



Overview

Potentiostat, Galvanostat

- Portable
- Computerized
- For test and education purpose

Description

The **PguEducation** is the new potentiostat/galvanostat for schooling purpose to discover the world of electrochemical measurements and make first experiences with this subject. Also intermediate learners can do experiments and measurements with this tiny unit.

When connecting the **PguEducation** with a computer running our **EcmWin** Software it behaves like a normal potentiostat. Performing OCP, Constant value, Scan and Pulse measurements are supported. EIS or ECN are not feasible with this device.

A maximal current of 50mA some realistic measurements can be carried out. In cases a higher current is required you can also reduce the sample size to be inside of the possible current. With 6 ranges, the lowest current range is 1 μ A. It is obvious that the resolution and the accuracy of a professional device cannot be reached in this range. Nevertheless also measurement can be done in this range.

With a compliance voltage of +- 10V and a polarization range of +-5V, the device is ideal for teaching and training. Moreover it is able to introduce in the typical nature of electrochemical measurements.

Equipment

- 4-pole circular connector for connection the electrodes (RE, WE, CE and GND).
- Power consumption 2-3 W
- USB and Ethernet for connection to computer
- Computer performs measurements and stores the results
- 12V Power Supply



Technical Details

Supply voltage	4.5...18 V DC (Power supply 9V)
Modes	Potentiostat/Galvanostat
Electrode connections	2, 3 electrode (CE, RE, WE)
Floating mode	Yes
Compliance voltage	±10V
Maximum current	±50 mA
Polarization ranges	± 5 V potentiostatic, ±50 mA galvanostatic
Current ranges	6 ranges from 50 mA to 1 µA
Resolution	10 µA=10000 mV in 1 µA range, 100 pA = 1 mV
Electrometer input impedance RE	10 ¹³ Ω
ADC	24 bit,
DAC	26 bit
Accuracy of setvalue	< ±3 mV, ±0,5 %
Accuracy of measurement	< ±3 mV, ±0,5 %
Sample rate	300 Hz at 24 bit, 1000Hz at 18 bit
Interface	USB, Ethernet
Software	EcmWin, EcmView
Measurement	OCP, hold experiments, reversed scan cyclic voltammetry, chronoamperometry, sequence measurement with battery charging and discharging functions, measurement current density versus time, current density versus potential
Dimensions (L x W x H) in mm	120 x 120 x 550
Weight (kg)	0,9