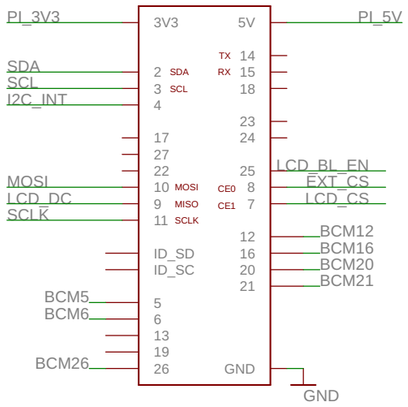
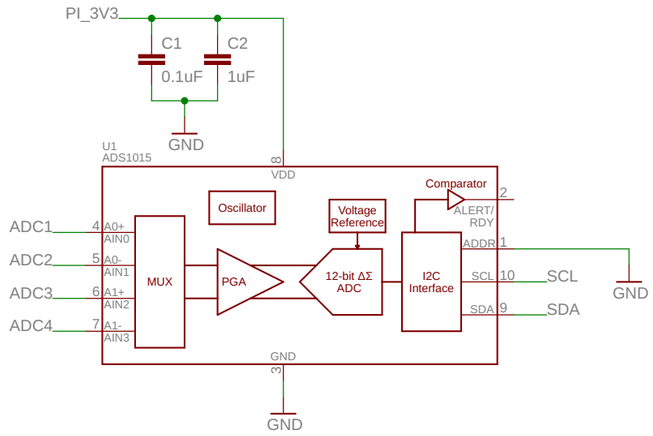
Automation HAT Mini (PIM487)

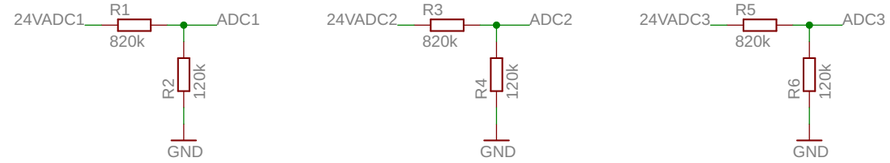
Pi GPIO connector



ADC



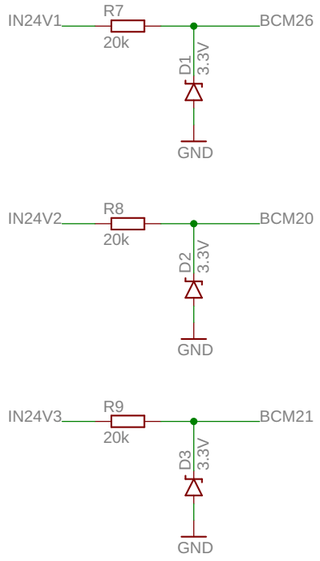
Analog Input Resistor Dividers



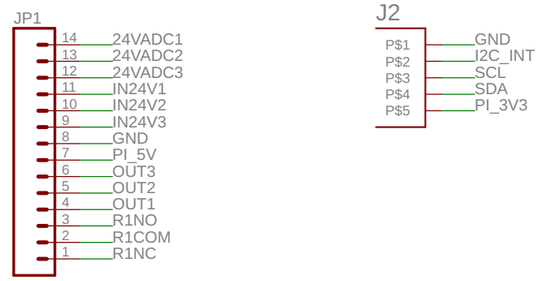
Scale the input on ADC channels to bring the maximum of 24V to below the ADCs non amplified range of 0V to 3.3V.
120k and 820k scale 25.85V to 3.3V.
Vadc = Vin * (120/(120+820))
Vin = Vadc / (120/(120+820))

24V tolerant inputs

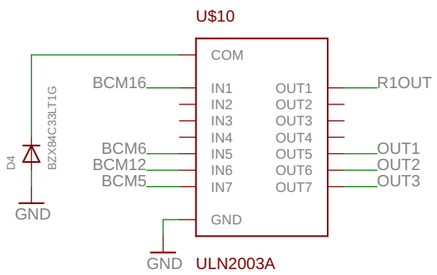
Max drop across resistor is 20.7V, 20k resistor inline limits current to around 1mA



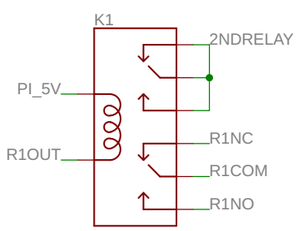
Screw terminals and I2C connector



Relay & powered outputs driver



Relay



2nd channel wired together for extra mechanical strength.
Assuming that people will grab the hat holding the relay...

0.96" 160x80 LCD

