



# SAMBAT

*Monitoring Station  
Monitoring and water quality control*

*Fresh water and Sea environment*

**SAMBAT** is an Autonomous Multiparameter Probe with Brush and Teletransmission of data. This equipment is used to measure and record during several months the main physicochemical water parameters (to be chosen): conductivity for the calculation of salinity, temperature, depth, turbidity, Chlorophyll a, Phycocyanin, Phycoerythrin, dissolved oxygen, pH, Redox, and the detection of hydrocarbons. **SAMBAT** uses a wiper to protect optical sensors from biofouling.

An operational probe:

- Monitoring station
- Fresh water or sea environment
- Fast wireless configuration thanks to a communication interface (Radio Data Pencil with a range of around 25 meters) connected to the USB port of a PC using Winmemo software.
- Transferring measured data by Email thanks to the integrated GSM modem (TI) or Modbus communication.
- Possibility to configure as data logger.
- Suitable for any type of support: very light buoy, ladder, stake, pontoon, etc.



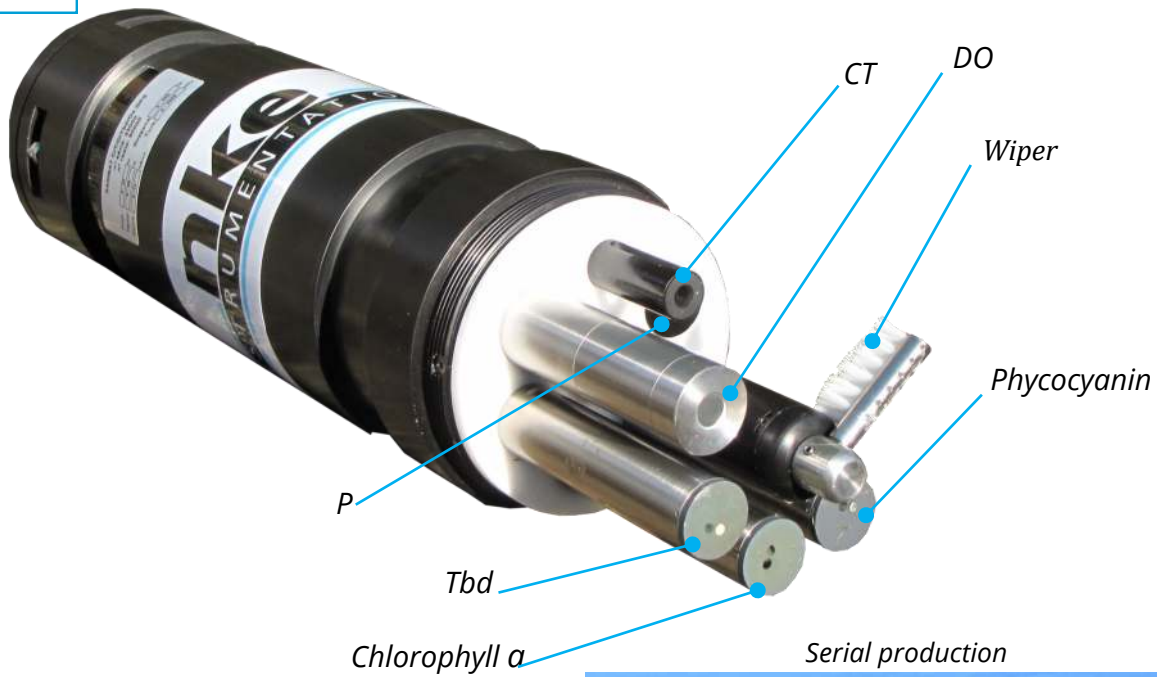


# Fresh water and Sea environment monitoring

## Technical features

Physicochemical parameters		Technical features		
		Range	Accuracy	Resolution
<b>Depth (D)</b>	TI or Modbus	0 to 10m	< 0,03 m	< 0,001 m
	TI (data logger) or Modbus	0 to 30m	< 0,15 m	< 0,001 m
	Modbus	0 to 50m	< 0,40 m	< 0,002 m
<b>Temperature (T)</b>		-5°C to +35°C	< 50m°C	1m°C to 10°C
<b>Conductivity (C)</b>		0 - 70 mS/cm	< 50 µS/cm	1,2 µS/cm
		0 - 2 mS/cm	< 20 µS/cm	0,04 µS/cm
<b>Salinity (sea version)</b>		2 - 42 PSU	< 0,1 PSU	< 0,001
<b>Turbidity</b>		0 - 15 NTU	<5%	< 0.0015 NTU
		0 - 150 NTU	<5%	< 0.015 NTU
		0 - 1500 NTU	Linearity 0.99 r2	< 0.05 NTU
<b>Dissolved oxygen (DO)</b> Optical measurement by luminescence	Concentration	0 - 20 mg/l	± 0,5 mg/l	0,01%
	Saturation	0 - 200%	± 5%	0,01%
<b>Fluorescence (Fluo) Chlorophyll A</b>	Excitation wavelength: 460 nm	0 - 500 µg/L	<5%	< 0,008 µg/L
	Emission wavelength: 620-715 nm	0 - 50 µg/L	Linearity 0.99 r2	< 0,0008 µg/L
	Detection wavelength: 300-1100 nm	0 - 5 µg/L		< 0,00008 µg/L
<b>Fluorescence (Fluo) Phycocyanin</b>	Excitation wavelength: 595 nm	0 - 2 000 000 Cml	<5%	< 31 Cml
	Emission wavelength: 670 nm	0 - 200 000 Cml	Linearity 0.99 r2	< 3 Cml
	Detection wavelength: 500-1100 nm	0 - 20 000 Cml		< 0,3 Cml
<b>CDOM</b>		0 - 1250 ppb	<5%	0,15 ppb
		0 - 5000 ppb	Linearity 0.99 r2	0,5 ppb
<b>pH (pH)</b>		0 - 14 pH	± 0,1 pH	0,0003 pH
<b>REDOX</b>		-1000 to +1000 mV	± 2 mV	0,1 mV
<b>Hydrocarbons Crude oil</b>	Min. detection limit: 0.2 ppb*** Linear range: 0-1,500 ppb*** ***PTSA (1,3, 6, 8 - Pyrenetetrasulfonic Acid Tetrasodium Salt)			
<b>Time</b>	Internal clock with calendar (clock drift < 1mn/month)			
<b>Sensors materials</b>	SAMBAT fresh water	Stainless steel		
	SAMBAT sea water	Titanium		
<b>Mechanical features</b>	SAMBAT	Ø 11cm / length 42,5 cm / weight 3,6 kg		
	On buoy	Max dimensions: Ø 29 cm / length 175 cm / weight 11 kg		
<b>Communication</b>	GPRS: Integrated Transmission (TI) (max antenna cable length 6 m) Modbus			
<b>Tracking</b>	Integrated GPS (only with GPRS communication)			

