nanoFlu

32SXXXXX0

Miniature fluorometer

nanoFlu fluorometers are low-priced, submersible miniaturized fluorometers for highly precise and selective measurement of CDOM (colored dissolved organic matter, yellow substances), chlorophyll a or phycocyanin in cyanobacteria. Long-term stability of measurements is ensured by the combination of low power consumption and innovative coating of the optical window, as an energy efficient and environmentally friendly anti-fouling solution. The devices can be used in diverse applications for the monitoring of sea and river waters, as well as in drinking- and wastewater treatment systems. Internal reference signals of the high performance LEDs used for fluorescence excitation compensate aging effects and temperature influences.

Benefits

- High sensitivity
- Nano coating
- Fast data acquisition
- Electronic light compensation
- Compact size
- Low power consumption
- Low costs

Applications

- Surface waters
- Bathing lakes
- Drinking water production and treatment
- Raw water treatment
- Environmental monitoring

Parameter list

Parameter	CDOM [µg/L]
	or chlorophyll a [µg/L]
	or phycocyanin [µg/L]
	or rhodamine [µg/L]
	or fluorescein [µg/L]

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Technical Specifications

Measurement technology	light source	LED	
	detector	Photo diodes	
Measurement principle		Fluorescence	
Parameter		See parameter list p. 1	
Measuring range		0...200 µg/L	0 to 200 ppb
Measurement accuracy		± 5 %	
Turbidity compensation		No	
Data logger		No	
T100 response time		6 s	
Measurement interval		3 s	
Housing material		Stainless steel (1.4571/1.4404) or titanium (3.7035)	
Dimensions (L x Ø)		171 mm x 36 mm	~ 6.7“ x 1.4“
Weight	stainless steel	0.5 kg	~ 1.1 lbs
	titanium	0.4 kg	~ 0.9 lbs
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 (± 10 %)	
Maintenance effort		≤ 0.5 h/month (typical)	
Calibration/maintenance interval		24 months	
System compatibility		Modbus RTU	
Guarantee		1 year (EU: 2 years)	US: 2 years

INSTALLATION

Max. pressure	with SubConn	30 bar	~ 435 psig
	with fixed cable	3 bar	~ 43.5 psig
	in FlowCell	1 bar, 2...4 L/min	~ 14.5 psig, 0.5 to 1 gpm
Protection type		IP68	NEMA 6P
Sample temperature		+2...+40 °C	~ +36 °F to +104 °F
Ambient temperature		+2...+40 °C	~ +36 °F to +104 °F
Storage temperature		-20...+80 °C	~ -4 °F to +176 °F
Inflow velocity		0.1...10 m/s	~ 0.33 fps to 33 fps

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