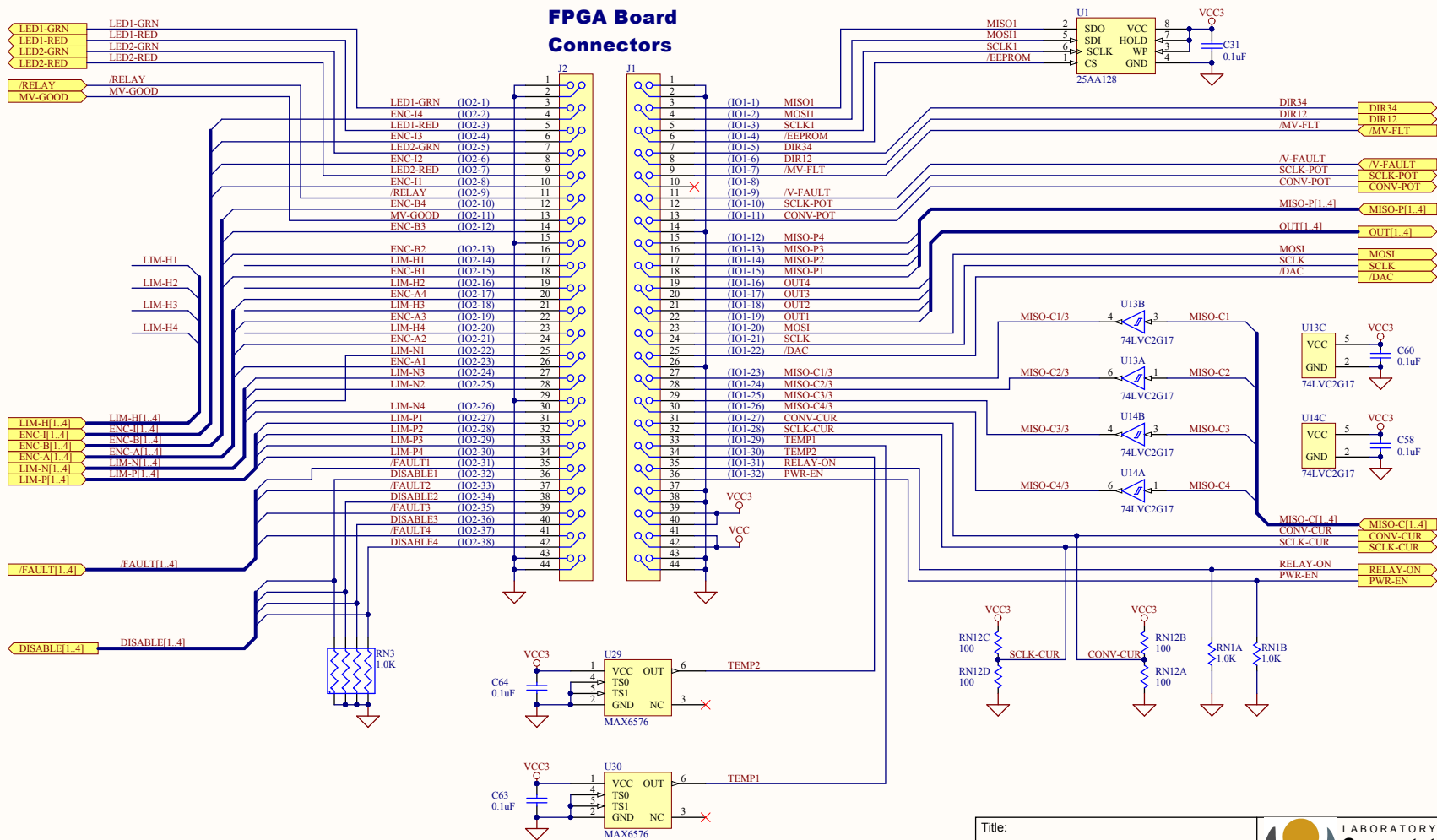


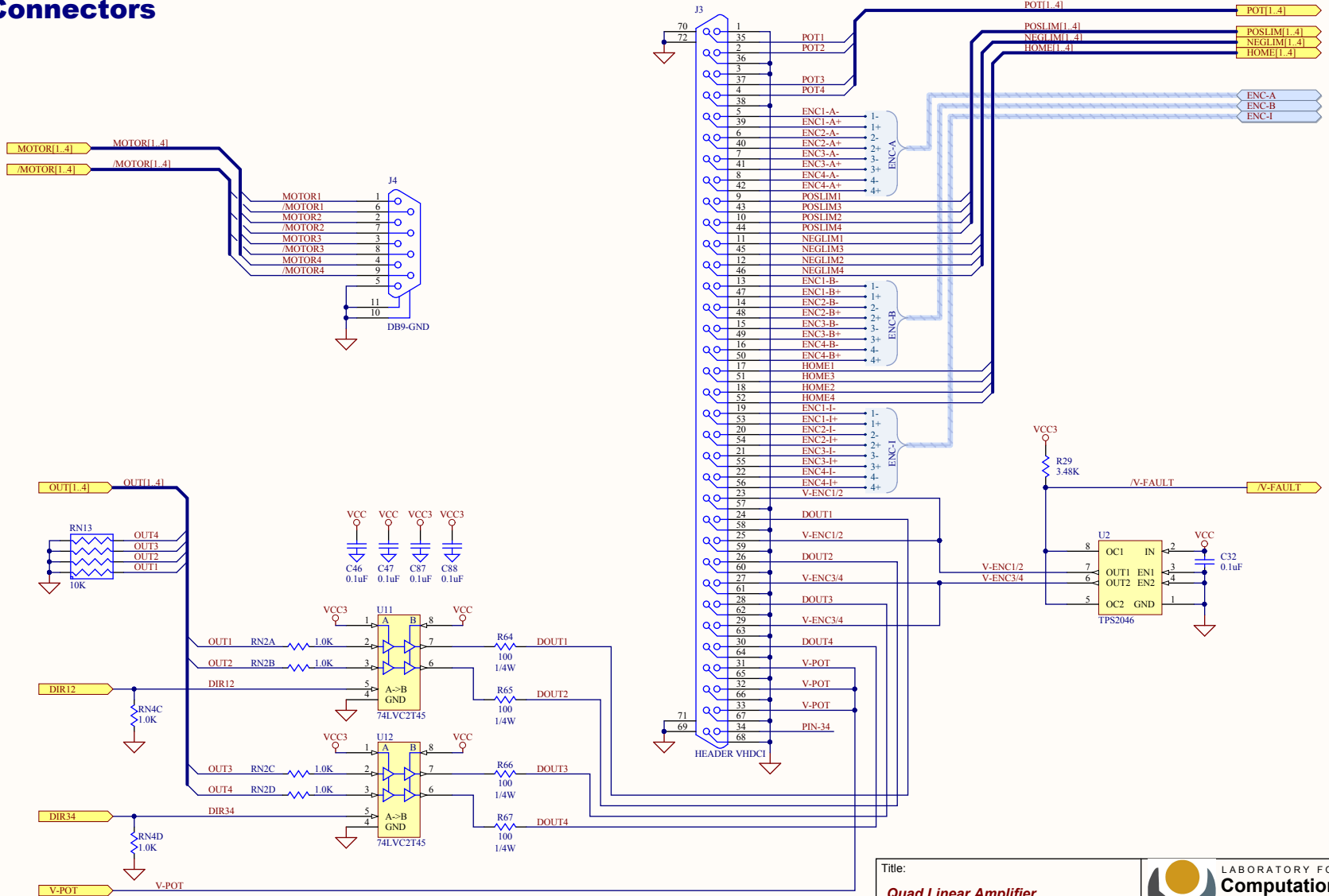
General Conventions:

- Signal names beginning with a ' / ' are active low
- Unless Specified Otherwise:
 - All resistors are 1% metal film, 1/10W, in 0603 package
 - All non-polarized capacitors are ceramic, in 0603 package
 - All ceramic capacitors up to and including 1,000pF are NPO, 50V or higher, 5% or better
 - All ceramic capacitors over 1,000pF up to and including 1.0uF are X7R, 16V or higher, 10% or better
 - All ceramic capacitors over 1.0uF are of the specified type and voltage
 - All polarized capacitors are of the specified type and voltage

