2017 Product Catalog

The OrigaLys' solutions fit your needs

OrigaLys ElectroChem SAS

More than 30 years' know-How

Instruments
for
Electrochemical Analytical Systems

OrigaLys ElectroChem

GARANTIE INSTRUMENT 5 ANS YEARS AÑOS INSTRUMENT WARRANTY

The Company

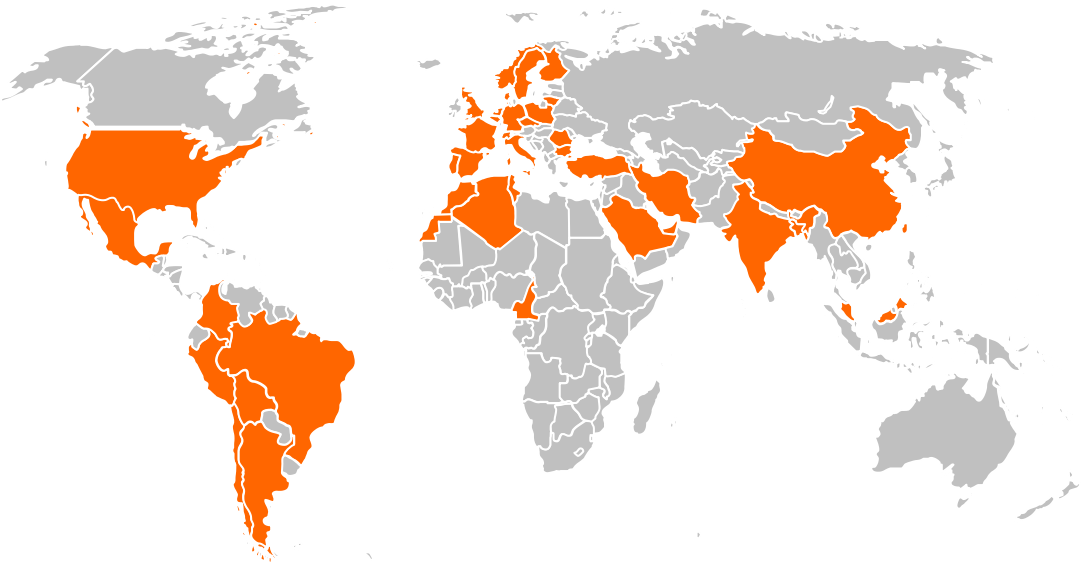
The OrigaLys' team

OrigaLys was founded in 2010, by R&D Engineers coming from Tacussel and Radiometer Analytical based in Lyon, France. Our goal is to propose to the customer "design" products with an affordable price and a high level of quality.

With more than 30 years' background and knowledge in electrochemistry and a worldwide distributor network, the company is able to provide a complete range of Instruments: Potentiostat, Galvanostat, Impedancemeter, Multi-Channels, Rotating Disk Electrode, Software, Electrodes and other Accessories (tips, pellets, corrosion cells and so on). All our products are **MADE IN FRANCE**.

As former designers of VoltaLab devices, such as PGZ301, PGP201 or EDI101, we are able to give you a free repair diagnostic of all your instruments from Radiometer Analytical and Tacussel.

Worldwide Network



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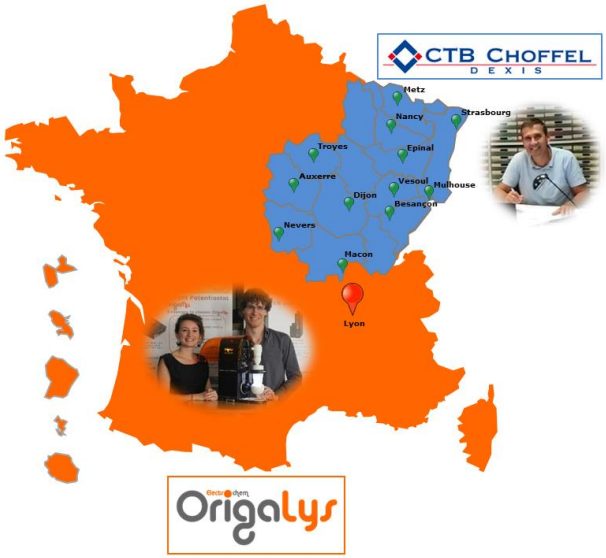
Distributors

Europe (13): Czech Republic, Denmark, Finland, Germany, Italy, Lithuania, Norway, Poland, Portugal, Romania, Spain, Sweden and The United Kingdom.
Africa (4): Algeria, Cameroon, Morocco and Tunisia.
Asia (8): Bangladesh, China, India, Iran, Malaysia, the Kingdom of Saudi Arabia, Turkey and the UAE.
America (8): Argentina, Bolivia, Brazil, Colombia, Chile, Mexico, Peru and the USA.

If your country is not listed here. **Please contact us directly.**
We are looking for distributors

WARRANTY:
5 years
on
Instruments

Network in France



NEW Distributor

in the « Grand Est »

Alsace Lorraine: Aube, Haute-Marne, Meurthe-et-Moselle, Meuse, Moselle, Bas-Rhin, Haut-Rhin and Vosges.

Franche Comté: Doubs, Jura, Haute-Saône and Territoire de Belfort.

Bourgogne: Côte-d'Or, Nièvre, Saône-et-Loire and Yonne.

If you are in this area, please contact directly CTB CHOFFEL.

Origalys

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CTB CHOFFEL DEXIS

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WARRANTY:
5 years
on
Instruments

Full Range of Products

p. 6

ORIGASTAT

Potentiostat
Galvanostat
Impedancemeter
pH-meter and T°C.
RDE Speed Controller

Ideal for Education and Research

14

LANDSTAT

Potentiostat
Galvanostat
Impedancemeter
pH-meter and T°C
RDE Speed Controller

Ideal for the field

16

ORIGABOOKST

Current Booster
From 5A/20V
to
20A/20V

17

ORIGAFLEX

Potentiostat, Galvanostat and Impedancemeter (optional)
Flexible and modular Multi-Channels
« Built your own system »
500mA, 1A or 5A

28

ORIGAMµ

Very Low Current Probe
Down to 1pA range with a 30aA resolution

29

ORIGATROD

OrigaTrod: Rotating Disk Electrode (RDE)
From 100 to 10,000 rpm
OrigaBox: RDE Speed Controller

32

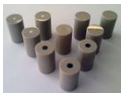
ORIGASOFT

OrigaMaster
For potentiostat

OrigaViewer
For multi-Channels

38

ORIGALINE



Glass Electrodes,
Static Electrode,
Tips, Pellets,
Sample Holder,
Magnetic Stirrer,
ElectroChemical Cells

48

ORIGASER

Services:
Radiometer's maintenance,
Training,
Expertise sessions
And product's customization

The OrigaStat range

The OrigaStat range and its software, OrigaMaster, are a new wave in the Electrochemical instrumentation world.

With this new kind of Potentiostat, Galvanostat and Impedancemeter (10µHz - 1KHz), the user can achieve highly accurate results with low noise. With a benefit of over 30 years' of experience in the field of Electrochemistry and Electrochemical measurement devices, the OrigaStat line follows the needs of users.

The OrigaStat line is light, compact and easily transportable. The unique attachable cell kit presents an easy and effortless setup for the user.

The OGS series have been designed for Research and Education and they can address any electrochemical measurement, such as corrosion, coatings, sensors, ...

All Included

- Potentiostat
- Galvanostat
- Impedancemeter
  EIS: 10µHz-1KHz
- RDE Speed Controller
- pH-meter *
- T°C Probe *

Option

- Plastic cover
  Beaker Holder
- Magnetic stirrer
- RDE - Rotating Disk Electrode

* For OGS100 and OGS200 only

All in one product

OGS080
±100 mA / ±17.5 V

OGS100
±100 mA / ±17.5 V

OGS200
±2 A / ±35 V

Entry level of the OrigaStat Line

This Potentiostat, Galvanostat, Impedancemeter from **OrigaLys Electrochem SAS** was specially designed for Education and Research.

