Nitric Oxide isoPod™ (Model EP355)

- Software controlled
- Plug and play installation
- Electrical isolation
- Input ranges, from 2 nA to 2 µA
- Offset control to zero background signal

Description

An electrically isolated, low noise, compact signal conditioner for use with **e-corder** recording units, for continuous monitoring of polarographic (Clark–style) nitric oxide electrodes.

Compatibility

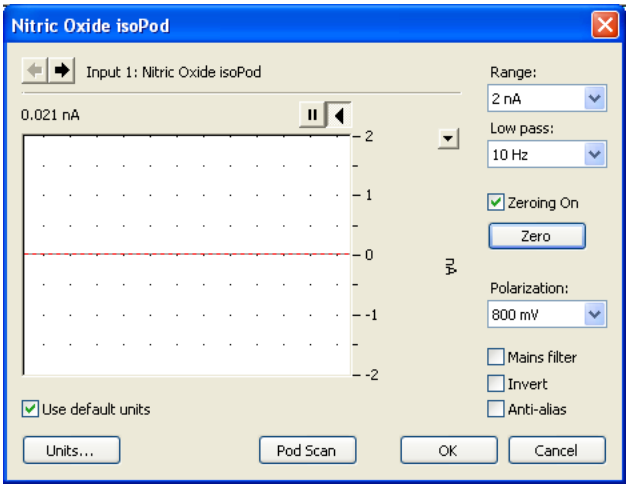
This isoPod be used with most types of nitric oxide sensor including:

- the eDAQ range of nitric oxide electrodes
- electrodes sold by Redbox Direct, Innovative Instruments, WPI Inc., etc.

Use with eDAQ Chart software version 5.5.7, or later, on Windows XP, or later, computers.

Applications

Ideal for chemical, biochemical, or physiological studies where continuous monitoring of a nitric oxide sensor is required. Electrical isolation minimizes interference with nearby pH, conductivity, ISE and similar sensors used in multi–parametric studies.



Nitic Oxide isoPod control dialog

Theory of Operation

The Nitric Oxide isoPod applies a polarizing voltage across the internal electrodes (anode and cathode) of the sensor and measures the resulting current signal. At a sufficient polarizing voltage the oxidation of nitric oxide occurs at the working electrode (anode):

$$NO + 2H_2O \longrightarrow NO_3^- + 4H^+ + 3e^-$$

and the current flow is proportional to the nitric oxide concentration.

Polarization can be selected between +500 and +1000 mV but usually a value of +800 mV is close to optimal.

The isoPod has four gain settings, and at each setting the **e-corder**, with Chart software, records at 16 bit resolution which gives better than picoampere resolution.

The isoPod runs on DC power and can be used inside a Faraday cage for lowest noise operation.

Specifications

Input ranges (and resolution):	2 nA (625 aA) 20 nA (6.25 fA) 200 nA (62.5 fA) 2 µA (625 fA)
Maximum output signal:	2 V
Polarization:	+500 to +1000 mV in 50 mV steps
Zero offset:	±2 µA
Low-pass filters:	1 – 100 Hz in 1:2:5 steps
Typical RMS noise:*	1 pA @ 100 Hz filter 100 fA @ 10 Hz filter 30 fA @ 1 Hz filter
Input connector:	3 pin, Mini XLR
Dimensions (l x w x h):	108 x 58 x 35 mm (4.25" x 2.28" x 1.38")
Weight:	200 g (7 oz)
eDAQ Pty Ltd reserves the right to alter these specifications at any time.	

* On 2 nA range, 1 Gohm load, inside a Faraday cage.

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