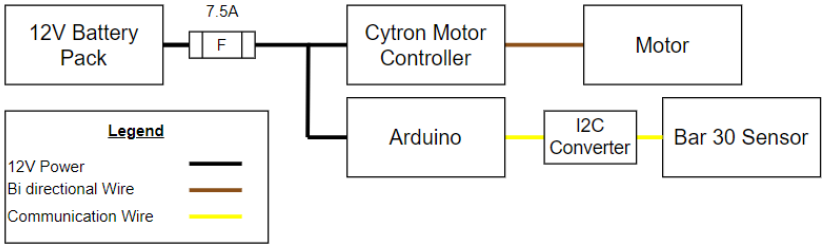
Shark Tech Float Document

Shark-fin first starts its mission at the surface by initially collecting the surface pressure and depth via a BAR30 pressure sensor connected to UNO R4 WIFI Arduino. once this data has been transferred to the surface via Bluetooth to a sister Arduino. The operator then presses a button which sends command to the float to begin its descent using a motor blade to move downward once commenced a built in timer will make the motor spin for 45 seconds which will get it to the bottom of the pool



Device	Total number on Float	Current Draw per Device (Amps)	Total Current (Amps)
Motor	1	3.2	3.2
Arduino	1	0.4	0.4
I2C converter	1	0.15	0.15
Motor controller	1	0.10	0.10

Total Calculated Current (Amps) **3.15**
Overcurrent protection Factor **150%**
Fuse Calculation 5.775
Rounded Fuse Size (Amps) 7.5

Once the 45 seconds has passed the motor will switch from forward to reverse and will propel the float upwards towards the surface. once the surface has been reached the Shark-fin will wait and transmit the collected data from the bar30 pressure sensor to the surface Arduino, then it will repeat this cycle once more before waiting for the ROV to tow it back to the deployment station.

when choosing a storage compartment we at shark tech decided to outsource the construction of the airtight compartment to blue robotics who provided us a 9,8inch acrylic tube. we chose to outsource because of our lack of expertise in this area and the assurances that outsourcing would provide for our company. the enclosure includes a pressure relief valve in case of high pressure build up, the Shark-fin also features a 7.5amp fuse to ensure that our vertical profiler can operate within safe parameters

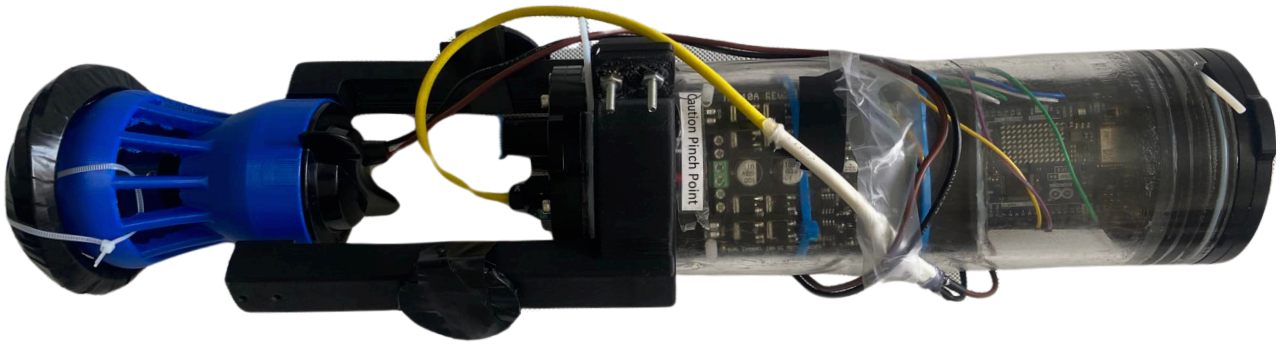


Figure 1: SharkFin, Image By Finlay Jones