

WMPG1000H Series

Power Multichannel Potentiostat/Galvanostat channel



WMPG1000H8



WMPG1000H12

- For power applications
- 800Watt(H8) or 1200Watt(H12)
- 5(H8)/4(H12) current ranges
- Applied voltage range of Max $\leq \pm 40V$
- 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 high power multichannel application

The power potentiostat/galvanostat channel, **WMPG1000H8** or **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 **WMPG1000H series** requires external 8channel controller and the channel power limit is 800Watt(H8) or 1200Watt(H12).

The **WMPG1000H series** can be configured with custom specification not exceeding its maximum power (800Watt:H8 or 1.2kWatt:H12), voltage limitation($\leq \pm 40V$).

Typical models for WMPG1000H8 are

- $\pm 10V$ @ 32Amp WMPG1000H8_1032BC10
- $\pm 20V$ @ 16Amp WMPG1000H8_2016BC21
- $\pm 40V$ @ 8Amp WMPG1000H8_408BC43

Typical models for WMPG1000H12 are

- $\pm 10V$ @ 50Amp WMPG1000H12_1050BC10
- $\pm 20V$ @ 25Amp WMPG1000H12_2025BC21
- $\pm 40V$ @ 12Amp WMPG1000H12_4012BC43

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 **WMPG1000H series 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

- 5 current ranges(H8) & 4 ranges(H12) 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

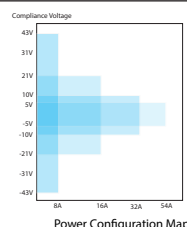
● Specifications

Control voltage range	Max $\leq \pm 40V$
Compliance voltage	Depending on control voltage
Control current range	5 ranges: H8 4 ranges :H12
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

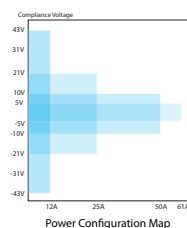
Current Control/Measurement



Maximum current depending on voltage range (H8)

- 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



Maximum current depending on voltage range(H12)

- 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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