

Power Potentiostats

PP-Series

Add-on modules for Electrochemical Workstations IM6/6e

Modern Electrochemistry



at high currents

Impedance Spectroscopy, Cyclic Voltammetry, Polarisation Curves ...
for Batteries, Fuel Cells, Electrolysis, Electro-Plating ...

ZAHNER[®]
M e s s s y s t e m e

Power potentiostats and electronic loads today are indispensable tools in several fields of electrochemistry, e.g. in the research of batteries and fuel cells. The *PP-Series* potentiostats are designed to apply and sink high currents up to $\pm 40A$ at a total power dissipation of up to 400W.

The *PP-Series* potentiostats are controlled by an *EPC40*, a plug-in module for the *Electrochemical Workstations IM6* and *IM6e*. Due to the built-in microprocessor each *EPC40* can address up to four *PP-Series* potentiostats. Up to four *EPC40* cards can be installed in an *IM6*, one in an *IM6e*. In total, an *IM6* can control up to 16 *PPs*, an *IM6e* up to 4. Each potentiostat will hold the control parameters from one access to the next one, so that no potential or current disturbances can occur while scanning the potentiostats. If series measurements are performed with more than one *PP-Series* potentiostat, spectra are taken from all modules in a definable order.

The *PP-Series* is embedded completely in the *IM6/6e* environment. Thus, all acquisition and analysis techniques that run on the *IM6/6e* can be applied with the power potentiostats as well. The installation of one or more *PP-Series* potentiostat will upgrade your *IM6/6e* to an even more versatile high-current electrochemical workstation.

Besides, the *PP-Series* potentiostats can be controlled by a Windows®-PC. In this case they provide the methods *Test Sampling* as well as *U-* and *I-curves* vs. time. They also work as a LabView® Virtual Instrument under the LabView® software.

Furthermore, you can control the *PP-Series* potentiostats in a mixed mode with an *IM6/6e* and a PC in parallel. Both devices can be connected and disconnected in operation.

Supported methods with IM6/6e	Software module
Impedance spectroscopy	IM
Simulation & model fitting	SIM
Cyclic voltammetry	CV
Polarisation curves	CV
Multicell multitasking voltammetry	CV
Arbitrary current/potential/time meas.	PVI
Capacity/potential measurements	C/E
Automatic series measurements	AS

Supported methods with PC
Test Sampling
U vs. time
I vs. time
LabView® Virtual Instrument

	PP200	PP210	PP240	PP410
Operating modes	pot/gal/oc	pot/gal/oc	pot/gal/oc	pot/gal/oc
Potential range	$\pm 10 V$	$\pm 20 V$	$\pm 4 V$	$\pm 48 V$
Potential accuracy	$\pm 0.1\% / \pm 1 mV$	$\pm 0.1\% / \pm 2mV$	$\pm 0.1\% / \pm 1mV$	$\pm 0.1\% / \pm 3mV$
Current range	0 A ... $\pm 20 A$	0A ... $\pm 10A$	0A ... $\pm 40A$	0A ... $\pm 10A$
Current accuracy	$\pm 0.25\%$	$\pm 0.25\%$	$\pm 0.25\%$	$\pm 0.25\%$
Output power	200 W	200 W	200 W	400 W
Frequency range	10 μ Hz - 100kHz	10 μ Hz - 100kHz	10 μ Hz - 100kHz	10 μ Hz - 100kHz
Impedance range	1 $\mu\Omega$ - 1 k Ω	1 $\mu\Omega$ - 1 k Ω	1 $\mu\Omega$ - 1 k Ω	1 $\mu\Omega$ - 1 k Ω
Ambient temperature	0°C ... 30°C	0°C ... 30°C	0°C ... 30°C	0°C ... 30°C
System requirements	IM6/6e+EPC40 or PC	IM6/6e+EPC40 or PC	IM6/6e+EPC40 or PC	IM6/6e+EPC40 or PC

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