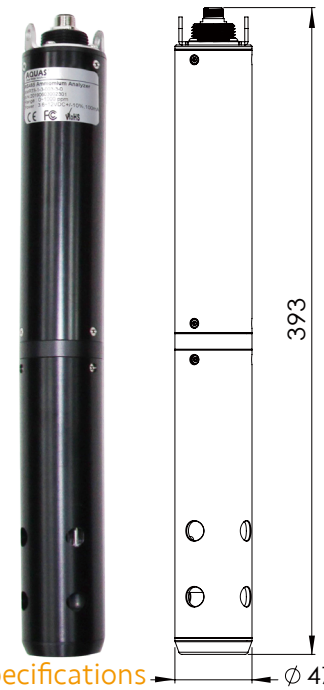
ISO9001 Certification

AQUAS
Simple. Reliable. Intelligent.

Digital
SMR21 Nitrate Analyzer



The Nitrate (NO_3-N) Analyzer is connected directly via RS485 communication interface, providing simple, reliable, cost-saving process data with remote monitoring, calibration, configuration and diagnostics capabilities.
Housing in a robust IP68 proof enclosure, 1500 N tensile strength Kevlar reinforced cable, up to 1.2 km digital data transmission, the transmitter is ideally used in water/wastewater industry.

Typical Applications

Drinking water, water treatment, wastewater, fishery

Measurement Method

The ion selective electrode continuous measurement of nitrate is carried out with specific membrane that is selective of nitrate. That membrane creates charge seperation between the water surrounded electrode and internal filling solution. The charge is measured as a voltage that changes the concentration in the water adjacent the membrane. Compared with the traditional colorimetric method, there are many advantages such as fast response time, more accurate, easier and no reagents used.

Advantages

- All-in-One Compact Endosure, Built-in Transmitter and Sensors
- Robust IP68 Water Submersible Enclosure, Protection
- Plug & Play, On- line Realtime Measurement
- Ultra Low Power Consumption, Ideal for Outdoor Applications
- 1500 N Tensible Strength Kevlar Reinforced Cable
- Temperature and Chloride Compensation
- Surge Protection for Power and RS485 Communication
- RS485 Digital Communication, Minimize Cabling and Engineering Cost
- Standard Modbus RTU Protocol, Direct Connected with PLC, HMI
- Very Stable Electrodes Over 18 Months Long Period of Life
- Metal Membrane of Electrode to Prevent Scratch
- Electrode Lifetime is up to 18 Months
- Auto Cleaning Wiper, Almost No Maintenance
- Onboard memory allowing users easily calibrate and configure sensor at lab and distribute to various fields sites
- Software Tool for Data Monitoring, Calibration , Configuration and Diagnosis

Specifications

► General
• Output Signal: RS485 (Modbus RTU protocol), 19,200 bps, 8 data bits, no parity, 1 stop bit; 4~20 mA (optional)
• Data Resolution: 16 bits (0.001% FS)
• Surge Protection: 4000 V DC
• Power: 5~12 V DC, 20 mA(SMR21-1); 60 mA(SMR21-2)
• Protection: polarity, overload, short circuit
• Safety: CE, FCC

Type	Ion selective electrode
Measurement range	0~1,000 mg/L
Accuracy	±5% measured value ±0.5 mg/L
Resolution	0.01 mg/L
Repeatability	±3% measured value ±0.5 mg/L
Operation pH	pH 4~11
Operating pressure	Max. 0.2 Kgf/cm²
Operating Temperature	0 ~ 40 °C
Process flow rate	0.1~10 m/s
Response time	1 sec
Protection	IP68
Temperature	
Sensor	NTC 10 K
Measurement range	0~40 °C
Accuracy	±0.5 °C
Resolution	0.01 °C
Repeatability	0.1 °C
Chloride	
Measurement range	0~1,000 mg/L
Accuracy	±5% measured valie ±0.5 mg/L
Resolution	0.01 mg/L
Repeatability	±3% measured valie ±0.5 mg/L
Process	M26 x 1.5
Housing	POM
Dimension	Φ 47x393 mm
Weight	Nitrate analyzer: approx. 1.5 Kg; Nitrate and chloride analyzer: approx. 1.8 Kg; cable: 80 g/m

Ordering

SMR21 - 2 - □ - □□□ - 3 - 0 - □

Sensor
- Temperature — 1
- Chloride+Temperature — 2

Cable Length (m)
- 5 — 005
- 10 — 010
- Custom — 001~999

Cable Type
- PUR — 3

Housing
- POM — 0

Wiper
- None — 0
- Built-in — 1

Optionals

Order	Description
PRO	Controller
ECO	Logger
ARK	Water Quality Monitoring Buoy
FLO	Open Channel Flow Meter
PRV	PRV Controller
AWS	Automatic Water Sampler
HMI	Multiparameter Controller
PAD	Handheld Meter
SFC	Flow Chamber
CAB06	Configuration Cable (1.5 m, USB interface)
CAB12	RS485 Cable (1 to 2 ports)
PIM	Pipe Mounting
SAO02	Analog Output Module (RS485 to 4~20 mA, 2 channels)

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