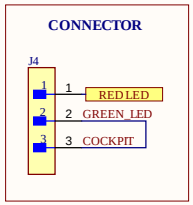
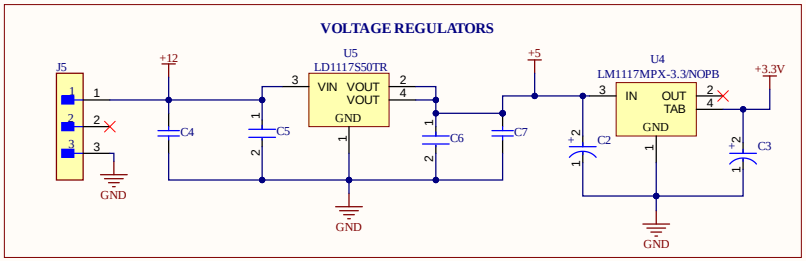
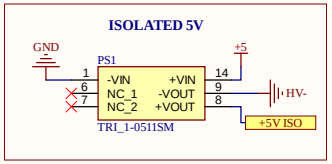
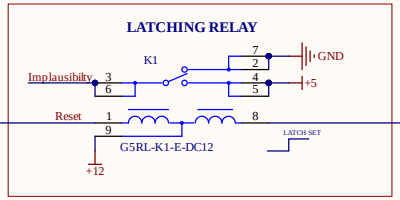
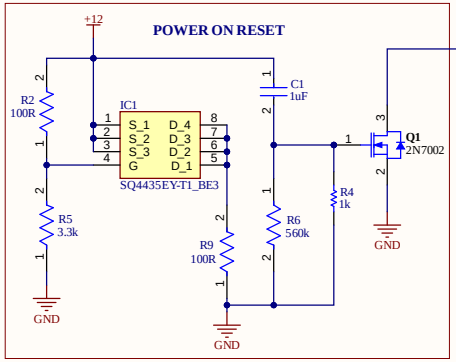
Green Light Control

