



## 515-DC

5 V / 5 A intermediate power Potentiostat



### Features – 515DC

- 5 Volt / 5 Amp
- Fully floating output connection
- High resolution measurement at PPM levels
- Display readout
- Front panel or PC operation
- Small and compact size – < 3kg
- Impedance spectroscopy with optional MM520

#### Stand alone operation

*Manage the unit with or without a PC for stand alone operations using the front panel command cluster*

#### Higher accuracy

*Achieve a clearer understanding of the electrochemical process within your sample utilising accuracy not found in other general purpose potentiostats.*

#### Easily fits into a dry box

*Compact and portable the 515 is small enough to fit into most dry boxes*

#### Fully floating output

*Allows connection to grounded cells and/or potentiostat in series*

#### Software included

*VoltaScope software included with the 515, intuitively simple, includes the common electrochemical techniques and a user-friendly graphical interface*



515 shares the same enclosure and layout as the MMulty

The MaterialsM 515 is a high accuracy, high resolution **intermediate power potentiostat / galvanostat**. The unit is designed for materials and energy research applications in both academia and industry.

Based on a new and innovative design from our engineering team, the 515 has all the electrochemical features you would expect from a high performance instrument for intermediate power applications. In particular we have designed a wide current range and a low noise measurement capability in order to increase the low end scan rate for Chrono Voltametry - ideal for corrosion applications.

The 515 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 techniques wrapped an intuitive graphical interface.

Test instrumentation for materials and energy science

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<b>Generation</b>	
Voltage control range (pstat mode)	+/- 5 V
Voltage compliance	+/- 5 V
Current output (gstat mode)	+/- 5 A – 100 nA in 8 ranges
Voltage resolution	10 $\mu$ V
Current resolution	10 pA max
Accuracy	0.2 % +/- 0.1 % f.s.
Slew rate	5V / $\mu$ S
Protection	Hardware Current limiter 2 levels 1A / 50 mA
<b>Measurement</b>	
Current measure	5A – 100 nA in 8 ranges
Current resolution	From 1 pA to 10 $\mu$ A
Current Measuring accuracy	0.1 % +/- 0.1 % f.s.
Voltage measure	+/- 10 V
Voltage resolution	10 $\mu$ V (100 $\mu$ V in manual mode)
Voltage Measuring accuracy	0.1 % +/- 0.1 % f.s.
<b>Reference Electrodes</b>	
Input impedance	1 Tohm
Biasing current	< 10 pA @ 25 °C
Common mode range	+/- 12 V
Common mode rejection	> 50 dB
<b>Meters and Interfaces</b>	
A/D resolution	22-16 bit (slow/fast mode)
Max sampling rate	1 ksample/sec fast mode (50 sample/sec slow mode)
Communication interface	USB 1.1
<b>Frequency response (EIS use)</b>	
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)
<b>Other features</b>	
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	MMulti-log data acquisition package
Drivers	Active-X optional on request
<b>Dimensions &amp; Sizes</b>	
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)
7050/7060	45/30V,1.5/48A	High voltage / High Power potentiostat
530	250V/10mA	Dielectric 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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