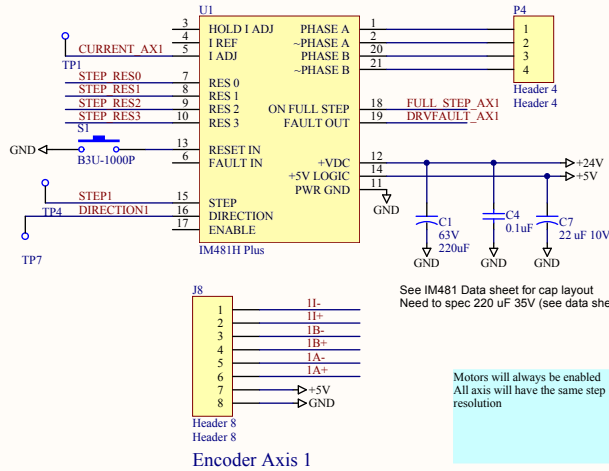
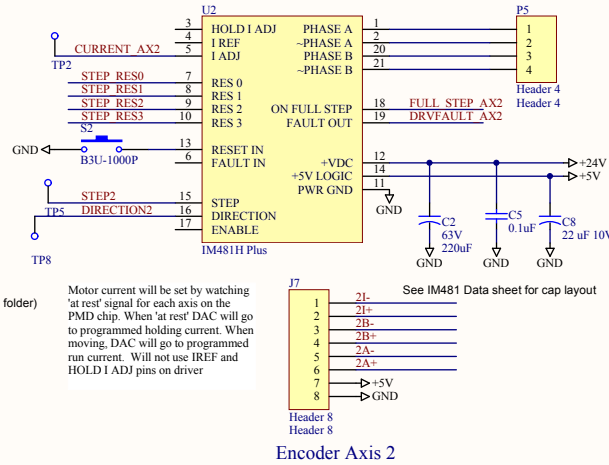


