Power

Project Lead: Daniel Goto

Overview

The power system within the submarine is divided into two sections: thruster power and bulkhead power. The power system must safely provide control and distribution of battery power to all systems in the submarine that require it.

Timeline

1. ~~Power Part Selection (September 26th)~~
2. PCB Schematic Completed (October 10th)
3. Schematic Simulation (October 13th)
4. PCB Part Selection and Footprint Association (October 15th)
5. PCB Schematic and Part Review (October 17th)
6. Board Routing Completed (November 10th)
7. PCB Design Review (November 17th)
8. Board Ordered (November 21st)
9. PCB Populated (January 8th)

Design

The two power systems should be controlled through two relays that are controlled by reed switches. The reed switches bust be able to be activated even when the submarine systems are unpowered (this allows for a self-start). Both power systems must be properly fused at the appropriate amperage ratings. Additionally,

Resources

Part	Description
Main Battery	16000mAh LiPo 4S - Main submarine power supply.
UPS Battery	4200mAh LiFePo4 3S battery for the UPS.
BQ76200	LiPo Battery protection chip.
BQ76920	LiPo active cell balancing chip.

9/26/2016 Deadline

Part	Part Number
Main Relay	LEV200A4NAF
Bulkhead Relay	ALFG2PF18