

ELECTROCHEMICAL SENSOR WITH MICROREACTOR

Type: MAC1.W*.R*

Description

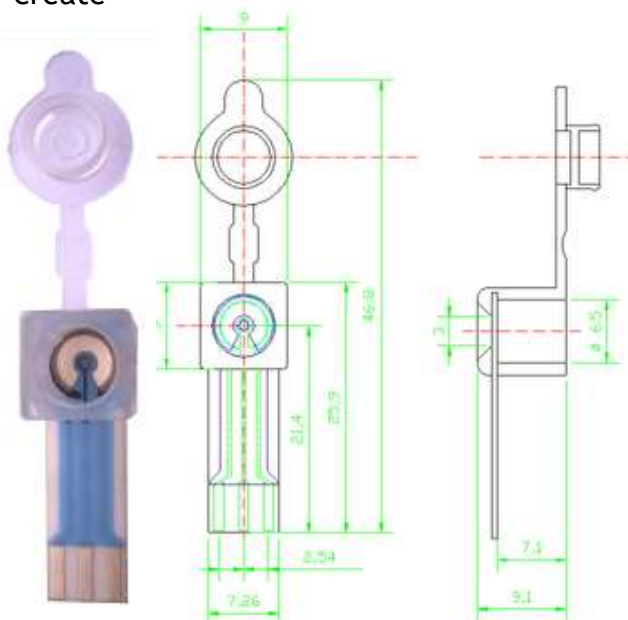
The sensor is formed on a corundum ceramic base. Onto this surface the working, the reference and the auxiliary electrodes are applied. The working and the reference electrodes are made of variety of materials. Active part of the sensor is placed in a small microreactor with lid.

At the end of the sensor there is a contacting field which is connected with the active part by the silver conducting paths which are covered by a dielectric protection layer. A bio-chemically active substance can be immobilised on the working electrode of the sensor to create a biosensor.

Physical parameters

Dimensions:

Length: 25.90 mm
 Width: 7.26 mm
 Sensor thickness: 0.63 mm
 Microreactor width: 9.10 mm
 Microreactor volume: 200 µl



Electrode Materials are defined by:

MAC1.W*.R*

The asterisk is replaced by the appropriate number or letter.

M - Microreactor	
AC - Amperometric sensor or electrode on corundum ceramic base	
AC1 - Sensor group reference number	
W - Working electrode material	R - Reference electrode material
S - Alloy of Gold and Platinum	S - Silver
1 - Pure Gold	1 - Silver / Silver Chloride
2 - Pure Platinum	2 - Silver covered by AgCl
3 - Pure Silver	
4 - Carbon(Graphite)	
5 - Manually Microdispensed Carbon(Graphite) with Au+Pt alloy auxiliary electrode	

Connector types for MAC1 sensors range

	KA1	KA1.S	KA1.C	KA4
MAC1.W*.R*	✓	✓	✓	✓

Sensor with microreactor usage

- Electrochemical and bio-electrochemical reactions in small volumes that needs closed reaction space to prevent solution evaporation.

MAC1 advantages

- Small volume and reactor size means that pure diffusion can balance concentration in the solution
- The system can be closed
- It allows to mix its content by shaking
- When using toxic materials there is minimal contamination danger
- The volume is not changed during measurement by exaporation

Software Packs

These are available for:

- Basic evaluation
- Measurement of enzyme activity and Michaelis Menten constant X

Related patents

- Czech patent 291 411
- Patent application PV 22-2009

Activation

BVT offers unactivated versions of both W4 and W5 for standard tests and direct measuring. For specialised testing and more precise results it is recommended to have the W4 and W5 activated (the activation in most cases, is unique for each type of test being carried out). The activation can be carried out by BVT, based on your requirements (activation will have an additional cost, which varies based on the type of activation required).

(Note: Please refer to AC1.* Data Sheet for more information on Activation)

Ordering information

- The order is specified by whole sensor description formula
- Minimum order quantity - 25 sensors
- All order quantities are to be in multiples of 25 e.g. 25, 50, 75, etc.
- Delivery time for standard MAC1 sensors is 4 weeks from receipt of order
- Delivery time for non-standard AC1 sensors depends on final technical specification of order

Examples of Order

- 100 pieces - MAC1.W2.R1
- 250 pieces - MAC1.W3.RS

Microreactor is possible to integrate onto different types of sensors such as CC1, CC2, etc. Do not hesitate to contact us (info@bvt.cz) for more information.