AQUALABO

PROCESS RANGE

AQUALYSE BY AQUALABO PERAX BY AQUALABO PONSEL BY AQUALABO

The word of the president

I am glad to introduce you our new catalog !

Our water quality sensors, venture flumes, samplers, telemetry systems and analyzers are proudly designed and made in France.

Our brands Perax, Ponsel and Aqualyse have a long experience in the development of water instrumentation. You will discover in this updated document our new brand name and sister company, Supratec, for online instrumentation. Offering a universal water quality controller and unique solutions for disinfection parameters, we now have a complete range for water control.

Aqualabo is a strong leader in the instrumentation field thanks to our strategy: high quality products, open communication protocols and low power consumption.

We are proud to deliver our products all over the world. Please feel free to contact your sales representative if you need more information.

Stanislas Rault,
CEO

AQUALABO Group presentation video

Catalog

AQUALABO

Digital controllers & probes

Water samplers

Flowmeters

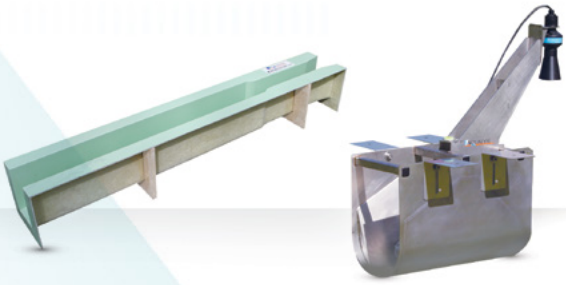
Levelmeters

Communication

AQUALYSE BY AQUALABO · PERAX BY AQUALABO · PONSEL BY AQUALABO · Supratec Instrumentation GmbH

2018 Edition. This edition supersedes all previous editions.

Physico-chemistry



Venturi flumes, weirs and thresholds

Water samplers

Level measurement

Data loggers

Data remote / software

pH
CONDUCTIVITY
DISSOLVED OXYGEN (OPTICAL)
SSI
TURBIDITY
FREE CHLORINE
OZONE
DISSOLVED
SLUDGE BLANKET
CHLORINE DIOXIDE
ORP

Summary

DIGITAL SENSORS DIGISENS,
Smart sensors for water control

Advantages

- Universal communication Modbus RS485 / SDI-12
- Compatible with all types of transmitters, recorders, remote control, controller equipped with a RS485 input or SDI-12 ...
- Integrated transmitter (recording of calibration data, history and measurement processing in the sensor)
- Ultra-low power technology

Digital communication

the DIGISENS sensors can connect to any type of recorder, transmitter or controller with a Modbus RS485 input, making data transfer more reliable.
More than 248 indexed sensors can be connected on the same RS485 input.
The digital signal processing combined with the pre-amplification of the measurement allow high reliability.

Integrated transmitter

All calibration data for (offset, slope), history, users and measures be processed directly in the sensor and transmitted via Modbus RS-485 or SDI-12 (optional).

Mechanical

Digital sensors are compact, rugged and light. They are made of stainless steel or PVC materials for portable or stationary use in the most fouling environments.

Application areas

Wastewater, Industrial effluent, Monitoring of surface water, Fish farming, Drinking water

DIGITAL OUTPUT SENSOR

DIGITAL COMMUNICATION MODBUS RS485 SDI12

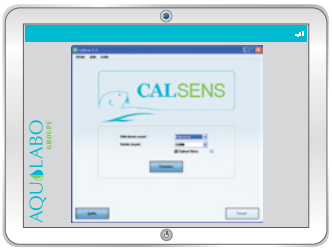
DIGITAL INPUT SYSTEM

Rental available

Technical specifications

	Parameter	Dimensions	Range	Accuracy	Sensor
PH/ORP/T°C	Temperature	Diameter : 27 mm Length without cable : 159 mm Weight : 350 g (sensor + cable)	0,00 to + 50,00 °C	± 0,5°C	NTC
	pH		0,00 to 14,00 pH	± 0,1	Combined electrode (pH/reference) : special glass Reference Ag/AgCl. Electrolyte plastogel (KCl)
	ORP		- 1000,0 to + 1000,0 mV	± 2 mV	Combined electrode (Redox/reference) : Platinum electrode, Reference Ag/AgCl. Electrolyte plastogel (KCl)
OPTOD	Dissolved Oxygen/T°C	Diameter : 25 mm Length without cable : 146 mm Weight : 450 g (sensor + cable)	0,00 to 20,00 mg/L 0,0 to 200,0 % SAT	± 0,1 mg/L ± 1 %	PONSEL OPTOD® optical luminescence technology ASTM D888 – 05 Compliance ISO 17289
C4E	Conductivity	Diameter : 27 mm Length without cable : 177 mm Weight : 350 g (sensor + cable)	0,0 to 200,0 µS/cm 0 to 2 000 µS/cm AUTOMATIC RANGE 0,00 to 20,00 mS/cm 0,0 to 200,0 mS/cm	± 1 % of the full scale	C4E Technology 4 electrodes (2 platinum and 2 graphite)
	Salinity		0,00-150,00 ppt	± 0,5 % of the full scale	C4E Technology 4 electrodes (2 platinum and 2 graphite)
CTZN	Conductivity	Diameter: 39.80 mm Length without cable : 258.6 mm Weight : 700 g (sensor + cable)	0,0 –100,0 mS/cm	< 5%	Inductive conductivity sensor compensated in temperature
	Salinity		5-60 g/Kg		
NTU	Turbidity	Diameter : 27 mm Length without cable : 170 mm Weight : 300 g (sensor + cable)	5 to 50 NTU ; 5 to 200 NTU ; 5 to 1000 NTU ; AUTOMATIC RANGE, 5 to 4000 NTU	± 1 % of the full scale	IR 90° technology ISO 7027 compliance
EHAN	ORP & T°	Diameter: 27mm Length: 262mm Weight: 350g (Sensor + cable 3m)	-1000,0 to + 1000,0 mV	± 10mV	Combination Electrode (ORP/reference) platinium ring, Reference Ag/AgCl. Gelled electrolyte (KCl)
MES5 / VB5	MES5: suspended solids VB5: sludge blanket	Diameter: 64mm Length: 212mm Weight: 750g	TSS: 0-50g/l Turbidity: 0-4000FAU Sludge blanket: 0-100%	TSS: 0-1 SS < 10 % Turbidity: ±5% (range 200 -4000 FAU) Sludge blanket: ±2%	Optical IR (870 nm) based on IR absorption

Interface Signal: RS485 Modbus or SDI-12, Sensor power supply: to 5-12 volts, Max. 5 bars, Cable 9 armoured connectors, polyurethane sheath, bare wire, Protection: IP 68



Accessories

CALSENS Software :
CALSENS software is designed for the optimization and exploiting the data of the PONSEL DIGISENS range (digital sensors). Simple, friendly and intuitive this is a support to configure the sensors, the calibration menu, to follow in real time the measurement of the selected parameters and to record the measured parameters.

Box of communication and power supply mono and multichannel Modbus :
Destined to the permanent instrument installations and supplementing the offer of digital sensors PONSEL, the junction boxes mono and multichannel PONSEL are easy to install. The module 4001 allows the connection of digital sensors PONSEL with all types of dataloggers, transmitter and remote systems or automates with an input Modbus RS485.

References

Module 4001 - 5 SENSORS BARE WIRE CABLE/1 CONNECTOR FOR ODEON CABLE	PF-ACC-C-00255
CABLE MODULE 4001 - ODEON	PF-ACC-C-00284
MODULE 4200 RS485/USB CONVERTOR FOR ONE SENSOR	NC-FIX-C-00020
MODULE 4200 RS485/USB CONVERTOR FOR TWO SENSORS	NC-FIX-C-00021
CALSENS SOFTWARE	LO-EMB-C-00031
CABLE TO CONNECT A BARE WIRE SENSOR TO ODEON	PF-ACC-C-00082

PHEHT: PH, ORP & TEMPERATURE,
DIGITAL technology for optimized measures

The PHEH sensor has been designed to perform under hard conditions from pure mountains water with conductivity as low as 20 µS/cm, lakes and rivers (100 – 2000 µS/cm), seawater with conductivities of 50 mS/cm and to wastewater with conductivity higher than 200 mS/cm.
This sensor features a "long life" reference. The Plastogel® PONSEL technology increase the lifetime of the probe the need to refill.
This sensor has been designed also for handheld and in situ applications which have been the most difficult situations for a pH/ORP sensor in term of sensor resistance, quick time response, minimal flow dependence and low power consumption.

Digital Technology
The "smart" pH/ORP/Temp sensor stores calibration and history data within the sensor. This allows you a "plug and play" system without re-calibration.

Thanks to the Universal Modbus RS485 protocol, the PONSEL pH/ORP/T sensor can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System...).

Range
- pH : 0 to 14 units
- ORP : - 1000 to + 1000 mV ;
- T°C : -10°C to +50°C

Applications
Urban wastewater treatment (inlet/ outlet controls), Sanitation network, Industrial effluent treatment, Surface water monitoring, Fish farming, Drinking water

Technical specifications Measures pH	
Measure principle	Combined electrode (pH/ref) : special glass, Ag/AgCl ref. Gelled electrolyte (KCl)
Range	0 – 14 pH
Resolution	0,01 pH
Accuracy	± 0,1 pH
Technical specifications Measures ORP	
Measure principle	Combined electrode (ORP/reference) : Platinum tip, Ag/AgCl AgAgCl. Gelled reference (KCl)
Range	- 1000 to + 1000 mV
Resolution	0,1 mV
Accuracy	± 2 mV
Technical specifications Measures Temperature	
Technology	NTC
Range	0,00 °C to + 50,00°C
Resolution	0,01 °C
Accuracy	± 0,5 °C
Response time	< 5 s
Storage temperature	0°C to + 60°C
Protection	IP 68
Interface	Modbus RS-485 / SDI-12
Power supply	5 to 12 volts
Power consumption	Standby : 25µA Average RS485 (1 measure/second) : 3,9 mA Average SDI12 (1 measure/second) : 6,8 mA Current pulse : 500 mA
Technical specifications Sensor	
Dimensions	Diameter : 27 / 21 mm ; Length : 207 mm
Weight	350 g (sensor + 3 m cable)
Material	PVC, DELRIN, special pH glass, platinum, polyamide
Pressure	5 bars
Cable	Coaxial armoured, Polyurethane, bare wire or Fisher connector
Protection	IP68

Advantages
- Combination pH/ORP/Temp sensor
- Digital Sensor : Modbus RS 485 / SDI-12
- Calibration data inside
- pH/ORP Cartridge

References

pH/ORP/T Digital Adapter - 3 m cable without pH/ORP sensor	PF-CAP-C-00143
pH/ORP/T Digital Adapter - 7 m cable without pH/ORP sensor	PF-CAP-C-00144
pH/ORP/T Digital Adapter - 15 m cable without pH/ORP sensor	PF-CAP-C-00161
Digital sensor Pheht design cable length without cartridge	PF-CAP-C-00177
pH/ORP/T Sensor (Cartridge)	PF-CAP-C-00155
pH-ORP sensor, 3 meters cable, bare wire	PF-CAP-C-00171
pH-ORP sensor, 7 meters cable, bare wire	PF-CAP-C-00172
pH-ORP sensor, 15 meters cable, bare wire	PF-CAP-C-00162
pH-ORP sensor, custom design cable length, bare wire	NC-CAP-C-00159
Supplementary cable per meter	PF-ACC-C-00193

EHAN: ANNULAR ORP SENSOR,
ORP potential and temperature

- **Combination sensor:** ORP & Temperature
- **Measuring ranges: ORP:** - 1000 to + 1000 mV; T ° C: -10.00 to + 50.00 ° C
- **Interchangeable Cartridge with "PLASTOGEL®"**
- **Digital communication RS-485 Modbus**

Digital Technology

The electrolyte "PLASTOGEL®" of DIGISENS Ponsel sensor communicates directly with the external environment without interposition of capillary or porous. There is therefore no risk of clogging or reference defusing. Temperature: Measures via CTN

Applications

Treatment of urban waste water (entrance, aeration tank, exit), industrial sewage treatment (optimization process of nitrifying / denitrifying), deodorization channels.

PONSEL BY AQUALABO

Technical specifications

Measures ORP	
Measuring principle ORP	combination electrode (ORP / reference): Platinum Ring Reference Ag / AgCl. gelled electrolyte (KCl)
Measurement range	-1000.0 to + 1000.0 mV
Resolution	± 0.1 mV
Accuracy	± 10mV
Response time	< 5 s
Temperature Measurement	
Measuring principle T°C	NTC
Operating Temperature	0.00 ° C to 50.00 ° C
Resolution	0,01 °C
Storage temperature	0°C to + 60°C
Protection	IP 68
Interface signal	RS-485 Modbus / SDI-12
Refresh rate measurement	Maximum <1 second
Sensor supply	5-12 volts
Consumption	Standby : 25µA, RS485 Average (1 measure / second) : 20 mA, Pulse current : 500 mA, Meating : 100 mS
Sensor	
Dimension of equipped sensor	Upper part: 27 mm diameter; Length 103 mm Cartridge Length: 173 mm; Equipped sensor Length: 262 mm without gland ; Length with cable gland: 327 mm
Weight	350 g (cable + sensor)
Materials in contact with the environment	PVC, POM-C, platinum, Polyurethane
Maximum pressure	5 bars
Cable / connector	9 armored connectors, polyurethane sheath, bare wires or sealed metal Fischer connector

References

EHAN sensor Fisher connector 3m cable without cartridge	PF-CAP-C-00268
EHAN sensor Fisher connector 7m cable without cartridge	PF-CAP-C-00269
EHAN sensor Fisher connector 15m cable without cartridge	PF-CAP-C-00270
EHAN sensor bare wires 3m cable without cartridge	PF-CAP-C-00271
EHAN sensor bare wires 7m cable without cartridge	PF-CAP-C-00272
EHAN sensor bare wires 15m cable without cartridge	PF-CAP-C-00273
Annular digital sensor cartridge ORP	PF-CAP-C-00263
Supplementary cable per meter	PF-ACC-C-00193

Rental available

C4E: CONDUCTIVITY/SALINITY,
Digital technology for optimized measures

- **Mounting at 4 electrodes:** The electrode works with a technology in 4 electrodes: an alternating current of constant-voltage is established between a primary's pair of electrodes in graphite. The secondary's electrodes in platinum allow of regulate the voltage imposed to primary's electrodes to reflect of the fouling. The voltage measured between the primary's electrodes is in function of the resistance of place and so, of the conductivity.
- **Digital Technology:** The "smart" Digital C4E sensor stores calibration and history data within the sensor. This allows you a "plug and play" system without re-calibration.

Thanks to the Universal Modbus RS485 protocol, the PONSEL Digital C4E can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System...).

