

AUTOMATIC VOLTAGE RESISTANCE TESTER

R01100







VOLTAGE AND INTERNAL RESISTANCE TEST SCENE

The voltage and internal resistance of lithium-ion batteries are two main battery parameters. Accurately and quickly characterizing these two parameters is the key to monitor the stability and status of battery production and improve the efficiency of production and testing. Scenarios in which the voltage and internal resistance of the cell are tested include:

Cell production process Cell failure analysis PACK and cell module Cell verification test Cell use terminal After the cell is sampled Different cycle numbers After injection and packaging Cell consistency screening Cell incoming inspection Before and after the cell is hung up for testing, etc.; Before and after formation Different storage times, etc.; Before and after capacity K value test Before cell shipment, etc.;

■ THE LIMITATIONS OF TRADITIONAL TEST METHODS

At present, most cell enterprises use simple resistance instrument combined with manual test clip to test a single cell. The existing problems, which is below:

- 1.Manual measurement of cell by cell, time-consuming and laborious;
- The contact force of the test clip cannot be fixed, and the contact resistance fluctuates greatly, resulting in the measured resistance fluctuation;
- 3. Each clamp test, easy to damage the tab;
- 4. Only one cell can be tested at a time, and the test efficiency is low;
- Need to manually record the cell barcode and voltage, resistance data, and uploaded to the monitoring system, prone to error;
- 6.It is necessary to manually determine whether the voltage and internal resistance are in the specification range, and high demands on people;

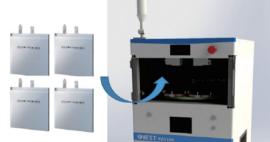


CREATIVE SOLUTIONS

RO1100 automatic battery voltage resistance tester is a device with high integration, high openness, perfect system function, minimize human intervention, rapid realization of battery voltage resistance measurement.

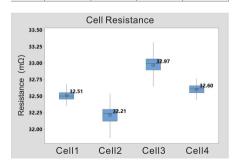
The advantages as following:

- 1. The equipment has four channels, can be a single continuous test of 2 cells;
- The contact force of the test clip is fixed, the contact resistance is fixed, and the measured resistance fluctuation is small;
- 3. Can test two cells at a time, high test efficiency, can test more than 15EA in a minute;
- 4. Plane contact, with little damage to the polar ear;
- $5. Automatic \, scan \, code \, cell, \, automatically \, test \, the \, voltage \, internal \, resistance \, data \, and \, save;$
- Automation software can set the voltage specification range, beyond the specification of automatic alarm;

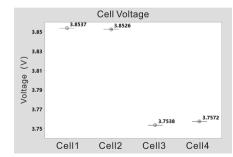


≥ TEST RESULT

100 Repeatability Test Results - Resistance (mΩ)						
	Cell1#	Cell2#	Cell3#	Cell4#		
Max	32.68	32.57	33.31	32.76		
Min	32.36	31.6	32.41	32.44		
Max-Min	0.32	0.97	0.9	0.32		
Mean	32.51	32.21	32.97	32.60		
COV	0.21%	0.46%	0.44%	0.22%		



	100 Repeatability Test Results - Voltage (V)					
		Cell1#	Cell2#	Cell3#	Cell4#	
-	Max	3.8537	3.8526	3.7538	3.7576	
	Min	3.8536	3.8526	3.7536	3.7572	
	Max-Min	0.0001	0.0000	0.0002	0.0004	
	Mean	3.8537	3.8526	3.7537	3.7575	
	COV	0.001%	0.000%	0.002%	0.002%	



Main instrument parameters				
Resistance range	0.1μΩ~3.1kΩ			
Resistance accuracy	±0.5%F.S			
Voltage range	0V~60V			
Voltage accuracy	±0.03%F.S			
Test efficiency	≥15 pcs/min			

Installation requirements				
Voltage	220V			
Voltage variation tolerance	±10%			
Power dissipation	70W			
Environmental temperature	25±5℃			
Environmental humidity	≤80%RH			
Environmental magnetic field	Keep away from intense electromagnetic			
Net weight	100kg			
Dimension(W*D*H)	510*600*800(mm)			



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