



VIS4600CHPa

Chlorophyll-a Analyzer

Visible Fluorometer

Ref: VIS4600CHPA_DS_E

Indication of Water Nutrients and Alarm for Algae Blooms

- **Very low operating costs**
- **Simple Design__ Rugged and Less Maintenance**
- **Only Real Time Measurement Way for Chlorophyll-a**

Method of analysis

VIS4600CHPA is a new design continuous fluorometer to monitor Chlorophyll in water. and the principle is based on light **fluoresces of algae** when irradiated with light of a particular wavelength, it emits light of a certain wavelength.

These instruments induce chlorophyll to fluoresce by shining a beam of light of the proper wavelength into the sample, and then measuring the light strength at fluoresced wavelength. The emittance represents the content of algae and/or phytoplankton in water flow.

The VIS4600CHPA Chlorophyll Analyzer is designed with special light parth to reduce the interferences from turbidity by suspended particles. With professional working logic and intelligent physical arithmetic, a more reliable results is expected to test the concentration of algae.

When the VIS4600CHPA test room is full of water sample, the sensor detects the signal and the Processor calculated the concentration data, then display on the LCD and/or send out 0/4-20mA linear signal to other remote meter or control system.

Features

- Direct detector eliminates problems associated with sample pretreatment.
- Self-diagnostic functions continuously monitor analyzer's operation.
- Controlled constant lazer LED light source and optical filter employed
- Less maintenance
- Accurate calibration using stability check function and automatic temperature compensation.
- Simplified span check using built-in optical filter.
- Long life desgin
- Wide measurement range need not auto-range switching.

Advantages Over Conventional Instruments

- Very low operating costs
- Simple Design__
- *Direct detect*, Real Time Measurement

Products Model

- 1)Dip-VIS4600 CHPA. for submersion application
- 2)CLA-VIS4600 CHPA. for online pipe or pump sampling application. Ultra sonic auto-clearing function enhanced

Dip-VIS4600CHPA Description

Compact and lightweight construction possible. This also simplifies maintenance and allows the use of corrosion resistant reinforced plastic.

Portable instruments for fields test

Sample extraction style analysis can be performed by attaching a water tank receiver.

The VIS4600CHPA Chlorophyll Analyzer saved the filter and extraction process of formal analysis steps, but still hold very good repeatability for long time test.

It eliminates the need for reagents, on-line sampling and sample conditioning. The instrument also eliminates the labor, delay and risk of error during sample preparation for lab analysis. The VIS4600CHPA Analyzer's measurement process is direct, fully automated, and continuous.

Specifications for Dip-VIS4600CHPA Transducer Unit

Analyzer: Fluorometer for Chlorophyll-a Monitor

Measurement: Algae pollution in effluent.

Measurement method: Dual wavelength
Fluorometric

Measurement cell: Immersed cell

Physical unit: Fluorescence (% FS) or ug/L of chlorophyll.

Measurement range: 0~ 1000ug/L, 0~100mg/L

Ambient temperature: -5~40°C.

Sample temperature: 0~45°C (no freezing).

Built-in datalog: The measurements are dated and stored in a static memory with a capacity of more than 360 frames for hole year. 30s for days of present month; 24 frames for day, 60 frames for current hour.

Calibration standards

Zero solution: Zero calibration liquid such as distilled water.

Span solution: Known sample or dye.

Maintenance

Stirrer/agitator: to keep the water sample mixed in pot application

Interval manual brush of the optics

Ultra sonic spray system is by order

Output signals for measurement:

Selective of F or concentration

Output signals via communication:

Maintenance signal

Power supply

Low sample water signal

Light source lamp failure signal

In cleaning mode signal

Max measurement value alarm signal

lamp decay, dirty cell window, water leakage, detector decay

More information ruled by IEEE1451.2 STIM

Output Signal for Alarm and Control

Optoisolator : Isolation Source Voltage (Input-to-Output), $V_{ISO} < 1500V$

Continuous Collector Current, $I_C > 100mA$.

Input signals:

Power Supply for Submersion Unit: 12-24 V DC <200mA.

Power consumption: Approx. <1 VA.

Measurement cell: Quartz glass.

Contact materials: Plastic body.

Optional body material : Any user specified (for proper corrosion resistance).

Weight: Detector Approx. 6.8kg (not including cable weight).

Optional Transmitter Stand: Approx. 7kg (support stand (FRP) 9kg).

Transducer Connect Number: 1-247 (optional)

Configuration:

Available options for Dip_UV4600:

Independent Remote Installation: BD5 Rato-Station, with Chargeable Battery Box or Solar Battery System

Pipe application for Dip model: Sample Cap



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Distance: <1000m (Fluorometer to Controller, with wired wires)

Installation:

Transmitter: Self supporting stand (standard) or pole mounting.

Wiring Connection: Waterproof plug socket for 15dia cable x4.

Installation: Install away from vibration, shocks and corrosive vapors.

Air connection: Air purge facilities are available for the body of the transmitter.

Air pressure: 0.02 Mpa (0.2 kgf/cm²)

Submersion Depth: <70m

Installation Notes:

(1).For easier installation method, make the best use of Dip-VIS4600CHPA type's advantages, we suggest the hanging style configuration with two of 3.5mm chains (if this specification is selected, the detector will be provided with two eye bolts).

(2).In case of no wall around the guide pipe of the winch equipment, the transducer may rotate. In these situations, select pipes style to fix. The same is also applicable to fast moving stream applications.

Performance

Repeatability: < +/-10% FS.

Baseline drift:

Zero drift: < +/-2% FS/week..

Span drift: < +/-2 % FS/week.

Response speed: 90% response 30 seconds or less.

Options:

Components for modifications to 1000ug/L cell.

Components for modifications to 100mg/L cell.

Components for sample extraction style application.

p-BD4xm Water Analyzer

Remote operating controller for dip-VIS4600

Power Supply for p-BD4 Controller: 110/220 V AC +/-10% 50/60Hz.

Power consumption: MAX < 3VA.

Display: 4x20 LCD

Size: 160x160x350 (mm)

CLA VIS4600 Poces CHPA Analyzer

- Continuous liquid analyzer construction
- Auto maintenance system from online sampling application

Differences from the Dip model

- 1) Flow through, by flow, or pump sampling
- 2) Automatic acid solution cleaning system. A fully automated cleaning system prevents the measurement flow cell from becoming dirty, giving the analyser autonomy for several weeks without maintenance.
The cleaning solution (5% sulphuric acid) should be renewed once a month.
- 3) This system is more reliable than dip type.



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