Applications

- Urban wastewater treatment
- Industrial effluent treatment
- Surface water monitoring
- Sea water
- Drinking water

Technical specifications measures	
Measure principle	Conductivity sensor with 4 electrodes (2 graphic, 2 platinum)
Measure ranges conductivity	• 0-200,0 µS/cm • 0 –2000 µS/cm • 0,00 –20,00 mS/cm • 0,0 –200,0 mS/cm
Resolution	0,01 to 1 according the range
Accuracy	± 1 % of the full range
Measure range salinity	5-60 g/Kg
Measure range TDS -KCl	0-133 000 ppm
Response time	< 5 s
Working temperature	0°C to + 50°C
Temperature compensation	NTC
Stocking temperature	-10°C to + 60°C
Signal interface	Modbus RS-485 or SDI-12
Maximum refreshing time	Max < 1 s
Sensor power-supply	5 to 12 volts
Electric consumption	Standby : 25 µA Average RS485 (1 measure/second) : 6,3 mA Average SDI12 (1 measure/second) : 9,2 mA Current pulse : 500 mA
Technical specifications sensor	
Dimensions	Diameter : 27 mm ; Length : 177 mm
Weight	300 g (sensor + cable 3 meters)
Material	PVC, DELRIN, stainless steel
Maximum pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
Degree of protection	IP68

Advantages

- 4 electrodes (2 graphic, 2 platinum)
- Range 0 to 200 mS/cm and automatic range
- Digital sensor / Modbus RS-485
- Robust and Watertight

References

C4E SENSOR WITH FISCHER CONNECTOR Conductivity/T Digital Probe - 3 m cable	PF-CAP-C-00149
C4E SENSOR WITH FISCHER CONNECTOR Conductivity/T Digital Probe - 7 m cable	PF-CAP-C-00150
C4E SENSOR WITH FISCHER CONNECTOR Conductivity/T Digital Probe - 15 m cable	PF-CAP-C-00167
Digital sensor for Odeon Fischer connector design cable length	NC-CAP-C-00151
C4E SENSOR, 3 meters cable, bare wire	PF-CAP-C-00169
C4E SENSOR, 7 meters cable, bare wire	PF-CAP-C-00170
C4E SENSOR, 15 meters cable, bare wire	PF-CAP-C-00156
C4E SENSOR, custom design cable length, bare wire	NC-CAP-C-00158

Rental available

CTZN : INDUCTIVE CONDUCTIVITY,
Inductive conductivity no sensitive to the fouling

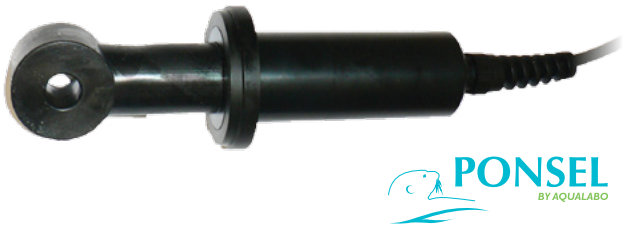
- **Measured parameters:** Conductivity compensated in temperature (mS/cm), Conductivity non-compensated in temperature (mS/cm), Salinity (g/Kg), Temperature (°C)
- **Inductive method:** A ring-type coil is excited at fixed intervals and the response is retrieved on a second coil, which is linked to the excited coil. The connectivity between the coils (determined by the degree of conductivity) takes place via the conducting solution. Economic and successful technology that requiring not enough maintenance and not consumable.
- **Digital Technology:** The "smart" Digital CTZN sensor stores calibration and history data within the sensor. This allows you a "plug and play" system without re-calibration. Thanks to the Universal Modbus RS485 protocol, the PONSEL Digital CTZN

Applications

Urban wastewater treatment, Industrial effluent treatment, Surface water monitoring, Sea water, Fish farming

Advantages

- Sensor regulated in temperature
- Ranges 0 to 100 mS/cm
- Numerical communication Modbus RS-485 and SDI12
- Compact, robust and watertight



Technical specifications measures	
Measure principle	Inductive conductivity sensor regulated in temperature
Measure ranges conductivity	0,0 –100,0 mS/cm
Resolution	0,1
Measure ranges salinity	5-60 g/Kg
Working temperature	0 to 50 °C
Temperature compensation	With NTC
Accuracy T°C	± 0.5 °C
Response time	90% of the value in less than 30 seconds
Stocking temperature	-10°C to + 60°C
Signal interface	Modbus RS-485 and SDI-12
Maximum refreshing time	Maximum < 1 second
Sensor power-supply	5 to 28 volts, max 30 V
Electric consumption	Automatic Standby < 50 µA , Heating time 100 mS Average Modbus RS485/ Range 0-100 mS/cm 1 measure/s :

	Vin 5V	Vin 12 V	Vin 24 V
1 measure/s	31 mA	15,5 mA	11,5 mA

Max current pulse 700 mA during 2 mS, 350 mA during 150 mS

Technical specifications sensor	
Dimensions	Diameter max. 62,4 mm, Length : 196 mm
Weight	700 g
Material	EPDM, PVC, Stainless steel
Maximum pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
Degree of protection	IP68

References

CTZN SENSOR, 3 METERS CABLE, BARE WIRE - STAINLESS STEEL IN PIPE INSTALLATION	PF-CAP-C-00265
CTZN SENSOR, 3 METERS CABLE, BARE WIRE - VERSION IMMERSION/PVC IN PIPE INSTALLATION	PF-CAP-C-00259
CTZN SENSOR, 7 METERS CABLE, BARE WIRE - STAINLESS STEEL IN PIPE INSTALLATION	PF-CAP-C-00266
CTZN SENSOR,7 METERS CABLE, BARE WIRE - VERSION IMMERSION/PVC IN PIPE INSTALLATION	PF-CAP-C-00261
CTZN SENSOR, 15 METERS CABLE, BARE WIRE - STAINLESS STEEL IN PIPE INSTALLATION	PF-CAP-C-00256
CTZN SENSOR, 15 METERS CABLE, BARE WIRE - VERSION IMMERSION/PVC IN PIPE INSTALLATION	PF-CAP-C-00253
Digital sensor CTZN Fischer connector 3M –PVC immersion pipe installation	PF-CAP-C-00186
Digital sensor CTZN Fischer connector 7M –PVC immersion pipe installation	PF-CAP-C-00189
Digital sensor CTZN Fischer connector 15M –PVC immersion pipe installation	PF-CAP-C-00188

OPTOD: OPTICAL DISSOLVED OXYGEN,

Optical technology for optimized measurements

Applications

- Urban wastewater treatment
- Industrial effluent treatment
- Surface water monitoring
- Drinking water

Advantages

- Optical Technology without calibration
- Digital Technology (Modbus RS-485)
- No drift, Reduced maintenance
- Body in Stainless steel (316 L) or Titanium

Optical technology

The OPTOD (Optical Dissolved Oxygen technology) is based on luminescent optical technology. The OPTOD sensor is approved by the ASTM International Method D888-05 and Norm ISO 17289.
Without calibration requirements and thanks to an ultra low power technology, the OPTOD sensor meets the demands of field works and short or long term campaigns.
Without oxygen consumption, this technology allows you an accurate measure in all situation and especially in very low oxygen concentrations

Mecanic

Compact, strong and light, the sensor allows a portable or in fixed/permanent use.
Body in Stainless steel 316 L (passivation treatment) or in Titanium for applications in corrosive environment.

PONSEL BY AQUALABO

Technical specifications measures	
Measure principle	Optical measure by luminescence
Measure ranges	0,00 to 20,00 mg/L • 0,00 to 20,00 ppm • 0-200%
Resolution	0,01
Accuracy	+/- 0,1mg/L • +/- 0,1 ppm • +/- 1 %
Response time	90% of the value in less than 60 seconds
Frequency of recommended measure	>5 s
Water move	No necessary move
Temperature compensation	Via NTC
Stocking temperature	-10°C to + 60°C
Signal interface	Modbus RS-485 or SDI-12
Sensor power-supply	5 to 12 volts
Consumption	Standby 25 µA Average RS485 (1 measure/ second) : 4,4 mA Average SDI12 (1 measure/ second) : 7,3 mA Current pulse : 100 mA
Technical specifications sensor	
Dimensions	Diameter : 25 mm ; length : 146 mm
Weight	Stainless steel version 450g (sensor + cable 3 m) Titanium version 300 g (sensor + cable 3 m)
Material	Stainless steel 316L, New : body in Titanium
Maximum pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare wires or waterproof Fisher connector
Protection	IP68

References

Optod digital sensor Odeon Fisher plug 3m	PF-CAP-C-00140
Optod digital sensor Odeon Fisher plug 7m	PF-CAP-C-00141
Optod digital sensor Odeon Fisher plug 15m	PF-CAP-C-00163
Optod custom digital sensor	NC-CAP-C-00142
Optod digital sensor 3m bare wires	PF-CAP-C-00160
Optod digital sensor 7m bare wires	PF-CAP-C-00168
Optod digital sensor 15m bare wires	PF-CAP-C-00164
Optod digital sensor bare wires custom length, more than 15m until 100m	NC-CAP-C-00175

Rental available

TITANIUM OPTOD,
Optical digital dissolved oxygen sensor

The Dissolved Oxygen sensor especially for seawater and corrosive environments.

Applications

- All applications in seawater, monitoring of coastal waters, estuaries, aquarium ...
- Many applications in corrosive environments ...

- Robust: body entirely in Titanium
- Compact and lightweight: Diameter: 25 mm; Length: 146 mm; Weight 300 g Titanium version
- Communicating and intelligent: Digital sensor RS485 or SDI-12 (communicates with any central accepting RS485 or SDI-12)

Technical specifications measures

Measurement principle	Optical luminescence measurement
Measurement ranges	0.00 to 20.00 mg / L ; 0.00 to 20.00 ppm ; 0-200%
Resolution	0,01
Accuracy	± - 0.1 mg / L or +/- 1%
Response time	90% of the value in less than 60 seconds
Storage temperature	- 10 ° C to + 60 ° C
Temperature compensation	Via NTC
Pressure max.	5 bars
Protection rating	IP68
Weight	300 g (sensor + 3m cable)

References

Optod digital sensor Odeon titanium Fisher plug 3m	PF-CAP-C-00240
Optod digital sensor Odeon titanium Fisher plug 7m	PF-CAP-C-00241
Optod digital sensor Odeon titanium Fisher plug 15m	PF-CAP-C-00242
Optod custom titanium digital sensor	NC-CAP-C-00107
Optod titanium digital sensor 3m bare wires	PF-CAP-C-00243
Optod titanium digital sensor 7m bare wires	PF-CAP-C-00244
Optod titanium digital sensor 15m bare wires	PF-CAP-C-00245
Optod titanium digital sensor bare wires custom length, more than 15m until 100m	NC-CAP-C-00106

Rental available

NTU: NEPHELOMETRIC TURBIDITY,

Optical technology for optimized measures

Optical technology: The measure principle is based on IR nephelometry ISO 7027 / 850 nm. The sensor can be calibrated with a formazine standard solution. The NTU sensor integrates a low-cost optical technology, with a very few maintenance and no consumables.

Applications

- Urban wastewater treatment (inlet/ outlet controls)
- Sanitation network
- Industrial effluent treatment
- Surface water monitoring
- Drinking water

Accessory

Hydroclean :
- Anti-fouling system for numerical sensor ntu

Technical specifications Measures	
Measure principle	Diffusion IR at 90°
Measure ranges	5 - 50 NTU ; 5 – 200 NTU ; 5 – 1000 NTU ; 5 – 4000 NTU ; AUTOMATIC RANGE 0 to 4500 mg/L Calibration: Range 0-500 mg/L according to NF EN 872 Range >500 mg/L according to NF T 90 105 2
Resolution	0,01 to 1 NTU - mg/L
Accuracy	< 5% of the reading
Working temperature	0°C to + 50°C
Measure of temperature	Via NTC
Stocking temperature	-10°C to + 60°C
Signal interface	Modbus RS-485 and SDI-12
Maximum refreshing time	< 1 second
Sensor power-supply	5 to 12 volts
Electric consumption	Standby: 40 µA Average RS485 (1 measure/second): 820 µA Average SDI12 (1 measure/second): 4,2 mA Current pulse: 500 mA
Technical specifications Sensor	
Dimensions	Diameter : 27 mm; length : 170 mm
Weight	300 g (sensor + cable 3 meters)
Material	PVC, DELRIN, Quartz, PMMA, Polyamide
Maximum pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
Degree of protection	IP68

Advantages

- IR optical sensor with optical fibre
- Range : 0 to 4000 NTU or 0-4500 mg/L
- Rugged and waterproof (IP68)
- Ultra low-power consumption
- Digital output Modbus RS-485
- Nephelometry measurement

References

NTU sensor, 3 meters cable, bare wire	PF-CAP-C-00173
NTU sensor, 7 meters cable, bare wire	PF-CAP-C-00174
NTU sensor, 15 meters cable, bare wire	PF-CAP-C-00166
NTU sensor, custom design cable length, bare wire	NC-CAP-C-00157
Turbidity/T Digital Probe Fischer Connector - 3 m cable	PF-CAP-C-00146
Turbidity/T Digital Probe Fischer Connector - 7 m cable	PF-CAP-C-00147
Turbidity/T Digital Probe Fischer Connector - 15 m cable	PF-CAP-C-00165
Digital sensor for Odeon Fischer connector design cable length	NC-CAP-C-00148

HYDROCLEAN BRUSH CLEANING SYSTEM	
HYDROCLEAN : Mechanical wiper for Ponsel Turbidity sensor (Maximum depth 30 M)	PF-ACC-C-00353
HYDROCLEAN : Mechanical wiper for Ponsel Turbidity sensor (Maximum depth 100 M)	PF-ACC-C-00354
Mechanical wiper for Ponsel Turbidity sensor to integrate (Maximum depth 30 M)	PF-ACC-C-00355
Supplement of cable for hydroclean system (price for 1 meter)	PF-ACC-C-00356

Rental available

MES 5 / VB5 : MEASUREMENT OF SS, TURBIDITY AND SLUDGE BLANKET,

Applications

- Treatment of urban waste water (Input / Network (MES, Turbidity) Aeration Tank (MES), Clarifier (Sludge Blanket), Outlet (Turbidity)).
- Industrial effluent treatment (Aeration Tank (SS), Decanter (Sludge Blanket), output (Turbidity))
- Sludge treatment channels.
- Monitoring of dredging sites ...

Optical Technology

The measuring principle is based on the attenuation of the IR signal through an optical slot. The sensor delivers measurement in Sludge concentration (g / l), Turbidity (FAU) and Sludge blanket in % of IR transmission. For a best accuracy, the optical measurements are temperature controlled. For a measure of Suspended Solids, the sensor is calibrated directly on the material to be measured (sludge sample). In Turbidity mode, the sensor provides measurements over a range of 0-4000 FAU (Formazin Attenuation Unit) and it is calibrated with Formazin solutions. Temperature: optical measurement and control via CTN.

