

WMPG1000D Series

Dual Channel Potentiostat/Galvanostat Module



- For Mid power applications
- Max 400Watt
- 5 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 dual channel
- LAN communication

Mid Power Potentiostat/Galvanostat channel for power application

The mid power potentiostat/galvanostat channel, **WMPG1000D**, is designed for Mid power purpose electrochemical experiments and its versatile features allow users to perform a wide range of electrochemical research and development. The **WMPG1000D series** requires external 8channel controller and the channel power limit is 400Watt.

The **WMPG1000D series** can be configured with custom specification not exceeding its maximum power (400Watt), voltage limitation($\leq \pm 40V$).

Typical models for WMPG1000D are

- $\pm 10V @ 16Amp$ WMPG1000D_1016BC10
- $\pm 20V @ 8Amp$ WMPG1000D_208BC21

Dual channel module has its own power supply.

Auxiliary voltage input and temperature input are optional.

The **WMPG1000D series channel** can support various application such as corrosion, physical electrochemistry, 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

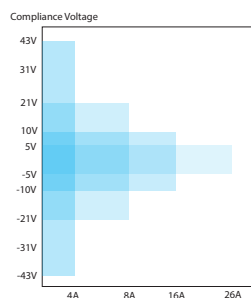
Control voltage range	Max $\pm 40V$
Compliance voltage	Refer to Power configuration map
Control current range	5 ranges
LED	Run: 1ea, Mode: 2ea, Irange:5 ea
Input impedance	10^{12} Ohm
Cell connection	4 probe type, alligator clip cables
No. of channels	2 per module
Voltage accuracy	$\pm 0.05\%$ f.s. (<math>< 10V</math>)
Current accuracy	$\pm 0.05\%$ 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 400Watt
Compliance Voltage	Maximum current depending on voltage range
	1) Max 26A @ $\pm 5V$ (C5V*)
	2) Max 16A @ $\pm 10V$ (C10V*)
	3) Max 8A @ $\pm 20V$ (C21V*)
	4) Max 4A @ $\pm 40V$ (C43V*)
	* Compliance voltage



Power Configuration Map

Full scale ranges	Max. f.s under 400Watt
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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