WATER QUALITY / DATA SHEET

SS313-01-ETH

Blue Green Algae Transmitter

Fluorescence measurement of blue-green algae concentration in water with temperature compensation and Ethernet data upload.



Overview

- Measures blue-green algae concentration from 0 to 300000 cells/mL.
- Fluorescence measurement supports online real-time monitoring.
- Sends readings over Ethernet to a cloud platform or customer server.

Maximum Range	Resolution	Power Supply	Upload
0–300000 cells/mL	1 cell/mL	DC 10–30 V	Ethernet

Key Advantages

- Filter algorithm reduces external-light interference.
- 2 s acquisition; 30 s default upload interval.
- Automatic temperature compensation.
- RJ45 interface; static IP, DHCP and DNS support.
- 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	SS313-01-ETH
Measurement principle	Fluorescence
Range options	0–300000 cells/mL
Linearity	R^2 >0.999; based on laboratory Rhodamine B tests
Resolution	1 cell/mL; temperature: 0.1 °C
Supply voltage	DC 10–30 V
Power consumption	0.6 W
Data upload	Ethernet; RJ45; TCP upload; static IP or DHCP; gateway and DNS support
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 pressure limit	<0.6 MPa
Probe cable	5 m standard; 10 / 15 / 20 m customizable

Item	Specification
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
Data acquisition interval	2 s
Data upload interval	30 s default; 1–60000 s in specification table; configuration section states 1–65535 s

MEASUREMENT DATA

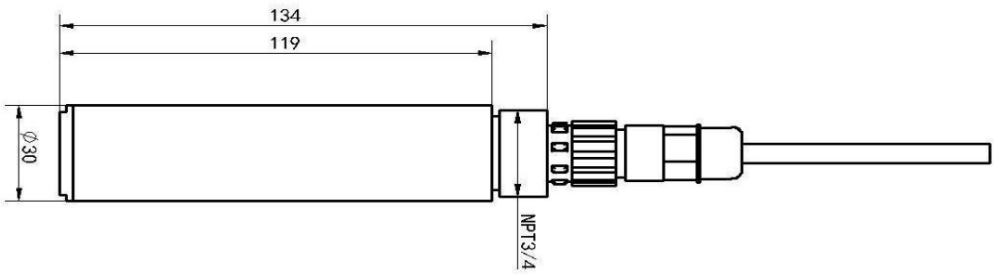
Measurement Conditions and Monitoring

Calibration condition	Requirement
Laboratory reference	Specified concentrations of Rhodamine B solution; published parameters derive from repeated laboratory measurements.
Monitoring conditions	Water turbidity below 50 NTU. Use multiple monitoring points because blue-green algae may be unevenly distributed.

Ordering model: SS313-01-ETH. Specify cable length (5 m standard; 10, 15 or 20 m customizable). The system includes the blue-green algae probe and wall-mounted Ethernet 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

Ethernet Configuration and Data Upload

Connect the RJ45 Ethernet port to the network. Use the supplied Android configuration app with Bluetooth enabled. Scan for ETHM followed by the device address, connect with default password 12345678, read parameters, edit settings and send them to the device. Read back to verify changes and use real-time data to check readings.

Set the receiving server public IP address or domain and matching listening port (default 8020). Select static IP or DHCP; for static IP, set the IP address, subnet mask and gateway. Upload interval defaults to 30 s; the configuration section gives 1–65535 s, while the specification table gives 1–60000 s. Confirm the supported upper limit before use. The unique 8-digit device address cannot be changed. Operation password: 1–8 numeric digits, default 12345678.

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 blue-green algae transmitter, one blue-green algae probe, one 12 V power adapter, two expansion plugs, two self-tapping screws, Ethernet cable, nylon protective net, 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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