
294K.7W1%	Resistor Metal Film 294K.7W1%
390K.7W1%	Resistor Metal Film 390K.7W1%
5K62W5%	Resistor metal film 5K6 2W 5%
MJL21193_SA	Transistor bipolar power MJL21193 surface mounted
MJL21194_SA	Transistor bipolar power MJL21194 surface mounted
R335W10%	Resistor wirewound R33 5W 10%
T10A250-5x20	Fuse slow blow 10A 250V 5x20mm
T15A250-5x20	Fuse slow blow 15A 250V 5x20mm
T6A3250-5x20	Fuse slow blow 6.3A 250V 5x20mm

IN4

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CON					
DESIGN K.A	DRAWN K.A	CHECKED	IN4		REPLACES 02 03 14
			4 CHANNEL INPUT AMPLIFIER		REPLACED BY
					DATE 02 10 31
					PAGE
					DRAWING NO IN403



DESIGN K.A	DRAWN K.A	CHECKED	<h1>IN4</h1> <p>4 CHANNEL INPUT AMPLIFIER</p>	REPLACES 01 06 11	REPLACED BY
				DATE 02 03 14	PAGE
				DRAWING NO	IN403-P

Component list for IN4 - rev 03

⚠ - Safety critical component. Should only be replaced with the specified type.

	Position	Partnumber	Description	Comment	Side
	C1	100n63VMMK5	Capacitor polyester 100n 63V MMK 5mm		Top
	C2	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C3	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C4	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C5	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C101	100n63VMMK5	Capacitor polyester 100n 63V MMK 5mm		Top
	C102	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C103	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C104	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C105	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C201	100n63VMMK5	Capacitor polyester 100n 63V MMK 5mm		Top
	C202	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C203	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C204	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C205	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C301	100n63VMMK5	Capacitor polyester 100n 63V MMK 5mm		Top
	C302	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C303	22p200VNP05%5	Capacitor ceramic 22p 200V NP0 5% 5mm		Top
	C304	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C305	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C401	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C402	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	C405	100n50VY5W5%5	Capacitor ceramic 100n 50V Y5W 5% 5mm		Top
	C406	100n50VY5W5%5	Capacitor ceramic 100n 50V Y5W 5% 5mm		Top
	D401		Variant dependent, see separate list		Top
	D402	1N5404	Diode power 1N5404		Top
	D403	1N5404	Diode power 1N5404		Top
	D404	1N4148	Diode signal 1N4148		Top
	D405	18V1.3W5%	Diode zener 18V 1.3W 5%		Top
	D406	1N4148	Diode signal 1N4148		Top
	D407	18V1.3W5%	Diode zener 18V 1.3W 5%		Top
	L1	L2xBEAD2M	Inductor bead double 2 modules		Top
	L2	L2xBEAD2M	Inductor bead double 2 modules		Top
	L101	L2xBEAD2M	Inductor bead double 2 modules		Top
	L102	L2xBEAD2M	Inductor bead double 2 modules		Top
	L201	L2xBEAD2M	Inductor bead double 2 modules		Top
	L202	L2xBEAD2M	Inductor bead double 2 modules		Top
	L301	L2xBEAD2M	Inductor bead double 2 modules		Top
	L302	L2xBEAD2M	Inductor bead double 2 modules		Top
	P1	NCJ6FI-H_NEU	Connector XLR/J 3pole female+jack 90dg NEUTRIK NCJ6FI-H		Top
	P101	NCJ6FI-H_NEU	Connector XLR/J 3pole female+jack 90dg NEUTRIK NCJ6FI-H		Top
	P201	NCJ6FI-H_NEU	Connector XLR/J 3pole female+jack 90dg NEUTRIK NCJ6FI-H		Top
	P301	NCJ6FI-H_NEU	Connector XLR/J 3pole female+jack 90dg NEUTRIK NCJ6FI-H		Top
	Q401	MPSA42	Transistor bipolar signal MPSA42		Top
	Q402	MPSA92	Transistor bipolar signal MPSA92		Top
	R1	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R2		Variant dependent, see separate list		Top
	R3	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R4		Variant dependent, see separate list		Top
	R5	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R101	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R102		Variant dependent, see separate list		Top

	Position	Partnumber	Description	Comment	Side
	R103	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R104		Variant dependent, see separate list		Top
	R105	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R201	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R202		Variant dependent, see separate list		Top
	R203	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R204		Variant dependent, see separate list		Top
	R205	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R301	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R302		Variant dependent, see separate list		Top
	R303	10K.7W1%	Resistor Metal Film 10K.7W1%		Top
	R304		Variant dependent, see separate list		Top
	R305	47R.25W5%	Resistor Carbon Film 47R.25W5%		Top
	R402	470R.7W1%	Resistor Metal Film 470R.7W1%		Top
	R405	18K.7W1%	Resistor Metal Film 18K.7W1%		Top
	R406	1K.7W1%	Resistor Metal Film 1K.7W1%		Top
	R408	18K.7W1%	Resistor Metal Film 18K.7W1%		Top
	R409	10R.25W5%	Resistor Carbon Film 10R.25W5%		Top
	R410	1K.7W1%	Resistor Metal Film 1K.7W1%		Top
	R411	4K73W5%	Resistor metal film 4K7 3W 5%		Top
	R412	4K73W5%	Resistor metal film 4K7 3W 5%		Top
	S401		Variant dependent, see separate list		Top
	S402	SPPJ32F29A_ALP	Switch inter locking PCB DPDT ALPS SPPJ32F29A		Top
	S403	SPPJ32F29A_ALP	Switch inter locking PCB DPDT ALPS SPPJ32F29A		Top
	S404	SPPJ32F29A_ALP	Switch inter locking PCB DPDT ALPS SPPJ32F29A		Top
	U401	LF353	IC Operational amplifier LF353		Top
	U402	LF353	IC Operational amplifier LF353		Top

