

microFlu V2

37SX0XX1X



microFlu V2 fluorometers are submersible miniature fluorometers for highly precise and selective measurement of tryptophan, CDOM, blue-green algae, chlorophyll, tryptophan or BT. The combination of low power consumption and innovative coating of the measurement windows as an energy and environmentally neutral antifouling solution ensures long-term stability of the measurements. The instruments can be used in a wide range of applications for monitoring seawater, river water, drinking water and wastewater. Internal reference measurements of the high-power LED used for fluorescence excitation compensate for aging effects and temperature influences. microFlu V2 is equipped with a RS-485 interface, which enables easy and fast sensor configuration via Modbus. Integration into existing process control systems and external data loggers has never been easier.

Advantages

- without sampling and sample preparation
- without delay
- without reagents
- high sensitivity and selectivity
- optical windows with nanocoating
- electronic daylight compensation
- handy size

Applications

- surface waters
- bathing lakes
- drinking water treatment
- raw water treatment
- environmental monitoring

Sensor version	Parameter	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 (coloured dissolved organic matter)	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	Fluoresceine	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	BT	255 nm / 305 nm	0 ... 1000 µg/L	20 µg/L

Technical specifications

Measurement technology	Light source	LED + Filter	
	Detector	Photodiode + Filter	
Measurement principle		Fluorescence	
Parameters		Chlorophyll a [$\mu\text{g/L}$]	
		Phycocyanin [$\mu\text{g/L}$]	
		CDOM [$\mu\text{g/L}$]	
		Rhodamine [$\mu\text{g/L}$]	
		Fluoresceine [$\mu\text{g/L}$]	
		Tryptophan [$\mu\text{g/L}$]	
		BT [$\mu\text{g/L}$]	
Measurement range		See table	
Detection limits		See table	
Measurement accuracy		\pm (5 % + Detection limit); Variation BT: \pm (10 % + Detection limit)	
Temperature compensation		No	
Turbidity compensation		No	
Data logger		No	
Reaction 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)	
		0 ... 5 V	
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 (\pm 10 %)	
Connection		SubConn 8-pin or fixed cable with M12 connector	
Required supervision		\leq 0.5 h/month typical	
Calibration/ maintenance interval		24 months	
Warranty		1 year (EU & USA 2 years)	
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	

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