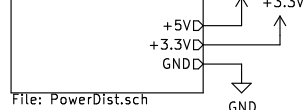
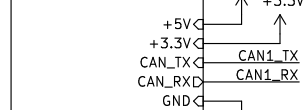


# Sheet: Power Distribution



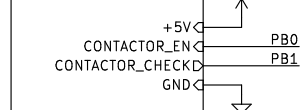
File: PowerDist.sch

# Sheet: CAN



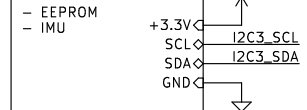
File: CAN.sch

# Sheet: Contactor Driver



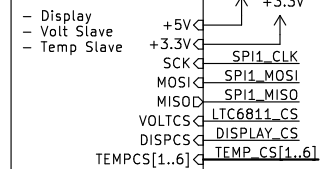
File: Contactor.sch

# Sheet: I2C



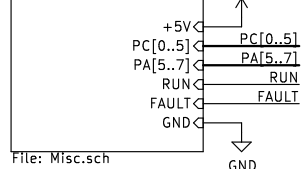
File: I2C.sch

# Sheet: SPI



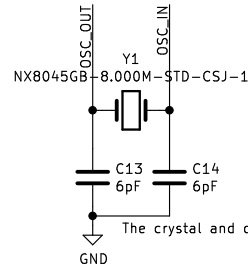
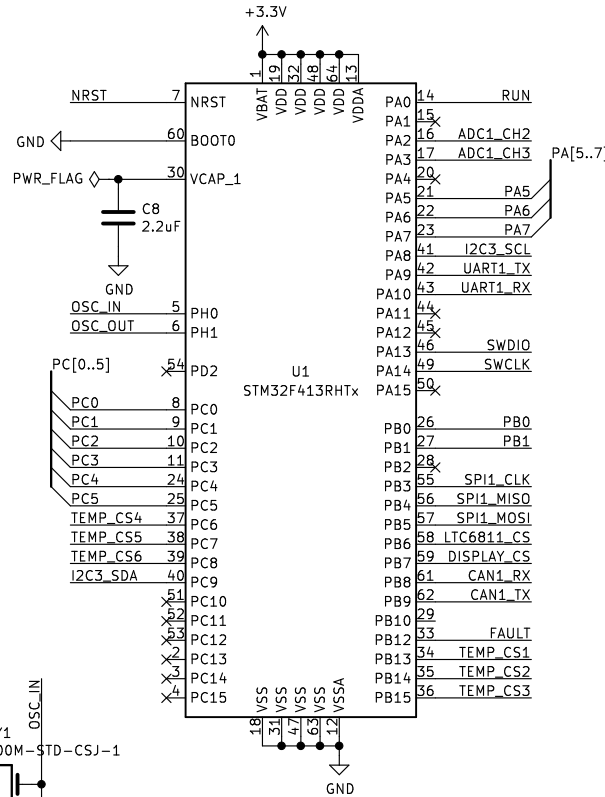
File: SPI.sch

# Sheet: Misc

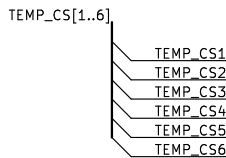


File: Misc.sch

Isolated +5V and +3.3V.  
Use GND as common gnd for electronic components.  
Connect GNDPWR when using +12V.

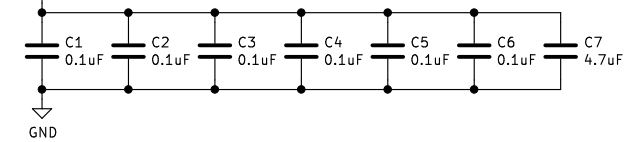


The crystal and caps have to be as close to the uC as possible.

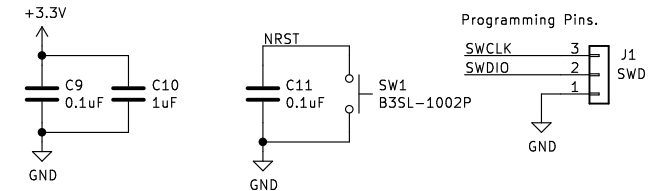


# Bypass Capacitors

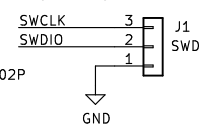
+3.3V Place these capacitors as close to mcu as possible for correct operation.  
VDD/VSS



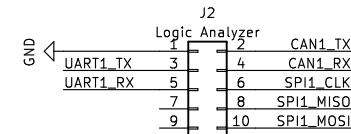
VDDA/VSSA (VREF+/VREF-)



Programming Pins.

