



# EMICHECK Gas Analyzer

**MEGA SYSTEM**  
s.r.l.

MANUFACTURER OF POLLUTION CONTROL SYSTEMS

The portable analyzers of EMICHECK series are suitable to easily, quickly and accurately detect and monitor the emissions of fumes and gases generated by the different combustion processes.

They allow to control combustion to optimise the efficiency of small, medium and large-size heating system.

The available models differ in the number of sensors that can be installed. It is possible install from 4 to 7 sensors, choosing among:

O<sub>2</sub> - CO - NO - NO<sub>2</sub> - SO<sub>2</sub> - CO (0÷5%) - CO<sub>2</sub> IR

The sensors used for gas detection are of electro-chemical type, except for those used to detect the Carbon Dioxide, which is an IR (Infrared) sensor.

The software allows to perform continual or scheduled analysis with average value recording.

The measured and processed data can be stored for future reference. They can also be printed by means of the built-in printer (optional), be downloaded to a PC through the RS232 serial port and transferred to USB pendrive.

Using the calibration program and with the help of certified gas mixtures the operator can check and/or calibrate the sensors.

The analyzers are equipped with a condensate filtering and collection system which can be enhanced according to specific needs, even with the built-in PELTIER cell cooling system with automatic moisture drain.

The instruments may be supplied by the mains voltage (230Vac / 50Hz), or by internal rechargeable batteries, to allow analysis to be carried out in hard to access areas.

For prolonged sampling in the presence of moisture the analyzer may be equipped with a probe with a heated Teflon tube, self-limited at 160°C.



The data which are displayed, calculated and stored are:

parameter detected by the installed sensors (depending on the chosen configuration)

NO<sub>2</sub> – calculated and expressed in mg/m<sup>3</sup>

CO<sub>2</sub> % - if the IR sensor is installed it is detected, otherwise it is calculated as a function of the max CO<sub>2</sub> for the type of selected fuel

Combustion efficiency, losses and air excess (lambda)



شرکت آلایرداز محیط

تهران - خیابان آزادی - بین خیابان شادمهر و  
بزرگراه یادگار امام - شماره ۴۱۷ - واحد ۵

E-mail: [info@apm-co.ir](mailto:info@apm-co.ir)  
Website: [www.apm-co.ir](http://www.apm-co.ir)

تلفن: ۰۲۱-۶۶۰۲۸۱۷۲-۵  
فکس: ۰۲۱-۶۶۰۲۰۵۰۹





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### CHARACTERISTICS OF THE SENSORS

**Sensor:** OXYGEN (O<sub>2</sub>)  
**Type:** ELECTROCHEMICAL  
**Range:** 0 ÷ 20,9 %  
**Resolution:** 0,1 %  
**Precision:** ± 2 %

**Sensor:** CARBON MONOXIDE (CO)  
**Type:** ELECTROCHEMICAL  
**Range:** 0 ÷ 4000 PPM  
**Resolution:** 1 PPM  
**Precision:** ± 5 %

**Sensor:** CARBON MONOXIDE (CO)  
**Type:** ELECTROCHEMICAL  
**Range:** 0 ÷ 5 %  
**Resolution:** 0,01 %  
**Precision:** ± 5 %

**Sensor:** NITROGEN MONOXIDE (NO)  
**Type:** ELECTROCHEMICAL  
**Range:** 0 ÷ 2000 PPM  
**Resolution:** 1 PPM  
**Precision:** ± 5 %

**Sensor:** NITROGEN DIOXIDE (NO<sub>2</sub>)  
**Type:** ELECTROCHEMICAL  
**Range:** 0 ÷ 800 PPM  
**Resolution:** 1 PPM  
**Precision:** ± 5 %

**Sensor:** SULFUR DIOXIDE (SO<sub>2</sub>)  
**Type:** ELECTROCHEMICAL  
**Range:** 0 ÷ 2000 PPM  
**Resolution:** 1 PPM  
**Precision:** ± 5 %

**Sensor:** CARBON DIOXIDE (CO<sub>2</sub>)  
**Type:** INFRARED  
**Range:** 0 ÷ 30 %  
**Resolution:** 0,1 %  
**Precision:** ± 5 %

**Sensor:** GAS TEMPERATURE  
**Range:** 0 ÷ 999 °C  
**Resolution:** 1 °C  
**Precision:** ± 2 °C

**Sensor:** AMBIENT TEMPERATURE  
**Range:** 0 ÷ 50 °C  
**Resolution:** 1 °C  
**Precision:** ± 2 °C

### MAIN FEATURES



Polycarbonate keypad with large backlight LCD display

Calculation in compliance with UNI 10389

Permanet memory allowing to store over 800 records of average analysis values (data logging function)

Logging of average and peak values for oxygen percentage and combustion data.

Built-in Printer

USB port for data downloading

Software for sensor calibration and checking

Possibility to express the concentrations of detected gases in % in ppm or in mg/m<sup>3</sup>

PELTIER cell cooling system with automatic moisture drain

Dual power supply: (230Vac/50Hz - internal batteries)

High-capacity batteries

Built-in battery charger

Dimensions: 470x370x200 mm

Weight – 8 kg

The instrument is complete of technical manual and test report.