CHLORINE COLORIMETRIC ANALYZER

Compact online analyzer for measurement of chlorine in water

APPLICATION FIELDS

- Drinking water
- Municipal wastewater
- Industrial wastewater discharge limit monitoring or process optimization
- Food and beverage
- Power and semiconductor
- Reverse osmosis (RO) process

ADVANTAGES / FEATURES

• Different compartments

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

• Low reagents consumption

Designed for unattended operation up to 30 days.
Low and customizable reagent consumption – last one month at 5 minute cycle times.

• 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 DPD Analyzer vary from trace µg/L to 200 mg/L Cl_2 using internal dilution module.

• Color touchscreen user interface

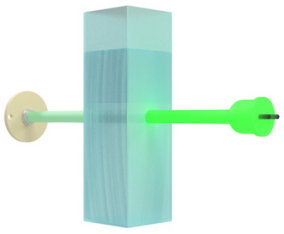
The colorimeter is equipped with a graphic touchscreen interface showing measured values and status information. Easy access to menus and functions. Integrated datalogger with USB download.

• Factory tested, ready for installation and operation

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

• Measurement principle

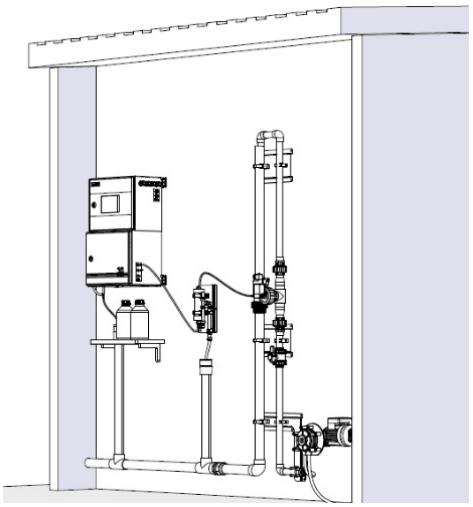
Chlorine-containing samples are reacted with N,N-diethyl-*p*-phenylenediamine sulfate in the presence of a suitable buffer. The indicator and buffer are added and react with chlorine to produce a pink color. This compound is measured at 525 nanometers. In total chlorine and monochloramine measurements, potassium iodide is added



TECHNICAL SPECIFICATIONS

Measured parameter	Cl_2 (ppb, ppm, mg/l)
Measuring principle	Differential colorimetric absorbance. DPD colorimetric (US EPA 4500-Cl G and ISO 7393-2 accepted method).
Measuring range	0.01 to 2 ppm Cl_2 for the 26 mm cell 0.02 to 5 ppm Cl_2 for the 16 mm cell up to 200 ppm Cl_2 with internal dilution.
Reproducibility	up to 1 ppm: ± 0.01 ppm or ± 3%, whichever is greater ≥ 1 ppm to 2 ppm: ± 0.02 ppb or ± 3%, whichever is greater (26 mm cell) up to 5 ppm: ± 0.05 ppm or ± 3%, whichever is greater (16 mm cell).
Analysis Frequency	Freely programmable, batch near-continuous analysis.
Cycle time	From 2.5 minutes, including conditioning before analysis cycle and rinsing after measuring.
Reaction cell	Temperature heated
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:

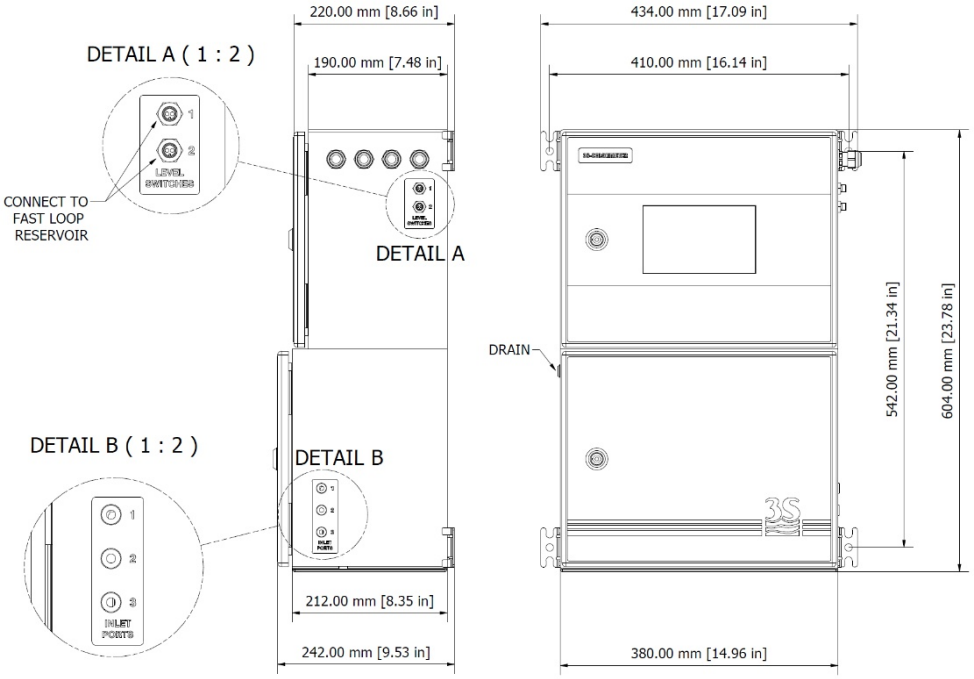
a) A46ERLS000 - Fast Loop external reservoir with level switch

