



510

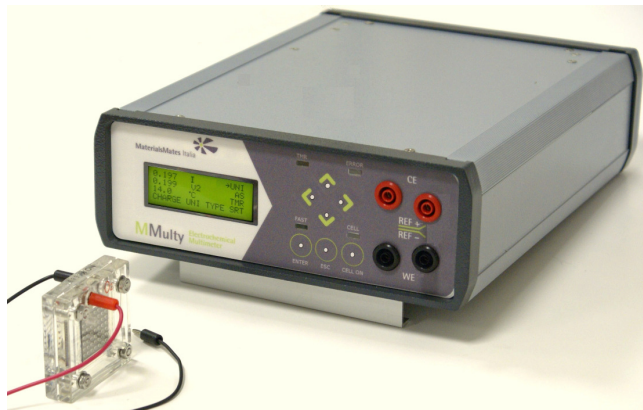
20 V 1A POTENTIOSTAT/GALVANOSTAT



MaterialsMates Italia

Features – 510DC

- 20 Volt / 1 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



510 shares the same enclosure and layout as the MMulty

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 510 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 510, intuitively simple, includes the common electrochemical techniques and a user-friendly graphical interface

The MaterialsM 510 is a high accuracy, high resolution **general purpose 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 510 has all the technical electrochemical features you would expect from a high performance instrument in a general purpose package. 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 510 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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20 V 1A POTENTIOSTAT/GALVANOSTAT



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Generation	
Voltage control range (pstat mode)	+/- 10 V
Voltage compliance	+/- 20 V
Current output (gstat mode)	+/- 1A – 100 nA in 8 ranges
Voltage resolution	10 uV
Current resolution	10 pA max
Accuracy	0.2 % +/- 0.1 % f.s.
Slew rate	5V /uS
Protection	Hardware Current limiter 2 levels 1A / 50 mA
Measurement	
Current measure	1A – 100 nA in 8 ranges
Current resolution	From 1 pA to 10 uA
Current Measuring accuracy	0.1 % +/- 0.1 % f.s.
Voltage measure	+/- 10 V
Voltage resolution	10 uV (100 uV in manual mode)
Voltage Measuring accuracy	0.1 % +/- 0.1 % f.s.
Reference Electrodes	
Input impedance	1 Tohm
Biassing current	< 10 pA @ 25 °C
Common mode range	+/- 12 V
Common mode rejection	> 50 dB
Meters and Interfaces	
A/D resolution	22-16 bit (slow/fast mode)
Max sampling rate	1 ksampl/sec fast mode (50 sample/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	20V, 1A	General purpose potentiostat (DC)
515DC	5V, 5A	Intermediate power potentiostat (DC)
7050	45V, 1.5A	High voltage potentiostat
7060	30V, 48A	High Power potentiostat
510AC	20V,1A	General purpose potentiostat with 520 Impedance interface capability
520	2Mhz	Frequency response analyser
Multi	Pot/ph/Cond.	Multi-functional electrochemistry instrument

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