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CONDUCTOMETRIC SENSOR SUBSTRATES

Type: CC1.W* (*)

Description

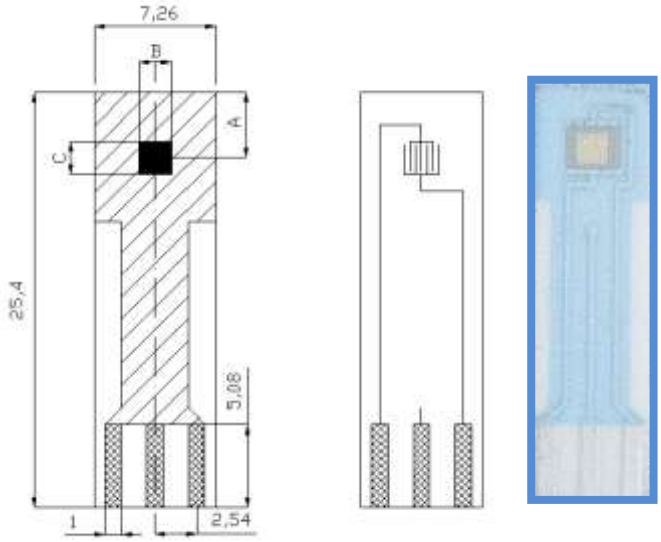
The sensor is formed on a corundum ceramic base. Onto this surface two interdigitated structures of electrodes are applied. The electrodes are made of Platinum-Gold alloy in standard product CC1.WS. At the end of the sensor there is a contact which is connected with the active part by the silver conducting path which is covered by a dielectric protection layer. A bio-chemically active substance can be immobilised on the working electrode of the sensor.

Physical parameters

Dimensions:

Weight:	0.4 gms
Length:	25.40 mm
Width:	7.26 mm
Thickness of sensor:	0.63 mm
Thickness of lines:	150 µm
Gap between lines:	200 µm

A = 4.00 ± 0.05 mm
B = 2.00 ± 0.05 mm
C = 2.00 ± 0.05 mm

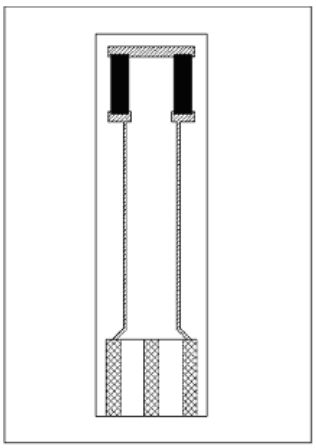


Electrode Materials are defined by:

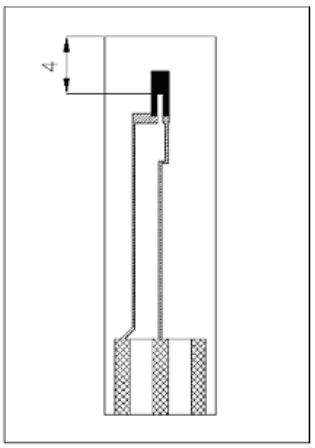
CC1.W* (*)

The asterisk is replaced by the appropriate number or letter.

CC - Conductometric sensor on corundum ceramic base	
CC1 - Sensor group reference number	
W - Working electrode material	**(*) - Additional Technical specification**
S - Alloy of Gold and Platinum	**H - Heating of the sensor**
1 - Pure Gold	**T - Temperature sensing element**
2 - Pure Platinum	
3 - Pure Silver	
4 - Carbon(Graphite)	



CC1.W* (H)



CC1.W* (T)

Heating parametry:
Maximum voltage is 35 V and temperature approximately 500°C, resistance: 80 +/- 10 Ohm.

