

PicoPotentiostat

PicoPTC-10100mE

Low-current general-purpose
potentiostat with EIS

Version 1.1
2018-11-14



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Quick summary

❖ Potentiostat/Galvanostat	$\pm 10\text{ V}$, $\pm 100\text{ mA}$
❖ 8 current ranges	10 nA .. 100 mA
❖ Max. current resolution	$< 1\text{ pA}$ for 10 nA range
❖ Impedance spectroscopy	1 mHz .. 1 MHz
❖ PC connection	USB, galvanically isolated
❖ Cell connection	4x BNC, 2-,3-,4-wire connection



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Technical Parameters

Power supply	5V DC / 1A for wall adapter
Dimensions	Aluminum enclosure 103 x 160 x 53 mm
Protection rating	IP20
Electrometer Input voltage range	-10 V ... +10 V
Auxiliary Input voltage range	-10 V ... +10 V
Compliance / Output voltage	-10 V ... +10 V
Compliance / Output current	-100 mA ... +100 mA for output potential ± 5 V -50 mA ... +50 mA for output potential ± 10 V
Current ranges	8 current ranges (10 nA .. 100 mA)
Sampling	24-bit ADCs, 3 ksps internal, 50 sps filtered sampling 14-bit ADCs, up to 20 Msps for EIS measurements
Measurement resolution	< 0.001 % of selected range for ≤ 3 ksps sampling < 0.01 % of selected range for EIS measurements
Accuracy	Voltage ≤ 0.1 % of range + 0.1 % of reading Current ≤ 0.1 % of range + 0.5 % of reading
Acquisition methods	constant V, I, open circuit, manual control chronoamperometry, chronopotentiometry linear sweeps, I/V characteristics cyclic voltammetry pulse voltammetry - differential, square, normal impedance spectroscopy
EIS frequency	1 mHz .. 1 MHz
EIS amplitude	1 .. 500 mV, up to 20 mA
Connection	USB 2.0
Software	Application for MS Windows, NI LabView drivers