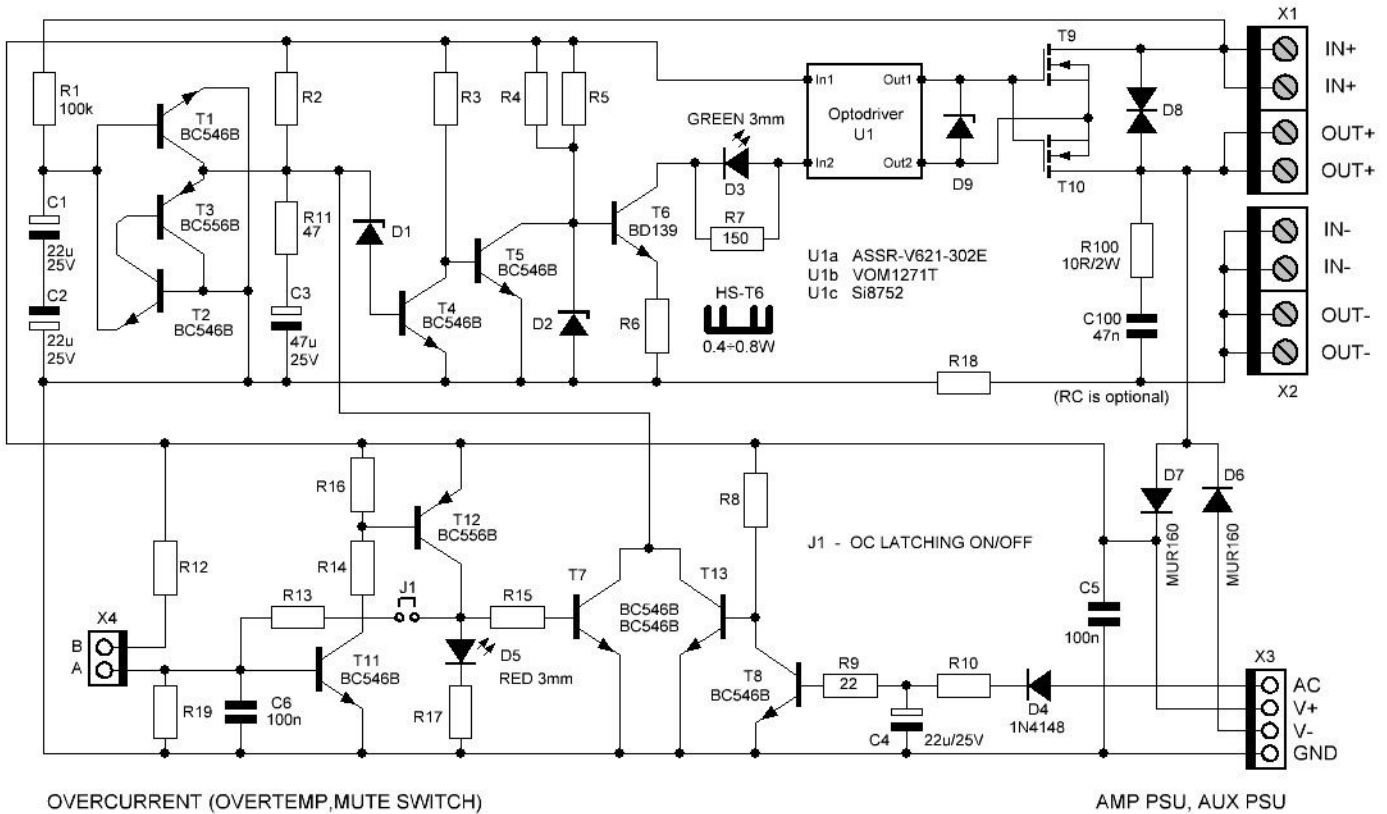


SSR Loudspeaker Protection

FOR POWERAMP 100-300W/4R

schematic v3.0

SENSORS : DC,AC,OC
 DC SENSING THRESHOLDS : +0.6V and -0.6V
 ON DELAY : ca 2s (adjusted by R2)
 DC REACTION TIME : 1.1s@1V, 15ms@50V
 AC REACTION TIME (OFF) : < 35ms
 OC REACTION TIME : < 200us
 U1 TURN-ON DELAY : < 4ms
 U1 TURN-OFF DELAY : < 200us
 MOSFET TURN-ON TIME : < 1ms
 MOSFET TURN-OFF TIME : < 1us
 PCB SIZE : 50x82mm



