

TECHNICAL PRODUCT INFORMATION

Electrochemical instruments

- high - quality
- moderate prices
- excellent precision

Your contact:

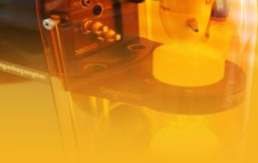
Technical support, services, demo & rental equipment, price information
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Tel.: +49(0)7032 / 895 93-2

Mail: info@ektechnologies.de

Web: www.ektechnologies.de

Shop: www.lxinstruments.com/shop/elektrochemie/



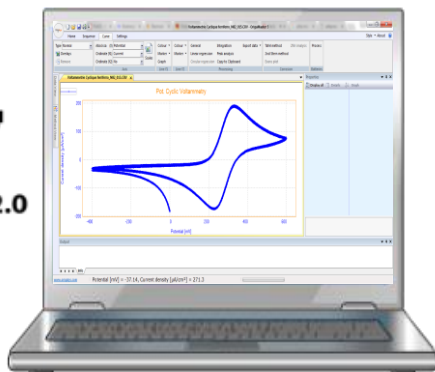
OGFIOA

Potentiostat – Galvanostat
 $\pm 100 \mu\text{A}$ to $\pm 10 \text{ A}$ / $\pm 15 \text{ V}$ / $\pm 20 \text{ V}$

POTENTIOSTAT
GALVANOSTAT
T°C PROBE
BATTERY HOLDER



OrigaMaster 5



Licence free software
Windows XP, Vista, 7, 8 and 10.

EASY TO USE



How it works

To supply the system, there are two possibilities, depending on your needs...

OGFDRV – DRIVE UNIT – MULTI-CHANNEL CONFIGURATION



- ✓ Power supply
- ✓ Control of channels
- ✓ Built-in dummy cell



Use an “**OGFDRV - Drive Unit**”, from one channel and to extend it in the future.

For instance:

5 channels 500 mA (OGF500)
+
One EIS module

OGFPWR – POWER SUPPLY – FOR SINGLE-CHANNEL



- ✓ Power supply
- ✓ For only one channel
- ✓ And one OGFEIS



Consult our different Pack OGF:



Pack
OGF500



Pack
OGF01A



Pack
OGF05A



Pack
OGF10A

For instance:

One channel 500 mA
+
One EIS module

or

One channel 500 mA
=
Pack OGF500



The OGF10A combines compactness, performance and accurate price. It is a 10 A potentiostat/galvanostat which can be complemented by one Impedance module OGFEIS.

His handle allows you to carry it easily and everywhere.

Connected to a Drive Unit OGFDV, it becomes a Multi-Channel system.

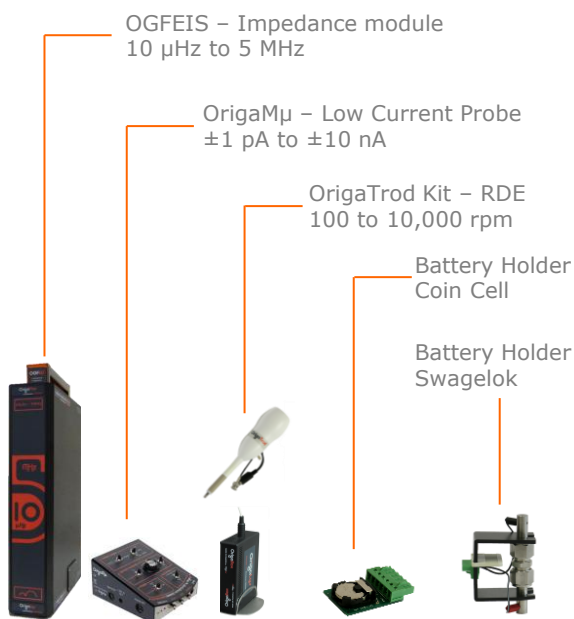
Built-in modularity:

1. Standalone Potentiostat & Galvanostat
2. Temperature measurement
3. Battery Holder Connector
4. Analog I/O to connect external devices
5. USB control

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	± 15 V
Compliance voltage	± 20 V
Maximum current	± 10 A
Current ranges	$\pm 100 \mu\text{A}$ to ± 10 A in 6 decades
Potential accuracy	$< 0.1\%$ FSR (Full Scale Range)
Potential resolution	0.003 %
Current accuracy	$< 0.1\%$ FSR
Current resolution	0.003 % FSR (Best: 3 nA)
Input impedance	1 Ω (\parallel 20 pF)
Potential bandwidth	100 KHz
Computer interface	USB 2.0
Software	OrigaMaster

Optional items



Easy to use and licence free

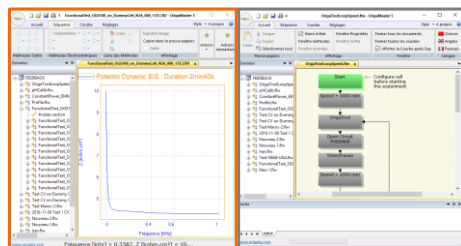


with or without EIS

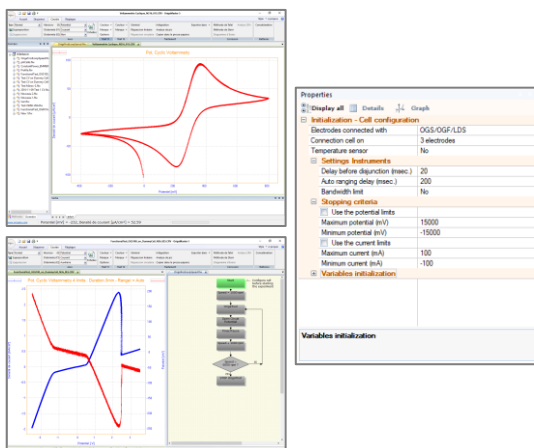
**Multi-Windowing
Changing scales in real time
Overlaying without limit**

- ✓ Windows Interface
- ✓ Easy graphic programming
- ✓ Up to 1,000,000 cycles
- ✓ Zooming in real time
- ✓ Export data to Excel, Open Office, Regressi ...

