

SMR12

Total Suspended Solids (TSS) Analyzer

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

The Total Suspended Solids 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 analyzer 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
- Innovative Nano Coating to Remain Window Clean
- 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

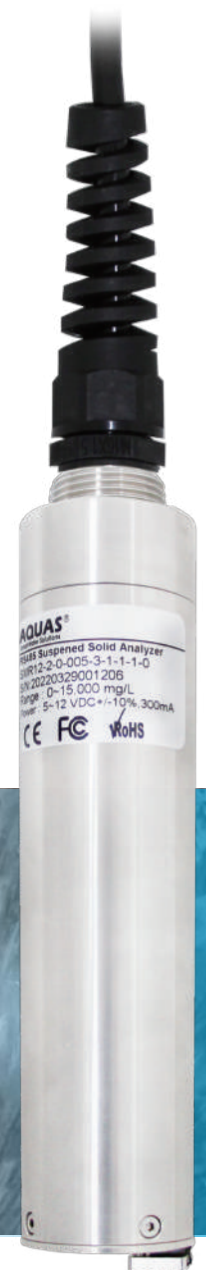
Drinking water, surface water, groundwater, industry, water treatment, wastewater

Measurement Method

The turbidity analyzer consists of a light source, a sample cell, and a light detector (photodetector). Incident light is scattered by the particles in the sample, and the scattered light is measured by the detector. The amount of scattering depends on the amount of material in the sample, the wavelength of light used and the size and composition of the suspended particles. The analyzer uses a long life near infrared LED (880 nm) and the 90° scattered light method which complies with DIN ISO 7027 or EPA method 180.1. An automated mechanical wiper is to remain surface clean and remove air bubbles from the optical window in order to maximize the accuracy and minimize the maintenance requirement.

Installation

Submersible, flow through, pipe insertion



Specifications

| | |
|-------------------------------|--|
| General | |
| Output Signal | Output Signal: RS485 (Modbus RTU protocol), 19,200 bps, 8 data bits, no parity, 1 stop bit; 4~20 mA |
| Data Resolution | 16 bits (0.001% FS) |
| Surge Protection | 1,500 VDC |
| Power | 5~12 VDC, 92 mA |
| Protection | Polarity, Overload, Short circuit |
| | This measuring device is a Nephelometric Turbidity Unit (NTU) according to ISO7027 (Formazin calibration solution) |
| Safety | CE, FCC |
| Total Suspended Solids | |
| Measurement Range | SMR12-2: 0~15/150/1,500/15,000mg/L ; SMR12-3: 0~150/1,500/15,000/50,000 mg/L (depending on sample), auto range |
| Accuracy | ±3% measured value (0~1,500 mg/L), ±5% measured value (1,500~50,000 mg/L) |
| Resolution | 0.001 mg/L |
| Repeatability | ±1% measured value |
| Light Source | LED 880 nm |
| Process Flow Rate | 0.1~10 m/s |
| Operating Pressure | Max. 10 Kg/cm ² |
| Operating Temperature | 0~60 °C |
| Response Time | 3 secs |
| Calibration Interval | Typical 24 months |
| Protection | IP68 |
| Electrical Connection | M16X1.5 plug fixed cable, M12 connector, 5 pin |
| Housing Material | SS316L; Titanium |
| Cable | Kevlar reinforced PUR cable, 1500N tensile strength |
| Dimensions | ø 22X130 mm (no wiper) ; ø 39X186.2 mm (with wiper) |
| Weight | analyzer: approx. 200g (SS316L) ; 400 g (Titanium) ; Cable: 80 g/m |

Ordering Codes

Ordering Codes

SMR12 - □ - 0 - □ - □ - 3 - □ - □ - □ - □ - □

Measurement Range(mg/L)

0~15,000 ————— 2
0~50,000 ————— 3

Sensor

None —————

Cable Length (m)

5 ————— 005
10 ————— 010
Custom ————— 001~999

Cable Type

PUR —————

Housing

SS316L ————— 1
Titanium ————— 2

Wiper

None ————— 0
Built-in ————— 1

Wire Connection

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

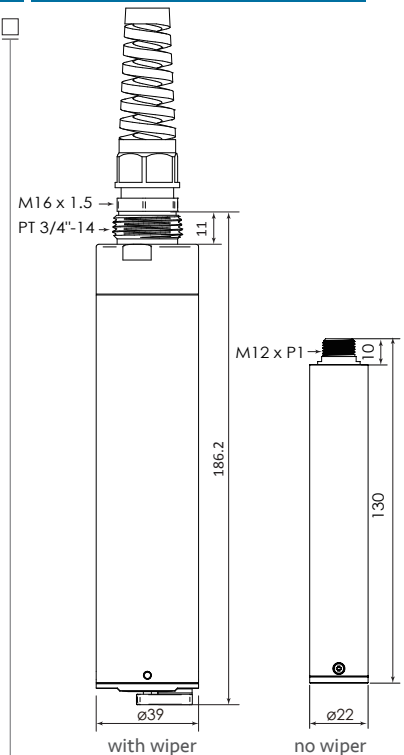
Explosive Proof

None ————— 0
Certificated ————— 1

Analog Output

None ————— 0
4~20 mA ————— 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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