FPGA Board, EEPROMs & Temperature Sensors

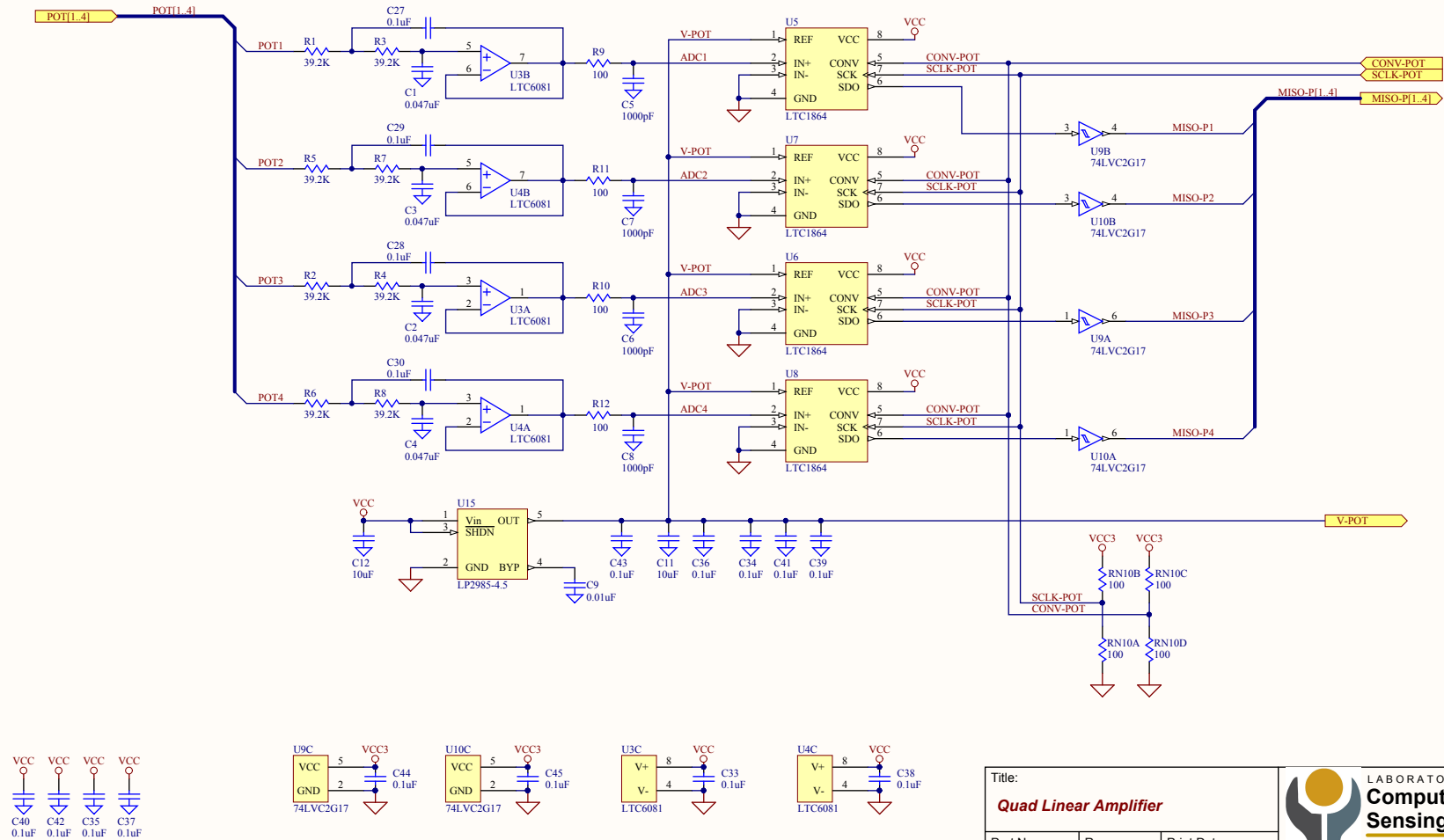



Robot Connectors



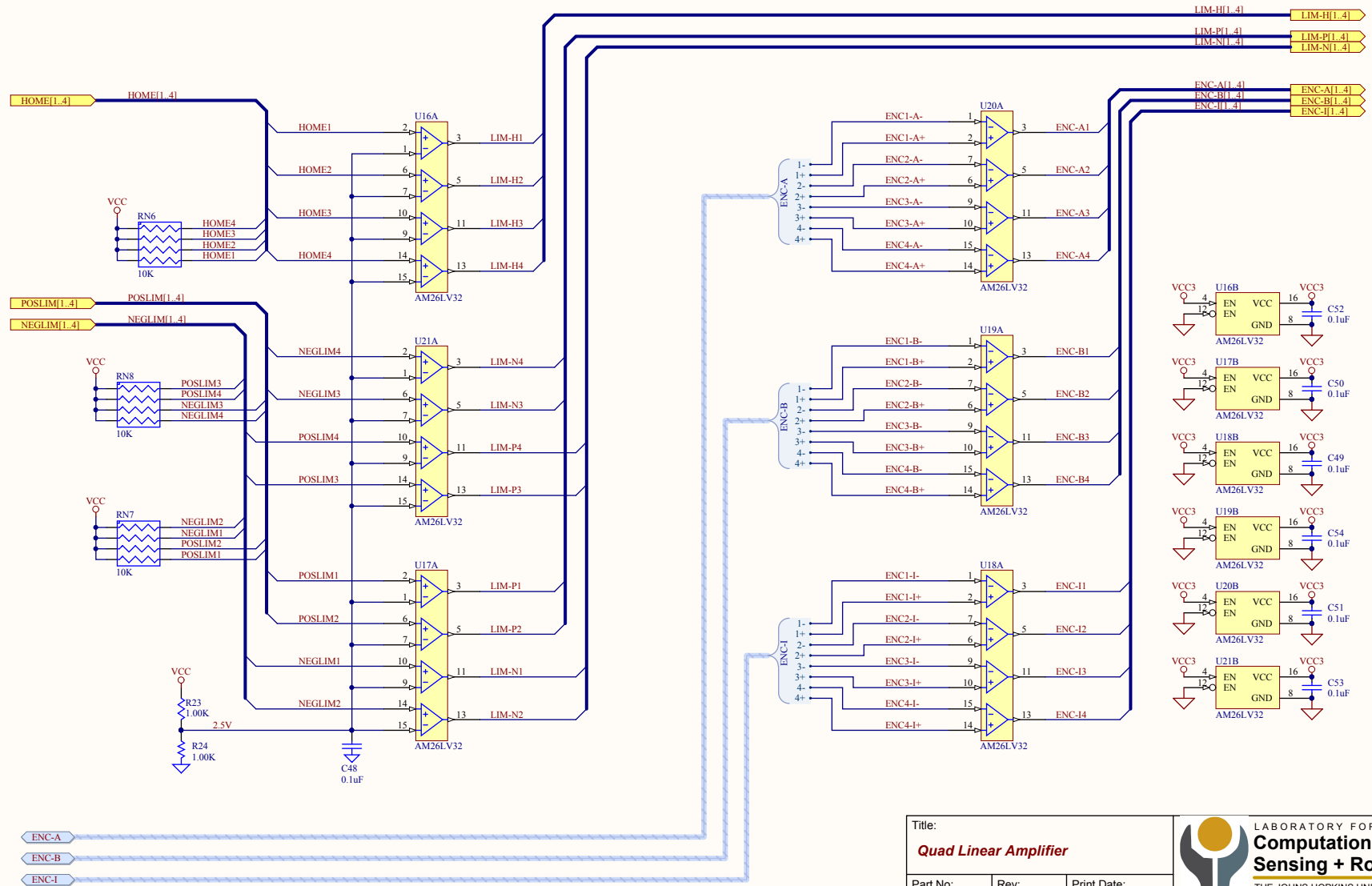
Potentiometer Interface

Fc: 60Hz
Gain: 1.000
Type: Butterworth



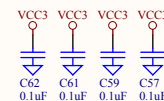