Thermistor:
1) Resistance paste - resistance 160Ohm, coefficient K= 6100 ppm/K
2) Pt1000

Connector types for CC1 sensors range

	KA1	KA1.S	KA1.C	KA4
CC1.W*	✓	✓	✓	✓
CC1.W* (H)				✓
CC1.W* (T)				✓

Sensor Usage

This specific range of CC1 sensors enables the measurement of:

- Basic electrochemical and bio-electrochemical techniques
- Conductivity analysis

CC sensors require a minimum frequency of 100 kHz to measure conductivity. For these sensors, the customer must perform his own calibration, because the response of the sensor will also depend on the chamber in which the measurement will be performed

Software Packs

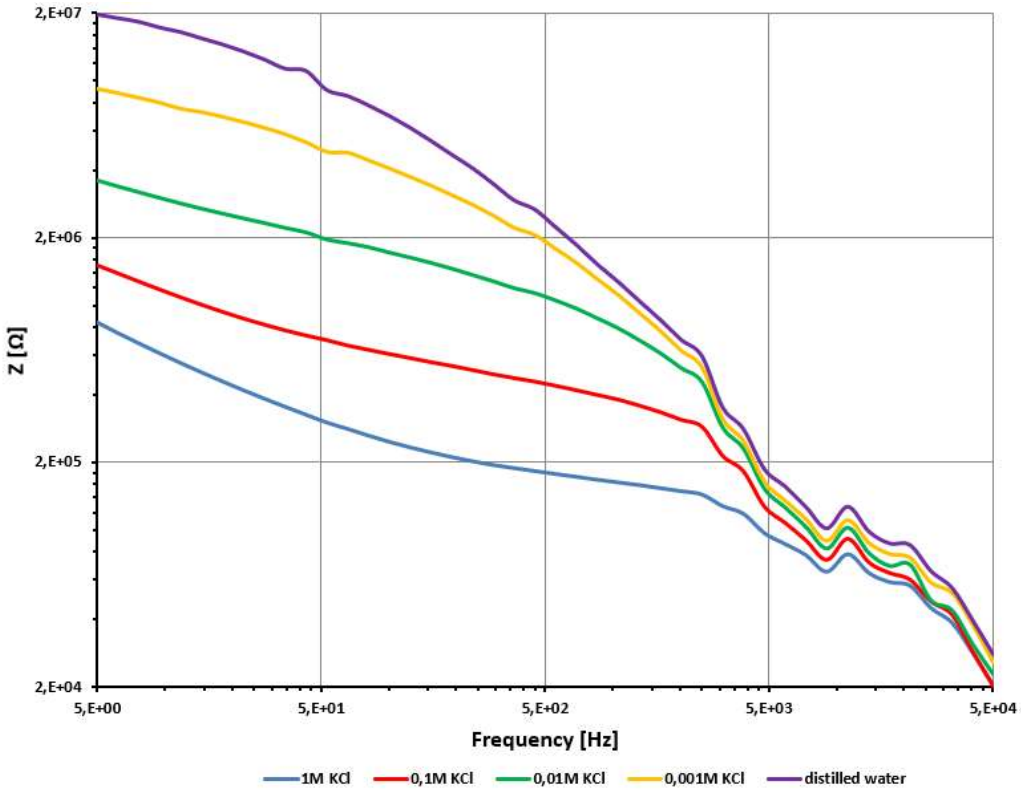
These are available for:

- Bipolar current pulse measurement

Related patents

- CZ-PV 2001-3227

Typical Sensor Response



Method:

- Impedance spectroscopy

Sensor:

- CC1.W2

Chemicals:

- KCl solutions (1M, 0.1M, 0.01M, 0.001M)

Activation

BVT offers an unactivated version of W4 for standard tests and direct measuring. For specialised testing and more precise results it is recommended to have the W4 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 – 20 sensors
- All order quantities are to be in multiples of 20 e.g. 20, 40, 60, etc.
- Delivery time for standard CC1 sensors is 4 weeks from receipt of order
- Delivery time for non-standard CC1 sensors depends on final technical specification of order

Example of Order

- 100 pieces – CC1.W2