Variant specific components

	Position	IN4-C	IN4-CM	IN4-C-29DB
	D401	-	LREDD3_EVE	-
	R2	15K4.7W1%	15K4.7W1%	11K.7W1%
	R4	15K4.7W1%	15K4.7W1%	11K.7W1%
	R102	15K4.7W1%	15K4.7W1%	11K.7W1%
	R104	15K4.7W1%	15K4.7W1%	11K.7W1%
	R202	15K4.7W1%	15K4.7W1%	11K.7W1%
	R204	15K4.7W1%	15K4.7W1%	11K.7W1%
	R302	15K4.7W1%	15K4.7W1%	11K.7W1%
	R304	15K4.7W1%	15K4.7W1%	11K.7W1%
	S401	-	SPPJ32F29A_ALP	-

Description for variant dependent components

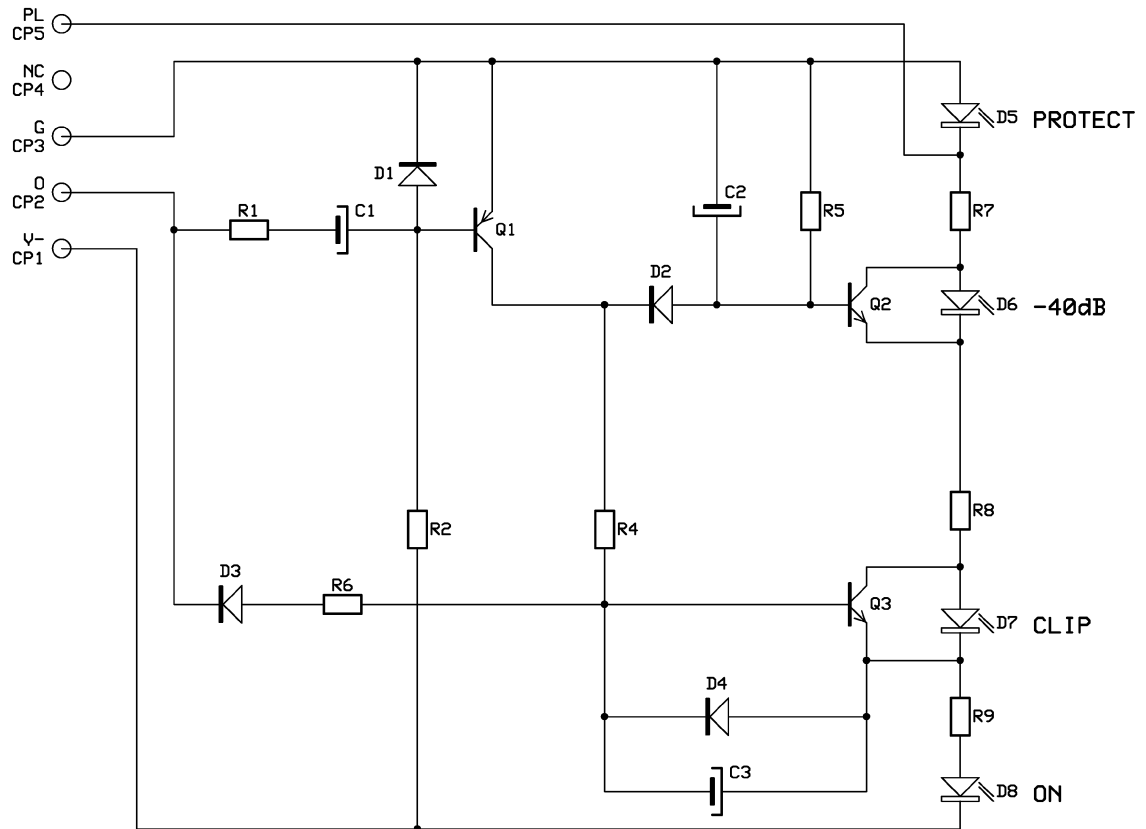
Partnumber	Description
11K.7W1%	Resistor Metal Film 11K.7W1%
15K4.7W1%	Resistor Metal Film 15K4.7W1%
LREDD3_EVE	Diode LED Red D3 lying EVERLIGHT A264B
SPPJ32F29A_ALP	Switch inter locking PCB DPDT ALPS SPPJ32F29A

