

ISA UV/Vis Spectrometer System

The **Intelligent Spectral Analyser (ISA)** is a compact UV/Vis spectrometer that allows the simultaneous determination of a variety of parameters with a single optical sensor.

Through the evaluation of the entire absorption spectrum from the UV until the near-infrared range (200-720nm), water properties, contained suspended solids, as well as dissolved substances can be comprehensively characterized.



Application Areas



Drinking Water

- Quality control
- Alarm systems



Wastewater

- Effluent monitoring
- Trend analysis
- Early detection of discharge (fingerprint)



Process Measurement & Control Technology

- Process monitoring in industrial facilities
- Control of process water treatment
- Process optimization



Environmental Monitoring

- River water
- Surface water

Parameters

- Ammonium
- Biochemical oxygen demand (BOD)
- Chemical oxygen demand (COD)
- Total organic carbon (TOC)
- Dissolved organic carbon (DOC)
- Total suspended solids (TSS)
- Nitrate
- Orthophosphate
- SAC 254nm

* Further parameters with application specific calibration

Main Functions & Features



Monitoring Function



Automated Cleaning



Calibration Monitoring (SQL)



ATEX Certified



Intelligent Event Handling



Cloud Data Service



Adjustable Optical Path Length



Deployable Up to +110 °C

Technical data

System	UV/Vis spectrum 200 - 720 nm
Measuring principle	Spectral analysis
Optical measuring path length	0.5 - 20 mm
Sampling rate	≥ 3 s
Light source	Xenon pulse light
Measuring head	
Material	Stainless steel 1.4404 / Titanium [optional]
Operation temperature range	0 °C to +110 °C
Weight	1.5 kg
Dimensions	Length approx. 230 mm; Ø 44 mm
IP protection class	IP 68
ATEX category 3 / category 2 [optional]	

Interfaces

1x RS-232, RS-485, var. protocols e.g. Modbus

1x CAN bus for connection of additional modules, sensors & actuators

1x Ethernet [TCP/IP], Modbus [TCP/IP]

1x 12V, 6W integrated power supply for sensors with RS-232/RS-485 port [optional]

Profibus [optional]

GPRS / UMTS / LTE modem [optional]

Inputs

2x Pulse-In (PNP/NPN selectable)

Outputs

2x Current output 4-20 mA

2x Relay with a switching capacity of 48 V AC/DC; 0,5 A

Product variants

The **ISA UV/Vis Spectrometer** is available in different variants. The **ISA complete systems** in combination with a **BlueBox TS measuring- and control system** allow for a stand-alone operation. GO Systemelektronik also offers a portable **mobile version** for flexible applications. The battery-powered system is designed for an autonomous operation on-site.

ISA Module variants can be integrated into existing measuring systems and enable their expansion through the CAN bus interface. Depending upon the application requirements the ISA UV/Vis Spectrometer is available either as an **in situ** measuring head for immersion measurements or as a **flow through fitting**.

ISA - UV/Vis Spectrometer System



[BlueBox TS - in situ]

Art. no. 486 0060



[BlueBox TS - flow through]

Art. no. 486 0061

ISA - Mobile - SAC [BlueBox TS - in situ]

Art. no. 486 0M60

ISA - UV/Vis Spectrometer Module



[ATEX 2 - in situ]

Art. no. 486 6004

[ATEX 3 - in situ]

Art. no. 486 6002

[Flow through]

Art. no. 486 6010