



IviumNstat

Multichannel potentiostat

**More for less:
The first affordable multi-channel
high performance instrument!**



- Batteries
- Fuel cells
- Electrode development
- Biotechnology
- Corrosion

**Up to 8 channels per frame
Stackable up to 8 frames with 64 channels**

Each channel with integrated impedance analyser!

IviumNstat:

- 1-8 channels per frame, stackable up to 64 channels
- Independent floating operation
- Modules encapsulated for easy handling
- 2-mode software:
 - IviumSoft: for independent operation per channel*
 - IviumNcontrol: synchronous control of multiple channels*

S-module:

- $\pm 2.5 \text{ A} @ \pm 10 \text{ V}$
- Each channel with integrated impedance analyser: $10 \mu\text{Hz}$ to 250 kHz
- Data acquisition rate: 100 kHz
- Current ranges $10 \text{ nA} - 10 \text{ A}$; min. resolution: 1 pA
- Peripheral analog/digital channels

**System Performance**

4 Electrodes	WE, CE, RE and S
Current compliance	±2.5 A
Maximum output Voltage	± 10 V below 1A and ±8 V up to 2.5 A
Potentiostat Bandwidth	250 kHz
Stability settings	High Speed, Standard, and High Stability
Programmable response filter	1 MHz , 100 kHz , 10 kHz , 1 kHz , 10 Hz
Signal acquisition	dual channel 16 bit ADC, 100.000 samples/sec

Potentiostat

Applied potential range	±10 V, with 0.33 mV resolution
Applied potential accuracy	0.2%, or 2 mV
Current ranges	±10 nA to ±10 A in 10 steps
Measured current resolution	0.015% of current range, minimum 1 pA

Galvanostat

Applied current resolution	0.33% of applied current range
Applied current accuracy	0.2%
Potential ranges	±10 mV, ±100 mV, ±1 V, ±10 V
Measured potential resolution	0.038% of potential range, minimum 3 uV

Impedance Analyser

Frequency range	10µHz to 250 kHz
Amplitude	0.015mV to 1.0V, or 0.03% to 100% of current range
DC offset	16 bit dc offset subtraction, and 2 dc-decoupling filters

Electrometer

Input impedance	>1000 Gohm // <8pF
Input bias current	<10 pA
Bandwidth	>1 MHz

Peripheral connections

2 Analog in	0 to +5.000 V, 16 bits resolution, bandwidth 40 kHz
1 analog out	0 to +4.096 V, 16 bits resolution
1 Digital inputs, and 3 Digital outputs	0 to +5 V
I-out, and E-out	analog monitor for cell current and potential
Ain	To apply analog external signals to cell
AC-out	±0.5 V sinewave 10µHz-250kHz with variable attenuation
Channel-X, and Channel-Y inputs	±4 V: to record impedance from peripheral devices

Environment

Size	w x d x h = 3 x 35 x 13 cm
Weight	0.7 kg
PC requirements	Windows XP or Vista, with free USB port

Specifications: IviumNstat main frame

Slot positions	8 (can mount up to 8 S- or B-modules)
Common connectors	GND and combined emergency off control monitor
Power requirements	100-240 V, 47-63 Hz, 300 W
Interfacing	USB 1.1 or 2.0 compliant
Size	w x d x h = 47 x 36 x 14 cm
Weight	6.2 kg (no modules) 11.8 (with 8 modules)

Power booster

B-module: power booster	±5 A ±10 V power booster for S-module Available Q2 of 2010
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