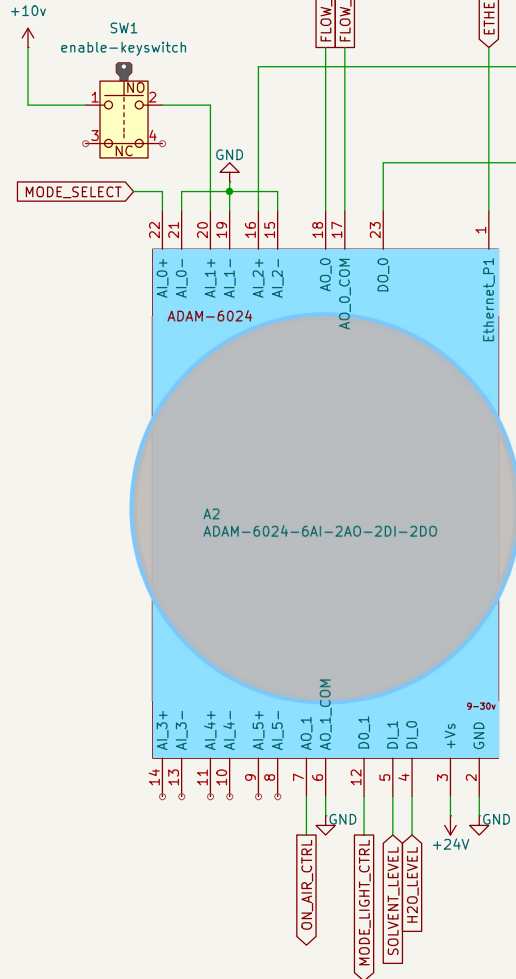


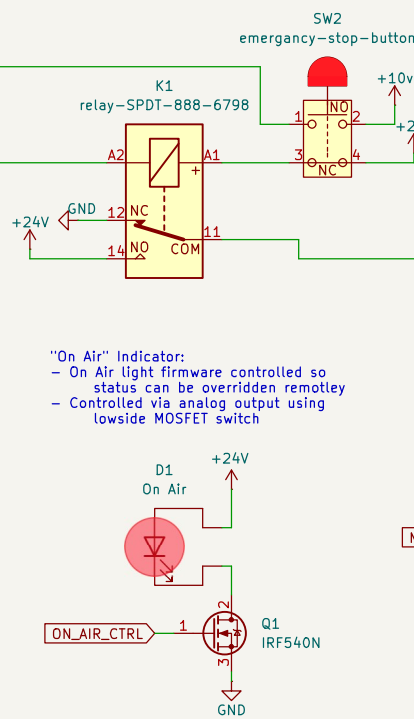
Enable Select

- Enable Keyswitch:
- Software Interlock only
 - Notifies firmware that equipment is unlocked
 - Analog input resolved to bool in firmware



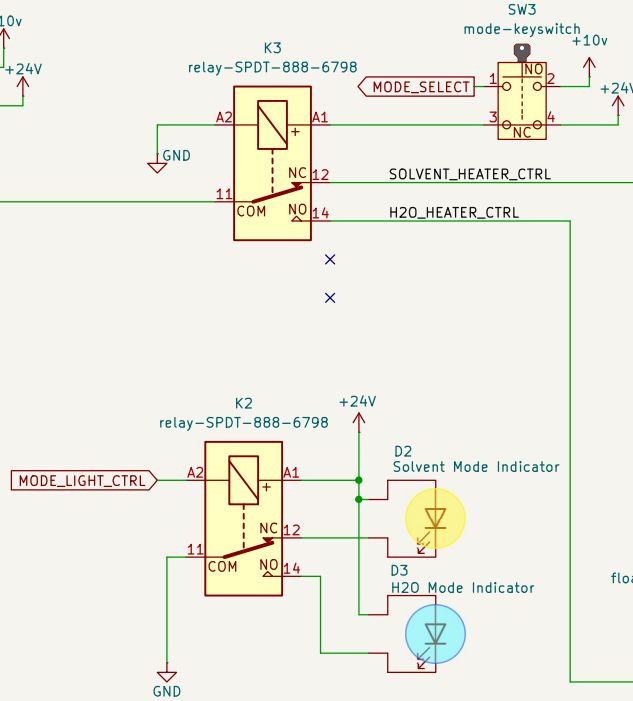
Emergency Stop Interlock

- Emergency Stop Button:
- Hardware & Software interlock
 - Physically breaks connection to heaters
 - Notifies firmware emergency stop pressed
 - Analog input resolved to Bool in firmware