- Tutorials can be easily prepared in advance and protected by the plastic cover
- Complete solution: Potentiostat, Galvanostat, Impedancemeter (10 µHz - 1 KHz), RDE Speed Controller, PC Software
- Easily transportable
- Everything is adjustable or removable: the lighted cell and the beaker holder.
- A magnetic stirrer can also be added if needed

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±5 V
Compliance voltage	±17.5 V
Maximum current	±100 mA
Current ranges	±1 nA to ±100 mA in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (30 fA)
Input impedance	1 TΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

Options

- **OrigaCell Kit**
Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base
- **OrigaMix**
Magnetic Stirrer
- **OrigaTrod**
Rotating Disk Electrode (RDE)
- **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **OrigaTest**
Dummy cell

Testimony

Luc Martel

Professor of chemistry in PC*
Lycée du Parc – Lyon – France

"This scientific tool allows professors from different fields: MP, PC, PSI, PT and TPC to carry out demonstration projects and creates a better understanding of electro-chemical measurement."

Compliance with the programs of scientific preparatory classes

Study of:

- ✓ **Detection of Slow-Fast system**
- ✓ **Potential and Intensity curves**
- ✓ **Evans and Tafel curves**
- ✓ **Chronoamperometry**
- ✓ **Observation of diffusion limited current**
- ✓ **Ferri-Ferro**

Why did you choose the OrigaStat - OGS080 ?

Luc Martel - Lycée du Parc:

"First time I heard about OrigaLys, it was during our collaboration with the Ecole Normale Supérieure (ENS Lyon). OrigaLys has fixed their Radiometer's instrument."

"After analysing the whole product range on the OrigaLys website www.origalys.com, the OrigaStat OGS080 seemed the most suitable device for our teaching purposes, especially because of the software intuitive programming (flowchart). Indeed, it was one of the most important criteria to select OrigaLys instruments."

"Its evolutionary capacities, such as battery methods implementation, makes the OrigaStat the perfect instrument for preparatory classes for PC*. Thus, we would be able to have great and various methods for teaching."

A Full Application

Compared to the **OGS080**, the **OGS-100** offers a more complete solution in only one instrument.

Thus, performing pH and T°C measurements is possible.

General specifications are the same than the **OGS080**: ±17.5 V for compliance voltage, ±100 mA for maximum current and ±5 V for applied voltage; but you can connect all the **OrigaLys**' products such as: **OrigaBooKst** (Booster from 5 A to 20 A) and **OrigaMµ** (down to 1 pA range with a 30 aA resolution).

OGS100 can be fitted with other external devices, as pump, heating circulator and many more.

Options

- **OrigaCell Kit**

Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base

- **OrigaMix**

Magnetic Stirrer

- **OrigaTrod**

Rotating Disk Electrode (RDE)

- **OrigaBooKst**

Current Booster, from 5 A to 20 A

- **OrigaMµ**

Low Current Probe, down to 1 pA range

- **OGFEIS**

External EIS module: up to 5 MHz

- **OrigaLine**

Static Electrode, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**

Dummy cell

Main Technical Specifications

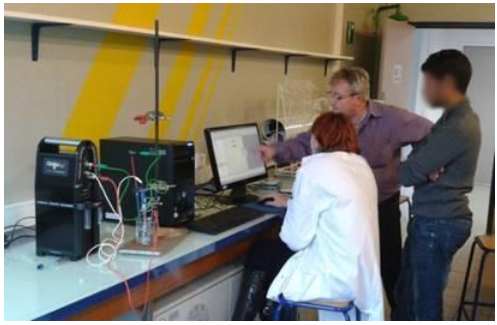
Electrode connections	2, 3 and 4
Max applied potential	±5 V
Compliance voltage	±17.5 V
Maximum current	±100 mA
Current ranges	±1 nA to ±100 mA in 9 decades (1 pA to 10 nA with OrigaMµ)
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (30 fA)
Input impedance	1 TΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

Testimony

Marie-Laure Doche

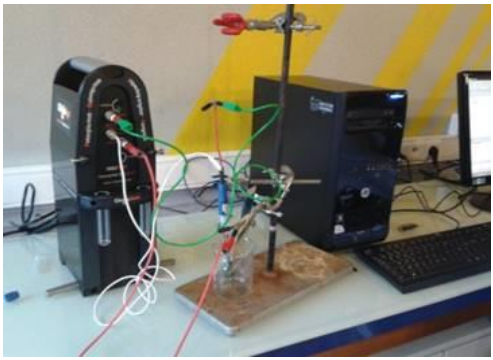
Internship Manager
2° Study Director
IUT de Besançon – Vesoul

Compliance with the programs of the Chemical department (IUT, Institut Universitaire de Technologie)



Why did you choose the OrigaLys?

Marie-Laure Doche:
"I have selected the OrigaLys instrument because it is designed and manufactured in France. So, I can trust the highly-qualified R&D team and receive an efficient after-sales service. The link with Radiometer Analytical was also a good point, even if the OrigaLys instruments are more modern."



Why did you choose the OrigaStat OGS100?

Marie-Laure Doche:
"The first criteria was the very competitive price, according the provided services. Then, its recent design shows a long-term investment but also easy to use. The students really like the nice shape and mainly its high technological performance."

"The OGS100 perfectly fits the teaching of practical work, registered to the program of the IUT Chemical Department. The software is user friendly for the students."

"OrigaLys always listens to its customers' needs. The team is highly competent and reactive. It is shown in the software improvements as well as quick implementation without any hesitation."

"The OGS100 is a complete instrument allowing us to perform our research."

OGS200

High power

Compared to the **OGS100**, the **OGS200** offers the same complete solution with more power.

Thus, performing pH and T°C measurements is possible.

General specifications are more advanced than those of the **OGS100**: ±35 V for compliance voltage, ±2 A for maximum current and ±15 V for applied voltage. **OGS200** can be connected to all the **OrigaLys**' products such as: **OrigaBooKst** (from 5 A to 20 A) and **OrigaMµ** (down to 1 pA range with an 30 aA resolution).

OGS200 can be fitted with other external devices, as pump, heating circulator and many other.

Options

- **OrigaCell Kit**

Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base

- **OrigaMix**

Magnetic Stirrer

- **OrigaTrod**

Rotating Disk Electrode (RDE)

- **OrigaBooKst**

Current Booster, from 5 A to 20 A

- **OrigaMµ**

Low Current Probe, down to 1 pA range

- **OGFEIS**

External EIS module: up to 5 MHz

- **OrigaLine**

Static Electrode, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**

Dummy cell

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±35 V
Maximum current	±2 A
Current ranges	±20 nA to ±2 A in 9 decades (1 pA to 10 nA with OrigaMµ)
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (600 fA)
Input impedance	> 10 GΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

Testimony

Sylvain Amand

R&D Manager
Aeroprotec – Pau
Expert in aeronautic coatings

It has been 3 years that **Aeroprotec** uses an **OrigaStat – OGS200** for its extended features.

Processing chain traitement

The OrigaStat OGS200

"It allows us to make an instant analysis and receive accurate results in a short time. As a result, we can know the concentration of species as well as the impact on the metal."

Why did you choose the OrigaStat OGS200?

Sylvain Amand - Aeroprotec:
"We work on the anticorrosion coatings and we need to make measurements on characterizations and on production electrolyte research. By using this potentiostat, we develop the analysis method to anticipate the weak aspect of a process metal deposition."

"This device can be monitored, thus we can easily control the experiment conditions ; It brings us a huge capacity to realize measurement on research field, and mainly on the process itself. The results are very relevant."

"The instrument is also useful to analyse metals in aqueous solution. It is a good environment advantage."

