

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 16 A continuously, 20 A for 1 minute

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 provides true bipolar circuitry ensuring cross-zero linearity, four auto switching 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 zones, allowing a unique temperature set point in each zone. Insulation and protection between each zone provide greater temperature control and a safe testing environment by isolating each cell or pair of cells.

Standard Configurations

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

Cell Formats
Cylindrical: 18650/21700/26650
Pouch: Consult your Arbin representative

System Information

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
Data Acquisition Rate	Up to 1 kHz
MZTC Chamber Specifications	
Chamber Zone Qty	16
Temperature Range	[Ambient-10 $^{\circ}$ C] to 60 $^{\circ}$ C
Temperature Uniformity	$\pm 1.5^{\circ}$ C
Temperature Control Stability	$\pm 0.5^{\circ}$ C
Chassis Specifications	
Cooling	Air-cooled with built-in variable speed fans
Input Power	220V1P, 208V3P - 520V3P
Chassis Size	Width: 25" (635 mm) Depth: 45" (1143 mm) Height: 72" (1,828.8 mm)

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

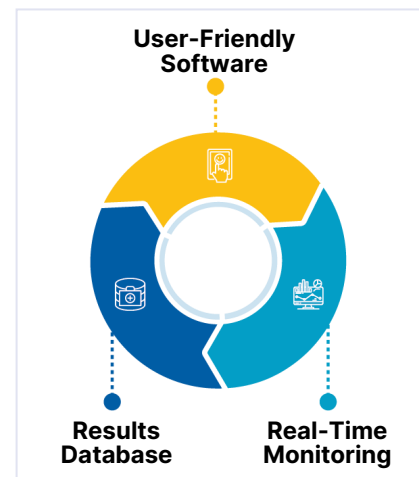


Cell-level Quality Control & Grading

Powerful Software Integration

Arbin's LBTS system, powered by our latest MITS 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.
- ✔ Test data securely stored in a range of robust databased formats including MS SQL, PostgreSQL, or utilize Apache Kafka for additional flexibility.



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