Aluminum Colorimetric Analyzer

Compact online analyzer for measurement of aluminum in water

APPLICATION FIELDS

• Drinking water

• Industrial waste water

• Municipal waste water

• Surface water

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 3 L for the 16 mm cell, of each reagent every 30 days with 60 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 Analyzer vary from 5 ppb to a maximum range of None 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.
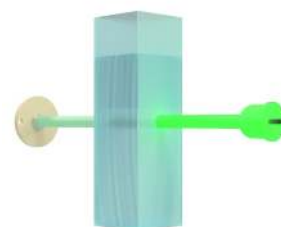
• Large color touchscreen

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.
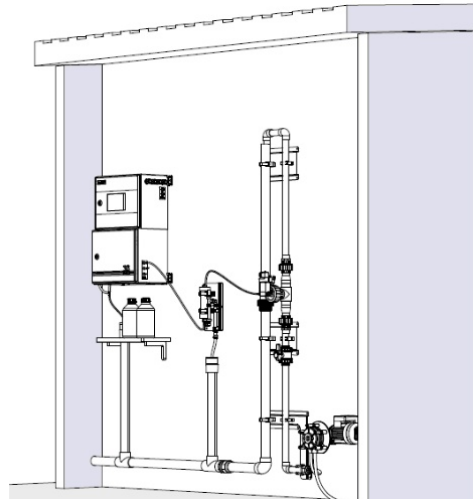
• Measurement principle

In a pH 5.9 buffered solution pyrocatechol violet and Al(III) form a blue colored compound. The absorbance intensity is proportional to the aluminum concentration in the sample and is measured at 572 nm.

TECHNICAL SPECIFICATIONS

Measured parameter	aluminum
Measuring principle	Differential colorimetric absorbance.
Measuring range	1 - 500 ppb (Ø 16 mm)
Reproducibility	± 2 ppb (Ø 16 mm)
Analysis Frequency	Freely programmable, batch near-continuous analysis.
Cycle time	25 minutes, including conditioning before analysis cycle and rinsing after measuring.
Termoregulation	Not necessary.
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.

