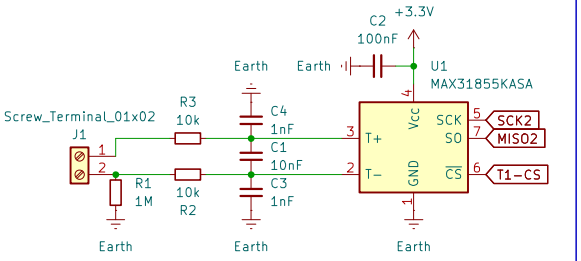
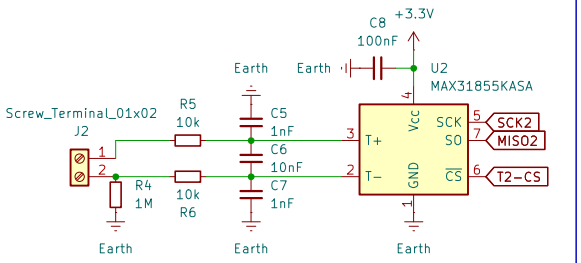
Thermocouple Amplifier 1

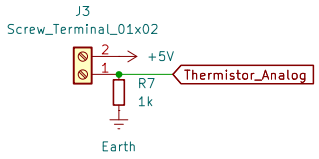


Thermocouple Amplifier 2



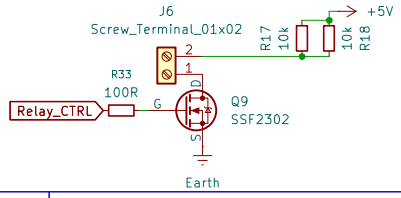
SSR Thermistor Input

LCSC Thermistor No. C394024

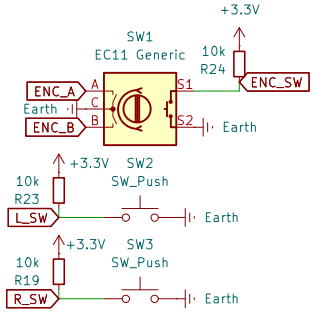


Relay Control Out

Selec Controls SSR RSS-TD1A140ZP

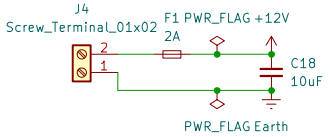


User Interface Inputs



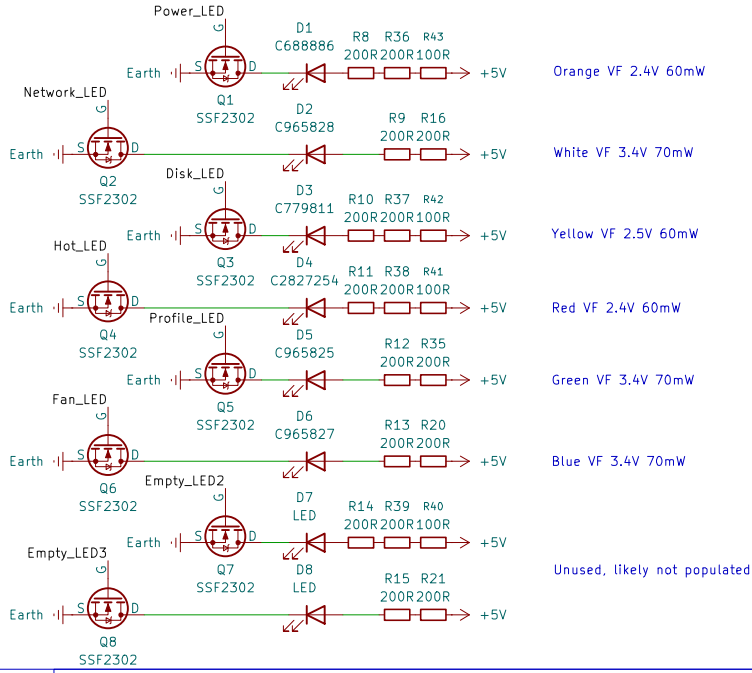
12V in (Flyback Converter)