Advantages

- Optical sensor based on IR absorptiometry
- Measuring ranges: SS: 0-50 g / L, Sludge Blanket 0-100% Turbidity 0-400 FAU
- Digital communication RS-485 Modbus
- Robust sensor

Technical specifications

Measures Sludge concentration, Turbidity, Sludge blanket detection	
SS Measuring principle	Optical IR (870 nm) based on absorptiometry
Measuring range	SS: 0-50 g / L Turbidity: 0-4000 FAU, Sludge blanket: 0-100% MES
Resolution	SS : 0.01 g / L Turbidity: 0.01 to 1 FAU, sludge blanket: 0.01 to 0.1% sludge blanket
Accuracy	SS : <10%; Turbidity: ± 5% (range 200-4000 FAU); Sludge blanket: ± 2%
Response time	< 35 secondes
Temperature Measurement	
Measuring principle T°C	NTC
Operating temperature	-5.00 °C to + 60,00°C
Resolution	0,01 °C
Accuracy	± 0.5 °C
Storage temperature	-10°C to + 60°C
Protection	IP 68
Interface signal	RS-485 Modbus or SDI-12
Refresh speed measurement	Maximum < 1 second
Sensor supply	5-28 volts
Consumption	Standby: 25 µA (5V), RS485 Average (1 measure / second): 4.5 mA (power supply 5V), SDI-12 Average (1 measure / second): 4.5 mA (power supply 5V) Pulse current 100 mA during 30 mS, Warm up time: 100 mS
Sensor	
Weight	750 g (sensor)
Materials in contact with the environment	DELRIN
Maximum pressure	5 bars
Cable / connector	9 armored connectors, polyurethane sheath, bare wires or sealed metal Fischer connector

References

Digital sensor MES5 Odeon Fisher plug 3m	PF-CAP-C-00276
Digital sensor MES5 Odeon Fisher plug 7m	PF-CAP-C-00277
Digital sensor MES5 Odeon Fisher plug 15m	PF-CAP-C-00278
Digital sensor MES5 Custom Length	NC-CAP-C-00259
Digital sensor VB5 Odeon Fisher plug 3m	PF-CAP-C-00283
Digital sensor VB5 Odeon Fisher plug 7m	PF-CAP-C-00284
Digital sensor VB5 Odeon Fisher plug 15m	PF-CAP-C-00285
Digital sensor VB5 Custom Length	NC-CAP-C-00261
Digital sensor MES5 bare wires 3m	PF-CAP-C-00279
Digital sensor MES5 bare wires 7m	PF-CAP-C-00280
Digital sensor MES5 bare wires 15m	PF-CAP-C-00281
Digital sensor MES5 bare wires Custom Length	NC-CAP-C-00260
Digital sensor VB5 bare wires 3m	PF-CAP-C-00286
Digital sensor VB5 bare wires 7m	PF-CAP-C-00287
Digital sensor VB5 bare wires 15m	PF-CAP-C-00288
Digital sensor VB5 bare wires Custom Length	NC-CAP-C-00262

Rental available

TRIPOD, Numerical multiparameter probe

The new numerical TRIPOD of PONSEL MESURE allows to measure until 8 physico-chemical parameters in the same time dedicated to the quality of waters among the following ones: pH, ORP, Temperature, DO (by optical way), turbidity (NTU / FNU), Turbidity (mg / L), conductivity, salinity, TDS...

Compact, robust and communicating in Modbus R485 or SDI12 the TRIPOD can be associated with every type of terminal with inlet RS485 Modbus (automaton of remote processing, transmitter, logger) or SDI12 (acquisition device, logger with transmission GSM / GPRS, sampler ISCO, flowmeter).

Resisting the disturbances: a pre-amplification is integrated into the sensor and the digital processing of the signals allows an extreme fiabilisation of the measures.

The TRIPOD associated with the handheld multiparameters ODEON allows an optimization and a fiabilisation of your physico-chemical measures : important capacity of recording (until 100 000) and large autonomy.

Applications

- Wastewater
- Surface water
- FishFarming, Aquaculture
- Drinking water

Advantages

- Measure until 8 parameters with the same probe
- Technology of oxygen measure by optical way
- Numerical communication Modbus RS-485 and SDI12
- Compact, strong and tight probe

Technical specifications	
Number of sensor	3 sensors max.
Signal interface	Modbus RS-485 / SDI-12
Measurement frequency	1 s max
Power supply	5-12 Volts
Dimensions	Diameter max. 75 mm, Length (without gland) 288 mm, Length with gland 394 mm
Weight	1300 g
Material	EPDM, PVC, Inox
Pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher Connector
Protection	IP68

Reference

Tripod	Contact us

Rental available

S200,
Multiparameter transmitter instrument

Intelligent transmitter for intelligent sensors : Dissolved Oxygen / Turbidity / TSS / Sludge Blanket / pH / ORP / Conductivity / Salinity / T°C

Advantages

- Large illuminated display
- Cursor-controlled operation with just 5 keys
- Menu navigation in plain text
- Easy integration into the process measurement and control equipment via existing ModBus RTU
- 3 relay outputs
- 1 or 2 digital inputs, switch input or frequency input
- 2 0/4 - 20mA outputs, electrically isolated
- Real time clock, battery backed

Main application areas

Chemical and process technology / Water treatment / Waste water treatment

Technical characteristics S200

Software and features	
1 digital RS-485 input	Digital interface for 1 or 2 digital sensors
2 Digital input	Controller stop by external contact, Pulse input of measuring water turbine (flow measurement)
2 Analog outputs	0/4-20 mA electrically isolated, freely configurable Load max. 500 Ω, resolution < 0.01 mA
3 Relay outputs	2 digital output, freely assignable to control outputs - 1 as permanent alarm relay - 1 potential-free NO contact Max. 250 V, 6A, 1000 VA
Controller	Off control (with hysteresis), P or PI control
Control behavior	On-Off controller with adjustable hysteresis, Pulse – pause controller, Pulse frequency controller, Continuous controller (analog output)
Limit value	Minimum and maximum limit value per controller Adjustable time delay (0 .....9999 s)
Digital interface 1	Modbus RTU Slave
Mains power	230 V/AC, +/- 10 % (50/60 Hz), Consumption 16 VA - 110V/ AC, +/- 10% (501 60 Hz)
Display	LCD display, 4x20 characters, alphanumeric, backlight Easy operation by means of 5 keys
Technical specifications	
Dimensions (WxHxD)	166 x 161 x 73,5 mm
Weight	1,1 Kg
Protection class	IP 65
Operating temperature	-20 to + 55 °C Max 90 % relative humidity at 40 °C non-condensing
Storage temperature	-20 to +65 °C

References

KIT S200 CLASSIC OPTOD 7M	NC-FIX-S-00001
KIT S200 CLASSIC NTU 7M	NC-FIX-S-00002
KIT S200 CLASSIC MES5 7M / C4E 7M / PH 7M	CONTACT US
KIT S200 OPEN	CONTACT US

S200 DISINFECTION,

Water control system for Free Chlorine, Chlorine Dioxide, Ozone and pH measurement

Complete set of measure and control

Advantages

ADVANTAGES OF THE MEASURING SYSTEM

- Principle of measure based on a potentiostatic sensor
- No electrolyte or consumable
- Automatic cleaning system
- Complete system plug and play

ADVANTAGES OF THE CONTROLLER S200

- Access to the menus of programming secured via password (3 user's levels).
- Controller possessing numerous possibilities of piloting
- Temperature compensation manually or by using a Pt100 or Pt1000
- Calibration of the pH with automatic detection of the value of the buffer solution
- Single-point calibration (DPD method)

Main application areas

Chemical and process technology / Water and Waste water treatment / Cooling water treatment / Drinking water and beverage

Technical characteristics sensor

Measured parameters	
Measuring principle Free Chlorine, Chlorine Dioxide, Ozone, Measuring principle pH	Potentiostatic with one gold ring, Reference used on the pH probe pH combined electrode reference / measure
Measuring range	• Free Chlorine : 0.00 to 5.00 mg/L, Active Chlorine : 0.00 to 5.00 mg/L • Chlorine dioxide : 0.00 to 5.00 mg/L, • Ozone : 0-1.000 mg/L or 0-5.00 mg/L • pH : -2.00 to +16.00 • Temperature : -30.00 to +140.00 °C
Resolution	• Chlorine : 0.01 mg/L • Chlorine Dioxide : 0.01 mg/L • Ozone : 0.001 mg/L or 0.01 mg/L • pH : 0.01 mV Resistor > 5x1011 Ω, Temperature : 0.1 °C/Pt100/ Pt1000
Accuracy	+/- 2 % Full Scale
Response time	30 s
Free Chlorine, Chlorine Dioxide, Ozone sensors	
Material in contact with the middle	Glass/gold
Water temperature max.	70 °C
Pressure max	8 bars at 20 °C
Flow	Between 40 and 120 l/h, Fluctuations Compensated and checked
Temperature	Pt1000
pH sensor	
Water temperature max.	70 °C
Pressure max	8 bars at 20 °C
Flow	Between 40 and 120 l/h, Fluctuations Compensated and checked

All components required for measurements are mounted on a plastic plate, dimensions 495 x 580 x 80 mm.

References

MULTIPARAMETERS CONTROLLER: S200 CHLORINE DIOXYDE / PH 230 V	600000SU
MULTIPARAMETERS CONTROLLER: S200 CHLORINE DIOXYDE / PH 110 V	600001SU
MULTIPARAMETERS CONTROLLER: S200 DISSOLVED OZONE / PH 230 V	700000SU
MULTIPARAMETERS CONTROLLER: S200 DISSOLVED OZONE / PH 110 V	700001SU
MULTIPARAMETER CONTROLLER: S200 FREE CHLORINE / PH 230 V	800000SU
MULTIPARAMETER CONTROLLER: S200 FREE CHLORINE / PH 110 V	800001SU

S200 TUr,
Measurement of Turbidity

Complete set of measure et control

Advantages

- Accurate measurement of low concentration of Turbidity
- Range: 0-10 to 0-100 NTU
- In compliance with ISO 7027-IR Nephelometric method
- Self-cleaning of the system by US Method

Main application areas

Cooling water treatment / Drinking water and beverage

Features

- **Fast and Easy Calibration:** Verification in seconds while a complete primary calibration can be completed in less than 5 minutes.
- **Low Volume Sample Chamber:** Low volume sample chamber (30 ml) reduces calibration costs and provides quick response times.
- **Low Maintenance Fail Safe Design:** Simple Modular Design. Easy to Use and Service
- **Bubble Rejection System:** Eliminates bubbles without delaying the response time.
- **Affordable:** Modular microprocessor based technology ensures high quality at the industry's lowest price.
- **AutoClean:** Ultrasonic cleaning allows for the first EPA Accepted Automatic Cleaning OnLine Turbidimeter

Technical characteristics for the measure

Measured parameter	
Measuring principle Turbidity	IR Nephelometry method - ISO 7027
Measuring range	0-10 to 0-100 NTU
Resolution	Between 0-10 NTU : 0.0001 NTU, Between 10 and 100 NTU : selectable
Accuracy	Between 0-40 NTU : 2 % of reading or +/- 0.02 (whichever is greater), 5 % of reading above 40 NTU
Response time	Adjustable (5 to 500 seconds)
Sample Temperature Range	1-50 °C

Technical characteristics S200 TUr

Software and functionality	
1 Analog output	4-20 mA electrically isolated, Load max. 600Ω
2 Relay outputs	Selectable high/Low alarms (NO/NC/C), 120-240 VAC, 2 A
1 Digital interface	RS485 Modbus bidirectionnal
Constructional design wall-mounted casing S200 TUr	
Mains power	100-240 VAC, 47-63 Hz, 80 VA
Display	LCD display, 4x20 characters, alphanumeric, backlight Easy operation by means of 4 keys
Weight	2.5 Kg
Protection class	IP 66 / NEMA 4X
Input Pressure	1-200 psi (built regulator set at 15 psi)
Flow Rate	100 ml/min to 1 L/min
Operating temperature	1 to + 50 °C
Environmental conditions	Not recommended for outdoor use, Altitude up to 2000 meters, Up to 95 % RH (non-condensing)
Regulatory Compliance And Certifications	IR Nephelometric method - ISO 7027, CE approved, ETL listed to UL 61010B-1 & ETL Certified to CSA 22.2 No. 1010-1-92

References

S200 CONTROLLER TURBIDITY DRINKING WATER / RANGE 0-100 NTU ISO 7027	900000SU
S200 CONTROLLER TURBIDITY DRINKING WATER / RANGE 0-10 NTU ISO 7027	900002SU

ODEON, The polyvalent handheld device

ODEON is the range of handheld numerical devices dedicated to water quality control on the field or in the laboratory.
Real combination of ruggedness and digital intelligence, ODEON offers reliability and flexibility never reached before.
With digital sensors DIGISENS, it can measure up to 7 physicochemical parameters.
With PHOTOPOD, it becomes a photometer able to analyze more than 40 additional parameters.
ODEON is available in version OPEN ONE with 1 sensor input or version OPEN X with 2 sensor inputs.

