

3S-UVFL Fluorescence Analyzer

Compact online analyzer for measurement of oil-in-water and aromatic hydrocarbons

APPLICATION FIELDS

- Drinking water
- Industrial waste water
- Oil-in-water monitoring
- BTEX/aromatic hydrocarbons monitoring
- Fuel industry
- Oil refinement/transportation
- 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 determination ranges of the 3S Fluorescence Analyzer varies from 0-30 to 0-300 ppm with a limit of detection of 0.1 ppm.

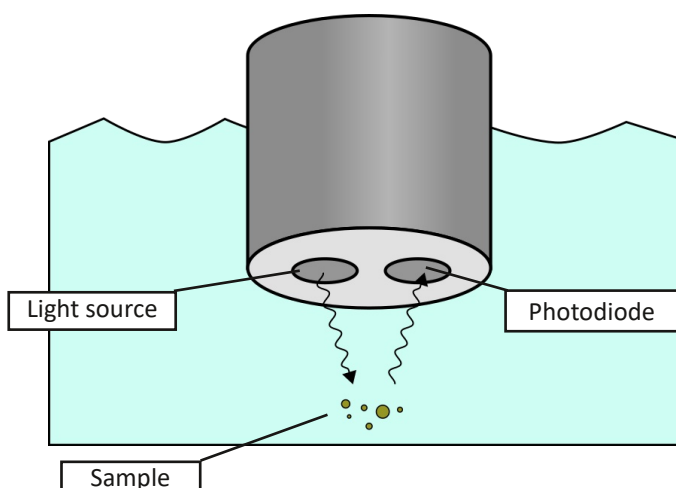
• **Large color touchscreen**

The analyzer is equipped with a graphic touchscreen interface showing measured values and status information. Easy access to menus and functions. Integrated datalogger with USB download.



• **Measurement principle**

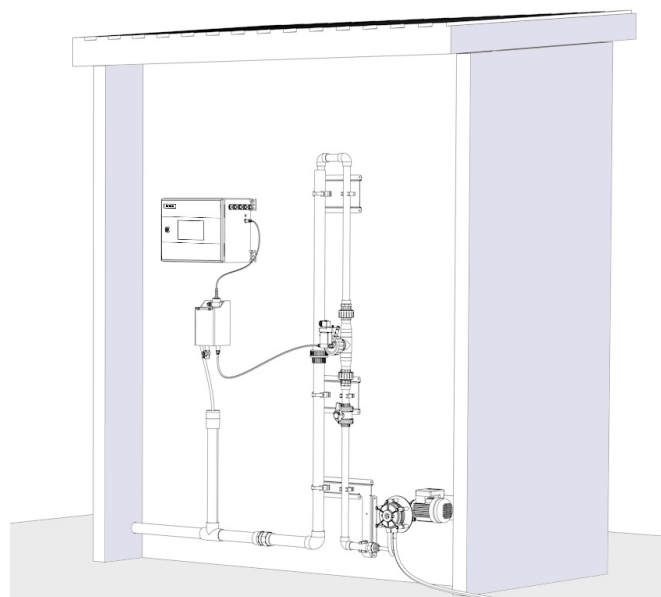
The analyzer is based on the fluorescence photometric determination of the active species dissolved or suspended in water. The external probe is installed in a sample reservoir and measurements are taken on the circulating sample flow.



TECHNICAL SPECIFICATIONS

Measured parameters	Oil-in-water, BTEX, aromatic hydrocarbons
Measuring principle	Fluorescence photometry
Measuring range	0 - 30 ppm - low range version 0 - 100 ppm - medium range version 0 - 300 ppm - high range version
Reproducibility	± 3 % of the full scale
Limit of detection	0.1 ppm
Analysis Frequency	≥ 1 s
Sample	Pressure-free vessel (probe up to 6 bar) Temperature: 5 - 45 °C (41 - 113 °F) Flow Rate: 80 to 500 mL/min Connection: 6 mm (¼-in.)
Drain	Pressure-free, atmospheric drain Connection: 12 mm (½-in.)
Dimensions (H x W x D)	300 x 380 x 210 mm (11.8 x 14.8 x 8.3 in)
Weight	Approx. 10 Kg (22 lbs)
Power Supply	Voltage: 100 - 240 VAC 50/60 Hz standard or 24 VDC (option) Power consumption: max. 80 VA
Outputs	2 x 4-20 mA outputs for measured data Modbus RTU RS485
Alarms	2 SPDT programmable potential free relays
Operating temperature	5 - 45 °C (41 - 113 °F)
Relative Humidity	10 to 85% (indoor use only)
Installation	Wall mount (standard), bench top support or panel mount (options).
Protection Grade	IP54

INSTALLATION EXAMPLE



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

In the picture are included the optional accessories:

