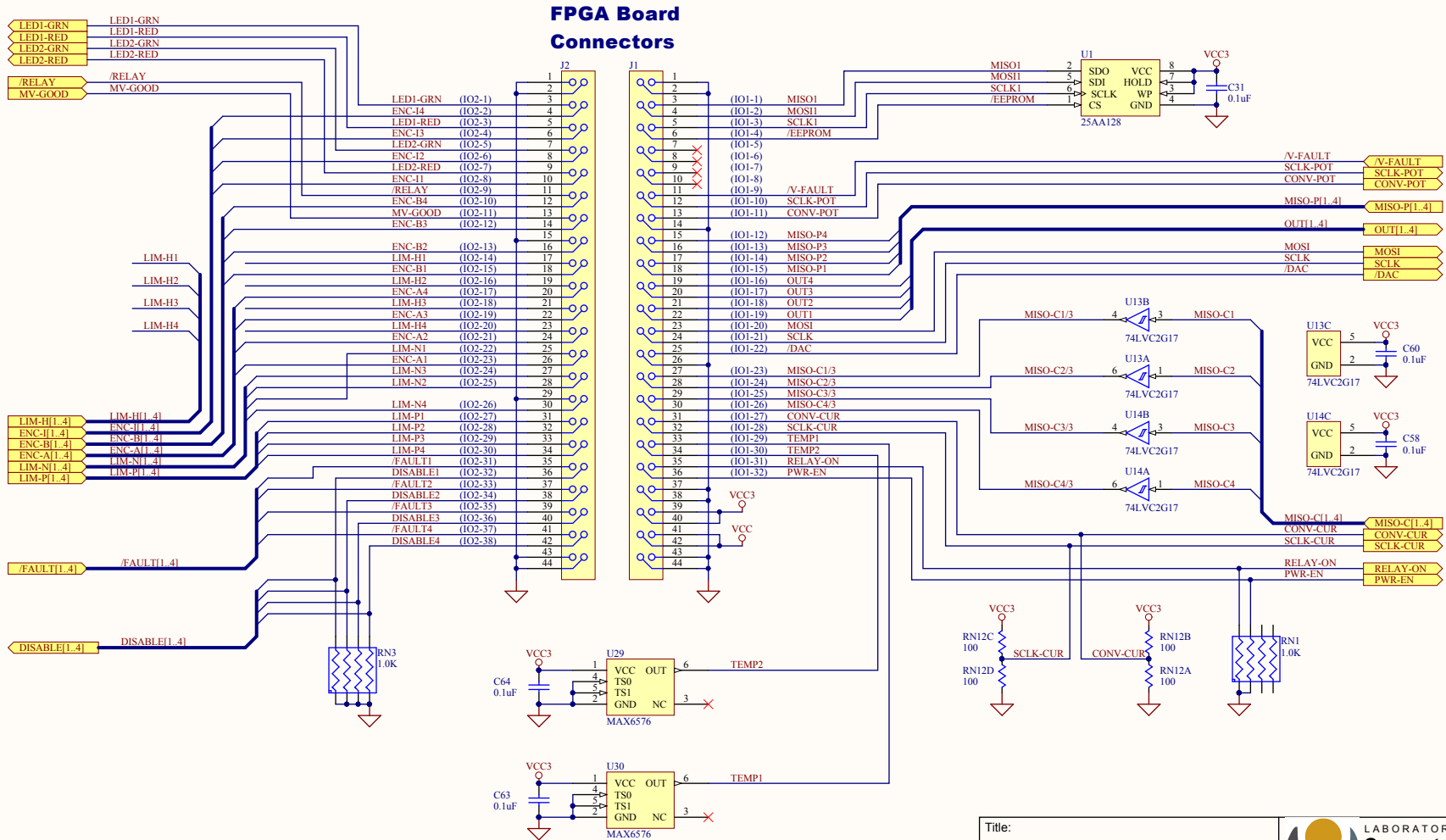


