

## WBCS3000H12 series

### Power Battery Test System channels



- **For high power applications**
- **Test of battery cells up to 1200Watt**
- **3 current ranges**
- **Potentiostat/Galvanostat circuit**
- **High accuracy**
- **Max 128 channels configuration**
- **Channel module type for easy maintenance**
- **LAN communication**

### Battery Charge/Discharge Test System

for high power application

The power channel, **WBCS3000H12 series**, for battery test system are designed for energy storage devices such as batteries, fuel cells, and supercapacitors. The **WBCS3000H12 series** are derived from the standard WBCS series battery cycler system and it provides continuous operation in high power applications where precise control of current and voltage is required.

The **WBCS3000H12 series** can be configured with custom specification not exceeding its maximum power (1.2kWatt). Please refer to the power configuration map.

Typical models for WBCS3000H12 are

- -1V to 5V @ 61Amp WBCS3000H12\_561B
- -1V to 10V @ 69Amp WBCS3000H12\_1069U
- -1V to 21V @ 43Amp WBCS3000H12\_2143U
- -1V to 43V @ 23Amp WBCS3000H12\_4323U

Each channel has its own power supply and emergency button to cell off for emergency. 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 **WBCS3000H12 series** has multiple safety features to protect the system under test and operator.

The **WBCS3000H12 series 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

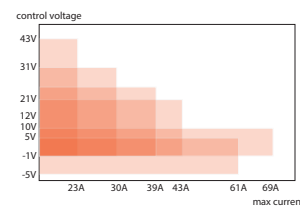
Control voltage range	Refer to Power configuration map
Control current range	3 range
Max Power per channel	1200Watt
LED	Run: 1ea, Mode: 2ea, Irange: 3ea
Input impedance	10 <sup>12</sup> Ohm for V<10V
Cell connection	4 probe type, alligator clip cables
Channel expansion up to	128
Voltage accuracy	±0.05% f.s.
Current accuracy	±0.1% f.s.

### Voltage Control/Measurement

Full scale ranges	Refer to power configuration map
Resolution(16 bits)	0.0015% f.s

### Current Control/Measurement

#### Full scale ranges



Power Configuration Map

Maximum current depending on voltage range

- 1) Max 61A @ -5V~+5V
- 2) Max 69A @ -1V~+10V
- 4) Max 43A @ -1V~+21V
- 5) Max 39A @ -1V~+24V
- 6) Max 30A @ -1V~+31V
- 7) Max 23A @ -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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