

## BI A 2005 series Multi Gas Analyzer

Small, low cost hand held analyzer using electrochemical sensors.

This analyzer is designed for short term measurement for all type of burners.

This combustion analyzer can be fitted with up to 4 electrochemical sensors



### Measurement of gas concentrations

Standard version with two gas sensors: O<sub>2</sub>, CO  
Optional gas sensor NO, SO<sub>2</sub>

### Measurement of other parameters

Measurement of gas and ambient temperatures  
Relative humidity measurement probe - optional

### Calculation

CO<sub>2</sub> concentration  
Calculation of all relevant combustion parameters

### Processing and presentation of measuring data

All results shown on display  
Averaging of all measured values. Averaging time: 2, 10, 20, 30, 60, 120, 180 seconds  
Storage for 16 measurements - "measure now, print later"  
Powerful PC program for analyzer settings and data communication

### Software capabilities

Automatic zeroing when the analyzer is switched on  
All settings for the analyzer carried out with PC program  
List of 20 common fuels  
4 further freely programmable fuels

### Hardware capabilities

Incredible 60 hours operating time from one set of batteries  
Full graphic display LCD  
Gas probe with thermocouple and condensate trap  
RS-232C interface and multifunctional PC program  
Updateable FLASH ROM program memory

### Technical data

Probe length 150 mm  
Length of gas line 2 m  
In line filter 20 µm  
LCD Display  
Power supply 6 V ( 4 x AA) Battery  
Membrane pump  
Operating temperature 10 °C ÷ 50°C  
Storage temperature -20 °C ÷ +55 °C

Parameter	Measuring method	Range	Resolution	Accuracy	Time (T90)
O <sub>2</sub> - oxygen, volumetric concentration	electrochemical gas sensor	0..25 %	0.01 %	± 0.2% or 2% rel.	45 s
CO <sub>2</sub> - carbon dioxide, volumetric concentration	calculated from volumetric concentration of O <sub>2</sub>	0..25 %	0.01 %	± 0.2% or 2% rel.	45 s
CO - carbon monoxide, volumetric concentration	electrochemical gas sensor	0..20000 ppm	1 ppm	± 5 ppm or 5 % rel.	45 s
COmg - carbon monoxide, mass concentration	calculated from volumetric concentration of CO	0...	1 mg/Nm <sup>3</sup>	± 5 mg/Nm <sup>3</sup> or 5 % rel.	45 s
COrel - carbon monoxide, mass concentration relative to O <sub>2</sub>	calculated from volumetric concentration of CO and O <sub>2</sub>	0...	1 mg/Nm <sup>3</sup>	± 5 mg/Nm <sup>3</sup> or 5 % rel.	45 s
NO / NOx - volumetric concentration of nitrogen oxides.	electrochemical gas sensor	0..1000 ppm	1 ppm	± 5 ppm or 5 % rel.	45 s
NOmg/NOxmg - mass concentration of nitrogen oxides	calculated from volumetric concentration of NO	0...	3 mg/Nm <sup>3</sup>	± 3 mg/Nm <sup>3</sup> or 5 % rel.	45 s
NOrel / NOxrel - mass concentration of nitrogen oxides relative to O <sub>2</sub>	calculated from volumetric concentration of NO and O <sub>2</sub>	0...	3 mg/Nm <sup>3</sup>	± 3 mg/Nm <sup>3</sup> or 5 % rel.	45 s
Tgas - flue gas temperature	Thermocouple	-10..1000°C	0.1 or 1°C set by user	± 2 °C or 1.5 % rel.	30 s
Tamb - ambient temperature	Thermistor	-10..100°C	0.1 or 1°C set by user	± 1 °C	30 s
Lambda - excess air number	calculated	1..10	0.01	0.01	
qA - combustion losses	calculated	0..100%	0.1%	0.1%	
Eta - efficiency	calculated	0..120%	0.1%	0.1%	

## Bhoomi Analyzers

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