AQUAS
Simple. Reliable. Intelligent.

SMR10
Turbidity Analyzer

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

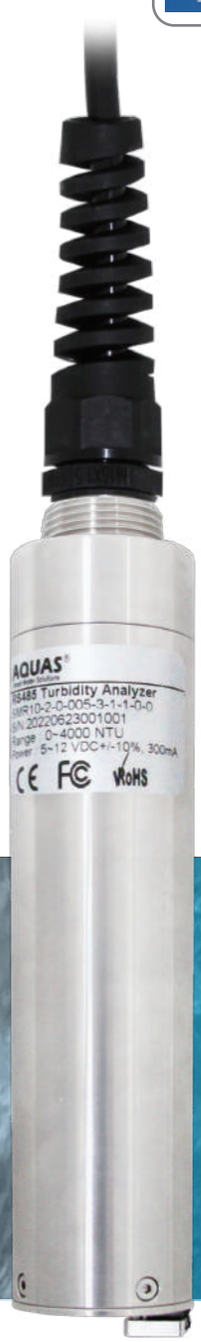
The Turbidity Analyzer is connected directly via RS485 communication interface, providing simple, reliable, cost-saving process data with remote monitoring, calibration, configuration and diagnostic capabilities. Housing in a robust IP68 proof enclosure, 1500 N tensile strength Kevlar reinforced cable, 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 (photo detector). 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 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	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	input: 5~12 VDC, 300 mA
Protection	Polarity, Overload, Short circuit
	This measuring device is a Nephelometric Turbidity Unit (NTU) according to ISO7027 (Formazin calibration solution)
Safety	CE, FCC
Turbidity	
Measurement Range	SMR10-2: 0~10/100/1,000/4,000 NTU (depending on sample), auto range SMR10-4: 0~10/100/1,000/4,000/10,000 NTU (depending on sample), auto range
Accuracy	±2% measured value (0~1,000 NTU) ; ±5% measured value (1,000~10,000 NTU)
Resolution	0.001 NTU
Repeatability	±1% measured value
Light Source	LED 880 nm
Process Flow Rate	Max. 3 m/s
Operating Pressure	Max. 10 Kgf/cm^2
Operating Temperature	0~60 °C
Response Time	3 secs
Protection	IP68
Connection	3/4"-14 PT; M16 plug fixed cable, M12 connector, 5 pin
Housing Material	SS316L; Titanium
Cable	Kevlar reinforced PUR cable, 1500N tensile strength
Dimensions	ø 39 X 265 mm
Weight	analyzer: approx. 500g (SS316L); 400 g (Titanium) ; Cable: 80 g/m

Ordering Codes

Ordering Codes: SMR10 - □ - 0 - 005 - 3 - □ - 1 - □ - □

Measurement Range(NTU)
- 0~4,000 — 2
- 0~10,000 — 4

Sensor
- None

Cable Length (m)
- 5

Cable Type
- PUR

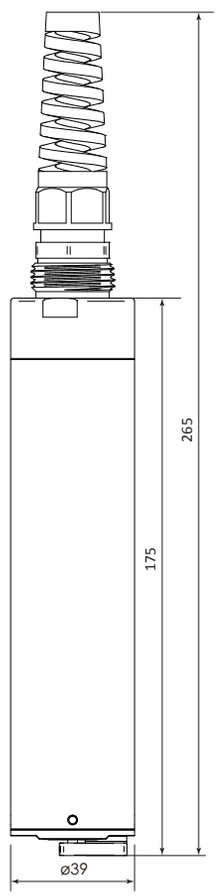
Housing
- SS316L — 1
- Titanium — 2

Wiper
- Built-in

Wire Connection
- Bare Wire — 0
- M12 Connector — 1

Explosive Proof
- None — 0
- Certificated — 1

Dimensions



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