

SMR21 Nitrate (NO₃-N) Analyzer

RS485 Communication. All-in-One Compact Housing. Explosive Proof.

The Nitrate (NO₃-N) Analyzer is connected directly via RS485 communication interface, providing simple, reliable, cost-saving process data with remote monitoring, calibration, configuration and diagnostic 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.

Advantages

- All-in-One Compact Endosure, Built-in Transmitter and Sensors
- Robust IP68 Water Submersible Protection, Directly Installed in the Field, No Cabinet Required
- 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, without Frequent Calibration
- Metal Membrane of Electrode to Prevent Scratch
- Electrode is over 12 Months Long Period of Life
- Auto Cleaning wiper, Less Maintenance
- Onboard Memory Allowing Users Easily Calibrate and Configure Sensor at Lab and Distribute to Various Fields and Sites
- AQCFG Software Tool for Data Monitoring, Calibration, Configuration and Diagnosis
- IECEx/ATEX Ex ia IIB T5 Ga Explosive Proof Certification

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 separation 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.

Installation

Submersible, flow through, pipe insertion



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	1,500 VDC
Power	5~12 VDC, 300 mA
Protection	Polarity, Overload, Short circuit
Safety	CE, FCC
Nitrate	
Type	Ion selective electrode
Measurement Range	0.1~100/1,000 mg/L, auto range
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 Kg/cm ²
Operating Temperature	0~40 °C
Process Flow Rate	0.1~4 m/s
Response Time	2 min (90%)
Protection	IP68
Connection	1"-11 PT; M16 plug fixed cable, M12 connector, 5 pin
Housing Material	POM
Cable	Kevlar reinforced PUR cable, 1500N tensile strength
Dimensions	ø 60X383 mm
Weight	analyzer: approx. 150 g ; cable: 80 g/m
Chloride	
Measurement range	0.1~1,000 mg/L
Accuracy	±5% measured value ±0.5 mg/L
Resolution	0.01 mg/L
Repeatability	±3% measured value ±0.5 mg/L
Temperature	
Sensor	Pt1000
Measurement Range	0~40 °C
Accuracy	± 0.1 °C
Resolution	0.01 °C
Repeatability	0.1 °C

Ordering Codes

Ordering Codes

SMR21 - 2 - 2 - 005 - 3 - 0 - 1 - □ - □

Sensor

Chloride+Temperature

Cable Length (m)

5

Cable Type

PUR

Housing

POM

Wiper

Built-in

Wire Connection

Bare Wire

0

M12 Connector

1

Explosive Proof

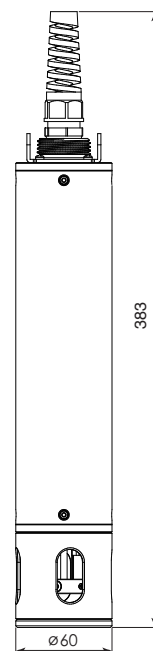
None

0

Certificated

1

Dimensions



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