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 cycler 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). Please refer to the power configuration map.

Typical models for WBCS3000D are

- *±5V@26Amp WBCS3000D_526B*
- *-1V to 10V@23Amp WBCS3000D_1023U*
- *-1V to 21V@14Amp WBCS3000D_2114U*
- *-1V to 43V@7Amp WBCS3000D_437U*

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.

WBCS3000D Series

Independent 8chanel 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

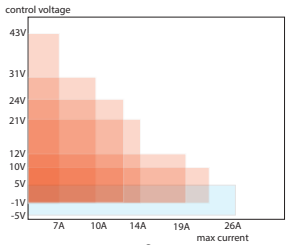
- Charge/Discharge(CC/CV) Test
- Constant Current Charge/Discharge(CC/CC) Test
- IV Curve Test
- Electrochemical Voltage Spectroscopy(EVS) Test
- Galvanostatic Intermittent Titration Technique(GITT) Test
- Potentiostatic Intermittent Titration Technique(PITT) Test
- Cyclic Voltammetry
- Potentiostatic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

Options

- Temperature Measurement
- Auxiliary Voltage Measurement

Specifications

Control voltage range	Refer to Power configuration map
Control current range	4 range
LED	Run: 1ea, Mode: 2ea, Irange: 4ea
Input impedance	10^{12} Ohm for V<10V
Cell connection	4 probe type, alligator clip cables
Channel expension up to	128
Voltage accuracy	±0.05% f.s.
Current accuracy	±0.05% f.s.
Voltage Control/Measurement	
Full scale ranges	Refer to power configuration map
Resolution(16 bits)	0.0015% f.s
Current Control/Measurement	



Power Configuration Map

Maximum current depending on voltage range
1) Max 26A @ ±5V
2) Max 23A @ -1V~+10V
3) Max 19A @ -1V~+12V
4) Max 14A @ -1V~+21V
5) Max 13A @ -1V~+24V
6) Max 10A @ -1V~+31V
7) Max 7A @ -1V~+43V

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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