

MICROMAC SILICATES

ON LINE ANALYZER FOR SILICATES MONITORING IN WATER



MICROMAC SILICATES is a microprocessor controlled On Line analyzer specifically designed for automatic Silicates monitoring on several types of waters matrix.

✓ ROBUST AND RELIABLE

Designed for industrial and Environmental On Line applications ensures the highest level of robustness in the electronics, mechanics and hydraulics components. Complete separation between electronics and hydraulics plus a simple and robust LFA* hydraulics allows easy maintenance and long terms reliable operations.

**LFA: Loop Flow Analysis patent pending*

✓ EASY TO INSTALL

The analyzer is delivered after a long and successful series of factory tests ready for installation and setup; it is provided with complete set of spares for start up. To start monitoring is enough to connect reagents, sample line, waste line and power supply.

✓ AUTOMATIC CALIBRATION

When the Calibration Time interval expires the analyzer performs a Calibration Cycle, storing and checking the new calibrant O. D. If new O.D. exceeds selected limits, an alarm contacts is closed.

✓ SAMPLE DILUTION

Sample can be analyzed as it is or after automatic dilution. Automatic dilution is factory adjusted for high range applications.

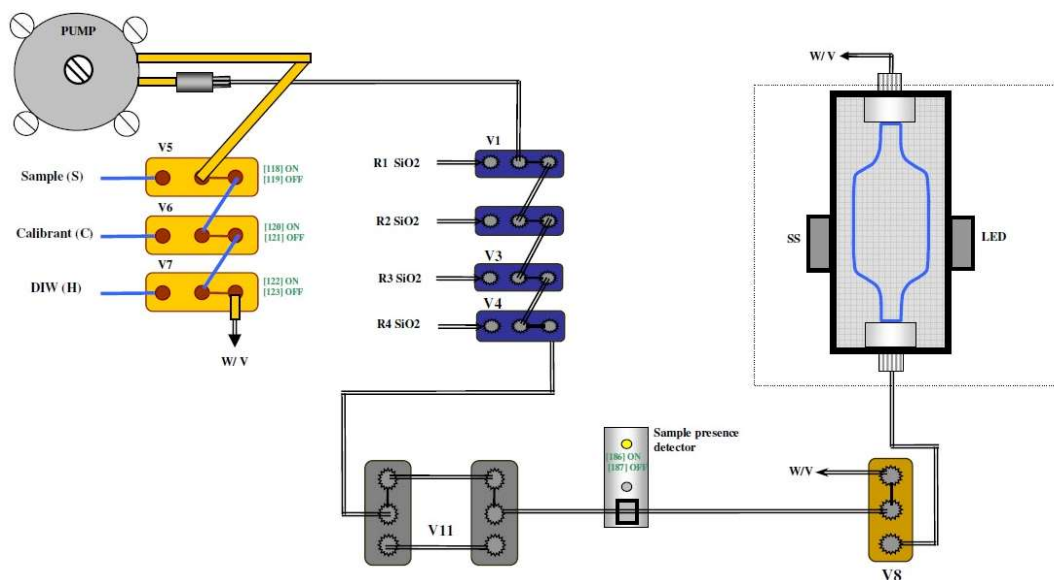
✓ MEASURING INTERVAL

User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

✓ FEATURES AND BENEFITS

- Fully automatic operation
- Long autonomy; low maintenance, low operating cost
- Low reagents consumption; short preparation time; low disposable costs
- Easy operation; plug in analyzer, no special training is required
- Electronics and hydraulics completely separated
- Serial interface for local o remote PC connection (option)

SiO₂ measuring principle and hydraulic diagram



This automated procedure for the determination of soluble silicates is based on the reduction of a silicomolybdate in acid solution to molybdenum blue by ascorbic acid. Oxalic acid is introduced to the sample to minimise interferences from phosphate. The absorbance is measured at proper wavelength.

Technical Specifications

MEASURING PRINCIPLE: Colorimetric.

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: 15 minutes

MEASURING RANGE: 0-200/500 ppb or up to 200 mg/L SiO₂; other ranges available on request

REPEATABILITY: better than 5% ; SD% of 7 replicates at 50% of the full scale

ACCURACY: better than 5% , average of 7 replicates at 50% of the full scale

DETECTION LIMIT: typically better 3% of the full scale, calculated as for EPA p. 136 appendix B

OUTPUT SIGNAL: 4-20 mA

INPUT SIGNALS: n. 1 Analysis, n. 1 calibration; digital contacts rev

ALARMS: n. 1 High Limit, n. 1 General, n. 1 Calibration; potential free contacts

SAMPLE AND WASTE DELIVERY: pressure free;

SAMPLE TEMPERATURE: 10 °C - 30 °C

REAGENTS REPLACEMENT: 3/4 weeks depending on the operating temperature

PROTECTION: IP55

HARDWARE: PC104 industrial standard, Integrated keyboard and graphics display, RS232 option

POWER SUPPLY: 12 V DC external power supply from local power to 12 V DC included

WEIGHT/ DIMENSION: 33 Kg without reagents/800x420x280 mm (hwxwd)

Subject to change without notice

SYSTEA S.p.A.

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