R1 (PF1262): A high power (20W) resistor. The value would be set at 0.5 Ohms. This is because the max current that should be going through it is 5A (2.5A repetetive [80% on per 10ms] through each channel). The ideal value would be 0.72 Ohms. Since that is not a standard value, 0.5 Ohms is probably best since it captures the all current values.

On the current sensor output, may need a large resistor to limit current into the STMF0 but the STMF0 has high impedance input, so it may be fine as is.

Changed the diodes from being in series with the L298 to being in parallel (and with a 10k resistor to limit current). These are used to indicate the state of the motor inputs.

Fixed the flyback diodes (and changed their direction to try and make it more readable).

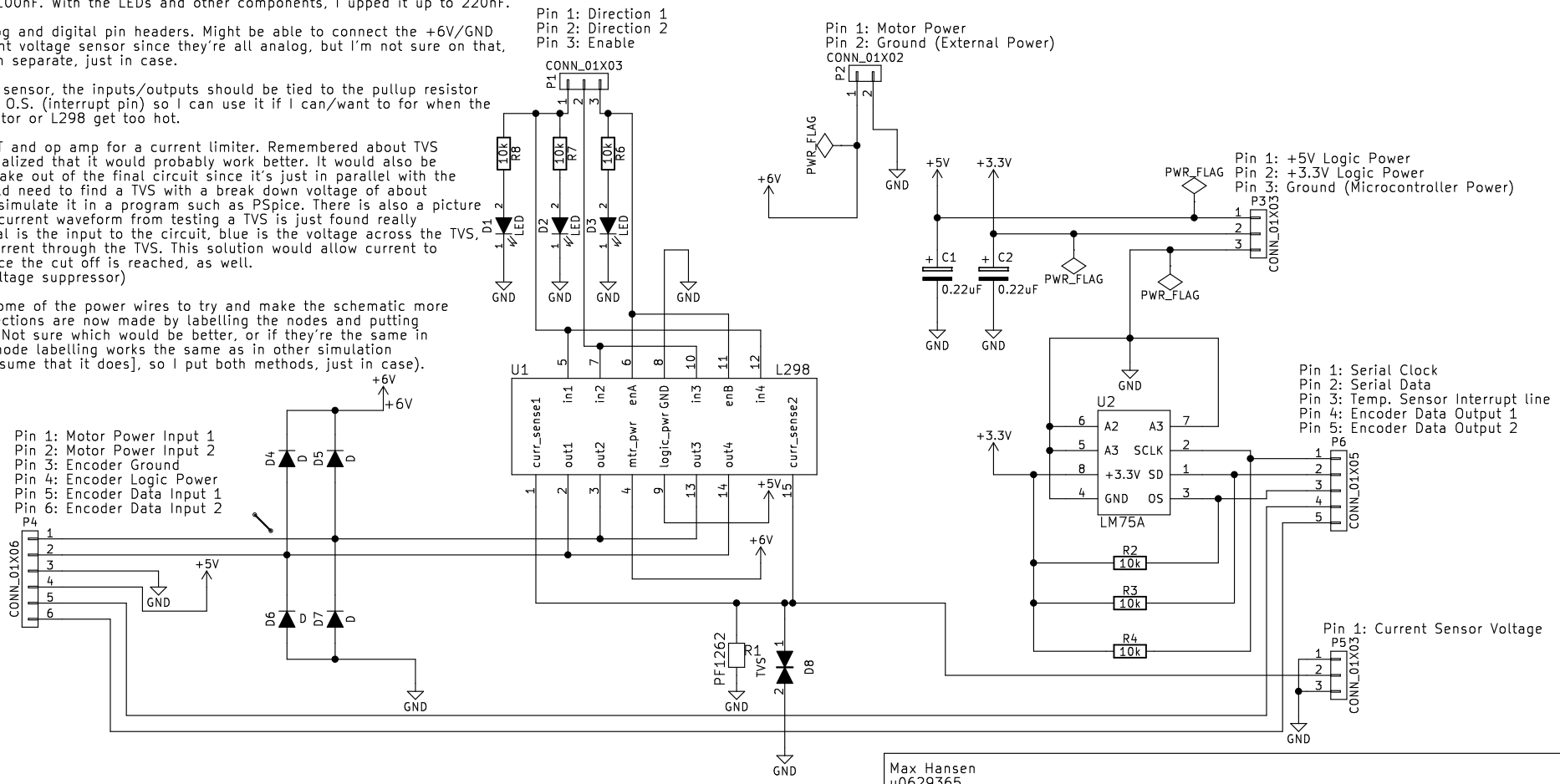
On the capacitors, they are at 200nF. This is because the L298 has a suggested capacitor value of 100nF. With the LEDs and other components, I upped it up to 220nF.

Separated the analog and digital pin headers. Might be able to connect the +6V/GND header to the current voltage sensor since they're all analog, but I'm not sure on that, so I'm keeping them separate, just in case.

On the temperature sensor, the inputs/outputs should be tied to the pullup resistor correctly. Using the O.S. (interrupt pin) so I can use it if I can/want to for when the current sensor resistor or L298 get too hot.

Originally had a BJT and op amp for a current limiter. Remembered about TVS diodes today and realized that it would probably work better. It would also be easier to test and take out of the final circuit since it's just in parallel with the sense resistor. Would need to find a TVS with a break down voltage of about 2.5 or 3 volts and simulate it in a program such as PSpice. There is also a picture of the voltage and current waveform from testing a TVS is just found really quick. The red signal is the input to the circuit, blue is the voltage across the TVS, and green is the current through the TVS. This solution would allow current to continue to flow once the cut off is reached, as well.
(TVS = transient voltage suppressor)

I also cleared up some of the power wires to try and make the schematic more readable. The connections are now made by labelling the nodes and putting the power symbol. (Not sure which would be better, or if they're the same in KiCad [not sure if node labelling works the same as in other simulation programs. Would assume that it does], so I put both methods, just in case).



PIN HEADERS:
P1: Digital control for motor.
P2: Motor power input.
P3: Power from STMF0 (5V, 3.3V, and ground)
P4: Connections from the motor.
P5: Current sensor value.
P6: Digital sensor data inputs/outputs.

Max Hansen
u0629365
Lab Section 005

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Title: H Bridge

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