NuVant Systems Inc.
Pioneering Electrochemical Technologies

130 N. West Street
Crown Point, Indiana 46307
Phone: (219) 644-3231
www.nuvant.com

Duostat Specifications

A Bipotentiostat

Cell Control	
Compliance Voltage	±25 V
Max Output Current	Working Electrode 1 (WE1, Disc) ±1 A, Working Electrode 2 (WE2, Ring) ±2 mA
Rise Time	45 µs for 1 Ohm load (0%-100% signal)
Slew Rate	0.2 V/µs
Bandwidth	8 kHz (-3 dB, 1 Ohm load)
Applied DC Potential Ranges	1, Disc (±10 V) 1, Ring (±5 V)
Applied Potential Resolution	0.3 mV, Both Electrodes
Applied Potential Accuracy	< 0.04% Full Scale Range (FSR), Both Electrodes
Current Autoranging	In Galvanostat Mode
Applied DC Current Ranges	4 (±1 µA, ±100 µA, ±10 mA, ±1 A)
Working Electrode 1 Applied Current Resolution by Range	±1 µA: 60 pA (0.0030% of FSR), ±100 µA: 6 nA (0.0030% of FSR), ±10 mA: 610 nA (0.0030% of FSR), ±1 A: 34 µA (0.0034% of FSR)
Working Electrode 1 Applied Current Accuracy by Range	±1 µA: 0.032% of FSR, ±100 µA: 0.032% of FSR, ±10 mA: 0.032% of FSR, ±1 A: 0.034% of FSR
Input Bias Current	500 pA
Input Impedance	250 GΩ parallel to 3 pf
Maximum Update Rate	4 µs
Maximum Scan Rate	100 V/s
IR Compensation	Manual, Potentiostat Mode 10 mA - 1 A Range
External Control	1 AO, 1 AI, 2 DO
Potential Measurement	
Measured DC Potential Ranges	2 (±50 mV, ±10 V) Autoranging
Resolution	3 µV, 300 µV (0.006%, 0.003% of FSR)
Accuracy	0.08 or 0.03% of FSR
Current Measurement	
Measured Current Ranges	Galvanostat WE1: 4 (±1 µA, ±100 µA, ±10 mA, ±1 A) Potentiostat WE1: 4 (±1 µA, ±100 µA, ±10 mA, ±1 A) Potentiostat WE2: 3 (±1 µA, ±100 µA, ±2 mA)
Potentiostat Min to Max	Electrode 1: 3 nA to 1 A Electrode 2: 3 nA to 2 mA

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Resolution by Range	Galvanostat: ±10 µA: 60 pA (0.0030% of FSR), ±100 µA: 6 nA (0.0030% of FSR), ±10 mA: 610 nA (0.0030% of FSR), ±1 A: 34 µA (0.0034% of FSR) Potentiostat WE1: ±1 µA: 60 pA (0.061% of FSR), ±100 µA: 6 nA (0.0067% of FSR), ±10 mA: 610 nA (0.0061% of FSR), ±1 A: 34 µA (0.0034% of FSR) Potentiostat WE2: ±1 µA: 60 pA (0.006% of FSR), ±100 µA: 6 nA (0.006% of FSR), ±2 mA: 120 nA (0.006% of FSR)
Accuracy by Range	Galvanostat: ±1 µA: 0.031% of FSR, ±100 µA: 0.031% of FSR, ±10 mA: 0.031% of FSR, ±1 A: 0.034% of FSR, Potentiostat WE1: ±1 µA: 0.34% of FSR, ±100 µA: 0.050% of FSR, ±10 mA: 0.047% of FSR, ±1 A: 0.033% of FSR, Potentiostat WE2: ±1 µA: 0.05% of FSR, ±100 µA: 0.05% of FSR, ±2 mA: 0.05% of FSR,
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/duostat/