

# Ammonium Colorimetric Analyzer

Compact online analyzer for measurement of ammonium in water

## APPLICATION FIELDS

- Boiler feed
- Cooling water
- Drinking water
- Surface water
- Municipal wastewater
- Industrial wastewater

## ADVANTAGES / FEATURES

### • Different compartments

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

### • Low reagents consumption

Minimum operating cost by small reagent consumption, only 2.2 L for the 16 mm cell / 2.9 L for the 26 mm cell of each reagent every 30 days with 20 minutes analysis frequency.

### • Automatic calibration / validation / cleaning

Validation, cleaning and calibration are standard features which significantly reduce downtime and operator intervention ensuring the most accurate results are obtained. Free selectable validation, cleaning and calibration intervals.

### • Wide measuring range

The determination ranges of the Ammonium High Analyzer vary from 0.15 ppm to a maximum range of 5 - 1000 ppm using internal dilution module.

### • Factory tested, ready for installation and operation

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

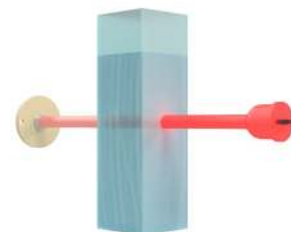


### • Large color touchscreen

The colorimeter 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

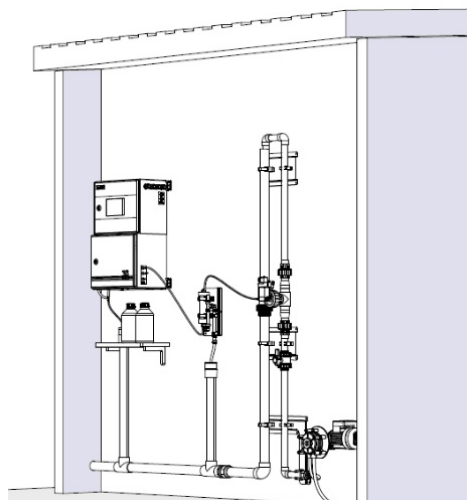
Ammonium reacts with salicylate and hypochlorite ions in the presence of ferricyanide ions to form the salicylic acid analog of indophenol blue. The resulting color is directly proportional to the concentration of ammonium present and is determined at 660 nm.



## TECHNICAL SPECIFICATIONS

Measured parameter	Ammonium
Measuring principle	Differential colorimetric absorbance.
Measuring range	1 to 500 ppb (26 mm cell); 5 to 1000 ppb (16 mm cell) with low range chemistry. 10 to 2000 ppb (16 mm cell) with medium range chemistry. 0.15 to 20 ppm (26 mm cell); 0.2 to 30 ppm (16 mm cell) with high range chemistry. Up to 1000 ppm with internal dilution.
Reproducibility	Up to 1000 ppb: $\pm 5$ ppb or $\pm 5\%$ , whichever is greater $\geq 1$ ppm to 500 ppm: better than $\pm 2\%$ full scale range for standard test solutions
Analysis	Freely programmable, batch near-continuous analysis.
Cycle time	13 minutes, including conditioning before analysis cycle and rinsing after measuring.
Termoregulation	50 °C
Sample	Pressure-free vessel 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.

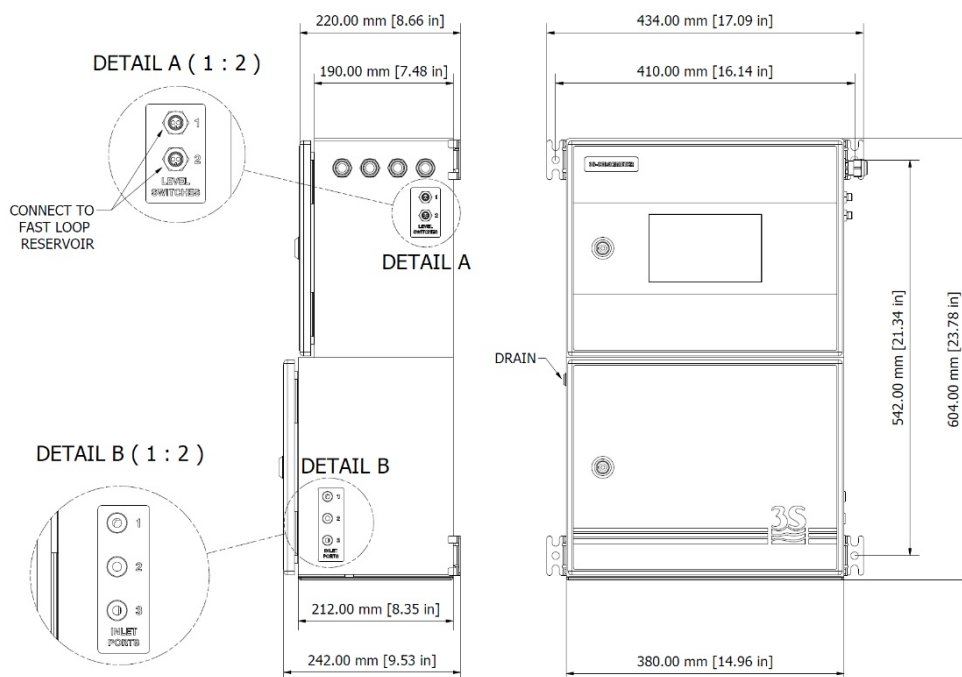
In the picture are included the optional accessories:

