

# SMR04 pH Analyzer

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

The pH 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 Housing, Built-in Transmitter and Sensors
- Replaceable Electrode, Standard M12 Connector
- Robust IP68 Water Submersible Protection, Directly Installed in the Field, No Cabinet Required
- Reference Cell Features a Double Junction Design for Extended Service Life to Reduce Maintenance Time and Cost
- Epoxy Electrode to Ensure Durability and Long Term Monitoring
- Plug & Play, On-line Realtime Measurement
- Ultra Low Power Consumption, Ideal for Outdoor Applications
- 1500 N Tensile Strength Kevlar Reinforced Cable
- Temperature 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
- 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

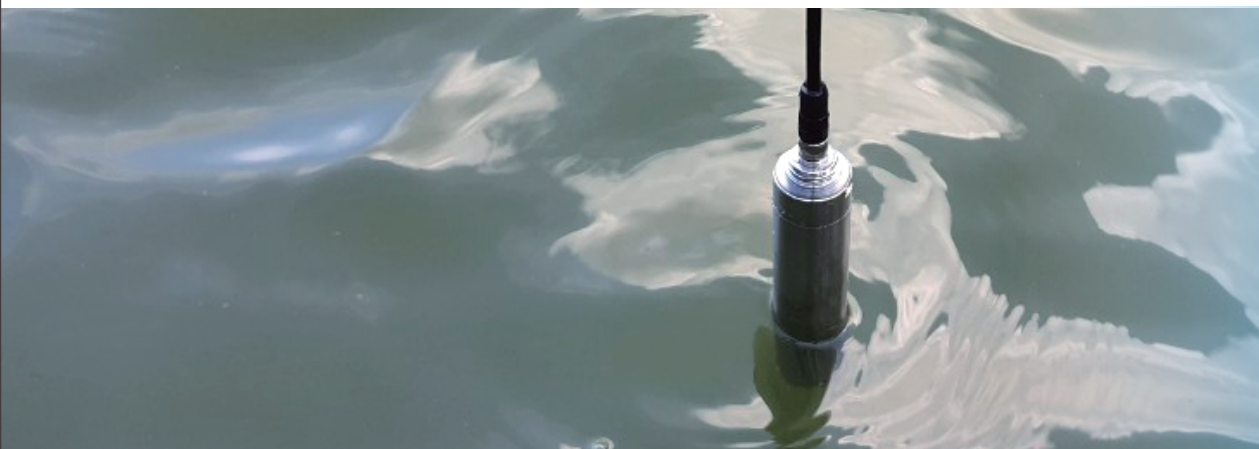
Drinking water, surface water, groundwater, industry, water treatment, wastewater

## Measurement Method

The analyzer complies with BS 2586:1979 and BS EN 60746-2: 2003 which consists of a pH electrode, a signal-amplifier, and a reference electrode. The pH sensing electrode acts as a transducer that generates and transmits different levels of voltage based on the concentrations of free hydrogen ions in water. The amplifier increases the signal so that it can be measured. The isolated reference electrode produces a baseline signal that is compared to the response from the active pH electrode, generating pH measurement.

## Installation

Submersible, flow through, pipe insertion



## Specifications

<b>General</b>	
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 VDC
Power	5~12 VDC, 75 mA
Protection	Polarity, Overload, Short circuit
Safety	CE, FCC
<b>pH</b>	
Measurement Range	0~14 pH
Accuracy	±0.1 pH
Resolution	0.01 pH
Repeatability	±0.01 pH
Operating Pressure	Max. 6 Kgf/cm <sup>2</sup>
Operating Temperature	0~80 °C
Process Flow Rate	Min. 0.1 m/s
Response Time	1 sec
Protection	IP68
Connection	3/4"-14 PT; 5-pin M12 plug
Housing Material	POM
Electrode Material	Glass
Dimensions	ø 36 X 338 mm
Weight	analyzer: approx. 150 g ; cable: 80 g/m
<b>Temperature</b>	
Sensor	Pt1000
Measurement Range	0~60 °C
Accuracy	± 0.1 °C
Resolution	0.01 °C
Repeatability	0.1 °C

## Ordering Codes

### Ordering Codes

SMR04 - □ - 1 - 005 - 3 - 0 - 0 - □ - □

#### Type

Glass ————— 3  
Epoxy ————— 4

#### Sensor

Temperature —————

#### Cable Length (m)

5 —————

#### Cable Type

PUR —————

#### Housing

POM —————

#### Wiper

None —————

#### Wire Connection

Bare Wire ————— 0  
M12 Connector ————— 1

#### Explosive Proof

None ————— 0  
Certificated ————— 1

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