

Portable Analyzer for water measurements



LFA: Loop Flow Analysis patented technique

µMAC-1000 is an on-line portable analyzer, available either in mono or sequential multiparametric configuration (**µMAC-1000 MP**), providing the highest level of analytical automation, based on combined colorimetric and fluorimetric analytical methods.

µMAC-1000 is the only available high sensitivity multiparametric portable analyzer in the market; it uses the well known wet chemistry methods normally used in the laboratories. The analyzer can measure any type of water samples; a wide range of applications is available, including high sensitivity methods for nutrients analysis in seawater.

EASY TO USE

Sample analysis using **µMAC-1000** is easy and friendly; the operator can run a sample only selecting a two keys analysis function on the integrated keyboard.

µMAC-1000 can perform in a full automated way very complex analytical cycles; the results are displayed in concentration units and provided through the analogic or the RS-232 port.

ALWAYS READY FOR ANALYSIS

At the end of each analytical cycle the analyzer remain in stand by mode, without reagents consumption, always ready for the next sample.

EASY TO INSTALL

After the factory tests, the analyzer is delivered ready to be installed, start-up kit is included; it is sufficient to prepare the reagents, to connect the sample line, the waste and the power supply to start the measurement.

SAMPLE DILUTION

The analysis can be run either on the whole sample either after dilution on operator request.

OFF SCALE REANALYZE

Dilution mode will be automatically activated on over range samples, with a dilution factor (factory selected) up to 100 times.

FEATURES/BENEFITS

- Portable, easy to install and to be managed
- Low reagents consumption: only a few hundreds microliters of reagents per analysis; low reagents and disposable cost
- Fully automated operation; no operator attending required
- Automatic calibration mode: it is enough to select the calibration function to perform a new calibration
- Results data storage: the analyzer can store up to 400 measuring results including date, time and optical density.

Technical data

Measuring principle:

Colorimetric

Detector: solid-state multi-beam colorimeter with silicon detector

Measurement type: cyclic (cyclic and sequential if MP version)

Measuring interval: programmable

Measuring time: from 4 to 8 minutes, depending on the analytical method

Number of parameters: up to 4

Number of measuring points: 1

Output signals: n.2 4-20 mA load 400 Ohm linear response or 0-5 Vdc. RS-232 serial output

Input signals: digital contacts with optoisolated for analysis and calibration start

Sample delivery:

- **Pressure:** atmospheric
- **Temperature:** 10° - 30 °C
- **Volume:** 20/30 ml
- **Connections:** Standard 3.2 x 1.6 mm or others on request

Operating temperature: 4°-30 °C

Waste: pressure free

Mounting: integrated carrying case

Protection: IP55; IP65 on request

Reagents replacement: from 4 to 10 weeks, depending on the configured methods

Reagent compartment cooling: optional, Peltier cell

Autonomy: up to one month, depending on measurement interval time

Hardware: PC-104 industrial CPU; integrated keyboard and graphic matrix display

Data output: standard RS 232 serial port; RS 485 available on request

Power supply: 12 Vdc, provided through the main connecting cable

Power absorption: 4 W in stand by, 10 W during analysis

Weight: 13 Kg without reagents

Dimensions: 550 x 350 x 110 cm (l x h x w)

AVAILABLE VERSIONS:

- **Micromac 1000 base:** monoparametric
- **Micromac 1000 MP:** multiparametric, up to 4 parameters
- **Micromac 1000 Nutrients:** multiparametric analysis of NH₃, NO₂+NO₃, NO₃, PO₄.

Note:

Not all analytical method can be available for MP version. Please verify the requested MP configuration with our application specialists.