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

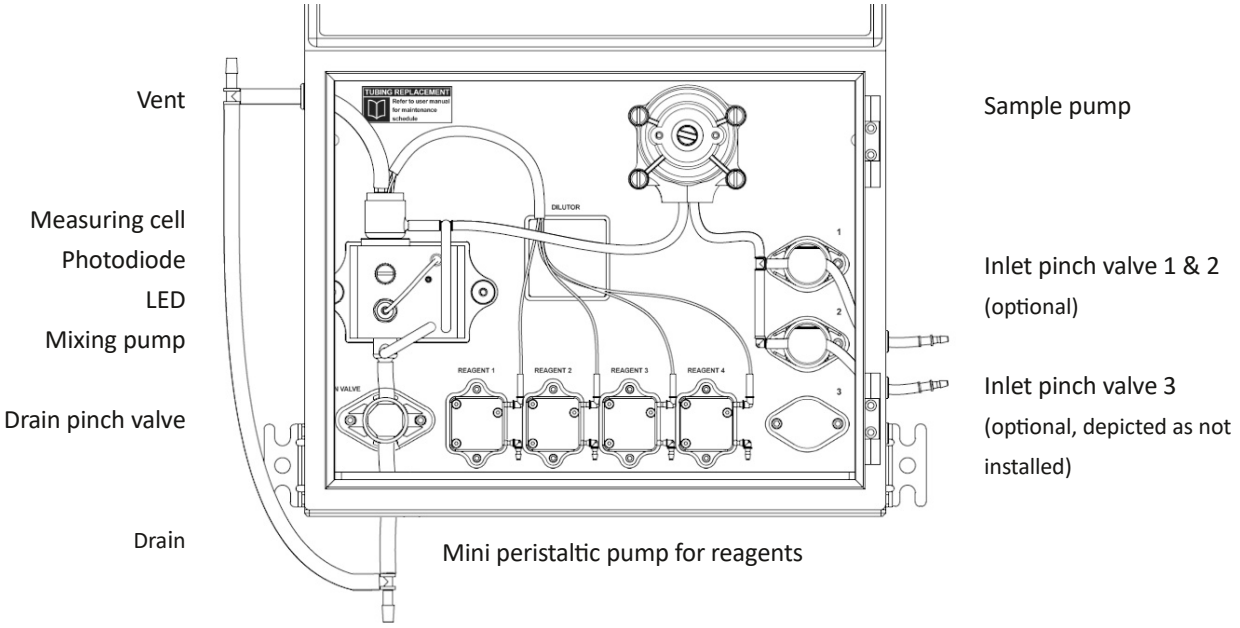
c) A46SPP0000 - Sampling Pump

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

CHLORINE, FREE

CL3-2-525-0-16-CL2	Chlorine Free, one inlet port, 16 mm cell
CL3-2-525-2-16-CL2	Chlorine Free, two inlet ports, 16 mm cell
CL3-2-525-3-16-CL2	Chlorine Free, three inlet ports, 16 mm cell
CL3-2-525-0-26-CL2	Chlorine Free, one inlet port, 26 mm cell
CL3-2-525-2-26-CL2	Chlorine Free, two inlet ports, 26 mm cell
CL3-2-525-3-26-CL2	Chlorine Free, three inlet ports, 26 mm cell

CHLORINE, TOTAL

CL3-2-525-0-16-CL2T	Chlorine Total, one inlet port, 16 mm cell
CL3-2-525-2-16-CL2T	Chlorine Total, two inlet ports, 16 mm cell
CL3-2-525-3-16-CL2T	Chlorine Total, three inlet ports, 16 mm cell
CL3-2-525-0-26-CL2T	Chlorine Total, one inlet port, 26 mm cell
CL3-2-525-2-26-CL2T	Chlorine Total, two inlet ports, 26 mm cell
CL3-2-525-3-26-CL2T	Chlorine Total, three inlet ports, 26 mm cell

CHLORINE, FREE AND TOTAL

CLP-3-525-0-16-CL2FT	Chlorine Free and Total, one inlet port, 16 mm cell
CLP-3-525-2-16-CL2FT	Chlorine Free and Total, two inlet ports, 16 mm cell
CLP-3-525-3-16-CL2FT	Chlorine Free and Total, three inlet ports, 16 mm cell
CLP-3-525-0-26-CL2FT	Chlorine Free and Total, one inlet port, 26 mm cell
CLP-3-525-2-26-CL2FT	Chlorine Free and Total, two inlet ports, 26 mm cell
CLP-3-525-3-26-CL2FT	Chlorine Free and Total, three inlet ports, 26 mm cell