Detailed specifications

	OrigaStat		
	OGS080	OGS100	OGS200
Potentiostat	yes		
Galvanostat	yes		
Impedancemeter	yes		
Maximum current	±100 mA		±2 A
Compliance voltage	±17.5 V		±35 V
Max applied potential	±5 V		±15 V
Voltage ranges	±1 V, ±2 V and ±5 V		±3 V, ±6 V and ±15 V
Potential accuracy	< 0.1% FSR*		
Potential resolution	30 µV		91 µV
Maximum scan rate	200 V/s		
Current ranges	9	9 (12 with low current option)	9 (14 with low current option)
with standard board	±1 nA to ±100 mA		±20 nA to ±2 A
with low current option	Not available	1 pA to 10 nA	
Current accuracy	< 0.1% FSR		
Current resolution	0.003 % FSR (Best resolution: 30 fA)		0.003 % FSR (600 fA)
Potentiostat rise/fall time	< 2 µs		
Input Impedance	>1 TΩ (//20 pF)		>10GΩ (//20 pF)
Interfaces	USB 2.0		
Acquisition time	≥100 µs		
IR compensation	Manual and automatic feedback		
Electrodes connections	2, 3, 4		
A/D converter	16 bits		
EIS capability	10 µHz to 1 KHz. Up to 5 MHz if connected to the OGFEIS		
Analog I/O	7		
External current booster	Not available		From 5 A to 20 A
Floating option	No, versatile connectivity		
Filters	1 µs to 1 s, analog		
Dimensions (DxWxH) Dimensions (unfolded feet)	326 x 135 x 418 mm 326 x 247 x 418 mm		400 x 135 x 418 mm 400 x 247 x 418 mm
Power requirements	90-264Vac, 47-63Hz, 30VA		90-264Vac, 47-63Hz, 120VA
Weight	5.5 kg		8 kg
PC Software	OrigaMaster (by USB 2.0)		
Cell cable length	On demand		
Temperature control	Not available	-10°C to 105°C (14°F to 221°F)	

*FSR = Full Scale Range

Subject to change without notice

Potentiostat for the field

This Potentiostat, Galvanostat, Impedancemeter from OrigaLys Electrochem SAS was specially designed for **outside measurements**:

- Complete solution: Potentiostat, Galvanostat, Impedancemeter (10 µHz - 5 MHz), RDE Speed Controller and PC Software (OrigaMaster)
- A laptop can be integrated into the box.
- Easily transportable due to its luggage cabin size and its wheels

- Safe thanks to the key lock system

Options

- **OrigaMix**

Magnetic Stirrer

- **OrigaTrod**

Rotating disk Electrode (RDE)

- **OrigaBooKst**

Current Booster, from 5 A to 20 A

- **OrigaMµ**

Low Current Probe, down to 1 pA range

- **OrigaLine**

Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**

Dummy cell

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±5 V
Compliance voltage	±17.5 V
Maximum current	±100 mA
Current ranges	±1 nA to ±100 mA in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	30 µV
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 30 fA)
Input impedance	1 TΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

- Corrosion & Cathodic Protection Survey
- Pipes & Tank: Gas, Oil and Water
- Navy Industry: Reinforced Concrete Structure
- Coating & Plating
- And many more

Connection from the car

Connection from the instrument

Connection to the field

Powerful

If you need higher current ranges you easily can add our booster, OrigaBookst. The **OrigaBooKst** increases the maximum current of the following instruments:

- **OrigaStat: OGS100** and **OGS200**
- **LandStat**

The maximum current can be increased easily by adding a module of 5 A. Thus, 4 ranges are available:

5 A, 10 A, 15 A and 20 A.

How it works?

The Booster consists in connecting **1 Drive Unit** and **Power Units of 5 A to an OrigaLys' potentiostat**

The **Drive Unit** replaces the front panel of the **OrigaLys**' Potentiostat. Thus, you connect the electrodes to the **Drive Unit** and not anymore to the potentiostat.

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±5 A / ±10 A ±15 A / ±20 A
Resolution	0.003%
Accuracy	< 0.1 % FSR (Full Scale Range)
Operation mode	Potentiostat/ Galvanostat
Bandwidth - Potentiostatic - Galvanostatic	50 KHz
Software	OrigaMaster
Instrument compatibility	OGS100 OGS200 LandStat OGFEIS

The OrigaFlex range

The **OrigaFlex** is a Multi-Channel system. Three different modules are available: 500 mA, 1 A and 5 A.

Each module is a real **Potentiostat** and **Galvanostat,** allowing simultaneous and independent measurements (including temperature control).

Up to 10 channels can be connected to a **Drive Unit** (or a sum of 20 A). The Drive allows a big reliability since it includes a **Dummy Cell** facilitating tests before experiments. It is also an excellent way to check the cords and the instrument.
An impedance module can be added to each module, without limitation with the Drive Unit.

For instance, you can build this system:

ETHERNET

This OrigaFlex system includes:

- 1 x Drive Unit & Dummy Cell
- 5 x OGF500
- 1 x OGFEIS

OGF500
±500 mA / ±20 V

OGF01A
±1 A / ±20 V

OGF05A
±5 A / ±20 V

OGFEIS
10 µHz – 5 MHz

The concept

From a single to a multi and flexible configuration…

1 Single Potentiostat for low budget


or


with or without EIS

Thanks to the Power Supply

USB 2.0

OrigaMaster

2 Multi-Potentiostats

Thanks to the Drive Unit

ETHERNET

OrigaViewer

3 Split multi-Potentiostats

ETHERNET

And/or

USB 2.0

Thanks to the Power Supply

The concept

Thanks to a networking system, the possibilities are without limits…

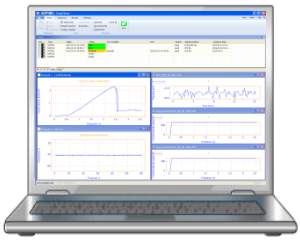
4 No limit multi-Potentiostats

Thanks to an Ethernet Switch.

You can connect all the Drive Units to your Switch

ETHERNET

OrigaViewer



By multiplying the Drive Units, you connect as many Channels as you need.

Either 1 Drive Unit, 2, 3 or more

Example: 9 channels and 2 EIS

OrigaFlex, from 1 to 999 channels

Supplying the system...

Multi-Channel mode

Use the **Drive Unit**, if you need more than one Channel

Mono-channel mode

Use the **Power Supply**, if you need just one Channel to begin

Drive Unit & Dummy Cell

3 main functions:

1. It **supplies current to the channels**, as the sum of each amps channel connected to a Drive Unit shall not exceed **20A** or **10 Channels**.
2. It allows **connection to a computer via Ethernet**. Thus, the PC software included, called **OrigaViewer** (without charge or licence) can control every channel of the system. Individually, each channel can be controlled by the PC software **OrigaMaster** via USB.
3. Finally, thanks to its **dummy cell**, functional tests can be performed on cords and on the different Channels. Thus, it is ensured that each method will be perfectly performed.

For example:

Five 500 mA Channels
+
One EIS Channel

Power Supply - OGFPWR

2 main functions:

1. **It supplies current to only one channel (500 mA, 1 A or 5 A).**
2. **It also supplies current to an EIS module.**

It is **not connected to a PC**. The connection has to be made **from the Channel** (**via USB** from the rear panel). Here, the channel is controlled by **OrigaMaster**.
No Dummy Cell inside

Technical specifications:

Power: 100-240Vac – 50-60Hz – 1KVA
Weight: 3.10 kg
Dimensions (Length x Width x Height) :
28.5 x 8.3 x 24.15 cm

For example:

One 500 mA Channel
+
One EIS Channel

or

One 500 mA Channel

OGF500

NEW DESIGN

This Potentiostat, Galvanostat, from **OrigaLys Electrochem SAS** was specially designed as independent module:

- In case Channels are added, simultaneous measurements on different Channels can be synchronized.
- EIS measurement is optional. To proceed, an EIS module (**OGFEIS**) has to be connected.
- This individual Channel can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.
- 2 LED Displays available: one to see the Status or the potential and one to see the Channel numbering.
- Up to 10 Channels **OGF500** with 1 **Drive Unit & Dummy Cell**

Options

- **OGFEIS**

External EIS module: 10µHz-5MHz

- **OrigaTrod Kit**

Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)

- **OrigaMµ**

Low Current Probe, down to 1 pA range

- **OrigaMix**

Magnetic Stirrer and its Speed Controller (**OrigaBox**)

- **OrigaLine**

Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **Battery Cell Holder**

See picture below

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±500 mA
Current ranges	±5 nA to ±500 mA in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	450 µV on ±15 V
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 150 fA)
Input impedance	10 GΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

OGF01A

NEW DESIGN

This Potentiostat, Galvanostat, from **OrigaLys Electrochem SAS** was specially designed as independent module:

- In case Channels are added, simultaneous measurements on different Channels can be synchronized.
- EIS measurement is optional. To proceed, an EIS module (**OGFEIS**) has to be connected.
- This individual Channel can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.
- 2 LED Displays available: one to see the Status or the potential and one to see the Channel numbering.
- Up to 10 Channels **OGF01A** with 1 **Drive Unit & Dummy Cell**

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±1 A
Current ranges	±10 nA to ±1 A in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	450 µV on ±15 V
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 300 fA)
Input impedance	10 GΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

Options

- **OGFEIS**
External EIS module: 10µHz-5MHz
- **OrigaTrod Kit**
Rotating disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
- **OrigaMµ**
Low Current Probe, down to 1 pA range
- **OrigaMix**
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
- **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **Battery Cell Holder**
See picture below

Testimony

Philippe Marx

Manager of AMF Company
Lury sur Arnon – France

Expert in the manufacture of components based on Nickel-Titanium (Nitinol) shape memory alloys for the medical device business and high technology applications.

