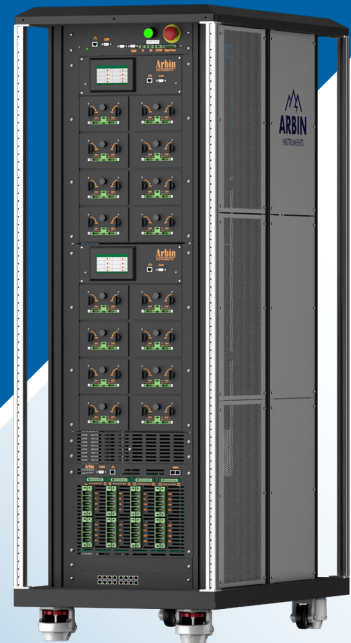


ARBIN LBTS-TC

Laboratory Battery Testing

Turn-key high-precision cell testing solution integrated with Arbin's patented Cell-Isolating Thermal Chamber



Integrated Precision

Arbin's next-generation Laboratory Battery Testing (**LBTS**) series offers industry-leading 24-bit resolution and high-precision measurements. The all-purpose tester features true bipolar circuitry for cross-zero linearity, four current ranges per test channel, and embedded MCUs for real-time calculations.

Complementing this, Arbin's Cell-Isolation Multi-Zone Thermal Chambers (**MZTC**) provide 16 independently controlled temperature mini-chambers. Each mini-chamber allows a unique temperature setpoint with thermal and electrical isolation, ensuring precise control. It provides a safe testing environment by isolating single or pairs of cells so a weak or failed cell does not interrupt others and allows greater independence in monitoring the devices under test.

Key Features

- ✓ **Turn-Key Solution**, arrives fully integrated with channel and temperature cables interconnected from channel to MZTC
- ✓ **Dynamic Temperature Setpoints** managed independently per isolated thermal chamber
- ✓ **100ppm Precision** with industry-leading 24-bit resolution across four current ranges per test channel
- ✓ **Reduces Complexity** of channel to chamber mapping, simplifying training and decreasing risk of operator error
- ✓ **Flexibility** to test 18650, 21700, 26650 up to 16A continuously, 20A for 1 minute

Standard Configurations

Voltage Range	Current Range
(-5V) to 5V	5A/100mA/10mA/1mA
0 to 5V	10A/100mA/10mA/1mA
0 to 5V	20A/100mA/10mA/1mA

Cell Formats

Cylindrical: 18650/21700/26650

Pouch: Consult your Arbin representative

System Characteristics	
Channels per Chassis	32
Current Ranges per Channel	4 (auto switching)
Current Rise Time	<200 μ s
Built-In Auxiliary Inputs	
Temperature PT100	1 input/channel
Control & Measurement Specifications	
Accuracy	\pm 0.02% FSR
Precision	\pm 0.01% FSR
Measurement Resolution	24 Bit
Control Resolution	16 Bit
Time Resolution	100 μ s
MZTC Chamber Specifications	
Mini-Chamber Qty	16
Chamber Temp. Range	[Ambient - 10°C] to 60°C
Temperature Uniformity	\pm 1.5°C
Temp. Control Stability	\pm 0.5°C
Chassis Specifications	
Cooling	Air
Input Power	220V1P, 208V3P - 520V3P
Chassis Size	Width: 25" (635 mm) Depth: 45" (1,143 mm) Height: 72" (1,828.8 mm)

Application Focus



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

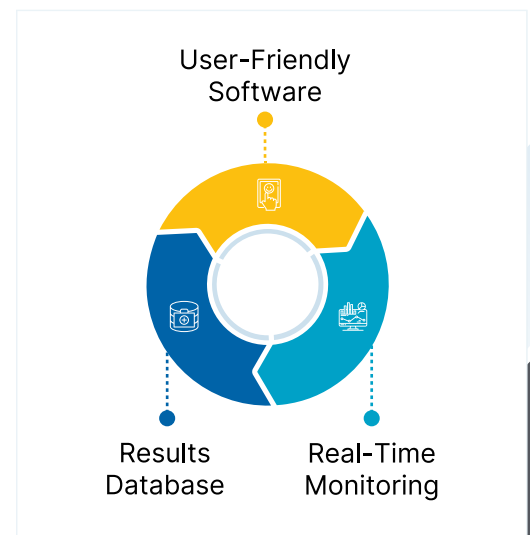


Cell-level Quality Control & Grading

Powerful Software Integration

Arbin's LBTS, 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.



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