



530

250V 10mA Dielectric Potentiostat



Features – 530

- 250 Volt / 10 mA bias capability
- 100 μ V / 10 fA resolution
- Fully floating output connection
- Display readout
- Front panel or PC operation
- Small and compact size – < 3kg
- High impedance spectroscopy measurement to $10^{12} \Omega$ with optional MM520



Accurate integrated operation

The 530 manages complex experiments usually performed by a mix of instrumentation: the source, the femto-ammeter and other components are integrated into a single unit for more accurate and defined performance.

Wider operating range

Achieve a clear understanding of the electrochemical process by extending the bias limits to the levels not seen in the market

Easily fits into a dry box

Compact and portable the 530 is small enough to fit into the space near your sample, achieving lower noise and higher accuracy

Fully floating output

Allows connection to grounded cells and/or potentiostat in series

Software included

VoltaScope software included with the 530, intuitively simple, includes the common electrochemical techniques and a user-friendly graphical interface

The MaterialsM 530 is a **high voltage dielectric potentiostat / galvanostat** of high accuracy and resolution designed specifically for materials research applications in both academia and industry.

This new and innovative design from our engineers, extends the limits and features of dielectric interfaces and sets a new standard by which others will follow. The 530 has an integrated high voltage potentiostat with a dielectric interface current measuring stage, merging DC and AC dielectric measurements never before assembled in the same single compact enclosure.

The 530 uses our all inclusive electrochemistry application software - **VoltaScope**. VoltaScope is designed to considering both the chemist and the engineer and includes all the common electrochemical

Test instrumentation for materials and energy science

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MaterialsMates Italia

Generation	
Voltage control range (pstat mode)	+/- 250 V (two electrode mode) +/- 40 V (three electrode mode)
Voltage compliance	+/- 250 V
Current output (gstat mode)	+/- 10mA – 1nA in 8 ranges
Voltage resolution	100 μ V
Current resolution	10 fA max
Accuracy	0.2 % +/- 0.1 % f.s. (1% +/- 0.5 % f.s. below 10 nA scale)
Slew rate	5V / μ S
Protection	Hardware Current limiter @ 10 mA
Measurement	
Current measure	10mA – 1 nA in 8 ranges
Current resolution	From 10 fA to 100 nA
Current Measuring accuracy	0.2 % +/- 0.1 % f.s. (1% +/- 0.5 % f.s. below 10 nA scale)
Voltage measure	+/- 250 V (WE-CE) +/- 40 V (Ref-WE)
Voltage resolution	100 μ V (WE-CE) / 10 μ V (Ref-WE)
Voltage Measuring accuracy	0.2 % +/- 0.1 % f.s.
Reference Electrodes	
Input impedance	1 Tohm
Biassing current	< 30 pA @ 25 °C
Common mode range	+/- 40 V
Common mode rejection	> 50 dB
Meters and Interfaces	
A/D resolution	22-16 bit (slow/fast mode)
Max sampling rate	1 ksamples/sec fast mode (50 samples/sec slow mode)
Communication interface	USB 1.1
Frequency response (EIS use)	
Measuring frequency range	DC- 500 KHz
Potentiostat Bandwidth	Selectable 100 KHz- 2 KHz (Hi speed/Hi stab)
Input/output signals	Mod. In Vout Iout (outputs dc-nulled)
Other features	
IR compensation	Low noise current interrupt IR compensation With automatic parameter detection
Thermocouple input	Selectable type K or T
Temperature controller	PID driven ON/OFF to a SSR
Software packs	MMulty-log data acquisition package
Drivers	Active-X optional on request
Dimensions & Sizes	
Voltage mains	115 / 230 Vac selectable
Power consumption	45 W max
Dimensions	280 x 220 x 75 mm - 2.8 Kg

About us

MaterialsM and Amel Chemistry are amongst the worlds leading electrochemistry instrumentation and test environment manufacturers operating in the scientific and industrial fields of materials and energy research. Our sales representation network covers Europe, Asia and the Americas, with an infrastructure of service and support for both instrumentation and electrochemical systems.

Accessory information

510DC/AC	20V, 1A	General purpose potentiostat (DC / AC option with EIS interface ability)
515DC/AC	5V, 5A	Intermediate power potentiostat (DC / AC option with EIS interface ability)
7050/7060	45/30V, 1.5/48A	High voltage / High Power potentiostat
520	2Mhz	Frequency response analyser
Multi	Pot/ph/Cond.	Multi-functional electrochemistry instrument
Gas factory	MF / SF	Management unit and Safety flush unit
Sample Holders	HT/RT/FC	High temperature conductivity, Room temperature and Fuel Cell options
Ovens	1KB/1KH	Horizontal and Vertical sample furnaces up to 1200°C

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