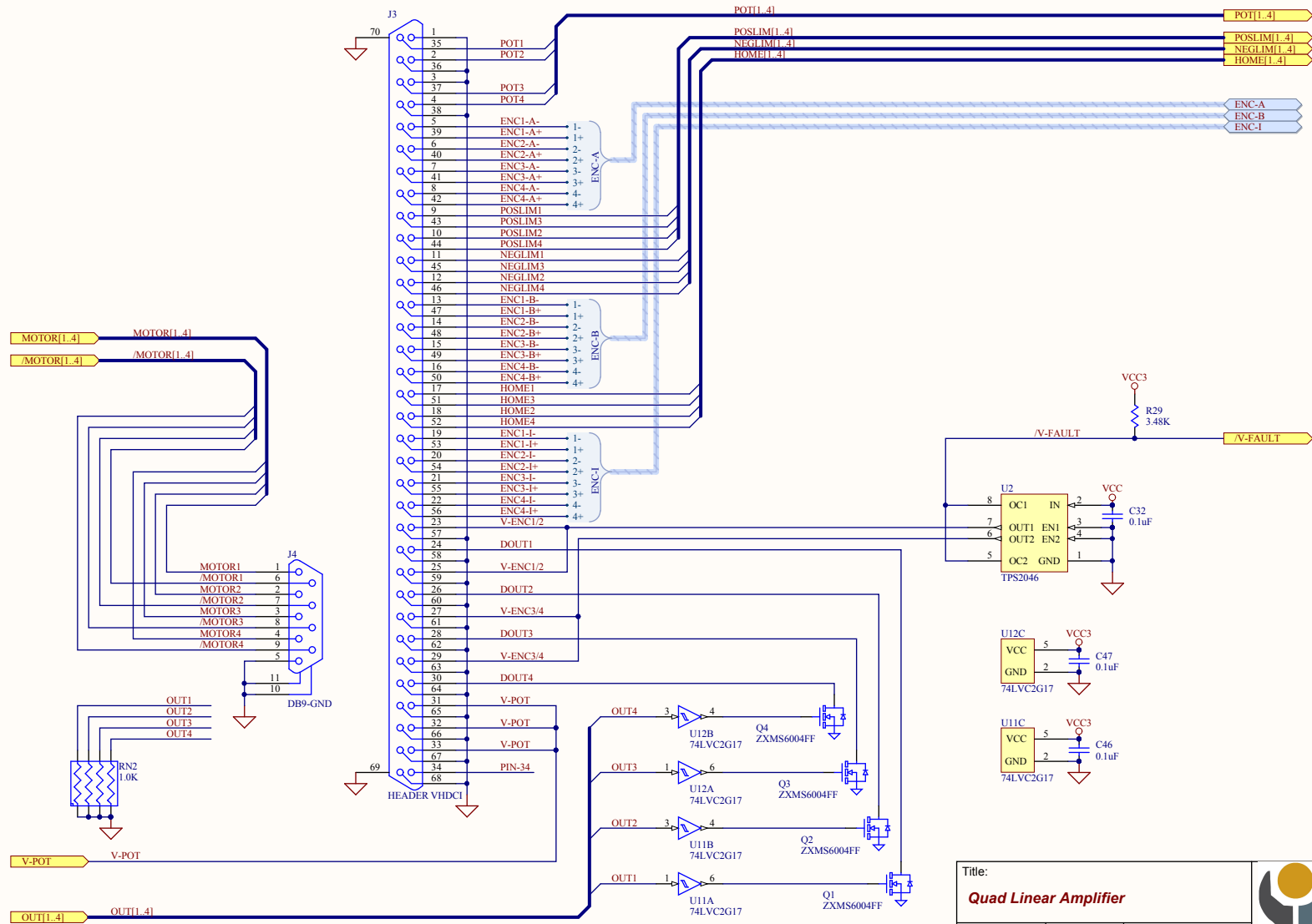
General Conventions:


