

PGU10/20V-1/2A-(E)



PGU20V-2A-E

Overview

- Potentiostat, galvanostat
- manual operation
- Control in- and outputs for external polarization voltage
- fully automatic operation with built-in interface
- Main power: 115V / 230V

Description

The PGU-devices with 10V or 20V compliance voltage and a current of 1A or 2A are the base of our PGU- laboratory instruments. The setups of the devices are in principal similar. The differences in the output data are steps to select an instrument depending on the budget and on the requirements. If you have a job, which need a higher compliance voltage, for example at complete battery, you will select an instrument with a higher compliance and a higher polarization voltage. If you only have to test single cells, a standard instrument with 10V compliance and polarization voltage is sufficient. The E-version has two more current ranges than the versions without an "E". With this, you have a better resolution of the current.

The design is modular and gives the choice to manufacture several types from one basic instrument. All PGU xxV-xA can work in manual mode. With a build-in interface and our EcmWin software, the usual standard measurement methods can be performed. Moreover with according extensions, the methods impedance and electrochemical noise can also be operated.

Technical Details

Compliance voltage	$\pm 12V$ or $\pm 25V$ / $\pm 1A$ or $\pm 2A$
Polarization range	$\pm 10V$ (potentiostat) / $\pm 1A$ or $\pm 2A$ (galvanostat)
Current ranges	6/8 ranges from 1A/2A to ... 100nA
Resolution	100nA = 10000mV in the 100nA range, 10pA = 1mV
Input resistance RE	$10^{13}\Omega$
Measurement outputs	Potential, current, current with 40Hz filter, current with x10 amplifier
Inputs	2 BNC connectors for external nominal potential

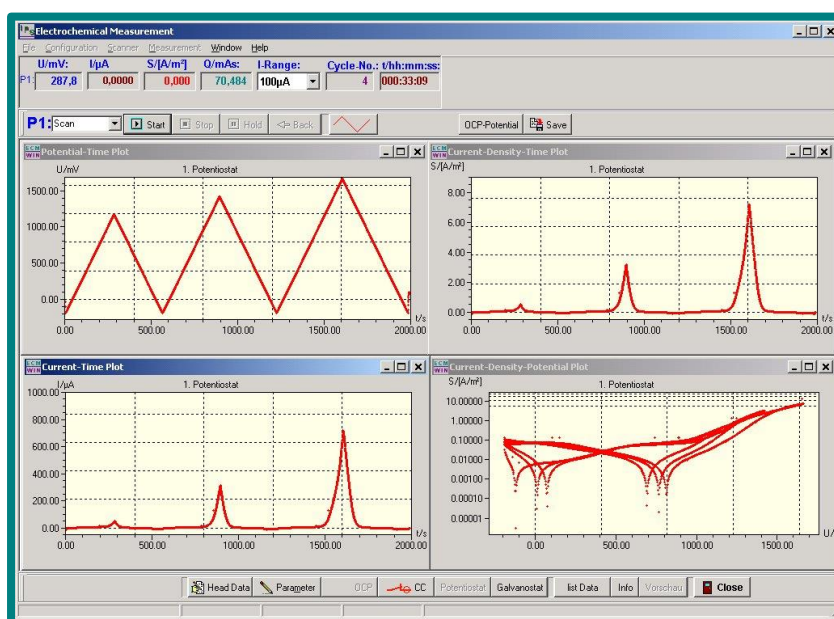
Connection

Special for the use in teaching mode, these devices give more information about the running processes. All events can read similar from the front panel of instrument and at the software window if this is in use.

The measurement can automate with our **EcmWin** software. Methods are OCP, Hold experiment, Linear and cyclic Sweep (Potentiostat and Galvanostat), Puls measurement (Potentiostat and Galvanostat), Limit control for return or switch off on reaching a limit point, Measuring of electrochemical noise (it's depending on the hardware), Measuring at rotating disc or ring-disc electrodes (if available), Sequence measurement.

The following picture shows a typical window with a CV measurement. All values are shown as digital meters with the correct units. On changing the current range, the unit will actualized in the display. To normalize the potential, a correction value can set, to calculate the current density, the size of the surface can entered. Additional to the digital meters, the values are displayed in a graphical display during the measurement. The scaling will set automatically during measurement.

The operation modes OCP/closed circuit or Potentiostat/Galvanostat can set manually or will set automatically as programmed during measurement.



Dialog CV-measurement (EcmWin)

All experiments can be performed with limit value monitoring. The recorded data is stored in ASCII format for further processing. The collection and storage of data runs at a maximum. 1000 values / sec per channel.

Evaluation of the standard measurement is performed using our **EcmView** software.