

# FTV

## EV/HEV Battery Module Test System

# BITRODE

PARTNER IN POWER

### Applications

- Drive simulations with standard Electric Vehicle tests: FUDS, SFUDS, GSFUDS, DST and ECE-15L
- Battery Module Testing
- Start/Stop Testing
- Traction Battery Testing
- Supercapacitor / Ultracapacitor Testing
- Drive Cycle Testing

### Features & Benefits

Bitrode's model FTV is a life cycle test system designed to perform standard electric vehicle, standby battery and supercapacitor tests. Designed for fast switching capability and high speed data acquisitions, the FTV is the ideal solution for demanding electric vehicle drive simulations.

Additional features include:

- Constant current, power or voltage control
- Discharge power recycled to AC line for cooler, more energy-efficient operation
- Bipolar capacity for discharging to below zero volts
- Drive Cycle Conversion utility automates test program development from acquired battery usage data
- Assignable data channels
- Drive Cycle Conversion utility automates test program development from acquired battery usage data
- Parallel circuit operation for greater flexibility in test specification
- Program execution is independent from the PC with VisualCN software
- Remote Binary Protocol via Ethernet connection available for 3rd party software control



### General Specifications

<b>Voltage:</b>	0-100V*
<b>Current:</b>	Up to 1000A (2000A in parallel) up to 4000A with external PCC
<b>Power:</b>	up to 72kW (200kW in parallel) up to 288kW with external PCC
<b>Accuracy:</b>	±0.1% of FS**
<b>Circuits:</b>	up to 4
<b>Data Sampling Rate:</b>	up to 10ms

\* Higher voltages available upon request. Contact your representative.

\*\*Accuracy values are conservative assuming operation will be through the standard temperature range of 0-40° C and RH from 10-90% (non-condensing). Units calibrated and maintained in a temperature and humidity controlled environment can expect an accuracy of 0.02-0.05%FS.



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### System Options

- Up to three current ranges per circuit
- Temperature, pressure, flow rate, and cell voltage monitoring
- Digital inputs and Digital outputs with function assigned per individual program
- Expression-based program limit conditions
  - Internal resistance calculation
  - Integration with Battery Management Systems: CAN
  - Ramp charge/discharge
  - Constant resistance discharge
- Remote Input Output (RIO) box reduces excessive cable lengths when connecting to remote test stations
- Parallel controller (PCC) can control up to four circuits from separate units for higher power or higher current programs
- Module-front LCD display
- Custom-designed test leads
- Drive Cycle Conversion utility automates test program development from acquired battery usage data



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