- 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

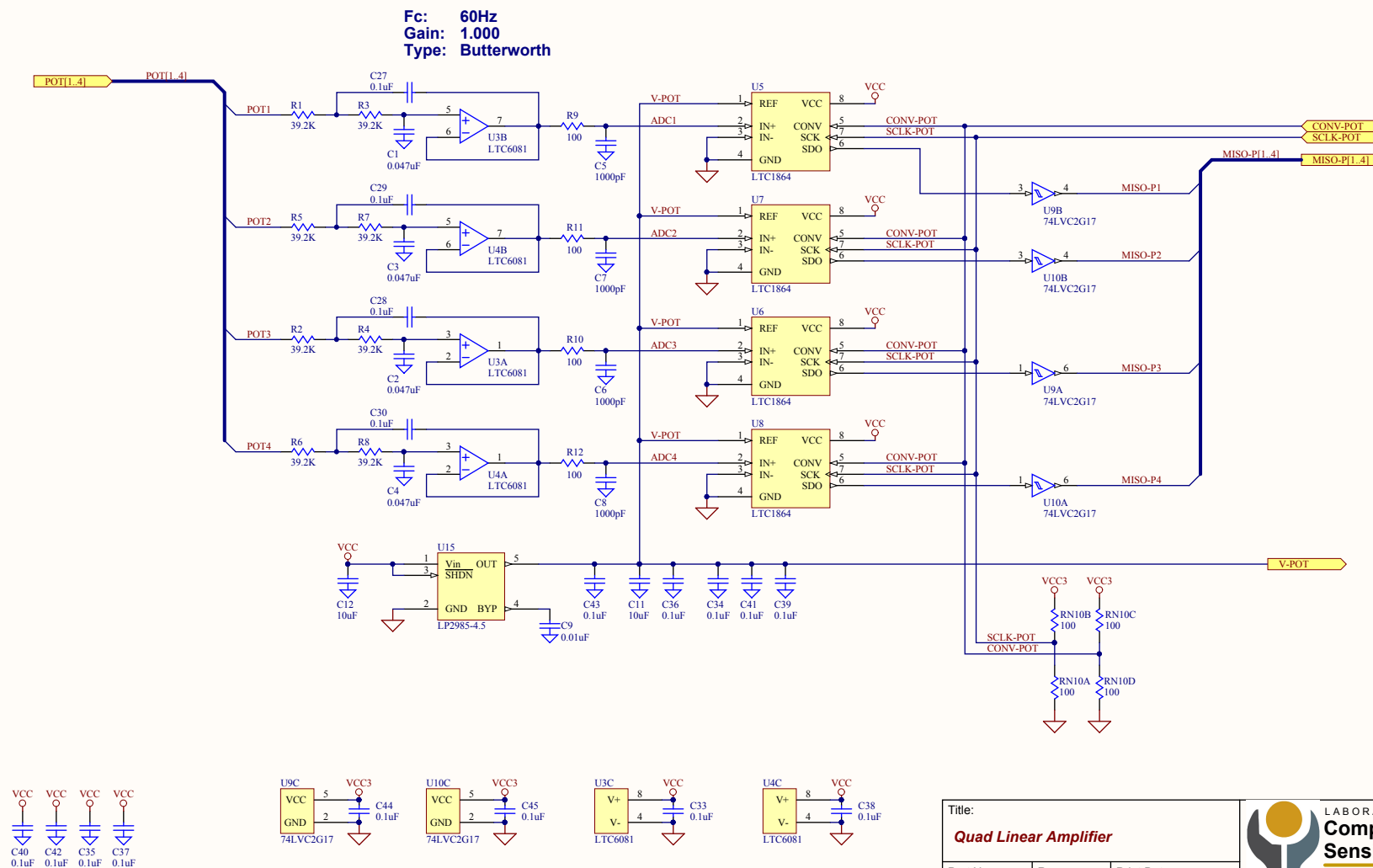


Robot Connectors

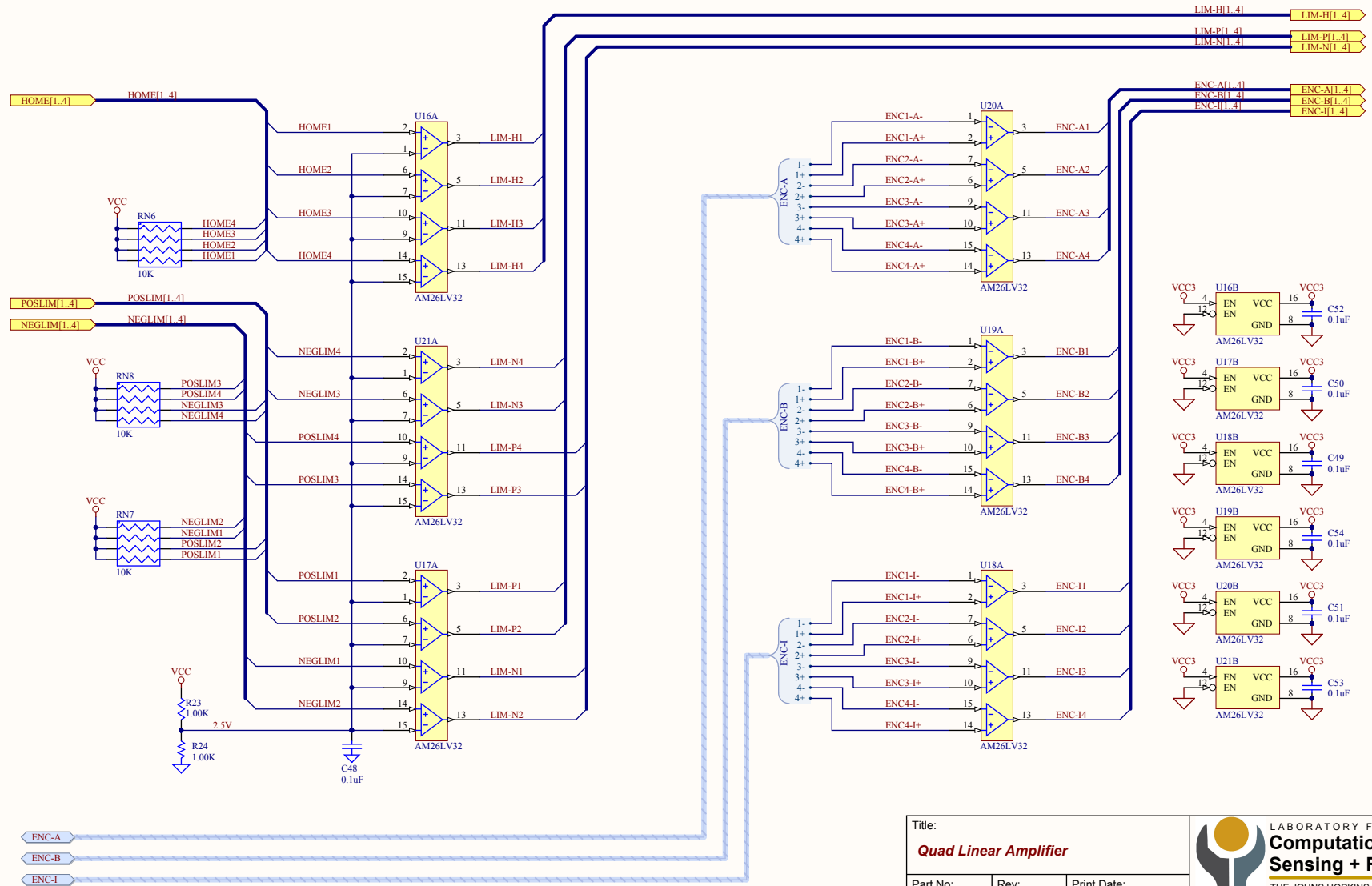


Title: <i>Quad Linear Amplifier</i>			 <div>LABORATORY FOR Computational Sensing + Robotics</div> <div>THE JOHNS HOPKINS UNIVERSITY http://lcsr.jhu.edu</div>
Part No:	Rev: 1.2	Print Date: 4/19/2013	
File Name: S03.SchDoc			
Sheet 3 of 9			