LD44

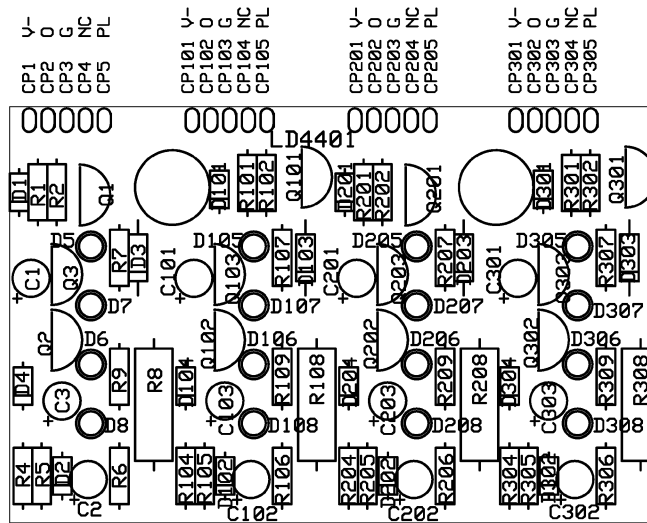
Schematics for LD44	2
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4 CHANNEL
 CHA add 0
 CHB add 100
 CHC add 200
 CHD add 300

2 CHANNEL
 CHA add 100
 CHB add 200



CON			LD44	REPLACES	REPLACED BY
DESIGN	DRAWN	CHECKED		01 03 30	
K.A	K.A		LED DISPLAY	DATE	PAGE
			4xLED 4 CHANNEL	02 04 12	
				DRAWING NO	LD4401



DESIGN D. B	DRAWN D. B	CHECKED	LD44	REPLACES 01 04 01	REPLACED BY
				LED DISPLAY 4xLED 4 CHANNEL	DATE 02 04 12
				DRAWING NO	LD4401-P

Component list for LD44 - rev 01

⚠ - Safety critical component. Should only be replaced with the specified type.

	Position	Partnumber	Description	Comment	Side
	C1		Variant dependent, see separate list		Top
	C2		Variant dependent, see separate list		Top
	C3		Variant dependent, see separate list		Top
	C101	1u50V	Capacitor electrolytic 1u 50V 5mm		Top
	C102	1u50V	Capacitor electrolytic 1u 50V 5mm		Top
	C103	2u2100V	Capacitor electrolytic 2u2 100V 5mm		Top
	C201	1u50V	Capacitor electrolytic 1u 50V 5mm		Top
	C202	1u50V	Capacitor electrolytic 1u 50V 5mm		Top
	C203	2u2100V	Capacitor electrolytic 2u2 100V 5mm		Top
	C301		Variant dependent, see separate list		Top
	C302		Variant dependent, see separate list		Top
	C303		Variant dependent, see separate list		Top
	D1		Variant dependent, see separate list		Top
	D2		Variant dependent, see separate list		Top
	D3		Variant dependent, see separate list		Top
	D4		Variant dependent, see separate list		Top
	D5		Variant dependent, see separate list		Top
	D6		Variant dependent, see separate list		Top
	D7		Variant dependent, see separate list		Top
	D8		Variant dependent, see separate list		Top
	D101	1N4148	Diode signal 1N4148		Top
	D102	1N4148	Diode signal 1N4148		Top
	D103	1N4004	Diode power 1N4004		Top
	D104	1N4148	Diode signal 1N4148		Top
	D105	LYELD3	Diode LED Yellow D3mm		Top
	D106	LGRND3	Diode LED Green D3mm		Top
	D107	LREDD3	Diode LED Red D3mm		Top
	D108	LGRND3	Diode LED Green D3mm		Top
	D201	1N4148	Diode signal 1N4148		Top
	D202	1N4148	Diode signal 1N4148		Top
	D203	1N4004	Diode power 1N4004		Top
	D204	1N4148	Diode signal 1N4148		Top
	D205	LYELD3	Diode LED Yellow D3mm		Top
	D206	LGRND3	Diode LED Green D3mm		Top
	D207	LREDD3	Diode LED Red D3mm		Top
	D208	LGRND3	Diode LED Green D3mm		Top
	D301		Variant dependent, see separate list		Top
	D302		Variant dependent, see separate list		Top
	D303		Variant dependent, see separate list		Top
	D304		Variant dependent, see separate list		Top
	D305		Variant dependent, see separate list		Top
	D306		Variant dependent, see separate list		Top
	D307		Variant dependent, see separate list		Top
	D308		Variant dependent, see separate list		Top
	Q1		Variant dependent, see separate list		Top
	Q2		Variant dependent, see separate list		Top
	Q3		Variant dependent, see separate list		Top
	Q101	BC557B	Transistor bipolar signal BC557B		Top
	Q102	BC547B	Transistor bipolar signal BC547B		Top
	Q103	BC547B	Transistor bipolar signal BC547B		Top
	Q201	BC557B	Transistor bipolar signal BC557B		Top
	Q202	BC547B	Transistor bipolar signal BC547B		Top

