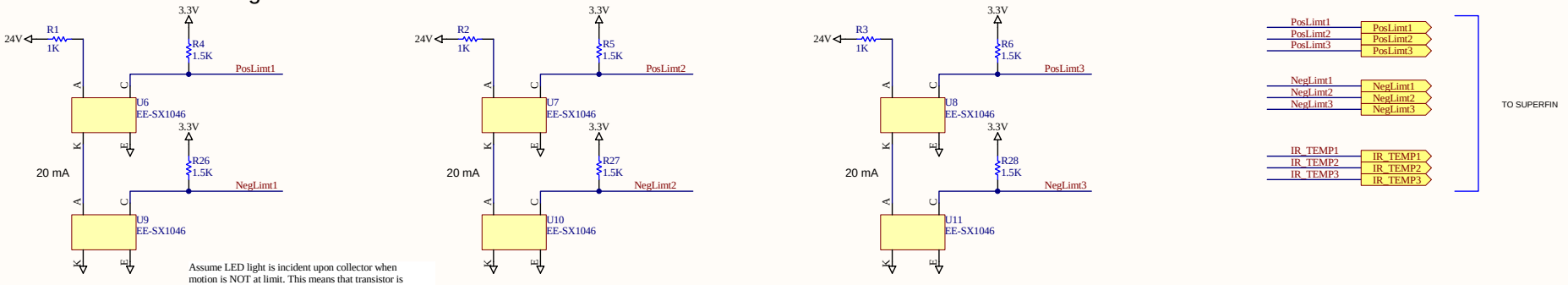
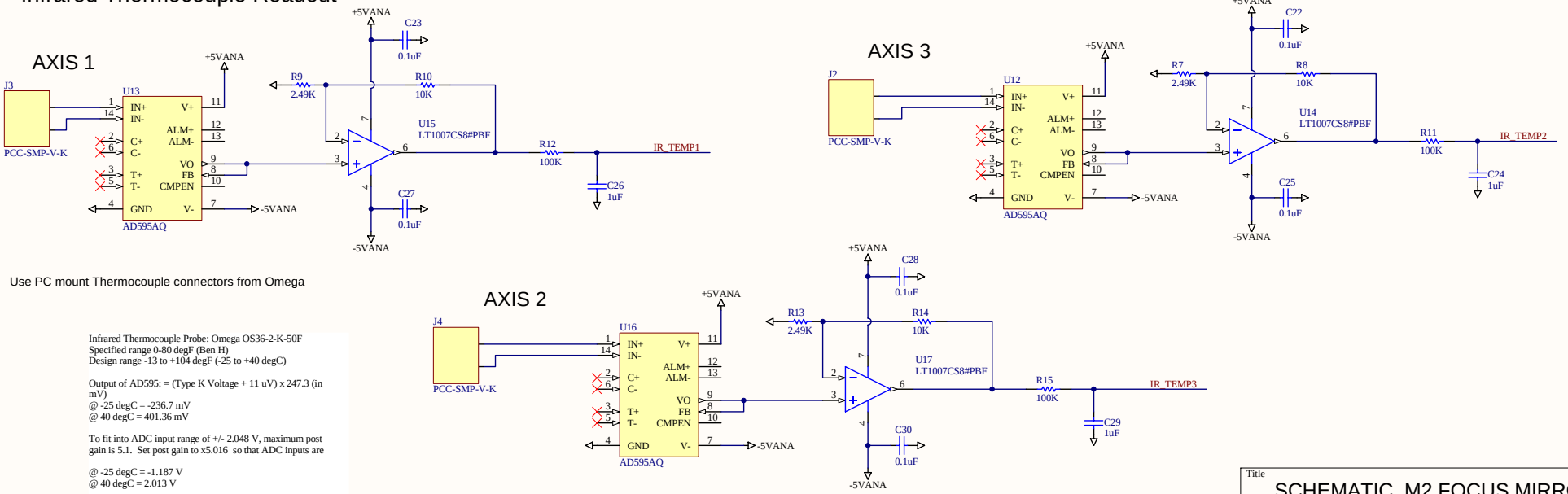
Photosensors / Pos and Neg Limits



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 transisitor 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



Use PC mount Thermocouple connectors from Omega

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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