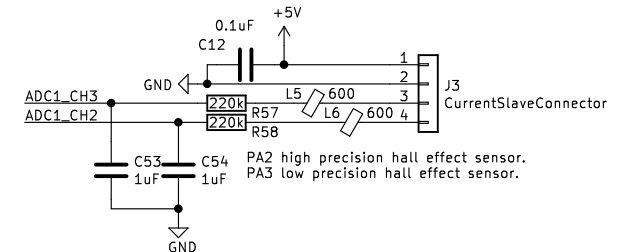


# Debug



- MH1 MountingHole
- MH2 MountingHole
- MH3 MountingHole
- MH4 MountingHole

# Current Board



PA2 high precision hall effect sensor.  
PA3 low precision hall effect sensor.

Sheet: /  
File: BPSMaster.sch

Title:

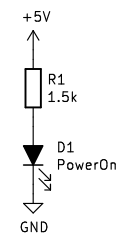
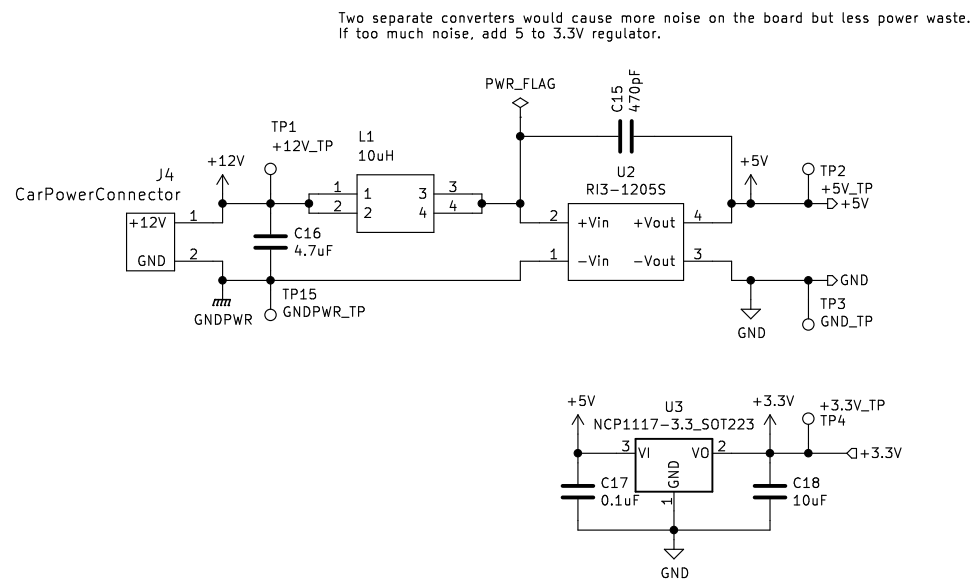
Size: A4

KiCad E.D.A. kicad (5.0.0)

Date:

Rev:

Id: 1/7



Sheet: /Power Distribution/  
File: PowerDist.sch

**Title:**

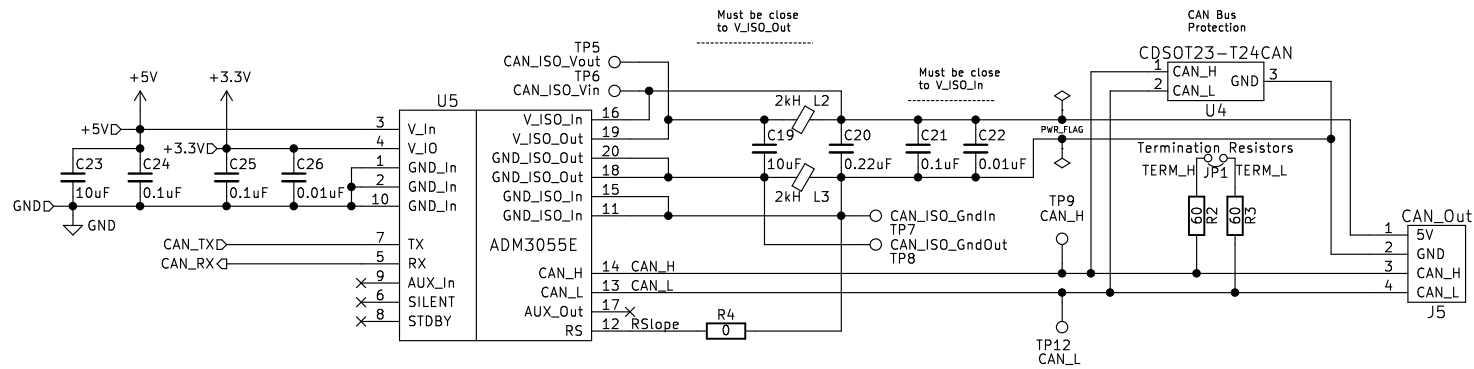
Size: A4

Date:

