

3S-UVNO3

Online analyzer for the determination of nitrates, nitrites, NO_{2+3}

APPLICATION FIELDS

- Municipal waste water
- Industrial waste water
- Rivers and surface water
- Drinking water
- Monitoring process liquids
- Measurement of water quality for distribution or discharge

ADVANTAGES / FEATURES

• Dual compartment enclosure

To ensure complete separation between the electronics (upper case) and the wet part (lower case).

• Low operating costs - no reagents

The UV spectroscopy measuring principle requires no chemical reagent resulting in very low operating and maintenance costs.

• Xenon lamp – UV light source

The high stability and long operating life make them ideal as light sources for water quality analyzers.

• Automatic calibration / zeroing / cleaning

These automatic functions ensure optimum performance with the minimum of manual intervention.

Free selectable cleaning, zeroing and calibration intervals.

• Wide measuring range

The determination range of the 3S-UVNO3 Analyzer can be extended using the internal dilution module.

• Dual streams version

Dual streams version gives two measurements in one instrument, each stream can be either high range or low range with different correlation / dilution factors.



• 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.

• Factory tested, ready for installation and operation

Just connect the power, sample and the analyzer is fully operational.

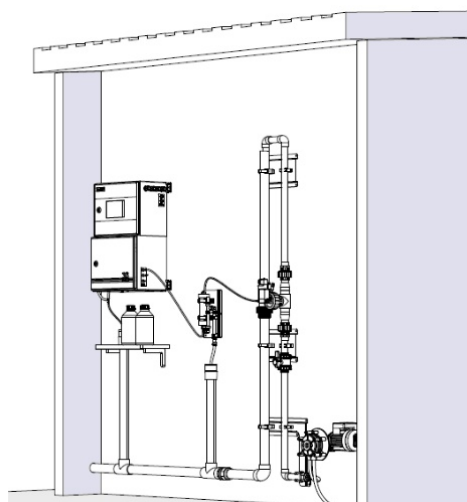
• Measurement principle

Nitrate dissolved in water absorbs UV light in the range 190 - 240 nm. The xenon lamp produces a UV light radiation that pass through the sample water in a quartz measuring cell. The receiver analyzes the light pulses at two different wavelengths, the measurement wavelength (220 nm) and the reference wavelength (270 nm), at which the sample constituents of interest do not absorb. This dual-wavelength measurement allows turbidity and dissolved organic compensation.

TECHNICAL SPECIFICATIONS

Measured parameters	NO ₃ / N-NO ₃ / N-NO ₂₊₃
Measuring principle	Dual wavelength technique, 220 nm measuring and 270 nm as reference, with matrix compensation
Measuring range	16 mm cell: 0 - 30 mg/l NO ₃ (0 - 6.75 mg/l as N-NO ₃) 11 mm cell: 0 - 60 mg/l NO ₃ (0 - 13.50 mg/l as N-NO ₃) Up to 2,000 mg/l with internal dilution (0 - 450 mg/l as N-NO ₃)
Reproducibility	± 2.5 % (30 ppm) ± 5 % (60 ppm) on the absorbance value for samples having turbidity below 100 NTU
Analysis Frequency	Freely programmable, batch near-continuous analysis.
Cycle time	Less than 1 minute, including conditioning before analysis cycle and rinsing after measuring
Sample	Pressure: atmospheric Temperature: 5 - 50 °C (41 - 122 °F) Flow Rate: 80 to 500 mL/min Connection: 6 mm (¼-in.)
Drain	Pressure-free, atmospheric drain Connection: 12 mm (½-in.)
N° of streams	1, 2 with integrated switching valve
Dimensions (H x W x D)	604 x 380 x 242 mm (23.6 x 14.8 x 9.4 in)
Weight	Approx. 20 Kg (44 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
Digital Input	Remote start/stop, start extra cycle, skip idle time, emergency stop
Working Temperature	5 - 45 °C (41 - 113 °F)
Humidity	10 to 90% RH (indoor use only)
Installation	Wall mount (standard), bench top support or panel mount (options).
Protection Grade	IP54

INSTALLATION EXAMPLE

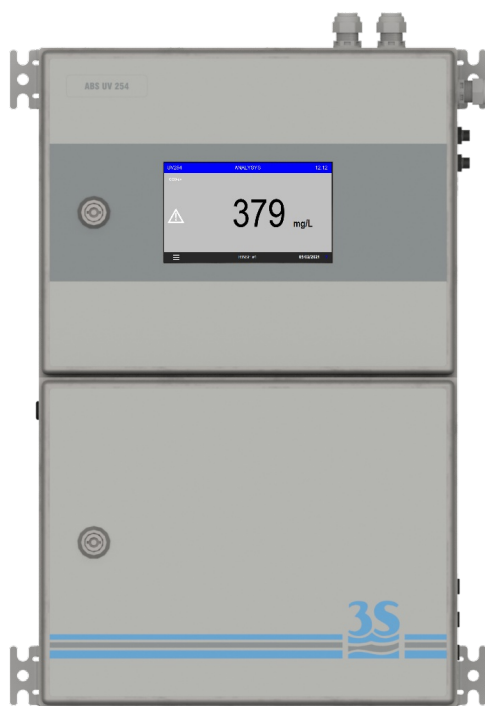


The analyzer is easily installed in a minimum amount of wall space.

