

# WMPG1000H12

## Power Multichannel Potentiostat/Galvanostat channel



- *For power applications*
- *Max 1200Watt*
- *4 current ranges*
- *Applied voltage range of Max  $<\pm 43V$*
- *4 Kelvin probe type P'stat/G'stat circuit*
- *High accuracy*
- *Max 64 channels configuration*
- *Independent power supply per each channel*
- *LAN communication*

### Power Potentiostat/Galvanostat channel for high power multichannel application

The power potentiostat/galvanostat channel, **WMPG1000H12**, is designed for high power purpose electrochemical experiments and its versatile features allow users to perform a wide range of electrochemical research and development. The **WMPG1000H12** requires external 8channel controller and the channel power limit is 1200Watt.

The **WMPG1000H12** can be configured with custom specification not exceeding its maximum power 1.2kWatt, voltage limitation(  $<\pm 40V$ ).

Typical models for WMPG1000H12 are

- $\pm 10V @ 50Amp$  WMPG1000H12\_1050BC10
- $\pm 20V @ 25Amp$  WMPG1000H12\_2025BC21
- $\pm 40V @ 12Amp$  WMPG1000H12\_4012BC43

\* Customized specification is available.

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

The **WMPG1000H12 channel** can support power application such as electrosynthesis, electrolysis, electroplating and experiments on energy devices.

The Smart Interface(SI) software for WMPG multichannel potentiostat/galvanostat 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 **WMPG1000 series** can communicate with the computer by the way of a Local Area Network(LAN).

## ● Features

- 4 current ranges for improved accuracy over a wide range of testing conditions.
- High resolution 16 bit DAC/ADC for system control and data acquisition.
- 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.
- 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 Electroanalytical Measurement

- Cyclic voltammetry
- Linear sweep voltammetry
- Chrono-amperometry
- Chrono-coulometry
- Chrono-potentiometry

## ● Corrosion Measurement

- Tafel plot
- Potentiodynamic
- Potentiostatic
- Galvanostatic
- Cyclic polarization
- Ecorr vs. time
- Linear polarization resistance

## ● For Energy Test

- Charge/Discharge(CC/CV) Test
- Constant Current Charge/Discharge(CC/CC) Test
- Steady state CV
- Pstat IV curve
- Gstat IV curve
- Electrochemical Voltage Spectroscopy(EVS) Test
- Galvanostatic Intermittent Titration Technique(GITT) Test
- Potentiostatic Intermittent Titration Technique(PITT) Test

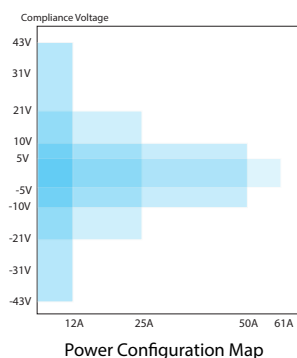
## ● Specifications

Control voltage range	Max $\pm 40V$
Compliance voltage	Refer to Power configuration map
Control current range	4 ranges
LED	Run: 1 ea, Mode: 2ea, Irange: 4 ea
Input impedance	$10^{12}$ Ohm
Cell connection	4 probe type, alligator clip cables
No. of channels	1 per module   Max 128ch configuration
Voltage accuracy	$\pm 0.05\%$ f.s. ( $<10V$ )
Current accuracy	$\pm 0.1\%$ f.s.

### Voltage Control/Measurement

Full scale ranges	Max $\pm 40V$
Resolution(16 bits)	0.0015% f.s.

### Current Control/Measurement



Maximum current depending on voltage range

- 1) Max 61A @  $\pm 5V$  (C5V\*)
  - 2) Max 50A @  $\pm 10V$  (C10V\*)
  - 3) Max 25A @  $\pm 20V$  (C21V\*)
  - 4) Max 12A @  $\pm 40V$  (C43V\*)
- \* Compliance Voltage

Resolution	16 bit(0.0015% f.s)
Communication	TCP/IP
Sampling time	Without option - 8~40 channels system: 10msec - 41~64 channels system: 10msec (2 SIF Boards) With Option - 8~16 channels system: 10msec - 17~40 channels system: 10msec (2 SIF Boards) - 41~64 channels system: 20msec (2 SIF Boards)

All specifications are subject to change without notice.



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