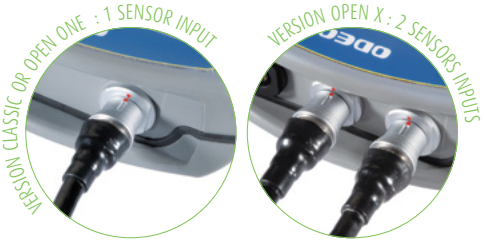
Getting immediate, intuitive use

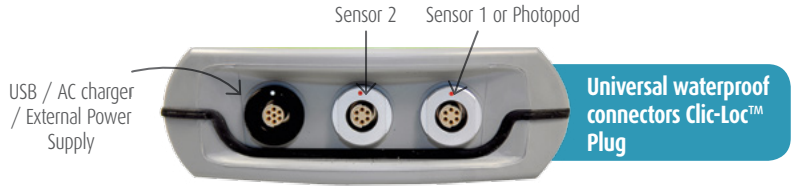
- Large graphical display 4 'backlit
- Exceptional Memory Capacity: 8 MB, up to 100,000 measurement records
- Ergonomic device, shock resistant and waterproof: IP67
- Automatic recognition and self-diagnostic probes «Plug and Play»
- Optical Sensors (Oxygen, Turbidity) and electrochemical (pH, ORP, temperature, conductivity)
- Over 40 parameters with photometry using the Photopod

PONSEL BY AQUALABO

Technical specifications

Memory	8 MB (up to more than 100,000 records)
Power supply	4 x 1.5V AA • Options: • Rechargeable Battery • Power. External 12 V
Battery life	145-190 hours depending on the configuration
Communication	USB
Housing	PC / ABS
Weight	400 g
Dimensions	196.5 x 121 x 46 mm
Protection	IP 67
Operating temperature, humidity	- 25 to + 50 ° C, 0-70%
Storage temperature, humidity	- 25 to + 65 ° C, 0-80%
Display	LCD 4 «240 x 320 pixel display with adjustable backlighting
Connectors	• 1 connector: ODEON CLASSIC and ODEON OPEN ONE • 2 connectors: ODEON OPEN X





References

Odeon Open One	NC-POR-C-00103
Odeon Open X	NC-POR-C-00093

Rental available

Accessories and options

- Transfer and data analysis software
- Rechargeable Version with charger 220 V
- External Power Cable 12V
- Y cable for 2 digital sensors on one input
- Sensor coupling Accessories
- Reels up to 20m and 100 m
- Enhanced suitcase equipped with a 12V battery
- Cable length 1 m / 3 m / 7 m / 15 m (other lengths available on request)
- 125 mL Standardized calibration solutions

Photometer PHOTOPOD

- Ultra compact and very lightweight
- 5 wavelengths with automatic selection
- Over 40 parameters available
- Fast and easy methods

Reference : Aqualabo analyse Catalog

References

Accessories

KIT Rechargeable Battery ODEON: Cable Charger, 4 Batteries NiMH rechargeables	NC-ACC-C-00001
Blue carrying case ODEON (small version)	PF-ACC-C-00190
Black carrying case ODEON (big version)	PF-ACC-C-00201
Reinforced briefcase for Odeon including: I reinforced briefcase, 1 battery 12V/17A, 1 cable, 2 connections for Digital sensor	PF-ACC-C-00038
USB/PC Cable	PF-ACC-C-00186
Power Supply Cable External 12V	PF-ACC-C-00195
Y Cable for 2 SENSORS	PF-ACC-C-00200
PVC STRAINER (Stainless steel weight) DIGITAL SENSOR	PF-ACC-C-00357
ACCESSORY COUPLING 2 SENSORS	PF-ACC-C-00197
DIGITAL SENSOR until 20 m HAND CRANK CABLE REEL	PF-ACC-C-00198
DIGITAL SENSOR until 100 m HAND CRANK CABLE REEL	PF-ACC-C-00199
ODEON upgrade to Open Technology (For Classic Line)	PF-ACC-C-00191
Strainer with DODISK for OPTOD sensor	PF-CSO-C-00041
Titanium strainer with exchange dodisk for OPTOD sensor	PF-CSO-C-00045

Consumables

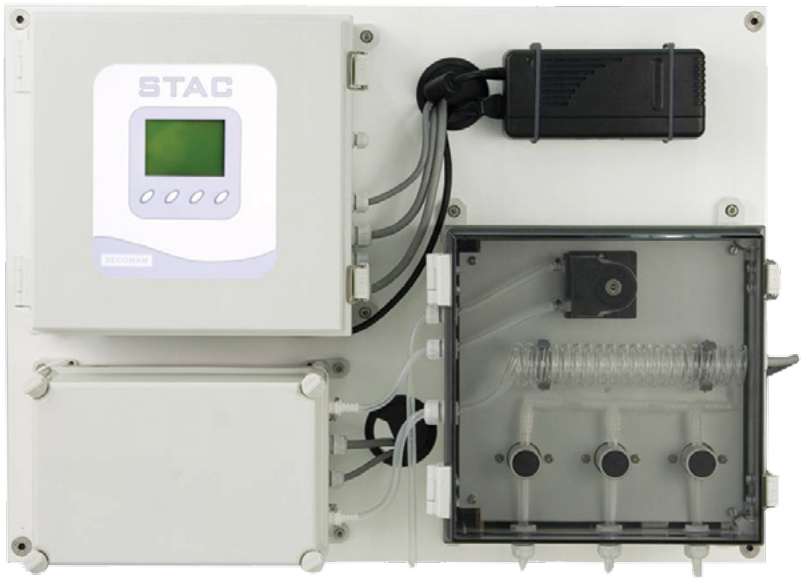
4 NiMH refillable batteries	PF-CSO-C-00032
125ml bottle of pH 4 buffer solution	PF-CSO-C-00015
125ml bottle of pH 7 buffer solution	PF-CSO-C-00011
125 ml bottle of pH 10 buffer solution	PF-CSO-C-00027
125ml bottle of pepsin cleaning solution for EH and pH sensors	PF-CSO-C-00013
Buffer solution for Redox meters : 240mV to 20°C, 125ml bottle	PF-CSO-C-00008
Buffer solution for Redox meters : 470mV to 20°C, 125ml bottle	PF-CSO-C-00009
Buffer solution for Redox meters : 240mV to 20°C, 125ml bottle	PF-CSO-C-00014
20g bottle of sodium sulphite	PF-CSO-C-00002
150ml bottle of formazine, 4 000 NTU stock solution	PF-CSO-C-00019
Conductimeter adjustment solution : KCl 1 413µS to 25°C, 125ml bottle	PF-CSO-C-00016
Conductimeter adjustment solution : KCl 1 413µS to 25°C, 125ml bottle	PF-CSO-C-00017

Cables

Cable for 1 digital sensor bare wire / Odeon (adaptation for Odeon)	PF-ACC-C-00082
Cable for 1 digital sensor bare wire / Fischer connector	PF-ACC-C-00260

STAC, Compact Alarm System

SECOMAM BY AQUALABO



The overall context

The protection of water resource is a National & European priority for the coming years.
If the permanent pollution of surface water tends to lower down following the progress of waste water treatment, accidental pollution and bio-terrorism become a more and more present threat.
Protecting sampling points, setting up restricted areas and surveying the quality of water dedicated for human use remains today as a priority.

- **Detector**
  - UV diode array spectrophotometer (204- 323 nm) without any moving parts
  - Pulsed deuterium source for a far UV high energy
- **Sampling**
  - Automatic and sequential sampling circuit rinsing and cuvette cleaning
  - Programmable automatic sampling from 5 to 30 minutes
  - Pinching valves Ø 8 mm for TSS reading without filtration
- **Date transfer**
  - Current loops
  - RS 232
  - UV-Pro software for data storage and UV spectrum management
- **Casing**
  - 1- Control box: 300 x 300 x 170 mm, Weight: 3 Kg, Protection IP 65
  - 2- Fluidic box: 300 x 300 x 170 mm, Weight: 3 Kg, Protection IP 65
  - 3- Polychromator box: 280 x 190 x 180 mm, Weight: 3 Kg, Protection IP 66/65

Measuring range

- **Correlation with Organic Matter:**
  - COD: 2 mg/L to 8750 mg/L
  - BOD: 0,5 mg/L to 8750 mg/L
  - TOC: 1 mg/L to 7500 mg/L
  - TSS: 5 mg/L to 2500 mg/L
- **Nitrates measurement:**
  - NO_3: 1 mg/L to 1000 mg/L
- **Undesirable substances detection:**
  - Components: 2,4 D, DIURON, CHLORPYRIPHOS, ATRAZINE 200, AMINOTRIAZOLE, PARAQUAT, DIAZINON, AZULENE, HEXAZINONE, DIQUAT, BENTAZONE, AROMATIC HYDROCARBONS

Advantages

- Physical method with almost no consumable
- Very fast reading (< 5 minutes)
- Easy and low maintenance
- Both quantitative and qualitative reading
- Build in separates enclosures with aqueous sample isolated from electronics
- Fitting with most of tele-transmitable systems
- Fully automatic

References

STAC Analyzer*	70MP0454
2mm optical pathlength flowcell	70MP0539
5mm optical pathlength flowcell	70MP0538

* Instrument delivered without cell, to be ordered separately (ref. 70MP0539 or ref. 70MP0538)

STAC CL, STAC Chlorine Analyzer

SECOMAM BY AQUALABO

Measurement principle

Measurement is based on the acquisition of UV spectrum (204 – 321nm) of the sample and its interpretation by a method of calculation called the "Deconvolution". The calculation of "Deconvolution" is based on two hypotheses:

- The spectrum of the sample is the sum of absorption spectra known as reference spectra;
- The combination of a small number of reference spectra makes it possible to reconstitute the shape of UV spectrum of an unknown sample.

This small number of spectra of reference is called "Model". After acquisition of the spectrum and its treatment by the "Deconvolution" method, measurement will give:

- Concentration of the sought parameters,
- Information on the quality of measurement (adequacy between the selected model and the measured sample)

Measured parameter

In this operation, H2S is dissolved at basic Ph, and then converted into Sulfate by Chlorine. The STAC Cl is able to trace both Chlorine & Sulfide.

Measuring range

It is possible to work on three ranges of measurement according to the size of the flow though cell used (2mm, 5mm)

Optical path of flow cell	Chlorine measuring range	Sulfide threshold detection
2 mm	From 100 to 3000 ppm	10 ppm
5 mm	From 40 to 1200 ppm	4 ppm

Technical specifications

Optic	UV Polychromator (204-321nm)
Samples circulation	By gravity
Maximum pressure for liquids	1 bar
Number of measuring channels	1 for standard analyzer (maximum 4)
Measurement frequency	4 minutes per channel
Memory	4 models, 255 results
Working temperature	From 15 to 40°C
Samples temperature	40°C maximum
Nature of the samples	Natural or treated (particules size< 2mm)
Outputs	4 current loops (4-20mA) and RS 232C port
Consumable	Demineralized or distilled water (blank)
Source	Deuterium lamp (100 000 measures maximum)
Power	Supply 230V single phase - 50/60Hz - 300VA - 110V-230V
Size	800 x 600 x 360
Weight	15 Kg

SECOMAM's STAC Chlorine allows at the same time to regulate chlorine production and control the sulfide rate coming from H2S oxydation. Therefore it offers the possibility to globally master the most sensitive part of this process.

References

STAC Chlorine Analyzer*	70MP0457
5mm optical pathlength flowcell	70MP0543
2mm optical pathlength flowcell	70MP0544

* Instrument delivered without cell, to be ordered separately (ref. 70MP0543 or ref. 70MP0544)

VIGILANT ECO, Isotherm portable sampler

Rugged

Reinforcement strips, Shockproof, Protected against uv

Easy to use

- Large tactile colour display, Fast and intuitive programming, Stainless steel basket for bottles carrying, Visualization of the bottles during sampling

Efficient

- Suction velocity: 0.7 Ms -1 to 6m
- Accuracy up to 1 ml
- Autonomy > 1500 sampling
- Reproducibility of sampled volumes

Portable

- Light, Ergonomic handling

Security

- Overthrowing detection
- Temperature indicator
- Lack of water absence and clogging detection

Applications

Waste water effluents, Storm water monitoring, Storm discharge monitoring, Pre-treatments compliance

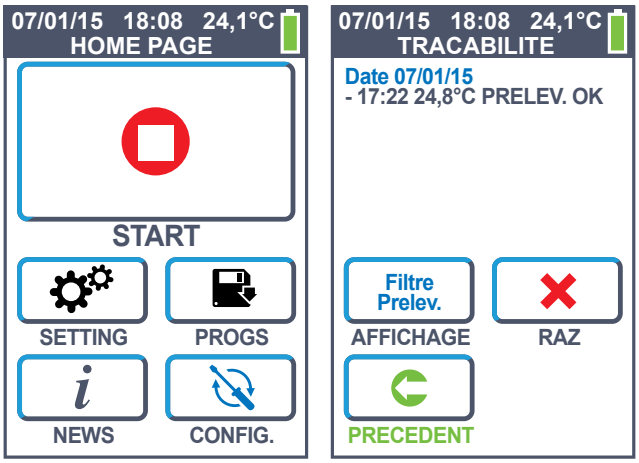
Versions

1 bottle 17 L • Multi-bottle 24 X1 L / HDPE

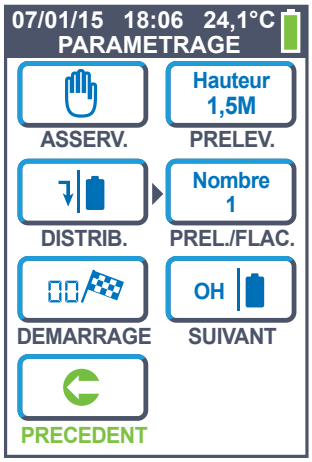
02 PE-HD

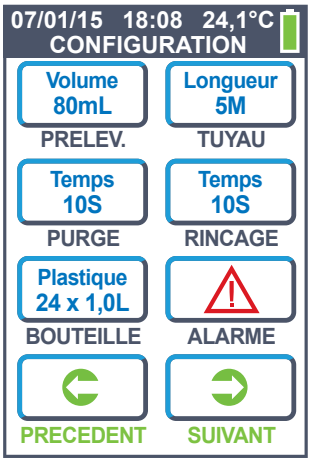
VIGILANT ECO

AQUALYSE BY AQUALABO



Color touchscreen for a user-friendly utilization





Rental available

Water samplers

Technical specifications	
Weight and dimensions	
Weight equipped (with battery)	1 bottle : 17 kg, Multi-bottle : 20kg
Dimensions (H x L x P)	640 x 505 x 450 mm
Materials	HDPE
Power supply	
Battery	Li 6,2 Ah integrated battery
Charging time	< 2 h
Controller	
Protection	IP 66
Operating temperature	0°C to 40°C
Memory	500 last samplings
Detection	of presence of water in the frame
Temperature control	in the frame
Overthrow	detection
Viewing	of the remaining autonomy
3 inputs	of from 5 to 15V, 20ms
3 outputs	for Pulse/Contacts
USB Port	firmware update
Pump	
Technology	Vacuum pump
Maximum suction height	> 7,5 m
Purge	before and after sampling (automatic or programmable)
Maximum suction speed	0,7 ms-1 to 6 m
Norm	ISO 5667-10
Detection	of water absence
Sampling	
Mode	time, flowrate, date or event
Frequency	1mn to 24H (step of 1mn) or 1 to 999 pulse
Delayed starting	configurable
Sampling unitary volume	40 to 200 mL (by default 40, 80, 120, 160 and 200 mL)

References

Vigilant eco portable water sampler 1 bottle	VIGILANTECO1
Vigilant eco portable water sampler 24 bottles 1l	VIGILANTECO24
Vigilant charger	CHARGVIGECO
Cable for vigilant eco connexion to flow-meter5m	CORDNUVI05
Cable between 4230 and vigilant eco 3m	CORDISVI05

Multi-bottle

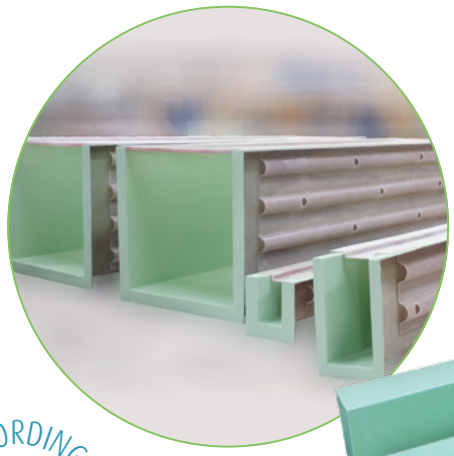
One bottle

02 PE-HD

AQUA VENTURI,
A rugged and economic venturi flume

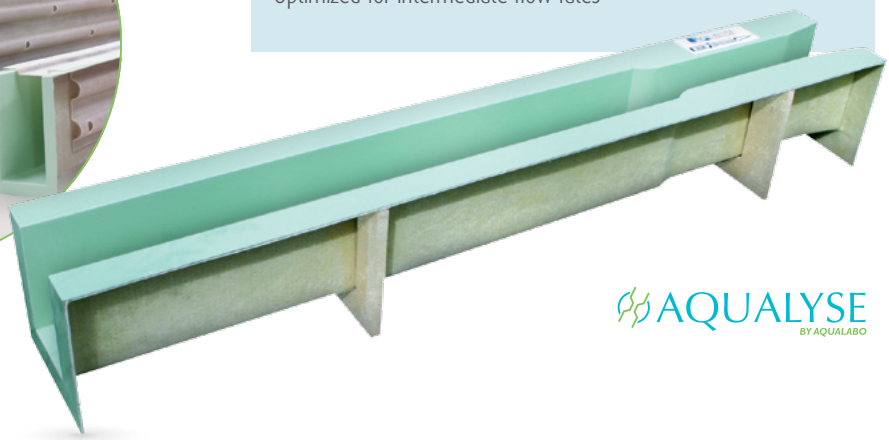
The integrated approach flume simplifies installation and minimizes positioning errors.