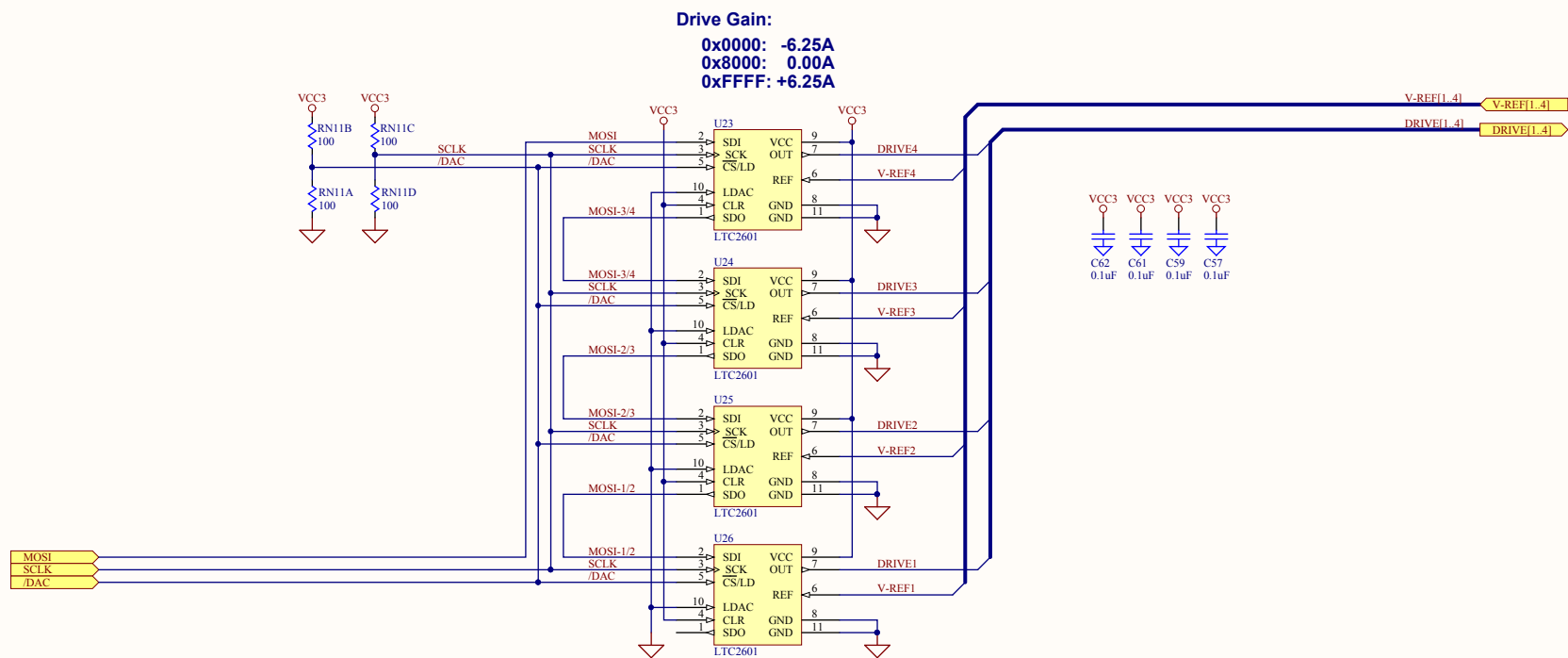
Potentiometer Interface



Encoder & Limit Switch Interface