Opening two OrigaMaster or more at the same time



1st OrigaMaster 2nd OrigaMaster



- ✓ Expert mode
- ✓ No point or time limitation
- ✓ Safety criteria
- ✓ Customization
- ✓ Multi-languages: English, French and Chinese

OrigaMaster's Methods

OrigaFlex – OGF10A

VOLTAMMETRY

Pot. Cyclic Voltammetry (CV)	✓
Pot. Advanced Cyclic Voltammetry	✓
Gal. Cyclic Voltammetry	✓
Pot. Linear Voltammetry	✓
Pot. CV 4 limits	✓
Pot. Interactive CV	✓
Staircase Voltammetry (SCV)	✓

CHRONO

Open Circuit Potential (OCP)	✓
Chrono Amperometry (CA)	✓
Chrono Amperometry Expert	✓
Chrono Coulometry (CC)	✓
Chrono Potentiometry (CP)	✓
Chrono Potentiometry Expert	✓
Interactive Potentiometry	✓
Single Chrono Amperometry	✓

IMPEDANCE

Pot. Dynamic EIS	✓
Pot. Fixed Frequency EIS (Capacitance)	✓
Gal. Dynamic EIS	✓

CORROSION

Pitting corrosion	✓
General corrosion (Rp)	✓
Coupled corrosion (Evans)	✓
Polarization for corrosion (Tafel)	✓
Zero Resistance Ammeter (ZRA)	x

PULSE

Pot. Differential Pulse (DPV)	✓
Gal. Recurrent Differential Pulse	✓
Pot. SW Voltammetry (SWV)	✓
Potentiometric Stripping Analysis (PSA)	x

BATTERIES and SUPER CAPACITORS

Single Charge or DisCharge	✓
Gal. Charge and DisCharge Cycle	✓
Expert Charge and DisCharge Cycle	✓
PITT	✓
GITT	✓
Constant Power	✓
Profile Generator	✓
Internal Resistance	✓

pH AND mV MEASUREMENT

pH fixed Calibration	x
pH auto Calibration	x
pH measurement	x
mV measurement	x

Battery Holders for Origaflex



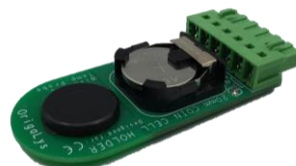
Swagelok Holders
2 electrodes / 3 electrodes

Dimensions:

- ✓ Length: 80 mm
- ✓ Width: 42 mm
- ✓ Height: 65 mm

Main Specifications:

- ✓ Easily removable from the device
- ✓ Empty weight: 44,51 g
- ✓ Full weight: 200 g
- ✓ Banana connectors: $\varnothing 2$ mm
- ✓ Operating temperature:
-30°C à 80°C



Coin cell Holder
CR2032

Fitting the following batteries:

- ✓ Thickness: 3,2 mm maximum
- ✓ Diameter: 20 mm maximum

Main Specifications:

- ✓ Easily removable from the device
- ✓ Length: 80 mm
- ✓ Width: 32 mm
- ✓ Temperature sensor
- ✓ Operating temperature:
-30°C to 80°C



Other Battery Cell Holders:
On demand

Detailed specifications

	OrigaFlex			
	OGF500	OGF01A	OGF05A	OGF10A
Potentiostat	yes			
Galvanostat	yes			
Maximum current	±500 mA	±1 A	±5 A	±10 A
Compliance voltage	±20 V			
Max applied potential	±15 V			
Voltage range	±15 V			
Potential accuracy	< 0.1% FSR (full scale range)			
Potential resolution	0.003 %			
Maximum scan rate	200 V/s			
Current ranges	9 (14 with low current option)	9 (13 with low current option)	6 (11 with low current option)	6 (11 with low current option)
with standard board	±5 nA to ±500 mA	±10 nA to ±1 A	±50 µA to ±5 A	±100 µA to ±10 A
with low current option	1 pA to 10 nA			
Current accuracy	< 0.1% FSR			
Current resolution	0.003 % FSR (Best: 150 fA)	0.003 % FSR (Best: 300 fA)	0.003 % FSR (Best: 1,5 nA)	0.003 % FSR (Best: 3 nA)
Input impedance	1 TΩ (//20 pF)			
Interfaces	Ethernet, USB 2.0			
Acquisition time	≥100 µs			
IR Compensation	Yes, manual and automatic Static			
Electrode connections	2, 3, 4			
A/D converter	16 bits			
EIS Capability	10 µHz to 5 MHz			
Analog I/O	Yes, 1			
Floating option	No versatile connection			
Filters	1 µs to 1 s, analog			
Dimensions (DxWxH)	300 x 85 x 450 mm		300 x 120 x 450 mm	300 x 170 x 450 mm
Power requirements	88-264 Vac, 47-63 Hz, 30 VA	88-264 Vac, 47-63 Hz, 40 VA	115/230 Vac, 47-63 Hz, 150 VA	115/230 Vac, 47-63 Hz, 150 VA
Weight	4.55 kg	4.55 kg	8 kg	16 kg
PC Software	OrigaMaster (by USB 2.0) and Origaviewer (by Ethernet)			
Cable length	On demand			
Temperature control	-10°C to 105°C (14°F to 221°F)			

Subject to change without notice

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