

Potentiostat Galvanostat

For fuel cell stacks, electrolyzers and batteries
EIS Acquisition

Potentiostat Product Family



PTC-0520E | PTC-0550E | PTC-1050EW | PTC-05100EW

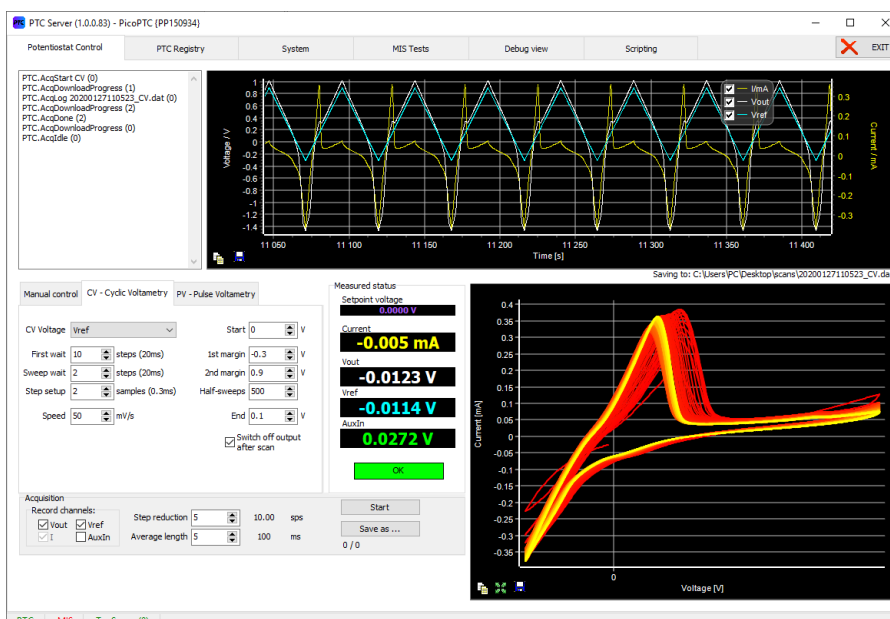


Applications

Typical applications include hydrogen fuel cells, water electrolyzers, solid-oxide cells, redox-flow batteries, and lithium batteries with high-current and high-power requirements. Additionally, EIS is utilized in applied research, manufacturing testing, and quality control.



Software PTC Server - EIS



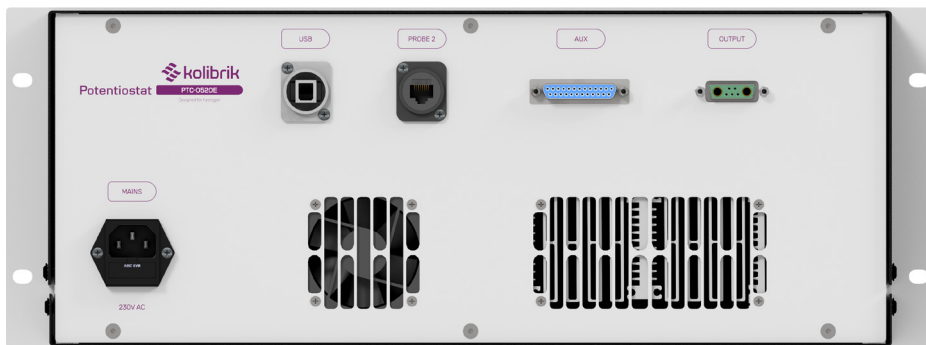
Software PTC Server - Cyclic Voltammetry



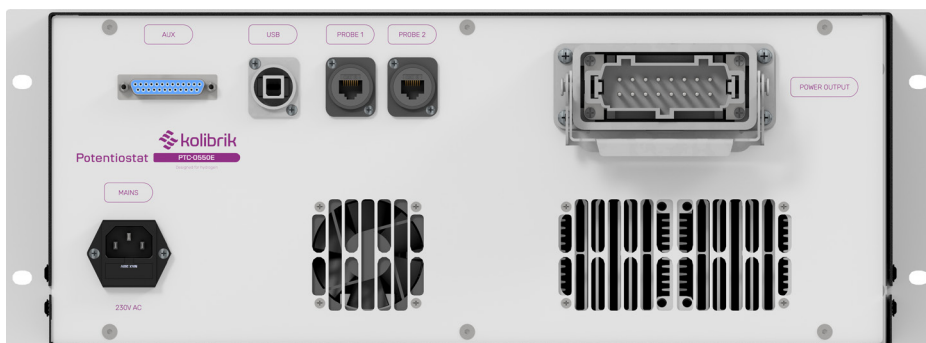
Technical Parameters

	PTC-0520E	PTC-055E	PTC-1050EW	PTC-05100EW
Power supply	110 ... 240 V AC / 50 ... 60 Hz			
Dimensions	19" rack cabinet, 4U height			
Cooling	Air	Air	Water	Water
Protection rating	IP20			
Electrometer Input voltage range	-10 V ... +10 V			
Compliance / Output voltage	-5 V ... +5 V	-5 V ... +5 V	-10 V ... +10 V	-5 V ... +5 V
Compliance / Output current	-20 A ... +20 A	-50 A ... +50 A	-50 A ... +50 A	-100 A ... +100 A
Max. internal power dissipation	200 W	350 W *)	1000 W	1000 W
Current ranges	20 mA, 200 mA, 2 A, 20 A	500 mA, 5 A, 20 A, 50 A	500 mA, 5 A, 20 A, 50 A	500 mA, 5 A, 20 A, 50 A
Sampling	24-bit ADCs, 1 ksp/s internal, 50 sp/s filtered sampling 14-bit ADCs, up to 20 Msps for EIS measurements			
Measurement resolution	0.001% of selected range for ≤ 1 ksp/s sampling			
Accuracy	Voltage: $\leq 0.1\%$ of range + 0.1% of reading Current: $\leq 0.1\%$ of range + 0.5% of reading			
Acquisition methods	Constant V, I, Open circuit, Manual control Chronoamperometry, Chronopotentiometry Linear Sweeps, I/V Characteristic Cyclic Voltammetry, Cyclic Amperometry Pulse Voltammetry – Differential, Square, Normal Electrochemical Impedance Spectroscopy (EIS) Programmable sequences of all available methods			
EIS frequency	1 mHz ... 100 kHz, limited use up to 1 MHz			
EIS amplitude	1 ... 1000 mV, up to 10 A for < 1 kHz	1 ... 1000 mV, up to 25 A for < 1 kHz	1 ... 1000 mV, up to 25 A for < 1 kHz	1 ... 1000 mV, up to 50 A for < 1 kHz
PC connection	USB 2.0			
Software	Software for MS Windows, TCP Server, NI LabVIEW drivers, Python tools			

*) 350 W continuous (air cooling, room temperature 25°C)
limitation in sink mode: 50 A for ≤ 2 V, 35 A for 2 ... 5 V
500 W peak (for 10 s)



Rear view of PTC-0520E



Rear view of PTC-0550E



Rear view of PTC-1050EW



Rear view of PTC-05100EW

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