OPTION 1: POWERED BY POWERAMP DUAL-MONO PSU
 POWERED BY POWERAMP SINGLE PSU

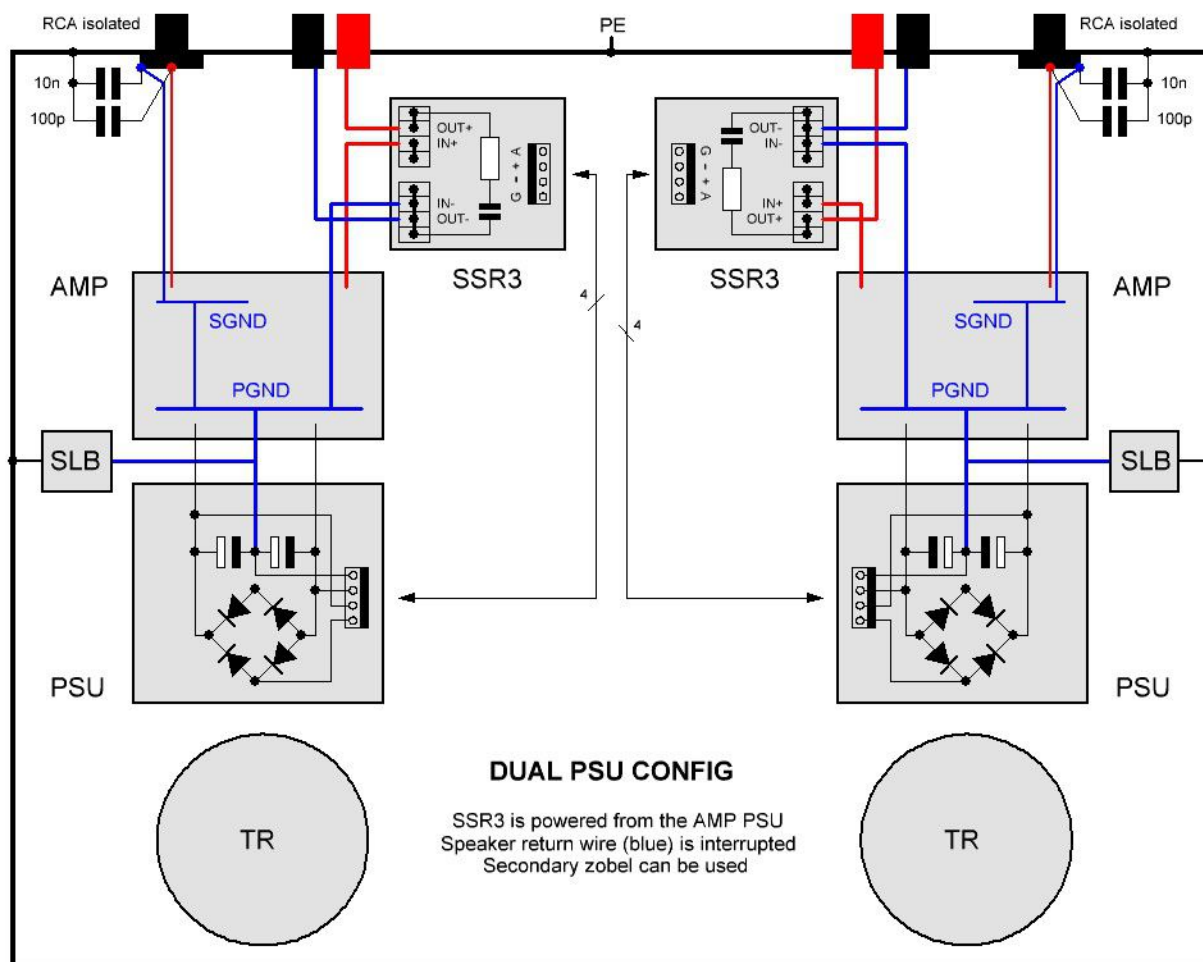
