**LFEV-Y5**

v0.1

**Lafayette College: Electrical and Computer Engineering**

Acceptance Test Plan: v0.1

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This document outlines all of the tests required to deliver LFEV-Y5. The plan is presented as an overview with the ATP number next to the test. This refers to the document that describes the test. The requirements are from the SoW for 2017

08

**Fall**

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# ATPs

None of these tests can be viewed as completed until appropriate documentation has been uploaded to the webpage.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Item description | Demonstrated Requirements | Successful Test Criteria | Verification Method |
| ATP-01 | Accumulator Verification | R001a | Pack can deliver 200A into a simulated load without seeing unexpected voltage drops | Test |
| ATP-02 | Accumulator integration | R001a  R001c  R001d  R001e | Packs power motor and all telemetry is recorded by VSCADA | Test |
| ATP-03 | Accumulator charging | R001b  R001g | Packs charge by the charging port and open the safety loop | Test |
| ATP-04 | Accumulator low current output | R001f | Packs discharge through 10A load at pack voltage | Test |
| ATP-05 | Remote telemetry | R002d | DAQ of cooling, TSI, TSV and GLV via cell phone app | Test |
| ATP-06 | CAN Bus link |  | DAQ by VSCADA of TSI, GLV, TSV, Cooling | Test |
| ATP-07 | Safety loop |  | Fault by:  Crashing  BRB  IMD  Cooling  VSCADA limit  Pack fault  Throttle fault  Brake fault |  |
| ATP-08 | Cruise Control |  |  |  |
| ATP-09 | 24h endurance test |  |  |  |
| ATP-10 | Unexpected shutdown |  |  |  |
| ATP-11 | VSCADA interchangeability |  | Add and remove certain sensors based on configuration file |  |
| ATP-12 | Cabling labels |  | Verify all cables are labeled clearly |  |
| ATP-13 |  |  |  |  |

# Deliverables

To count as delivered it must be uploaded to the website and emailed to all required professors. After this it must be accepted by all of them.

|  |  |  |
| --- | --- | --- |
| Deliverable | Item description | Successful Test Criteria |
| D000 | PDR presentation and report | Presented PDR.  Uploaded PDR to webpage  Uploaded PDR minutes to webpage |
| D001 | CDR Report, Presentation, Demos | Present CDR  Demo some parts of the HW  Demo communication link  Upload CDR minutes to webpage  Demo UI |
| D002 | User Manuals | Compiled extensive list of module operation |
| D003 | Final Report and Maintenance Manual | DVD delivered and accepted by all course instructors and ECE head |
| D004 | ATP | Document approved |
| D005 | ATR |  |

# Experiments

To end an experiment the last step should be submission of the data to the webpage.

|  |  |  |
| --- | --- | --- |
| Item | Item description | Demonstrated Requirements |
| EXP-01 | Accumulator Simulator | R001a |

# Compliance Matrix

|  |  |
| --- | --- |
| Requirement | Test(s) to demonstrate acceptance (Only one has to pass) |
| ATP-01 | Accumulator Verification |