# SENSORS

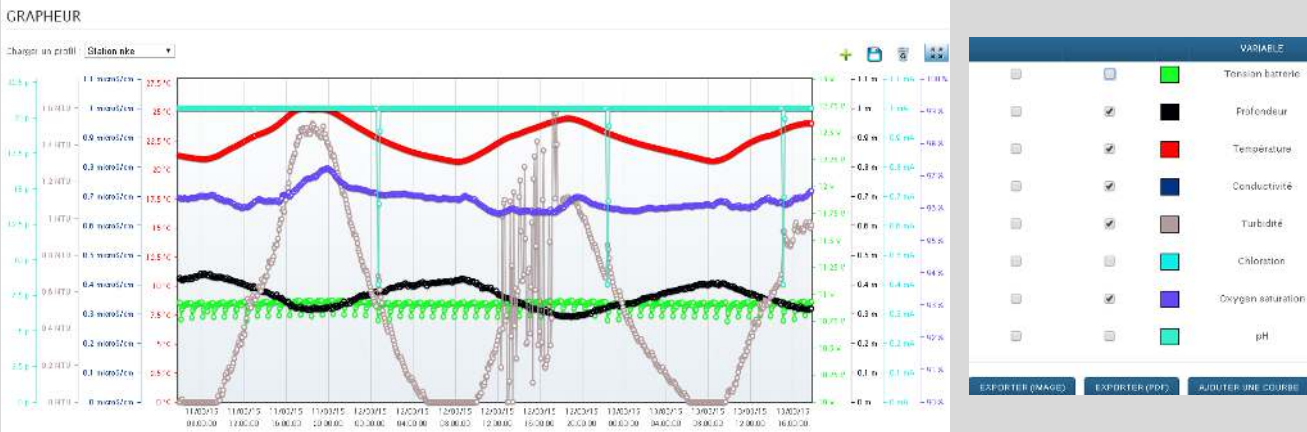


## IN OPTION

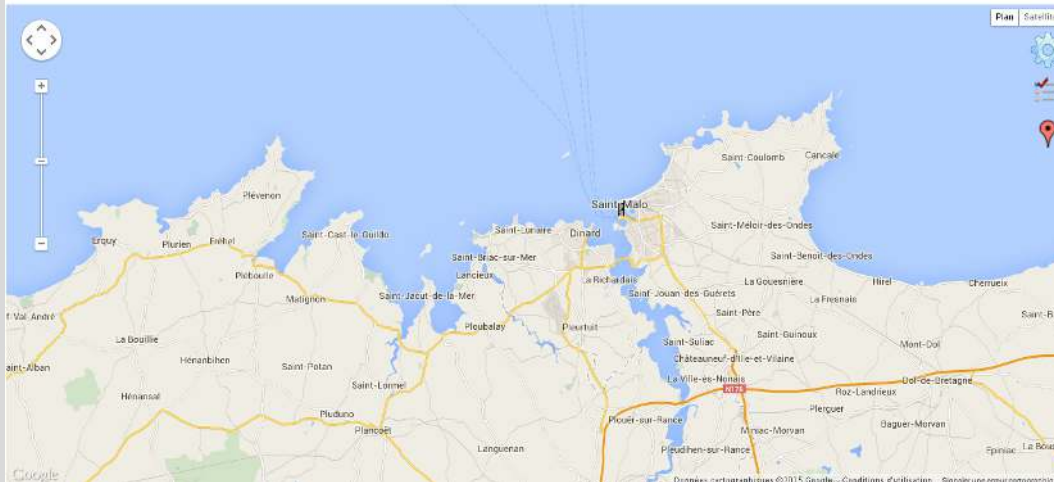
- Detection of hydrocarbons: specific detection floating oils and chlorinated solvents
- Webdata: data processing



## Webdata application:



## LOCALISATION DES STATIONS



## Main practical applications:

- Automated measuring station
- Water quality control
- Environmental monitoring
- Civil engineering and harbour projects follow-up
- Salinity and turbidity measurement for hydrodynamic model settings
- Bathing waters monitoring



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