

OPUS aero

12SXXXXXX



OPUS aero is the new generation of spectral sensors for online measurement of nitrate and nitrite in wastewater aeration tank. By analyzing a complete spectrum, OPUS aero is able to provide reliable readings for either NO₃-N only or NO₃-N and NO₂-N, depending on the calibration.

OPUS features the new TriOS G2 interface, allowing fast and easy configuration of sensors by using

a web browser. Integration into existing process control systems and external data loggers has never been easier.

WiFi connectivity allows laptops, tablets or smartphones to be easily used for control without any special application software or app installation.

Benefits

- Without sampling and preparation of test samples
- Real-time sensor
- Without reagents
- Optical window with nano coating
- Pre-installed application calibration

Applications

- wastewater aeration tank

Path (mm)	Nitrate N-NO ₃	Nitrite N-NO ₂
0,3	2.4...120	4.4...220
1	0.7...36	1.3...67
2	0.35...18	0.65...33.5

Technical Specifications

Measurement technology	light source	Xenon flash lamp	
	detector	High-end miniature spectrometer	
		256 Channels	
		200 to 360 nm	
		0.8 nm/pixel	
Measurement principle		Attenuation, spectral analysis	
Optical path		0.3 mm, 1 mm, 2 mm	
Parameter		Nitrate NO ₃ -N or Nitrate NO ₃ -N+Nitrite NO ₂ -N	
Measuring range		See parameter list	
Measurement accuracy		± (5 % + 0.1)	
Turbidity compensation		Yes	
Data logger		~ 2 GB	
T100 response time		2 min	
Measurement interval		≥ 1 min	
Housing material		Stainless steel (1.4571/1.4404)	
Dimensions (L x Ø)		~ 470 mm x 48 mm	~ 18.5" x 1.9"
Weight	stainless steel	~ 3 kg	~ 6.6 lbs
Interface	digital	Ethernet (TCP/IP)	
		RS-232 or RS-485 (Modbus RTU)	
Power consumption		≤ 8 W	
Power supply		12...24 VDC (± 10 %)	
Maintenance effort		≤ 0.5 h/month (typical)	
Calibration/maintenance interval		24 months	
System compatibility		Modbus RTU	
Warranty		1 year (EU: 2 years)	USA: 2 years
Max. pressure	with fixed cable	3 bar	~ 43.5 psig
	in FlowCell	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 fps to 33 fps