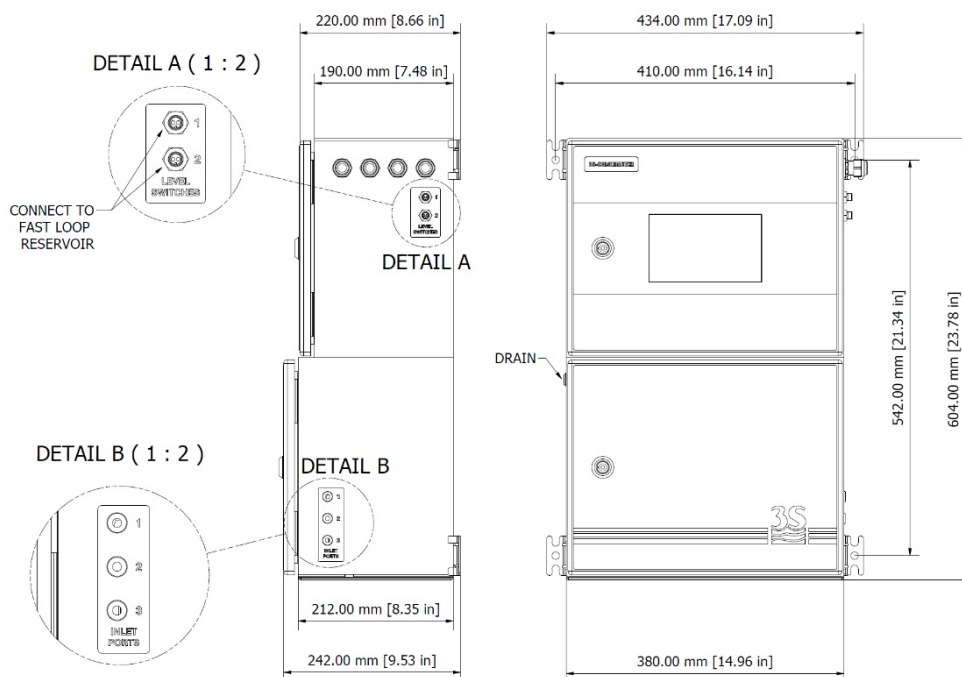In the picture are included the optional accessories:
  a) A46ERLS000 - Fast Loop external reservoir with level switch
  b) A46SF10020 - Filtration unit 100 micron 230 VAC (other mesh size and input voltages available)
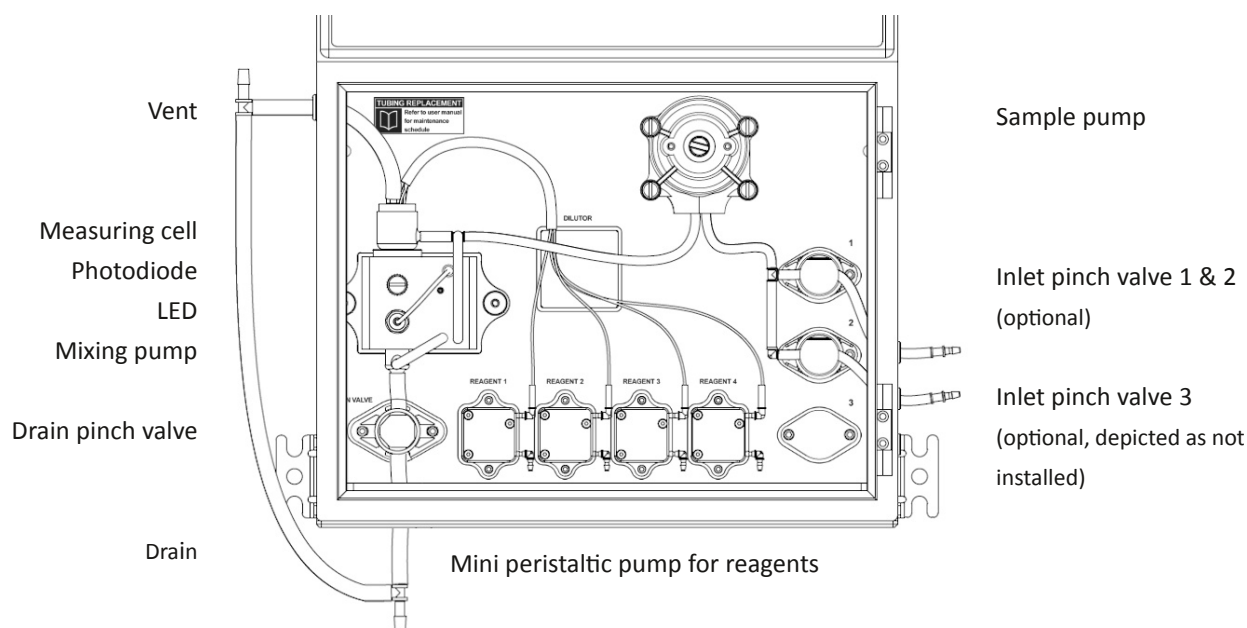 c) A46SPP0000 - Sampling Pump

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

DETAIL A (1 : 2)

220.00 mm [8.66 in]

190.00 mm [7.48 in]

LEVEL SWITCHES

CONNECT TO FAST LOOP RESERVOIR

DETAIL A

434.00 mm [17.09 in]

410.00 mm [16.14 in]

DRAIN

542.00 mm [21.34 in]

604.00 mm [23.78 in]

DETAIL B (1 : 2)

DETAIL B

INLET PORTS

212.00 mm [8.35 in]

242.00 mm [9.53 in]

380.00 mm [14.96 in]

HYDRAULIC COMPARTMENT VIEW

Vent

Measuring cell
Photodiode
LED
Mixing pump

Drain pinch valve

Drain

TUBING REPLACEMENT
Refer to user manual for maintenance schedule

DILUTOR

REAGENT 1   REAGENT 2   REAGENT 3   REAGENT 4

Mini peristaltic pump for reagents

Sample pump

Inlet pinch valve 1 & 2
(optional)

Inlet pinch valve 3
(optional, depicted as not
installed)

PRODUCT CODES

CL3-3-572-0-16-AL	Colorimeter, one inlet port, 16 mm cell
CL3-3-572-2-16-AL	Colorimeter, two inlet ports, 16 mm cell
CL3-3-572-3-16-AL	Colorimeter, three inlet ports, 16 mm cell
CL3-3-572-0-26-AL	Colorimeter, one inlet port, 26 mm cell
CL3-3-572-2-26-AL	Colorimeter, two inlet ports, 26 mm cell
CL3-3-572-3-26-AL	Colorimeter, three inlet ports, 26 mm cell