Welko

AQUALABO
Smart water solutions

ACTEON 5000

DIGITALFIXED UNIT
MULTIPARAMETERSDIGITAL
TRANSMITTER IN THE FIELD

APPLICATIONS

- Waste water treatment plant (aeration basins to control / regulation processes Nitrification /Denitrification
- Drinking water (raw water control)
- Industrial effluent treatment (waste controls, regulation...)
- Monitoring of surface water
- Fish farming…

ADVANTAGES

- Technology of digital communication
- 2 inputs sensor
- 2 analog input, 2 relay input
- Digital output Modbus, Ethernet
- Large graphics screen: visualization until 4 measures,
- Outputs 4-20 mA, Programmable relays (visible state main screen)
- Fast and simple intuitive programming
- Wide range of digital sensors

The new digital transmitter ACTEON 5000 allows connection from 2 digital sensors of the range PONSEL MESURE for monitoring parameters pH, ORP, temperature, dissolved oxygen (optically), conductivity, salinity, turbidity (NTU, mg / L), UV254, TOC, COD, BOD, Suspended Solid (g/L), Sludge Blanket detection (%) ....

PONSEL
BY AQUALABO

The measured values are displayed and transmitted by analog or digital way. The functions of preconfigured regulations also optimize process control.

ACTEON 5000 is associated with a wide range of digital sensors resistant to disturbances: pre-amplifying is integrated to the sensor and digital signal processing. All data regarding calibration, history, users and measures are handled directly in the sensor to enable traceability and extreme reliability of the measurements.

TRANSMITTER ACTEON 5000

SOFTWARE AND FEATURES	
Digital sensor	2 inputs digital sensor RS485
2 analog input	In mode 0/4-20 mA or 0-10 V
2 relay input	Function of transfer on exit(release) TOR Information of external cleaning system : swing in maintenance mode
2 analog outputs	Choice of 2 parameters programmable according to the connected sensor. Programming PID
2 digital outputs /relay	NO/NF customizable Instruction point: setting of the measuring range (Hysteresys / activation way) and time of activation, Command for external cleaning system Output alarm for defect material sensor
Digital output	Modbus RTU Ethernet TCP IP
Data recording	Internal flash memory • Frequency recording: 1-120 mn • Recording journal of events, measure sensors.
Atmospheric pressure sensor	To compensate oxygen pression
CHARACTERISTICS	
Display	Backlit graphic LCD touch Screen – Size95x54 mm
Analog outputs	0/4.00 – 20.00 mA with galvanic isolation • Charge max 250 Ω
Relay outputs	6 A /250 V
Operating conditions	Temperature : -15°C to + 50 °C • Temperature of storage/transport : -15°C to + 50°C
USB port	Unloading of the recorded data
Power/ Electrical protections	100-240 V AC/DC 50-60 Hz • Option 9-28 V DC/DC • Electrical protection: consistent EN61010-1 :2010
HOUSING	
Dimensions (LxHxP)	213 x 185 x 84 mm
Material	Grey ABS
Protection rating	IP 65
Front	Antireflective polyester

DIGITAL SENSORS

Digital "smart" sensors

- All calibration data (factory coefficients, offset, slope) are stored in the probe,
- Digital technology for extreme reliability measurements without interference.

Robust probe in field and laboratory

- Probes from more than 50 years of experience PONSEL
- Applications waters, drinking water, wastewater, sewage...

