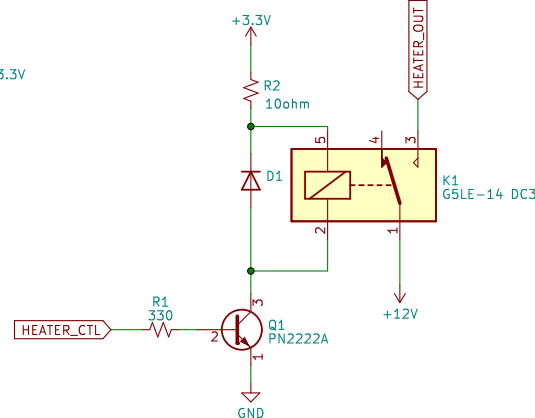
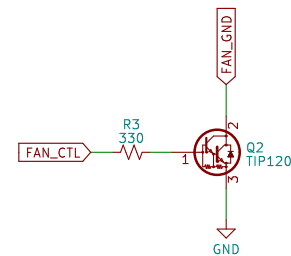


Heater Drive



Fan Drive



Theory Of Operation:

- Pico outputs to an ILI9341 based TFT over SPI. Expected LCD is a 240x320 (in rotation mode 3)
- User interface is controlled via a rotary encoder with pushbutton, wired to a JST PH 5 pin connector
- Pico has full control of stepper via SPI connection to the TMC5160 board.
- Pico can enable / disable the drive output via MOTOR_EN (Active Low)
- Pico can activate the Heater by pulling HEATER_CTL High, switching on the relay (3.3v coil).
- Pico can activate the fan by pulling FAN_CTL high, fan current conducted by the TIP120
- 3.3v power provided by a drop in switching powersupply module for simplicity.
- All power connectors are Phoenix LPT lever connectors. These support 12awg – 24awg up to a max of 24A. Can substitute in SPT or any other phoenix connector with the same 5mm pin spacing

Expansion header is mapped to GPIO0 – GPIO3 on the microcontroller.
This may be configured as:
– 4 independent GPIO pins for input/output
– 1 hardware i2c bus (i2c1), and 2 GPIO pins (GPIO and GPIO1)
– 4 pins with a PIO program assigned to them.
(Software SPI is a possibility)

KiwiBoard