



*Redefining Electrochemical Measurement*

## Specifications for Gamry Potentiostats

We specify our Potentiostats conservatively, so you can be sure that your Gamry Potentiostat will meet these specifications in any Windows-compatible computer anywhere in the world.

	<u>Reference 600</u>	<u>Series G 750</u>	<u>Series G 300</u>
Potentiostat	Yes	Yes	Yes
Galvanostat	Yes	Yes	Yes
Zero Resistance Ammeter	Yes	Yes	Yes
Cell Connections	2, 3, or 4	2, 3, or 4	2, 3, or 4
Floating (Isolated from earth)	Yes	Yes	Yes
<b>SYSTEM</b>			
Max. Current	±600 mA	±750 mA	±300 mA
Current Ranges	11 (60pA-600mA)	9 (7.5nA-750mA)	9 (3nA-300mA)
Current Ranges (with internal gain applied)	13(600 fA-600mA)	11 (75 pA-750mA)	11 (30 pA-300mA)
Min. Voltage Resolution	1 µV	1 µV	1 µV
Min. Current Resolution	20 aA	2.5 fA	1 fA
Max. Applied Potential	±11 V	±8 V	±11 V
Rise Time	<250 ns	<2 µs	<2 µs
Noise and Ripple	<10 µV rms	<20 µV rms	<20 µV rms
Min. Time Base	3.333 µs	50 µs	50 µs
Max. Time Base	715 s	600 s	600 s
Min. Potential Step	12.5 µV	12.5 µV	12.5 µV
Analog/Digital Converters	16 bit	16 bit	16 bit
Max. Data Points Per Experiment	262,143	262,143	262,143
<b>EIS MEASUREMENT</b>			
Frequency Range	10 µHz – 1 MHz	10 µHz-300 kHz	10 µHz-300 kHz
Impedance Accuracy	See Accuracy Contour Plot		
Max AC Amplitude	1425 mV rms	3600 mV rms	3600 mV rms
Min AC Amplitude	2.75 µV rms	55 µV rms	55 µV rms
<b>CONTROL AMP</b>			
Compliance Voltage	>±22 V	>±12 V	>±20 V
Output Current	>±600 mA	>±750 mA	>±300 mA
Speed Settings	5	4	4
Unity Gain Bandwidth (typical)	980, 260, 40, 4, 0.4 kHz	200, 100, 40, 6 kHz	200, 100, 40, 6 kHz

	<b><u>Reference 600</u></b>	<b><u>Series G 750</u></b>	<b><u>Series G 300</u></b>
<b>ELECTROMETER</b>			
Input Impedance	>10 <sup>14</sup> Ω	>10 <sup>12</sup> Ω	>10 <sup>12</sup> Ω
Input Current	<10 pA	<10 pA	<10 pA
Bandwidth (-3dB) (typical)	> 15 MHz	>4 MHz	>4 MHz
Common Mode Rejection Ratio	>80 dB (3 Hz), >60 dB (1 MHz)	>80 dB (3 Hz), >60 dB (100 kHz)	>80 dB (3 Hz), >60 dB (100 kHz)
<b>APPLIED POTENTIAL</b>			
Accuracy	± 1 mV ±0.2 % of setting	± 2 mV ±0.2 % of setting	± 2 mV ±0.2 % of setting
Resolution	12.5 μV, 50 μV, 200 μV/bit	12.5 μV, 50 μV, 200 μV/bit	12.5 μV, 50 μV, 200 μV/bit
Drift	<20 μV/°C	<30 μV/°C	<30 μV/°C
Potential Scan Range	±0.4 V, ±1.6 V, ±6.4V	±0.4 V, ±1.6 V, ±6.4 V	±0.4 V, ±1.6 V, ±6.4 V
<b>MEASURED POTENTIAL</b>			
Accuracy	± 1 mV ±0.3% of reading	± 1 mV ±0.3% of reading	± 1 mV ±0.3% of reading
Full-Scale Ranges	12 V, 3 V, 300 mV, 30 mV	30 V, 3 V, 300 mV, 30 mV	30 V, 3 V, 300 mV, 30 mV
Resolution	400 μV, 100 μV, 10 μV, 1 μV/bit	1 mV, 100 μV, 10 μV, 1 μV/bit	1 mV, 100 μV, 10 μV, 1 μV/bit
Offset Range	±10 V	±12V	±12 V
<b>APPLIED CURRENT</b>			
Accuracy	±10 pA ±0.3 % of setting	±10 pA ±0.3 % of setting	±10 pA ±0.3 % of setting
Resolution	0.0033 % full-scale/bit	0.0033 % full scale/bit	0.0033 % full scale/bit
<b>MEASURED CURRENT</b>			
Accuracy	±0.3% range ± 10 pA	±0.3% range ± 50 pA	±0.3% range ± 50 pA
Resolution	0.0033 % full-scale/bit	0.0033 % full-scale/bit	0.0033 % full-scale/bit
Bandwidth (-3dB)	>10 MHz (600 mA-600 μA)	>500 kHz (750 μA-750 mA)	>500 kHz (300 μA-300 mA)
<b>Note: Bandwidth is current range dependent</b>	>1.5 MHz (60 μA) >0.15 MHz (6 μA)	>100 kHz (75μA), >10 Hz (7.5nA)	>100 kHz (30μA),>10 Hz(3nA)
Stability Settings	4	3	3
Post Offset Gain	1, 10, 100	0.1, 1, 10, 100	0.1, 1, 10, 100
Offset Range	±1X full-scale	±2X full-scale	±2X full-scale

	<b><u>Reference 600</u></b>	<b><u>Series G 750</u></b>	<b><u>Series G 300</u></b>
<b>iR COMPENSATION</b>			
Mode	Current Interrupt and	Positive Feedback	
Minimum interrupt time	33 $\mu$ s	30 $\mu$ s	30 $\mu$ s
Maximum interrupt time	715 s	64 ms	64 ms
<b>AUXILIARY A/D INPUT</b>			
Range	$\pm 3$ V	$\pm 3$ V	$\pm 3$ V
Resolution	0.1 mV	0.1 mV	0.1 mV
Input Impedance	>100 k $\Omega$ or 10 G $\Omega$	>25 k $\Omega$	>25 k $\Omega$
<b>AUXILIARY D/A OUTPUT</b>			
Range	0-4 V	$\pm 5$ V or 0-10 V	$\pm 5$ V or 0-10 V
Resolution	1 mV	2.5 mV	2.5 mV
<b>WEIGHT</b>			
	3 kg	1 kg	1 kg
<b>DIMENSIONS</b>			
	10 (W) x 20 (H) x 30 (D) cm	2 10 x 25 cm PCI Printed Circuit Boards	2 10 x 25 cm PCI Printed Circuit Boards

