



# Autolab PGSTAT100N

## PGSTAT100N

Dieses Produkt wird nicht mehr zum Verkauf angeboten, die Gewährleistung gilt jedoch weiterhin. Sollte Wartungsbedarf bestehen, wenden Sie sich bitte an Ihre Metrohm Vertriebsgesellschaft.

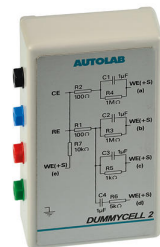
Der PGSTAT100N ist ein Hochspannungspotentiostat/Galvanostat mit einer Ausgangsspannung von 100 V und einem Maximalstrom von 250 mA (in Kombination mit dem BOOSTER10A maximal erweiterbar auf 10 A/20 V). Dieses Gerät wurde für elektrochemische Messungen unter extremen Bedingungen wie zum Beispiel in organischen Elektrolyten, Bodenproben, Beton usw. konzipiert.

## Lieferumfang PGSTAT100N

Qt.	Order no.	Beschreibung
-----	-----------	--------------

1 PCS      AUT.DUMCELL.S      Autolab dummy cell

Dummy cell for instrument testing.



---

1 PCS      CABLE.BNC.50      50 cm BNC cable

50 cm BNC cable for diagnostics purposes.



---

1 PCS      CABLE.MONITOR      Monitor cable for N series Autolab

Monitor cable for modular Autolab systems, providing connections for external equipments (Potential output ( $E_{out}$ ), Current output ( $i_{out}$ ) and Potential input ( $E_{in}$ )).



---

1 PCS      CABLE.PWR      Power cable

Standard power cable for Autolab instruments and accessories.



1 PCS

CBL.USB

Standard USB cable

Standard USB cable for Autolab instruments.



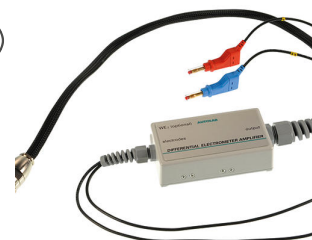
---

1 PCS

CELLCBL.30.RE.S

Cell cable

Standard cell cable, 1.5 m, with connection for reference electrode (RE) and sense electrode (S).



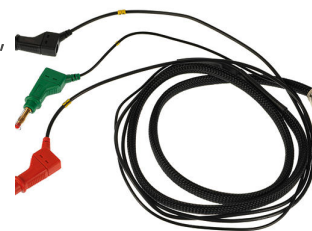
---

1 PCS

CELLCBL.30.WE.S

Cell cable

Standard cell cable, 1.5 m, with connection for counter electrode (CE), working electrode (WE) and ground.



NOVA is the package designed to control all the Autolab instruments with USB interface.

Designed by electrochemists for electrochemists and integrating over two decades of user experience and the latest .NET software technology, NOVA brings more power and more flexibility to your Autolab potentiostat/galvanostat.



NOVA offers the following unique features:

- Powerful and flexible procedure editor
- Clear overview of relevant real-time data
- Powerful data analysis and plotting tools
- Integrated control for external devices like Metrohm Liquid Handling devices

[Download the latest version of NOVA](#)

---

## Optionales Zubehör

Order no.	Beschreibung
ADC10M.S	<p>Dual-channel ultra-fast sampling module</p> <p>The ADC10M module is an ultra-fast sampling module that increases the sampling rate of the Autolab from 50 kSamples/s to 10 MSamples/s giving you the ability to acquire fast transients with intervals down to 100 ns.</p> <p>When combined with the SCAN250 module, you can perform ultra-fast cyclic voltammetry measurements with scan rates up to a practical limit of 250 kV/s, making it a powerful tool for studying fast kinetic processes.</p>
ALL.CLIP.BLACK	<p>Black Alligator Clamp</p> <p>Black alligator clamp for connections to electrodes in the electrochemical cell.</p>
ALL.CLIP.RED	<p>Red Alligator Clamp</p> <p>Red alligator clamp for connections to electrodes in the electrochemical cell.</p>



This high end, high current potentiostat/galvanostat, with a compliance voltage of 30 V and a bandwidth of 1 MHz, combined with our FRA32M module, is specially designed for electrochemical impedance spectroscopy.