	Position	Partnumber	Description	Comment	Side
	Q203	BC547B	Transistor bipolar signal BC547B		Top
	Q301		Variant dependent, see separate list		Top
	Q302		Variant dependent, see separate list		Top
	Q303		Variant dependent, see separate list		Top
	R1		Variant dependent, see separate list		Top
	R2		Variant dependent, see separate list		Top
	R4		Variant dependent, see separate list		Top
	R5		Variant dependent, see separate list		Top
	R6		Variant dependent, see separate list		Top
	R7		Variant dependent, see separate list		Top
	R8		Variant dependent, see separate list		Top
	R9		Variant dependent, see separate list		Top
	R101	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R102	10M.7W1%	Resistor Metal Film 10M.7W1%		Top
	R104	220K.7W1%	Resistor Metal Film 220K.7W1%		Top
	R105	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R106	1K.7W1%	Resistor Metal Film 1K.7W1%		Top
	R107	680R.7W1%	Resistor Metal Film 680R.7W1%		Top
	R108	6K83W5%SO5	Resistor metal film 6K8 3W 5% 5mm stand off		Top
	R109	680R.7W1%	Resistor Metal Film 680R.7W1%		Top
	R201	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R202	10M.7W1%	Resistor Metal Film 10M.7W1%		Top
	R204	220K.7W1%	Resistor Metal Film 220K.7W1%		Top
	R205	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R206	1K.7W1%	Resistor Metal Film 1K.7W1%		Top
	R207	680R.7W1%	Resistor Metal Film 680R.7W1%		Top
	R208	6K83W5%SO5	Resistor metal film 6K8 3W 5% 5mm stand off		Top
	R209	680R.7W1%	Resistor Metal Film 680R.7W1%		Top
	R301		Variant dependent, see separate list		Top
	R302		Variant dependent, see separate list		Top
	R304		Variant dependent, see separate list		Top
	R305		Variant dependent, see separate list		Top
	R306		Variant dependent, see separate list		Top
	R307		Variant dependent, see separate list		Top
	R308		Variant dependent, see separate list		Top
	R309		Variant dependent, see separate list		Top

Variant specific components

	Position	LD92-2X13-2	LD92-2X32-2
	C1	-	1u50V
	C2	-	1u50V
	C3	-	2u2100V
	C301	-	1u50V
	C302	-	1u50V
	C303	-	2u2100V
	D1	-	1N4148
	D2	-	1N4148
	D3	-	1N4004
	D4	-	1N4148
	D5	-	LYELD3
	D6	-	LGRND3
	D7	-	LREDD3

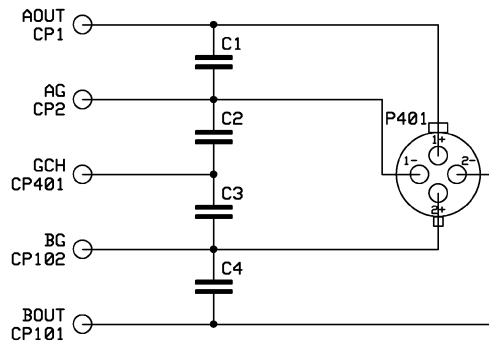
	Position	LD92-2X13-2	LD92-2X32-2
D8	-		LGRND3
D301	-		1N4148
D302	-		1N4148
D303	-		1N4004
D304	-		1N4148
D305	-		LYELD3
D306	-		LGRND3
D307	-		LREDD3
D308	-		LGRND3
Q1	-		BC557B
Q2	-		BC547B
Q3	-		BC547B
Q301	-		BC557B
Q302	-		BC547B
Q303	-		BC547B
R1	-		100K.7W1%
R2	-		10M.7W1%
R4	-		220K.7W1%
R5	-		100K.7W1%
R6	-		1K.7W1%
R7	-		680R.7W1%
R8	-		6K83W5%SO5
R9	-		680R.7W1%
R301	-		100K.7W1%
R302	-		10M.7W1%
R304	-		220K.7W1%
R305	-		100K.7W1%
R306	-		1K.7W1%
R307	-		680R.7W1%
R308	-		6K83W5%SO5
R309	-		680R.7W1%

Description for variant dependent components

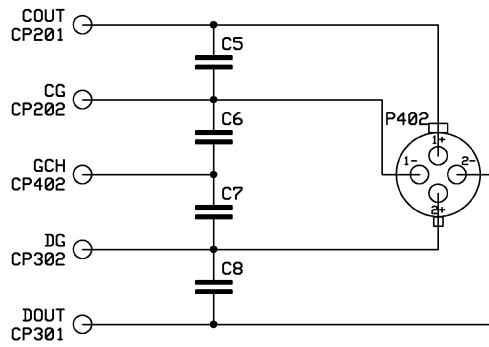
Partnumber	Description
100K.7W1%	Resistor Metal Film 100K.7W1%
10M.7W1%	Resistor Metal Film 10M.7W1%
1K.7W1%	Resistor Metal Film 1K.7W1%
1N4004	Diode power 1N4004
1N4148	Diode signal 1N4148
1u50V	Capacitor electrolytic 1u 50V 5mm
220K.7W1%	Resistor Metal Film 220K.7W1%
2u2100V	Capacitor electrolytic 2u2 100V 5mm
680R.7W1%	Resistor Metal Film 680R.7W1%
6K83W5%SO5	Resistor metal film 6K8 3W 5% 5mm stand off
BC547B	Transistor bipolar signal BC547B
BC557B	Transistor bipolar signal BC557B
LGRND3	Diode LED Green D3mm
LREDD3	Diode LED Red D3mm
LYELD3	Diode LED Yellow D3mm

OUT4

Schematics for OUT4.....	2
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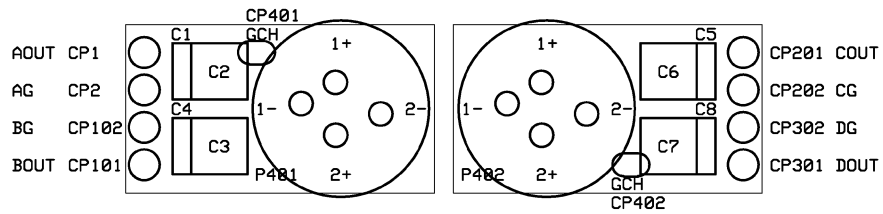