		Principle	Range	Precision	Material	
OPTIC	Oxygen	Optical fluorescence	0,00-20,00 mg/L 0-200 %	± 0,1 mg/L ± 1 % Range 0-100 %	PVC special membrane, 316L stainless steel or titanium, herazil	Temperature Compensation via CTN
	Turbidity	IR Nephelometry (diffusion 90°)	5,0-50,0 NTU 5,0-200,0 NTU 5-1000 NTU 5-4000 NTU Automatical range NTU 0-4500 mg/L	< 5% of reading	PVC, POM-C, PMMA, Inox	Temperature Compensation via CTN
	Suspended Solid sensor	Optical IR (870 nm) based on IR absorption	Sludge blanket : 0-100 % SS : 0-50 g/L Turbidity : 0-4000 FAU	SS< 10 % Turbidity : +/- 5% (range 200-4000 FAU) Sludge blanket : +/- 2%	DELRIN, Nickel-plated brass, EPDM	Temperature regulation of optics via CTN
	VB5 Sludge Blanket Detection sensor	Optical IR (870 nm) based on IR absorption	0-100%	+/- 2%	DELRIN, Nickel-plated brass, EPDM	Temperature regulation of optics via CTN
ELECTROCHEMISTRY	pH/T°C	combined Electrode (pH/Reference)	0,00-14,00 pH 0,00 to +50,00 °C	± 0,1 pH	Special glass pH Reference Ag/AgCl to gelled electrolyte Temperature: CTN	Temperature Compensation via CTN
	Redox	combined Electrode to peak of platinum	- 1000,0 to + 1000,0 mV	± 2 mV	Delrin, PVC, glass, platinum	Reference Ag/AgCl to gelled electrolyte
	Redox Annular	combined Electrode to ring of platinum	- 1000,0 to + 1000,0 mV	± 10 mV	Delrin, glass, platinum	Reference Ag/AgCl to gelled electrolyte
	Conductivity	4-electrode amperometric	0-200,0 µS/cm 0-2000 µS/cm 0,00-20,00 mS/cm 0,0-200,0 mS/cm Automatical range	± 1 % of full scale	2 graphite electrodes, 2 platinum electrodes DELRIN	Temperature Compensation via CTN
	Salinity	4-electrode amperometric	5,00-60,00 g/Kg	< 5 % of full scale	2 graphite electrodes, 2 platinum electrodes DELRIN	Temperature Compensation via CTN
	Inductive Conductivity	Inductive Method	0-100 mS/cm	< 5 % of full scale	EPDM, PVC, Inox	Temperature Compensation via CTN
	Inductive Salinity	Inductive Method	5,00-60,00 g/Kg	< 5 % of full scale	EPDM, PVC, Inox	Temperature Compensation via CTN

STACSENSE PROBE

UV OPTICAL TECHNOLOGY FOR OPTIMAL MEASUREMENTS

SUV254 PONSEL

UV254 multiparameter probe

- UV 254 spectral absorption without any reagents or consumables
- Multi-parameter measurement: SAC254, CODeq, TOCeq and & BODeq
- Modbus RS-485 digital communication
- Automatic Turbidity compensation.

The StacSense probe uses UV absorption at 254 nm to measure organic compounds dissolved in water. This absorbance is correlated with the concentration of TOC, COD and BOD to provide a high-performance probe requiring no consumables. A reference measurement at 530 nm is used to compensate for the presence of particles in the sample that also absorb UV light.

Op.T	Parameters	Measurement range *	Units	Detection limit	Quantification	Accuracy **	Application
2 mm	SAC_{254}	0-750	Abs/m	1.7		1 or +/-3%	Wastewater
	CODeq	0-1300	mg/L	3.0	5.0 9.0 3.0 4.0 0.3	2 or +/-3%	
	BODeq	0-350	mg/L	1.0	0.6 0.2 0.2	1 or +/-3%	
	TOCeq	0-500	mg/L	1.5		1 or +/-3%	
50 mm	SAC_{254}	0-30	Abs/m	0.20		0.1 or +/-3%	Drinking Water
	CODeq	0-50	mg/L	0.15		0.2 or +/-3%	
	BODeq	0-15	mg/L	0.10		0.1 or +/-3%	
	TOCeq	0-20	mg/L	0.10		0.1 or +/-3%	

Performance levels obtained under laboratory conditions (controlled temperature and stirring, aqueous solutions of KHP)
* Optical path 2 and 50mm, Linearity: > 0.99 on the given range.
** Highest value

LOWTUS DIGITAL TURBIDIMETER FOR DRINKING WATER MEASUREMENTS

• Nephelometric Light Scattering Method 90 degrees – ISO 7027 • Ranges 0-10 NTU; 0-100 NTU; Automatic Range • Modbus RS-485 digital communication • Optical measuring cell self-cleaning • Quick check with Tare Solid The measurement principle is based on the 90° infrared light scattering measurement (ISO 7027) and allows continuous monitoring of turbidity measurement over low ranges. The new low turbidity sensor incorporates a new mechanical system for automatic cleaning of the measuring cell. This system prevents the accumulation of contamination in the measuring cell and on optical scattering and IR radiation cells. An automatic debubbling system prevents bubbles from sticking to optical windows so as not to introduce measurement errors.

Measurements	
Measurement principle	Diffusion IR at 90° - ISO 7027
Measuring Range	0-10; 0-100 NTU & Automatic Range
Resolution	0,0001 NTU for [0,0002 to 9,9999 NTU] 0,001 NTU for [10,000 to 100,00 NTU]
Accuracy	Low range: +/-2% of reading or 0,1 NTU* High range: +/-5% or 0,3 NTU* *Highest value
Temperature	NTC
Temperature Accuracy	+/- 0.5°C
Type of detector	Si photodiode
Light sources	IR LED 850 nm
Measurement frequency min	0.75s (measure only), 6s (measure + cleaning)

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