The PGSTAT302N is the successor of the popular PGSTAT30. The maximum current is 2 A, the current range can be extended to 20 A with the BOOSTER20A, the current resolution is 30 fA at a current range of 10 nA.

---

BSTR10A.S

## Booster 10A

The Booster 10A module increases the maximum current of the PGSTAT100N, PGSTAT128N, PGSTAT302N, PGSTAT204 or M204 to 10 Ampere. The compliance voltage of the system is 20 V in combination with the Booster10A.

With its fast response time, the Autolab Booster 10A has been optimized to perform electrochemical impedance measurements, in combination with the FRA32M module, on fuel cells, batteries and super-capacitors. The booster is able to handle active as well as passive cells. The Booster 10A can be used to measure the charge and discharge characteristics of super-capacitors, perform measurements on fuel cells or perform DC or AC measurements on large area electrodes.



---

ECD.S

## Low current amplifier module

The lowest current range available on the standard Autolab is 10 nA. At this current range, the Autolab has a current resolution of 30 fA. When doing measurements on micro-electrodes sometimes even higher resolution is needed. Originally designed for electrochemical detection in HPLC and FIA, the ECD module makes the measurement of such low currents possible.

The ECD module provides 2 additional current ranges of 1 nA and 100 pA giving a minimum current resolution of 0.3 fA. The ECD module also has a built in third order Sallen-Key filter, with 3 RC-time constants that help to filter out noise.



The FI20 filter and integrator module allows the Autolab users to do coulometric and chrono-coulometric experiments. The analog integrator gives you the possibility to measure charge instead of current and can be used both in cyclic voltammetry as well as in potential step experiments.

With this module it is easy to separate the capacitive current from the faradaic current. In addition the integrator is effective in reducing signal noise by averaging it out.

The third order Sallen-Key filter with selectable RC-times between 0 and 500 ms, can be used to filter out noise.

The filter of the FI20 module is also useful in cases where the background noise (50 or 60 Hz for example) cannot be removed by using measures like a Faraday cage.



The FRA32M provides the means to perform impedance and electrochemical impedance measurements in combination with the Autolab. This module allows one to perform both potentiostatic and galvanostatic impedance measurements over a wide frequency range of 10  $\mu$ Hz to 32 MHz (limited to 1 MHz in combination with the Autolab PGSTAT). In addition to the classical EIS, the NOVA software also allows the users to modulate other outside signals such as rotation speed of a rotating disk electrode or the frequency of a light source to perform Electro-hydrodynamic or Photo-modulated impedance spectroscopy.

The FRA32M module comes with a powerful fit and simulation software for the analysis of impedance data.



Interface for Metrohm 663 VA Stand.



## MBA.S

### Dual mode bipotentiostat module

The MBA.S is an additional bipotentiostat module which can be installed into a MultiBA (MBA) Autolab potentiostat/galvanostat adding an additional working electrode to the MBA instrument. A maximum of 5 MBA.S modules together with one FRA32M.S module can be installed in one MBA instrument.



---

## SCAN250.S

### True linear scan generator module

When the processes exhibit very fast transient behavior, such as hydrogen adsorption, digital sweep can lead to loss of information regarding the adsorption process. The SCAN250 module, which has the capability of applying a true analog sweep to the sample, was specially designed to overcome this problem. The true linear scan rate range is from 10 mV/s to 250 kV/s. The SCAN250 module in combination with ADC10M is a very powerful tool for studying fast transients.



---

## SDK

### Software development kit

The Autolab Software Development Kit (Autolab SDK) is designed to control the Autolab instrument from different external applications such as LabVIEW, Visual Basic for Applications (VBA), scripting etc. With the Autolab SDK the external application can be used to measure complete procedures or control individual Autolab modules.

In order to use the Autolab SDK from other applications, these applications must have the possibility to use .NET assemblies or in the case of 'older' applications to use COM assemblies. How to integrate these assemblies is explained in the manual of the application.

The Autolab SDK is compatible with Autolab NOVA however it does not require NOVA to be installed.

**Metro**  
Autolab