

MICROMAC TOTAL PHOSPHORUS

ON LINE ANALYZER FOR TOTAL PHOSPHORUS MONITORING IN WATER



MICROMAC PHOSPHORUS TOTAL is a microprocessor controlled On Line analyzer specifically designed for automatic Total Phosphorous monitoring on several types of water 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 reagent, 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.

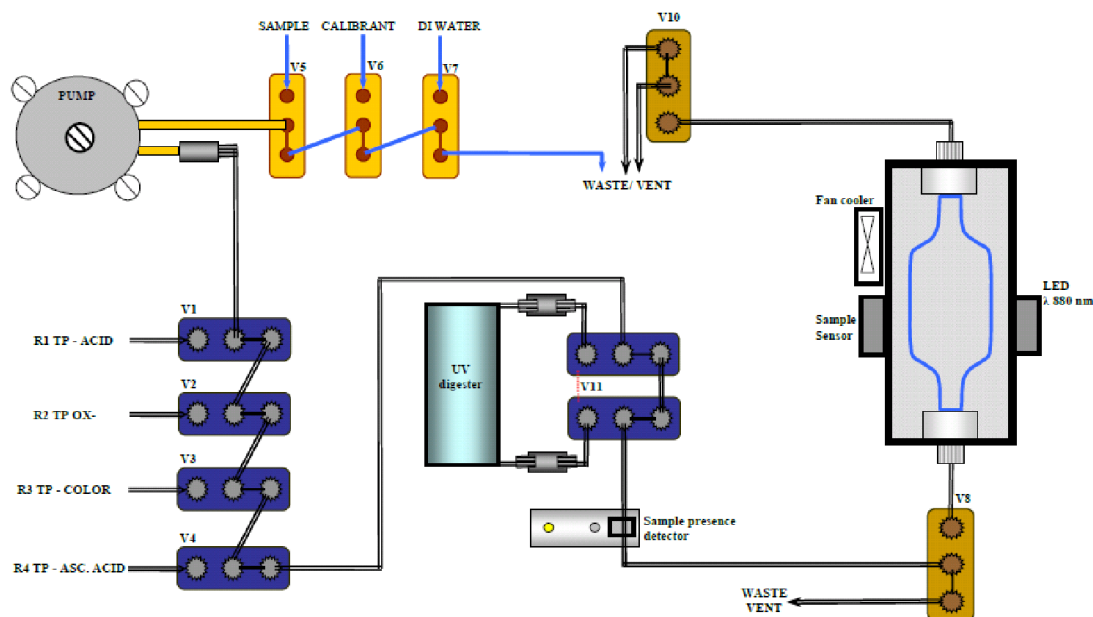
✓ MEASURING INTERVAL

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)

Total Phosphorus measuring principle and hydraulic diagram



The sample is acidified and heated to convert all the inorganic forms of phosphorous, then it is oxidized by the double action of potassium persulphate and UV radiation in acid environment. The orthophosphate produced reacts with molybdate to form phosphomolybdate, which is then reduced to blue molybdenum by ascorbic acid. The complex is read at 880 nm. Antimonyum is used to increase the sensitivity.

Technical Specifications

MEASURING PRINCIPLE: Colorimetric, Acidic high T°&UV digestion, molybdate/ascorbic acid reaction

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: <30 minutes

MEASURING RANGE: 0-0.2/0.3/0.5/1/2/5/10/20/50/100/200mg/L P, other ranges available on request

DETECTION LIMIT: 0.001mg/L P, calculated as for EPA p. 136 appendix B

REPEATABILITY: 1%; **ACCURACY:** +/-3%

ZERO DRIFT: 1% FS; **RANGE DRIFT:** 1% FS; **RESOLUTION:** 0.001

OUTPUT SIGNAL: 4-20 mA **INPUT SIGNALS:** n. 1 Analysis, n. 1 calibration; digital contacts

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 CHANGE: 30 days

PROTECTION: IP55

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

POWER SUPPLY: 12 V DC external power supply included; 4W Standby; 50 W (mean) analysis

WEIGHT: 33 Kg without reagents; **DIMENSION:** 800x420x280 mm(hxwx d)

Subject to change without notice



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