



nanoFlu

32SXXXXXX



Miniature fluorometers

nanoFlu fluorometers are cost-effective, submersible miniature fluorometers for the highly precise and selective measurement of CDOM (Colored Dissolved Organic Matter, yellow substances), chlorophyll a, phycoerythrin in cyanobacteria, rhodamine or fluorescein. The combination of low power consumption and innovative coating of the optical windows as an energy and environmentally neutral antifouling solution, ensures long-term stability of the measurements. The devices can be used in a wide range of applications for monitoring seawater and river water as well as drinking water and waste water. Internal reference measurements of the high-performance LEDs used for fluorescence excitation compensate for aging effects and temperature influences.

nanoFlu is equipped with the new TriOS G2 interface, allowing quick and easy sensor configuration using a web browser. Integration into existing process control systems and external data loggers has never been so easy.

Advantages

- High sensitivity
- Optical windows with nano coating
- Fast data acquisition
- Electronic daylight compensation
- Compact size
- Low power consumption
- Low cost

Applications

- Waste water treatment
- Drinking water treatment
- Raw water treatment
- Environmental monitoring
- Bathing and surface waters
- Seawater, brackish water
- Industrial applications
- Cooling water monitoring
- Aquaculture

Technical specifications

Measurement technology	Light source	LED	
	Detector	Photodiode	
Measurement principle		Fluorescence	
Parameters		CDOM [$\mu\text{g/L}$] with 0...200 $\mu\text{g/L}$ or chlorophyll a [$\mu\text{g/L}$] with 0...200 $\mu\text{g/L}$ or 0...500 $\mu\text{g/L}$ or phycocyanin [$\mu\text{g/L}$] with 0...200 $\mu\text{g/L}$ or 0...500 $\mu\text{g/L}$ or rhodamine [$\mu\text{g/L}$] with 0...200 $\mu\text{g/L}$ or fluorescein [$\mu\text{g/L}$] with 0...200 $\mu\text{g/L}$	
Measurement range		0...200 $\mu\text{g/L}$ or 0...500 $\mu\text{g/L}$	
Measurement accuracy		$\pm 5 \%$	
Temperature compensation		No	
Turbidity compensation		No	
Data logger		No	
Response time (T100)		6 s (default)	
Measurement interval		3 s (default)	
Interface	digital	Ethernet (TCP/IP)	
		RS-232 or RS-485 (Modbus RTU)	
Power consumption	typical	< 1 W	
	with network	< 1,6 W	
Power supply		12 - 24 VDC ($\pm 10 \%$)	
Housing material		Stainless steel (1.4571/1.4404) or Titanium (3.7035) or POM	
Dimensions (L x Ø)		~171 mm x 36 mm	~ 6.7" x 1.4"
Weight	VA	~ 500 g	~ 1.1 lbs
	Ti	~ 400 g	~ 0.9 lbs

	POM	~ 270 g	~ 0.6 lbs
System compatibility		Modbus RTU	
Max. Pres- sure	with Subconn	30 bar	~ 435 psi
	with fixed cable	3 bar	~ 43.5 psi
	in FlowCell	1 bar, 2...4 L/min	~ 14.5 psi, 0.5 to 1 gpm
Degree of protection		IP68	
Sample temperature		+2...+40 °C in situ +2...+40 °C FlowCell	~ +36 to +104 °F in situ ~ +36 to +104 °F FlowCell
Ambient temperature		+2...+40 °C	~ +36 to +104 °F
Storage temperature		-20...+80 °C	~ -4 to +176 °F
Relative humidity		0...95 %, non-condensing	
Transportation conditions		see storage temperature	
Inflow velocity		0.1...10 m/s	~ 0.33 to 33 fps
Maintenance effort		≤ 0.5 h/month typical	
Calibration/ maintenance interval		24 months	
Warranty		1 year (EU & USA 2 years)	