

Differential Electrometer Amplifier

for measuring high-ohmic external voltages



Differential Electrometer Amplifier

The PalmSens Differential Electrometer Amplifier (DEA) is a general-purpose input amplifier. The DEA can be used as a floating voltage amplifier with differential input and single output to the auxiliary port of the potentiostat.

Gain Configurations

The DEA allows simultaneous recording of a high-ohmic external (floating) voltage difference.

For low voltage measurements like a pH meter use an input voltage range of -1 to +1 V.

Available Gain Configurations

The PalmSens DEA is available with the following potential ranges:

Potential range	Order code	Resolution EmStat4X	Resolution PalmSens3	Resolution PalmSens4	Resolution Nexus
± 10 V	DEA.10	2.04 mV	0.152 mV	0.509 mV	0.509 mV
± 5 V	DEA.05	4.07 mV	0.076 mV	0.254 mV	0.254 mV
± 1 V	DEA.01	0.20 mV	0.015 mV	0.051 mV	0.051 mV

Other potential range configurations are available on request.

Compatible Measurement Techniques

The DEA can be used with PStTrace and MultiTrace; our standard software for Windows. The following techniques are supported for measurements using the DEA:

Voltammetric techniques

- Linear Sweep Voltammetry LSV
- Cyclic Voltammetry CV

Amperometric techniques

- Chronoamperometry CA
- MultiStep Amperometry MA

Galvanostatic techniques

- Linear Sweep Potentiometry LSP
- MultiStep Potentiometry MP
- Chronopotentiometry CP
- Open Circuit Potentiometry OCP

Impedimetric techniques

- Potentiostatic/Galvanostatic Impedance spectroscopy EIS/GEIS
at fixed frequency or frequency scan vs
 - fixed potential or fixed current
 - scanning potential or scanning current
 - time

System Specifications

General			
input voltage range	DEA.10 ± 10 V	DEA.05 ± 5 V	DEA.01 ± 1 V
input voltage difference without damage	± 40 V		
common mode voltage (CMV)	± 10 V		
common mode rejection ratio (CMRR)	> 73 dB (min)		
input impedance	1000 GOhm // 5 pF		
max. input offset	3 mV (1 mV typical for PalmSens4)		
linearity error	max. 0.3%		
max. bias current	± 4 pA		

Connections	
V+ and V- input	LEMO plug with 2 mm stackable pin connectors
differential output	2 mm female plug
interface	D-Sub (15 pin)

Compatibility

The DEA can be used with the following models from PalmSens BV:

- EmStat4X
- PalmSens3
- (Multi)PalmSens4
- Nexus

➤ See for more information:

www.palmsens.com/differential-electrometer-amplifier

PalmSens BV has more than 50 distributors around the world.
Please contact us at info@palmsens.com or go to our website to
get in touch with a distributor in your region.



Please do not hesitate to contact PalmSens for more details: info@palmsens.com

PalmSens BV
The Netherlands
www.palmsens.com

DISCLAIMER

Changes in specifications and typing errors reserved.
Every effort has been made to ensure the accuracy of
this document. However, no rights can be claimed by
the contents of this document.

