

COD WATER QUALITY MONITORING / DATA SHEET

SS306-01-4G

Self-Cleaning COD Transmitter

4G COD transmitter for continuous UV-absorption measurement, automatic cleaning and remote water-quality monitoring.

Overview

- SS306-01-4G measures chemical oxygen demand (COD) using dual-wavelength ultraviolet absorption without chemical reagents.
- The integrated self-cleaning system reduces biofouling, with automatic temperature and turbidity compensation for field stability.
- Measured data can be uploaded over 4G to a customer server or cloud platform for web, desktop and mobile access.



COD Range 0–500 mg/L	Turbidity 0–200 NTU	Protection IP68	Upload 4G
Key Advantages • Reagent-free dual-wavelength UV absorption. • Integrated self-cleaning against biofouling. • Automatic turbidity and temperature compensation. • Wide 12–30 VDC supply and low data traffic.		Application Scenarios • Wastewater treatment. • Aquaculture water monitoring. • Environmental water-quality networks. • Industrial process-water monitoring.	

MEASUREMENT PRINCIPLE

Measurement Principle

OPTICAL MEASUREMENT

Dual-wavelength ultraviolet absorption with a modulated optical signal, automatic turbidity compensation, temperature compensation and integrated self-cleaning. The COD range is specified as 0–500 mg/L equiv. KHP.

SYSTEM DATA

Technical Specifications

Item	Specification
Power Supply	DC 12–30 V
Typical Power Consumption	≤0.8 W normal; ≤1.5 W during self-cleaning
Communication / Upload	4G
Measurement Principle	Dual-wavelength ultraviolet absorption
COD Measurement Range	0–500 mg/L equiv. KHP
Turbidity Measurement Range	0–200 NTU
COD Measurement Accuracy	±5% FS equiv. KHP at 25 °C
Turbidity Accuracy	±5% FS at 25 °C
COD Resolution	0.1 mg/L
Turbidity Resolution	0.1 NTU
Temperature Resolution	0.1 °C
Temperature Accuracy	±0.5 °C
Repeatability	±1% FS equiv. KHP at 25 °C
Response Time	≤20 s

Item	Specification
Operating Conditions	0–40 °C
Ingress Protection	IP68
Flow Velocity	<3 m/s
Pressure Resistance	<0.1 MPa
Data Upload Interval	Default 60 s; 1–65535 s configurable
Data Acquisition Interval	2 s
Cable Length	5 m by default; custom length available
Housing Material	Corrosion-resistant plastic and stainless steel
Recommended Calibration / Maintenance	Every 3 months
Self-cleaning System Life	About 18 months; depends on cleaning frequency

NETWORK & CONFIGURATION

4G Data and Configuration

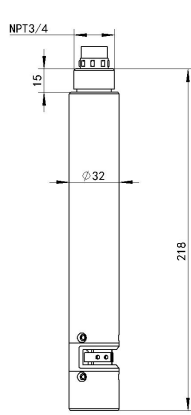
The 4G interface can upload data to the SpeSense cloud platform, a local monitoring platform or a customer server. The target address, port, upload interval and first-upload delay are configurable. Bluetooth configuration is supported through the mobile configuration tool; the default operation password is 12345678.

Parameter	Source-specified setting
Target address / port	Customer server or platform address and port
Upload interval	1–65535 s; default 60 s
First upload delay	Configurable after power-on
Configuration	Bluetooth mobile configuration tool

MECHANICAL DATA

Dimensions and Installation

The controller enclosure is supplied in a compact wall-mount housing. The probe uses an NPT3/4 threaded connection and is designed for submerged installation.

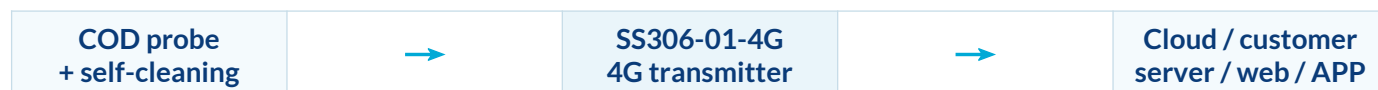
 Controller enclosure: 117 × 87 × 43 mm max	 Probe: 218 mm length; Ø32 mm; NPT3/4
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INSTALLATION NOTE

Install the probe in water without bubbles; horizontal placement is preferred. Keep the probe no more than 2 m below the water surface and at least 0.3 m below the minimum water level. Avoid impact, excessive flow and cable tension.

COMMUNICATION

4G Communication Path



The supplied topology supports remote data collection and platform-based monitoring. Use the configured target address and port for a customer server, or select the SpeSense cloud service for hosted access.

INSTALLATION & OPERATION

Installation and Maintenance Notes

- Connect a stable 12–30 VDC supply and allow 1–3 minutes before checking uploaded data.
- Fix the controller enclosure with the supplied expansion plugs and screws; protect it from direct sunlight and mechanical impact.
- Keep the optical window free of bubbles, oil film and scale. Rinse with tap water and wipe only with a soft, wet cloth; do not scratch or touch the window.
- Check the self-cleaning brush regularly. Do not force the brush shaft; return the unit for moving-seal service after about 18 months, adjusted for actual cleaning frequency.
- Calibrate before use; a three-month calibration interval is recommended and may be adjusted for the application environment.
- Lock the cable connectors before placing the probe in water. If readings are unstable or abnormal, inspect and clean the measurement window first.

SERVICE & SUPPORT SUMMARY

The source manual specifies a 12-month warranty under normal use and lifetime repair service. SpeSense support covers product selection, 4G target configuration, platform integration and routine maintenance.

ORDERING INFORMATION

Product Selection

Code	Description
SS306-01-	Product model
4G	4G data upload
C500	COD range 0–500 mg/L equiv. KHP
T200	Turbidity range 0–200 NTU
5M	5 m cable, default length
S18	Self-cleaning system, about 18-month service life

CONTACT / SUPPORT

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