KiCad E.D.A. kicad (5.0.0)

**Rev:**

Id: 2/7



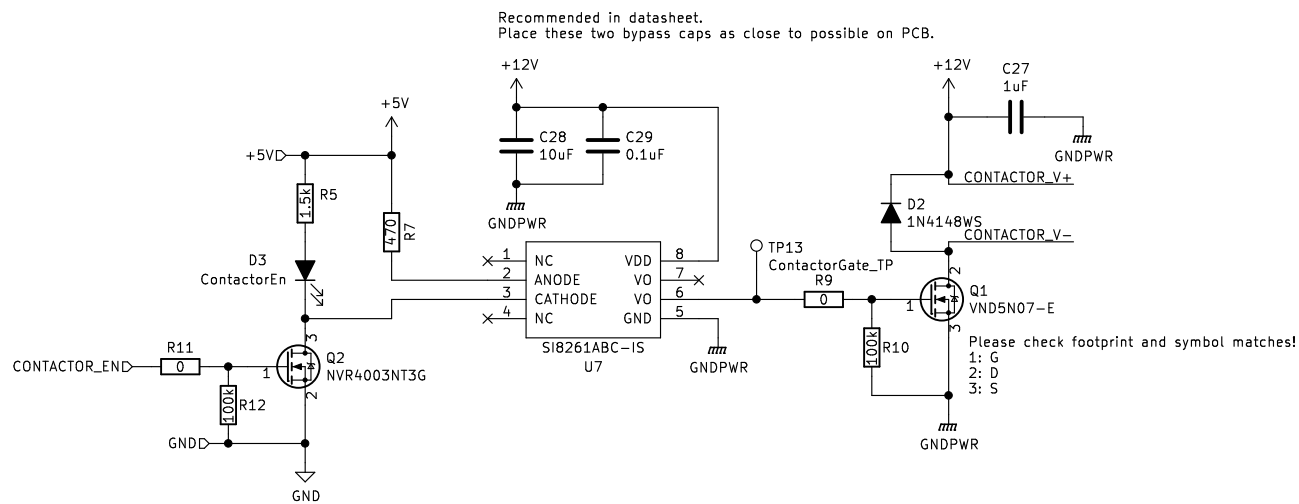
Sheet: /CAN/  
File: CAN.sch

**Title:**

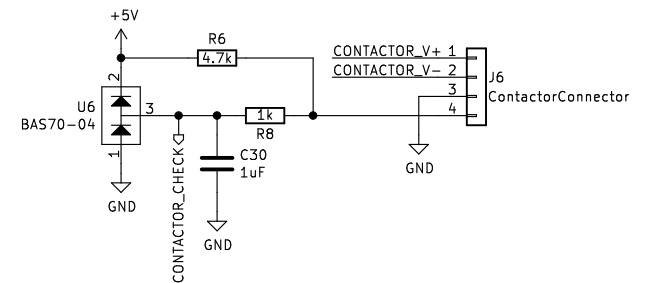
Size: A4  
KiCad E.D.A. kicad (5.0.0)

Date:

**Rev:**  
Id: 3/7



Since +12V is used to drive the contactor, use GNDPWR to keep 12V line isolated from the main electronics of the BPS.



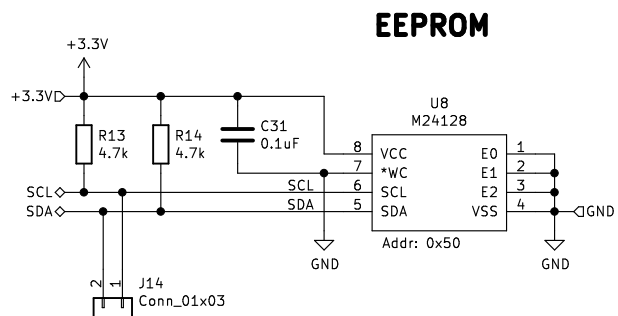
Sheet: /Contactor Driver/  
File: Contactor.sch

**Title:**

Size: A4  
KiCad E.D.A. kicad (5.0.0)

Date:

