demoSTAT

Smart introduction to electrochemical instrumentation

- Potentiostat - Galvanostat - Impedance analyser

- Compliance: ±5mA @ ±3V

- Impedance: 10µHz to 100kHz

- Performs all conventional electrochemical techniques, including EIS!

- Small size: 95 x 60 x 8mm

Applications:
- Demonstration and feasibility
- Training and education

demoSTAT-lite: €300

demoSTAT-pro: €900

Low risk investment: First try out demoSTAT-lite, that is limited to scans of short duration. After the performance has been confirmed, upgrade to demoSTAT-pro that has no limitations!

Direct route to professional instrumentation: method & datafiles are directly compatible with the professional Ivium Instruments, for a seamless progression to research grade work: better accuracy and wider dynamic range.

Specifications

- 3 electrodes: WE,CE,RE via M3 screw terminals
  - Compliance: 5mA@3V (2mA@6V)
  - Potentiostat: ±2V applied range, resolution: 1mV
  - Galvanostat: ±2mA applied range, resolution: 0.1% of range
- 2 peripherals: (pro only)
  - 1 Analog input, ±5V with 0.15mV resolution
  - 1 Digital output, 0/3.3V
- 4 current ranges: 1mA...1µA
- Measured potential: ±5V, 0.15mV resolution
- Measured current: ±5*CR, 0.015% resolution down to 150pA
- Accuracy: 0.1% of range +0.5% of value
- Bandwidth for 1kOhm cell at CR=1mA: 150kHz; risetime 5µs
- Impedance:
  - Frequency range 10µHz to 100kHz
  - Fixed 25mV potentiostatic amplitude, or 0.025*CR galvanostatic amplitude
  - Error below 1%, 1deg for 20Ohm-10kOhm Cells in 10µHz to 10kHz range
- Reference electrode: input impedance 100GOhm//150pF, DC bias < 10pA
- USB powered, via USB-C cable
- Dimensions: 95x60x8mm, 50g
- Requirement: Windows 10 PC, with free USB port

Performance:

- Acquisition 2x16bit up to 100,000 datapoints /second
- Scan duration:
  - demoSTAT: DC limited to 60s duration or 100 points/scan; EIS max 10 points/scan.
  - demoSTAT-pro: no limits

Shipment includes:

- demoSTAT instrument, 1 year warranty
- IviumSoft software license
- 3 electrode cable leads 25cm, screw terminal M3 / alligator clips
- USB-C cable, 1m

List of supported Electrochemical Techniques:		
Linear Sweep Voltammetry	ChronoAmperometry	ElectroChemicalNoise
Linear Sweep Currentaveraging	ChronoPotentiometry	CycliScan
Linear Sweep Potentiometry	MixedMode	Amperometric Detection
Cyclic Voltammetry	Eoc Monitor	Differential Pulse Voltammetry
Cyclic Voltammetry Currentav.	Polarization Resistance	Square Wave Voltammetry
Cyclic Potentiometry	Tafel Plot	Normal Pulse Voltammetry
Impedance Constant E	PotentioDynamic	AC Voltammetry
Impedance Constant I	Cyclic Polarization	AC Detection
Impedance Potentialscan	Galvanic Corrosion	Pot. Stripping Voltamm.
Impedance Currentscan	Corrosion Rate Monitor	Voltammetric Pulse Builder