CHAB



CHCD

CON			OUT4	REPLACES	REPLACED BY
DESIGN	DRAWN	CHECKED		01 03 03	
K.A	K.A		4 CHANNEL OUTPUT CONNECTOR BOARD AB CD	DATE	PAGE
				02 03 15	
				DRAWING NO	OUT401



DESIGN K.A	DRAWN K.A	CHECKED	<h1>OUT4</h1> <p>4 CHANNEL OUTPUT CONNECTOR BOARD AB CD</p>	REPLACES 01 03 28	REPLACED BY
				DATE 02 03 15	PAGE
				DRAWING NO	OUT401-P

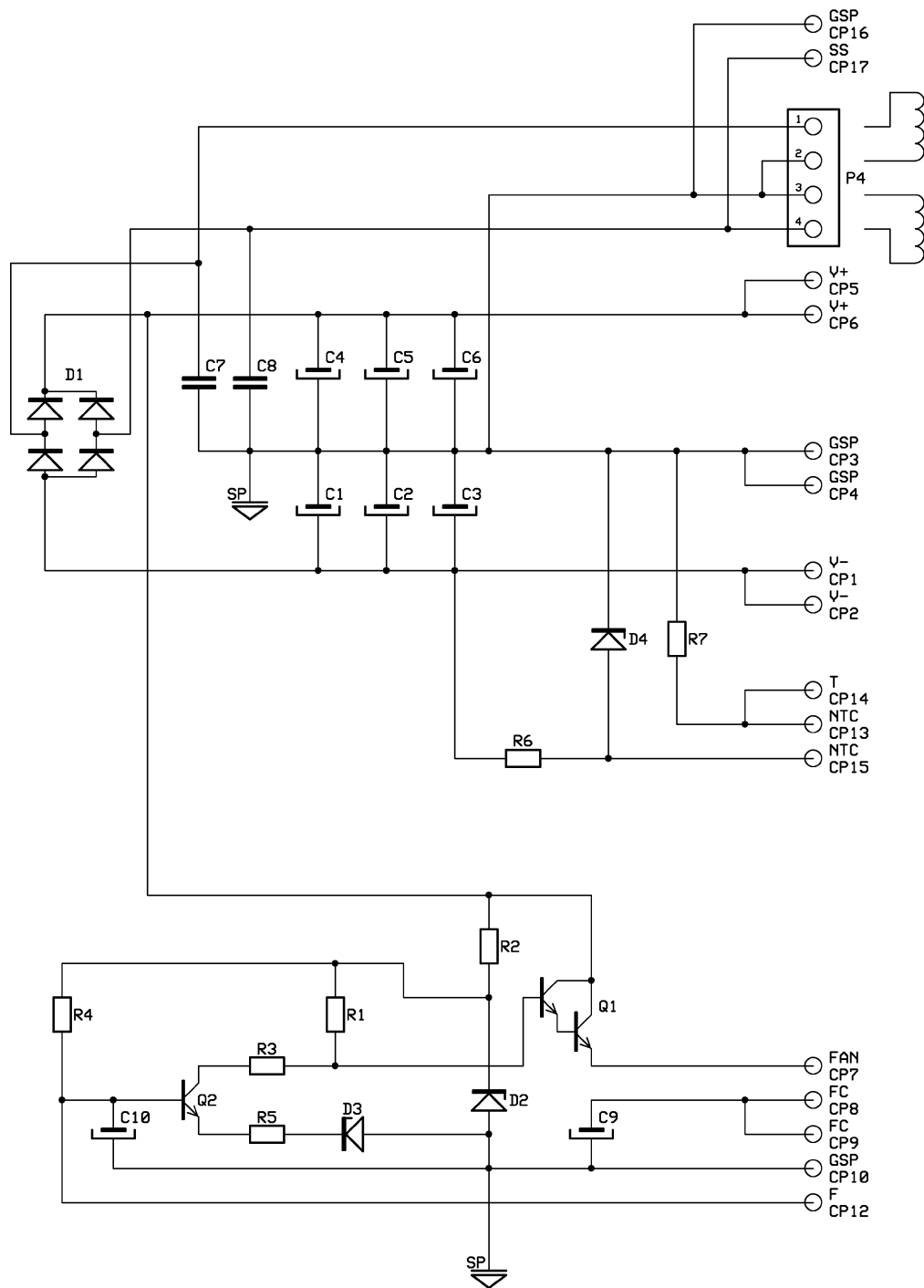
Component list for OUT4-A04B - rev 01A

⚠ - Safety critical component. Should only be replaced with the specified type.

