



ECi-100 is a professional potentiostat/galvanostat with a small form factor, perfect for electrochemical catalyst characterization and other standardized experiments.

Power Amplifier	
Voltage Compliance	±15V
Current Compliance	±200mA
Bandwidth	Max 3MHz
Stability Settings	8 settings: 3MHz, 300kHz, 30kHz, ...
Slew Rate	>15V per μ s typical (no load)
Rise Time (-1.0V to +1.0V)	<350 ns (no load)

Voltage Control (potentiostat mode for both electrodes. Cell mode for WE)	
Applied Voltage Range	±10V
Applied Voltage Resolution	for ±10V signal = 300 μ V
Applied Voltage Accuracy	±0.2% of value ±2mV
Maximum Scan Rate	50 V/s
Maximum Scan Range	±10V / 300 μ V (16bit)

Current Control (galvanostat mode)	
Applied Current Range	±5x full scale (depends on range selected) ±200mA;
Applied Current Resolution	±1/32,000 x 5 x full scale
Applied Current Accuracy	±0.2% of reading, ±0.2% of range
Max. Current Range/Resolution	±2A / 600 μ A
Min. Current Range/Resolution	±1nA / 15pA

Electrometer	
Max. Input Range	±10V
Bandwidth	≥1MHz (3dB)
Input Impedance	≥10 ¹² Ω in parallel with ≤5pF (typical)
Leakage Current	≤5pA at less than 25°C
CMRR	60 dB at 100kHz (typical)

Data Acquisition	
DAQ Card	NI-6003
AI Resolution	16bit
AI Sampling rate(samples per second) Single Channel ADC Multiplexing of up to 8 channels	100k 100k
AO Resolution	16bit
AO Sampling rate (samples per second)	5k

Voltage Measurement	
Voltage Range	±10V
Resolution	<0,01mV using oversampling
Voltage Accuracy	±0.2% of reading, ±2mV

Linear Current Measurement	
Current Modes	Set maximum output current: 4 modes: 1A, 10mA, 100uA, 1uA
Current Ranges	4 ranges: Current mode x Range Setting Changing the current range does not affect the IR-compensation. 1A mode: 1A (500mA max/100mA) to 1mA 10mA mode: 10mA (50mA max.) to 10uA 100uA mode: 100uA (500uA max.) to 100nA 1uA mode: 1uA (5uA max.) to 1nA
Current Resolution	0.01% of current range using oversampling
Current Accuracy (DC)	20 nA to 2A: ±0.2% of reading, ±0.2% of range 100pA: <0.5% ±20pA

Logarithmic Current Measurement	
Current Range	100pA to 20mA
Current Accuracy (DC)	1% over full range

Impedance (EIS)	
Mode	Potentiostat/Galvanostatic/Cell
Frequency Ranges	1mHz to 1 MHz (based on DAQ card)
Minimum AC Voltage Amplitude	0.1mV RMS
Sweep	Linear or Logarithmic

iR Compensation	
Positive Feedback	Yes, analogue Post measure IR-correction is also available.

Interfaces	
Analog Voltage Output (included as standard)	±10V range, max ±10mA, output impedance 1kΩ BNC connector (for stirrers, rotating disk electrode etc.)
Digital inputs (optional)	3
Digital Outputs (optional)	3 Output
Auxiliary Voltage/Current Input for multi electrode measurements. (Optional)	Voltage: 4 signals vs sense or 4 signals measured differentially. ±10V range.
PC / Software	
Communications Interface	Universal Serial Bus (USB)
Operating System	Windows® XP, Vista, 7 and 8,10,11 (64-bit & 32-bit)
PC Specification (minimum)	Pentium® 4 (1GHz) / 2 GB memory
Software	EC4™u suite(EC4™DAQ and EC4™View) National Instruments® LabVIEW® 2013 Runtime-Engine

General	
Power	DC: 12-18 V,
Dimensions(L x W x H)	appr. 200 x 121 x 33mm
Weight	appr. 0.5 kg
Operating Temperature Range	10°C to 50°C
Humidity	Maximum 80% non-condensing
Temperature (specified)	25°C
Internal Dummy Cell	No
CE marking	Yes Compliance with the following regulations: 2004/108/EC (EMC) 2002/95/EEC (RoHS)



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