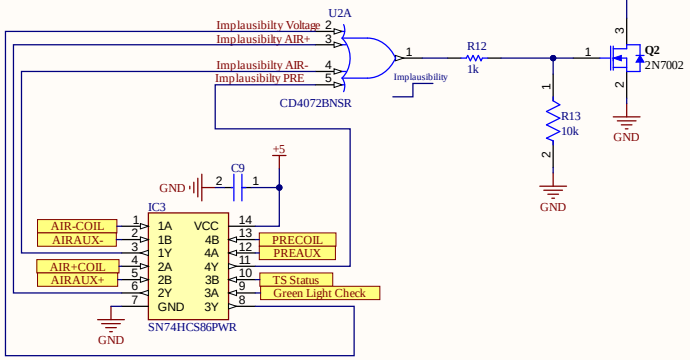


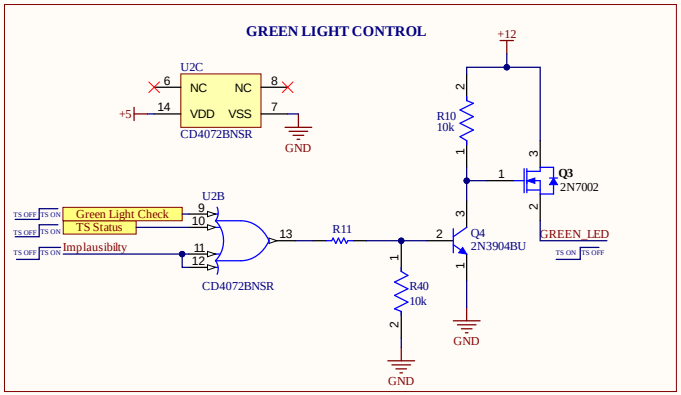






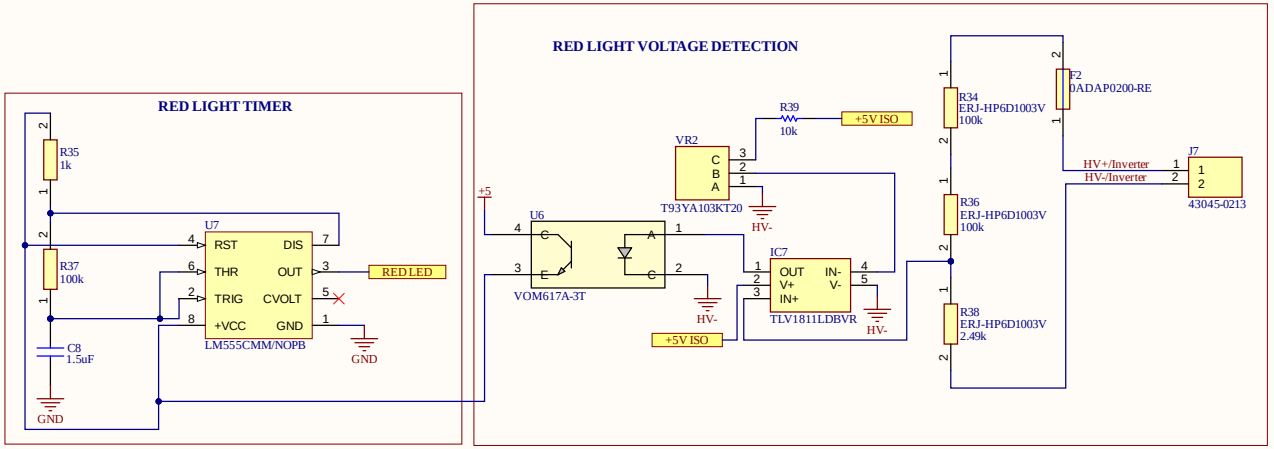






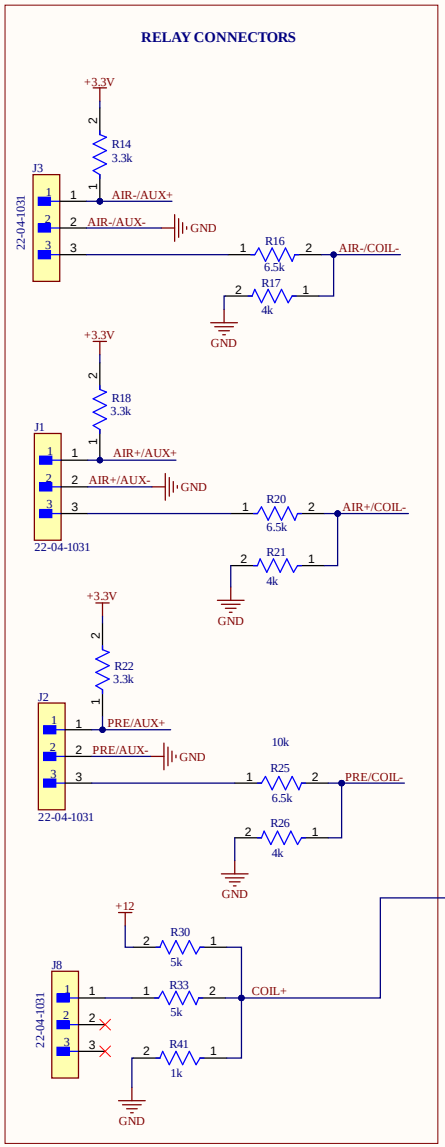
POSEIDON RACING TEAM					
TITLE: TSAL_Inverter Enclosure					DATE: 23/04/24
DRAWN BY: Georgios Papandreou	CAR NUMBER: E5	SIZE: A3	REV: 4	SHEET: 1 / 3	

DC Link Measurements

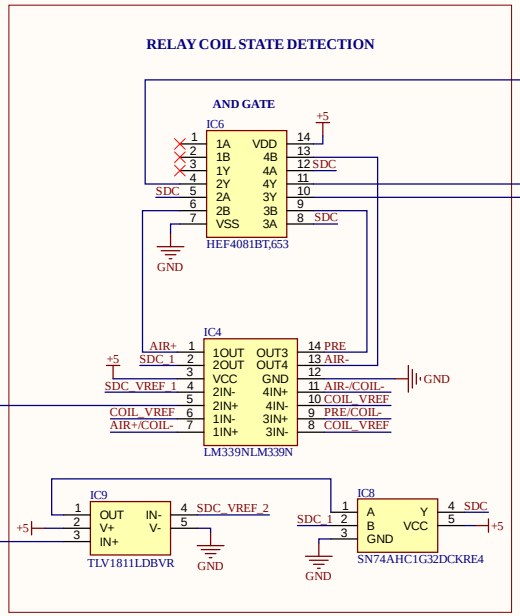


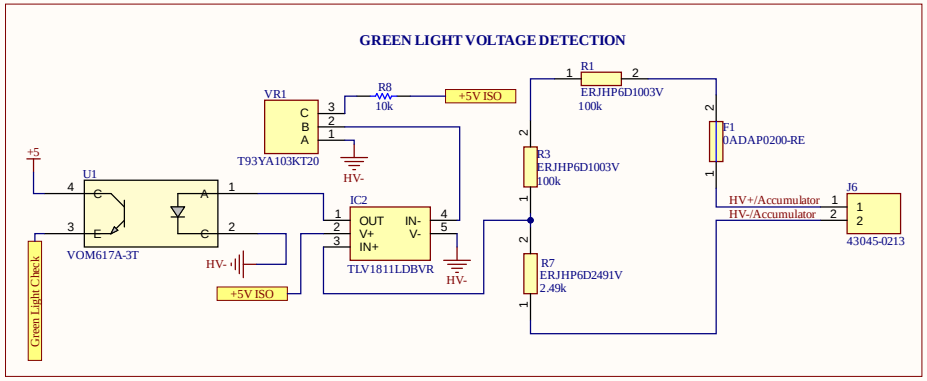
POSEIDON RACING TEAM					
TITLE: TSAL_Inverter Enclosure					DATE: 23/04/24
DRAWN BY: Georgios Papandreou	CAR NUMBER: E5	SIZE: A3	REV: 4	SHEET: 2 / 3	

