ION - ASIA PTE. LTD

AIViM

Biofilm Monitoring System

Catalog

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ALVIM Biofilm Monitoring System - Catalog

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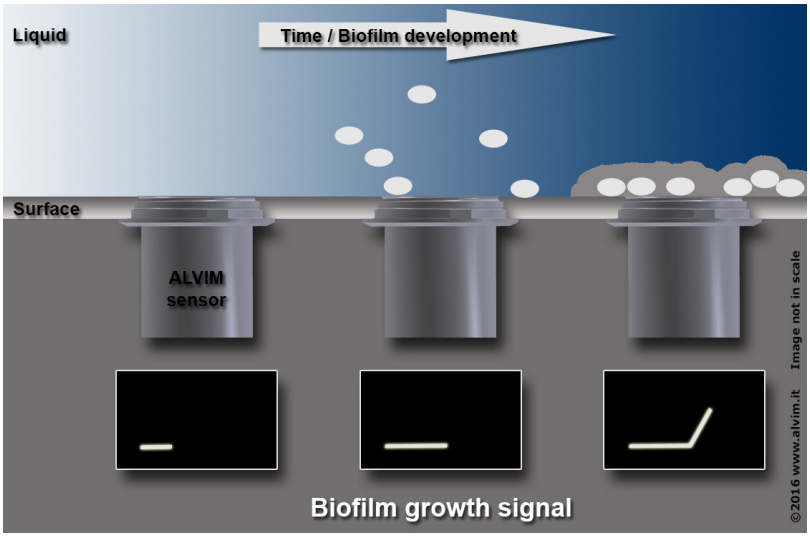
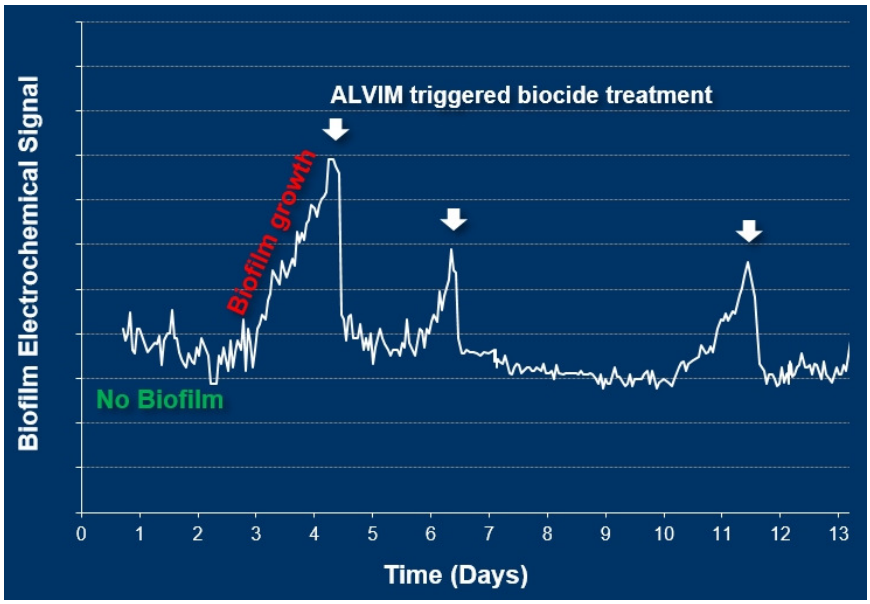
The ALVIM Technology

The ALVIM real-time, on line, Biofilm Monitoring System is able to detect bacterial settlement since its first phases (down to 1% of surface covered by microorganisms).

Basing on ALVIM data it is possible to adjust and optimize water treatments / biocide treatments, verifying, at the same time, the efficacy of the sanitation. ALVIM Biofilm Sensors are used worldwide in many different fields, ranging from industrial cooling waters to Food and Beverage, Pulp and Paper, Oil and Gas and others, including many *Fortune 500* Companies.





Among the users of the ALVIM Biofilm Monitoring System:

For more info:

www.alvim.it | info@alvim.it | +39 0108566345

A001S3 Biofilm Sensor

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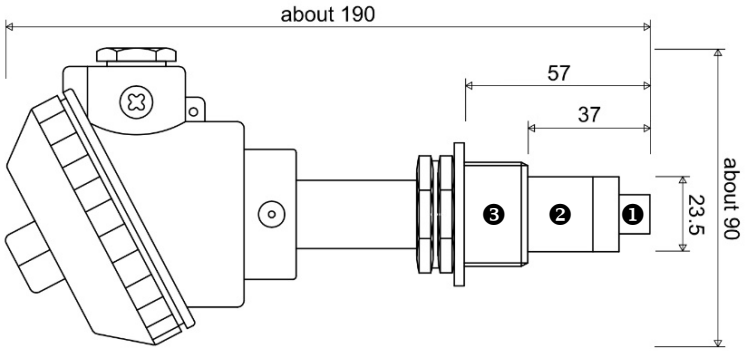
ALVIM standard sensor, suitable for most industrial applications. Given its corrosion resistance, it is particularly indicated for seawater applications

