



## Picostat (Model EA162)



- Software-controlled
- Plug and Play installation with **e-corder** units
- High sensitivity —  $\pm 10$  pA to  $\pm 100$  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:	$\pm 10$ V
Output current:	$\pm 100$ 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 $\mu$ V/°C
i <sup>2</sup> C input and output:	Male and female DB-9 pin connectors. Provides control and power to the Picostat.
Power requirements: (supplied by <b>e-corder</b> )	$\pm 20$ V unregulated DC, ~20 mA $\pm 10$ 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)
eDAQ reserves the right to alter these specifications at any time.	

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