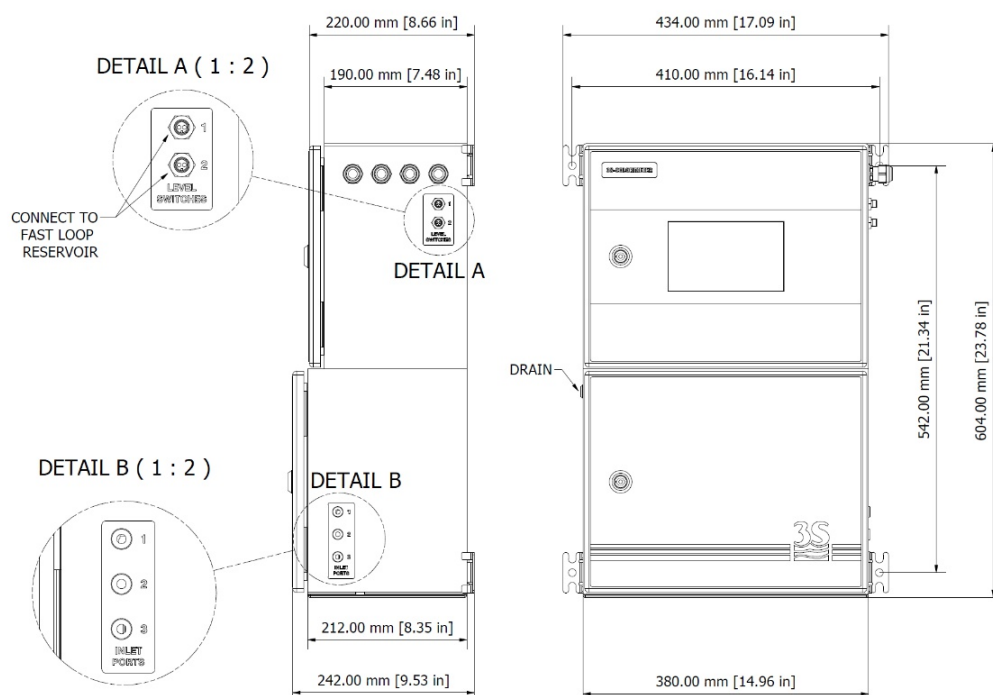
In the picture are included the optional accessories:

- a) A46ERLS000 - Fast Loop external reservoir with level switch
- b) A46SF10020 - Filtration unit 100 micron 230 VAC (other mesh size and input voltages available)
- c) A46SPP0000 - Sampling Pump

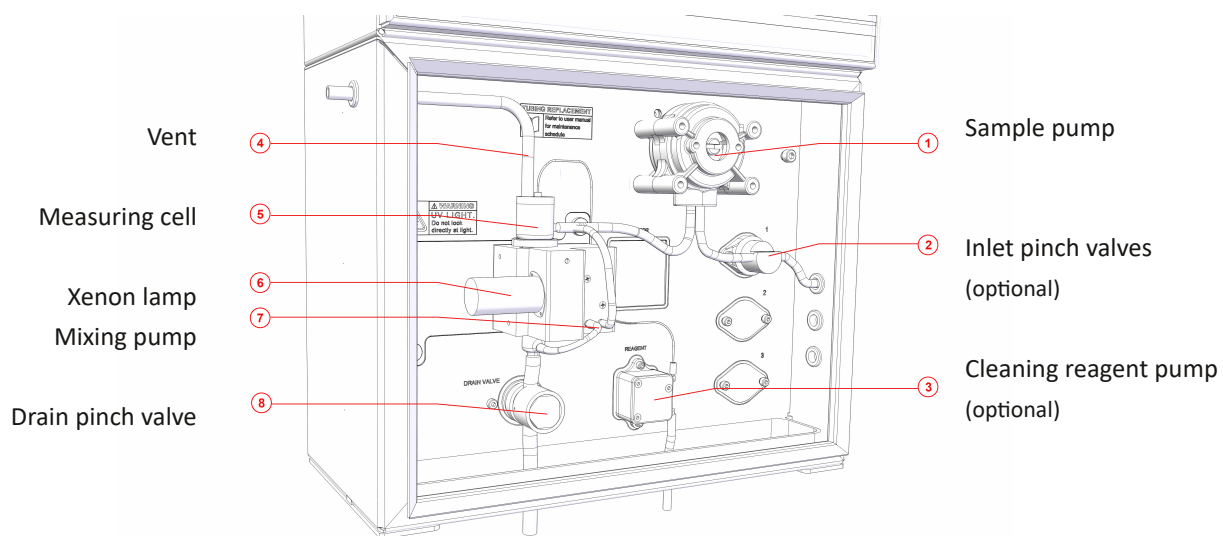
Other accessories, including external dilutors to increase the analyzer range and different kind of sample reservoirs are also available. See our website for more info.



TECHNICAL DRAWING



HYDRAULIC COMPARTMENT VIEW



PRODUCT CODES

UV3-NO3-0-H	3S-UVNO3 analyzer, no inlet valves, 11 mm cell
UV3-NO3-0-L	3S-UVNO3 analyzer, no inlet valves 16 mm cell
UV3-NO3-2-H	3S-UVNO3 analyzer, two inlet valves, 11 mm cell
UV3-NO3-2-L	3S-UVNO3 analyzer, two inlet valves, 16 mm cell
UV3-NO3-3-H	3S-UVNO3 analyzer, three inlet valves, 11 mm cell
UV3-NO3-3-L	3S-UVNO3 analyzer, three inlet valves, 16 mm cell