

3S-UVO measurement of absorbance at 254 nm

Compact online sensor for the determination of organic pollutants in water samples

APPLICATION FIELDS

- Drinking water
- Industrial wastewater
- Municipal wastewater
- Pollution monitoring of surface waters



ADVANTAGES / FEATURES

• **Compact design, sturdy build**

Great responsiveness in a small volume thanks to the Fast Loop sample reservoir included in the analyzer. The stainless steel enclosure makes the analyzer resistant to corrosion even in the most harsh industrial conditions.

• **Low operating costs**

Minimum maintenance necessary: the external probe can be easily cleaned in seconds. No reagents needed.

• **Wide measuring range, low detection limit**

The range of the UV 254 nm online sensor 3S-UVO varies from 0 - 370 mg/l to 0 - 1000 mg/l (COD, eq. KHP), with a detection limit of 0.75 ppm.

• **Measurement principle**

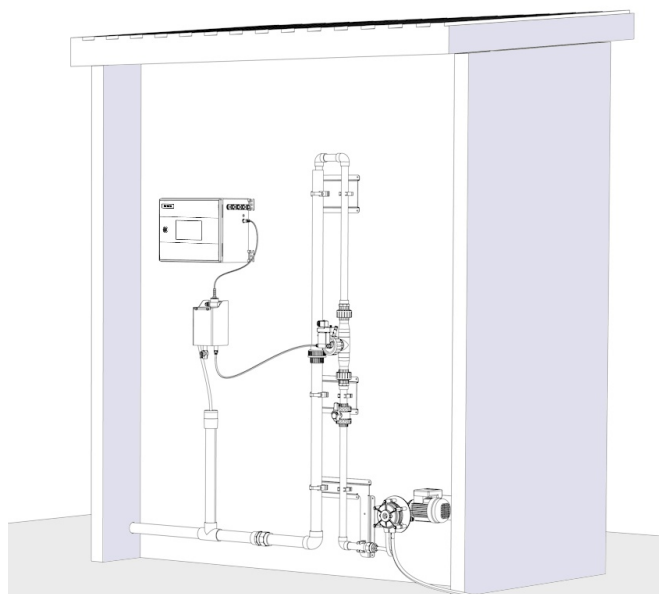
The sensor is based on the photometric determination of the UV absorbance at 254 nm. Active species, dissolved or suspended in water absorb the incident UV radiation and are detected by the sensor.

The external probe is installed in a sample reservoir and measurements are taken on the circulating sample flow, guaranteeing fast analysis time.

TECHNICAL SPECIFICATIONS

Measured parameters	CODeq, TOCeq, BOD eq, SAC, UV254Abs
Measuring principle	UV absorption photometry
Measuring range	Low range COD 0 - 370 mg/l eq. KHP / TOC 0 - 150 mg/l High range COD 0 -1000 mg/l eq. KHP / TOC 400 mg/l
Reproducibility	± 2.5 % of the full scale
Limit of detection	0.75 ppm (KHP equivalents)
Analysis Frequency	1 s
Sample	Pressure: pressure-free vessel (depth up to 60 m) Temperature: 5 - 50 °C (41 - 122 °F) Flow Rate: 80 to 500 mL/min Connection: 6 mm (¼-in.) Drain: pressure-free, atmospheric drain
Body material	Stainless steel 316L
Dimensions	Ø 50 mm, L 175.8 mm
Weight	Approx. 1 Kg (2.2 lbs)
Power Supply	Voltage: 5 - 12 VDC Power consumption: max. 0.5 VA
Outputs	ModBUS RTU via RS485
Installation	With optional fast-loop reservoir (not included), pipe-mounted or wall mounted with appropriate brackets
Protection Grade	IP68

INSTALLATION EXAMPLE



The probe system is easily installed in a minimum amount of wall space.

