AQUAS
Simple. Reliable. Intelligent.

SMR05
ORP Analyzer

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

The ORP 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
- Replaceable Electrode, Standard M12 Connector
- All-in-One Compact Housing, Built-in Transmitter and Sensors
- 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 Tensible Strength Kevlar Reinforced Cable
- 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 sensing device consists of an ORP electrode, a signal amplifier, and a reference electrode. The ORP sensing electrode acts as a transducer that generates and transmits different levels of voltage based on the ORP 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 ORP electrode, generating ORP measurement.

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	4000 VDC
Power	5~12 VDC, 75 mA
Protection	Polarity, Overload, Short circuit
Safety	CE, FCC
ORP	
Measurement Range	-1,500~1,500 mV
Accuracy	±5 mV
Resolution	0.1 mV
Repeatability	±0.5 mV
Operating Pressure	Max. 6 Kgf/cm²
Operating Temperature	0~60 °C
Process Flow Rate	Min. 0.1 m/s
Response Time	3 secs
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

Ordering Codes

Ordering Codes: SMR05 - □ - 0 - 005 - 3 - 0 - 0 - □ - □

- Type
  - Glass — 3
  - Epoxy — 4
- Sensor
  - None — 0
- Cable Length (m)
  - 5 — 005
- Cable Type
  - PUR — 3
- Housing
  - POM — 0
- Wiper
  - None — 0
- Wire Connection
  - Bare Wire — 0
  - M12 Connector — 1
- Explosive Proof
  - None — 0
  - Certificated — 1

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