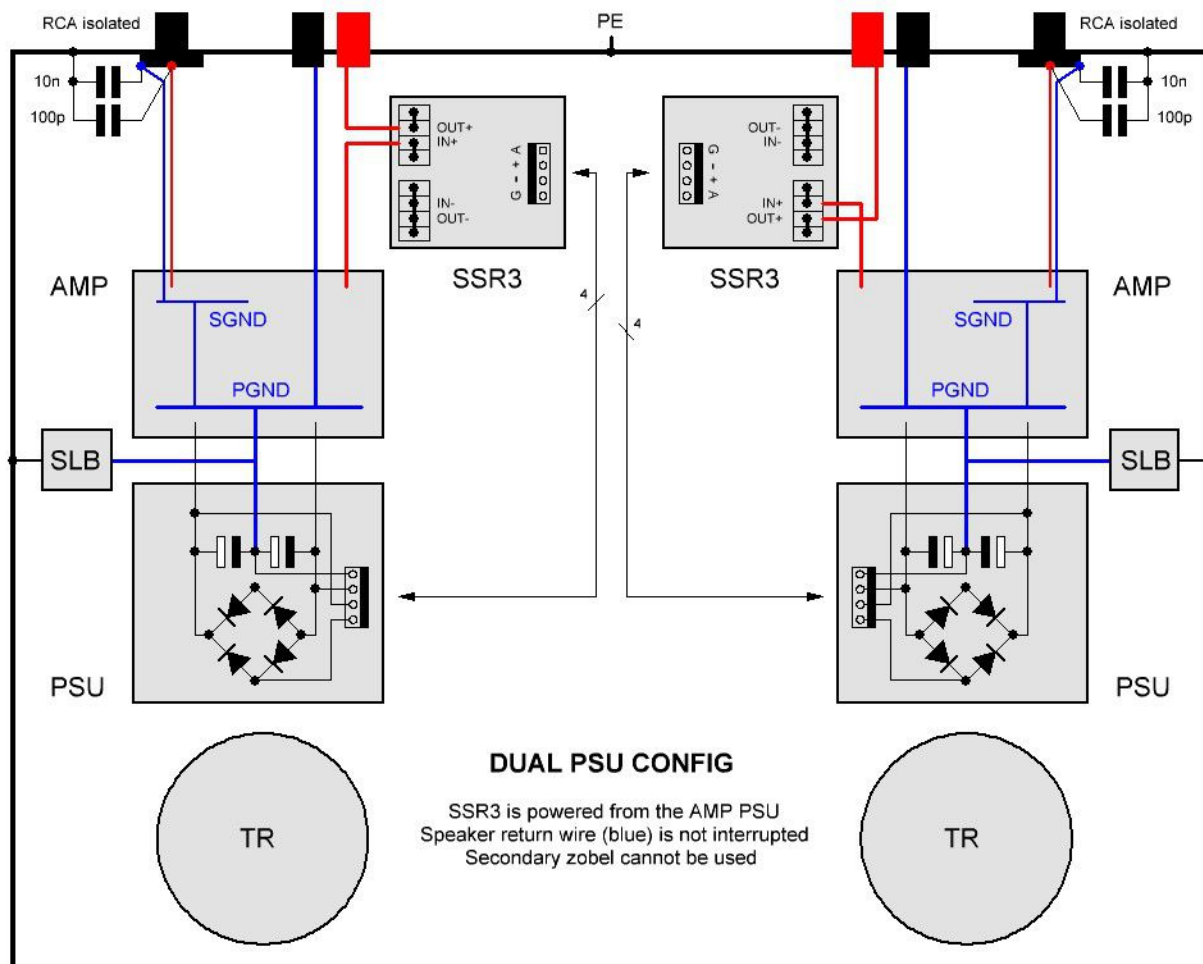
OPTION 2: POWERED BY SINGLE AUX PSU (both channels)

