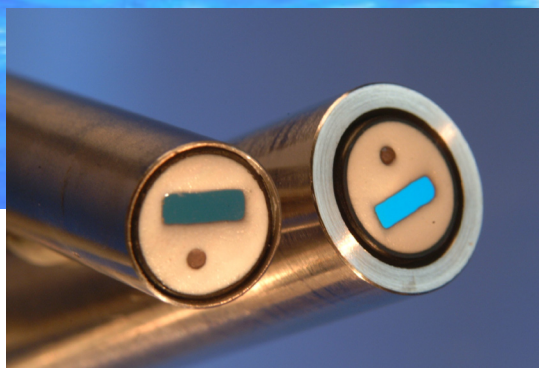


Au-SenSys™

description and specifications



Au-SenSys™ electrodes

Adamant Technologies has developed a novel membrane-less amperometric sensor, Au-SenSys™, based on microdisc array (MDA) electrodes. The sensor is composed of a three-electrode system, including a working electrode which consists of an array of gold microelectrodes integrated on a silicon chip.

Several designs and operating programs are available allowing sensing and monitoring of a range of disinfectants and/or oxidants in water.

Sensor Au-SenSys™ description

Three electrode system

- Working electrode: MDA chip
- Reference electrode: electrolyte free Ag/AgCl electrode
- Counter electrode: stainless steel (sensor body)

The sensor is provided either with a shielded integrated cable (2 m) or with a BNO connector and corresponding 2 m detachable cable (2 m).

Connector type: 22 BNO-0-0-2 / 11 BNO-0-4-1

Cable type: upon request

Specifications

MDA working electrode	
Substrate	p-silicon, 0.5 mm thick
Chip size	2.8 X 7 mm
Passivation layer	Si ₃ N ₄ and SiO ₂
Number of microelectrodes	more than 100 (depending on size)
Microelectrodesize	from 3 µm to 15 µm (upon request)
Active material	Gold
Reference electrodes	
Active material	Ag/AgCl sinter
Diameter	1.5 mm
Particular asset	without electrolyte
Counter electrode	
Active material	Stainless steel (316L)

Size

- Available in 12 or 16 mm diameter
- 100 mm length without cable connection (can be easily adapted)

Innovative technology for disinfectant/oxidant monitoring in water

Resistance

- Resistance up to 10 bar water pressure
- Temperature stability range in water / air -55°C / +85°C

Au-SenSys™ unit option

- Cable with or without connector

SenSys™ – Control Specific floating controlling unit

Power supply	Standard external 220/110 V, 50/60 Hz to 12 V converter
Display	Continuous display of main data
Simplified keyboard	Calibration factor, initialization
Stored parameters	Concentration, date, time, temperature, number of measurements
Data storage capacity	64 Kb
Analogical output (4-20 mA; 0-5 V)	For continuous data monitoring and control
Digital output (RS 232)	For data downloading and data monitoring
Current range (upon request)	-8/+8 nA -80/+80 nA -800/+800 nA -8/+8 mA -20/+20 mA
Current sensitivity	50 pA (for the -80/+80 nA range)
Potential range	-2.5 /+2.5 V (up to -8 /+8 V upon request)
Bandwidth	1 kHz
Floating features	optocoupling and galvanic insulation
Size	180 x 150 x 140 mm

Applications

- Main applications: on-line or off-line measurement of oxidant / disinfectants:
 - Free chlorine (0.02 ppm up to 10 (100) ppm)
 - O₃ in raw, purified or ultra-pure water (ppb level)
 - H₂O₂ in water
- Further applications included DO in water and sludges



SenSys™ Control unit

Adamant Technologies SA preserves its right of changing some of the technical specifications of this product.