WATER QUALITY / DATA SHEET

SS314-01-4G

Chlorophyll Transmitter

Fluorescence measurement of chlorophyll concentration and relative fluorescence in water with temperature compensation and 4G data upload.



Overview

- Measures chlorophyll concentration from 0 to 400 µg/L.
- Fluorescence measurement supports online real-time monitoring.
- Sends readings over 4G to a cloud platform or customer server.

Maximum Range	Resolution	Power Supply	Upload
0–400 µg/L	0.1 µg/L	DC 10–30 V	4G

Key Advantages

- Filter algorithm reduces external-light interference.
- 2 s acquisition; 60 s default upload interval.
- Automatic temperature compensation.
- <25 MB monthly traffic at the default upload interval.
- IP68 probe and IP65 transmitter housing.

Application Scenarios

- Rivers, lakes and ponds.
- Marine surveys and aquaculture.
- Drinking-water sources.
- Algae and phytoplankton research.

SYSTEM DATA

Technical Specifications

Item	Specification
Model	SS314-01-4G
Measurement principle	Fluorescence
Range options	0–400 µg/L; 0–100 RFU
Measurement error	±5% FS at 25 °C
Response time	≤30 s
Resolution	0.1 µg/L; 0.1 RFU; temperature: 0.1 °C
Supply voltage	DC 10–30 V
Power consumption	0.6 W
Data upload	4G
Probe operating temperature	0–40 °C
Housing environment	−40 to +60 °C; 0–95% RH, non-condensing
Ingress protection	Probe: IP68; transmitter housing: IP65
Probe cable	5 m standard; 10 / 15 / 20 m customizable
Housing dimensions	117 × 87 × 43 mm maximum
Probe dimensions / thread	134 mm and 119 mm dimensions shown; Ø30 mm; NPT 3/4
Temperature error	±0.5 °C

Item	Specification
Data acquisition interval	2 s
Data upload interval	60 s default; configurable from 1 to 65535 s

MEASUREMENT DATA

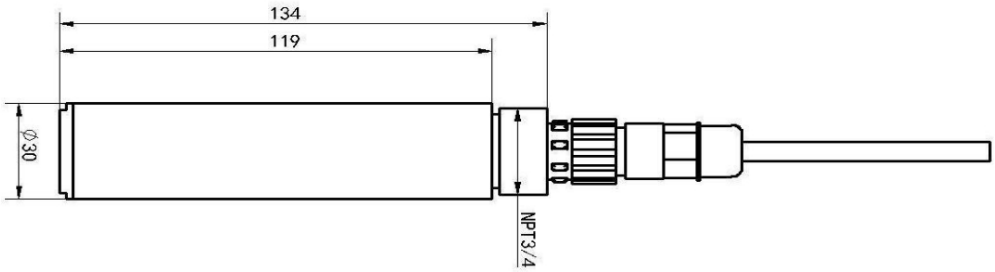
Measurement Conditions and Monitoring

Calibration condition	Requirement
Laboratory reference	Specified concentrations of Rhodamine B solution; published parameters derive from repeated laboratory measurements.
Relative fluorescence	RFU output supports analysis of fluorescence intensity versus chlorophyll concentration for the actual application. Built-in temperature measurement enables automatic compensation.

Ordering model: SS314-01-4G. Specify cable length (5 m standard; 10, 15 or 20 m customizable). The system includes the chlorophyll probe and wall-mounted 4G transmitter for centralized monitoring.

MECHANICAL DATA

Dimensions and Installation



Dimensions in millimetres: probe Ø30 mm, 134 mm and 119 mm dimensions as shown; NPT 3/4 mounting thread. Module housing: 117 × 87 × 43 mm maximum. Wall mounting spacing: 105 mm; use Ø5 mm holes with the supplied plugs and screws.

Install in slow-flowing, bubble-free water, at least 10 cm below the water surface while allowing for water-level changes. Maintain 5 cm clearance from surrounding walls and keep the 7 cm space beneath the probe free of obstructions. Route the cable through a waterproof support pipe and attach using the NPT 3/4 thread.

ELECTRICAL CONNECTION

Power Connection and Start Up

Connection	Instruction
Supply voltage	DC 10–30 V; supplied adapter: 12 V
Start up	Connect the adapter to the power input, then energize
Data availability	Wait 1–3 minutes, then view readings on the platform or receiving server

COMMUNICATION DATA

4G Configuration and Data Upload

Use the supplied Android configuration app with Bluetooth enabled. Scan for 4GMOD followed by the device address code and connect with default password 12345678. Read current parameters, edit the required settings and download them to the device. Read real-time data to check signal strength: values from 10 to 33 indicate weakest to strongest signal.

Set the target IP address or domain and receiving port (local software: 2404; cloud: 8020). Upload interval: 1–65535 s, default 60 s. The first network upload delay is configurable in seconds. Operation password: 1–8 numeric digits, default 12345678. Use the supplied development documentation for custom server integration.

Monitoring platforms: local software runs on a customer PC or server; the cloud option needs no customer server. Both offer web monitoring, limit alarms, email alerts, history export and permission management. Local SMS alerts require an additional SMS modem.

CALIBRATION & MAINTENANCE

Probe Cleaning and Calibration

Remove the black rubber protective cover before measurement. Clean probe deposits approximately every 30 days, adjusting frequency to the operating environment. Rinse with flowing water and wipe remaining dirt with a soft damp cloth. Avoid scratching the optical light-guiding surfaces.

Calibrate before each use and approximately every 3 months for long-term operation; adjust frequency for fouling and chemical deposits. Keep cable connectors out of water until fully locked. If an obvious fault occurs, contact technical support and do not open the device for repair.

Do not use this device as a safety device or emergency stop device, or in applications where equipment failure could cause personal injury. Read the operating instructions before installation, use or servicing.

Package contents: one chlorophyll transmitter, one chlorophyll probe, one 12 V power adapter, two expansion plugs, two self-tapping screws, certificate and warranty card. Warranty: 12 months for verified defects in materials or workmanship under normal use and maintenance.

CONTACT / SUPPORT

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