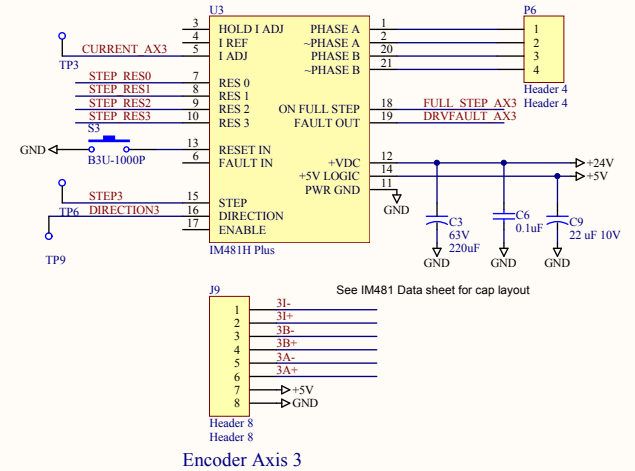
## AXIS 1



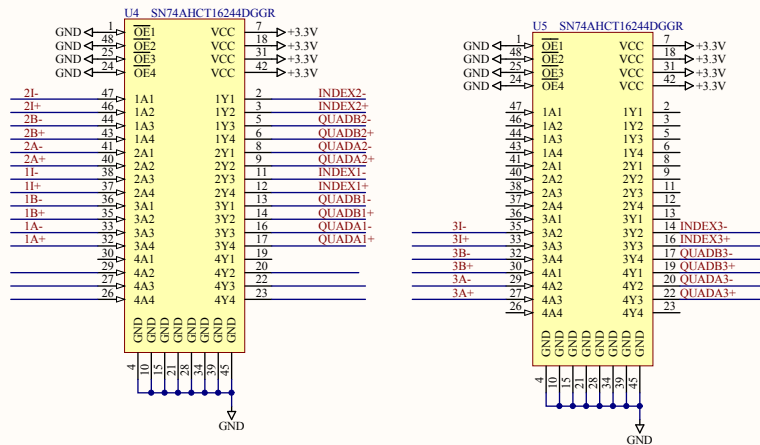
## AXIS 2



## AXIS 3



## Translators +5V to 3.3V



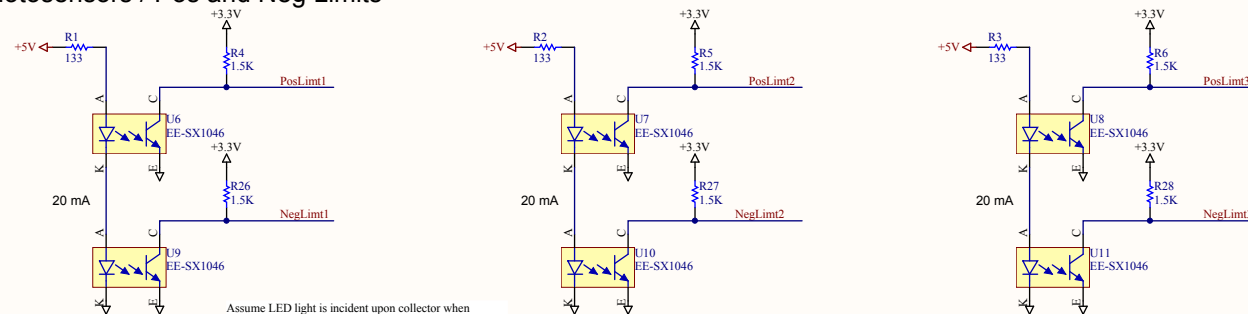
## REVISION HISTORY

Rev 1: Generated Document  
 Rev 2: No Data  
 Rev 3: No Data  
 Rev 4: R42 was 182K (2/22/2012, RL)

## MOTOR DRIVERS / LINEAR ENCODERS

Title		
SCHEMATIC, M2 FOCUS MIRROR		
Size	Number	Revision
B	780-00012	4
Date:	1/7/2013	Sheet 1 of 1
File:	\\.\780-00012-P1_rev4 Sch M2 Focus Mirror.dwg	

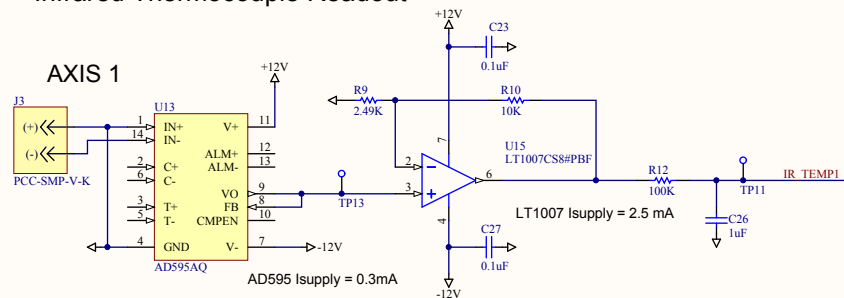
## Photosensors / Pos and Neg Limits



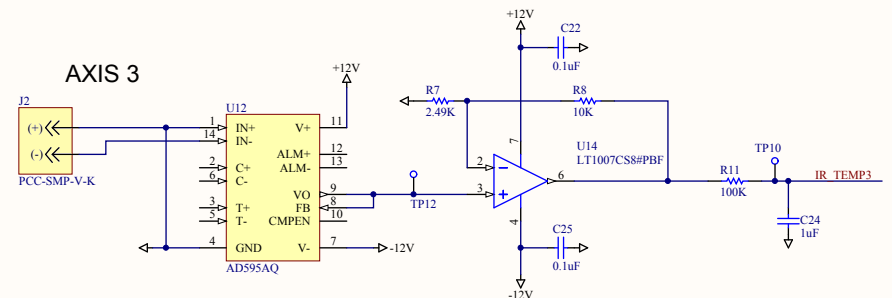
Assume LED light is incident upon collector when motion is NOT at limit. This means that transistor is conducting. Opto coupler at SuperFin input has diode COM connected to GND hence they are in parallel with transistor of photosensor. Superfin has pull-down resistor on emitter of opto transistor. So when photosensor is ON, no current is going through SuperFin opto and PMD chip sees a LOW as it should. When limit is reached, photosensor does not conduct, current goes through SuperFin input diode and input to PMD chip goes HIGH.

