

# BlueScan Plus UV/Vis Spectrometer

The **BlueScan Plus UV/Vis Spectrometer** is capable of simultaneously detecting multiple parameters. The utilization of chemometric methods allows for the measurement and comprehensive analysis of a multitude of water properties, contained suspended solids, as well as dissolved substances. To achieve this, the evaluation encompasses the entire absorption spectrum ranging from the UV until the near-infrared range (200-708 nm).



## Application Areas



### Drinking Water

- Quality control
- Alarm systems



### Environmental Monitoring

- River water
- Surface water
- Well & bore hole

## Parameters

- Biochemical oxygen demand (BOD)
- Chemical oxygen demand (COD)
- Total organic carbon (TOC)
- Dissolved organic carbon (DOC)
- Total suspended solids (TSS)
- Nitrate (NO<sub>3</sub>)
- SAC 254nm
- Ammonium (NH<sub>4</sub>)\*
- Total Nitrogen (TN)\*
- Orthophosphate (PO<sub>4</sub>)\*
- Total Phosphorous (TP)\*

\* Correlation based Calibration, limitations apply.

## Functions & Features



Integrated Electronics



Automated Cleaning



Calibration Monitoring (SQI)



Expandable with MSH



High Pressure Resistance



Integrated Pressure Sensor



Adjustable Optical Path Length



Integrated Temperature Sensor

## Technical data

System	UV/Vis spectrum 200 - 708 nm
Measuring principle	Spectral analysis
Optical measuring path length	1 - 30 mm
Measuring interval	≥ 3 s
Light source	Xenon pulse light
<b>Measuring head</b>	
Material	Stainless steel 1.4404 / Titanium [optional]
Weight	approx. 6 kg
Dimensions	Length 620 mm; Ø 86 mm
IP protection class	IP 68
Pressure range	0 - 10 bar
Operation temperature range	-5 to +45 °C
Art. no.	461 6600

## Interfaces

- 1x CAN bus for connection to the BlueBox system
- 1x CAN bus for connection of the **Multi Sensor Head (MSH)** probe head [optional]
- 1x Modbus [RTU] for connection to a PLC or integration into third-party systems

## Parameters

UV/Vis detectable Parameters

Pressure / Level	0 - 10 bar / 0 - 100 m
Temperature	0 - 60 °C



### Integrated Pressure Sensor

The BlueScan Plus is equipped with an integrated pressure sensor, which allows to calculate the current water level.



### Integrated Electronics

Compared to the ISA UV/Vis spectrometer, the BlueScan Plus features integrated electronics and can be connected directly to the BlueBox system via CAN bus. This allows applications where longer cable lengths are required, such as well monitoring. The BlueScan Plus is also equipped with an internal memory to store the measurement data and calibrations and allowing a stand-alone operation.



### Automated Cleaning

The BlueScan Plus is equipped with an automated brush cleaning system to prevent contamination of the optical windows. The low power consumption of the brush makes the BlueScan Plus particularly suited for systems that are powered by batteries or solar panels.



### Expandable with MSH

The expandable design of the BlueScan Plus allows the extension of the spectrometer with a **Multi Sensor Head (MSH)**. The MSH is a modular sonde that allows the integration of up to four sensors or electrodes in one submersible probe head. With this feature it is possible to increase the number of measurable parameters even further.