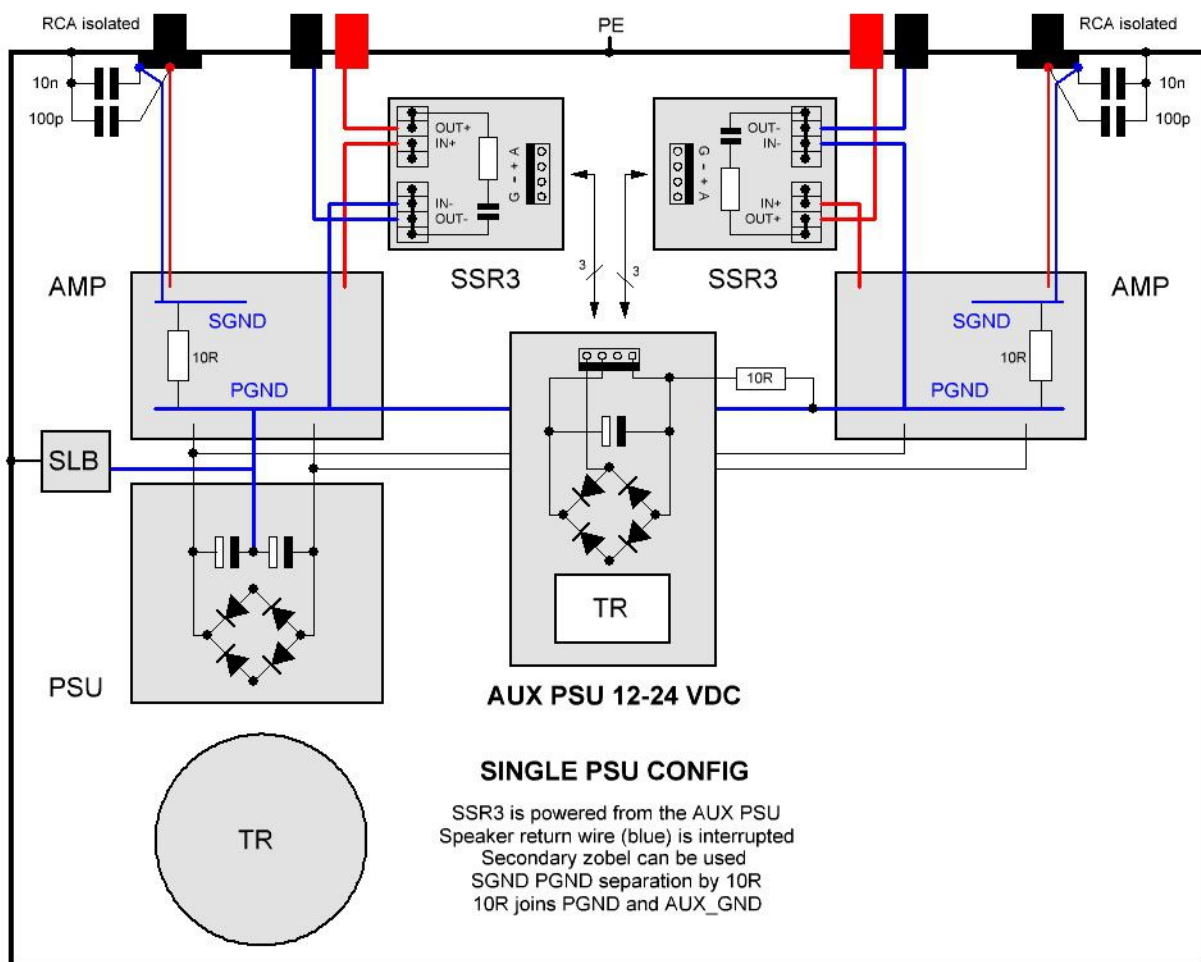
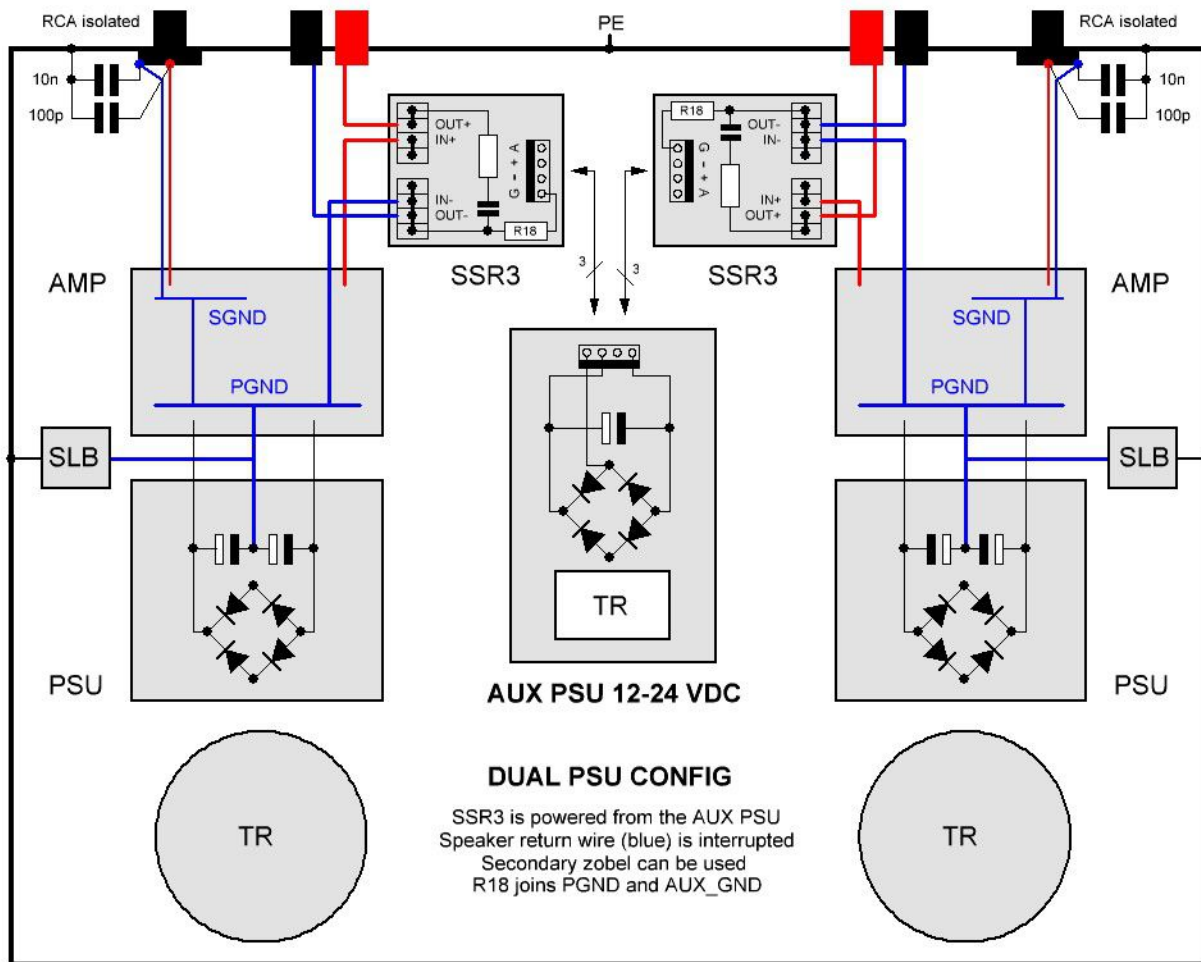
GND 0V
 V- -35 ÷ -60 VDC
 V+ +35 ÷ +60 VDC
 AC 25 ÷ 43 VAC