Mean Well IRM-45-12ST

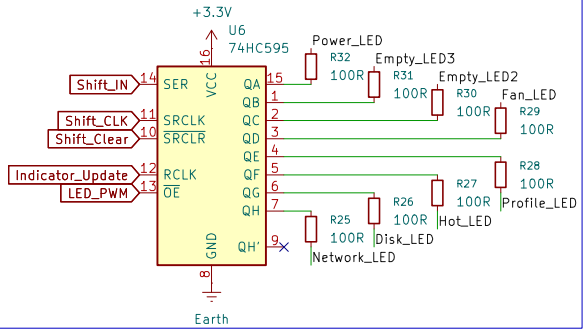


Indicator LEDs

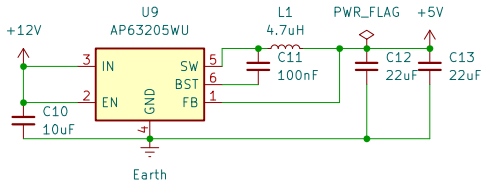
Part No. from LCSC



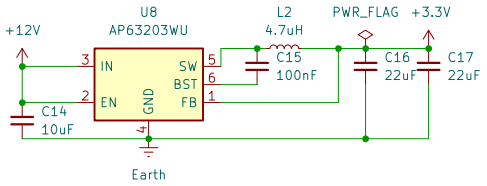
Shift Register for Addressing LEDs



12V to 5V Buck



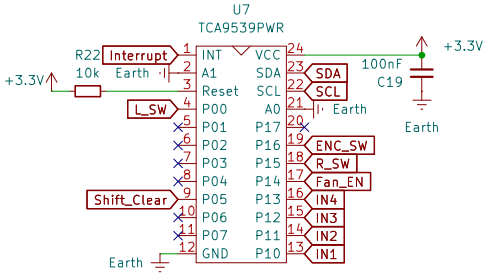
12V to 3.3V Buck



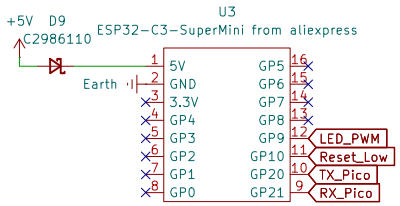
RP-Pico

File: Pico.kicad_sch

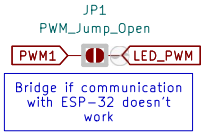
I2C I/O Expander



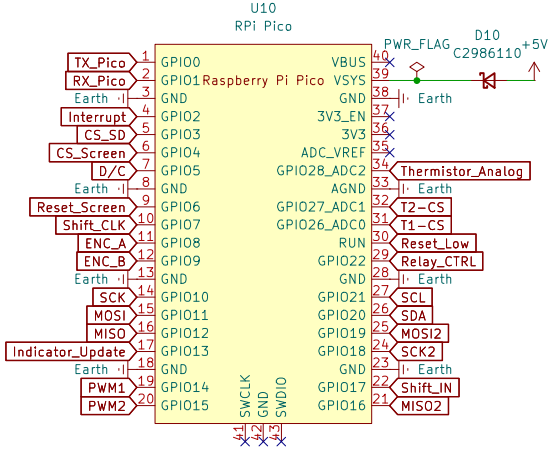
Web I/O Controller + LED PWM



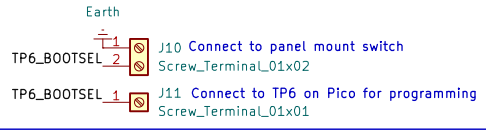
In Case UART? communication doesn't work



Main Controller

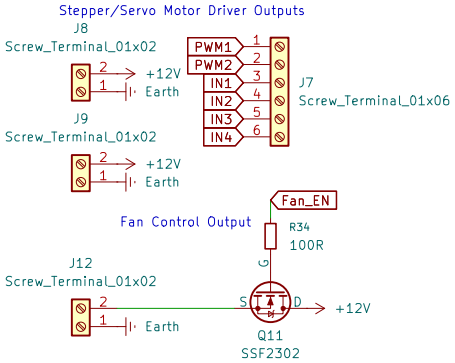


Reset the pico by pulling the Reset_Low signal to GND (~50k pull up normally)

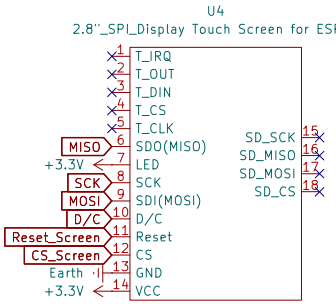


Vent Fan & Electronic Dampers

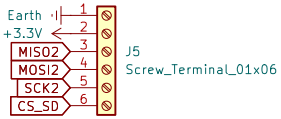
Not used unless I add a vent fan and electronic dampers



Device Screen



uSD Card Module

Connect rear jumper on module for 3.3V operation

MicroSD Socket Module (AliExpress)