Connection to the process	1" BSPP threaded connector
Materials in contact with the process	Titanium (working electrode ❶), Zinc (counter electrode ❷), PVC (threaded connector ❸)
Sensitivity	1-100% of surface covered by biofilm (i.e. the first bacterial layer)
Measures (mm)	

Operating conditions

Temperature:	-10<T<+60°C (to monitor biofilm growth: +2<T<+40°C)
Oxygen:	>1 ppm (at the maximum sensitivity level)
Pressure:	<10 bar
Conductivity:	>10 µS/cm
Power supply	12V DC ±20%
Data communication	4-20 mA and RS485/MODBUS RTU
Wiring	Standard 6-wire cable, FROR 6x0.5 suggested (2 wires used for power supply, 2 for RS485/MODUS communication, 2 for 4-20 mA data transmission)
Software - Minimum system requirements (RS485/MODBUS)	PC with Windows XP/7/8/10, 1 GHz CPU, 512 Mb Ram, 200 Mb of free space on hard drive, RS485 serial interface or USB port (for USB-RS485/MODBUS converter)

A003S3 Biofilm Sensor

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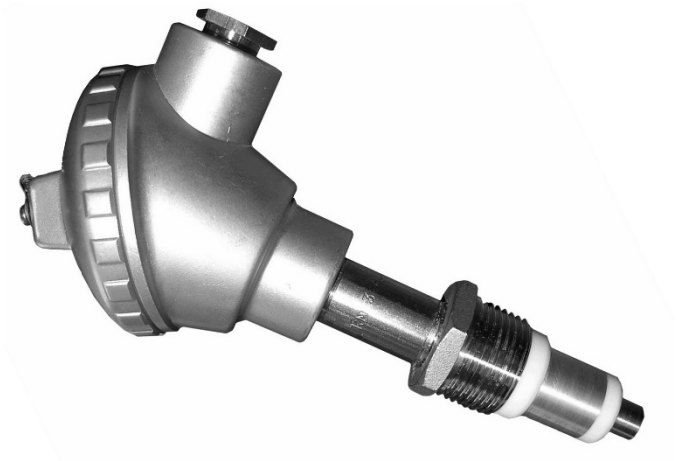
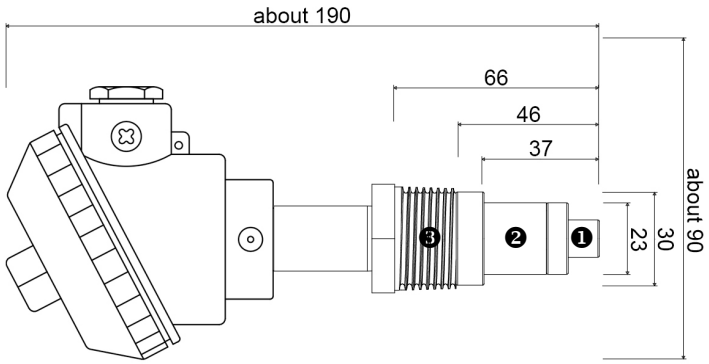


Suitable for most industrial applications. Compared to A001S3 sensor, this model can tolerate higher temperatures

Connection to the process	1" BSPP threaded connector
Materials in contact with the process	Titanium (working electrode ❶), Zinc (counter electrode ❷), PTFE, Stainless Steel (threaded connector ❸)
Sensitivity	1-100% of surface covered by biofilm (i.e. the first bacterial layer)
Measures (mm)	

Operating conditions

Temperature:	-10<T<+120℃ (to monitor biofilm growth: +2<T<+40℃)
Oxygen:	>1 ppm (at the maximum sensitivity level)
Pressure:	<10 bar
Conductivity:	>10 µS/cm
Power supply	12V DC ±20%
Data communication	4-20 mA and RS485/MODBUS RTU
Wiring	Standard 6-wire cable, FROR 6x0.5 suggested (2 wires used for power supply, 2 for RS485/MODUS communication, 2 for 4-20 mA data transmission)
Software - Minimum system requirements (RS485/MODBUS)	PC with Windows XP/7/8/10, 1 GHz CPU, 512 Mb Ram, 200 Mb of free space on hard drive, RS485 serial interface or USB port (for USB-RS485/MODBUS converter)