**Rev:**  
Id: 4/7



Sheet: /I2C/  
File: I2C.sch

**Title:**

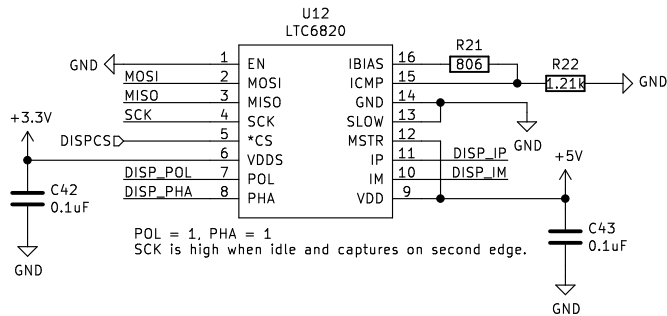
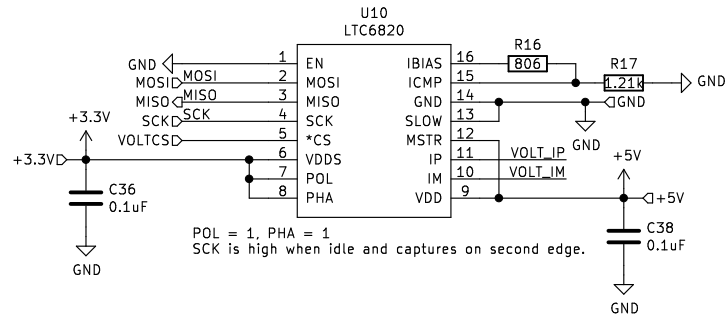
Size: A4  
KiCad E.D.A. kicad (5.0.0)

Date:

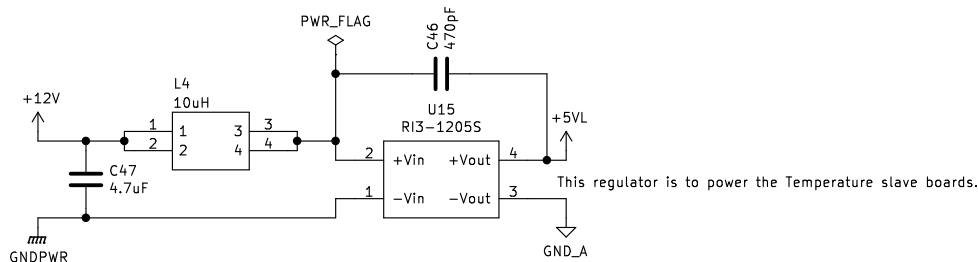
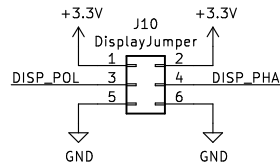
**Rev:**  
Id: 5/7

## Isolated SPI

If the wires lengths are short and you want to save more power, change IBIAS resistor to be 2.8k. Look in LTC6820 datasheet for more information on calculating these BIAS resistors.

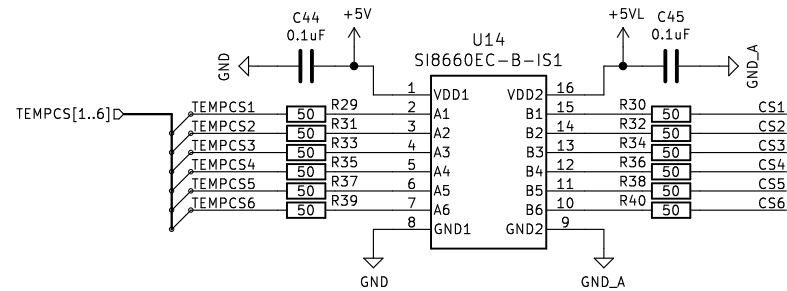
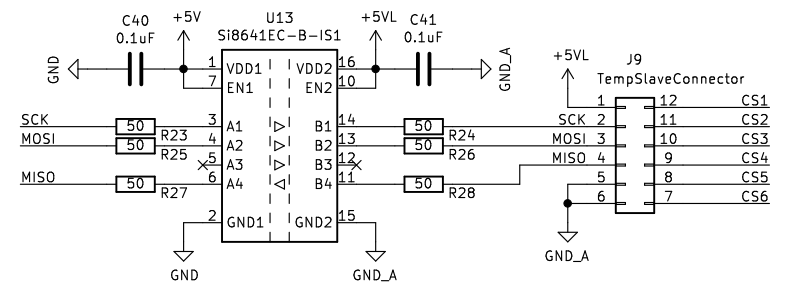
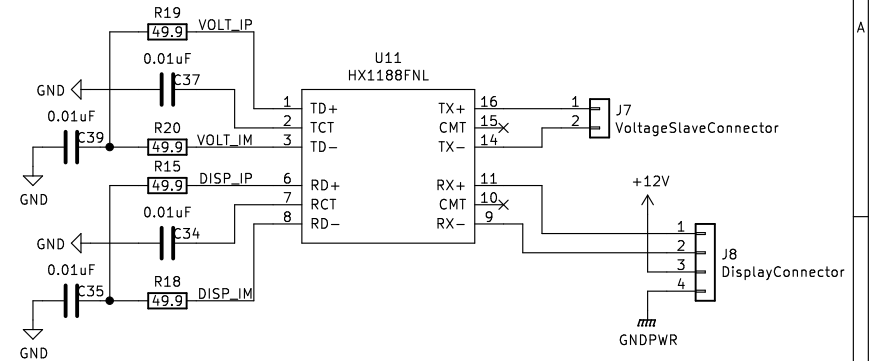


