



CH8 eight channel multiplexer

The multiplexer CH8 is used with PalmSens if a sensor-array is applied. The number of sensors which can be connected to this device is eight. It can be applied with different configurations of sensor arrays:

- 1 Sensorarrays with (up to) eight working, reference and counter electrodes
- 2 Sensorarrays with eight working and eight combined reference/counter electrodes
- 3 Sensorarrays with eight working electrodes sharing a reference and a counter electrode
- 4 Sensorarrays with eight working electrodes sharing a combined reference/counter electrode

In all configurations the sensors can be multiplexed, leaving the not-selected sensors at open circuit. Sensor configurations 2, 3 and 4 also have the possibility to apply the specified potential to all sensors continuously.

The configuration is set by means of some jumpers on the board of the instrument. The userguide explains the jumper settings.

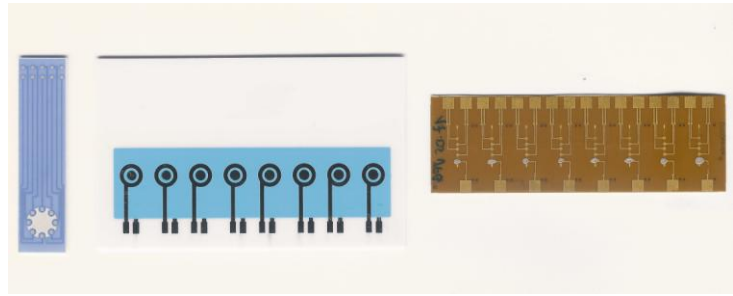


Software support

The software for the Pocket PC as well as for the PC supports the multiplexer for amperometric detection in two modes:

1. Measuring current as a function of time of each channel sequentially, so one channel after another. This mode can be used for all four configurations.
2. Scanning the eight channels continuously each time the interval time has elapsed, with a maximum rate of 3 readings per second for all eight channels in parallel. This mode is useful for the configurations 2, 3 and 4. During such a measurement, the program will show the eight curves simultaneously.

The Windows program PSLite and PSTrace is available for users who want to automatically measure voltammetric as well as amperometric curves on all eight channels sequentially. This program performs the measurements, displays the measured curves one after another and stores the data of all eight channels in a single datafile. This file can be imported in other graphics programs like EXCEL®.



Specifications

Number of channels	8
On resistance	WE and RE channels: 85 ohm typical CE channel 900 ohm typical
Leakage current	10 pA typical at 25 °C 100 pA typical at 25 °C
Charge injection	-0.5 pC typical
Cable	High density cable with stripped end leads, without connectors, for <ul style="list-style-type: none">- eight WE's- eight CE's- eight RE's- one CE used when all WE's share one counter electrode- one RE used when all WE's share one reference electrode- analog ground for shielding



Dedicated cables are available for the Florence sensorstrips with 8 sensors as well as for the BVT sensorarray (type AC9C).