



# PhycoSens

## Online determination of algae classes, chlorophyll and phycocyanin concentrations as well as photosynthetic activity

The bbe PhycoSens\* is deployed in measuring stations and laboratories in which **online measurement of water quality** is required for rivers, reservoirs, dams and lakes as well as in drinking water production.

The instrument impresses due to its rapid analysis of chlorophyll and unbound phycocyanin (free PC) concentrations. The free colour pigments of the cyanobacteria are an important **indicator for cyanotoxins as well as flavours and odorous substances** in raw water. The online device can also measure the photosynthetic activity of microalgae and the transmission. The detection of different algal classes by excitation with coloured LEDs distinguishes this measuring instrument from its competitors. Part of the analysis is a yellow substances (CDOM) measurement to adjust the calculation of the total chlorophyll and phycocyanin contents. The **integrated cleaning unit** protect against growth problems during long-term measurement.

## Specifications

| DESCRIPTION            | VALUE   |
|------------------------|---|
| Measurands             | Total chlorophyll [ $\mu\text{g chl-a/l}$ ], green algae [ $\mu\text{g chl-a/l}$ ], blue-green algae [ $\mu\text{g chl-a/l}$ ], diatoms [ $\mu\text{g chl-a/l}$ ], cryptophyceae [ $\mu\text{g chl-a/l}$ ], yellow substances correction, unbound phycocyanin [ $\mu\text{g /l}$ ], water temperature, photosynthetic activity – optional, transmission |
| Measuring range        | 0 – 200 $\mu\text{g chl-a/l}$ , 0 – 50 $\mu\text{g free PC/l}$  |
| Resolution             | 0.01 $\mu\text{g chl-a/l}$  |
| Transmission           | 0 - 100 %   |
| Turbidity              | 0 - 200 FTU   |
| Weight                 | 25 kg   |
| Dimensions (H x W x D) | 530 x 660 x 25 mm   |
| Protection class       | IP 54   |
| Voltage                | 230 V / 50 Hz; 110 V / 60 Hz  |
| Power consumption      | 100 W   |
| Sample temperature     | 0 to 40 °C  |
| Sample volume          | 45 ml   |
| Maintenance interval   | > 7 days  |
| PC                     | internal PC with touchscreen, Windows   |
| Options                | Genty determination, modem, up to zu 16 4-20mA and 16 digital outputs, SDI-12 with bbe converter  |



## FEATURES

- ▶ Quick, simple chlorophyll measurement with algal class differentiation
- ▶ Indicator for cyanotoxins as well as flavours and odorous substances by phycocyanin measurements
- ▶ Turbidity compensation up to 200 FTU
- ▶ Minimal maintenance
- ▶ Easy to use
- ▶ Monitoring of algae around the clock
- ▶ Direct measurement without preparation
- ▶ Integrated stirrer
- ▶ PC operation with bbe software
- ▶ RS232, LAN, USB



## APPLICATIONS

- ▶ Online water quality assessment
- ▶ Reservoir monitoring
- ▶ Process tracking in waterworks
- ▶ Environmental and hygiene monitoring
- ▶ Chemical assessment
- ▶ Cooling and production water control
- ▶ Limnological work
- ▶ Research and teaching
- ▶ Oceanography
- ▶ Aqua culture monitoring