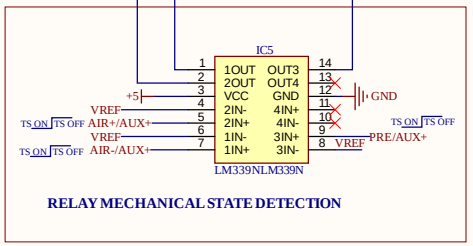
TSAC Logic



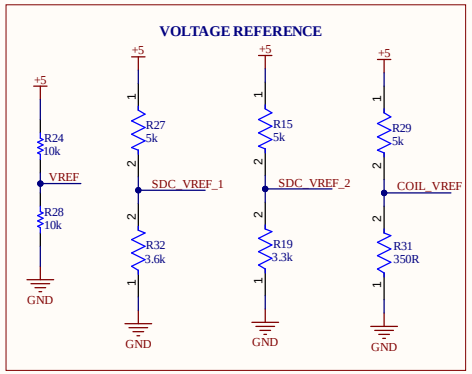
-PIN 3 of J1,J2,J3 are connected to the negative side of the relay's coil. When the relay is closed or there is a broken wire, signal at AIR-/COIL-, AIR+/COIL- and PRE/COIL- is almost zero and the output of IC4 is LOW (TS ON). When there are no faults, voltage at these points is higher than 0.47V (TS OFF)
-PIN 1 of J8 connector is connected on the positive side of the relay coils (AIR+,AIR- and Precharge). When LVS is ON and TSMS OFF, voltage at COIL+ is 1.89V. When LVS is ON anf TSMS is ON voltage at COIL+ is 3.42V. If there is a fault then the signal is 2V. In order to detect the fault, we use two comparators, IC4(2OUT) and IC9 and their outputs are inputs to IC8(OR GATE). The output on both is LOW (TS ON) when the fault is detected and so output of IC8 is LOW (TS ON). When there are no faults ,one of the outputs of IC4 or IC9 is HIGH and thus IC8 is HIGH.
-Outputs from IC8 and IC4 are inputs to IC6 (AND GATE). When there are no faults, all inputs are HIGH and thus output is HIGH so TS is OFF. If there is a fault or at least one relay is closed, output of IC6 is LOW so TS is ON.

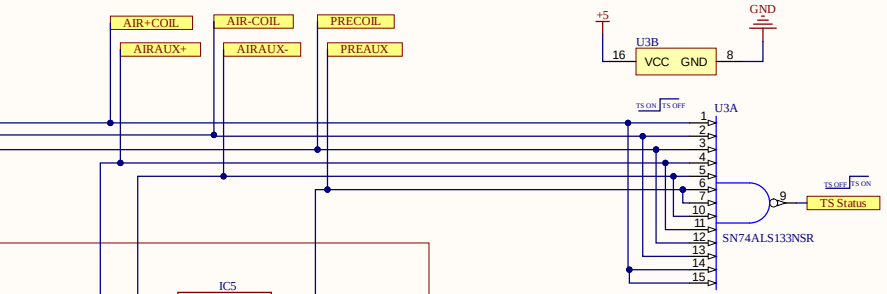




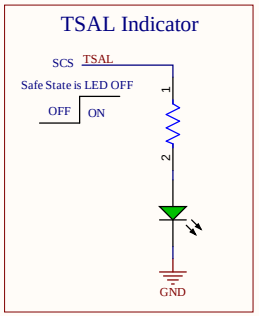


AIR+/AUX+ , AIR-/AUX+, PRE/AUX+ : These three are connected to the positive auxiliary contacts of the three relays. When the contacts are closed the input signal on the IC5(Comparator) is LOW and when the contacts are open, the input signal is HIGH via the R14,R18,R22. When the wire is broken, the input is also HIGH.





TITLE: TSAL_Inverter Enclosure				DATE: 23/04/24	
DRAWN BY: Georgios Papandreou	CAR NUMBER: E5	SIZE: A3	REV: 4	SHEET: 3 / 3	



POSEIDON RACING TEAM

TITLE					DATE
TSAL Cockpit Indicator					15/04/24
DRAWN BY	CAR NUMBER	SIZE	REV	SHEET	
Georgios Papandreou	E5	A3	3	1 / 1	