

Powerstat-05 Specifications

General Cell Control	
Compliance Voltage	±15V
Max Output Current	±5 A
Rise Time	45us for 1 Ohm load (0%-100% signal)
Bandwidth	10kHz (-3 dB, 1 Ohm Load)
Input Impedance	250 GOhm parallel to 3 pF
Max Update Rate	1.2 us
IR Compensation	Manual, 5A range
Potentiostat Mode Control	
Applied DC Potential Ranges	1 (±10V)
Applied Potential Resolution	0.3mV
Applied Potential Accuracy	<0.04% FSR
Slew Rate	0.2 V/us
MAX scan rate	500 V/s
Input Bias Current	1 pA
Potentiostat Mode Current Measurement	
Current Ranges	4(±1uA, ±100uA, ±10mA, ±5A)
Potentiostat Min to Max	20nA to 5A
Best Current Resolution	150uA at ±5A .37uA at ±10mA 3.7nA at ±100uA 37pA at ±1uA
Best Current Accuracy	0.3 - 0.03% of FSR Depending on Range
Galvanostat Mode Control	
Applied DC Current Ranges	4(±1uA, ±100uA, ±10mA, ±5A)
Best Applied Current Resolution	37pA, 0.003% FSR
Applied Current Accuracy	0.3 - 0.03% of FSR Depending on Range
Galvanostat Mode Potential Measurement	
Potential Ranges	1 (±10V)
Best Potential Resolution	0.3mV
Accuracy	0.03% FSR



Key Benefits:

- High power potentiostat galvanostat (up to 5 A)
- Data acquisition speed: 250k samples per second
- EZware software controls auxiliary digital and analog I/O, thermocouple inputs, frequency counter and digital synchronization
- Performs Step Impedance Spectroscopy (SIS) and Electrochemical impedance spectroscopy (EIS)

Powerstat-05 Specifications

(Continued)

EIS Measurement	
Frequency Range	10mHz - 10kHz
Potentiostat Mode	
Max Applied AC amplitude	20mV
AC Applied Potential Resolution	0.6uV
Min Applied AC amplitude	60uV
AC Current Best Resolution	150uA at $\pm 5A$.37uA at $\pm 10mA$ 3.7nA at $\pm 100uA$ 37pA at $\pm 1uA$
Galvanostat Mode	
Max AC amplitude	maximum selected current range
AC Applied Current Resolution	150uA at $\pm 5A$.37uA at $\pm 10mA$ 3.7nA at $\pm 100uA$ 37pA at $\pm 1uA$
AC Voltage Range	1 ($\pm 10V$)
AC Voltage Best Resolution	300uV
iR Compensation	
Mode:	Current interrupt
Min Interrupt time:	8us
Max Interrupt time:	800s
AUX inputs outputs	
Analog Input for AUX Potentiostat Control	$\pm 10V$
2 Digital Outputs	$\pm 10mA$ MAX current sink
Thermocouple input	2
Frequency counter	1
External Trigger Input/Output	1
Data Acquisition	
Acquisition Speed	250 k samples/s (Aggregate) 125 k samples/s/ch. (min 2 channels)
DAC Resolution	16 bits



About NuVant Systems Inc.

NuVant Systems is a worldwide provider of electrochemical instrumentation for academicians, industries, and national laboratories. We customize electronics for analysis, reconditioning and de-energizing of batteries for aftermarkets, repurposing, and end-of-life recycling. NuVant empowers small businesses and large vehicle fleets to improve energy storage device lifecycles, bringing electrochemistry to the streets. By integrating electronics and chemistry, we offer a scientific approach to success in the renewable energy market.

Disclaimer: All statements of accuracy and precision are based on the assumption that the end-user is in a noise free environment. Users have the option to prepare their own Faraday cages if needed