

# Potentiostat

## PTC-0550E

High-power H2FC potentiostat

Version 1.2  
2021-03-15



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## Quick summary

- |                                  |                         |
|----------------------------------|-------------------------|
| ❖ Potentiostat/Galvanostat       | $\pm 5$ V, $\pm 50$ A   |
| ❖ Max internal power dissipation | 350 W                   |
| ❖ 4 current ranges               | 500 mA, 5 A, 20 A, 50 A |
| ❖ Impedance spectroscopy         | 1 mHz .. 100 kHz        |
| ❖ Cooling                        | Air                     |

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## Technical Parameters

Power supply	110..240V AC / 50..60 Hz
Dimensions	19" rack cabinet, 4U height
Cooling	Air
Protection rating	IP20
Electrometer Input voltage range	-10 V ... +10 V
Compliance / Output voltage	-5 V ... +5 V
Compliance / Output current	-50 A ... +50 A
Max. internal power dissipation	350 W continuous (air cooling, room temperature 25°C) limitation in sink mode: 50 A for $\leq 2$ V, 35 A for 2..5 V 500 W peak (for 10 s)
Current ranges	4 current ranges (500 mA, 5 A, 20 A, 50 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 $\leq 1$ ksps 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 characteristics cyclic voltammetry, cyclic amperometry pulse voltammetry - differential, square, normal 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 25 A for $< 1$ kHz
PC connection	USB 2.0
Software	Software for MS Windows, TCP Server, NI LabVIEW drivers

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