Potentiostat/ Galvanostat

For fuel cell stacks, electrolyzers and batteries EIS Acquisition

Potentiostat Product Family

PTC-0520E | PTC-1020E | PTC-0550E | PTC-1050EW | PTC-05100EW | PTC-10100EW
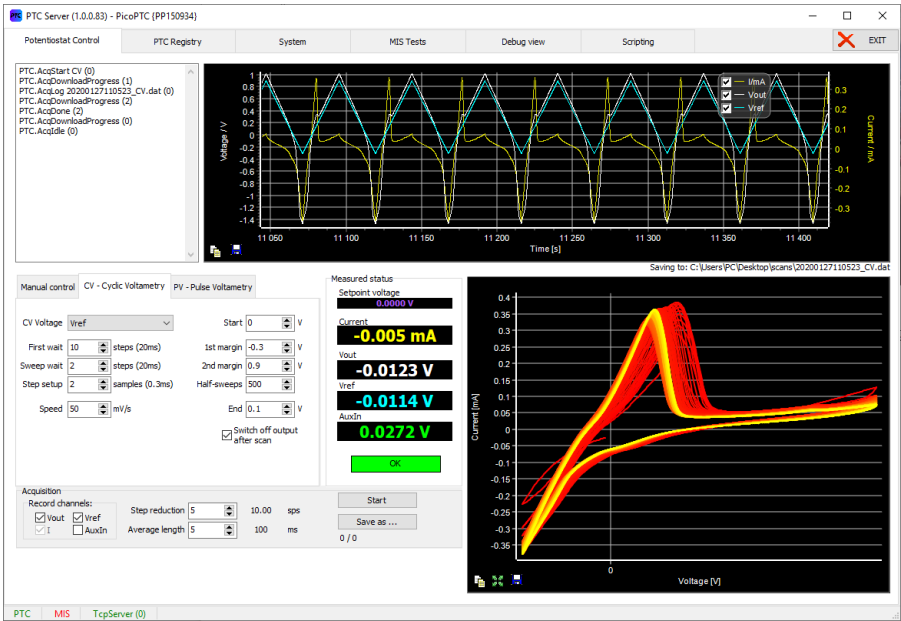
Applications

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.
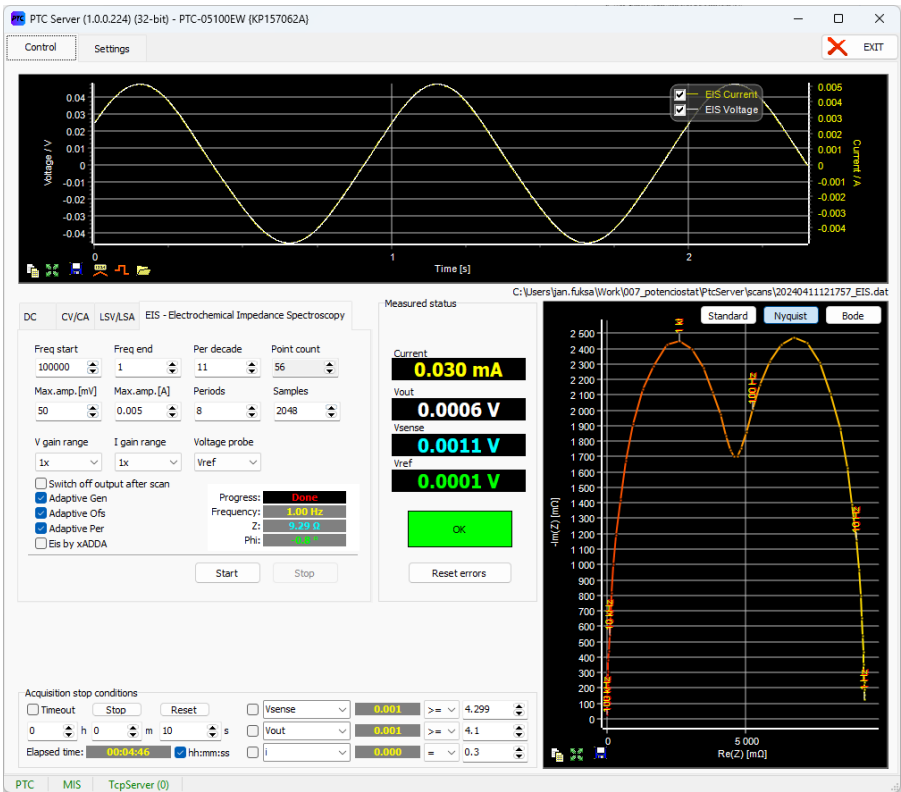
Software PTC Server - EIS