Compliance with the standard ASTM F2129

Helpful to:

- ✓ **Specify all the conditions of the test to show without ambiguity the respect of the standard.**
- ✓ **Explain the performances obtained in the relations with the states of surface of the material and the quality of the passivation layer.**

Why did you choose the OrigaFlex - OGF01A ?

Philippe Marx - AMF Company:
"A corrosion test is very delicate to realize for several reasons. It is necessary to know how to interpret the curves of corrosion and understand the phenomena."
"It is necessary to give to the laboratory series of implants with several qualities of state of surface and several thicknesses of passivation layer. It is only with such a level of trial report that we can hope to win the trust of an auditor of CE or FDA marking."

"Those who want to integrate ways of in-house test can contact Origalys."

This Potentiostat, Galvanostat, from **OrigaLys Electrochem SAS** was specially designed as independent module:

- In case Channels are added, simultaneous measurements on different Channels can be synchronized.
- EIS measurement is optional. To proceed, an EIS module (**OGFEIS**) has to be connected.
- This individual Channel can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.
- 2 LED Displays available: one to see the Status or the potential and one to see the Channel numbering.
- Up to 4 Channels **OGF05A** with 1 **Drive Unit & Dummy Cell**

Options

- **OGFEIS**

External EIS module: 10µHz-5MHz

- **OrigaTrod Kit**

Rotating disk Electrode (RDE) and its Speed Controller (**OrigaBox**)

- **OrigaMµ**

Low Current Probe, down to 1 pA range

- **OrigaMix**

Magnetic Stirrer and its Speed Controller (**OrigaBox**)

- **OrigaLine**

Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **Battery Cell Holder**

See picture below

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±5 A
Current ranges	±50 µA to ±5 A in 6 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	450 µV on ±15 V
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 1,5 nA)
Input impedance	10 GΩ (//20 pF)
Potential bandwidth	100 KHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

OGFEIS

NEW BOARD

High Electrochemical Impedance Spectroscopy (EIS)

Performing EIS measurements becomes easier with this additional module dedicated to Impedance.

- Once the module is added to any kind of Channel, the **OrigaMaster** software allows a potentiostatic and galvanostatic control, over a frequency of:
  10 µHz to 5 MHz
- Included into OrigaMaster and OrigaViewer, you can find all the EIS methods:
  - Potential Dynamic EIS
  - Potential Fixed Frequency (Capacitance)
  - Galvanic Dynamic EIS

Compatibility

- **OGF500**
- **OGF01A**
- **OGF05A**
- **OGS100**
- **OGS200**
- **LandStat**

OGFEIS connected to an **OGS200**

OGFEIS connected to an **OGS100**

Main Technical Specifications

Frequency range	10 µHz – 5 MHz
Frequency resolution	5 ppm
Input range	±15 V
Signal types	Sine with delay and Average on 1 to 10 determinations
Input Channels	E and I from the Potentiostat/galvanostat or X and Y external signals
Potential AC Amplitude	6µV to 7,5V maximum
Current AC Amplitude	100% of range I, best resolution 6ppm
Data	Nyquist, Bode, Admittance, Mott-Schottky
Analysis	Fit and simulation, Find circle, Element subtraction, Export Data
Software	OrigaMaster and OrigaViewer

Bi-Potentiostats

1 Configuration = 1 Drive Unit + 3 Channels (to really monitor 3 Power Electrodes)

In addition to acting as a bi-potentiostat you also have three fully independent potentiostats that can be separated when needed.

OGFDRV

OGF500 or OGF01A or OGF05A

AS WORKING 1

OGF500 or OGF01A or OGF05A

AS WORKING 2

OGF500 or OGF01A or OGF05A

AS AUXILIARY

2 OrigaFlex bi-potentiostat configuration

ETHERNET

OrigaViewer

Example: 1 x OGFDRV + 3 x OGF500

Recommendation for an optimal configuration:

Current Work 1 + Current Work 2 < Current Aux

Please consult us for more information

Detailed specifications

	OrigaFlex		
	OGF500	OGF01A	OGF05A
Potentiostat	yes		
Galvanostat	yes		
Maximum current	±500 mA	±1 A	±5 A
Compliance voltage	±20 V		
Max applied potential	±15 V		
Voltage range	±15 V		
Potential accuracy	< 0.1% FSR (full scale range)		
Potential resolution	450 µV		
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)
with standard board	±5 nA to ±500 mA	±10 nA to ±1 A	±50 µA to ±5 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)
Potentiostat rise/fall time	< 4 µs		
Input impedance	10 GΩ (//20 pF)		
Interfaces	Ethernet, USB 2.0		
Acquisition time	≥100 µs		
IR Compensation Manual	No, 4 poles measurement capability		
Electrode connections	2, 3, 4		
A/D converter	16 bits		
EIS Capability	10 µHz to 5 MHz		
Analog I/O	7		
External Booster of current	No		
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
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
Weight	4.55 kg	4.55 kg	8 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

The most sensitive Low Current Potentiostat

The **OrigaMµ** allows to perform very low current measurement of the following instruments:

- **OrigaStat: OGS100** and **OGS200**
- **OrigaFlex: OGF500, OGF01A and OGF05A**
- **LandStat**

The current range can be decreased to:
1 pA, 10 pA, 100 pA, 1 nA and 10 nA.

How it works?

This low current potentiostatic probe can be used alone (manual mode) or connected (remote mode) to an **OrigaLys**' instrument.

Remote Mode

Connecting the **OrigaMµ** to an **OrigaLys**' potentiostat allows to fully operate the excellent response time of the **OrigaMµ.**

Driven by purely analog signal and supplied on battery during measurements (no risk of interference), you can implement using **OrigaMaster** all standard electrochemical methods including impedance up to 1 KHz (for **OGS** and **LandStat** only).

Manual Mode

The **OrigaMµ** can be used alone, thus it applies a constant potential (from ±1 V).
Here, the current ranges are:
±100 pA, ±1 nA and ±10 nA.

Main Technical Specifications	
Electrode connections	2 or 3
Max applied potential	±2 V (Remote mode) ±1 V (Manual mode)
Compliance voltage	±7 V
Current ranges Remote mode: 5 Manual mode: 3	±1 pA, ±10 pA, ±100 pA , ±1 nA and ±10 nA
Best resolution	30 aA
Accuracy	< 0.1 % FSR (Full Scale Range)
Operation mode	Connected or alone
Software	OrigaMaster if connected None if alone
Instrument compatibility	OGS100 OGS200 LandStat OGF500 OGF01A OGF05A

Rotating Disk Electrode (RDE)

Radiometer's EDI101 and CTV101 Legacy
(same designer)

The Kit is composed by

OrigaTrod

Rotating Disk Electrode (RDE)
From **100 to 10,000** rpm

OrigaTrod fits on most glass cells, with an NS 14/23 ground joints. Manufactured with noble plastics PETP, PTFE, PEEK and the best stainless steel.

A metallic and removable barbed fitting allows a neutral gas to flow through the electrode when it is used in a corrosive atmosphere.
The electrical signal is ensured thanks to graphite contact doped with silver.
With an optical digital encoder, **OrigaTrod** guarantees a rotation speed accuracy of 0.35%.