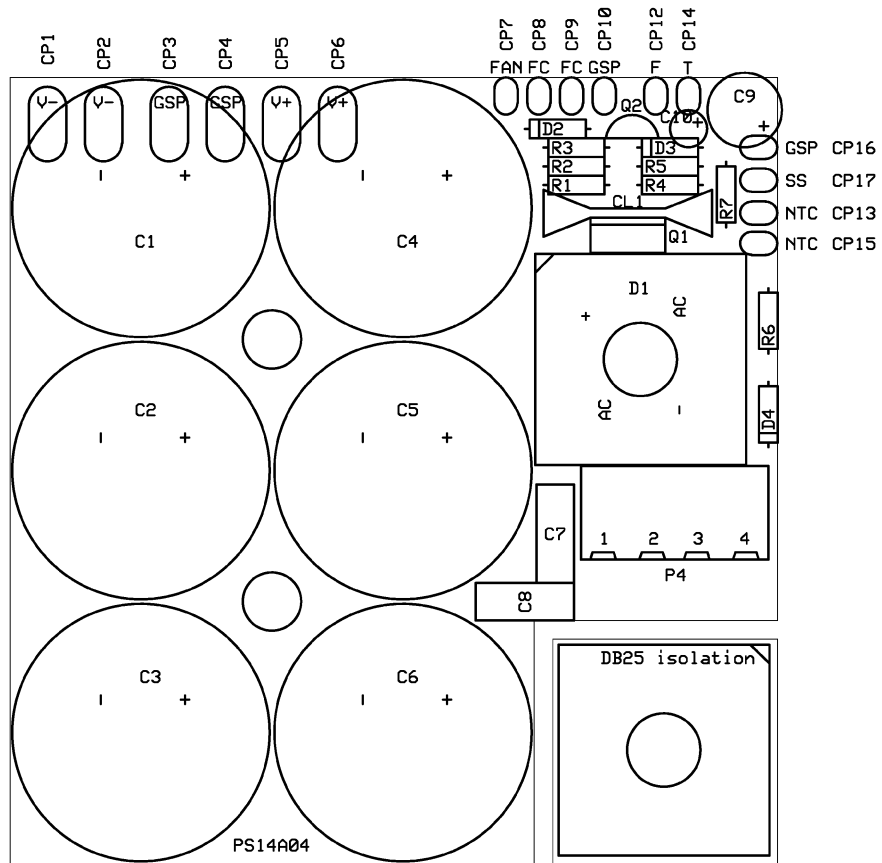
	Position	Partnumber	Description	Comment	Side
	C1	10n250VMMK5	Capacitor polyester 10n 250V MMK 5mm		Top
	C2	2u250VMMK5	Capacitor polyester 2u2 50V MMK 5mm		Top
	C3	2u250VMMK5	Capacitor polyester 2u2 50V MMK 5mm		Top
	C4	10n250VMMK5	Capacitor polyester 10n 250V MMK 5mm		Top
	C5	10n250VMMK5	Capacitor polyester 10n 250V MMK 5mm		Top
	C6	2u250VMMK5	Capacitor polyester 2u2 50V MMK 5mm		Top
	C7	2u250VMMK5	Capacitor polyester 2u2 50V MMK 5mm		Top
	C8	10n250VMMK5	Capacitor polyester 10n 250V MMK 5mm		Top
⚠	P401	NL4MD-V_NEU	Connector speakon PCB 4pole NEUTRIK NL4MD-H		Top
⚠	P402	NL4MD-V_NEU	Connector speakon PCB 4pole NEUTRIK NL4MD-H		Top

PS14A

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Component list for PS14A - rev 04

⚠ - Safety critical component. Should only be replaced with the specified type.

	Position	Partnumber	Description	Comment	Side
	C1		Variant dependent, see separate list		Top
	C2		Variant dependent, see separate list		Top
	C3		Variant dependent, see separate list		Top
	C4		Variant dependent, see separate list		Top
	C5		Variant dependent, see separate list		Top
	C6		Variant dependent, see separate list		Top
	C7	220n250VMMK10	Capacitor polyester 220n 250V MMK 10mm		Top
	C8	220n250VMMK10	Capacitor polyester 220n 250V MMK 10mm		Top
	C9		Variant dependent, see separate list		Top
	C10	22u50V	Capacitor electrolytic 22u 50V 5mm		Top
	D1	KBPC35-06mh	Diode bridge KBPC35-06		Top
	D2		Variant dependent, see separate list		Top
	D3	5V6.4W2%	Diode zener 5V6 .4W 2%		Top
	D4	27V.4W5%	Diode zener 27V .4W 5%		Top
	P4	TBPC4P2.5M6	Terminal block PCB 4pole 2.5module 6mm2	May have different value	Top
	Q1	TIP132	Transistor bipolar power TIP132		Top
	Q2	BC546	Transistor bipolar signal BC546		Top
	R1	39K.7W1%	Resistor Metal Film 39K.7W1%		Top
	R2		Variant dependent, see separate list		Top
	R3	18K.7W1%	Resistor Metal Film 18K.7W1%		Top
	R4		Variant dependent, see separate list		Top
	R5	4K7.7W1%	Resistor Metal Film 4K7.7W1%		Top
	R6		Variant dependent, see separate list		Top
	R7		Variant dependent, see separate list		Top

Variant specific components

	Position	PS14A-2x4.5-2	PS14A-4x3-2	PS14A-2x6.5-2	PS14A-2x13-2
	C1	4700u100V35x45	10000u63V35x45	4700u100V35x45	4700u100V35x45
	C2	4700u100V35x45	10000u63V35x45	4700u100V35x45	4700u100V35x45
	C3	-	-	4700u100V35x45	4700u100V35x45
	C4	4700u100V35x45	10000u63V35x45	4700u100V35x45	4700u100V35x45
	C5	4700u100V35x45	10000u63V35x45	4700u100V35x45	4700u100V35x45
	C6	-	-	4700u100V35x45	4700u100V35x45
	C9	-	-	100u50V	100u50V
	D2	30V.4W2%	30V.4W2%	62V.4W2%	62V.4W2%
	R2	8K2.7W1%	8K2.7W1%	6K8.7W1%	6K8.7W1%
	R4	1M.7W1%	1M.7W1%	180K.7W1%	180K.7W1%
	R6	4K7.7W1%	4K7.7W1%	10K.7W1%	10K.7W1%
	R7	4K7.7W1%	10K.7W1%	10K.7W1%	8K2.7W1%

