

# WBCS3000M2 Series

## Max 200Watt Power Battery Test System



WBCS3000M2

- *For mid power applications*
- *Test of battery cells up to 200Watt*
- *4 current ranges*
- *Potentiostat/Galvanostat circuit*
- *High accuracy*
- *Max 128 channels configuration*
- *Plugin channels for easy maintenance*
- *LAN communication*

### Battery Charge/Discharge Test System

for max 200Watt power application

The battery test system, **WBCS3000M2**, is designed for energy storage devices such as batteries, fuel cells, and supercapacitors. The **WBCS3000M2** is derived from the standard WBCS series battery cycler system for mid power application and maximum power of each channel is 200Watt.

The system can be configured with custom specification not exceeding its maximum power. For example, **WBCS3000M2** can test the batteries at  $\pm 20A$  up to 5V. The **WBCS3000M2** offer high output/measure accuracy with 4 customizable current ranges.

Up to 8 independent channels can be installed per substation and extra channels can be added up to a maximum of 128 channels.

The **WBCS3000M2** do not only 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 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

## ● Features

- Suitable for energy storage device and mid power applications
- The system provides a maximum output power of 200Watt for WBCS3000M2
- 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 protect the cell and system from being damaged.
- The obtained data can be analyzed by IVMAN™ 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

- Temperature Measurement
- Auxiliary Voltage Measurement
- Battery Jig

## ● Specifications

|                                    |                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control voltage range              | ±5V(standard)*                                                                                                                                                                                                                                                                                                                                   |
| Control current range              | 4 ranges                                                                                                                                                                                                                                                                                                                                         |
| LED                                | Run: 1ea, Mode: 2ea                                                                                                                                                                                                                                                                                                                              |
| Input impedance                    | 10 <sup>12</sup> Ohm                                                                                                                                                                                                                                                                                                                             |
| Cell connection                    | 4 probe type, alligator clip cables                                                                                                                                                                                                                                                                                                              |
| Max. channel No.                   | 128                                                                                                                                                                                                                                                                                                                                              |
| Voltage accuracy                   | ±0.02% f.s.                                                                                                                                                                                                                                                                                                                                      |
| Current accuracy                   | ±0.05% f.s.                                                                                                                                                                                                                                                                                                                                      |
| <b>Voltage Control/Measurement</b> |                                                                                                                                                                                                                                                                                                                                                  |
| Full scale ranges                  | ±5V(standard)*                                                                                                                                                                                                                                                                                                                                   |
| Resolution(16 bits)                | 0.15mV(standard)*                                                                                                                                                                                                                                                                                                                                |
| <b>Current Control/Measurement</b> |                                                                                                                                                                                                                                                                                                                                                  |
| Full scale ranges                  | Depending on system specification<br>Max. 200Watt for WBCS3000M2                                                                                                                                                                                                                                                                                 |
| Resolution                         | 16 bit(0.0015% f.s)                                                                                                                                                                                                                                                                                                                              |
| Communication                      | TCP/IP                                                                                                                                                                                                                                                                                                                                           |
| Sampling time                      | Without option<br>- 1~32 channels system: 10msec<br>- 33~40 channels system: 20msec<br>- 41~64 channels system: 50msec<br>- 65~128 channels system: 50msec<br>With option (Aux V and/or Temperature)<br>- 1~16 channels system: 10msec<br>- 17~40 channels system: 20msec<br>- 41~64 channels system: 50msec<br>- 65~128 channels system: 50msec |
| Size                               | W464.7xD625.4xH375.6 mm                                                                                                                                                                                                                                                                                                                          |

All specifications are subject to change without notice.



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