



Picostat (Model EA162)



- Software-controlled
- Plug and Play installation with **e-corder** units
- High sensitivity — ± 10 pA to ± 100 nA
- Compact ! Use in Faraday cages or inert atmosphere boxes

Description

The EA162 Picostat is a high sensitivity, software-controlled potentiostat for use in electrochemical applications where small currents (from a few picoamperes to 100 nA) need to be measured. The unit provides two analog signals to the **e-corder**, one for current flow and the second for applied potential.

Compatibility

Supplied ready for use with **e-corder** units and includes an electrode cable terminated with three miniature alligator clips.

Specifications

Compliance voltage:	>13 V
Maximum control voltage:	± 10 V
Output current:	± 100 nA maximum
Input impedance:	$10^{13} \Omega \parallel 1$ pF
Input bias current:	<250 fA @ 25 °C, 60 fA typical
Current ranges:	$\pm 100, 50, 20, 10, 5, 2, 1$ nA $\pm 500, 50, 20, 10$ pA
Gain:	10 nA/V, 1 nA/V, 100 pA/V
DC current error:	< $\pm 1\%$ FS on ranges of 10 pA to 1 nA < $\pm 0.5\%$ FS on ranges of 2 to 100 nA
Filter setting:	10 Hz low pass
Filter type:	3rd order Bessel

Applications

- *Neurochemistry*: for in vivo or in vitro monitoring of neurotransmitters and other redox active metabolites using carbon fibre or other microelectrodes.
- *Chemistry*: electroanalytical chemistry with microelectrodes.
- *Biochemistry*: monitoring of dissolved oxygen or nitric oxide.
- *Biosensors*: suitable for use with most types of amperometric biosensor, including microdialysis biosensors.

Bandwidth, unfiltered:	>10 kHz, on ranges of 20 to 100 nA ~1 kHz, on ranges of 10 pA to 10 nA
Drift with temperature:	<20 μ V/°C
I ² C input and output:	Male and female DB-9 pin connectors. Provides control and power to the Picostat.
Power requirements: (supplied by e-corder)	± 20 V unregulated DC, ~20 mA ± 10 V unregulated DC, ~20 mA ~1 W quiescent
Dimensions (h x w x d):	50 mm x 76 mm x 260 mm (1.96" x 3.0" x 10.2")
Weight:	0.8 kg (1.8 lb)
Operating conditions:	0 to 35 °C 0 to 90% humidity (non-condensing)
<i>eDAQ reserves the right to alter these specifications at any time.</i>	

WARRANTY: eDAQ Hardware units are supported by a one year warranty

www.eDAQ.com

E-mail: info@edaq.com

e-corder is a registered trademark of eDAQ Pty Ltd.
All other trademarks are the property of their respective owners. PT7/03

Document Number: M-EA162-0703

Copyright © eDAQ 2003