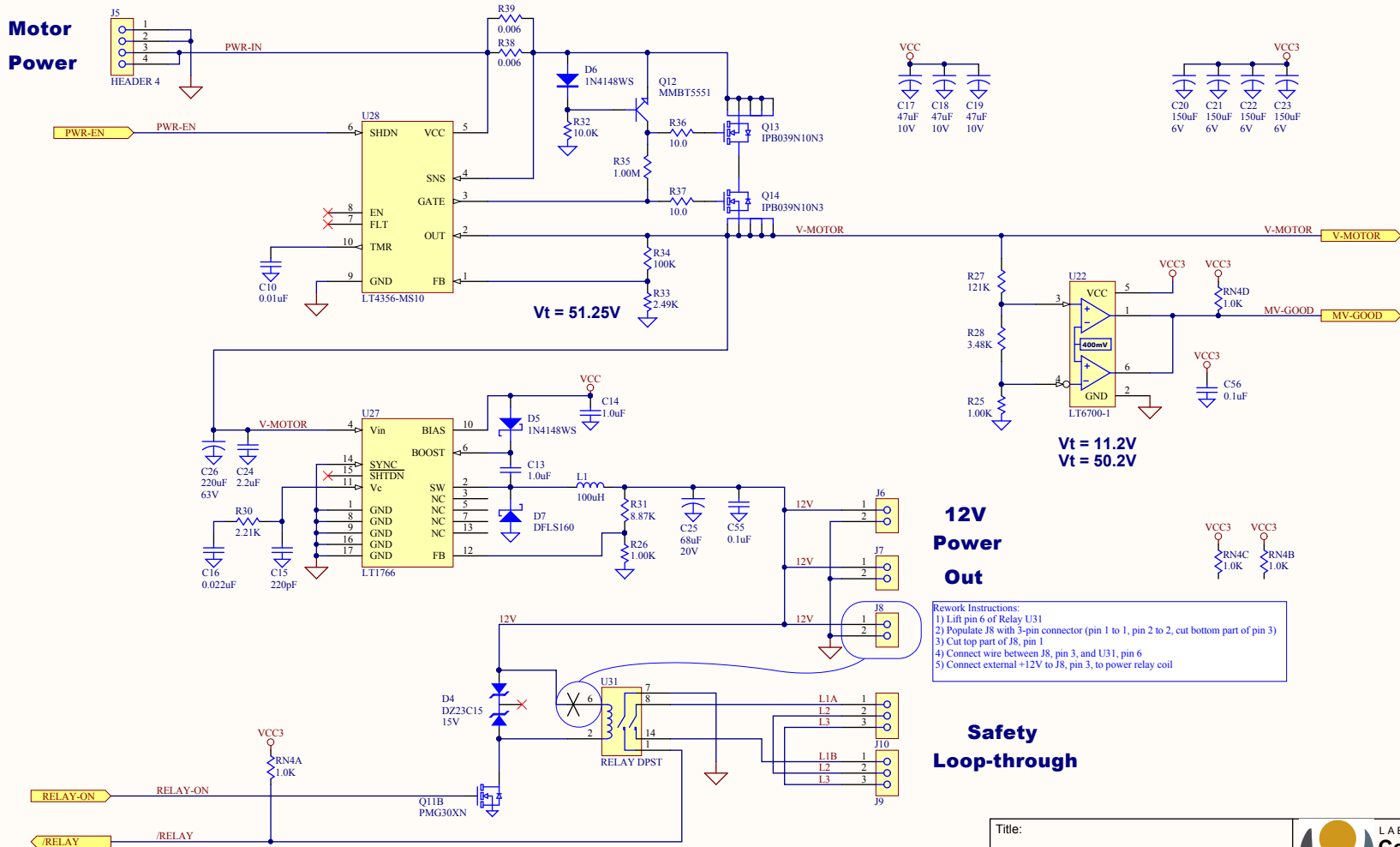


Drive DACs



1.2	6	Quad Linear Amplifier
Rev:	Sheet:	Drawing Title:

