

CHEMICAL AND PHYSICAL CHARACTERIZATION

Specifications

Compliance voltage range in volt
30

Current resolution
0.0003 % (of current range)

Input impedance in Ohm
1 TOhm

Maximum bandwidth in Hz
1 MHz

Maximum current in ampère
2

Maximum number of channels
1

Maximum number of modules
8

Modular instrument
Up to 4 connections - EIS Module FRA32M

Number of current ranges
9.0

Number of current ranges remarks
10 nA to 1 A

Potential and current accuracy
0.2 % or 0.2 % of current range

Potential range in volt
10

Potential resolution
0.3 μ V (gain 1000)

Electrochemical analyser

Potentiostat/galvanostat PGSTAT 302N

The potentiostat/galvanostat PGSTAT 302N permits the study of the electrochemical properties of metallic materials and coatings: it allows to test the corrosion resistance of the samples in different environmental conditions.

In potentiostatic mode, a potentiostat/galvanostat (PGSTAT) will accurately control the potential of the Counter Electrode (CE) against the Working Electrode (WE, tested material) so that the potential difference between the working electrode and the Reference Electrode is well defined, and corresponds to the value specified by the user.

In galvanostatic mode, the current flow between the WE and the CE is controlled. The potential difference between the RE and WE and the current flowing between the CE and WE are continuously monitored.

The value specified by the user is accurately controlled anytime during the measurement by using a negative feedback mechanism.

Thanks to the additional module (FRA32M), it is furthermore possible to perform electrochemical impedance spectroscopy (EIS).