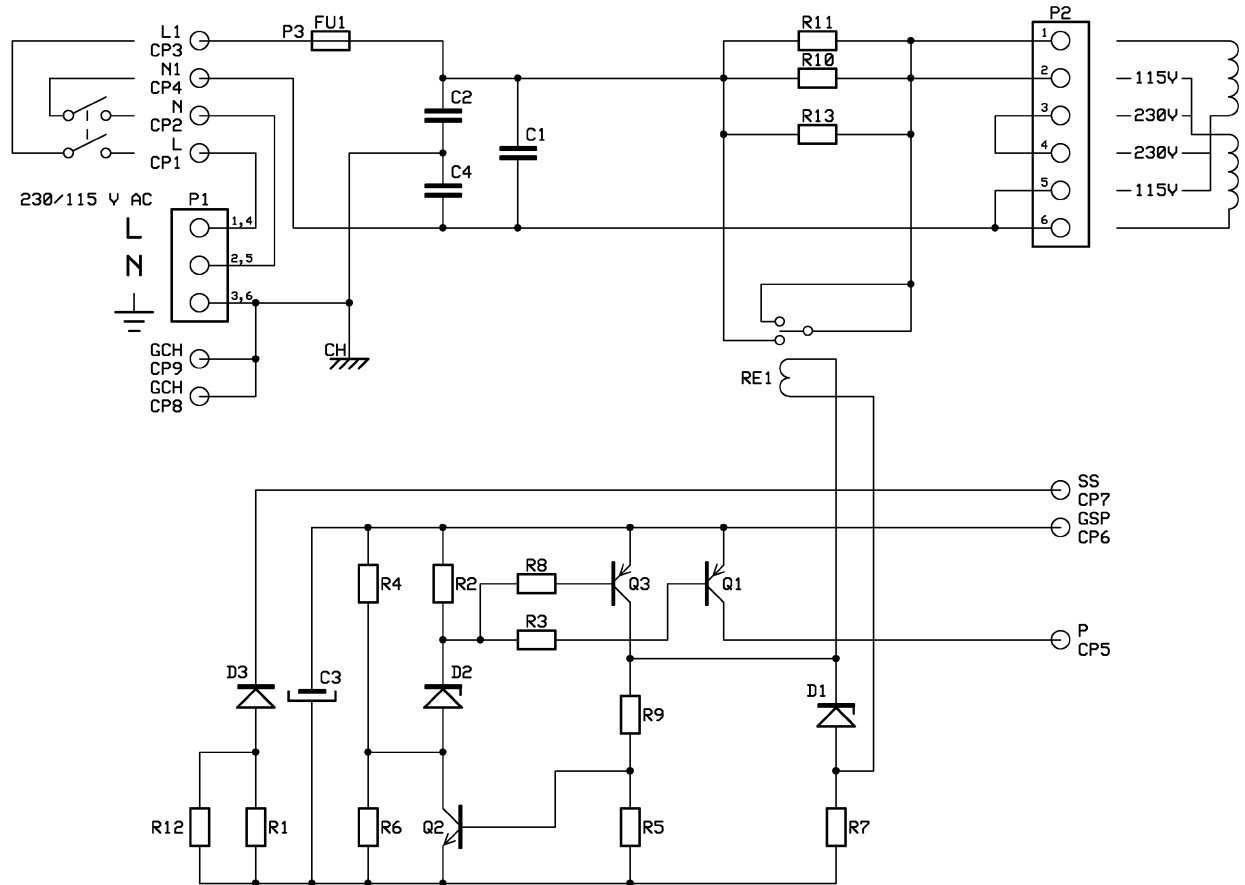
Description for variant dependent components

Partnumber	Description
10000u63V35x45	Capacitor electrolytic 10000u 63V 35x45mm snap in
100u50V	Capacitor electrolytic 100u 50V 5mm
10K.7W1%	Resistor Metal Film 10K.7W1%
180K.7W1%	Resistor Metal Film 180K.7W1%
1M.7W1%	Resistor Metal Film 1M.7W1%

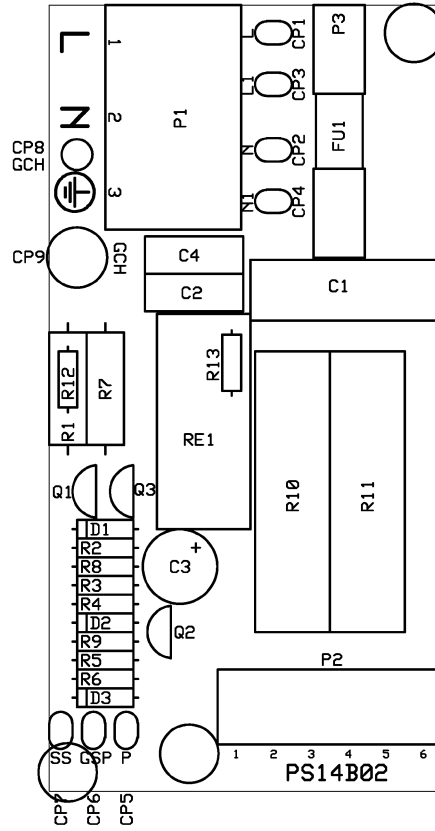
30V.4W2%	Diode zener 30V .4W 2%
4700u100V35x45	Capacitor electrolytic 4700u 100V 35x45mm snap in
4K7.7W1%	Resistor Metal Film 4K7.7W1%
62V.4W2%	Diode zener 62V .4W 2%
6K8.7W1%	Resistor Metal Film 6K8.7W1%
8K2.7W1%	Resistor Metal Film 8K2.7W1%

