

# WMPG1000H8 Series

## Power Multichannel Potentiostat/Galvanostat channel



WMPG1000H8

- For power applications
- Max 800Watt
- 5 current ranges
- Applied voltage range of Max  $<\pm 40V$
- 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 mid power multichannel application

The power potentiostat/galvanostat channel, **WMPG1000H8**, was designed for mid power purpose electrochemical experiments and its versatile features allow users to perform a wide range of electrochemical research and development. The **WMPG1000H8** requires external 8channel controller and the channel power limit is 800Watt.

The **WMPG1000H8** can be configured with custom specification not exceeding its maximum power 800Watt; voltage limitation(  $<\pm 40V$ ).

*Typical models for WMPG1000H8 are*

- $\pm 10V @ 32Amp$  WMPG1000H8\_1032BC10
- $\pm 20V @ 16Amp$  WMPG1000H8\_2016BC21
- $\pm 40V @ 8Amp$  WMPG1000H8\_408BC43

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 **WMPG1000H8** 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

- 5 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

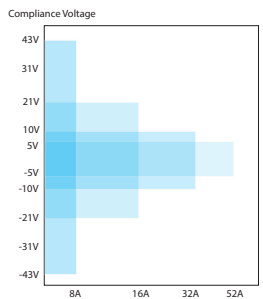
Control voltage range	Max $\leq \pm 40V$
Compliance voltage	Refer to Power configuration map
Control current range	5 ranges
LED	Run: 1ea, Mode: 2ea, Irange: 5ea(H8), 4 ea(H12)
Input impedance	$10^{12}$ Ohm
Cell connection	4 probe type, alligator clip cables
No. of channels	1 per module   Max 64ch configuration
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

Full scale ranges	Max. f.s under 800Watt
Compliance Voltage	Maximum current depending on voltage range
	1) Max 52A @ $\pm 5V$ (C5V*)
	2) Max 32A @ $\pm 10V$ (C10V*)
	3) Max 16A @ $\pm 20V$ (C21V*)
	4) Max 8A @ $\pm 40V$ (C43V*)
	* Compliance Voltage



Power Configuration Map

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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