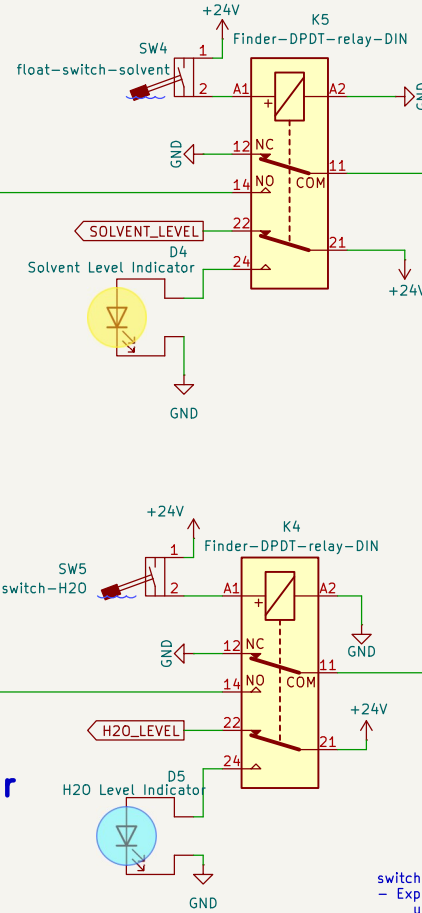
Mode Select

- Mode Keyswitch:
- Hardware & Software Interlock
 - Prevents both heater circuits being actuated at the same time
 - Notifies firmware as to the selected mode
 - Firmware state is reported via indication LEDs to confirm the correct mode is set in firmware

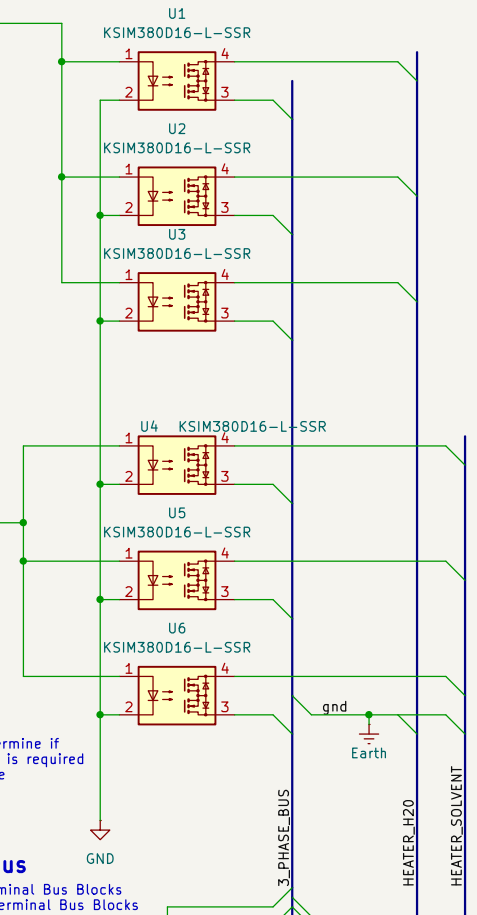


Fluid Level Interlock

- Float Switch Interlock:
- Hardware & Software interlock
 - Physically prevents heater actuation if float switches are off
 - Reports to firmware status of float switches
 - Hardware reporting of float switch status
 - Local technician able to detect fluid levels as long as system is powered – no reliance on firmware



Solid State Relays & 3 Phase Power Distro



FAIL SAFE:

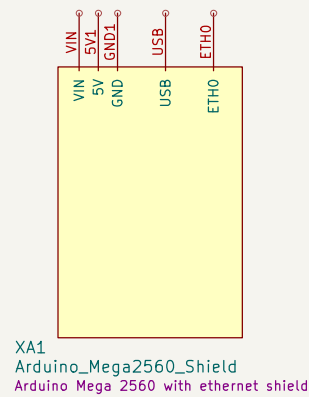
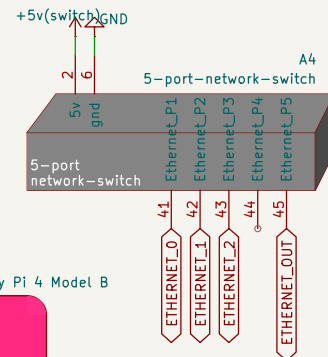
- Fail Safe position MUST be the SOLVENT heater

Solvent heater is always submerged in typical operation
H2O heater is exposed during solvent operation

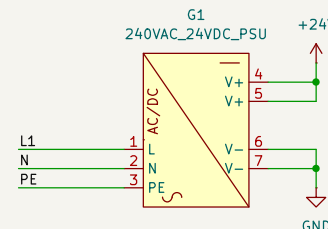
Fail Safe System:

- Before use, ensure that unpowered relays default to OFF and SOLVENT heater in each case.

