

FTF-HV

High Voltage Pack Test System

BITRODE

Member of the Schuler Group



Applications

- Battery Testing, including all advanced chemistries
- Inverter, UPS, Generator, and Flywheel Testing
- Fuel Cell Discharge Testing
- Drive Cycle Simulation Testing: FUDS, SFUDS, GSFUDS, DST and ECE-15L
- Cycle Testing of EV / HEV / PHEV Battery Packs
- Bi-directional DC Power Supply
- Microgrid Battery Conditioning: Increase Lifespan, Efficiency and Performance
- Battery Banks
- Vehicle Drivetrain Testing

Key Features

- IGBT Design for efficiency and high performance operation
- Design for 100% duty cycle at max power
- Over-current, under-current, over-voltage and under-voltage protection standard on all models
- No performance loss under voltage control
- Quick disconnects on output leads
- Test control and data management with Bitrode's VisualCN™ Lab Client Software
- Constant Current (CC), Constant Voltage (CV), Constant Power (CP), and Constant Resistance (CR) control
- Program execution is independent from the PC with VisualCN™ software
- CE compliant
- Discharge power recycled to AC line for cooler, energy-efficient operation
- Built-in isolation transformer, AC input filter, and DC output filter
- 3rd party software control through Remote Binary Protocol (RBP) via Ethernet connection (RBP sold separately)
- Safety features include circuit shutdown when the cabinet door is open
- Dual output in one cabinet with independent control circuit
- Battery Simulation (BattSim) mode for electric motor/generator testing with user-specified controls: voltage, internal resistance, maximum power. Optional protection module available offers an added layer of protection to the FTF in case the inverter, motor controller, or other DUT connected to the FTF fails, loses control, or discharges an amount of energy outside the capabilities of the FTF. The energy is absorbed until the FTF can shut down in a safe controlled manner.



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General Specifications

Number of Circuits	2 (Max 4 Circuits)	
Voltage Configurations	100-1500VDC	
Max Current (configurable)	600/1200A	1200/2400A
Max Power (per cabinet)	450KW	900KW
Accuracy	Voltage:	0.1% of FS
	Current:	0.05% of FS
Peak Efficiency	92%	
THD	5%	
Power Factor	0.99	
Current Rise Time (10-90%)	30ms	
Pulse width	100ms	
Switching Time (Chg/Dchg, Dchg/Chg)	Zero	
Overshoot)	Zero	
Data Acquisition Rate	10ms (1ms optional)	
Interface	Ethernet	
Noise Output Level (at 10ft distance)	90db	
Operation Temperature	0° to 40°C	
Input Voltages	380/400/415/480V ±10% (50/60Hz)	
Dimensions (approx.)	175"W x 50"D x 78"H	350"W x 50"D x 78"H

* Above specifications are subject to change without notice.

System Options

- Up to two current ranges per circuit
- Optional inputs (i.e. temperature, voltage and digital inputs/outputs) assignable to any channel
- Digital I/O with functions assigned per individual test program
- DC Internal Resistance calculation
- Integration with Battery Management Systems: CAN
- Parallel BattSim mode for higher current requirements for specific configurations
- Remote Input Output (RIO) Box reduces excessive cable lengths when connecting to remote test station
- Insulation Monitoring Device
- Up to 512 additional sensor connections available when daisy chaining RIO Boxes
- External Parallel Controller (PCC) can control up to four circuits for higher power and/or higher current test requirements
- Drive Cycle Conversion utility automates test program development from acquired battery usage data
- Custom Hardware and Software engineering services
- Environmental chamber control (TCCA)
- Ramp up/down of voltage in Battsim Mode

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