Remote Battery Testing System

Project

Large storage/backup batteries are used everywhere around us, from fire alarms to our automobiles. However, we often forget they are even there. This leads to failures going unnoticed until the time of need. Then, it’s too late. The Remote Battery Testing System addresses this with the following features:

- Tester installed at location of batteries
- Tests automatically on a schedule
- Results of tests are sent back over network
- Results indicate health of batteries (not just charge)

Methods

Batteries are rated based on a 20 hour discharge time, so the Remote Battery Testing System discharges the battery at a regulated 20 hour rate of current to achieve the greatest accuracy. The full discharge process is timed to calculate the available capacity.

The Remote Battery Testing System also performs a fast “sanity check” using a large test load for a few seconds to quickly test the availability of the battery without over stressing it too frequently with the full discharge test.

In between tests, the batteries are maintained at their optimum “float” voltage.

System

Conclusion

Whether there is a power failure, and you want emergency lighting to help you get out of the building safely, or you just want your boat to start when you get to Bear Lake, you are counting on large storage/backup batteries to make it happen.

Using the Remote Battery Testing System, you can receive test results remotely and automatically, to indicate that everything is ready to go, or to alert you that there is a problem. This allows you to be confident that your batteries won’t let you down when you need them most.