It's fully compatible with the tips from Radiometer.

OrigaBox

Rotating disk Electrode **Speed Controller**

OrigaBox is really a tiny piece of high technology using an ARM9 processor. Thus, we are able to obtain a 0.35 % digital regulation of the Rotating Electrode Speed (and without risk of runaway).

OrigaBox offers a unique flexibility. Delivered with its PC Software and connected by USB, it drives the **OrigaTrod**. But, it is also adapted to the environment. With a specific cord, **OrigaBox** can receive an analog signal from any kind of Potentiostats.

Product compatibility

OrigaTrod (without OrigaBox)	OGS080, OGS100, OGS200 and LandStat
OrigaTrod and OrigaBox	OGF500, OGF01A, OGF05A and other brands

A complete solution

It's fully compatible with the tips from Radiometer.

RDE Stand

This stand for RDE is composed by:
- A standard stand

With a robust base
The height is easily adjustable

- A glass cell

The volume can vary, on demand.
This cell can also be thermostated.
With its 5 holes, the cell can fit RDE, counter electrodes, working electrodes and reference electrodes.

OrigaTrod Kit

When the OrigaTrod is used together with the OrigaBox, it is provided with a box. Thus, everything is safely transported.

This kit contains:
- OrigaTrod
- OrigaBox
- USB Key, containing the software (PC Control Panel)
- User's manual
- The convenient cords
- The box

Not delivered with tips, pellets or sample holders. But, it has been designed to carry it, easily.

An easy solution

NEW

Rotating Disk Electrode with a Built-in Speed Controller

Suitable to any kind of brands: Metrohm-Autolab, Bio-Logic, CH Instruments, and so on

Compatible with tips from Radiometer-Hach

From 100 to 5,000 rpm

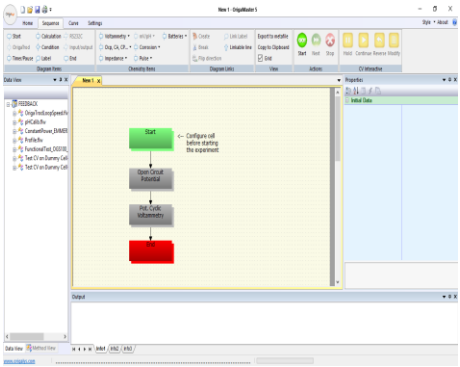
Potentiometer

Monitoring manually the rotation speed of the OrigaTrod and directly on the device.

External Power Supply

The system needs to be directly supplied by a standard AC / DC switching adaptor 12V output.

OrigaLys provides 3 different software, depending on the use



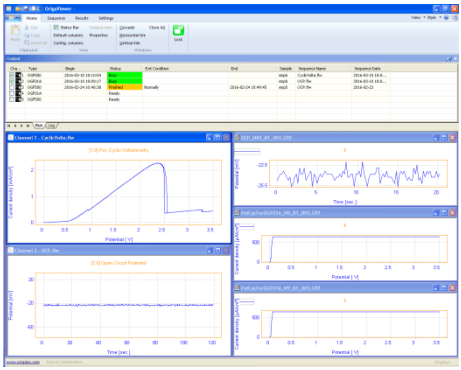
OrigaMaster

Dedicated to mono-potentiostat.

Windows interface. Compatible with Windows XP, Vista, 7, 8 and 10.

Products' compatibility

- OrigaStat: OGS080, OGS100 and OGS200
- OrigaFlex: OGF500, OGF01A and OGF05A
- LandStat



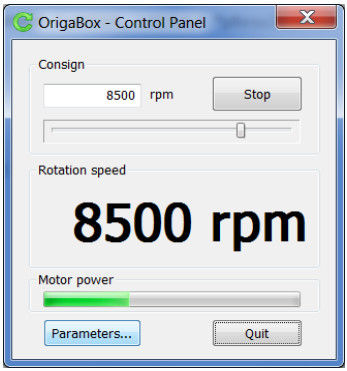
OrigaViewer

Dedicated to multi-potentiostat.

Windows interface. Compatible with Windows Vista, 7, 8 and 10.

Products' compatibility

- OrigaFlex: OGF500, OGF01A and OGF05A



PC Control Panel

Allows to control the Speed Controller of the RDE and the Magnetic Stirrer.
Windows interface. Compatible with Windows XP, Vista, 7, 8 and 10.

Products' compatibility

- OrigaBox: RDE (OrigaTrod)
- Magnetic Stirrer (OrigaMix)

Easy to use and scalable

With **OrigaMaster**, you **never lose or miss a single record**. Indeed, the system always asks you if you want to save the data and so the results.

OrigaMaster automatically records all data obtained on unit interfaced via a standard USB port, with naming according user choice.

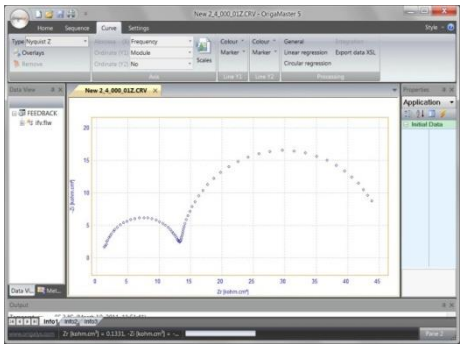
With OrigaMaster, you never lose or miss a single record thanks to **automatic uploading** and archiving of all results and curve data points obtained from your connected electrochemical unit.

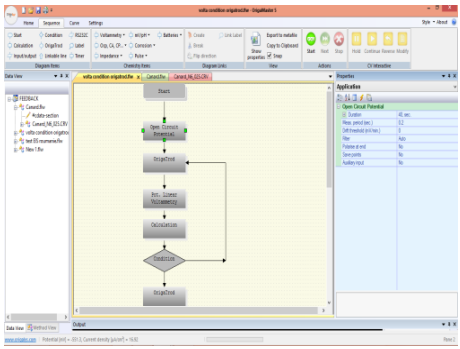
In addition to the usual methods it also features:

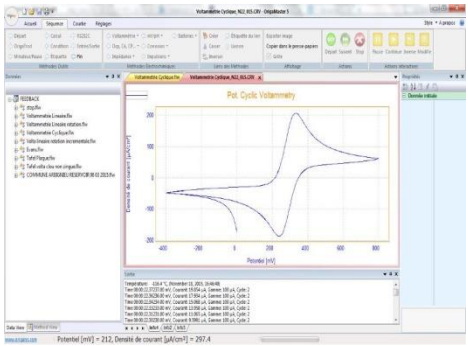
- **Graphic programming of the sequences**
- The possibility of running conditional loops, cycles tests
- Insertion of a mathematical equation, of starting a peripheral, and receiving start/stop commands from external units.

OrigaMaster and its start/stop instructions combined to the logical inputs of the **OrigaLys**' instruments, provides a complete automation for electrochemical applications.

OrigaMaster includes a help file, accessible at all times. A printable version is also available.







Multi-languages

4 languages are available

1

English - Anglais*

*Language by default

2

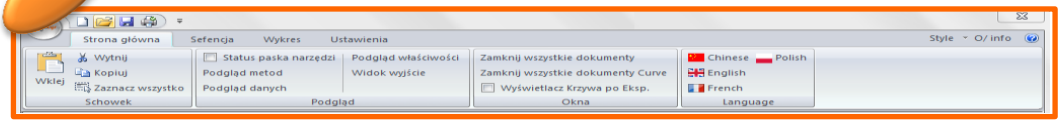
Français - French

3

中文 - Chinese

4

Polski - Polish



5

Español - Spanish

Soon

For other languages, contact us:

Deutsch, Português, Română, Türkçe, Čeština, العربية, فارسی, 日本語, 한국어, Dansk, हिंदी, Italiano, Русский, etc.

