



# Autolab IMP

Full Specifications

# Autolab IMP

Selected specifications. The specified values are typical values which are reached in optimal working conditions at 25 °C. Specifications are subject to change without notice.

Potentiostat, applied potential and applied current	
Compliance voltage	±10 V
Maximum applied potential	±10 V
Maximum applied current	±100 mA
Applied potential: accuracy	± 0.2% of setting ± 2 mV
Applied potential: resolution	150 µV
Applied current: accuracy	±0.2% of current ± 0.2% of current range
Applied current: resolution (10 nA current range)	0.015% of current range (1.5 pA)
Rise time (typical)	<300 ns

Measured potential (S-RE)	
Maximum measured potential	±10 V
Measured potential: accuracy	0.2% ± 2 mV
Measured potential: resolution (ADC resolution)	3 µV (gain 100)
Input impedance of the electrometer	>100 GΩ
Bandwidth of electrometer (-3 dB)	> 4 MHz

Measured current	
Maximum measured current	±100 mA
Measured current: accuracy	±0.2% of current ± 0.2% of current range
Measured current: resolution (10 nA current range)	0.0003% of current range (30 fA)
Lowest current range	10 nA
Total number of current ranges	7

General	
EIS	Yes
Cell Cables	2, 3 or 4 electrode connections with 4 mm male banana connectors.
Maximum scan rate	145 V/s (25 mV step and fixed gain)
Minimum scan rate	0.1 µV/s
Number of cell connections	4 (WE, CE, RE, S)
Connection type	USB

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Dimensions (w x h x d), excl. cables	15 cm x 19 cm x 26 cm
Weight	5 kg
Power requirements	75W, 100..240V, 50/60Hz

Electrochemical Impedance Spectroscopy	
Maximum Frequency with PGSTAT	1 MHz
Minimum Frequency	10 µHz
Maximum generated frequency	32 MHz
AC amplitude - Potentiostatic	0.2 mV to 0.35 V (RMS) with 0.025 mV step (RMS)
AC amplitude - Galvanostatic	0.0002 to 0.35 times used current range (with 0.000025 times used current range steps)
Input range	±10 V
Frequency resolution	0.44 µHz
ADC resolution	14-bit
AC resolution	1.3 µV
DC resolution:	0.3 mV (3 µV with PGSTAT)
Output impedance of Sine generator	50 Ω
Input channels	E and I from the PGSTAT (internal) X and Y on the front panel (external)
Data presentation	Nyquist, Bode, Admittance, Mott-Schottky, AC vs time, Lissajous
Data analysis	Fit and simulation, Find circle, Kramers-Kronig test

Autolab IMP:  
professional  
specs for  
education





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