NICO

15SXXXXXX

TriOS's new low-cost nitrate meter

Based on the device platform concept of TriOS sensors like OPUS, LISA and VIPER, TriOS introduces NICO: a low-cost UV photometer for the determination of nitrate. The four detection channels enable a precise optical determination of nitrate by absorption, taking into account turbidity and organic substances that pose a problem for many products currently on the market.

An internal temperature correction additionally increases stability of the measured values.

Equipped with our G2 interface with web browser configuration and internal data logger NICO includes features that are much more advanced than those of comparable devices available on the market.

The unified platform of all TriOS photometers also facilitates a standardized spare parts and consumables system, which allows the use of a wide range of accessories for our devices. Furthermore the cutting-edge G2 interface enables quick integration into third-party systems.

Benefits

- Proven UV-absorption method
- Without sampling and preparation of test samples
- Real-time sensor
- Without reagents
- Optical window with nano coating

Applications

- Sewage treatment plants
- Environmental monitoring
- Drinking water monitoring

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Technical Specifications

Measurement-technology	light source	Xenon flash lamp	
	detector	4 photo diodes + filter	
Measurement principle		Attenuation	
Optical path		0.3 mm, 1 mm, 2 mm, 5 mm, 10 mm, 50 mm	
Parameters		NO_3-N, NO_3, NO_x-N, NO_x (calibrated with NO_3 standard solution)	
Measurement range	1 mm path	0.5...60 mg/L NO_3-N	
	10 mm path	0.05...6 mg/L NO_3-N	
Measurement accuracy		± (5 % + 0.1 mg/L NO_3-N) with 10 mm path ± (5 % + 1 mg/L NO_3-N) with 1 mm path	
Turbidity compensation		Yes	
Data Logger		~ 2 GB	
Reaction time T100		20 s	
Measurement interval		≥ 10 s	
Housing material		Stainless steel (1.4571/1.4404) or titanium (3.7035)	
Dimensions (L x Ø)		~ 470 mm x 48 mm (10 mm path)	~ 18.5" x 1.9" (with10 mm path)
Weight	stainless steel	~ 3 kg	~ 6.6 lbs
	titanium	~ 2 kg	~ 4.4 lbs
Interface	digital	Ethernet (TCP/IP)	
		RS-485 (Modbus RTU)	
Power consumption		≤ 7 W	
Power supply		12...24 VDC (± 10 %)	
Required supervision		Typically ≤ 0.5 h/month	
Calibration/maintenance interval		24 months	
System compatibility		Modbus RTU	
Warranty		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 flow unit	1 bar, 2...4 L/min	~ 14.5 psig at 0.5 to 1.0 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 to 33 fps

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