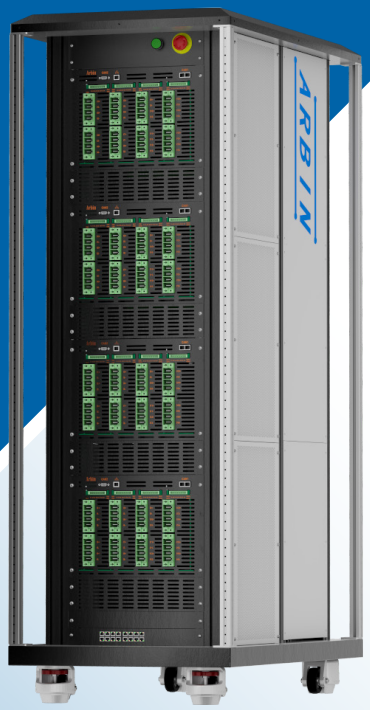
ARBIN
RBT-CELL

Regenerative Battery Testing

High current cell testing solutions utilizing Arbin's regenerative technology for efficient and reliable testing.



Precision Meets Efficiency

As the demand for energy storage solutions grows, so does the need for regenerative technology that not only accurately tests and characterizes batteries, but also contributes to a sustainable future.

Arbin's Regenerative Battery Testing (RBT - Cell) series combines high-precision measurements and regenerative technology to reduce the overall energy cost of your testbed. This innovative technology enables researchers to generate reliable and repeatable data without compromising on results in the pursuit of energy efficiency.

Key Features

Precision: Each channel provides multiple current ranges with industry-leading 24-bit resolution

Channel Density: 16 channels per module, capable of output currents ranging from ±100A up to ±1,600A per module

Minimize Floor Space with up to 64 channels per chassis in a compact footprint

Parallelable so any number of channels on the 16 channel module can be connected to increase the current handling capability

Reduce Energy Consumption: Efficient regenerative circuitry can return up to 85% of discharge energy back to the system and/or grid

Standard Configurations	
Voltage Range	Current Range
0 to 6V	100A/25A
	400A/50A
2 to 10V	100A/25A
	400A/50A
2 to 20V	100A/25A
	400A/50A
Flexible Channel Ranges	
Parallelable up to 1,600A	
(-6V) or (-20V) available as an option	

Specification Summary	
Hardware Specifications	
Channels per Module	4 or 16
Number of Channels	Up to 64
Voltage Range	6V, 10V, or 20V
Current per Channel	±400A for 4CH module ±100A for 16CH module
Channel Parallel	Up to 16 Channels
Current Ranges	2
Rise Time	<1ms for 4CH module <2ms for 16CH module
Regenerative Efficiency	Up to 85%
Measurement Specifications	
Measurement Accuracy	0.02% FSR
Measurement Precision	0.01% FSR
Measurement Resolution	24 Bit
Measurement Refresh Interval	2ms for 4CH module 8ms for 16CH module
Time Resolution	100 µs
Chassis Specifications	
Cooling	Air
Input Power	340V - 520V
Chassis Size	Width: 25” / 635mm Depth: 45” / 1143mm Height: 72” / 1828.8mm

Application Focus

- Facility integration to interface with temperature chambers, test facilities, or other third party systems.
- Data Sampling and Logging: Powerful embedded controllers provide ultra-fast data sampling and logging.
- Comprehensive safety features for lithium-ion battery testing.
- Dynamic data acquisition based on changes in time, voltage, and current to capture more data when it’s needed and maintain efficient file sizes.
- Simulation of Real World Test Profiles
- dQ/dV & Coulombic Efficiency
- Cell-level Quality Control & Grading

Powerful Software Integration

Arbin’s RBT-Cell system, powered by our latest MITS Pro software, optimizes the battery testing process by simplifying control of the testing process, and integrating the test station into a test facility.

- Create and manage test schedules, monitor real-time testing, and analyze results.
- Integration with third-party hardware and automation software.
- Suitable for both laboratory and production environments.
- Local or remote control of test channels.
- Test data securely stored in a range of robust databased formats including MS SQL, Post GreSQL, Access, or utilize Apache Kafka for additional flexibility.

CONTACT US

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