**Software PTC Server - Cyclic Voltametry**

Technical Parameters

	PTC-0520E	PTC-1020E	PTC-0550E	PTC-1050EW	PTC-05100EW	PTC-10100EW
Power supply	110 … 240 V AC / 50 … 60 Hz					
Dimensions	19" rack cabinet, 4U height					5U height
Cooling	Air	Air	Air	Water	Water	Water
Protection rating	IP20					
Electrometer Input voltage range	–10 V … +10 V					
Compliance / Output voltage	–5 V … +5 V	–5 V … +10 V	–5 V … +5 V	–10 V … +10 V	–5 V … +5 V	-2 V … +10 V
Compliance / Output current	–20 A … +20 A	–20 A … +20 A	–50 A … +50 A	–50 A … +50 A	–100 A … +100 A	–100 A … +100 A
Max. internal power dissipation	200 W	300 W	350 W *)	1000 W	1000 W	1000 W
Current ranges	20 mA, 200 mA, 2 A, 20 A	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, 100 A	500 mA, 5 A, 20 A, 100 A
Sampling	24-bit ADCs, 1 ksps internal, 50 sps filtered sampling 14-bit ADCs, up to 20 Msps for EIS measurements					
Measurement resolution	0.001% of selected range for ≤ 1 ksps sampling					
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, Linear Sweeps, Cyclic Voltammetry, Cyclic Amperometry, Electrochemical Impedance Spectroscopy (EIS), Chronoamperometry, Chronopotentiometry, Double Step Chronoamperometry, Double Step Chronopotentiometry, Current Interrupt, Square Pulse Potentiometry, Square Pulse Amperometry, Battery Charge and Discharge, Custom experiment sequences, Python scripting					
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 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	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 library and examples					

*) 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)

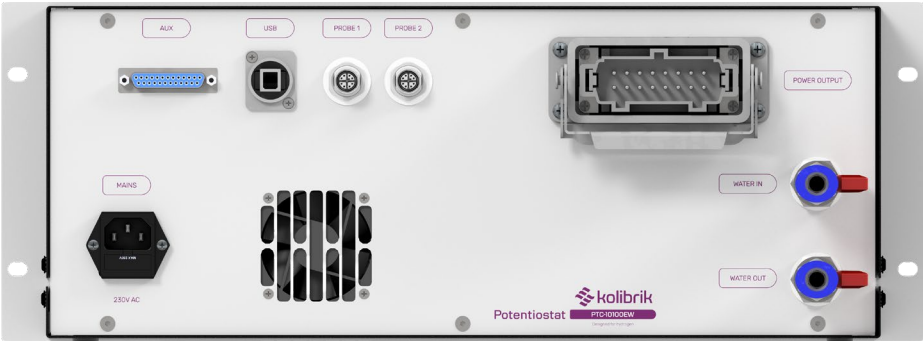# Rear View
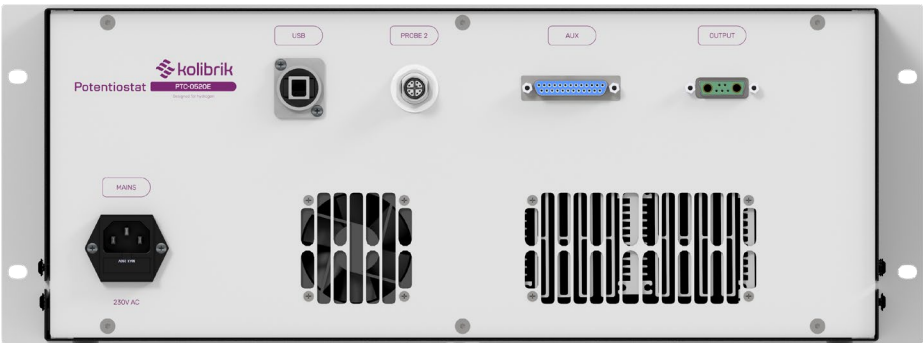
PTC-0520E

PTC-0550E
PTC-1020E

PTC-1050EW
PTC-05100EW

PTC-10100EW

kolibrik