

## ELECTROCHEMICAL SENSOR

Type: AC1.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: 0.4 gms  
 Length: 25.40 mm  
 Width: 7.26 mm  
 Thickness: 0.63 mm

A =  $4.00 \pm 0.05$  mm

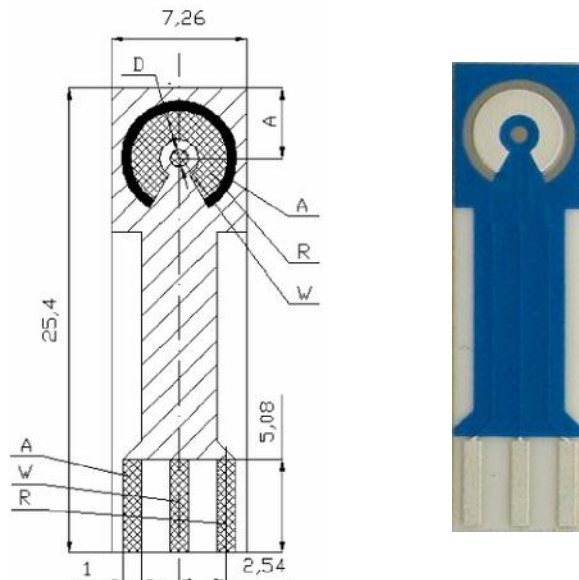
D =  $1.00 \pm 0.05$  mm

### Electrode Materials

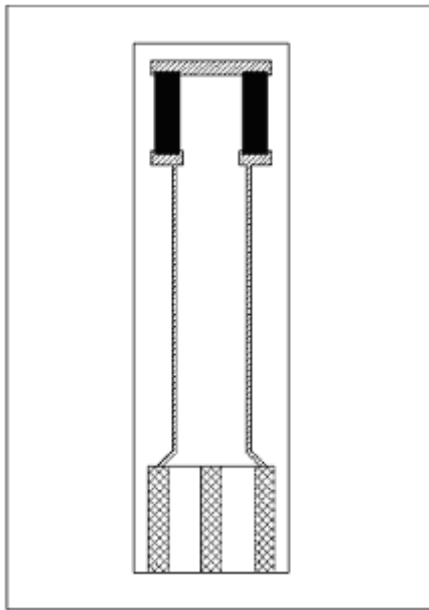
are defined by:

AC1.W\*.R\* (\*)

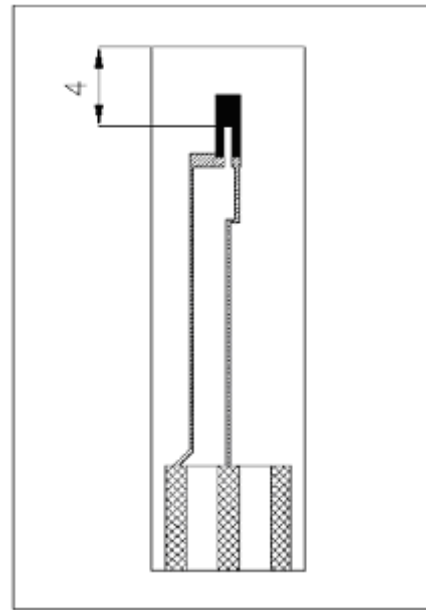
The asterisk is replaced by the appropriate number or letter.



A = Amperometric sensor or electrode	R - Reference electrode material
C = Corundum ceramic base	S - Silver
1 = Sensor group reference number	1 - Silver / Silver Chloride
W - Working electrode material	2 - Silver covered by AgCl
S - Alloy of Gold and Platinum	(*) - Additional Technical specification
1 - Pure Gold	H - Heating of the sensor
2 - Pure Platinum	T - Temperature sensing element
3 - Pure Silver	
4 - Graphite	



AC1.W\*.R\* (H)



AC1.W\*.R\* (T)

### Optional Equipment

#### *Evaluating Units:*

- BA1.\*
- BA2.\*
- LA.\*

#### *Experimental Accessories:*

- Flow Through Adapter
- MFS (Micro Flow System)
- Peristaltic Pump
- Stand
- Thermostated Vessel

### Connector types for AC1 sensor range

	KA1	KA4
AC1.W*.R*	✓	✓
AC1.W*.R*(H)		✓
AC1.W*.R* (T)		✓
AC1.W*.R* (H, T)		✓

### Sensor Usage:

This specific range of AC1 sensors enable the measurement of:

- Basic electrochemical and bio-electrochemical techniques
- H<sub>2</sub>O<sub>2</sub> concentration
- Glucose
- Ferricyanide
- Toxicity caused by pesticides
- Enzyme activity
- Enzyme activity and Michaelis Menten constant

### Software Packs:

These are available for

- Basic evaluation

- Measurement of enzyme activity and Michaelis Menten constant X

**Related patents:**

PV 1994-864 (13.04.1994) utility design no. 6113/94

**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 AC1 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 - AC1.W2.R1
- 250 pieces - AC1.W3.RS (H,T)

The explicit list of materials used for electrode preparation

Type of Sensor	Electrode Material			Conducting Paths
	Working	Reference	Auxiliary	
AC1.WS.RS	PtAu (15 / 85%)	AgPd (98 / 2%)	PtAu (15 / 85%)	Ag
AC1.WS.R1	PtAu (15 / 85%)	Ag / AgCl (60 / 40%)	PtAu (15 / 85%)	Ag
AC1.WS.R2	PtAu (15/85%)	Chlorinated Silver	PtAu (15/85%)	Ag
AC1.W1.RS	AuPd (98 / 2%)	AgPd (98 / 2%)	AuPd (98 / 2%)	Ag
AC1.W1.R1	AuPd (98 / 2%)	Ag / AgCl (60 / 40%)	AuPd (98 / 2%)	Ag
AC1.W1.R2	AuPd (98 / 2%)	Chlorinated Silver	AuPd (98 / 2%)	Ag
AC1.W2.RS	Pt (100%)	AgPd (98 / 2%)	Pt (100%)	Ag
AC1.W2.R1	Pt (100%)	Ag / AgCl (60 / 40%)	Pt (100%)	Ag
AC1.W2.R2	Pt (100%)	Chlorinated Silver	Pt (100%)	Ag
AC1.W3.RS	AgPd (98 / 2%)	AgPd (98 / 2%)	AuPd (98 / 2%)	Ag
AC1.W3.R1	AgPd (98 / 2%)	Ag / AgCl (60 / 40%)	AuPd (98 / 2%)	Ag
AC1.W3.R2	AgPd (98 / 2%)	Chlorinated Silver	AuPd (98 / 2%)	Ag
AC1.W4.RS	C (7105)	AgPd (98/2%)	PtAu (15/85%)	Ag
AC1.W4.R1	C (7105)	Ag / AgCl (60 / 40%)	PtAu (15 / 85%)	Ag
AC1.W4.R2	C (7105)	Chlorinated Silver	PtAu (15/85%)	Ag