



Differential Electrometer Amplifier

For measuring high-ohmic external voltages using:
PalmSens 3 / 4
Or
EmStat3 Blue / EmStat3+ Blue

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 PalmSens.

Gain Configurations

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

For low voltage measurements like a pH meter a low input voltage range of -1 to +1 V can be ordered.

Available Gain Configurations

The PalmSens DEA is available with the following potential ranges:

Potential range	Order code	Resolution on EmStat series	Resolution on PalmSens3	Resolution on PalmSens4
±10 V (default)	DEA.10	2.4 mV	0.152 mV	0.038 mV
±5 V	DEA.05	1.2 mV	0.076 mV	0.019 mV
±1 V	DEA.01	0.24 mV	0.015 mV	0.004 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

Techniques as a function of time:

- Chronoamperometry CA
- Chronopotentiometry CP
- Open Circuit Potentiometry OCP

System Specifications

General

	model	DEA.10	DEA.05	DEA.01
input voltage range		±10 V	±5 V	±1 V
input voltage difference without damage:		±40 V		
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		

Resolution

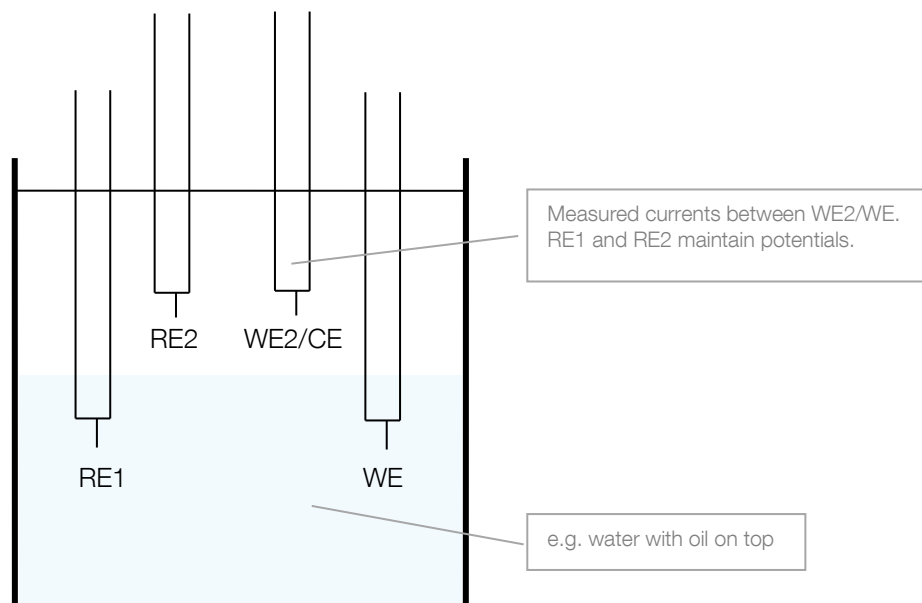
Potential range	model	Resolution on EmStat series	Resolution on PalmSens3	Resolution on PalmSens4
±10 V	DEA.10	2.4 mV	0.152 mV	0.038 mV
±5 V	DEA.05	1.2 mV	0.076 mV	0.019 mV
±1 V	DEA.01	0.24 mV	0.015 mV	0.004 mV

Connections

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

Using the DEA as Additional Reference Electrode

By connecting the RE from PalmSens or EmStat Blue to the differential output (diff. output) of the DEA module, the V+ and V- of the DEA can be used for two reference electrodes:



Please don't hesitate to contact PalmSens for more details:
info@palmSens.com

PalmSens BV
The Netherlands
www.palmSens.com

DISCLAIMER

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