PS14B

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Component list for PS14B - rev 02A

⚠ - Safety critical component. Should only be replaced with the specified type.

	Position	Partnumber	Description	Comment	Side
⚠	C1	u22X22.5	Capacitor 220n X2 metallized propylene 22.5mm		Top
⚠	C2	2n2Y10	Capacitor 2n2 Y2 metallized paper 10mm		Top
	C3	47u100V	Capacitor electrolytic 47u 100V 5mm		Top
⚠	C4	2n2Y10	Capacitor 2n2 Y2 metallized paper 10mm		Top
	D1	30V1.3W5%	Diode zener 30V 1.3W 5%		Top
	D2	27V.4W5%	Diode zener 27V .4W 5%		Top
	D3	1N4004	Diode power 1N4004		Top
⚠	FU1		Variant dependent, see separate list		Top
⚠	P1	TBPC3P4M8	Terminal bloc PCB 3pole 4module 8mm2		Top
	P2	TBPC6P2M2.5	Terminal block PCB 6pole 2 module 2.5mm2		Top
	P3	FCPC5x20-6.3x32	Fuse clip combi PCB 5x20 and 6.3x32 mm fuse (2pcs)		Top
	Q1	BC557B	Transistor bipolar signal BC557B		Top
	Q2	BC547B	Transistor bipolar signal BC547B		Top
	Q3	MPSA92	Transistor bipolar signal MPSA92		Top
	R1		Variant dependent, see separate list		Top
	R2	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
	R3	27K.7W1%	Resistor Metal Film 27K.7W1%		Top
	R4	27K.7W1%	Resistor Metal Film 27K.7W1%		Top
	R5	47K.7W1%	Resistor Metal Film 47K.7W1%		Top
	R6		Variant dependent, see separate list		Top
	R7	1K3W5%SO5	Resistor metal film 1K 3W 5% 5mm stand off		Top
	R8	27K.7W1%	Resistor Metal Film 27K.7W1%		Top
	R9	100K.7W1%	Resistor Metal Film 100K.7W1%		Top
⚠	R10	47R9W5%17MSO5	Resistor wirewound 47R 9W 5% 17modules 5mm stand off		Top
⚠	R11	47R9W5%17MSO5	Resistor wirewound 47R 9W 5% 17modules 5mm stand off		Top
	R12		Variant dependent, see separate list		Top
	R13	-	Not used		Top
⚠	RE1	PCSPNO16A24V	Relay PCB SPNO 16A 24V		Top

Variant specific components for 230V versions - rev 02A

	Position	PS14B-2x3-2	PS14B-4x3-2	PS14B-2x6.5-2	PS14B-2x13-2
⚠	FU1	T8AH250-5x20	T8AH250-5x20	T10AH250-5x20	T15AH250-6.3x32
	R1	-	-	-	150R3W5%SO5
	R6	24K3.7W1%	15K.7W1%	34K.7W1%	47K.7W1%
	R12	R04M.6	R04M.6	R04M.6	-

Variant specific components for 115V versions - rev 02A

	Position	PS14B-2x3-2U	PS14B-4x3-2U	PS14B-2x6.5-2U	PS14B-2x13-2U
⚠	FU1	T15AH250-6.3x32	T15AH250-6.3x32	T20AH250-6.3x32	T30AH125-6.3x32
	R1	-	-	-	150R3W5%SO5
	R6	18K.7W1%	10K.7W1%	27K.7W1%	34K.7W1%
	R12	R04M.6	R04M.6	R04M.6	-

Description for variant dependent components

Partnumber	Description
10K.7W1%	Resistor Metal Film 10K.7W1%
150R3W5%SO5	Resistor metal film 150R 3W 5% 5mm stand off

15K.7W1%	Resistor Metal Film 15K.7W1%
18K.7W1%	Resistor Metal Film 18K.7W1%
24K3.7W1%	Resistor Metal Film 24K3.7W1%
27K.7W1%	Resistor Metal Film 27K.7W1%
34K.7W1%	Resistor Metal Film 34K.7W1%
47K.7W1%	Resistor Metal Film 47K.7W1%
R04M.6	Resistor jumper 0R 4modules D.6mm
T10AH250-5x20	Fuse slow blow 10A 250V 1500A IR 5x20mm
T15AH250-6.3x32	Fuse slow blow 15A 250V 1500A IR 6.3x32mm
T20AH250-6.3x32	Fuse slow blow 20A 250V 10000A IR 6.3x32mm
T30AH125-6.3x32	Fuse slow blow 30A 125V 400A IR 6.3x32mm
T8AH250-5x20	Fuse slow blow 8A 250V 1500A IR 5x20mm