

eCombiner

Test Next Gen Batteries Without Investing in All New Equipment

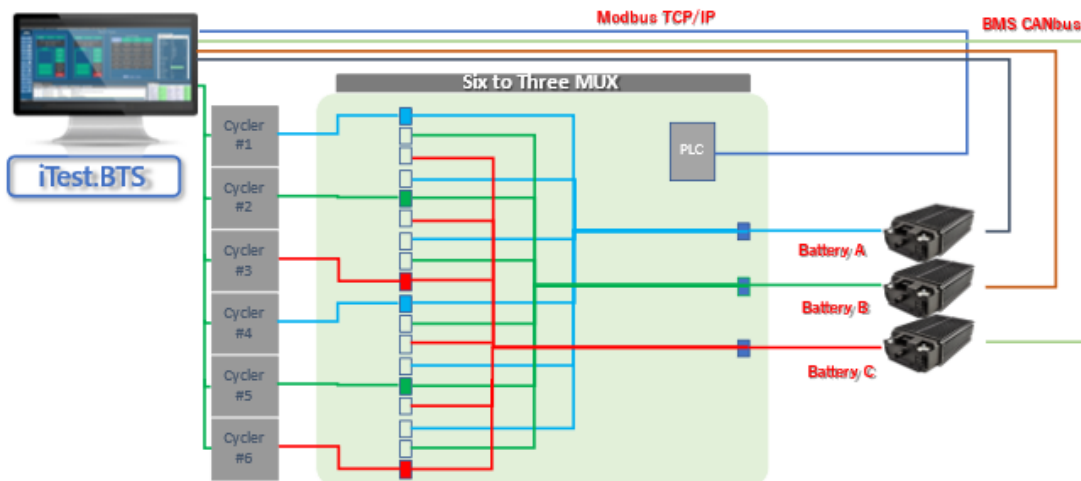
Multiplexer

Increased demand for electric vehicles and large-scale energy storage systems are driving an ever-increasing demand to maximize battery output while reducing charging time. These competing goals are forcing battery test labs to increase capacity while keeping costs in-check. As newer batteries with more capacity and higher charging requirements are introduced, testing facilities are faced with making significant investments in new equipment to meet the power requirements of next generation batteries.

A&D Technology's eCombiner allows testing facilities to support testing these new batteries without investing in new equipment. With an A&D eCombiner, cyclers can be externally connected in parallel to supply current levels greater than what is available from a single cycler. An eCombiner is a programmable six input to three output multiplexer, which allows any combination of six cyclers to be connected to any one of three batteries providing up to 900kW of power to a single battery. A built-in controller automatically performs circuit selection and arbitration. The controller uses Modbus TCP/IP interface for communications with iTest.BTS or other test automation systems.

Benefits:

- Programmable six input to three output multiplexer
- Test higher capacity batteries with higher charging requirements without investing in new equipment
- Provides up to 900kW of power to a single battery
- Built-in Controller automatically performs circuit selection and arbitration
- Uses Modbus TCP/IP interface for communications with iTest.BTS or other test automation systems
- Dynamic allocation of cycler outputs maximizes cycler use
- Each cycler is able to run tests independently until one of the running battery tests requires high current



eCombiner with Battery A connected to Cyclers 1 & 4, Battery B connected to Cyclers 2 & 5, Battery C connected to Cyclers 3 & 6

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High Current Pulse Testing

A key feature of the eCombiner is its ability to dynamically combine cycler outputs to a single battery to support tests requiring high current pulses. This feature allows cyclers to be operated independently until one of the batteries requires extra current. At that point the iTest.BTS software can automatically pause the test running on any cycler, then command the eCombiner to dynamically switch the cycler's output to the battery requiring additional current. Once the high current test step has been completed iTest.BTS disconnects the cycler from the battery and reconnects it to the battery originally being tested by that cycler. This dynamic allocation of cycler outputs maximizes cycler use by allowing each cycler to run tests independently until one of the running battery tests requires high current.



Specifications

- Input power requirements: 100 - 240VAC, 15A
- Cycler Circuits: 350A, 1000VDC, 100kW per circuit
- Battery Circuit: 3000A, 1000VDC, 900kW per circuit
- Dimensions: 48" W x 62"H x 15"D (121.92cm x 157.48cm x 40.64cm)
- Weight: 850 lbs. / 386 kg.

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