

COD WATER QUALITY MONITORING / DATA SHEET

SS306-01-WIFI

Self-Cleaning COD Transmitter

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

Overview

- SS306-01-WIFI 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 Wi-Fi 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 WIFI
Key Advantages • Reagent-free dual-wavelength UV absorption. • Integrated self-cleaning against biofouling. • Automatic turbidity and temperature compensation. • Wide 9–30 VDC supply and configurable Wi-Fi upload interval.		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 9–30 V
Typical Power Consumption	≤1 W normal; ≤1.7 W during self-cleaning
Communication / Upload	WIFI via 802.11b/g/n
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

Item	Specification
Repeatability	±1% FS equiv. KHP at 25 °C
Response Time	≤20 s
Operating Conditions	Probe: 0–40 °C; enclosure: –40–60 °C, 0–95% RH non-condensing
Ingress Protection	Probe IP68; enclosure IP65
Flow Velocity	<3 m/s
Probe Pressure Resistance	<0.1 MPa
Data Upload Interval	Default 10 s; 1–65535 s configurable
Data Acquisition Interval	2 s
Wi-Fi Parameters	802.11b/g/n
Security / Encryption	WEP, WPA-PSK or WPA2-PSK / WEP, TKIP or AES
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

WIFI Data and Configuration

The Wi-Fi interface uploads data over 802.11b/g/n to the SpeSense cloud platform, a local monitoring platform or a customer server. LAN communication, cross-gateway WAN access and DNS are supported. Static IP or DHCP, target address, port and upload interval are configurable; the default operation password is 12345678.

Parameter	Source-specified setting
Wireless interface	802.11b/g/n Wi-Fi; LAN and cross-gateway WAN supported
Target address / port	Local platform default port 2404; cloud platform default port 8020
IP mode	Static IP or DHCP; subnet mask and gateway supported
Upload interval	1–65535 s; default 10 s
Configuration	Bluetooth mobile configuration tool; device name WIFIOPEN + address

ORDERING INFORMATION

Product Selection

Code	Description
SS306-01-WIFI	Product model
WIFI	Wi-Fi 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

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.

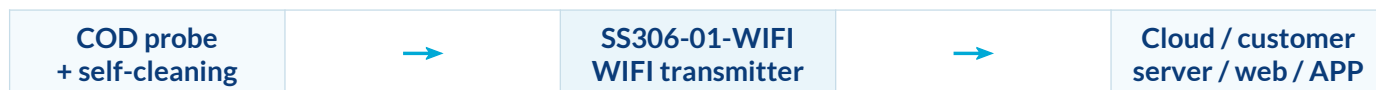


INSTALLATION NOTE

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

WIFI Communication Path



The supplied topology supports remote data collection and platform-based monitoring over Wi-Fi. 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 9–30 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, Wi-Fi network configuration, platform integration and routine maintenance.

CONTACT / SUPPORT

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