

WMPG1000HP Series

High Power Multichannel Potentiostat/Galvanostat



- *For high power multichannel applications*
- *< 4kWatt*
- *3 or 1 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*

High Power Potentiostat/Galvanostat

for high power multichannel application

The high power potentiostat/galvanostat, **WMPG1000HP**, 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 **WMPG1000HP series** is equipped in rack module.

The **WMPG1000HP series** can be configured with custom specification not exceeding its maximum power (4kWatt). Please refer to the power configuration map.

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 **WMPG1000HP series** 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

- 3 or 1 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

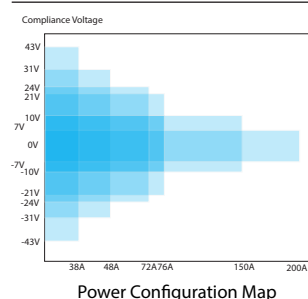
● Specifications

| | |
|-----------------------|-------------------------------------|
| Control voltage range | Max $\leq \pm 30V$ |
| Compliance voltage | Refer to Power configuration map |
| Control current range | 3 or 1 ranges |
| LED | Run: 1ea, Mode: 2ea |
| Input impedance | 10^{12} Ohm |
| Cell connection | 4 probe type, alligator clip cables |
| Max. channels | Max 64ch configuration |
| Voltage accuracy | $\pm 0.1\%$ f.s. |
| Current accuracy | $\pm 0.1\%$ f.s. |

Voltage Control/Measurement

| | |
|---------------------|---------------|
| Full scale ranges | Max $\pm 30V$ |
| Resolution(16 bits) | 0.0015% f.s. |

Current Control/Measurement



Maximum current depending on voltage range

- 1) Max 200A @ $\pm 5V$ (C7V*)
 - 2) Max 150A @ $\pm 10V$ (C10V*)
 - 3) Max 76A @ $\pm 10V$ (C10V*)
 - 4) Max 76A @ $\pm 20V$ (C21V*)
 - 5) Max 72A @ $\pm 24V$ (C24V*)
 - 6) Max 48A @ $\pm 30V$ (C31V*)
 - 7) Max 38A @ $\pm 43V$ (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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