

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

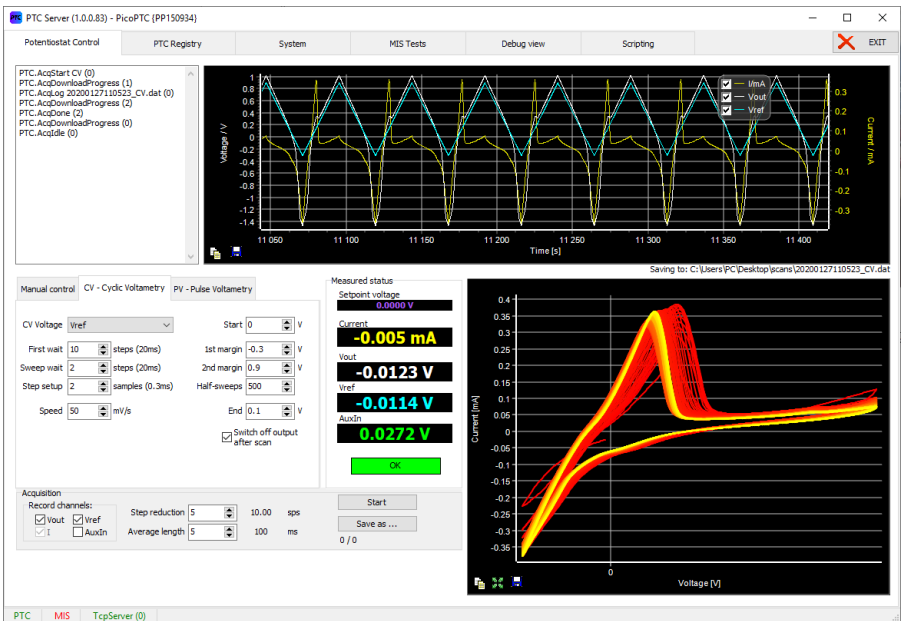


Applications

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 Voltammetry



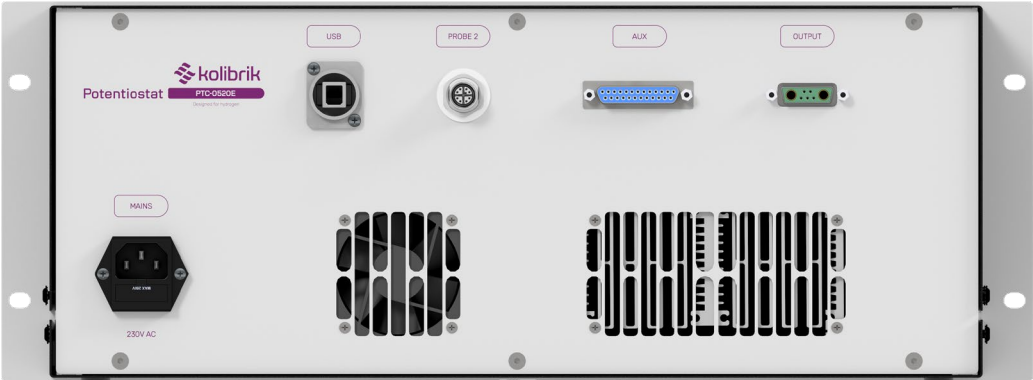
Technical Parameters

	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					
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 ksp/s internal, 50 sps 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, 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					

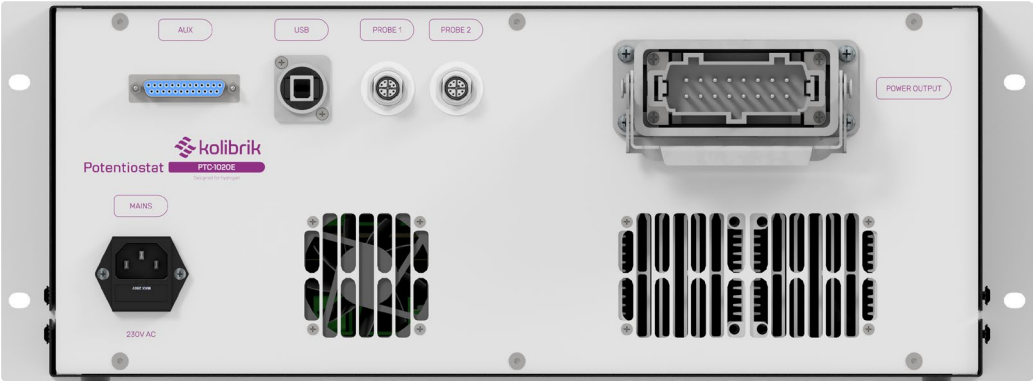
*) 350 W continuous (air cooling, room temperature 25°C)
 limitation in sink mode: 50 A for ≤ 2 V, 35 A for 2 ... 5 V
 500 W peak (for 10 s)



Rear View



PTC-0520E



**PTC-0550E
PTC-1020E**



**PTC-1050EW
PTC-05100EW
PTC-10100EW**

Disclaimer
All rights reserved. All data contained within this manual is for information purposes only and is not guaranteed for legal purposes. The Information has been checked carefully and is believed to be accurate; however, no responsibility is assumed for any inaccuracies. Kolibri.net, a.s. reserves the right to change, modify, or improve this document or the product described herein, as seen fit without further notice.

Proprietary Note
This document contains proprietary information and is the property of Kolibri.net, a.s. or under license from third parties. No part of this document may be reproduced, copied, or transmitted in any form or by any means, disclosed to others, or stored in any retrieval system or media without the prior written consent of Kolibri.net, a.s.