AQUA VENTURI is a standardized prefabricated flume ISO 4359. Available in 8 models from 7 to 2500 m³ / h, it adapts to all situations and water content.



Advantages

- Reinforced polyester fiberglass resin
- Self-cleaning bottom
- Integrated approach channel (up to 100 m³ / h)
- Simple installation limits the risk of error
- Optimized for intermediate flow rates

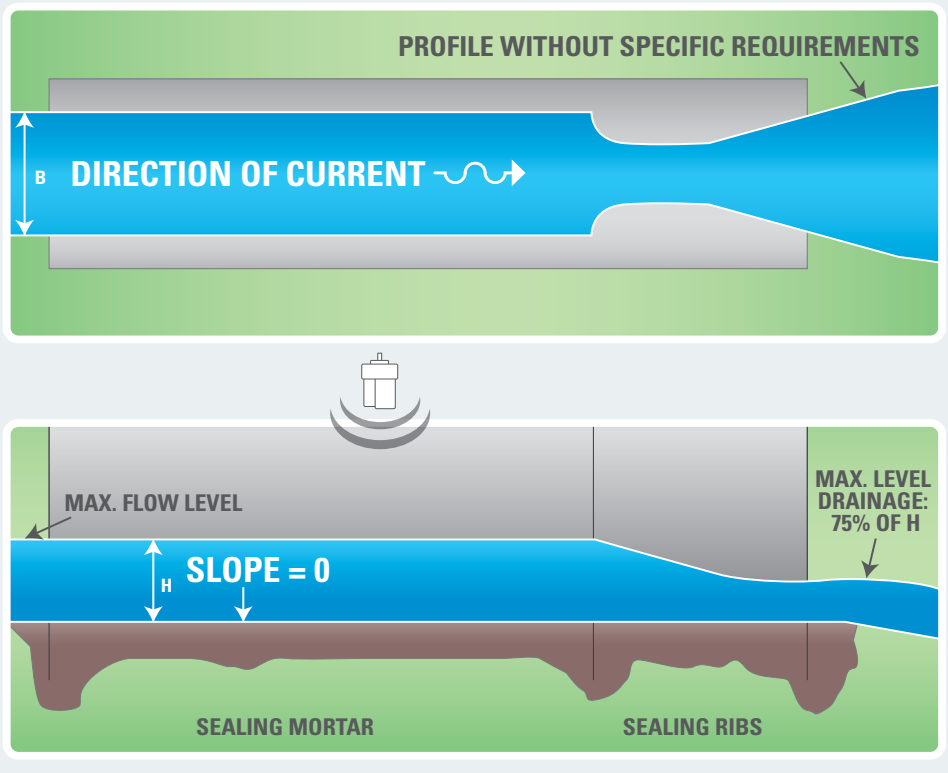


ACCORDING TO ISO 4359

AQUALYSE BY AQUALABO

Technical specifications

Material	Reinforced polyester fiberglass
Installation requirements	



Aqua Venturi Product line

	AV 7[1] AV 7S[1,2]	AV 25[1] AV 25S[1,2]	AV 100	AV 250	AV 500	AV 1000	AV 1500	AV 2500
Nominal Flow (m³/h)	7,6 7	25 19	100	250	500	1000	1500	2500
Overflow Rate (m³/h)	12 9,3	28,5 22,4	111	271	548	1070	1621	2679
Recommended Minimum Flow[3] (m³/h)	2,6	5	7	14,3	21,5	30	44	73
Interior Width B	100	100	150	300	450	550	650	1100
Overall Width	200	200	250	400	550	650	750	1200
Overall Height	185	205	356	395	470	620	705	700
Length of Aqua-Venturi	Venturi - Integrated Approach			1143	1495	1919	2161	2805
Approach Length	Venturi - Integrated Approach			2440[4]	3394[4]	4334[5]	5068[5]	7312[5]
Overall Length Approach + Aqua-Venturi	1260	1350	2414	3583	4889	6253	7229	10117

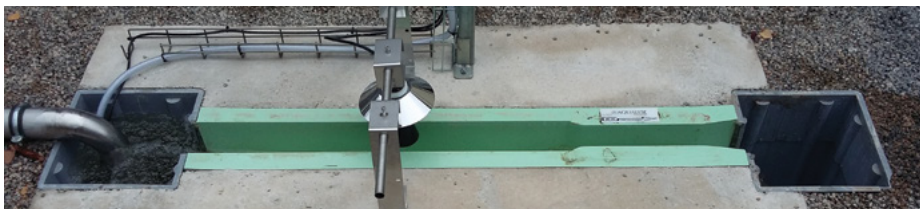
Material: Reinforced polyester fiberglass.
1) The width of the neck (<100 mm) does not comply with ISO standards.
2) With raised bottom and air bubbling measurement hole.
3) As defined in ISO standards.
4) Delivered in one piece.
5) Comes in 2 parts.
All dimensions in mm.

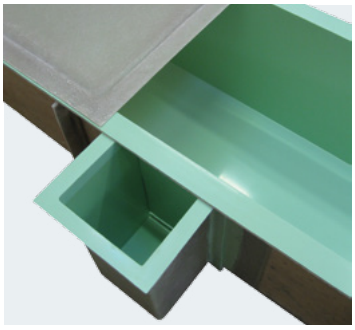
References

Venturi flume 7m³/h including approach length	AVCA0007S2 AVCA0007
Venturi flume 25 m³/h including approach length	AVCA0025S2 AVCA0025
Venturi flume 100 m³/h including approach length	AVCA0100
Venturi flume 250 m³/h	
Venturi flume 250 m³/h	AV0250
Approach channel 250 m³/h	CA0250
Venturi flume + 1 approach channel 250 m³/h	Package
Venturi flume 500 m³/h	
Venturi flume 500m³/h	AV0500
Approach channel 500m³/h	CA0500
Venturi flume + 1 approach channel 500m³/h	Package
Venturi flume 1000 m³/h	
Venturi flume 1000 m³/h	AV1000
Approach channel (foresee 2 channels) 1000 m³/h	CA1000
Venturi flume + 2 approach channels 1000 m³/h	Package
Venturi flume 1500 m³/h	
Venturi flume 1500 m³/h	AV1500
Approach channel (foresee 2 channels) 1500 m³/h	CA1500
Venturi flume + 2 approach channels 1500 m³/h	Package
Venturi flume 2500 m³/h	
Venturi flume 2500 m³/h	AV2500
Approach channel (foresee 2 channels) 2500 m³/h	CA2500
Venturi flume + 2 approach channels 2500 m³/h	Package
Aluminium Limnimetric Scale with flow-rate for Aquaventuri (precise type of venturi)	REGLIMALUAV…
Sticking Limnimetric Scale with flow-rate for Aquaventuri (precise type of venturi)	REGLIMAV…

Options

Measuring well for bubbler on Aquaventuri	PUITSAV
Measuring well for SENSOR ultrasons on Aquaventuri	PUITSAVUS





AQUA-UV,

316L stainless steel measuring channel for circular pipe laying

The Venturi that slides into the tightest spots.

Fully 316L stainless steel, Aqua-UV® Aqualyse U-shaped is actually a measurer Canal «U» easily fitting into pipes in all diameters for a very economical and quick installation.

The Aqua-UV has been specially designed to answer to the problematic installation in small dimensions and insertion in cylindrical pipe layings. A simple existing room or the end of a pipe is sufficient for the installation.

Upstream slope up to 1% is acceptable. Stainless steel improves the fluidity and reduces the deposits on walls. The transport of sediment is optimum and the development of minimum algae. The rigidity of this material makes it easier to install than a polyester channel by reducing the installation costs.

The Aqua-UV is ideally suited for installation in standard vents.

Applications

- Sanitation systems
- Stormwater systems
- Industrial or collective discharges

Advantages

- Reduced of Civil Engineering
- Excellent accuracy
- Very Reduced size

	Ø 200	Ø 250	Ø 300	Ø 400	Ø 500	Ø 600
Recommended minimum flow (m^3/h)	3	3	4	4	5	6
Recommended maximum flow (m^3/h)	67	119	180	383	649	1185
Overall length (excluding bracket)	300	300	360	480	600	720
Overall height (excluding bracket)	240	300	360	480	600	720
Minimum approach length REQUIRED	2000	2500	3000	4000	5000	6000

Material: stainless steel 316L. Other models : contact us. All dimensions in mm.

References

U Threshold triangular section aqua uv 58 m^3/h	UV0200
U Threshold triangular section aqua uv 120 m^3/h	UV0250
U Threshold triangular section aqua uv 215 m^3/h	UV0300
U Threshold triangular section aqua uv 491 m^3/h	UV0400
U Threshold triangular section aqua uv 859 m^3/h	UV0500
U Threshold triangular section aqua uv 1355 m^3/h	UV0600

AQUABAC, Measuring tank with overflow of triangular or rectangular notch

Six models of aquabac with integrated overflows allow for measurements from 2.9 To 25 m³/h.

The aquabac is a rectangular tank made of pvc or 316l stainless steel with a triangular or rectangular overflow. An ultrasonic probe or radar sensor can be placed on the handle for measuring flow rate.

The ideal solution for measuring small flow rates.

Description

- The AQUABAC measuring tanks are made of stainless material, they have excellent resistance to chemicals.
- The "economic" versions are entirely of PVC (including the weir).
- Delivered in one piece an AQUABAC can be buried or set on the floor, and only requires for intake and drainage.
- Installation does not involve adjusting the «sensitive» parts (the spill blade and internal geometry of the overflow). This simplified installation, minimizing the risk of errors, guarantees excellent measurements.

	AQUABAC 3	AQUABAC 4	AQUABAC 8	AQUABAC 16	AQUABAC 25
Maximum flow (m³/h)	2,9	4	8	16	25
Width	290	290	290	290	290
Tank height	440	440	440	305	305
Overall height With measuring handle	850	850	850	715	715
Length	1440	1440	1440	2440	2800

Tank material: grey PVC - Overflow material: 316L stainless steel (except economical models: PVC).
All dimensions in mm.

Aqualabo can design and produce all types of overflows (triangular indentation, rectangular or others) to match your specific needs and ready to be installed at your location.
A table of height/flow ratio corresponding to applicable ISO standards is provided.

References

Aquabac with "V" weir 20 degrees	AQBAC03
Aquabac with PVC "V" weir 20 degrees	AQBAC03P
Aquabac with "V" weir 28 degrees 4	AQBAC04
Aquabac with PVC "V" weir 28 degrees 4	AQBAC04P
Aquabac with "V" weir 53 degrees 8	AQBAC08
Aquabac with PVC "V" weir 53 degrees 8	AQBAC08P
Aquabac with rectangular weir 125 m³/h	AQBAC125
Aquabac with "V" weir 90 degrees	AQBAC16
Aquabac with PVC "V" weir 90 degrees	AQBAC16P
Aquabac with "V" weir 90 degrees long version	AQBAC25
Aquabac with PVC "V" weir 90 degrees long version	AQBAC25P
Ultrasonic probe holder for Aquabac	POTENFAQBAC

WEIRS, Triangular or rectangular custom

We can design and produce all types of weirs (triangular indentations, rectangular or others) specifically for your application and ready to insert into your counting channel.

The triangular weir allows the measurement of low flow very accurately. However, the rectangular weir allow higher flow rates.

In correspondence with the ISO / AFNOR standards, we provide a relation graph height / flow calculated from Kindsvater-Carter formulas, SIA or Rehbock for rectangular weirs and KindsvaterShen or BSI for triangular weirs.

AQUALYSE BY AQUALABO

Advantages

- Standardized, accurate and or very accurate, custom made
- Getting heavy load. To be reserved for screening waters.

ACCORDING TO ISO 1438

References

Triangular weirs	Contact us
Rectangular weirs	Contact us

THRESHOLD, Measurer "CRUMP"

Threshold measurer triangular profile

Formerly the weir «CRUMP», it can be achieved in large widths and thus cover a wide range of flow rates.

It represents a very interesting alternative to very large venturi channels.

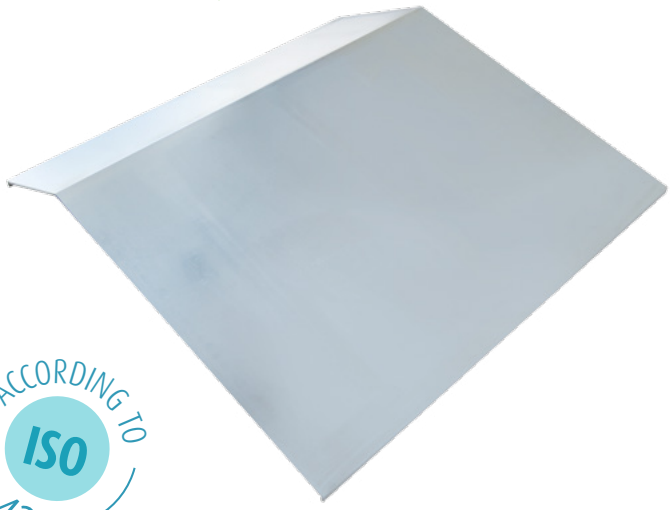
Customized realization

We can study and perform any threshold size measurer to «triangular profile» specifically for your application and ready to insert on your site. A curve height relationship / debit corresponding to ISO / AFNOR standards, is provided for each measurer threshold.

Advantages

- Standardized.
- No risk of obstruction, used on all effluents
- Particularly suited to large or very large flows

AQUALYSE BY AQUALABO



ACCORDING TO ISO 4360

Reference

Threshold	Contact us

CORAL PROBES,
Water level measuring probes

The AQUALYSE "CORAL Probes" ensure a sonorous and luminous detection of the groundwater level.
The AQUALYSE "CORAL probes" have been developed for punctual measures on groundwater level needs (well, drilling, piezometer...). A luminous and sonorous signal indicate the water surface (surface bottom as an option) has been reached.
Reading the depth on the ribbon is simple and unmistakably. The detection is ensured by a stainless steel probe whose sensitivity is adjustable on the reel. A white polyethylene and strengthened ribbon is UV, saltwater and crushing resistant. A bicolour and high sensibility (m, dm, cm) metering facilitates the level determination.
The reel is equipped with a stainless steel hook and with a ribbon's guide.

