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| Test Writer | | Cassandra Noice | | | | | |
| Test Case Name | | Power Systems Acceptance Testing | | | | Test ID# | PS-AT-1 |
| Description | | Verify all submodules of the CU Robosub AUV can draw power from the power conversion board and merge circuit, given two 14.8V, 100A Lithium Ion Polymer batteries | | | | Type | Blackbox |
| Test Information | | | | | | | |
| Name of Tester | |  | | | | Date |  |
| Hardware Version | | PS 1.0 | | | | Time |  |
| Setup | | Merge Circuit, Power Conversion Board, and Controls board are slotted into the backplane. Attach two 14.8V, 100A, LIPo batteries to the input terminals of the merge circuit. Have a function generator set to a 3kHz square wave with a 50% duty cycle | | | | | |
| Step | Action | Expected Results | Pass | Fail | N/A | Comments | |
| 1 | Verify operational status indicator LED for the Microcontroller on the merge circuit is turned on. | LED is turned on |  |  |  |  | |
| 2 | Verify operational status indicator LED for the Microcontroller on the Power conversion board is turned on. | LED is turned on |  |  |  |  | |
| 3 | Verify operational status indicator LED for the Microcontroller on the Controls board is turned on. | LED is turned on |  |  |  |  | |
| 4 | Verify voltage outputs on the backplane are within nominal values. | 5V Rail Measures 5V, +/- 0.1V  12V Rail Measures 12V, +/- 0.1v  19V Rail Measures 19V, +/- 0.1v  48V Rail Measures 48V, +/- 0.1v |  |  |  |  | |
| Overall Results | | |  |  |  |  | |