## Infrared Thermocouple Readout

### AXIS 1

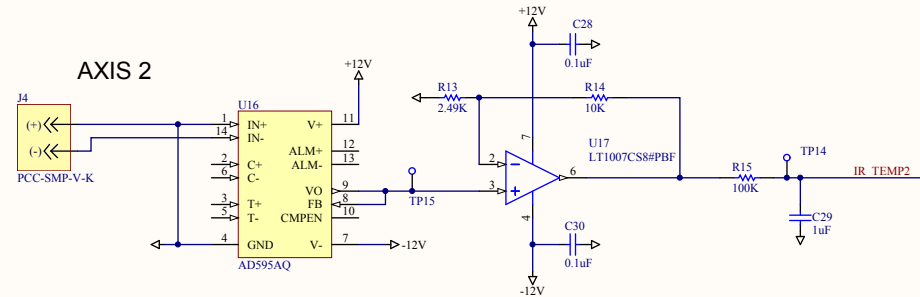


### AXIS 3



Use PC mount Thermocouple connectors from Omega

### AXIS 2



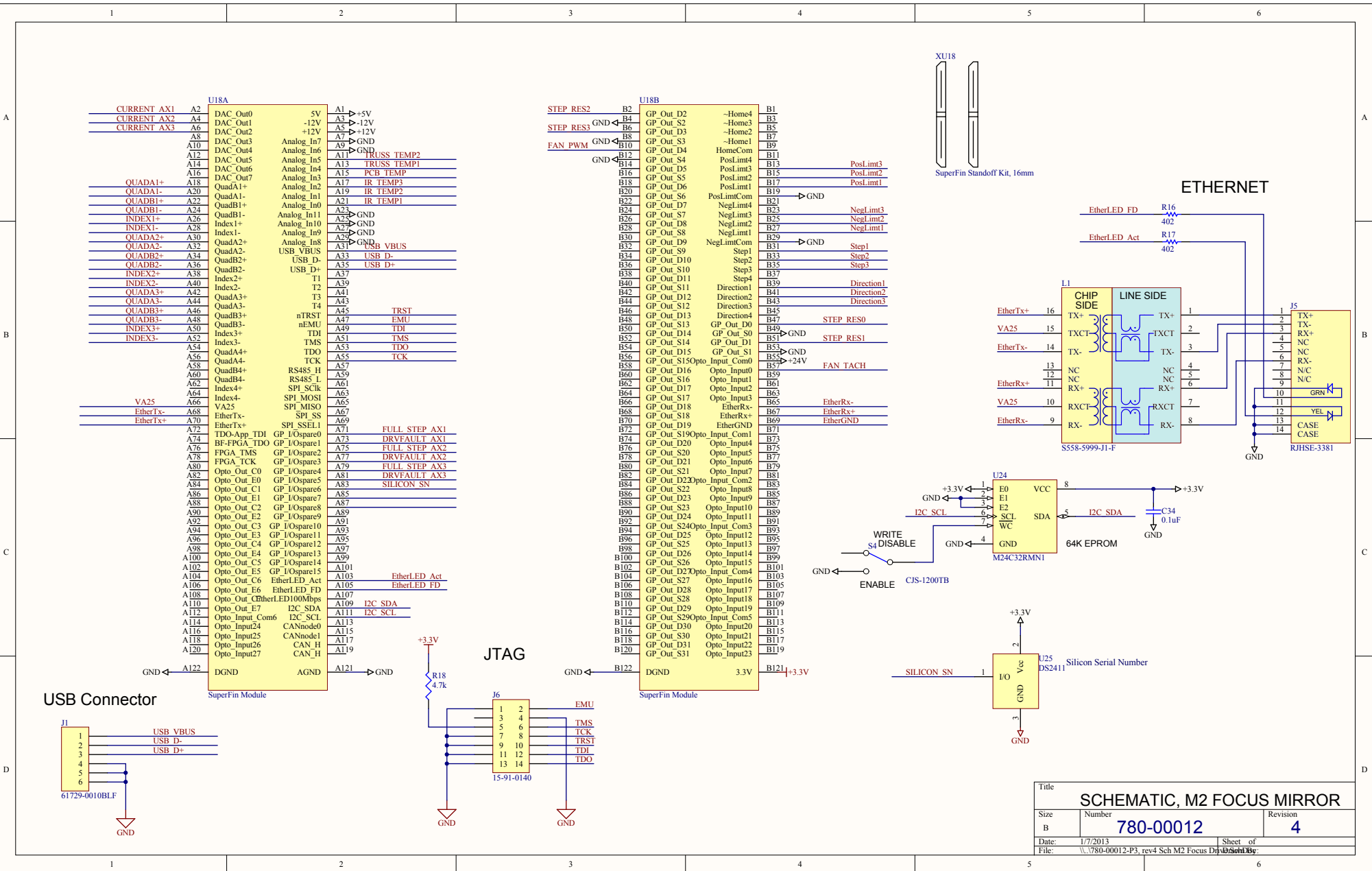
Infrared Thermocouple Probe: Omega OS36-2-K-50F  
Specified range 0-80 degF (Ben H)  
Design range -13 to +104 degF (-25 to +40 degC)

Output of AD595: = (Type K Voltage + 11 uV) x 247.3 (in mV)  
@ -25 degC = -236.7 mV  
@ 40 degC = 401.36 mV