Methods

	OrigaMaster		
	LandStat	OrigaStat	OrigaFlex
VOLTAMMETRY			
Pot. Cyclic Voltammetry		✓	
Pot. Linear Voltammetry		✓	
Pot. CV 4 limits		✓	
Pot. Interactive CV		✓	
Staircase Voltammetry		✓	
CHRONO			
Open Circuit Potential		✓	
Chrono Amperometry		✓	
Chrono Amperometry Expert		✓	
Chrono Coulometry		✓	
Chrono Potentiometry		✓	
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)		✓	
Polarisation for corrosion (Tafel)		✓	
Zero Resistance Ammeter (ZRA)	✓	✓*	×
PULSE			
Pot. Differential Pulse		✓	
Gal. Recurrent Differential Pulse		✓	
Pot. SW Voltammetry		✓	
PSA	✓	✓*	×
BATTERIES			
Charge/Discharge		✓	
Constant Power		✓	
Run Profile		✓	
Internal Resistance		✓	
pH AND mV MEASUREMENT			
pH fixed Calibration	✓	✓*	×
pH auto Calibration	✓	✓*	×
pH measurement	✓	✓*	×
mV measurement	✓	✓*	×

* Not available with OrigaStat - OGS080

Powerful and Secure

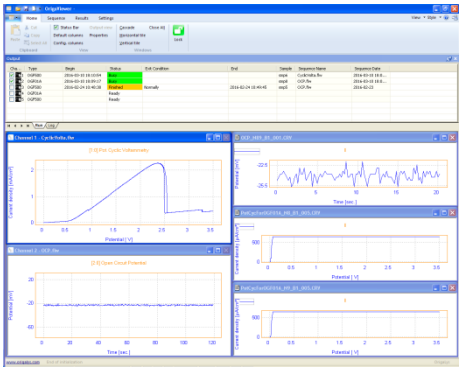
OrigaViewer uses a powerful database secure system, via Ethernet. There are 3 levels of users:
- Administrator
- Supervisor: head of one group
- Operator: controlled by the supervisor

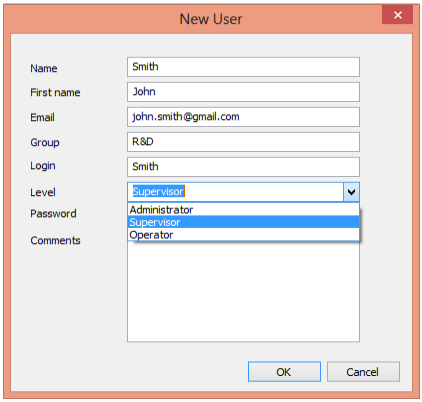
It is a software for Multi-Channels. A screen allows the on-line view of the simultaneous measurements.
Thanks to the database, all the results are saved automatically and much more: name of the user, his group, date, method, sample, exit condition and so on.

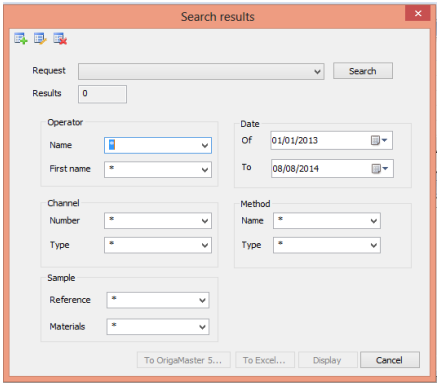
OrigaViewer is compatible with **OrigaMaster**. Thus, you can prepare a sequence (flow chart) with **OrigaMaster** and load it into **OrigaViewer**. A curve obtained by **OrigaViewer** can be processed into **OrigaMaster**.

OrigaViewer is also a scalable system. It can be personalized to fit your needs. Methods can be removed or added, on demand.

OrigaViewer is a powerful data archiving tool, which enables you to access your stored results and curves in a flash via user-programmable requests. You can consult the dedicated analytical database and filter and sort the archived results by date, method type etc. providing the information you need at a glance.







Methods

	OrigaViewer		
	OrigaFlex		
	OGF500	OGF01A	OGF05A
VOLTAMMETRY			
Pot. Cyclic Voltammetry	✓		
Pot. Linear Voltammetry	✓		
Pot. CV 4 limits	✓		
Pot. Interactive CV	×		
Staircase Voltammetry	✓		
CHRONO			
Open Circuit Potential	✓		
Chrono Amperometry	✓		
Chrono Amperometry expert	✓		
Chrono Coulometry	✓		
Chrono Potentiometry	✓		
Chrono Potentiometry expert	✓		
Interactive Potentiometry	×		
Single Chrono Amperometry	✓		
IMPEDANCE (with the OGFEIS module)			
Pot. Dynamic EIS	✓		
Pot. Fixed Frequency EIS (Capacitance)	✓		
Gal. Dynamic EIS	✓		
CORROSION			
Pitting corrosion	✓		
General corrosion (Rp)	✓		
Coupled corrosion (Evans)	✓		
Polarisation for corrosion (Tafel)	✓		
Zero Resistance Ammeter (ZRA)	×		
PULSE			
Pot. Differential Pulse	✓		
Gal. Recurrent Differential Pulse	✓		
Pot. SW Voltammetry	✓		
PSA	×		
BATTERIES			
Charge/Discharge	✓		
Constant Power	✓		
Run Profile	✓		
Internal Resistance	✓		
pH AND mV MEASUREMENT			
pH fixed Calibration	×		
pH auto Calibration	×		
pH measurement	×		
mV measurement	×		

Accessories

39 ORIGASENS



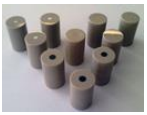
OrigaLys provides any kind of Reference, Auxiliary, Working, Selective and Counter Electrodes: Calomel, Ag/AgCl, Platinum, Silver, Glassy Carbon, Combined, Fluor, Calcium and Nitrate.

Many more on demand

39 ORIGACCESS


With the electrodes, we offer any kind of connectors (BNC, UHF and so on), length and shielded cords.

40 ORIGATIP




Tips:
- Platinum, Glassy Carbon...

Pellets:
- Aluminum, BDD, Nickel...

Sample Holders:
- Active area: ø6 or 13mm
- Pellets: ø8 or 15mm

41 STATROD

Static Electrode
Banana connector
PEEK material

For Tips

42 ORIGACELL


OrigaLys supplies cells with:
- Potentiostats: OrigaCell Kit for OrigaStat
- Electrodes: any kind of Glass or Plastic beakers
- Specific applications: Corrosion Cells, thermostated Cells

45 STAND

The cell stand was specially designed to support cell & a Rotating disk Electrode (OrigaTrod)

45 ORIGAMIX

Magnetic Stirrer
Exchangeable
From 100
to
1,500 rpm

46 BATTERY HOLDERS


Different holders,
With T°C measurement

For:
- Coin Cells
- Flat Cells
- Cylindrical Cells

47 ORIGATEST

External Dummy Cell
- CV
- LIN
- EIS

OrigaSens - Electrodes

OrigaLys provides a wide range of electrodes:

- Reference
- Counter electrode
- Combined
- Selective
- pH
- µ-electrodes
- And many more on demand.

Standard specifications

- Length:103 or 120 mm
- Diameter: 6, 8, 10 or 12 mm
- Sleeve (14,5/23) or not
- Screw head
- Porous Pin

Origaccess - Cords

With its electrodes, **OrigaLys** provides a wide range of cords and connectors. The standard one for our electrodes is CLSCH S7/S8.

S7 socket

BNC socket

The cords offered with **OrigaLys**' potentiostat are reinforced to obtain better results.

Electrode Overview

Reference	Hg/HgO, Ag/AgCl, ECS, $Cu/CuSO_4$,…
Auxiliary and Working	Silver rod ø3mm, Platinum disc ø10mm, Platinum wire ø1mm , Platinum plate 5x5mm , …
Combined	Platinum ring ø8x1,5 + Ag/AgCl, …
Selective	Fluor, Nitrate, Calcium, Cadmium, Lead, …
pH	Annular Junction, ø12x103mm
Other	Liquid Junction Protection Tube ø12: 140 mm, porous pin, NS14/23 sleeve joint

Cord Overview

Connectors	BNC, UHF, Banana ø2 or 4mm, DIN, Pin DIN and other on demand
Adaptors	BNC/BNC, BNC/Banana, Banana/double banana, UHF/BNC and so on
Shielded?	Standard cords are shielded Not shielded on demand
Length	Standard: 0,16cm, 0.25cm, 1m and 2m. Any kind of length on demand
Power Cord	Fr, UK, US, CH and more on demand
Other	- Isolated Alligator clamp - Standard Alligator clamp - Temperature probe - Crystal tube

Ag/AgCl Reference Electrode
Porous Pin, Saturated KCL, 103 mm

1m BNC – S7 cord:
- Shielded
- For Reference electrodes

OrigaTip
Tips – Pellets

Tips from OrigaLys can be used with our **RDE** (OrigaTrod) and with the **Static Electrode** (StaTrod) but also with most of other RDE on the market.
All the tips are in PEEK (PolyEther Ether Ketone) material.