AS01S3 Biofilm Sensor

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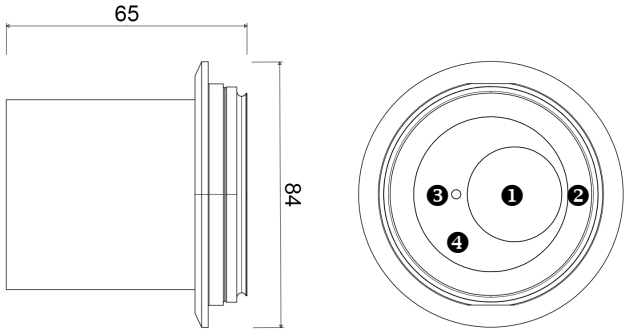
With hygienic connection to the process, flat surface in contact with the liquid and high resistance to chemical treatments, this model is indicated for applications where hygiene is critical

Connection to the process	VARIVENT® Type N (for pipes from DN 40 to DN 150)
Materials in contact with the process	Stainless Steel (working electrode ❶, VARIVENT® connector ❷), coated Titanium (counter electrode ❸), PEEK ❹, EPDM (O-Ring)
Sensitivity	First bacterial layer
Measures (mm)	
Operating conditions	
Temperature:	-10<T<+150°C (to monitor biofilm growth: +2<T<+40°C)
Oxygen:	>1 ppm
Pressure:	<10 bar
Conductivity:	>30 µS/cm
Power supply	12V DC ±20%
Data communication	4-20 mA and RS485/MODBUS RTU
Wiring	Standard 6-wire cable, FROR 6x0.5 suggested (2 wires used for power supply, 2 for RS485/MODUS communication, 2 for 4-20 mA data transmission)
Software - Minimum system requirements (RS485/MODBUS)	PC with Windows XP/7/8/10, 1 GHz CPU, 512 Mb Ram, 200 Mb of free space on hard drive, RS485 serial interface or USB port (for USB-RS485/MODBUS converter)

AX03S3 Biofilm Sensor

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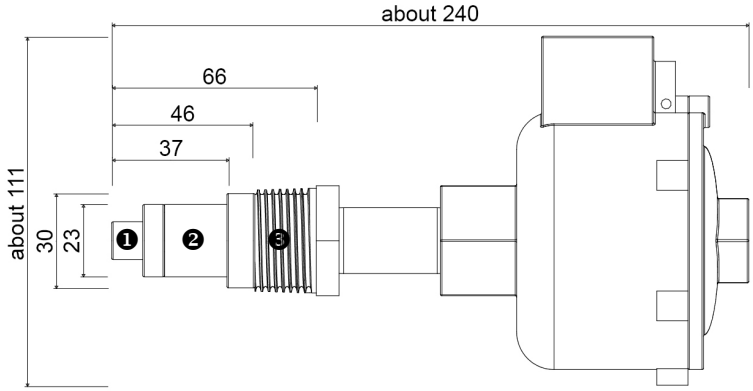
ATEX certified, this model is indicated for classified areas and applications where there is a risk of explosion (e.g. Oil&Gas)

Connection to the process	1" BSPP threaded connector
Materials in contact with the process	Titanium (working electrode ❶), Zinc (counter electrode ❷), POM-C, Stainless Steel (threaded connector ❸)
Sensitivity	1-100% of surface covered by biofilm (i.e. the first bacterial layer)
ATEX string	Ⓔx II 2G Ex mb IIB T6 Gb

Measures (mm)



Operating conditions

Temperature:	-10<T<+50°C (to monitor biofilm growth: +2<T<+40°C)
Oxygen:	>1 ppm (at the maximum sensitivity level)
Pressure:	<10 bar
Conductivity:	>10 µS/cm
Power supply	12V DC ±20%, 500 mA
Data communication	4-20 mA and RS485/MODBUS RTU
Software - Minimum system requirements (RS485/MODBUS)	PC with Windows XP/7/8/10, 1 GHz CPU, 512 Mb Ram, 200 Mb of free space on hard drive, RS485 serial interface or USB port (for USB-RS485/MODBUS converter)

Control Box

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ALVIM Control Box includes power supply unit and data communication card. It can be used with A001S3, A003S3 and AS01S3 sensors

Size	150 x 110 x H70 mm
Operating conditions	
Temperature:	-10<T<+60°C
IP Rating:	IP56 (excluding data communication card)
Power supply unit	Input: 100-240V AC, 50/60 Hz Output: 12V DC, 1A
Available versions	CB-USB (with USB data communication card) CB-TCP (with Modbus TCP gateway) * CB-WIFI (with Modbus TCP over Wi-Fi gateway) *

** Available on request*