To fit into ADC input range of +/- 2.048 V, maximum post gain is 5.1. Set post gain to x5.016 so that ADC inputs are

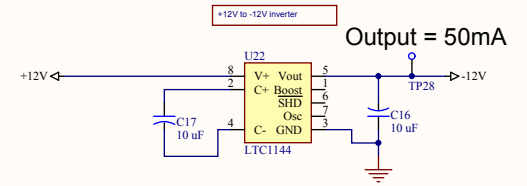
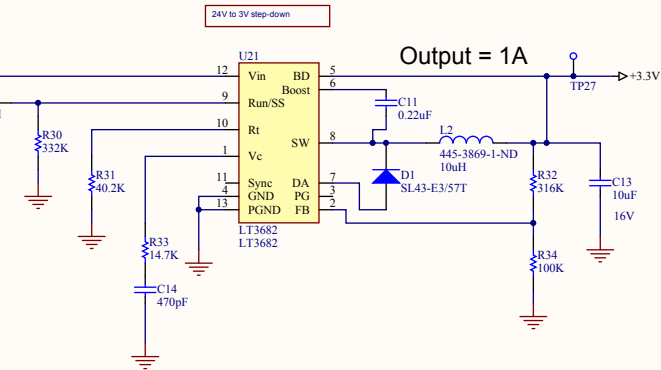
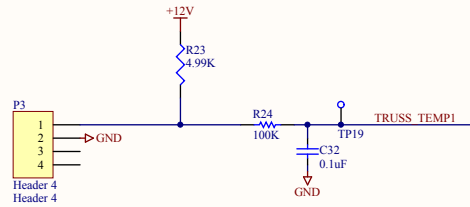
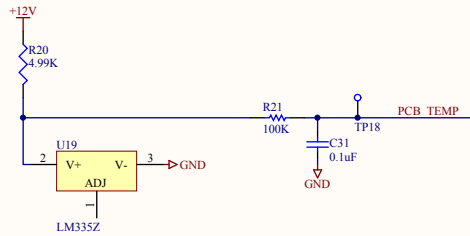
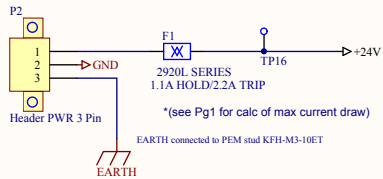
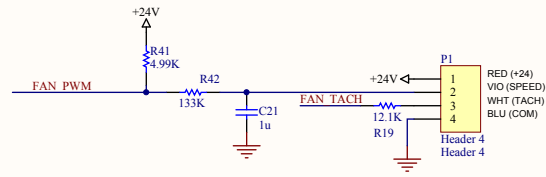
@ -25 degC = -1.187 V  
@ 40 degC = 2.013 V

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B	780-00012	4
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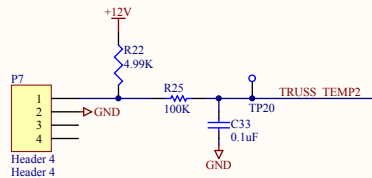
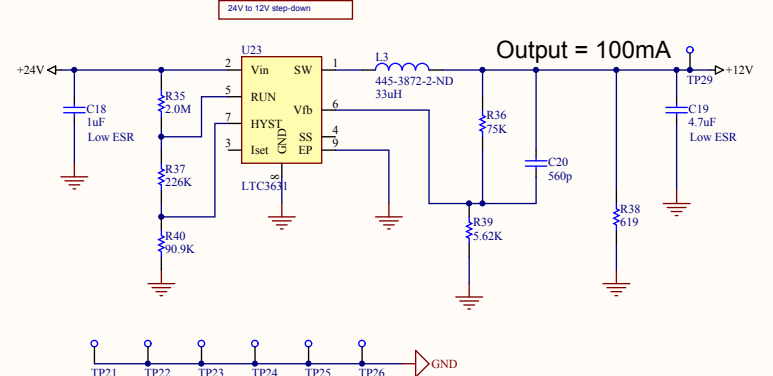
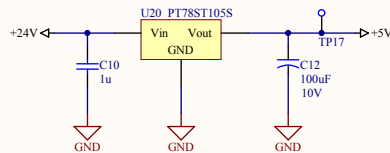


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SCHEMATIC, M2 FOCUS MIRROR		
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B	780-00012	4
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# TOP FAN DRIVE



Note on +/- 12V supplies:  
Since +12V is driving -12V, the maximum balanced current is 50 mA



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B	780-00012	4	
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