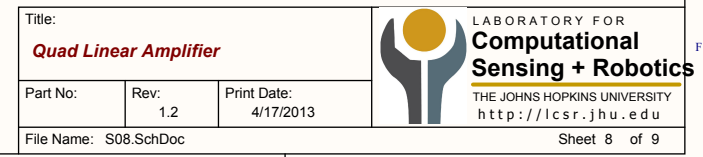
Power Connectors, Power Supplies



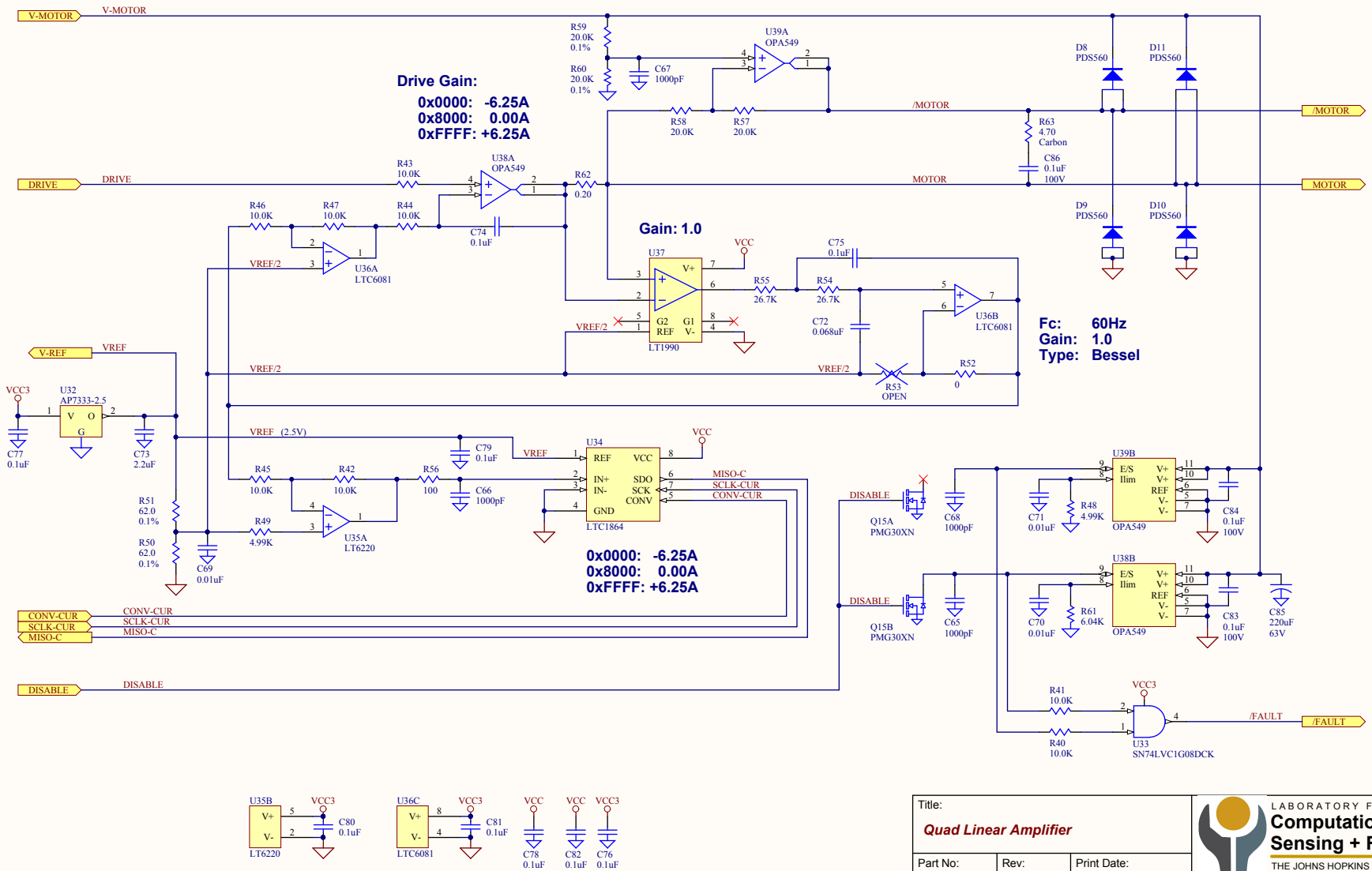
Rework Instructions:


- 1) Lift pin 6 of Relay U31
- 2) Populate J8 with 3-pin connector (pin 1 to 1, pin 2 to 2, cut bottom part of pin 3)
- 3) Cut top part of J8, pin 1
- 4) Connect wire between J8, pin 3, and U31, pin 6
- 5) Connect external +12V to J8, pin 3, to power relay coil

F



Motor Driver



Title: <i>Quad Linear Amplifier</i>			
Part No:	Rev: 1.2	Print Date: 4/19/2013	
File Name: S09.SchDoc			
			Sheet 9 of 9

Quad Linear Amplifier
 Drawing Title:
 9 Sheet:
 1.2 Rev:
 Sheet 9 of 9