picoFlu

XXXXXXX

SEPIA immersion sensors provide precise, modular and digital water analysis in any situation - in the laboratory, in the field, mobile and directly in the process of waterworks or sewage treatment plants. They offer maximum flexibility for water management, wastewater treatment, environmental laboratories, industrial processes and aquaculture and combine all measurement tasks in a single, modular, expandable system.

picoFlu is a submersible miniature fluorometer for the highly precise and selective measurement of chlorophyll a, phycocyanin in cyanobacteria, CDOM (Colored Dissolved Organic Matter), rhodamine or fluorescein.

As an immersion sensor in the **SEPIA series**, the picoFlu was specially developed for use with the TriOS multiparameter probe **FALCON**. Digital communication ensures safety and interference-free signal transmission from the sensor to the controller.

Thanks to the modular design of the SEPIA sensors, the picoFlu can be easily calibrated under laboratory conditions using the TriOS Lab Controller **LoLA**.

The system portfolio is further complemented by a TriOS Modbus handheld unit, which transmits the measured values from individual sensors directly to any Modbus-compatible device or controller.

Advantages

- High accuracy and reliability
- Digital, modern and ergonomic design
- Calibrate in the lab - use in the field
- Cost-efficient due to modular design
- USB-C and Modbus for seamless integration
- Comparable results in the lab and in the field

Applications

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

Sensor versions

Sensor version	Parameters	Ex / Em	Measurement range	Detection limit
chl	**Chlorophyll a**	470 nm / 682 nm	0...200 µg/L	0.05 µg/L
		470 nm / 682 nm	0...500 µg/L	0.1 µg/L
blue	**Phycocyanin**	620 nm / 655 nm	0...200 µg/L	tbd*
cdom	**CDOM**	375 nm / 460 nm	0...500 µg/L	tbd*
rho	**rhodamine**	470 nm / 590 nm	0...200 µg/L	tbd*
fluo	**fluorescein**	470 nm / 590 nm	0...200 µg/L	tbd*

* to be defined (still to be defined)

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Technical specifications

Measurement technology	**Light source**	LED + filter	
	Detector	Photodiode + filter	
Measurement principle		fluorescence	
Parameters		Chlorophyll a [µg/L] or phycocyanin [µg/L] or CDOM [µg/L] or rhodamine [µg/L] or fluorescein [µg/L]	
Measurement range		see table	
Detection limit		see table	
Measurement accuracy		± (5 % + detection limit)	
Temperature compensation		No	
Turbidity compensation		No	
Data logger		No	
Response time (T90)		2 s	
Response time		2 s	
Smallest measurement interval		1 s	
Cross sensitivities		Turbidity	
Interface		digital, SEPIA	
Power consumption		< 250 mW	
Connection		3.5 mm plug, 4-pole (TRRS)	
Housing material		titanium (3.7035)	
Dimensions (L x Ø)		112 mm x 24 mm	~ 4.4" x 0.95"
Weight		103 g (with o-ring)	~ 0.23 lbs
System compatibility		SEPIA compatible	

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Max. Pressure	30 bar	~ 435 psi
Degree of protection	IP68	
Sample temperature	+0...+50 °C * +2...+40 °C (for specified measurement accuracy)	~ +32 to +122 °F * ~ +36 to +104 °F
Ambient temperature	+0...+50 °C * +2...+40 °C (for specified measuring accuracy)	~ +32 to +122 °F * ~ +36 to +104 °F
Storage temperature	-20...+60 °C	~ -4 to +140 °F
Relative humidity	0...95 %, non-condensing	
Transportation conditions	see storage temperature	
Operating altitude	max. altitude 2000 m (6562 ft)	

* No ice crystals in the sample water

Maintenance effort	≤ 0.5 h/month typical
Calibration/maintenance interval	24 months
Warranty	1 year (EU & USA 2 years)

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