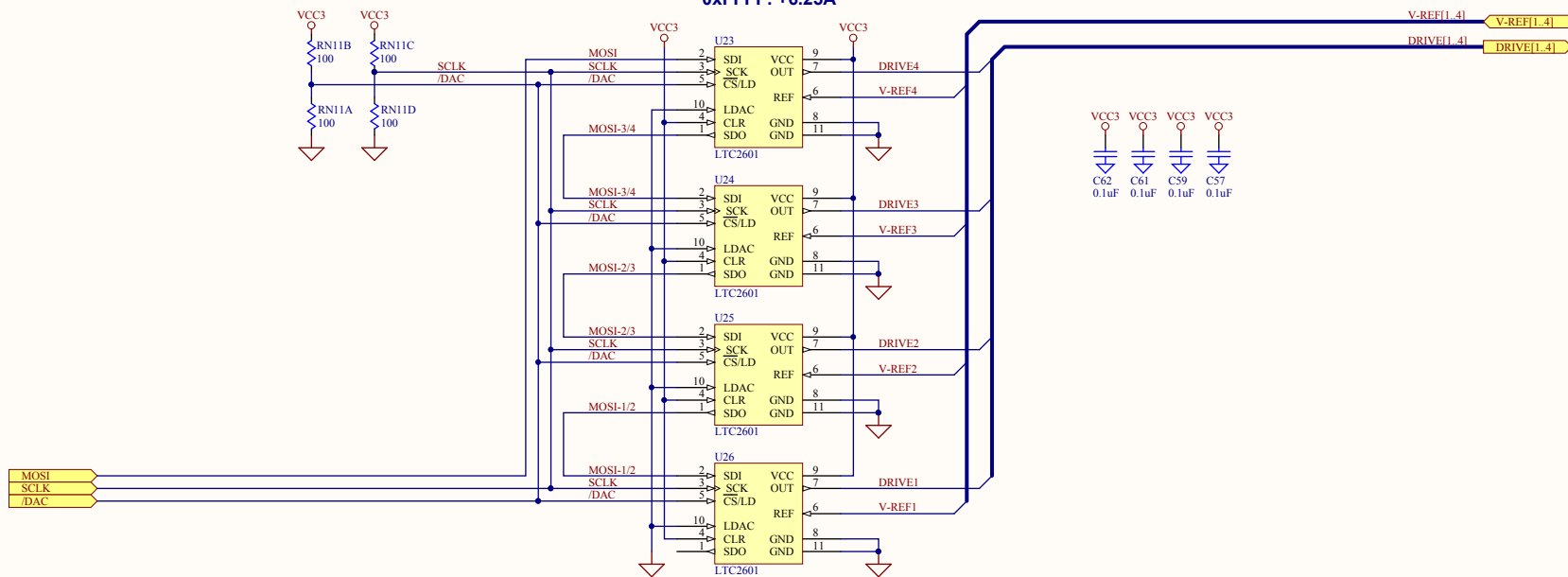
Title: Quad Linear Amplifier			 LABORATORY FOR Computational Sensing + Robotics THE JOHNS HOPKINS UNIVERSITY http://lcsr.jhu.edu
Part No:	Rev: 1.4a	Print Date: 7/7/2018	
File Name: S04.SchDoc		Sheet 4 of 9	