Application
• Drilling level measuring, wells and ground water

Technical specifications	
Versions	30 m, 50 m, 100 m and 150 m
Probes	• Materials: stainless steel 316 • Dimensions: diameter: 15 mm, length: 195 mm • Protection: IP68 • Storage temperature: +0°C / +30°C
Ribbon	• Type: white polyethylen double wire • Ultraviolet, saltwater and contaminated water resistant • Metering: m (red), dm and cm (black)
Reel/controller	• Length: 30, 50, 100 and 150m • Hooks for fixing • Stainless ribbon guide integrated • Probe holder integrated • Battery: 2 buttons battery/autonomy: 15 000 detections or 10 years • Signal: Sonorous (buzzer) and luminous (LED) • Detection's sensibility: adjustable by potentiometer • Test: TEST A: battery / TEST B: probe + ribbon • IP55 protection
Dimensions and weight	Dimensions : • 30 m and 50 m versions: 210 x 300 x 205 mm (LxHxD) • 100 m and 150 m versions: 262 x 360 x 230 mm (LxHxD) Weight: • 30 m and 50 m versions: < 2,3 kg • 100 m and 150 m versions: > 4.8 kg
Option	• Bottom detection probe

TEST A

TEST B

References	
Coral Probe 30m	CORAIL30
Coral Probe 50m	CORAIL50
Coral Probe 100m	CORAIL100
Coral Probe 150m	CORAIL150

Rental available

OVERFLOW, Overflow detectors

The overflow detector sensor detects the presence of water and delivers information in the form of non-polarized dry contact.

The overflow detector PONSEL has 2 waterproof and rugged enclosures: sensor and cylindrical control unit. Sensor is in PVC material and contains two electrodes in stainless steel and can easily be installed in horizontal or lateral position with its two anchoring points (M5x40 screws).

The 9 meters cable is connected to the control unit.

The cylindrical control unit is powered by an internal lithium battery and has a grip ring to facilitate the installation. The 1 meter cable(s) can be connected to the following materials:
- Automatic sampler,
- Recorder,
- Remote Management System.

The information gathered by the Ponsel overflow sensor may be referred to a supervisory or smartphone via the datalogger Smartlog.

Applications

- Qualitative monitoring of storm overflows, by the presence of water detection.
- Qualitative monitoring of sanitation networks.

Advantages

- Rugged, waterproof, easy to install
- Connecting to recorders, remote management, sampler
- Distribution signal as a dry contact

Sensor technical specifications

Detection Limit	Under 0,5 mm of water
Measurement	Getting in contact with two electrodes
Materials	PVC, stainless steel
Protection	IP68
Operating temperature	0-50°C
Dimensions (H x W x D)	20 x 80 x 60.5
Power supply	Via the electronic control unit, external power version
Cable	Shielded Multiple wires, polyurethane sheath. 9 meters connected to the electronic box (length can not be changed)

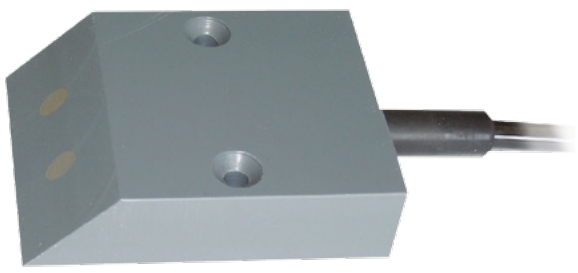
Electronic box technical specifications

Materials	PVC
Protection	IP68
Dimensions (H x diameter)	120 x 40
Power supply	• Internal Lithium Battery, Battery Life: 3 years • External power Version +3.6 V ± 5% (consumption < 200 µA)
Cables	1 or 2 cables of 1 meter (polyurethane wrapped) • Bare wires (possibility to install connectors depending on the type of equipment)

PONSEL BY AQUALABO

References

Overflow detector, version 2 cables bare wires	PF-CAP-M-00013
Overflow detector, version 1 cable bare wires	PF-CAP-M-00023
Overflow detector, external power supply	PF-CAP-M-00031



SMARTLOG, Recorder transmitter sms / gprs

SMARTLOG

PERAX BY AQUALABO

Advantages

- **Security: Your data are stored** in internal memory in case of network deficiently
- **Intelligence:** Flow calculation and volume by linear interpolation

- **Automatic switching GPRS / SMS:** it adapts automatically depending on the network
- **Waterproof:** IP68
- **Autonomous:** Up to 10 years running on battery according to use
- **Convenient:** Small size, screw fixing or magnet

Application areas

Monitoring: • Drinking water mains • storms Weirs • Dams, lakes and streams • Other technical facilities

Accessories

Aquamonitor :
Configuration Software

Technical specifications

Communication Configuration and use performed via GSM or USB, compatible with SMARTMONITOR, AQUAMONITOR, ARLEQUIN, TOPKAPI® (V5.0)	**GSM** • GPRS, SMS, or GPRS 3G backed up by SMS • Up to three recipients • Network provider's tests without SIM card • Modem 2G,3G **USB** For laptop local connection		**Antenna** • External by IP68 connectors • Flat external 2m cable, to be installed under roads • External 5m cable 5dBi, provided with angle brackets	
Memory	100 000 points 8000 line of paper board 512 SMS			
Power supply 10 years depending on acquisition frequency, network quality and connected sensors	**Lithium 2D pack** 3.6V 26Ah		**USB** Direct supply by the laptop (standard)	
Environment Fitted for isolated sites	**Waterproofness** IP68, certified 1 month under 1m of water		**Temperature** -10 to +50°C	**Certification** CE marked
Diagnosis	**Monitor** • Battery voltage • Network reception quality • Real time		**LOG** Record every acquisition & communication with a time stamp	
Time stamp	**Time setting** Automatic, via SMS or SNTP		**Memorization** • On state change (resolution 1s) • Periodically (between 2 min and 1 hour)	
Hardware Battery & SIM card can be replaced by user	**Dimensions** 145x145x185 mm	**Weight** 650 g	**Connectors** IP68 connectors	

Sectorization Counters

- Counters management simple and double sense
- Memorization Flow, daily Volume, accumulated Volume
- Alarm configuration

Sectorization Pressure

- Pressure sensor 4-20 mA with scale management
- Management time warms
- Alarm configuration for 1 or 2 threshold

Spillway

- Height sensor, overflow sensor.
- Flow calculation by linear extrapolation
- Memorization Height, flow, volume, accumulated volume change state of overflow sensor, time overflow daily
- Management doubles frequency of memorization

Digital Sensors

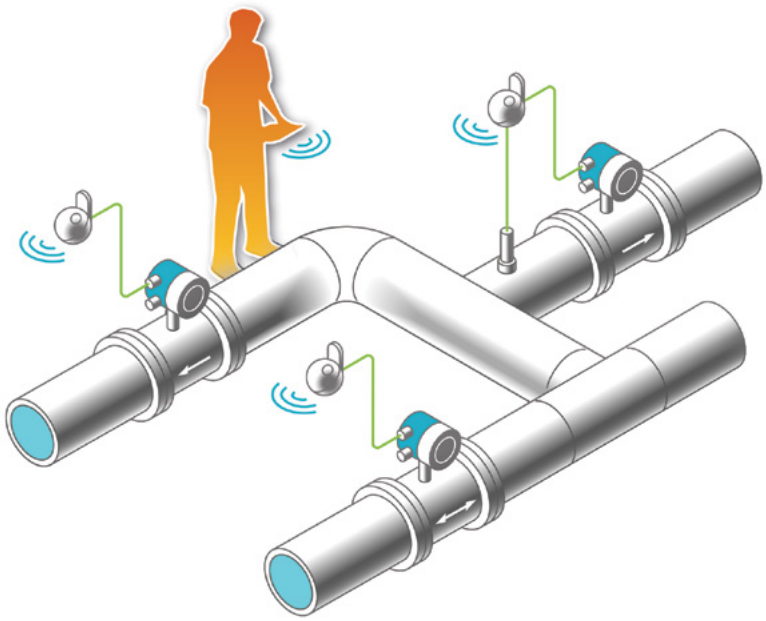
- Digital sensors from the DIGISENS range : pH/ORP, Dissolved oxygen, Conductivity/Salinity, Turbidity, SS, Sludge Blanket...
- Alarm configuration for 1 or 2 threshold by parameter

Smartlog Sect'o

Follow your drinking water systems in real time.
Leak detection on drinking water systems is a key element in the search for savings, whether in quantity of water, or premature deterioration of leaking equipment. The Smartlog Sect'o allows precise real-time control of volume and flow of your meters and flow meters, and alert you when an defect is found. The Aquamonitor Smartlog Sect'o interface has been specially designed for a hyper simplified segmentation configuration type in few minutes only. Just define the site and your needs, and Smartlog Sect'o adapts automatically.

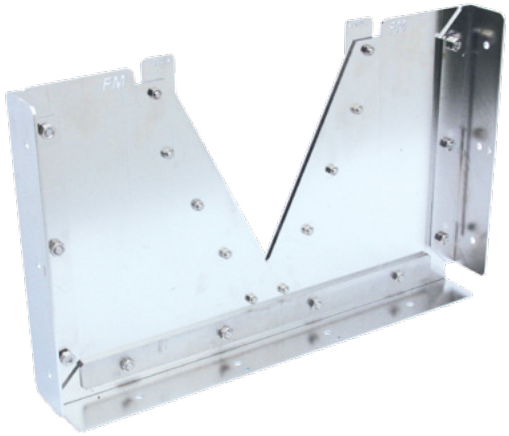
Instant leak detection> Savings and Safety

Automatic creation of information (calculated for each direction in the case of bidirectional counter):
- Counter Index
- Daily counter
- Flow rate calculated or measured



Smartlog D'o

Control your storm drains safely
Monitoring of rainfall events needs to be notified in real time of sudden rising of water level in networks. The Smartlog D'o, which combines a datalogger Smartlog to a level probe (Ultrasound, radar or other) or an overflow sensor, or both, is the insurance to send information in real time, and thus an increased safety. The Smartlog Aquamonitor D'o interface has the Aquamonitor interface including a standard assistant specifically dedicated to Smartlog configuration for storm overflow.



References

Kit Smartlog STORMWATER OVERFLOW Tubular Antenna Ultrasonic Sensor	ENS/XGDODA
Kit Smartlog STORMWATER OVERFLOW Tubular Antenna Overflow Sensor	ENS/XGDODT
Kit Smartlog STORMWATER OVERFLOW Tubular antenna Overflow Sensor and ultrasonic sensor	ENS/XGDODTA
Kit Smartlog STORMWATER OVERFLOW Flat Antenna Ultrasonic Sensor	ENS/XGDOPA
Kit Smartlog STORMWATER OVERFLOW Flat Antenna Overflow Sensor	ENS/XGDOPT
Kit Smartlog STORMWATER OVERFLOW Flat Antenna Overflow Sensor and ultrasonic Sensor	ENS/XGDOPTA
Kit Smartlog tubular antenna physicochemistry sensor 2G	ENS/XGPHYSICODT
Kit Smartlog tubular antenna physicochemistry sensor 3G	ENS/XGPHYSICODT3G
Kit Smartlog OPEN flat antenna Physicochemistry sensor 2G	ENS/XGPHYSICOPT
Kit Smartlog OPEN flat antenna Physicochemistry sensor 2G	ENS/XGPHYSICOPT3G
Smartlog pack for leakage detection tubular antenna pressure sensor Modem 2G	ENS/XGSECTODA
Smartlog pack for leakage detection flat antenna pressure sensor Modem 3G	ENS/XGSECTOPA

Option: Multi-operator Subscription "ZEN package"

Communication package "all inclusive" for Smartlog including:
- A SMARTLOG datalogger with a wide autonomy
- An industrial SIM Card 10 year warranty -20 ° C + 70 ° C
- A Multi-operators GPRS subscription: your Smartlog connects to the best available operator with the same APN whatever the operator
- The Aquamonitor software configuration of your Smartlog
- International: Identical rates across Europe
- Tracker «SmartMonitor» from ftp address
- Service life 5 years with possible extension including a factory control

P400XI,
Modular remote terminal units dedicated to water management

The P400Xi is the most versatile of communicating controllers in its class

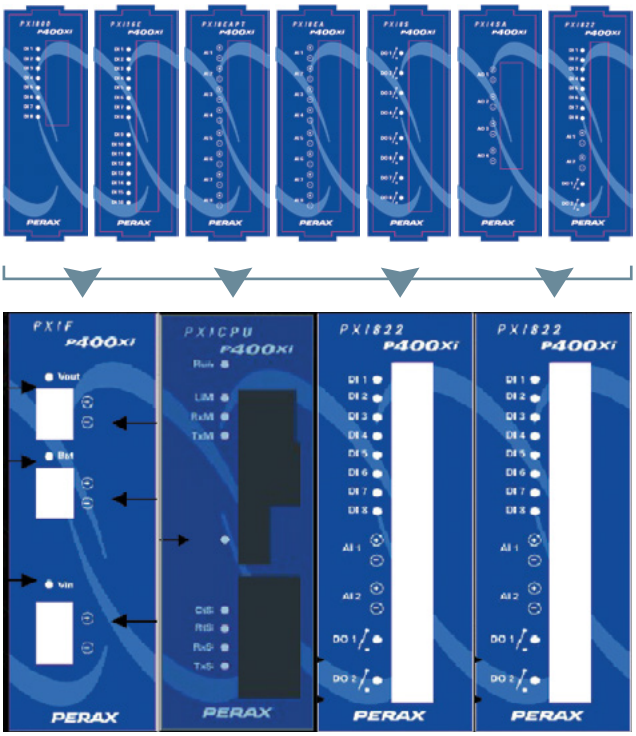
Its design makes it a perfect tool for the management of treatment facilities, production or distribution of industrial water, natural and municipal.

The P400Xi allows the transmission of events and alarm to SCADA or operators, Internet, Intranet or telephone. The data transmission is performed by different format, sms, voice, fax, e-mail.

A real building game!

Fully modular and upgradeable, the P400Xi responds with its 1500 variable acquisition capacity at all needs even the most complex. Its architecture in 8 racks, 4 plug-in cards connected by RS485 Bus and its optional 4 lines and 20 characters display allows an almost infinite number of configurations.

Its multi-protocol connections (Modbus RTU, TCP, Hart, Mbus, etc .. Unitelway) ensure a dialogue with multiple devices (PLCs, meters, sensors, controllers,, badge readers)



1 to 8 rack for inputs/outputs Digital / Analog

8 digital inputs / 16 digital inputs / 8 analog inputs / 8 analog inputs with 4 PT100 / 8 digital outputs / 4 analog outputs / combined card : 8 digital inputs, 2 analog inputs, 2 analog outputs

Accessories and options

Optionally the P400Xi can be equipped with an interactive remote display, EDF tele-information interfaces, key drives without contact.