This jumper connector is for changing the LTC6820's SPI configuration to match to whatever the didplay you're using specifies.



## Connectors

Each connector is isolated from the maaster board components.



Sheet: /SPI/  
File: SPI.sch

Title:

Size: A4  
KiCad E.D.A. kicad (5.0.0)

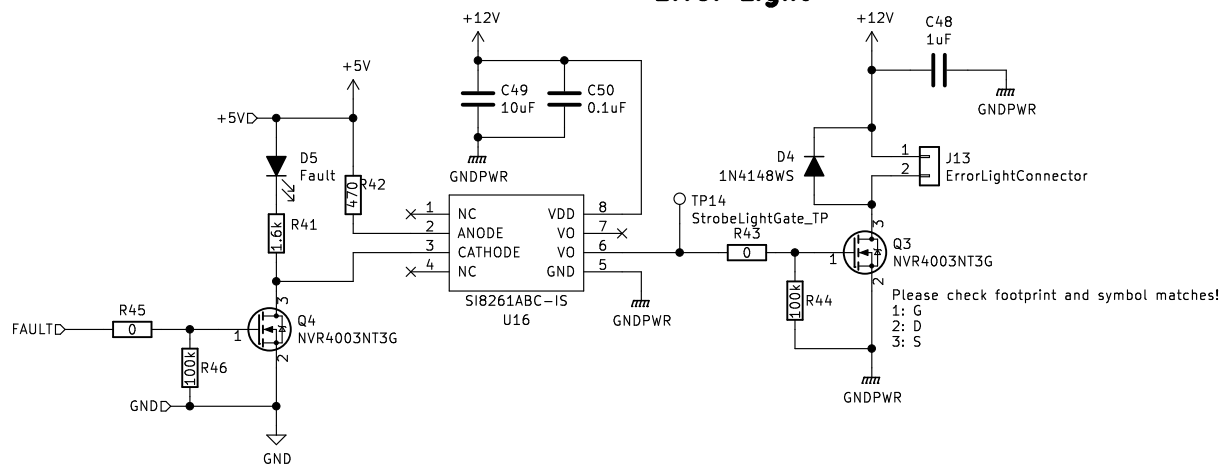
Date:

Rev:

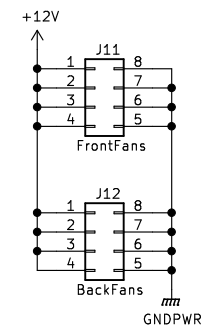
Id: 6/7

This page holds other miscellaneous connections that are required:  
 - Strobe/Error light Indicator  
 - Fan connectors

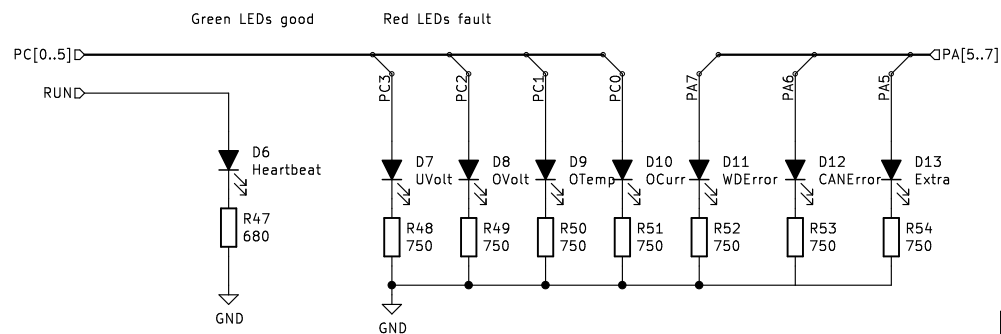
## Error Light



## Fans



## Status LEDs



Sheet: /Misc/  
 File: Misc.sch

### Title:

Size: A4  
 KiCad E.D.A. kicad (5.0.0)

Date:

Rev:

Id: 7/7