WBCS3000LeRACK

128 Channel Rack Type Battery Test System

- *Min. 64 to Max.128 channels, rack-mounted system*
  Configurable in units of 16 channels
- *Perfect for coin cell test at various C-rates*
- *Max. ±100mA current with 4 current ranges*
- *Applied voltage range of ±5V*
- *Potentiostat/Galvanostat circuit*
- *High accuracy*
- *Max. sampling time 50msec*
- *LAN communication*
- *Option : Monitor, PC*

128 Channel Battery Charge/Discharge Test System

for low current application

The WBCS3000LeRACK, a 128-channel rack-mounted battery test system, is designed for low-current experiments and large scale battery cell testing, allowing for a configuration of up to 128 channels per rack. The included monitor and PC (optional) in the rack enable users to efficiently monitor and analyze data.

Coin cells are often used to test the capacities and rate capabilites of new materials in the initial stage and the WBCS3000LeRACK can be a perfect choice for coin cell testing at high C-rates and half cell testing. Not only does the WBCS3000LeRACK support various techniques for battery studies, but also carries out electrochemical techniques such as corrosion test techniques, electro-analytical techniques, cyclic voltammetry, chronoamperometry, and potentiometry, etc. and this feature allows user to perform general Echem experiments.

WBCS3000Le RACK has four current ranges from 100uA to 100mA, allowing for more precise current control and measurement, and supports testing within a voltage range of -5V to 5V. This system offer high precision with ±0.02% accuracy for both voltage and current across all ranges and supports 50msec sampling per channel, even with 128 channels running.

The Smart Interface(SI) software is a convenient and powerful tool allowing :
- easily making schedule files by using schedule editor
- selecting pre-defined techniques
- classifying/grouping channels by user's purpose
- monitoring detailed test data
- providing general/cycle graph format

WBCS3000LeRACK

Features

- Potentiostat/Galvanostat circuit : no time delay between the charge and discharge cycles
- Supports techniques for battery studies such as CC/CV test, CC/CC test, C-rate/CV test, CV test as well GITT/PITT test for calculation of diffusion coefficient.
- Tests the coin cell to charge-discharge cycles at the required C-rate
- High sampling rate for calculating dynamic charge/discharge capacity ratings
- The various safety functions are provided to protect the cell and system from being damaged.
- Users can monitor charge/discharge data in real-time through the monitor, allowing for immediate identification and response to any issues that may arise during testing.
- Efficiency is enhanced by the ability to test multiple batteries simultaneously through 128 independent channels.
- Measured data can be analyzed using the provided data analysis software without the need for a separate license purchase. This includes :
  - Data Manager software for data post-processing, featuring peak detection functionality
  - IVMAN™ Differential Analysis software for charge-discharge analysis

For Energy Test

- Charge/Discharge(CC/CV) Test
- Constant Current Charge/Discharge(CC/CC) Test
- IV Curve Test
- Electrochemical Voltage Spectroscopy(EVS) Test
- Galvanostatic Intermittent Titration Technique(GITT) Test
- Potentiostatic Intermittent Titration Technique(PITT) Test
- Cyclic Voltammetry
- Potentiostatic Experiment With Half Cell

Options

- Temperature monitoring
- Auxiliary voltage monitoring
- PC & monitor built-in Rack

Specifications

Control voltage range	±5V
Control current range	100mA, 10mA, 1mA, 100uA (4 range)
LED	Run: 1ea
Input impedance	10^{12} Ohm
Cell connection	4 probe type, alligator clip cables
Number of channels per rack	128
Voltage accuracy	±0.02% f.s.
Current accuracy	±0.02% f.s.
Voltage Control/Measurement	
Full scale ranges	±5V
Resolution(16 bits)	0.15mV
Current Control/Measurement	
Full scale ranges	Max. 100mA@5V
Resolution	16 bit (0.0015% f.s)
Communication	TCP/IP
Sampling time	50msec
Size	W724xH750xD1382mm

All specifications are subject to change without notice.

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