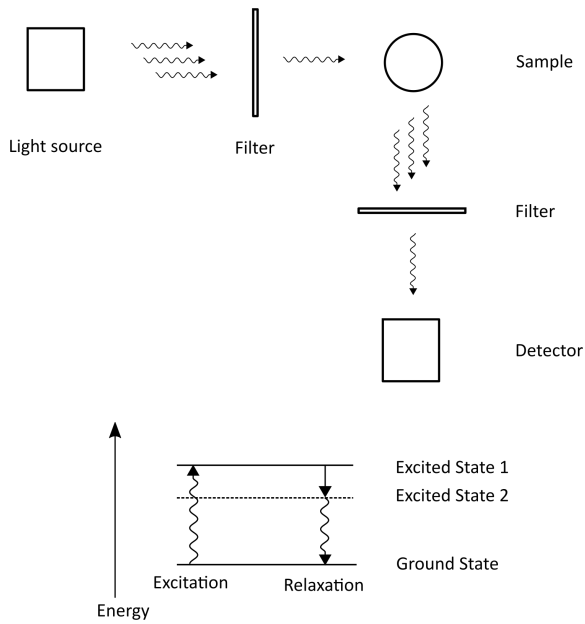
- a) A46SF10020 - Filtration unit 100 micron 230 VAC (other mesh size and input voltages available)
- b) A46SPP0000 - Sampling Pump

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.

FLUORESCENCE SPECTROSCOPY



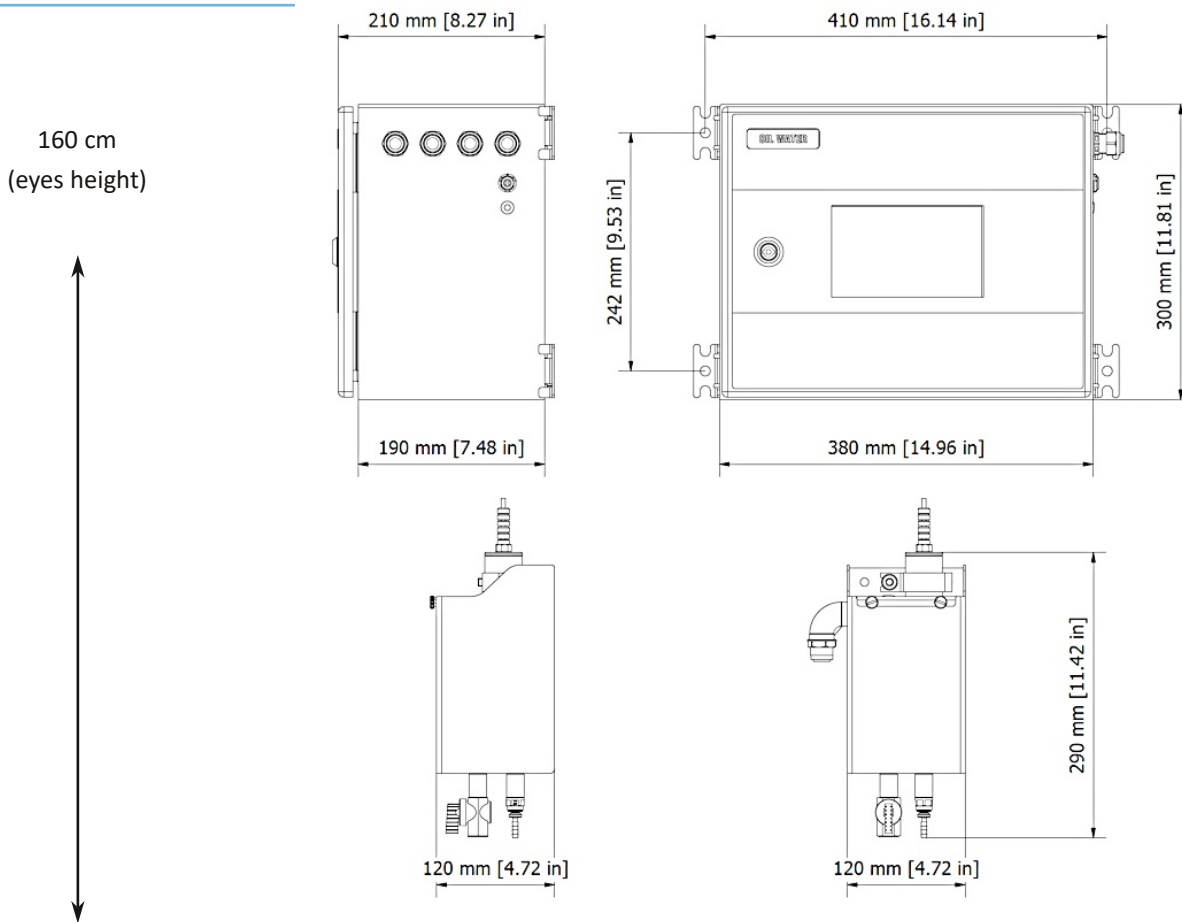
A polychromatic light source is filtered to select a specific wavelength. Molecules in the sample absorb the energy from the radiation and reach Excited State 1.

A part of the energy is released as heat and the species reach Excited State 2. The remaining energy is then released as a photon of appropriate wavelength and the molecule reaches the Ground State again.

Another filter selects a specific wavelength, characteristic of the species we want to analyze and a detector measure the intensity of this emitted radiation. The detector is thus placed at an angle to avoid interference with the incident light.

The amount of emitted radiation is proportional to the concentration of our target molecule.

TECHNICAL DRAWINGS



PRODUCT CODES

3S-UVFL-L	Fluorescence Analyzer 0 - 30 ppm
3S-UVFL-M	Fluorescence Analyzer 0 - 100 ppm
3S-UVFL-H	Fluorescence Analyzer 0 - 300 ppm