

WBCS3000Ls

Low Current Battery Test System



- *For low power applications*
- *Perfect for coin cell test*
- *$\pm 10\text{mA}$ current over 4 current ranges*
- *Applied voltage range of $\pm 5\text{V}$*
- *Potentiostat/Galvanostat circuit*
- *High accuracy*
- *Max 128 channels configuration*
- *Plugin channels for easy maintenance*
- *LAN communication*

Battery Charge/Discharge Test System for low current application

The low power battery test system, the **WBCS3000Ls**, is designed for low current applications and allows users to make the right choice for their battery studies. .

Coin cells are often used to test the capacities and rate capabilities of new materials in the initial stage and the **WBCS3000Ls** can be a perfect choice for coin cell testing and half cell testing. Not only does the **WBCS3000Ls** 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.

The **WBCS3000Ls** has four current control ranges of $10\mu\text{A}$ to 10mA and voltage range of -5V to $+5\text{V}$. The accuracy for current and voltage on these channels is $\pm 0.02\%$ FSR. Max channel configuration is 128 per one PC.

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
- converting the data to ASCII or excel format

The compact size **WBCS3000Ls** can communicate with the computer by the way of a Local Area Network(LAN).

● 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.
- 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.
- The obtained data can be analyzed by IMMAN™ software without license code for further 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

- Battery Jig
- Coin Cell Holder
- Test Cell
- Dilatometer

● Specifications

Control voltage range	±5V
Control current range	10mA, 1mA, 100uA, 10uA (4 ranges)
LED	Run: 1ea
Input impedance	10 ¹² Ohm
Cell connection	4 probe type, alligator clip cables
Max channels	128
Rise time	<50usec
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. 10mA@5V
Resolution	16 bit(0.0015% f.s)
Communication	TCP/IP

Sampling time	Without option
	- 8~40 channels system: 10msec - 41~80 channels system: 20msec - 81~128 channels system: 50msec
With Option	- 8~16 channels system: 10msec
	- 17~40 channels system: 20msec
	- 41~80 channels system: 50msec
	- 81~128 channels system: 50msec (2 SIF boards)

All specifications are subject to change without notice.



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