



SAMPLING  
SOLUTIONS

MEGA SYSTEM

CALIBRATION  
& METROLOGY

# E1-ANALYZER SERIES



- Analyzer for combustion and verification of emissions
- O<sub>2</sub> Paramagnetic Sensor (UNI EN 14789)
- CO NDIR Sensor (UNI EN 15058)
- Gas effluent density measurement (UNI EN 16911-1)
- Efficient PELTIER system
- Programmable Auto-reset (auto-zero) for prolonged measurements
- Built-in printer



CARE FOR THE  
ENVIRONMENT



# E1-ANALYZER SERIES

The E1-ANALYZER portable analyzer is an innovative tool suitable for detecting and monitoring gas fume emissions in industrial plants. The probe, with its heated line as well as a filtering and cooling system, guarantees “dry” gas inlet to the sensor circuit, and proper sample handling. This means that it is possible to carry out exact and prolonged measurements, even in circumstances where there is elevated condensation.

The E1-ANALYZER verifies oxygen (O<sub>2</sub>) volume in compliance with UNI EN 14789 (using paramagnetic techniques) and identifies carbon dioxide (CO<sub>2</sub>) by means of NDIR sensors, allowing it to calculate the density of gas effluents (UNI EN 16911-1).

Other sensors may be installed on request. These include NDIRs for identifying carbon monoxide (CO) in compliance with UNI EN 15058 and electrochemical sensors for identifying nitrogen oxides (NO-NO<sub>2</sub>) and sulphur dioxide (SO<sub>2</sub>).

What makes this product unique is the option of transmitting detected parameters to Mega System isokinetic samplers. Sampling precision is improved by automatically adjusting the isokinetic sampling flow in real time.

## MAIN FEATURES

The analyzer is equipped with a filtration system and an integrated PELTIER cell cooling system with automatic condensate discharge.

The condensate collection system, operating on mains grid, can be upgraded with external accessories according to specific needs.

For prolonged samplings where there is condensation, it is possible to equip the analyzer with a Teflon-coated tube, which self-regulates to 180°C.

The software allows for continuous or timed analyses and records average values. Minimum acquisition time is 10 seconds.

The data collected and processed can be stored for later consultation.

Data may be printed using the built-in printer or by downloading the information to a PC via the RS232 serial port or by transfer to a USB Pen Drive.

Through the calibration program and with the help of certified gas mixtures, the operator is able to check and / or calibrate the sensors.

The instrument is powered by the mains grid. The instrument is supplied with technical manual, test report and transport case.



MEGA SYSTEM

## PROBE AND SAMPLING LINE

The E1-ANALYZER may be used with the FIREFLY sampling probe, which has a heated filter, thermostated to 180°C.

A 3µm interchangeable filter is housed in the filter holder.

It is possible to equip the probe with a thermocouple to measure chimney temperatures.

- The interchangeable tip is made of steel and withstands temperatures up to 650°C.  
Available lengths:  
350 mm and 750 mm.  
The probe can be equipped with a heated sampling tube for sample collection in the presence of a considerable amount of condensation.  
(Available length 750 mm).



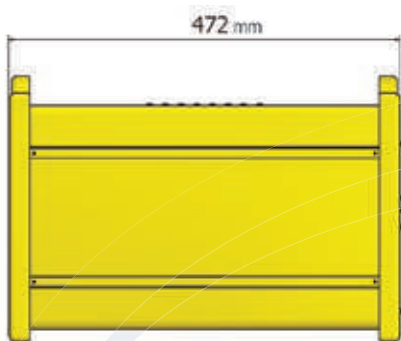
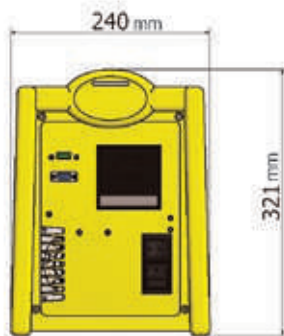
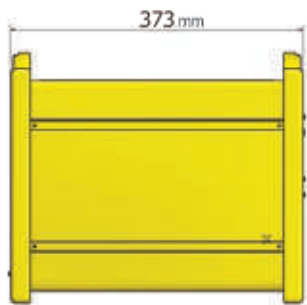
- In conjunction with the heated filter probe, an automated self-regulated heated (180°C) Teflon tube may be used with the sampling line.



It is also possible to use non-heated sampling probes, as an alternative to the probe with the FIREFLY heated filter.

# E1-ANALYZER SERIES

## E1-ANALYZER



## TECHNICAL SPECIFICATIONS

### Sensors

	Range	Resolution	Linearity
O <sub>2</sub> (paramagnetic)	0 ÷ 25%	0,01 %	1 % F.S.
CO <sub>2</sub> (NDIR)	0 ÷ 25%	0,01 %	1 % F.S.
CO (NDIR) OPTIONAL	0 ÷ 2000 ppm	1 ppm	1,5 % F.S.
Thermocouple Type K	0 ÷ 1000 °C	0,1 °C	± 1 °C (linearization software)

### Interface, Data storage

Display	Alphanumeric 160 characters (40x4 lines)
Interface	RS232 - USB (on Pen Drive)

### Environmental conditions

Temperature	0 °C ÷ +45 °C - 95% UR
-------------	------------------------

### Energy

Power	Input 230 Vac - 50 Hz
Power consumption	115 W

### Weight

9 Kg (O <sub>2</sub> paramagnetic - CO NDIR)
11 Kg (O <sub>2</sub> paramagnetic - CO <sub>2</sub> NDIR - CO NDIR - 3 electrochemicals)

### Supplied with

Technical Manual
Test report
A sturdy, comfortable carry-case is available for transporting the analyzer

### Options - Electrochemical Sensors

	Range	Resolution	Accuracy
Nitrogen oxide (NO)	0 ÷ 2000 ppm	1 ppm	± 5 % O.R.
Nitrogen dioxide (NO <sub>2</sub> )	0 ÷ 800 ppm	1 ppm	± 5 % O.R.
Sulphur dioxide (SO <sub>2</sub> )	0 ÷ 2000 ppm	1 ppm	± 5 % O.R.
Carbon oxide (CO <sub>2</sub> )	0 ÷ 500 ppm	1 ppm	± 1 % F.S.

# MEGA SYSTEM