

# DROPSSENS

## *μStat 200*



### Specifications

- dc-potential range	± 2.048 V
- voltage reference	4.096 V
- dc-potential resolution	1 mV
- dc-offset error	± 1 mV
- accuracy	≤ 0.1 %
- current ranges	2 nA to 200 μA (6 ranges)
- current resolution	0.05 % of current range 1 pA on lowest current range
- electrometer amplifier input	CMOS input, C < 2 pF
- rise time	20 μs
- dimensions	8.0 cm x 5.4 cm x 2.3 cm (L x W x H)
- power	5 V / 45 mA max. USB powered
- interfacing	USB
- Extra inputs/outputs	3 generic digital I/O internal pins 3 10-bit ADC inputs multiplexing the above specific connector
- sensor connection	

*Specifications are subject to change without previous notice*

# DS

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*μStat 200* is a small portable **Bipotentiostat** that can be applied for amperometric measurements at a fixed dc-potential as well as voltammetric measurements like differential pulse and square wave voltammetry. The supplied *DropView* software for Windows is used to control the instrument and to plot the measurements and perform the analysis of results. The instrument is controlled and powered by means of a USB connection.

*μStat 200* has six current ranges: 2 nA to 200 μA, and Auto (the instrument automatically selects the optimal current range), with a resolution of 1 pA on the lowest current range.

The instrument can be tailored for specific applications. All relevant amperometric and voltammetric methods can be programmed for the instrument.

The embedded software of *μStat 200* can provide all methods which are relevant for electrochemical sensors. The voltammetric methods are used to measure a curve of current versus potential. Amperometric detection is used to record current as a function of time.

### Available Voltammetric methods

- Linear Sweep Voltammetry (**LSV**)
- Cyclic Voltammetry (**CV**)
- Square Wave Voltammetry (**SWV**)
- Differential Pulse Voltammetry (**DPV**)

These methods can all be used in their stripping modes which are applied for (ultra-) trace analysis.

### Available Amperometric method

- Amperometric Detection (**AD**)
- Pulsed Amperometric Detection (**PAD**)

### Specifications of most of the relevant parameters

General pretreatment		General voltammetric parameters	
Apply conditioning potential for:	0 - 1600 s	Begin potential:	-2.048 V to +2.048 V
Apply deposition potential for:	0 - 1600 s	End potential:	-2.048 V to +2.048 V
Apply equilibration potential for:	0 - 1600 s	Step potential:	1 mV to 2048 mV
Conditioning potential:	-2.048 V to +2.048 V	Pulse potential	1 mV to 2048 mV
Deposition potential:	-2.048 V to +2.048 V		
Equilibration potential:	-2.048 V to +2.048 V		

### Limits of some technique specific parameters

LSV and CV	Scan rate:	1 mV/s to 5.0 V/s
SWV	Frequency:	1 Hz to 400 Hz
	Amplitude potential:	1 mV to 250 mV
DPV	Scan rate:	1 mV/s to 2.5 V/s
	Pulse time:	1 ms to 200 ms
AD	Interval time:	50 ms to 300 s
	Run time:	Hours (65000 points)
PAD	Pulse time:	1 ms
	Run time:	Hours (65000 points)