microFlu V2

37SX0XX1X

microFlu V2 fluorometers are submersible miniature fluorometers for the highly precise and selective measurement of tryptophan, CDOM (colored dissolved organic matter), blue-green algae (phycocyanin), chlorophyll, rhodamine, fluorescein or BTX. The combination of low power consumption and nano coating of the measuring windows as an energy and environmentally neutral antifouling solution ensures the long-term stability of the measurements. The devices can be used in a wide range of applications for monitoring seawater, river water, drinking water and waste water. Internal reference measurements of the high-power LED used for fluorescence excitation compensate for aging effects and temperature influences.

microFlu V2 is equipped with an RS-485 interface, which enables easy and fast sensor configuration via Modbus, and also has an analog interface. Integration into existing process control systems and external data loggers has never been so easy.

Advantages

- Without sampling and sample preparation
- Delay-free
- Without reagents
- High sensitivity and selectivity
- Optical windows with nano coating
- Electronic daylight compensation
- Handy size

Applications

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

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Sensor versions

Sensor version	Parameters	Ex / Em	Measuring range	Detection limit
chl	**Chlorophyll a**	470 nm / 682 nm	0...200 µg/L	0.05 µg/L
blue	**Phycocyanin**	620 nm / 655 nm	0...200 µg/L	0.5 µg/L
cdom	**CDOM**	375 nm / 460 nm	0...500 µg/L	0.25 µg/L
rho	**Rhodamine**	470 nm / 590 nm	0...200 µg/L	0.2 µg/L
fluo	**Fluorescein**	470 nm / 590 nm	0...200 µg/L	0.05 µg/L
TRP	**Tryptophan**	275 nm / 360 nm	0...500 µg/L	3 µg/L
BT	**BTX**	255 nm / 305 nm	0...1000 µg/L	20 µg/L

Technical specifications

Measure-ment tech-nology	**Light source**	LED + filter
	Detector	Photodiode + filter
Measuring principle		Fluorescence
Parameters		Chlorophyll a [µg/L] or Phycocyanin [µg/L] or CDOM [µg/L] or Rhodamine [µg/L] or Fluorescein [µg/L] or Tryptophan [µg/L] or BTX [µg/L]
Measuring range		see table
Detection limit		see table
Measurement accuracy		± (5 % + detection limit) Variant BT: ± (10 % + detection limit)
Temperature compensation		No
Turbidity compensation		No
Data logger		No

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Response time (T90)		6 s (default)
Smallest measuring interval		3 s (default)
Cross sensitivities		All microFlu V2: turbidity microFlu V2 TRP: dissolved oil, PAH, DOM
Interface	**digital**	RS-485, Modbus RTU
	analog	4 .. 20 mA (default), max. load: 500 Ohm
		alternative: 0 - 5 V, min. load 1 kOhm
		alternative: 0 - 10 V, min. load 1 kOhm
Power consumption	**typical**	max. 0.6 W
	with activated analog interface	max. 1.1 W
	Power-down	max. 70 mW
Power supply		12 - 24 VDC (± 10 %)
Connection		SubConn 8pin or fixed cable with M12 connection
Housing material		Stainless steel (1.4571/1.4404) or titanium (3.7035)
Dimensions (L x Ø)		~162 mm x 48 mm / ~ 6.4" x 1.9"
Weight	**VA**	~ 650 g / ~ 1.4 lbs
	Ti	~ 510 g / ~ 1.1 lbs
System compatibility		TriBox3, TriBox mini, Modbus RTU
Max. Pressure	**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 / NEMA6P

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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)

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