

SMR44 COD Analyzer

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

The Chemical Oxygen Demand (COD) 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
- 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 Tensile 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
- Sapphire Glass Windows to Prevent Scratch
- Innovative Nano Coating to Remain Window Clean
- Auto Cleaning Wiper, Less Maintenance
- Dual Beam Light and Temperature Compensation
- Suspended Solids Measurement and Compensation
- 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, industry, water treatment, wastewater

Measurement Method

The analyzer consists of an UV 254 nm light source, a sample cell, and a light detector (photo detector). Incident light is absorbed by the sample, and the light is measured by the detector. The value depends on the amount of absorbance in the sample. The transmitter uses a long life LED and the 180° light method in accordance with International standard to assure accurate measurement values. An automated mechanical wiper is to remain surface clean and remove air bubbles of the optical window in order to maximize the accuracy and minimize the maintenance requirement.

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 400 mA (SMR44-1~4, 6) ; 12 VDC±10%, 500 mA (SMR44-5) |
| Protection | Polarity, Overload, Short circuit |
| Safety | CE, FCC |
| COD | |
| Measurement Range | SMR44-1 (20 mm) : 0~200 mg/L ; SMR44-2 (5 mm) : 0~1,000 mg/L ; SMR44-3 (1 mm) : 0~3,000 mg/L ; SMR44-4 (0.3 mm) : 0~7,000 mg/L ; SMR44-5 (1 mm) : 0~30,000 mg/L ; SMR44-6 (100 mm) : 0~20 mg/L |
| Accuracy | ±5% in standard solution(0~15,000 mg/L); ±10% in standard solution(15,000~30,000 mg/L) |
| Resolution | 0.01 mg/L |
| Repeatability | ±3% in standard solution |
| Light Source | LED 254 nm (SMR44-1~4, 6); Xenon flash lamp (SMR44-5) |
| Beam Angle | 180° |
| Light Path Length | 0.3, 1, 5, 20 mm |
| Process Flow Rate | Max. 3 m/s |
| Operation Pressure | Max. 10 Kgf/cm ² |
| Operating Temperature | 0~50 °C |
| Response Time | 3 secs |
| Protection | IP68 |
| Connection | 1"-11 PT; M16 plug fixed cable, M12 connector, 5 pin |
| Housing | SS316L; Titanium |
| Cable | Kevlar reinforced PUR cable, 1500N tensile strength |
| Dimensions | SMR44-1: ø 50X305 mm ; SMR44-2: ø 50X290 mm ; SMR44-3: ø 50X287 mm ; SMR44-4: ø 50X286 mm ; SMR44-5: ø 68X443 mm ; SMR44-6: ø 50X385 mm |
| Weight | analyzer: approx. 1 Kg; (SS316L); 0.8 Kg (Titanium); Cable: 80 g/m |
| Suspended Solids | |
| Measurement Range | SMR44-1 (0~200 mg/L) ; SMR44-2 (0~1,000 mg/L) ; SMR44-3 (0~3,000 mg/L) ; SMR44-4 (0~7,000 mg/L) ; SMR44-5 (0~30,000 mg/L) ; SMR44-6 (0~20 mg/L) |
| Accuracy | ±5% measured value |
| Resolution | 0.01 mg/L |
| Repeatability | ±3% measured value |

Ordering Codes

Ordering Codes

SMR44 - □ - 3 - 005 - 3 - □ - 1 - □ - □

Measurement Range(mg/L)

| | |
|----------|---|
| 0~200 | 1 |
| 0~1,000 | 2 |
| 0~3,000 | 3 |
| 0~7,000 | 4 |
| 0~30,000 | 5 |
| 0~20 | 6 |

Sensor

Suspended Solids (SS)+Temperature

Cable Length (m)

5

Cable Type

PUR

Housing

SS316L 1
Titanium 2

Wiper

Built-in

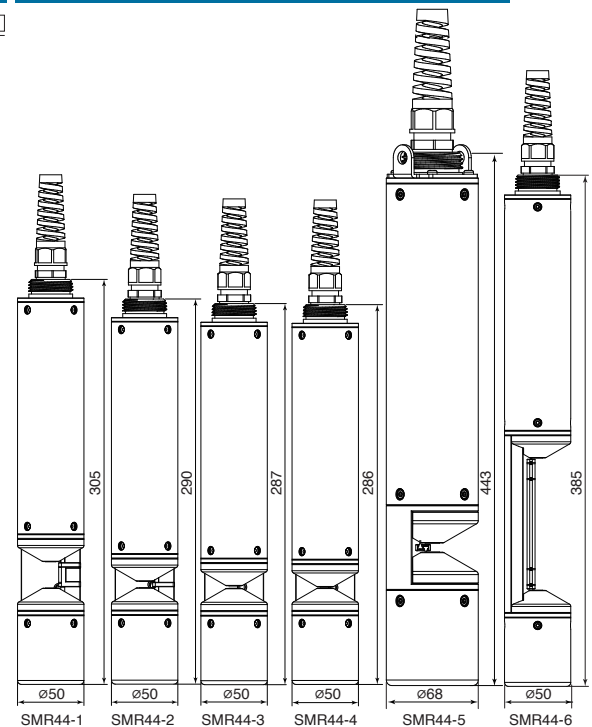
Wire Connection

Bare Wire 0
M12 Connector 1

Explosive Proof

None 0
Certificated 1

Dimensions



All performances are subject to the actual performance of the products sold by the company in the market, and are only applicable to the products of the company's brand sold by the company or its designated distributors. All the above data are from the internal test of Kaifa Water Resources, and the data may be biased due to different test environments. The manufacturer reserves the right to make changes to product performance, specifications, samples or designs without notice. All information has been carefully checked for accuracy. If there is any printing omission or there may be errors in translation, the company will not be responsible for the consequences.
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