

# WPG100HP Series

## High Power Potentiostat/Galvanostat



- *For high power applications*
- *< 4kWatt : Refer to Power Map*
- *3 or 1 current ranges*
- *Applied voltage range of Max <40V*
- *4 Kelvin probe type P'stat/G'stat circuit*
- *High accuracy*
- *Sampling time of 1msec*
- *LAN communication*

### High Power Potentiostat/Galvanostat for high power application

The high power potentiostat/galvanostat, **WPG100HP**, 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 **WPG100HP series** is equipped in rack module.

The **WPG100HP series** can be configured with custom specification not exceeding its maximum power (4kWatt). Please refer to the power configuration map.

There is an emergency button to cell off for emergency.

Auxiliary voltage measurement and temperature measurement are standard configuration

The **WPG100HP series** can support power application such as electrosynthesis, electrolysis, electroplating and experiments on energy devices.

The Smart Interface(SI) software for WPG 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 **WPG100 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.
- Max 90Volt in unipolar and  $\pm 45V$  in bipolar.

## ● 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

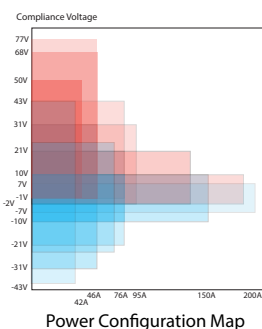
Control voltage range	Refer to power configuration map
Compliance voltage	Refer to power configuration map
Control current range	3 or 1 ranges
LED	Run: 1ea, Mode: 2ea
Input impedance	$10^{12}$ Ohm
Cell connection	4 probe type, alligator clip cables
No. of channels	1 per module
Voltage accuracy	$\pm 0.1\%$ f.s.
Current accuracy	$\pm 0.1\%$ f.s.

### Voltage Control/Measurement

Full scale ranges	Refer to power configuration map
Resolution(16 bits)	0.0015% f.s

### Current Control/Measurement

Full scale ranges      Maximum current depending on voltage range



1. voltage bipolar
  - 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 46A @  $\pm 30V$  (C31V\*)
  - 7) Max 38A @  $\pm 40V$  (C43V\*)
- \* Compliance voltage
2. voltage unipolar
  - 1) Max 180A @  $-2V \sim +10V$
  - 2) Max 140A @  $-2V \sim +21V$
  - 3) Max 95A @  $-2V \sim +31V$
  - 4) Max 76A @  $-1V \sim +43V$
  - 5) Max 42A @  $-1V \sim +50V$
  - 6) Max 46A @  $-1V \sim +68V$
  - 7) Max 46A @  $-1V \sim +77V$

Resolution	16 bit(0.0015% f.s)
Communication	TCP/IP
Sampling time	1msec

All specifications are subject to change without notice.



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