Application areas

Monitoring and controls for:

- AEP structure and sanitation
- Management of industrial waste
- Fish farms
- Other technical facilities

Technical specifications

Modularity Up to 8 racks for I / O cards or COM connectable via RS485 inter racks bus maps	**Inputs / Outputs** • 8 or 16 digital inputs • 8 Analog Inputs • 8 digital outputs • 8 ETOR 2EANA 2STOR • 4 inputs PT100 / PT1000 • 4 Analog Outputs	**Communication card** • 1 serial port RS232 / RS485, 1 USB port, 1 Ethernet port 10 / 100base T, 1 modem port • 1 serial port RS232 / RS485, 1 RS232 port or modem
Communication Multichannel operation Compatible HARLEQUIN TOPKAPI - LERNE	**Integrated modems** • RTC • LS / LP • GSM	**Ports** • Radio with and without license • Satellite • Ethernet, Internet
Central Unit RTC rescued SDRAM Memory 64MB Buffered memory 128MB	**Control** • voltage and battery charge • Internal Temperature • LED display • Diagnostic Card I / O and communication	**Maintenance** • Replaceable cards without tool • Front unplugged connection • Traceability hardware and software
Installation 179x117x104mm Getting case DIN rail Conforms to CE marking	**Power supply** 12-24 V AC / DC with battery charger 9 to 24 V DC external power for rescued	**Environment** • -5 to + 55 ° in operation • -20 to + 70 ° in storage • 5 to 90% non-condensing

Advantages

- **Communicating:** MODBUS RTU / TCPIP, HART, MBUS, UNITELWAY, SYSWAY, CEI 60870-5-101/4
- **Powerful:** Embedded Linux, 1500 customizable pathways, 47 000 stamped data
- **Clever:** Local automation from logic and analog function blocks or ST language, Ladder, Grafcet (optional)
- **Friendly:** Consultation of status, Logs, curves via web browser, off-line setting
- **Modularity:** Customized and scalable architecture
- **Over-equipment:** Serial ports RS 232/485, USB and integrated automation functions
- **Ethernet:** Internet connection, Web Server and Modbus TCP / IP natively

Preconfigured applications

AQUALABO Control offers free applications dedicated to your facilities equipped with Perax P400xi.

Download them from www.aqualabo.fr and deploy configurations on your P400xi controllers. These configurations can be pre-installed when ordered.

P400Xi Waste Water

Install this version, and manage your pumping station optimally . The P400Xi drives the alternance of your pumps from a level probe, with a rescue system by a level bulb, or simply manages the work station with a bulb. Its operation can detect a clogged pump, by simple calculation, and can also handle the pumps priorities following their faults or their operating time. This sanitary version includes a random tidal range that avoids the formation of fat rings.

P400Xi Lift Station

Driving pump by level sensor, by bulb, by level probe with rescue bulb.

Random tidal range to avoid the formation of fat rings.

Swapping of cyclic pumps on operating time.

Pump management priorities.

Alert pump clogged.

P400Xi Tank

This application manages the filling application of your tank. 2 thresholds can start sending a separate control of one or two pumps.

This program incorporates cross-site management to trigger a pump on a remote p400xi.

P400Xi Pumping Station

The ideal application that complements the one of the tank. Receive directly from a remote site, order that will perfectly manage the rotation of 2 pumps (priority, fault management), their simultaneous starts in case of high demand.

P400Xi Tank with Local Pumps

This application manages your tank fill demand from the pumps controlled by the PLC. 2 starting thresholds send a separate control of one or two pumps.

Smartmonitor

The AQUALABO Control hosted solution is the perfect partner for your remote zone. From a Web browser, you will easily see each of your sites. The data representation is customized view on charts. A software suite also allows you to offer a similar solution installed on your premises. Contact us for more information.

References

P400Xi 8ET 2EA 2ST 4SA 12-24V RS232/485, IP, USB, GSM

- Model
- Nbr of digital inputs
- Nbr of analaog inputs
- Nbr of digital outputs
- Nbr of analaog outputs
- Alimentation with or without battery charger
- Nbr of serial ports1 to 5 Ethernet connection
- Ethernet Connexion
- USB connection
- MODEM GSM or/and RTC, LSLP

P400XI 8ET 2EA 2ST 12-24V, RS232/485, IP	XI0/HUW000N
P400XI 8ET 2EA 2ST 12-24V, RS232/485, IP, RTC	XI0/HRUW000N
P400XI 8ET 2EA 2ST 12-24V, RS232/485, IP, GSM	XI0/GHUW000N
P400XI 16ET 4EA 4ST 12-24V, RS232/485, IP, RTC	XI0/2HRUW000N
P400XI 16ET 4EA 4ST 12-24V, RS232/485, IP, GSM	XI0/G2HUW000N
Accessories	
Power supply 230Vac/24Vcc 5A	Alim/24.5
Lead battery 12V - 7.2Ah	Bat7
Arrester plug sector	MPRO/D230STD
RTC plug arrester + base	MPRO/D170STD
Other configurations, contact us	

References for Configurated Application

Example: for pumping station 2 pumps: Add "ASSA" at the end of the refrence Ex : XI0/HRUW000NASSA

Waste water version	..... + ASSA
Lift station version 3 pumps	..... + AS3P
Tank version	..... + TANK
Pumping station version	..... + PUMP
Tank with local pump version	..... + RE2P

Solutions FOR WASTE WATER TREATMENT PLANTS

Wheter in construction, operation or maintenance, **the Aqualabo range** covers all your needs for control and monitoring waste water plants.

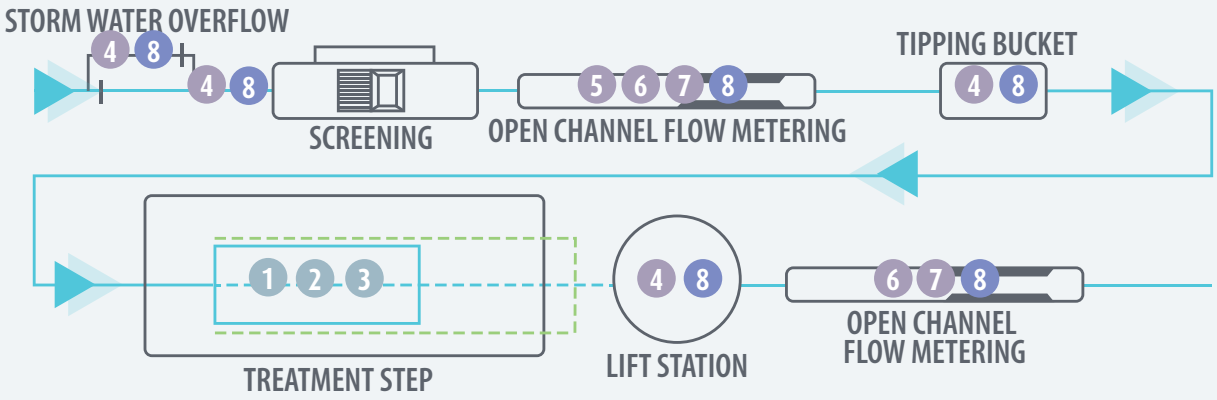
For the control of:

- Activated sludge
- Constructed wetlands
- Biological disks
- Phyto-epuration
- SBR / Etc.

One contact: simplicity and security

- Physico-chemical measurement
- Control and monitoring

EXAMPLE*



* The above scheme is only for example.

PHYSICO-CHEMICAL

1 Measurement of dissolved oxygen, TSS, turbidity...

2 Kits and analysis cases

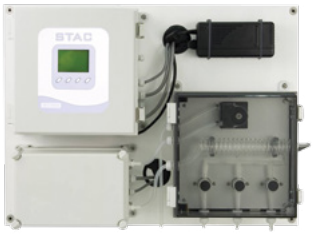
3 Sludge blanket control

CONTROL AND MONITORING

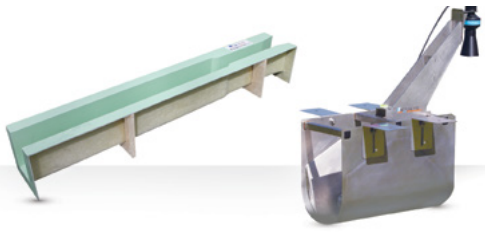
4 Controllers

5 Automatical sampler

6 COD,BOD,TOC,TSS measurement



7 Venturi flumes



MASTERING REMOTE MANAGEMENT

8 Data remote and data logging

FISH FARMING,

Create an ideal environment for your pisces

Instrumentation is a key factor in the field of Aquaculture, **since it acts directly on the health and longevity of fish.**

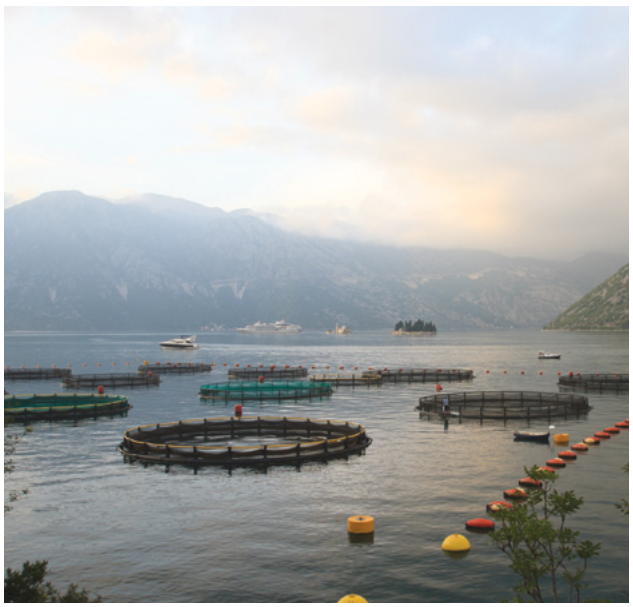
Perfect management of the dissolved oxygen level in the pool water is essential, but the monitoring of pH, temperature, conductivity, for example, are also very important.

Finally, the monitoring of ammonia (that gives an indication of organic decompositions volumes present in the water) and of nitrates and nitrites is an essential step of fish farming.

Aqualabo offers a comprehensive range of simple equipment, reliable and accurate, dedicated to Fish farming activity , but can also support complete systems of measurement, analysis and all sizes of installations of control, ranging from a few to several dozen ponds, passing sea fish farm.

Advantages

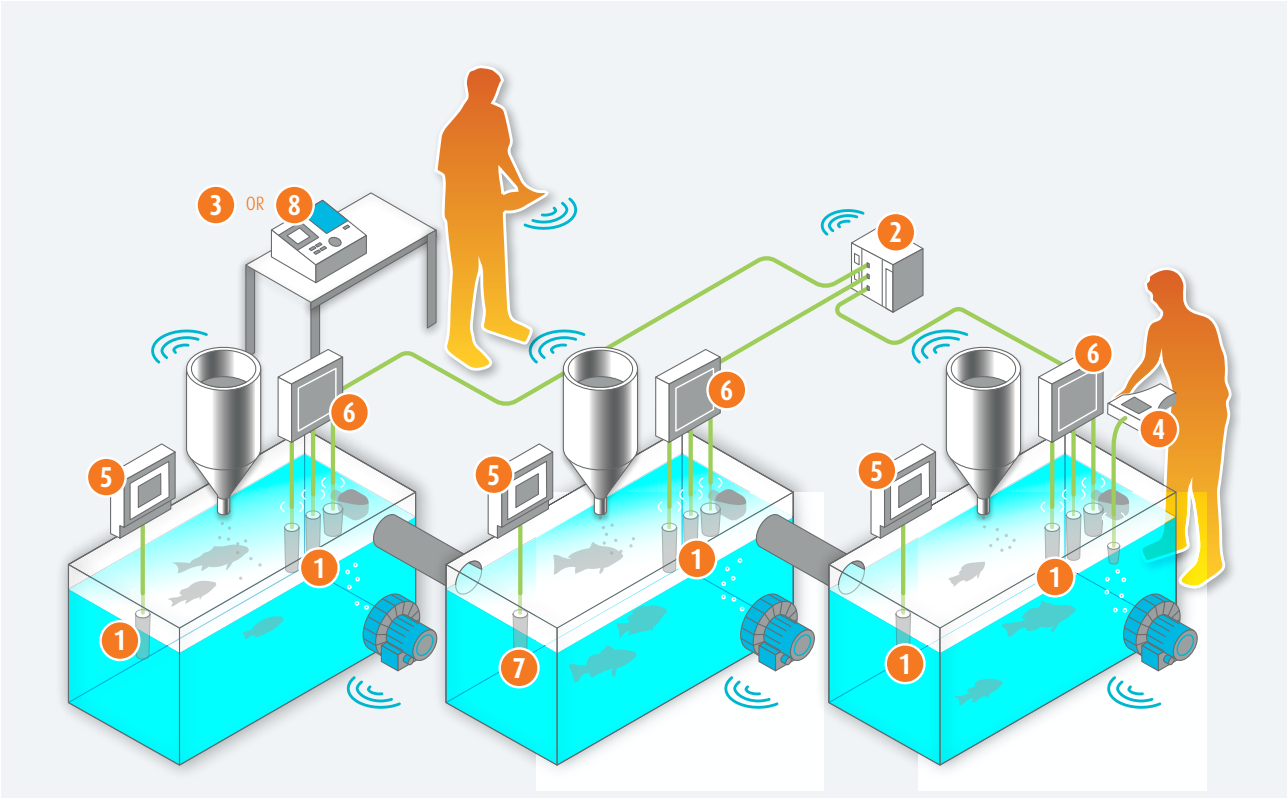
- Real-time tracking
- Environmental supervision
- Remote control of equipment



Accurate and quality measures: Security

Aqualabo instruments for Fish farming range from measuring water quality (PH , dissolved oxygen , temperature, redox , conductivity, turbidity ...) in stationary or mobile station , the various control levels and pool volumes. **Remote management Aqualabo equipment to control the entire plant from a supervisory position,** but also to control the renewal of the water, air compressors, feeders, fans etc ..

For offshore installations, Aqualabo instrumented buoys allow remote monitoring of water quality, and are therefore an important source of savings and safety facilities



1 Digisens • Digital probes

2 P400X1 • Data remote

3 Fish farming analysis case

4 **Odeon + Photopod**
• Handheld transmitter + Photometer

5 S200 • Stationary transmitter

6 Module 4001
• Communication box

7 Tripod • Multiparameter probe

8 Uviline Connect
• Spectrophotometer

Control and monitoring for
INDUSTRIAL WASTE WATER DISCHARGE

The discharge of industrial waste water in the field or to a municipal treatment plant, after its treatment, is subject to strict regulations. **An adapted instrumentation is one the main tools to insure its perfect control.**

Besides the quality measurement (PH , turbidity, dissolved oxygen etc ...), physical control (flow-rates, volumes, levels, etc ...) and automatic sampling, **Aqualabo ensures, thanks to its long time expertise in communications equipment, the full implementation of reliable and accurate monitoring systems** (monitoring data, forwarding alarms etc ...) for industrial facilities.

