WBCS3000LxRACK

128 Channel Rack Type Battery Test System

- *Min. 64 to Max.128 channels, rack-mounted system*
  Configurable in units of 16 channels
- *For high capacity coin cells*
- *Max. ±1A current with 4 current ranges*
- *Applied voltage range of -1V to 5V*
- *Potentiostat/Galvanostat circuit*
- *High accuracy*
- *Max. sampling time 50msec*
- *LAN communication*

128 Channel Battery Charge/Discharge Test System

The WBCS3000LxRACK, a 128-channel rack-mounted battery test system, is designed for mass battery cell testing with up to 1A per channel, allowing for a configuration of up to 128 channels per rack. This system maximizes the efficiency and accuracy of battery testing and analysis tasks through its user-friendly interface and software.

With the trend towards higher capacity, even coin cells now require high current, and to meet these demands, experiments of up to 1A per channel are possible. To measure capacity with precision, the system calculates capacity every 50msec regardless of the sampling conditions and stores the capacity value when it matches the sampling conditions, thus providing more accurate capacity values.

Each channel uses a Potentiostat/Galvanostat circuit, enabling control of voltage and current at the working electrode relative to the reference electrode (e.g., for half-cell experiments).

The WBCS3000LxRACK has four current ranges from 1mA to 1A, allowing for more precise current control and measurement. It can test within a voltage range of -1V to +5V, making it suitable for single cell experiments.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

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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, CV test as well GITT/PITT test for calculation of diffusion coefficient.
- The various safety functions are provided to protectthe cell and system from being damaged.
- 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

Specifications

Control voltage range	-1V to +5V
Control current range	1A, 100mA, 10mA, 1mA (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	-1V to 5V
Resolution(16 bits)	0.15mV
Current Control/Measurement	
Full scale ranges	Max. 1A@-1~+5V
Resolution	16 bit (0.0015% f.s)
Communication	TCP/IP
Sampling time	50msec
Size	W724xD750xH1582 mm

All specifications are subject to change without notice.

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