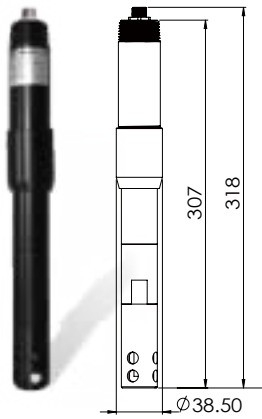


# SMR23

## RS485 Communication Ammonium (NH<sub>4</sub>-N) Analyzer



Ammonium Analyzer

The Ammonium (NH<sub>4</sub>-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

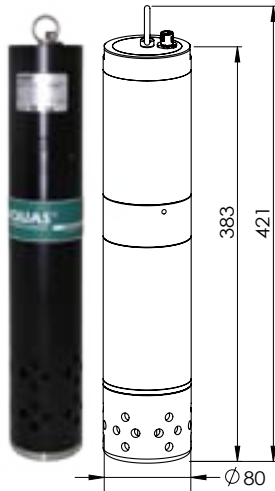
Drinking water, water treatment, wastewater, fishery

### Measurement Method

The ion selective electrode continuous measurement of nitrate is carried out with specific membrane that is selective of ammoniumion. 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.

### Advantages

- Robust IP68 Water Submersible Enclosure, Solution Without Cabinet
- On-line Realtime Measurement
- Ultra Low Power Consumption, Ideal for Outdoor Applications
- Temperature, pH and Potassium Compensation
- High Reliability, Drift Free
- Surge Protection for Power and RS485 Communication
- 1.2 Km RS485 Digital Communication, Minimize Cabling and Engineering Cost
- Software Configuration Calibration and Data Monitoring
- Standard Modbus RTU Protocol, Direct Connected with PLC, HMI, Eliminate I/O Module Cost
- Onboard memory allowing users to easily calibrate and configure sensor at lab and distribute to various fields sites



Ammonium and Potassium Analyzer

## 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: 3.6~12 V DC ±10%, 20 mA(SMR23-1); 60 mA(SMR23-2)
- Protection: polarity, overload, short circuit
- Safety: CE, FCC

Type	Ion selective electrode
Measurement range	SMR23-1: 0~1000 mg/L SMR23-2: 0~100 mg/L SMR23-3: 0~10 mg/L
Accuracy	±5% of reading ±0.2 mg/L
Resolution	0.01 mg/L
Repeatability	±5% of reading ±0.2 mg/L
Operation pH	pH 4~10
Operating pressure	Max. 3 Kg/cm <sup>2</sup>
Operating Temperature	0 ~ 50 °C
Process flow rate	0.1~10 m/s
Response time	<2 min (90%)
Protection	IP68
Temperature sensor	PT100
Temperature measurement range	0~50 °C
Temperature accuracy	±0.5 °C; ±0.1 °C(optional)
Potassium Sensor	
Measurement range	0~10/100/1,000 mg/L
Accuracy	±5% of reading ±0.2 mg/L
Resolution	0.01 mg/L
Repeatability	±5% of reading ±0.2 mg/L
pH Sensor	
Measurement range	0~14 PH
Accuracy	±0.05 PH
Resolution	0.01 PH
Repeatability	±0.02 PH
Process connection	M26 x 1.5
Housing	POM
Dimension	Ammonium analyzer: Φ38.5x318 mm Ammonium and potassium analyzer: Φ80x383 mm
Weight	Ammonium analyzer: approx. 180 g; Ammonium and potassium analyzer: approx. 450 g; cable: 80 g/m



## Ordering

### Type

Refer to the table

### Sensor

- Temperature \_\_\_\_\_ 1
- pH+Temperature \_\_\_\_\_ 2
- Potassium+pH+Temperature \_\_\_\_\_ 3

### Cable Length (m)

- 0 \_\_\_\_\_ 000
- 3 \_\_\_\_\_ 003
- 5 \_\_\_\_\_ 005
- 10 \_\_\_\_\_ 010

### Cable Type

- None \_\_\_\_\_ 0
- PUR \_\_\_\_\_ 3

### Housing

- POM \_\_\_\_\_ 0

## Optionals



Order	Description
PRO	Wireless Controller
ECO	Wireless Logger
ARK	Water Quality Monitoring Buoy
FLO	Open Channel Flow Meter
PRV	Wireless PRV Controller
AWS	Automatic Water Sampler
HMI	Multiparameter Controller
PAD	Handheld Meter
SFC	Flow Chamber
CAB06	Configuration cable (1.5 m, USB interface)
CAB12	2 ports RS485 cable
CAB16	4 ports RS485 cable
PIM02	Pipe mounting
SAO01	Analog output module(4~20 mA, 1 channel)

Specification and product information contained herein are subject to change without notice. Performance varies depending on hardware, software and overall system configuration. Warranty and RMA policy varies with countries, please check with your local distributors or visit [www.aquas.com.tw/en](http://www.aquas.com.tw/en)



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