

μ Stat-i 400 (Bi)potentiostat/Galvanostat/Impedance Analyzer (EIS) μ Stat-i 400s Potentiostat/Galvanostat/Impedance Analyzer (EIS)

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Ref. STAT-I-400 STAT-I-400S



μ Stat-i 400

Metrohm DropSens provides you with a **portable** and **wireless** (Bi)Potentiostat/ Galvanostat/ Impedance Analyzer that can be used for **Voltammetric, Amperometric, Potentiometric** and **Electrochemical Impedance Spectroscopy (EIS)** measurements. A **complete solution** for **laboratory** and **fieldwork**.

Potentiostatic impedance measurements allow defining resistive and capacitive properties in the analyzed system. From corrosion to detection of immunological binding events, EIS analysis offers a **wide range of applications**.

Now you have two different instruments available:

Potentiostat/Galvanostat, single channel impedance instrument μ Stat-i 400s

Bipotentiostat/Galvanostat, dual channel impedance instrument μ Stat-i 400 for multiplexed EIS measurements

Key EIS features

- Frequency range 1 mHz to 1 MHz
- AC Amplitude range 1 mV to 0.350 V rms (1.0 V p-p)
- AC perturbation superpose to a fixed DC Voltage [-3.5V to 3.5V] or OCP value
- Frequency scan

Key Benefits

- Portable & wireless system for *in-situ* EIS analysis
- Compact and robust ideal for field work
- Powerful software for getting the most from your laboratory experiments

Key Software Features

In addition to all powerful functions of DropView 8400:

- Data presentation: Nyquist, Bode, Lissajous, Time Domain, Frequency Domain (FFT) and more
- Fit and Simulation, semicircle fit
- Graphical Equivalent Circuit
- Export measured data to ZView, EIS Analyzer or NOVA with one click



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Available techniques

POTENTIOSTAT

Voltammetry

LSV	Linear Sweep Voltammetry
CV	Cyclic Voltammetry
SWV	Square Wave Voltammetry
DPV	Differential Pulse Voltammetry
NPV	Normal Pulse Voltammetry
NDPV	Differential Normal Pulse Voltammetry
ACV	AC Voltammetry
LPR	Linear Polarization Resistance

Amperometry

AD	Amperometric Detection
ZRA	Zero Resistance Amperometry
FA	Fast Amperometry ($t_{int} < 0.1$ s)
PAD	Pulsed Amperometric Detection
MAD	Multipulsed Amperometric Detection
COUL	Coulometric Detection

EIS / FRA

GALVANOSTAT

LSP	Linear Sweep Potentiometry
CP	Cyclic Potentiometry
PD	Potentiometric Detection (galvanostatic)
ZCP	Zero Current Potentiometry (OCP)
FP	Fast Potentiometry ($t_{int} < 0.1$ s)
PSAG	Potentiometric Stripping Analysis (galvanostatic)
PSAF	Potentiometric Stripping Analysis (faradaic)
MPD	Multipulsed Potentiometric Detection

MIXED TECHNIQUES *

LSV+ AD	Linear Sweep Voltammetry + Amperometric Detection
CV+ AD	Cyclic Voltammetry + Amperometric Detection

* Mixed techniques not available in μ Stat-i 400s.

Instrument Specifications

Power	Li-ion Battery (2300 mAh) USB DC charger adaptor compatible (5V)
PC interface	Bluetooth® / USB
Operating modes	BiPotentiostat/Galvanostat/Impedance Analyzer (μ Stat-i 400) Potentiostat/Galvanostat/ Impedance Analyzer (μ Stat-i 400s)
DC-Potential Range	± 4 V
Current ranges (potentiostat)	± 1 nA to ± 10 mA (8 ranges)
Maximum measurable current	± 40 mA
Potential ranges (galvanostat)	± 100 mV, ± 1 V (2 ranges)
Applied Potential Resolution	1 mV
Measured Current Resolution	0.025% of current range 1 pA on lowest current range
Applied Current Resolution	0.1% of current output range
Measured Potential Resolution	0.012% of potential range
Potential Accuracy	$\pm 0.2\%$
Current Accuracy	$\leq 0.5\%$ of current range at 100 nA to 10 mA
External inputs/outputs	Iout, Eout 2 Analog inputs, 1 Analog output, 2 Digital input/outputs, TX, RX, RTS signals for RS232 connection
LED indicators	Power, Status, Measuring, Bluetooth®
EIS Frequency Range	1 mHz to 1 MHz
Current ranges (EIS)	± 1 nA to ± 100 mA (9 ranges)
DC fix potential or OCP	-3.5 V to 3.5 V
AC Amplitude range	1 mV to 0.350 V rms (1.0 V p-p)
Dimensions	13.2 cm x 10.0 cm x 3.6 cm (L x W x H)
Weight	540 g

Specifications are subject to change without previous advice

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