

Powerstat-05 Specifications

Powerstat-05 is equipped with a modern high performance differential electrometer.

General Cell Control

Compliance Voltage	±15 V
Max Output Current	±5 A
Rise Time	25 µs for 1 Ohm load (0%-100% signal)
Slew Rate	1.6 V/µs
Bandwidth	10 kHz (-3 dB, 1 Ohm load)
Applied DC Potential Ranges	1 (±10 V)
Applied Potential Resolution	0.3 mV
Applied Potential Accuracy	< 0.04% FSR
Current Autoranging	In Galvanostat Mode
Applied DC Current Ranges	4 (±1 µA, ±100 µA, ±10 mA, ±5 A)
Best Applied Current Resolution	.3 µA, 0.003% of FSR
Applied Current Accuracy	0.03% of FSR
Input Impedance	250 GOhm parallel to 8 pf
Maximum Update Rate	0.36 µs
Maximum Scan Rate	100 V/s
External Control	1 AO, 1 AI, 2 DO

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	2 pA

Potentiostat Mode Current Measurement

Current Ranges	4(±1µA, ±100µA, ±10mA, ±5A)
Potentiostat Min to Max Measured Current	0.3nA to 5A
	150µA at ±5A
Best Current Resolution	0.3µA at ±10mA 3nA at ±100µA 30pA at ±1µA
Best Current Accuracy	0.3 - 0.03% of FSR Depending on Range

Galvanostat Mode Control

Applied DC Current Ranges	4(±1uA, ±100uA, ±10mA, ±5A)
	150uA at ±5A
Applied Current Resolution by Range	0.3uA at ±10mA
	3nA at ±100uA
	30pA at ±1uA
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

EIS Measurement

Frequency Range	10mHz - 10kHz
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Potentiostat Mode

Max Applied AC amplitude	20mV
AC Applied Potential Resolution	0.6uV
Min Applied AC amplitude	60uV
	150uA at ±5A
AC Current Best Resolution	0.3uA at ±10mA
	3nA at ±100uA
	30pA at ±1uA

Galvanostat Mode

Max AC amplitude	maximum selected current range
	150uA at ±5A
AC Applied Current Resolution	0.3uA at ±10mA
	3nA at ±100uA
	30pA at ±1uA
AC Voltage Range	1 (±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	±10V
2 Digital Outputs	±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

http://nuvant.com/products/potentiostat_galvanostat/powerstat/