Encoder & Limit Switch Interface



Drive DACs

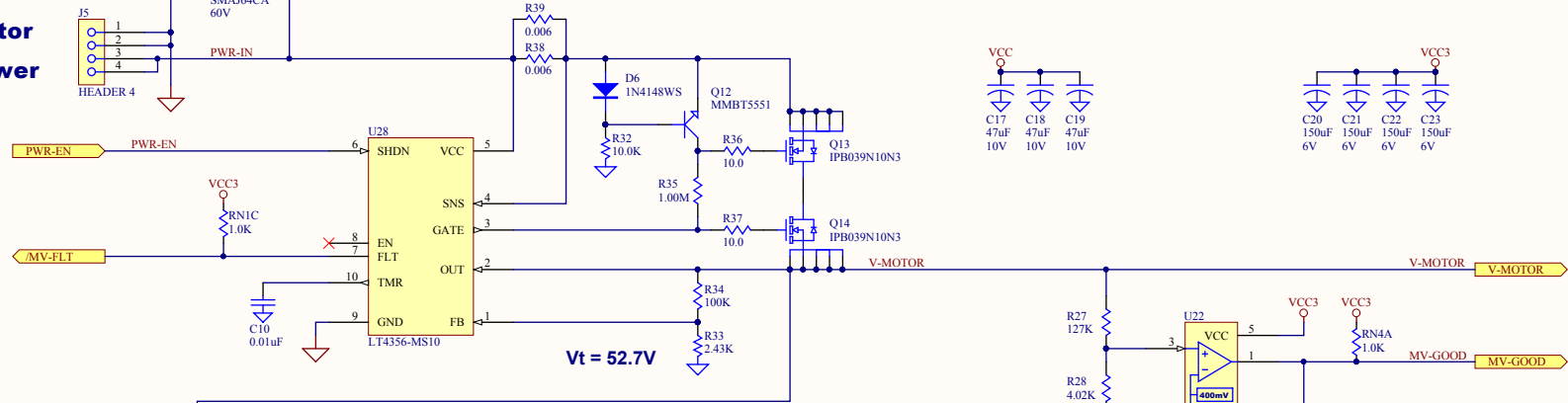
Drive Gain:
 0x0000: -6.25A
 0x8000: 0.00A
 0xFFFF: +6.25A



