

## ⇒ Description

Coulometry is a direct method of measurement with the potential of being primary. The presented equipment consisting of Current Source, Indication Unit and optional Valve Unit offers effective means to set up a high-precision coulometric system. The structured SCPI compatible command language and the MENU oriented access to all functions and the large LCD ensures user-friendly operation and system integration.

## Current Source

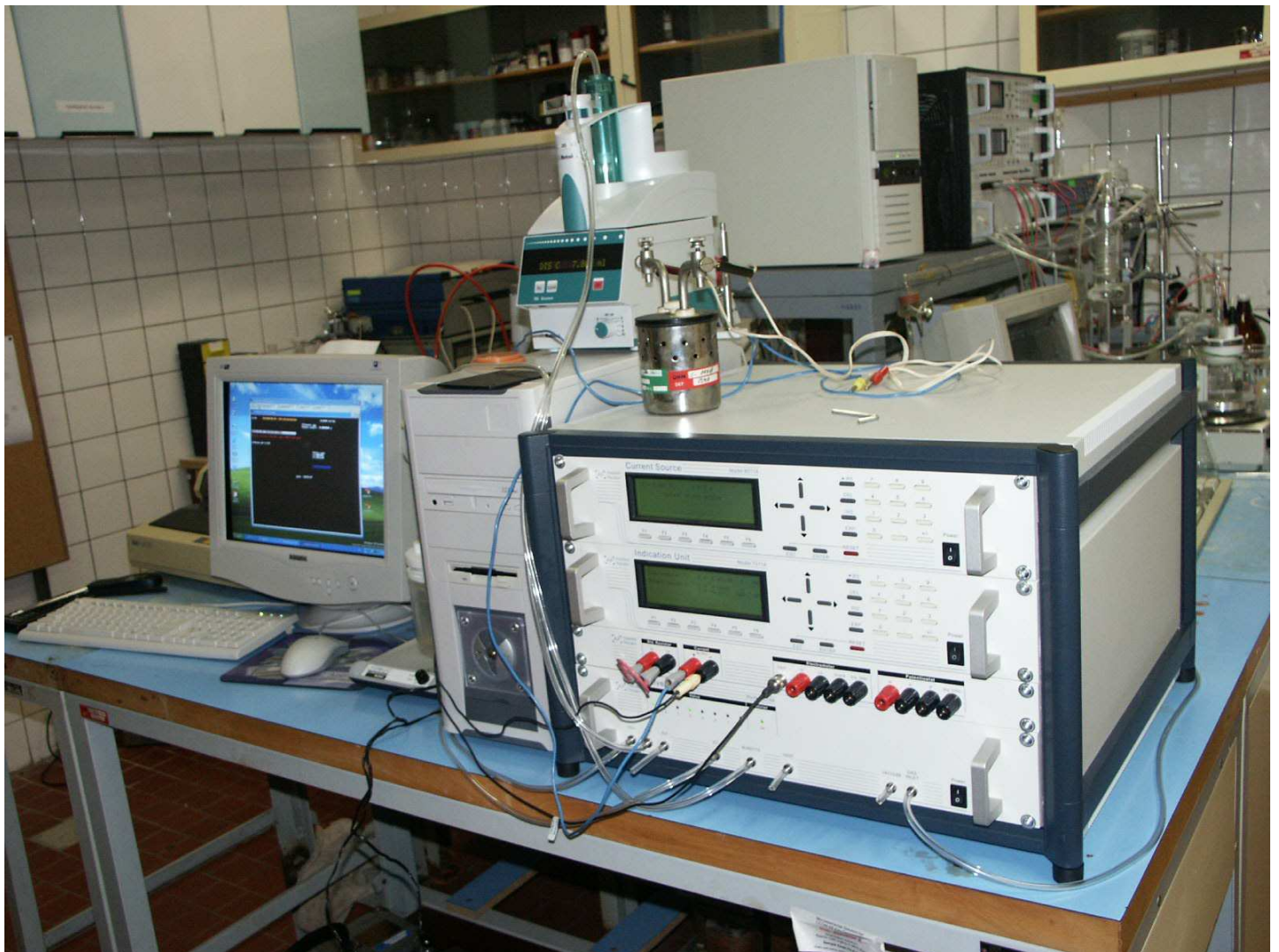
The precision Current Source with exceptional stability equipped with integrated precision timer is capable to generate electric current with precision timing up to 100.000.000 seconds with 1  $\mu$ s resolution.

## Indication Unit

The microprocessor controlled Indication Unit serves for both potentiometric and amperometric end-point detection with superior resolution and stability.

## Valve Unit

This optional unit is equipped with 8 built-in valves. The unit enables any user defined setting of valves and state of electrical power output. The power output serves as power supply for magnetic stirrer. The unit is programmed with ASCII commands via RS-232 interface.



*High Precision Coulometry Equipment*

## ⇒ Technical Specification

Current Source		
Maximum Output Voltage	> 100 V	
Maximum Output Current	500 mA (optional 1 A)	
Current Resolution	1 $\mu$ A	
Current Accuracy	20 ppm + 2 $\mu$ A	
Current Stability	24 hours	10 ppm + 1 $\mu$ A
	1 year	20 ppm + 2 $\mu$ A
Current Noise (peak-to-peak)	5 ppm + 0.5 $\mu$ A	
Timing Accuracy	0.1 ppm + 1 $\mu$ s	
Dimensions	19" Rack System, 2U high	
Weight (approx.)	15 kg	
Power Requirements	230 V - 20 %	
Power Consumption	max. 300 W	
Communication Interface	RS-232 with SCPI compatible programming protocol	

Indication Unit		
<b>Potentiometric part (fully floating):</b>		
Voltage Range	-2 to 2 V	
Voltage Resolution	0.01 mV	
Voltage Noise (peak-to-peak)	0.02 mV	
Input Resistance	> $10^{12}$ Ohm	
Input Current	< 0.5 pA	
Electrode Socket	BNC and banana plugs	
<b>Amperometric part (fully floating) in 3-electrode operation:</b>		
Potential Range	-2 to 2 V	
Potential Driving Voltage	-10 to 10 V	
Potential Resolution	0.1 mV	
Potential Stability	0.1 mV	
Max. Current	$\pm$ 0.2 mA	
Resolution	50 ppm + 0.2 nA	
Dimensions	19" Rack System, 2U high	
Weight (approx.)	8 kg	
Power Requirements	230 V - 20 %	
Power Consumption	max. 30 W	
Communication Interface	RS-232 with SCPI compatible programming protocol	

Valve Unit		
Mains	AC 230 V	
Number of Controlled Valves	8 mutually independent	
Power Output	1 x 100 VA	
Communication Interface	RS-232 with ASCII programming protocol	

Optional Accessories		
<ul style="list-style-type: none"> <li>• Cabinet 19" with front connector panel</li> <li>• Burette and other accessories (<i>piston burette, exchange unit with 20 ml glass cylinder incl. reagent bottle, magnetic stirrer with magnetic stirring bars, two coulometric cells for acid-base titrations and for other titrations, other small accessories like tubing, tubing connectors etc.</i>)</li> <li>• Control PC with communication controllers</li> <li>• Control and evaluation software</li> </ul>		