Datasheet

Potentiostat/ Galvanostat

For fuel cell stacks, electrolyzers and batteries
EIS Acquisition

Potentiostat Core

PTC-10100EW

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

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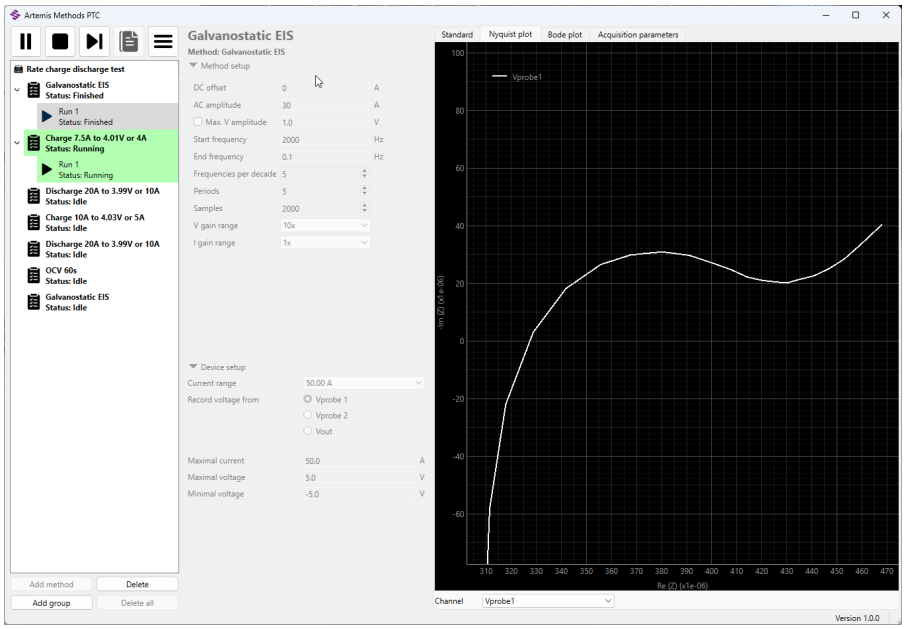
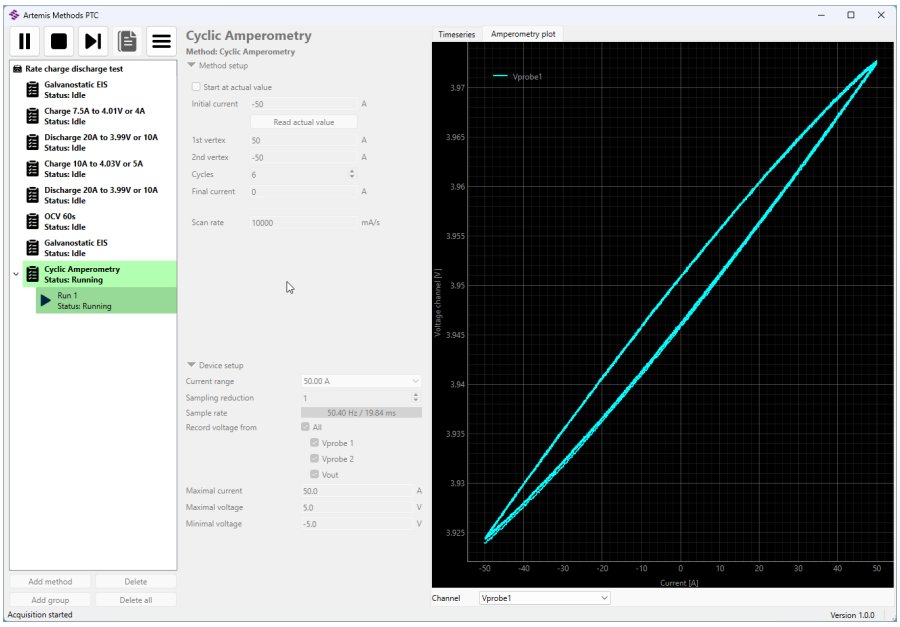
Applications

Potentiostat Core Line is designed for high-power electrochemical applications, including a wide range of fuel cells, electrolyzers, and advanced battery technologies. Integrated EIS provides critical diagnostics for applied R&D, manufacturing, and quality control.

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



Artemis – Kolibrik Measurement Software – EIS



Artemis – Kolibrik Measurement Software – Cyclic Amperometry

Technical Parameters

	PTC-0550E	PTC-1050EW	PTC-05100EW	PTC-10100EW
Power supply	110 … 240 V AC / 50 … 60 Hz			
Dimensions / Weight	19" rack-mount, 4U; 440 mm (W) × 177 mm (H) × 358 mm (D) / 15 kg			5U; 223 mm (H) / 18,5 kg
Cooling	Air	Water [1]	Water [1]	Water [1]
Protection rating	IP20			
Electrometer Input voltage range	-10 V … +10 V			
Compliance / Output voltage	-5 V … +5 V	-10 V … +10 V	-5 V … +5 V	-2 V … +10 V
Compliance / Output current	-50 A … +50 A	-50 A … +50 A	-100 A … +100 A	-100 A … +100 A
Max. internal power dissipation	350 W [2]	1000 W	1000 W	1000 W
Current ranges	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	14-bit ADCs, up to 20 Msps for EIS measurements, max. 2000 samples per single frequency			
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			
EIS amplitude [3]	1 … 1000 mV, 0 … 25 A up to 12.5 A for 1 kHz up to 2.8 A for 10 kHz	1 … 1000 mV, 0 … 25 A up to 12.5 A for 1 kHz up to 2.8 A for 10 kHz	1 … 1000 mV, 0 … 50 A up to 20 A for 1 kHz up to 2.8 A for 10 kHz	1 … 1000 mV, 0 … 50 A up to 20 A for 1 kHz up to 2.8 A for 10 kHz
PC connection	USB 2.0			
Software	Artemis Software for MS Windows, TCP Server, NI LabVIEW drivers, Python library and examples			

1) Water cooling via standard lab/industrial chiller and fittings. A cooling chiller unit is available as optional extras upon request. To avoid building mineral deposits inside the copper tubes of the MegaEIS system, a **demineralized** water for the cooling is strictly recommended.

2) 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)

3) Maximum EIS amplitude depends also on the Device Under Test (DUT) and cabling used. This specification applies to the supplied output cable with no extensions.

Rear View

PTC-0550E
PTC-1020E

PTC-1050EW
PTC-05100EW

PTC-10100EW

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