In the picture are included the optional accessories:

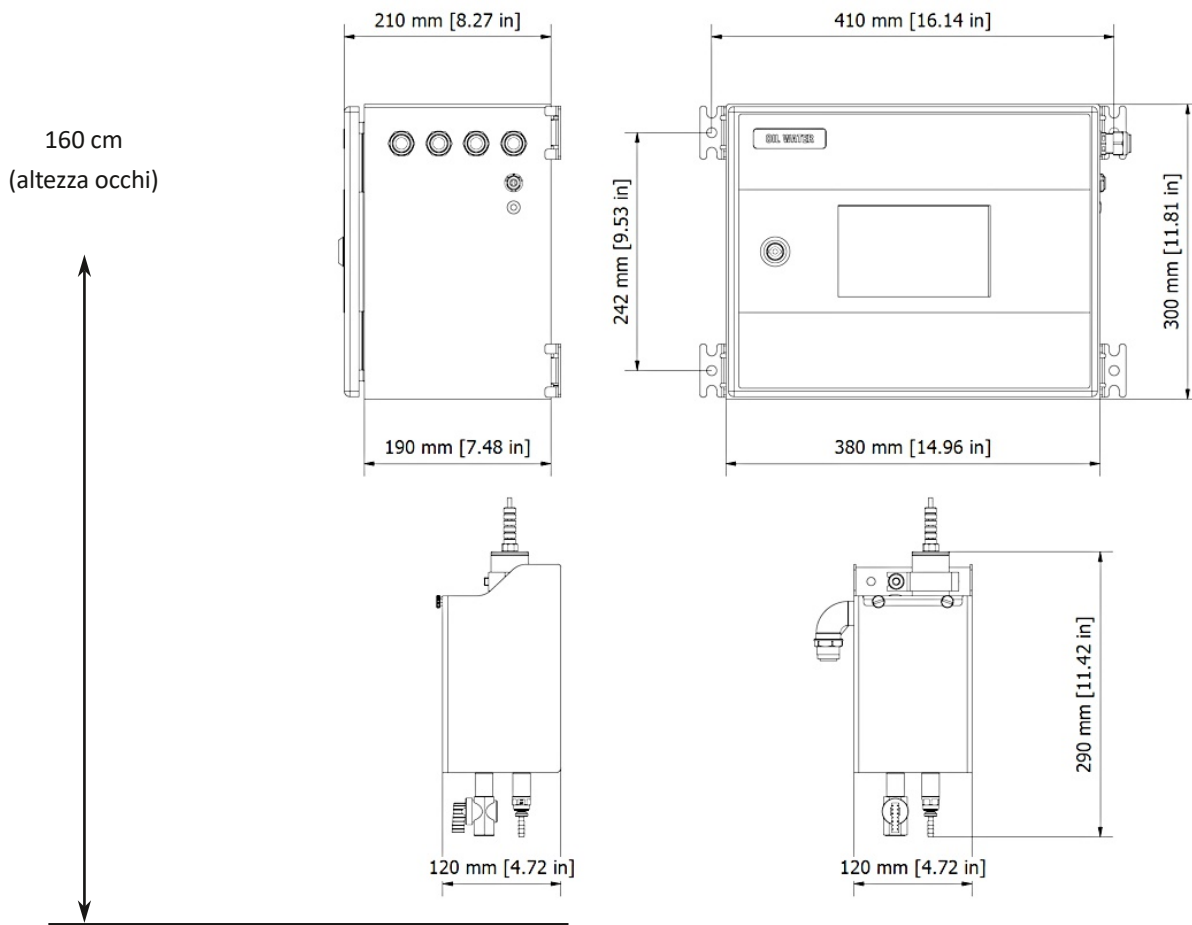
- a) A46SF10020 - Filtration unit 100 micron 230 VAC (other mesh size and input voltages available)
- b) A46SPP0000 - Sampling Pump

FAST LOOP RESERVOIR WITH PROBE



The probe is installed in the provided Fast Loop sample reservoir, protected from external light and easily accessible for cleaning and maintenance (to be purchased separately, product code A46U10020)

TECHNICAL DRAWINGS (complete setup)



PRODUCT CODES

3S-PC1000	Probe controller with color touch screen
3S-UVO-L	UV254 absorption sensor for organic load - low range (COD 0 - 370 mg/l eq. KHP)
3S-UVO-H	UV254 absorption sensor for organic load - high range (COD 0 - 1000 mg/l eq. KHP)
A46U10020	Stainless steel continuous flow D.50 sensor holder