

ELECTROCHEMICAL SENSOR

Type: AC13.W*.R*

Description

The sensor is formed on a corundum ceramic base. On to this surface the working, the reference and the auxiliary electrodes are applied. The working and the auxiliary electrodes are made of variety of materials. 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.

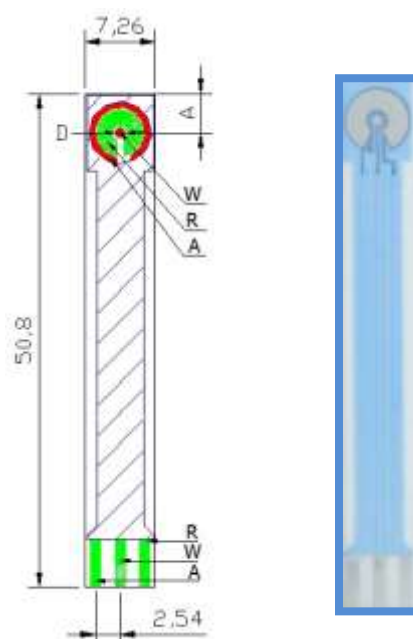
Physical parameters

Dimensions:

Weight: 0.9 gms
 Length: 50.80 mm
 Width: 7.26 mm
 Thickness: 0.63 mm

A = 4.00 ± 0.05 mm

D = 1.00 ± 0.05 mm



Electrode Materials are defined by:

AC13.W*.R*

The asterisk is replaced by the appropriate number or letter.

A - Amperometric sensor or electrode	3 - Pure Silver
C - Corundum ceramic base	4 - Graphite
13 - Sensor group reference number	R - Reference electrode material
W - Working electrode material	S - Silver
S - Alloy of Gold and Platinum	1 - Silver / Silver Chloride
1 - Pure Gold	2 - Silver covered by AgCl
2 - Pure Platinum	

Connector types for AC13 sensors range

	KA1	KA1C	KA1s	KA4
AC13.W*.R*	✓	✓	✓	✓

Sensor Usage

This specific range of AC13 sensors enable the measurement of:

- Basic electrochemical and bio-electrochemical techniques
- Enzyme activity and Michaelis Menten constant
- H₂O₂ concentration
- Glucose
- Ferricyanide
- Toxicity caused by pesticides
- Enzyme activity

References

- Jan Krejčí, Jan Prášek, Lukáš Fucik, Sameh Khatib, Edita Hejátková, Luboš Jakubka, Louisa Giannoudi, Screen-printed sensors with graphite electrodes - comparison of properties and physical method of sensitivity enhancement, *Microelectronics International*, 2004, Vol. 21 Issue: 3, pp.20-24, <https://doi.org/10.1108/13565360410549684>
- Andrew C. Barton, Stuart D. Collyer, Frank Davis, Davinia D. Gornall, Karen A. Law, Emma C.D. Lawrence, Daniel W. Mills, Suzy Myler, Jeanette A. Pritchard, Mark Thompson, Seamus P.J. Higson, Sonochemically fabricated microelectrode arrays for biosensors offering widespread applicability: Part I, *Biosensors and Bioelectronics*, Volume 20, Issue 2, 2004, Pages 328-337, ISSN 0956-5663, <https://doi.org/10.1016/j.bios.2004.02.002>.
- Jan Krejčí, Lucie Ježová, Radka Kučerová, Robert Plička, Štěpán Broža, David Krejčí, Iva Ventrubová, The measurement of small flow, *Sensors and Actuators A: Physical*, Available online 6 September 2017, ISSN 0924-4247, <https://doi.org/10.1016/j.sna.2017.08.050>.

Software Packs

These are available for:

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

Ordering information

- The order is specified by whole sensor description formula
- Minimum order quantity - 12 sensors
- Delivery time for standard AC13 sensors is 4 weeks from receipt of order
- Delivery time for non-standard AC13 sensors depends on final technical specification of order