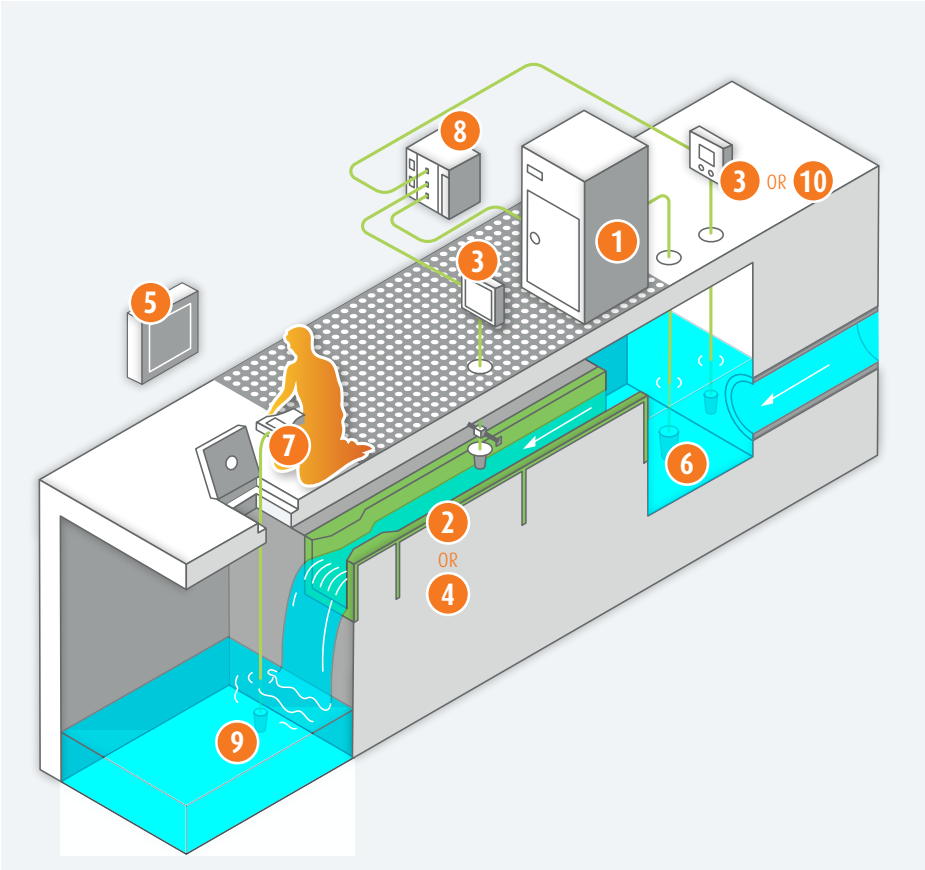
Control of waste water: Environmental protection

- Sampling and monitoring
- Water quality analysis
- Measurement of physical values

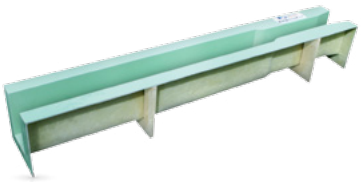
A full range of interconnected equipment

Aqualabo range covers all industrial needs for complete and real-time monitoring of their waste water discharge.

Stationary or handheld transmitters, digital sensors , venturi flumes, ultrasonic flow meters, automatic samplers , level sensors, communication systems, **Aqualabo facilities are part of a global solution and are the insurance of a smooth and reliable installation,** adapted to the industrial issues.



1 **Vigilant Eco** • Automatic sampler



2 **Aquaventuri** • Venturi flume

3 **S200** • Stationary transmitter

4 **Aqua-UV** • Venturi flume

5 **STAC** • Online analyser

6 **Digisens** • Digital probes

7 **Odeon + Photopod**
• Handheld transmitter
+ Photometer

8 **P400X1** • Data remote

9 **Tripod** • Multiparameters probe

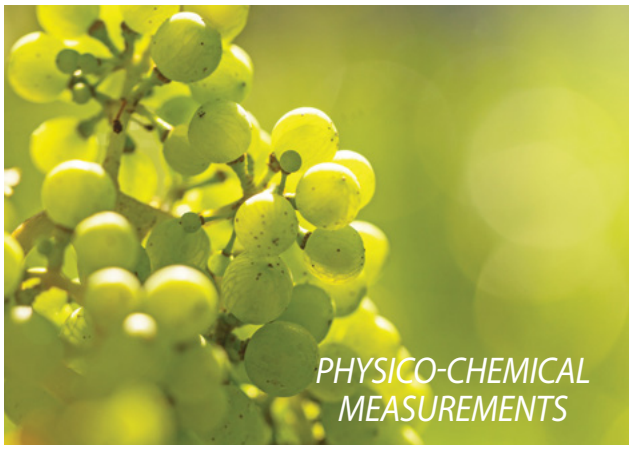
10 **Module 4001** • Communication box

Measure and quality monitoring of wines
IN WINEMAKING PROCESS

Optimize quality, ensure regularity, produce wines in style and predefined characteristics include rigorous quality control and a mastery of the different stages of development.

Aqualabo offers instruments, including quality sensors, real tool for decision-making and steering, constituting one of the solutions to achieve these objectives.

- Specific measurements
- Easy-to-use and field-adapted devices
- Quality instruments made in France
- On site or workshop services



A full range of interconnected equipment

Aqualabo range covers all needs for complete and real time monitoring of winemaking process.

PHYSICO-CHEMICAL MEASUREMENTS

- **Dissolved oxygen measurement :** real strategic tool for decision-making for the implementation of processes of supply of oxygen or technical itineraries validations (filtration, transfers…). The monitoring of the oxygen concentration is carried out at each stage of your production, maturation, preparation and packaging.
- **Turbidity measurement :** Measured throughout the process, it allows to ensure the final quality of the wine. Qualitative control of the juices from the extraction which for white and rosé wines must not exceed 200 NTU.
- **Conductivity measurement :** Necessary during juice extraction phases (pressing) : Tracer of the qualitative evolution of the juices and allows to select the type of wine desired. The monitoring of conductivity allows to establish the level of treatment necessary to obtain the stability of the juice.
- **PH measurement :** Essential tool on the technical steps of acidification or deacidification of wine in order to target the optimal pH of the final wine.
- **Temperature measurement :** Carried out at different stages of vinification and constitutes a guarantee of quality for wines. According to the type of wine desired, the winemaker cools or heats the musts.

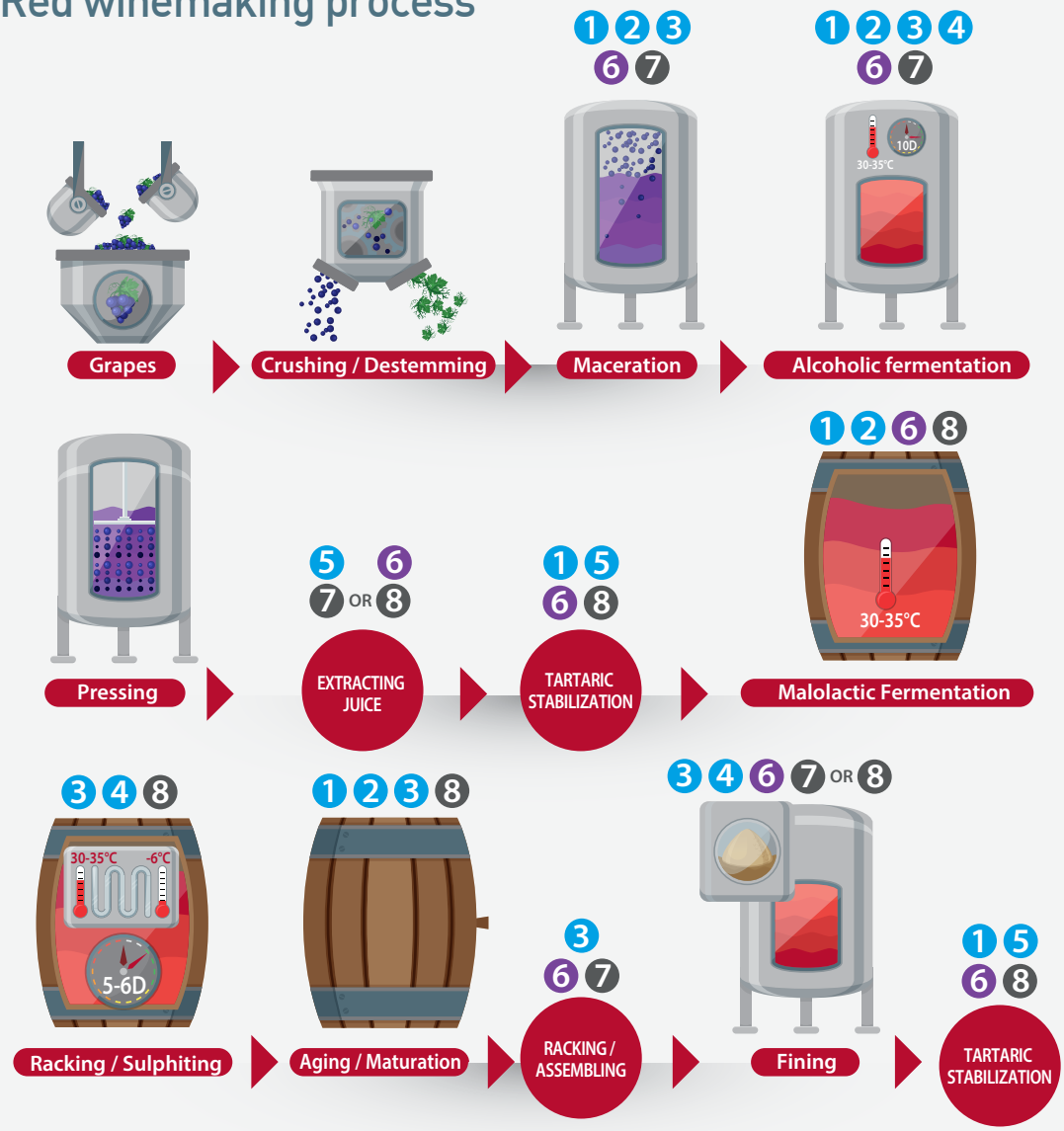
LEVEL MEASUREMENT

- **A level measurement** is necessary in the maceration tanks and alcoholic fermentation in red winemaking process and at the level of settling/fining and racking in white wine process.

MONITORING AND CONTROL

- **The remote management** allows to automate, monitor and manage your facilities locally or remotely. It ensures continuity and quality of process, a help to curative and preventive maintenance.
- **The Supervision** associated with the remote controller allows to visualize and to remotely control the assembly of your facilities, manage and archive all collected data. Equipped with most modern means of communication you can dispose of all your information locally or nomadically.

Red winemaking process



Digisens • Digital sensors
1 pH, 2 Temperature, 3 Oxygen,
4 Turbidity, 5 Conductivity

6 **P400XI** • Date remote - Monitoring

7 **S200** • Stationary transmitter

8 **Odeon** • Handheld device

AQUALABO SERVICES

Workshop services

Hotline
The AQUALABO technicians are available to help you to solve all your adjusting problems or phone-based troubleshooting

Spare parts
AQUALABO has a large stock of spare parts to allow you to repair your equipment yourself

Workshop Troubleshooting
Your measurement equipment can be serviced by our team of technicians in our workshops

Provision
One of your equipment is being repaired, we offer the provision of an equivalent device, allowing you to not interrupt your measurements

Calibration
We perform the calibration of your measuring equipment in our workshops

Training
AQUALABO regularly organizes group training on its premises on different measurement methods

Site Services

Maintenance contracts
With AQUALABO maintenance contracts, you deal only your profession, your measuring equipment is no longer a concern. Two contract forms, the standard contract and the contract "all inclusive"

On-site troubleshooting
Our technicians will come to your site, within a short time, for effective troubleshooting

Material rehabilitation
Rather than hire a new replacement which can be expensive, AQUALABO can restore some of your older devices and give them a new youth

Rental equipment
Whether for samplers, digital cameras analysis or measurement, AQUALABO provides an important stock of materials available to the rental

Training
Need additional training on one of your devices? Our technicians will come to you to achieve it

The "AQUALABO Pack Services" of AQUALABO

... Is a set of workshop services, either in phone support, practical training on a set of equipment, or repairs and checks on the test bench.

Maintenance contracts AQUALABO Services

Periodic visits, control and optimization, calibrations, preventive maintenance, additional training, extended warranty, troubleshooting.

With AQUALABO SERVICES maintenance contract, operation of your devices and the quality of their action is no longer a concern. If necessary, AQUALABO can rent for a given period the necessary equipment to some spot checks.

AQUALABO LOCATION

WWW.AQUALABO-SERVICES.COM

AQUALABO has one of the largest park of measuring equipment and water control available for rent:

Automatic samplers

Physico chemical measurement devices

Digital sensors

Flowmeters

Recorders

Pressure / level

Currentmeters

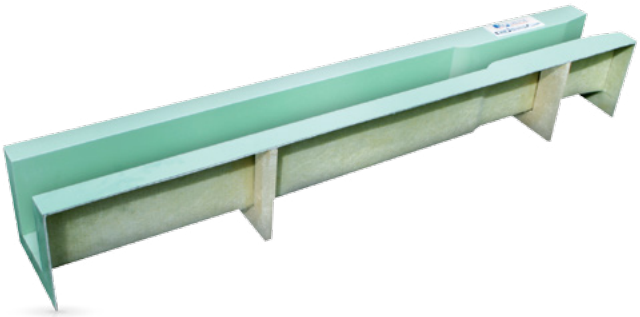
Instrumented buoys

Accessories

You will find in our website "www.aqualabo-services.com", our rental offer for mobile applications or stationary and of course all the associated accessories. Our range meets your needs in many application areas, wastewater, natural water, drinking water, aquaculture, and many more ...

Our team of experts ensures a strict control under ISO 9001 norm. Also, after each use, the material is cleaned, disinfected and tested before restocking.

Index



AQUALABO

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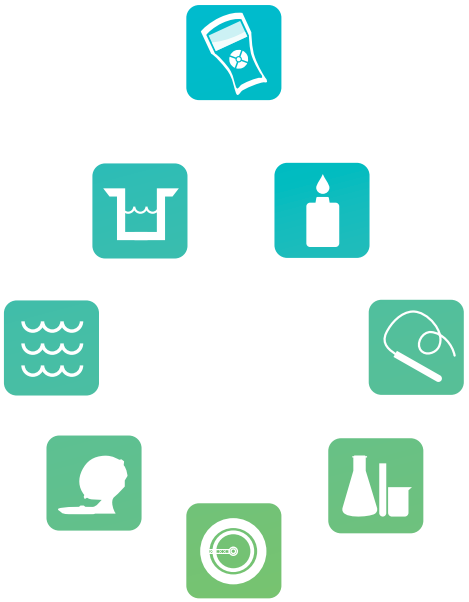

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