Power Connectors, Power Supplies

Solder D12 (transorb) on back side of PCB, between pins 2 and 3 of connector J5

Motor Power

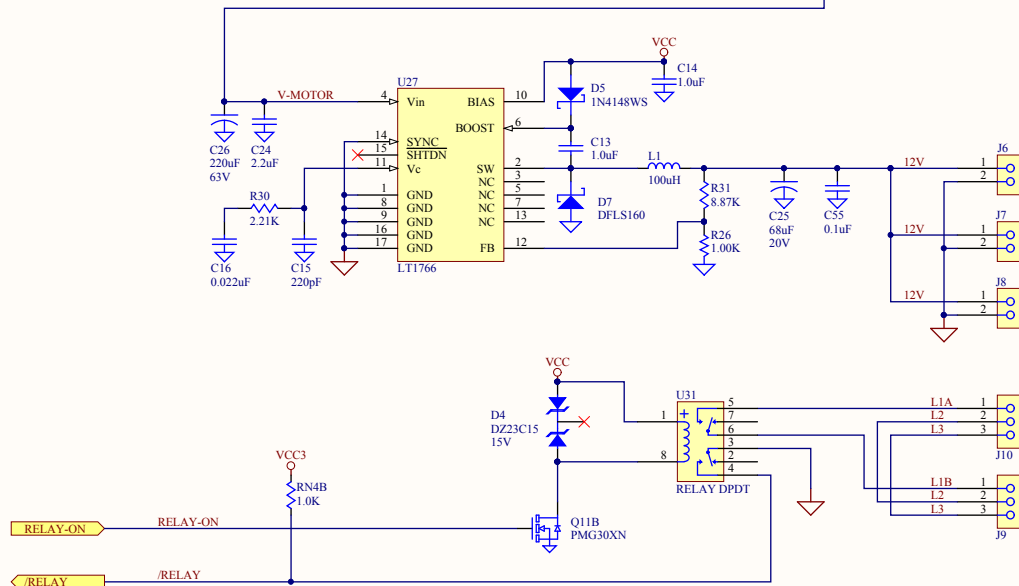



$V_t = 52.7V$

$V_t = 10.5V$
 $V_t = 52.8V$

12V Power Out

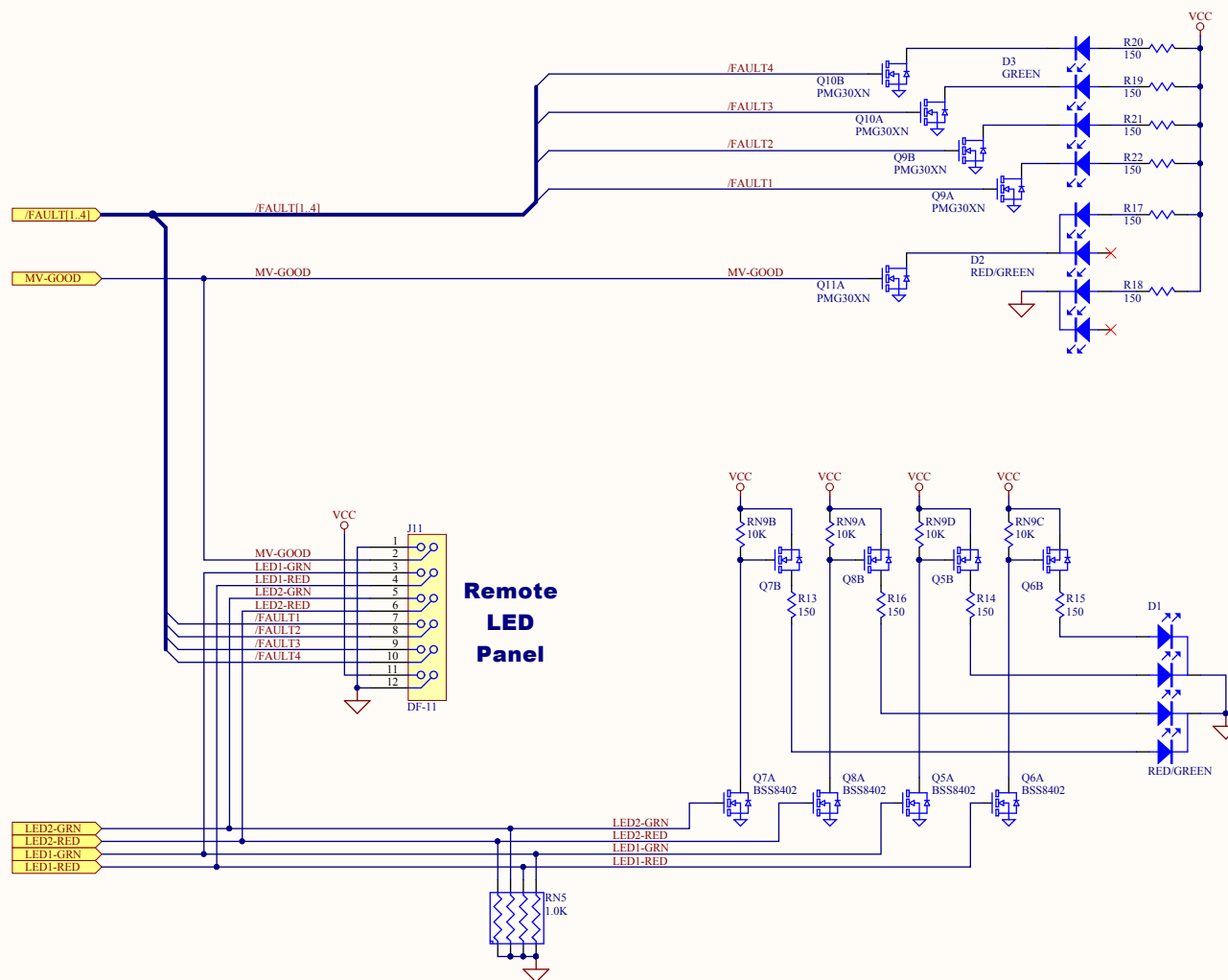
Safety Loop-through



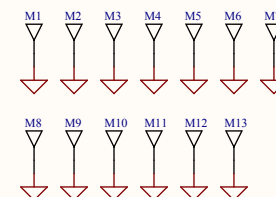
Title: Quad Linear Amplifier			 <p>LABORATORY FOR Computational Sensing + Robotics THE JOHNS HOPKINS UNIVERSITY http://lcsr.jhu.edu</p>
Part No:	Rev: 1.4a	Print Date: 7/7/2018	
File Name: S07.SchDoc			

Sheet 7 of 9

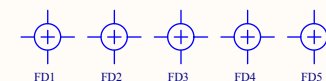
LEDs




Mounting Holes



Fiducials



Title: <i>Quad Linear Amplifier</i>			 LABORATORY FOR Computational Sensing + Robotics THE JOHNS HOPKINS UNIVERSITY http://lcsr.jhu.edu	Sheet 8 of 9
Part No:	Rev: 1.4a	Print Date: 7/7/2018		
File Name: S08.SchDoc				

Quad Linear Amplifier
Drawing Title:

8
Sheet:
1.4a
Rev:

Motor Driver

