ModuLab® XM ECS
Xtreme Measurement

solartron analytical

corrosion and coatings

Corrosion & Coatings

Linear Polarization Resistance | Electrochemical noise | Tafel
Potentiodynamic | Galvanodynamic | Zero Resistance Ammeter

the XM difference

- ***Market leading impedance analysis***
- ***Widest voltage and current range available***
- ***Harmonics and multi-sine over full frequency range***

The latest generation ModuLab® XM ECS system is designed with modularity and flexibility very much in mind, to satisfy a wide range of applications. Purpose built for energy research the ModuLab XM provides:

- High-performance impedance analysis throughout the entire frequency range and across all three modes of operation
  - Swept sine (highest accuracy and repeatability)
  - Multi-sine/FFT (for increased test throughput especially at low frequency)
  - Harmonic analysis (to study cell non-linearity)
- Unique 100 V compliance and polarization enables potentiostatic and galvanostatic tests on specialized corrosion and coatings materials
- Multi-component system calibration for ensured measurement accuracy
- Market leading frequency range and resolution (1 in 65,000,000)
- Smooth ‘analog’ ramp waveforms to minimize cell disturbance during LPR and CV tests
- Wide current measurement range (over 16 decades from 0.15 fA to 2 A), allows testing of the most demanding corrosion coatings and high impedance cells
- Electrochemical noise experiments are available using Zero Resistance Ammeter, fast time domain measurement and floating electrodes (which also allows connection to grounded systems including – pipelines, tanks and autoclaves).
- User friendly software with simple three step test setup/run, built-in live waveform displays, connection diagrams and equivalent circuit/Tafel fit functions
- Plug and Play option modules and additional channels to minimize system down time

AMETEK

Accessories

Corrosion Cell

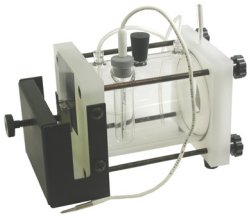
The cell permits a series of metal specimens and liquid environments to be tested quickly and uniformly. Most of the common electrochemical techniques for corrosion testing can be employed under aggressive conditions (except for HF) and at ambient or elevated temperatures.

Tait Cell

The Tait Cell was developed to address coatings/corrosion studies on flat specimens where the electrolyte under study cannot support a standard reference electrode. The cell was developed to accept a wide range of working electrode shapes and sizes eliminating the need for machining or special mechanical preparation of the sample.

Flat Cell

The practical design of the Flat Cell makes it simple to use for corrosion and/or coatings research. It can accommodate a wide range of electrode sizes, eliminating the need for machining or special mechanical procedures.



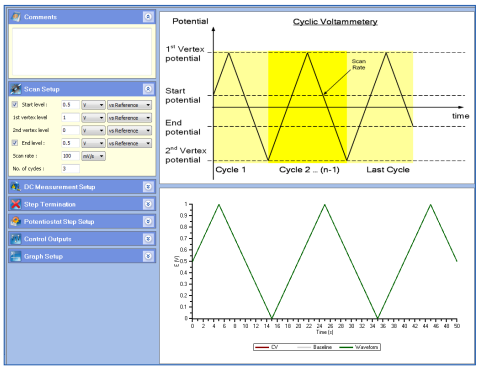
Software

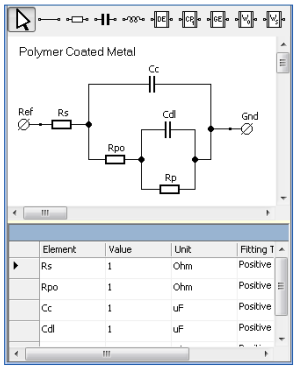
ModuLab XM ECS software is a very flexible and comprehensive electrochemical test software package. A large selection of test types are provided, from standard open circuit and cyclic voltammetry to complete multi-step sequences. This can include sample preparation, potentiostatic/galvanostatic, ramp and pulse techniques, and integrated impedance analysis.

As test parameters are entered into the software, a waveform diagram displays the timing and levels that will be applied to the cell when the test is run.

Equivalent circuit models may be constructed using a range of components including resistors, capacitors, inductors, distributed elements, constant phase elements, Gerischer elements, and Warburg open / short elements.

A built-in report generator takes test results and outputs them, together with graphs, diagrams and analysis information into your selected word processor software.





Europe

Unit 1 Armstrong Mall
Southwood Business Park
Farnborough
Hampshire GU14 ONR UK

Tel: +44 (0)1252 556800

Fax: +44 (0)1252 556899

USA

801 South Illinois Avenue
Oak Ridge
TN 37831-0895 USA

Tel: (865) 425-1289
or (865) 482-4411

Fax: (865) 481-2410

Please see our website for a complete list of our global offices and authorized agents

solartron analytical

www.solartronanalytical.com
solartron.info@ametek.com

AMETEK®

0514 RevA