

# Silica Analyser CL1000-301

## Online Colorimetric Measurement

CL1000-301 is a microprocessor controlled online analyser specifically designed for automatic silica monitoring on several types of waters matrix

### Features

Easy configuration

With our modular configuration we can automate your color laboratory method with up to four reagents

Dual compartment enclosure

To ensure complete separation between electronics and hydraulics

Touch screen interface. Simple and user friendly menus and functions

Separate waste line for sample containing reagents

Long autonomy, low maintenance, low operating cost

Rugged and reliable

Designed for industrial and environmental on-line applications, ensures the highest level of robustness in the electronics, mechanics and hydraulics components

Easy installation and operation

To start measurement is enough to power the analyzer and connect reagents, sample and waste line.

Loss of sample input

Low reagent level alarm

### Benefits

Programmable photometer

Trace level measurement, high range with auto dilution module

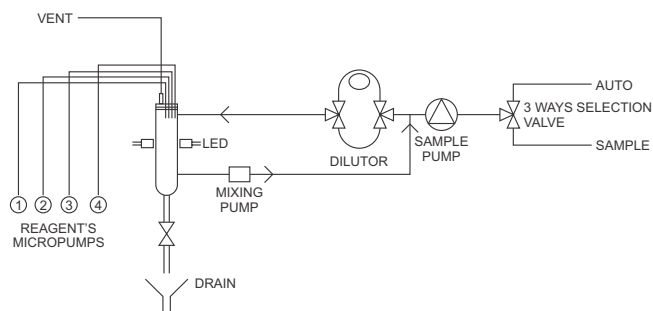
Auto / manual calibration, validation against standard

Free selectable measuring, cleaning and calibration intervals

Automatic cleaning



## Measuring Principle and Hydraulics Diagram



After rinsing the cuvette, sample will pump into dilutor followed by distilled water into the cuvette. Mixing pump will then activated to mix the sample with distilled water (dilution process applies to high range models only. For low range models sample will pump directly into cuvette).

First measurement take place (reference) to eliminate interfering factors such as sample own colour or turbidity, miscellaneous reagent own colour and refractive index variations.

Next reagent will add into cuvette, and mixing pump will activate to mix the liquid from lower part to the upper part of the cuvette. Color development and second measurement take place.

The concentration is measured with the absorbance calculated based on the difference between the two measurements and the stored calibration parameters.

### Technical Specifications

| Measuring Principle       | Colorimetric   |
|---------------------------|--|
| Model                     | CL1000-301   |
| Manufacturer              | AWA instruments pte singapore  |
| Measuring principle       | Online colorimetric  |
| Colorimeter               | LED IR- 850 nm, photodetector, thermostated                                  |
| Measurement interval      | Programmable   |
| Measurement time          | 15 min   |
| Range                     | 0-1000 ppb / 0-5000 ppb / 0.2-150 ppm (auto dilution)                        |
| Detection limit           | 0.5 ppb for 0-1000 ppb / 2 ppb for 0-5000 ppb / 0.5 ppm for dilution modules |
| Repeatability             | ± 2% of measured full scale with turbidity < 40 NTU                          |
| Accuracy                  | 0-500 ppb: ±1% or ±1 ppb / 500-5000 ppb: ±5% or ± 2 ppb whichever greater    |
| Output                    | Signal 4-20mA, RS232   |
| Input signals             | 2 configurable relays  |
| Alarms                    | 2 configurable relays  |
| Sample pressure           | 0.2~1 bar  |
| Sample temperature        | 5-50°C   |
| Cleaning                  | Automatic cleaning with distilled water                                      |
| Reagents consumption      | ~0.1 ml per analysis   |
| Reagents storage          | 1 month (2L each)  |
| Enclosure protection, MOC | IP54, coated steel   |
| Display                   | Color touch screen, graphical  |
| Power supply              | 110-220VAC , 50-60 Hz, 80VA  |
| Weight                    | 20 kg.   |
| Dimensions                | H 600 x W 409 x D 210 mm   |



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