

# Potentiostat/ Galvanostat

For fuel cell stacks, electrolyzers and batteries  
EIS Acquisition

Potentiostat **Ultimate**



PTCu-10100EW

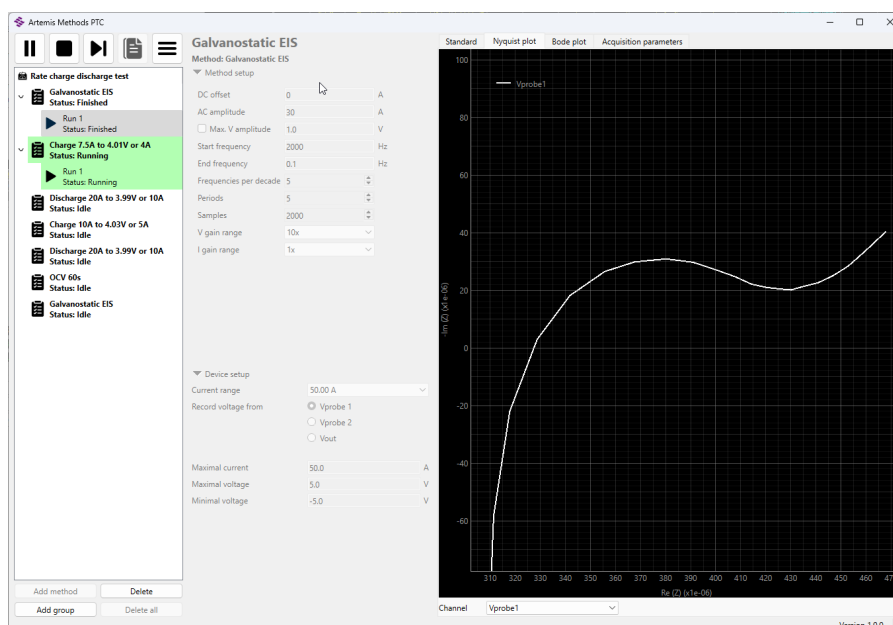
PTCu-1020E | PTCu-0550E | PTCu-1050EW | PTCu-05100EW



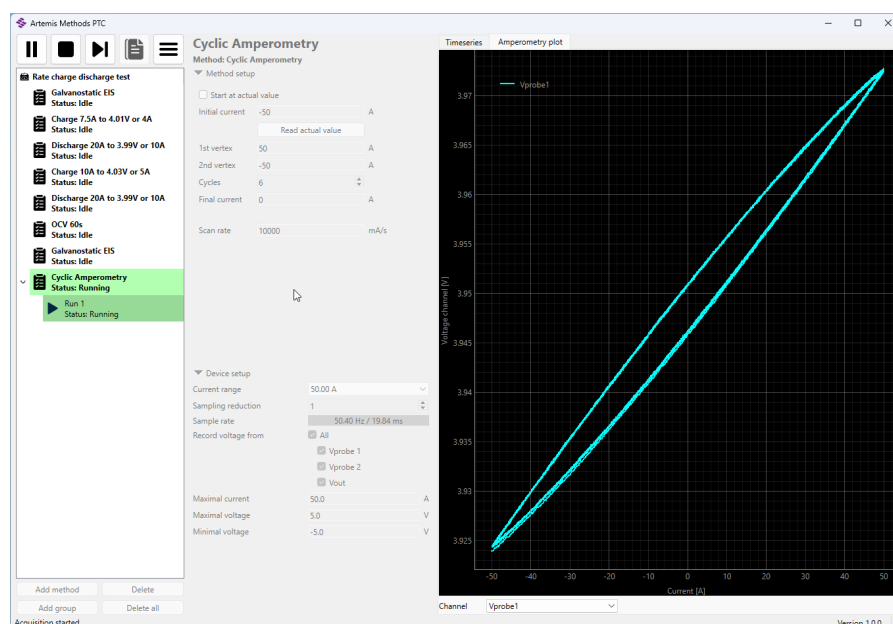
# Applications

The **Potentiostat Ultimate Line** brings true parallel **MegaEIS™ architecture** to high-power electrochemical applications, including advanced fuel cells, electrolyzers, and batteries. It delivers **up to ±100 A** while utilizing **3 independent measuring channels** for simultaneous **high-speed data acquisition up to 1.25 Msp/s**.

All models are fully driven by **Artemis measurement software**, ensuring robust PC-controlled workflows. This enables advanced cycling, custom high-speed method sequencing, and full scripting to automate complex experimental procedures.



Artemis – Kolibri Measurement Software – EIS



Artemis – Kolibri Measurement Software – Cyclic Amperometry



# Technical Parameters

	PTCu-1020E	PTCu-0550E	PTCu-1050EW	PTCu-05100EW	PTCu-10100EW
<b>Power supply</b>	110 ... 240 V AC / 50 ... 60 Hz				
<b>Dimensions / Weight</b>	19" rack-mount, 4U; 440 mm (W) × 177 mm (H) × 358 mm (D) / 15 kg				5U; 223 mm (H) / 18,5 kg
<b>Cooling</b>	Air	Air	Water	Water	Water
<b>Protection rating</b>	IP20				
<b>Electrometer Input voltage range</b>	-10 V ... +10 V				
<b>Compliance / Output voltage</b>	-5 V ... +10 V	-5 V ... +5 V	-10 V ... +10 V	-5 V ... +5 V	-2 V ... +10 V
<b>Compliance / Output current</b>	-20 A ... +20 A	-50 A ... +50 A	-50 A ... +50 A	-100 A ... +100 A	-100 A ... +100 A
<b>Max. internal power dissipation</b>	300 W	350 W *)	1000 W	1000 W	1000 W
<b>Current ranges</b>	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
<b>Sampling</b>	24-bit ADCs, up to 1.25 Msps				
<b>Measurement resolution</b>	0.001% of selected range for ≤ 1 ksps sampling				
<b>Accuracy</b>	Voltage: ≤ 0.1% of range + 0.1% of reading Current: ≤ 0.1% of range + 0.5% of reading				
<b>Acquisition methods</b>	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, High Frequency / Multiple Frequency Resistance High-Resolved Square Pulses, Pseudo-Random Binary Sequences, Current Interrupt High-Speed EIS during charge / discharge process Battery Diagnostic Procedures, Custom experiment sequences, Python scripting				
<b>EIS channels</b>	3 independent channels				
<b>EIS frequency</b>	1 mHz ... 100 kHz, limited use up to 1 MHz				
<b>EIS amplitude</b>	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
<b>PC connection</b>	Ethernet, USB 2.0				
<b>Software</b>	Artemis 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



**PTCu-1020E**  
**PTCu-0550E**



**PTCu-1050EW**  
**PTCu-05100EW**



**PTCu-10100EW**

### Disclaimer

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