Available Tips

Material	Diameter (mm)
316L Stainless	2 and 5
70% Copper and 30% Nickel	5
Aluminium	5
Antimony	5
Cadmium	5
Carbon Steel XC38	5
Cobalt	5
Copper	5
Glassy Carbon	3 and 5
Gold	2 and 5
Iridium	5
Iron	5
Lead	5
Nickel	2 and 5
Palladium	2
Peek	0
Platinum	2 and 5
Rhodium	2
Silver	2 and 5
Tin	5
Titanium	5
Tungsten	1
Zinc	2

In addition to tips, **OrigaLys** provides a whole range of sample pellets.

Main Specifications

✓ Thickness:
- For all the pellets: 3 mm

✓ Diameter:
- 8 mm
- Or 15 mm

Available Pellets

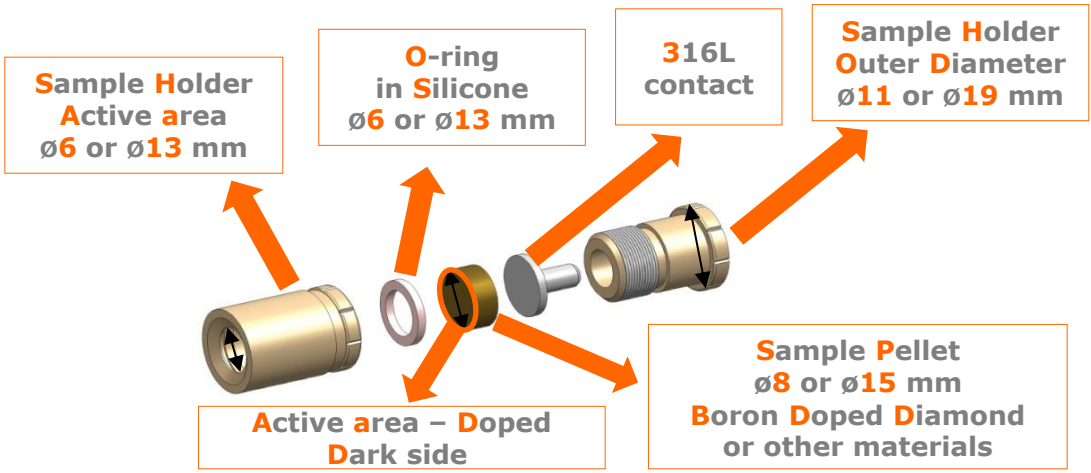
Material	Diameter (mm)
316L Stainless	8 and 15
A37	8
Aluminium	8
Boron Doped Diamond (BDD)	8 and 15
Copper	8 and 15
Glassy Carbon	8 and 15
Gold	8
Graphite	8
Iron	8
Nickel	8 and 15
Platinum	8
Silver	8
Stainless Steel	8
Tungsten	8

OrigaTip
Sample Holder

Pellets from OrigaLys can be used with a **Sample Holder**, which can be adapted on the **RDE** (OrigaTrod) and on the **Static Electrode** (StaTrod) but also with most of the RDE on the market, as any kind of tips.

All the Sample Holders are in **PEEK** (PolyEther Ether Ketone) material.

2 different sample holders with an active area of 6 or 13 mm diameter



StaTrod
Static Electrode

This Static Electrode can fit all the tips and sample holders from OrigaLys. It matches much more tips from other manufacturers.

Main Specifications

- ✓ Material: PEEK
- ✓ Length: 114 mm
- ✓ Diameter: 11 mm
- ✓ Connector: Banana plug ø4 mm

Temperature
Sensor

This temperature probe can fit all the glass cells from OrigaLys. It matches much more cells thanks to its sleeve and RCA connector.

Main Specifications

- ✓ Material: PEEK
- ✓ Length: 103 mm
- ✓ Diameter: 7,5 mm
- ✓ Head: Titanium

OrigaCell Kit

1

Orange plastic cover

2

Electrode Holder with LEDS

3

Beaker Holder
Glass or plastic beaker
30 to 125 ml

4

Base

The OrigaCell Kit is composed by 4 parts

The complete OrigaCell Kit

The OrigaCell Kit fits exclusively the OrigaStat range:
Every part is adjustable and removable

OrigaCell
Corrosion Cells

The right cell for your application:

For Disc samples

Thermostated cell for corrosion with sample holder for discs and platinum disc counter electrode.

- Volume = 100 to 200 ml
- Disc diameter = 1,5 cm
- Disc active area = 1,33 cm2
- One Pt ø10 mm disc counter electrode
- One Ag/AgCl reference electrode
- Temperature probe

For Flat samples

Thermostated cell.
Ideal for cavernous corrosion
Ideal for under coating corrosion tests. Corrosion cell for flat samples with a large surface.

- Volume = 100 to 200 ml
- Sample active Area = 22,9 cm^2

OrigaCell – The Cell you need

OrigaCell – Plastic and Glass Cell

Number	1	2	3	4	5	6
Max volume	150 ml	150 ml	150 ml	130 ml	100 ml	100 ml
Material	Glass	Glass	Glass	Plastic	Glass	Glass
Thermostated	Yes	No	Yes	No	Yes	No
Reference	AR00369	X12.OGL.031	X12.OGL.033	-	X10.OGL.003	D10.OGL.075
Compatibility	All	All	All	All	OrigaStat*	OrigaStat*

*** Use only with the OrigaCell Kit for the OrigaStat**

Special Request:
Please contact us

OrigaTrod
RDE Stand

This stand for RDE is composed by:

✓ **A standard stand**
With a robust base
The height is easily adjustable
It is also removable

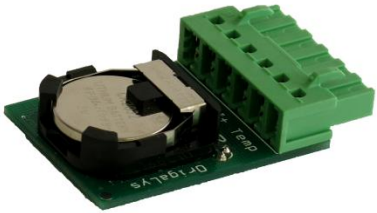
✓ **A glass cell**
The volume can vary, on demand.
This cell can also be thermostated.
With its 5 holes, the cell can fit RDE, counter electrodes, working electrodes and reference electrodes made by OrigaLys or not.

OrigaMix

Magnetic Stirrer

✓ Exchangeable
✓ Swiss made motor
✓ Fitting **OrigaStat**
✓ 100 to 1,500 rpm

Battery Holders



CR2032 Coin Cell

Swagelock Holder:

- ✓ Exchangeable
- ✓ Banana connectors: ø2mm

To be used with OrigaFlex

Dimensions:

- ✓ Length: 8 cm
- ✓ Width: 4,2 cm
- ✓ Height: 6,5 cm
- ✓ Height with the Swagelock: 11,4 cm

Main Specifications:

- ✓ Empty weight: 44,51 g
- ✓ Full weight: 200 g
- ✓ Operating temperature : -30°C à 80°C
- ✓ Receptacle

Fitting the following batteries:

- ✓ Coin Cells
- ✓ Flat Cells
- ✓ Cylindrical Cells

To be used with **OrigaFlex**

Main Specifications for the batteries:

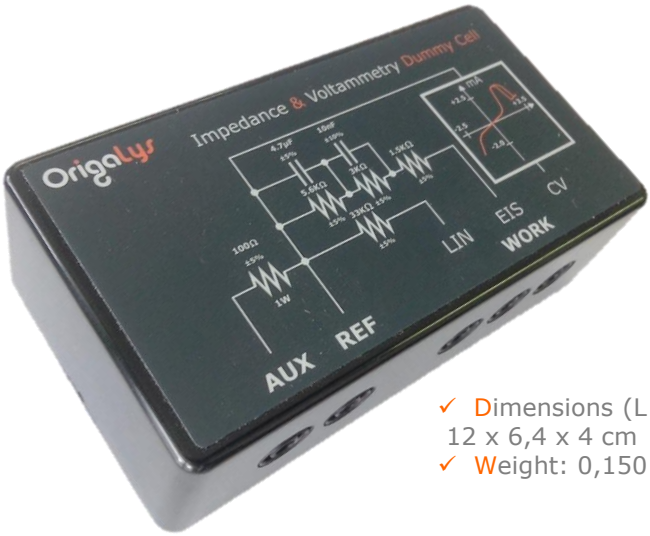
- ✓ Thickness: 3,2 mm maximum
- ✓ Diameter: 20 mm maximum

Main Specifications:

- ✓ Temperature sensor
- ✓ Operating temperature: -30°C to 80°C
- ✓ Receptacle

Other Battery Cell Holders: On demand

OrigaTest
External Dummy Cell



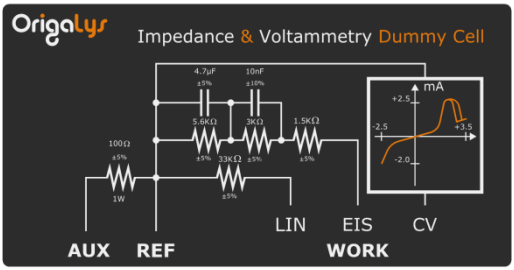
- ✓ Dimensions (L x W x H): 12 x 6,4 x 4 cm
- ✓ Weight: 0,150 kg

The **OrigaTest** is an external dummy cell, easily transportable, allowing to:

- ✓ Verify the **main technical specifications** of the OrigaLys range of products, such as: **OrigaStat**, **LandStat** or **OrigaFlex**.
- ✓ Familiarize with the **OrigaMaster** software, in order to prepare, to run and to examine experiments.
- ✓ Check the cords. Thus, you can determine if the cables are fully operational or if you need to change them.

Main Dummy Cell functions

- ✓ Linear Voltammetry (LIN)
- ✓ Cyclic Voltammetry (CV)
- ✓ Impedance (EIS), double loop
- ✓ Auxiliary (AUX)
- ✓ Reference (REF)
- ✓ Work (WRK)
- ✓ 2 or 3 electrodes

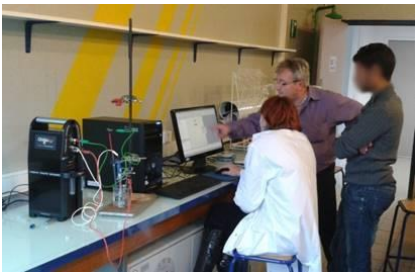


Radiometer's Maintenance

As former designers of Radiometer and Tacussel, we are able to give you a repair diagnostic of all your instruments from Radiometer Analytical and Tacussel:

- ✓ **VoltaLab range**, such as PST006, PGZ100, PGP201, PST050, PGZ301 or PGZ402.
- ✓ **EDI101 and CTV101.**

General Services

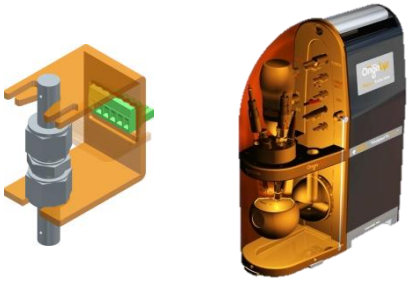


Training day

OrigaLys offers its expertise and know-how to enable you to be more competitive and efficient or train you to the use of OrigaLys' devices in your business or research.

Do not hesitate to consult us if you have any needs in the following areas:

- ✓ Electrochemistry
- ✓ Batteries
- ✓ Corrosion
- ✓ Coatings



Customization

The accessory or the device, you are looking for, does not exist yet? You do not find the device which fits your needs?

- ✓ OrigaLys can design, with you and for you, a special equipment.
- ✓ From the first specifications to the final products, we are by your side.
- ✓ We can create, with you and then implement, a customized method into our software.

Compatibility

Compatibility table of OrigaLys products	OGS080	OGS100	OGS200	LandStat	OGF500	OGF01R	OGF05R
OrigaTrod	✓	✓	✓	✓	✓	✓	✓
OrigaBox	Built-in	Built-in	Built-in	Built-in			
OrigaTrod Lt	✓	✓	✓	✓	✓	✓	✓
OrigaMix	✓	✓	✓	✓	✓*	✓*	✓*
OrigaMμ	✓	✓	✓	✓	✓	✓	✓
OrigaBooKst	✗	✓	✓	✓	✗	✗	✗
OGFEIS	✗	✓	✓	✓	✓	✓	✓
OrigaCell Kit	✓	✓	✓	✗	✗	✗	✗
T°C probe	✗	✓	✓	✓	✓	✓	✓
Battery Holder	✗	✗	✗	✗	✓	✓	✓
OrigaTest	✓	✓	✓	✓	✓	✓	✓

*** To be used with the OrigaBox (Speed Controller)**

For instance:

1

OGS100 + OGFEIS

2

OGS200 + OrigaTrod + OrigaCell Kit

Coatings

Are you looking for a « Plug and Play » system?

Do you wish for a solution fitting your needs?

Coating is a topic involving corrosion. As it is electrochemical in nature, it requires electrochemical techniques using sophisticated devices, to perform:

- Characterization measurements
- Research on Electrolyte for production processes
- Study of species concentration
- Impact on the metals

With the OrigaLys instruments, you are able to understand why a treatment does not work and how improve it.

5 reasons to choose it

- ✓ Following the bath composition
- ✓ Developing new deposits
- ✓ Monitoring the deposit quality
- ✓ Controlling your waste waters
- ✓ 5 year warranty

Instruments

- ✓ OrigaStat – OGS200

Accessories

- ✓ OrigaCell Kit – Built-in electrochemical cell
- ✓ OrigaTrod – Rotating disk Electrode (RDE)
- ✓ Sample Holder - ø 8mm
- ✓ Glassy Carbon tip - ø 3mm
- ✓ Platinum tip - ø 5 mm

Software methods

- ✓ Open Circuit Potential
- ✓ Cyclic Voltammetry
- ✓ Electrochemical Impedance Spectroscopy
- ✓ Corrosion methods: pitting and general corrosion

Corrosion Analysis

- ✓ Tafel slope analysis
- ✓ Corrosion rate: automatic calculation of polarization resistance (Rp)

Turnkey system

Teaching

Are you looking for a « Plug and Play » potentiostat?

Do you wish for a solution fitting your budget?

Preparing practical works in advance and store it.

The students can easily change the parameters to see their influence on:

- Diffusion limited current
- Detection of Slow-Fast system
- Potential and Intensity curves
- Evans and Tafel curves

With the OrigaLys instruments, the use is totally safe:

- Only plastic, no glass
- No Mercury
- All the connections are secured

5 reasons to choose it

- ✓ Easy to use because it's a all in one solution
- ✓ Safe (without Mercury)
- ✓ Good value for money
- ✓ 5 year warranty
- ✓ Compact, only 13 cm width

Instruments

- ✓ OrigaStat – OGS080

Accessories

- ✓ OrigaCell Kit – Built-in electrochemical cell
- ✓ OrigaTrod – Rotating disk Electrode (RDE)
- ✓ Platinum tip - ø 2 mm

Software methods

- ✓ Open Circuit Potential
- ✓ Linear Voltammetry
- ✓ Cyclic Voltammetry
- ✓ Chrono methods
- ✓ Electrochemical Impedance Spectroscopy

Analysis

- ✓ Tafel slope analysis
- ✓ Peak search
- ✓ Regression Circular
- ✓ Data transfer to Excel and Regressi

30 years' French know-How in ElectroChemistry

www.origalys.com

5 reasons to choose Origalys

1. **G**ood value for money
2. **E**volutive and flexible design
3. **W**arranty: 5 years
4. **C**ustom developments
5. **O**rigaLys is by your side

Subject to change
27-03-2017

Country **R**epresentative

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