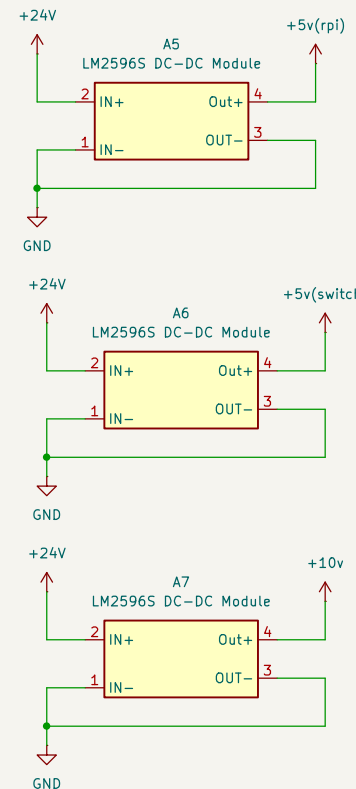
SBC & Network



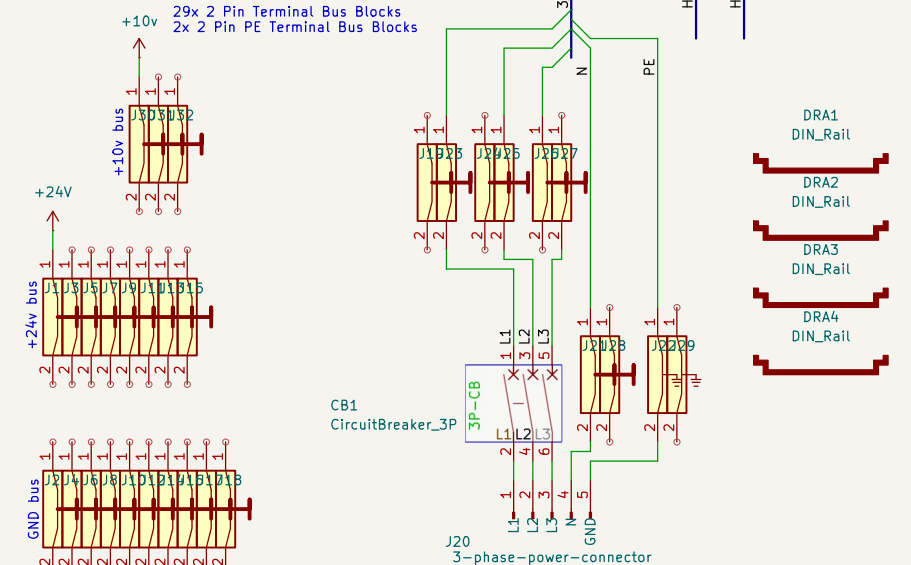
AC/DC Power Distro



DC Power Distro

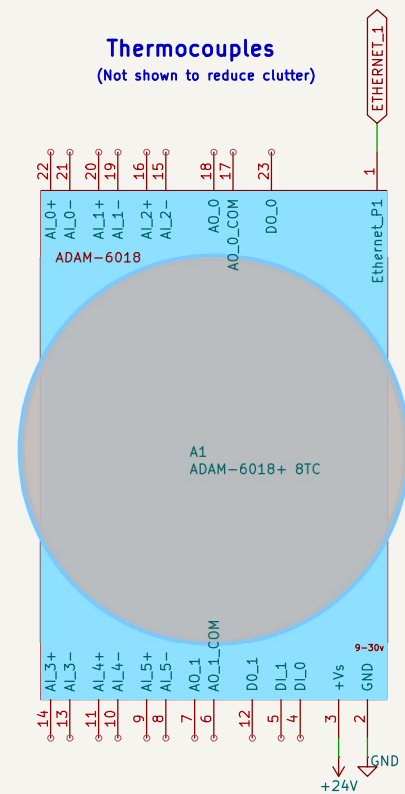


DC Power Bus



Thermocouples

(Not shown to reduce clutter)



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