GND 0V
 V- not used
 V+ +12/+24 VDC
 AC 9 ÷ 20 VAC

DO NOT POPULATE: R18,D9,C6
 R2 100k-220k
 R3,8,14,15 47k
 R4,5,12,13 33k
 R6 330
 R10,17 22k
 R16,19 1k5
 C1-C4 Elyt 5mm
 D1 BZX55C10
 D2 BZX55C5V6
 D8 TVS BIPOLAR 68V (P6KE68CA)
 HS-T6 HS-130-25 (tme.eu)
 T9,T10 TO220 N-Channel 80-100V 3-5mR

DO NOT POPULATE: D6,D7,D9,C6
 R2 100k-220k
 R3,8,14,15 15k
 R4,5,12,13 10k
 R6 150
 R10,17 4k7
 R16,18,19 1k
 C1-C4 Elyt 5mm
 D1 BZX55C4V7
 D2 BZX55C3V3
 D8 TVS BIPOLAR 68V (P6KE68CA)
 HS-T6 HS-130-25 (tme.eu)
 T9,T10 TO220 N-Channel 80-100V 3-5mR





SSR Loudspeaker Protection

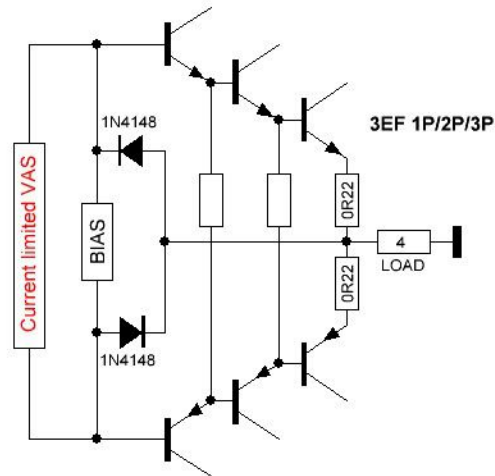
Overcurrent protection settings

Natural Current Limiter

Inc(1P) ~ 10Ap

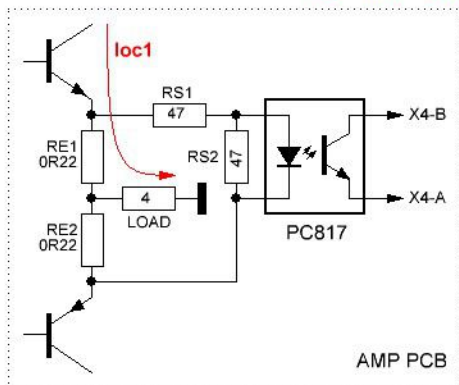
Inc(2P) ~ 20Ap

Inc(3P) ~ 30Ap



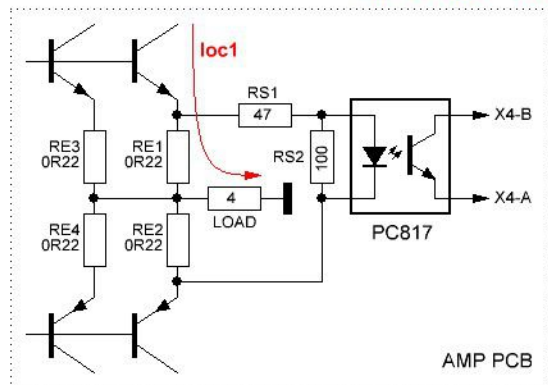
100W/4R (5Arms, 7Ap)

loc = loc1 = 10Ap



200W/4R (7Arms, 10Ap)

loc = 2 * loc1 = 15Ap



300W/4R (8.7Arms, 12.3Ap)

loc = 3 * loc1 = 20Ap

