

# WBCS3000D series

## Mid Power Battery Test System dual channel module



- **For Mid power applications**
- **Test of battery cells up to 400Watt**
- **4 current ranges**
- **Potentiostat/Galvanostat circuit**
- **High accuracy**
- **Max 128 channels configuration**
- **Dual Channel module type for easy maintenance**
- **LAN communication**

### Battery Charge/Discharge Test System for Mid power application

The Mid power channel, **WBCS3000D series**, for battery test system are designed for energy storage devices such as batteries, fuel cells, and supercapacitors. The **WBCS3000D series** are derived from the standard WBCS series battery cyler system and it provides continuous operation in Mid power applications where precise control of current and voltage is required.

The **WBCS3000D series** can be configured with custom specification not exceeding its maximum power (400Watt), voltage limitation( <80V : max voltage difference between the highest voltage and the lowest voltage).

Typical models for WBCS3000D are

- -5V to 5V @ 25Amp WBCS3000D\_525B
- -1V to 10V @ 25Amp WBCS3000D\_1025U
- -1V to 30V @ 10Amp WBCS3000D\_3010U

This module contains dual channels and this module has its own power supply.

Optional accessories for this system is auxiliary voltage measurement and temperature measurement

Extra channels can be added up to a maximum of 128 channels. Including watchdog functions, the **WBCS3000D series** has multiple safety features to protect the system under test and operator.

The **WBCS3000D series Mid power channel** requires independent 8channel controller. This does 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.

Independent 8channel controller uses Smart Interface(SI) software which 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 high power applications.
- 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
- The various safety functions are provided to protect the cell and system from being damaged.
- Emergency button per channel.
- 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

## ● Specifications

Control voltage range	User specification*
Control current range	4 range
LED	Run: 1ea, Mode: 2ea, lrange: 4ea
Input impedance	10 <sup>12</sup> Ohm for V<10V
Cell connection	4 probe type, alligator clip cables
Channel expansion up to	128
Voltage accuracy	±0.05% f.s.
Current accuracy	±0.05% f.s.
<b>Voltage Control/Measurement</b>	
Full scale ranges	User specification*
Resolution(16 bits)	0.0015% f.s
<b>Current Control/Measurement</b>	
Full scale ranges	Depending on system specification Max. 25A(WBCS3000D: -5V to +5V)
Resolution	16 bit(0.0015% f.s)
Communication	TCP/IP
Sampling time	- 8~16 channel system : 20msec - 17~32 channel system : 25msec - 33~128 channel system : 50msec

\* : User can specify the voltage range within <80V for difference between high and low voltage. All specifications are subject to change without notice.



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