- 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

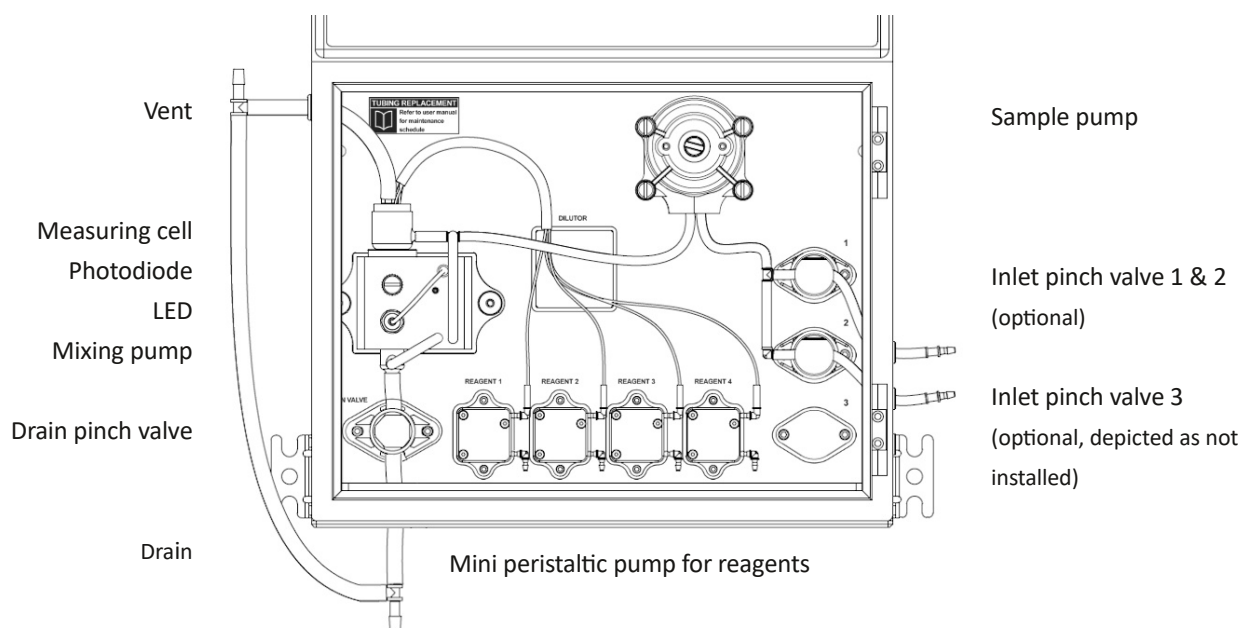
Other accessories, including external dilutors to increase the analyzer range and different kind of sample reservoirs are also available. See our website for more info.



## TECHNICAL DRAWING



## HYDRAULIC COMPARTMENT VIEW



## PRODUCT CODES

### AMMONIUM CHEMISTRY INDOPHENOL, SALICYLATE HIGH, MEDIUM

CL3-3-660-0-16-NH3	One inlet port, 16 mm cell
CL3-3-660-2-16-NH3	Two inlet ports, 16 mm cell
CL3-3-660-3-16-NH3	Three inlet ports, 16 mm cell
CL3-3-660-0-26-NH3	One inlet port, 26 mm cell
CL3-3-660-2-26-NH3	Two inlet ports, 26 mm cell
CL3-3-660-3-26-NH3	Three inlet ports, 26 mm cell

### AMMONIUM CHEMISTRY SALICYLATE LOW

CL3-4-660-0-16-NH3	One inlet port, 16 mm cell
CL3-4-660-2-16-NH3	Two inlet ports, 16 mm cell
CL3-4-660-3-16-NH3	Three inlet ports, 16 mm cell
CL3-4-660-0-26-NH3	One inlet port, 26 mm cell
CL3-4-660-2-26-NH3	Two inlet ports, 26 mm cell
CL3-4-660-3-26-NH3	Three inlet ports, 26 mm cell