



# ***MCA 100*** *the most Enhanced NDIR* *Multigas Analyser*



A powerful NDIR multigas analyser with the follow benefits:

- Continuous measurements up 15 gases
- Low operational costs
- Touch Screen Monitor
- Manual & Automatic Calibration
- Unheated sample line (when used with SPP-100 sampling system)
- PC embedded with Monitor Touch Screen

*MCA 100 can be configurate to detect at ppm,mg/m<sup>3</sup>, % level:*

***CO,CO<sub>2</sub>,CH<sub>4</sub>,NO,NO<sub>2</sub>,N<sub>2</sub>O,SO<sub>2</sub>,HCL,HF,THC (CH<sub>4</sub> based), H<sub>2</sub>O, NH<sub>3</sub>,Formaldehyde, H<sub>2</sub>S,and O<sub>2</sub> (with integrate paramagnetic cell)***

## ***Description***

The MCA 100 analyser features a NDIR Spectrometer (with a Patent Pending filter system technology). A MP cell, control computer and user interface with keyboard and monitor.

An integrated flow meter monitors the sample gas flow rate. An oxygen paramagnetic cell can be installed. Into the instrument in order to perform a powerful stand alone device. All parts in contact with the measuring gas can be heated to prevent cooling below the dew point. The MCA 100 controls and monitors flue gas measurements up to 15 different compound..The values determined are displayed on screen, stored on the computer and transmitted to the interfaces.

The MCA 100 use is a NDIR device which enables bifrequency and gas filter correlation procedures to be used simultaneously. Two important features of the light source (an infrared emitter) are its high energy output and long service life. The light emitted passes through the chopper wheel, the MP cell, the Special filter wheels with the interference and gas filters, and impinges on a 2 stage PbSe detector.

## ***Integrated system control in the MCA 100 analyser***

The computer integrated in the MCA 100 analyser is an Industrial Fanless PC with a GUI user interface. A Flash disc (with no moving parts) serves as a bulk memory. The computer controls the measurement procedure, processes measured values, monitors limit values and outputs the results, warnings and alarms to the monitor and the interfaces. The illuminated and touchscreen monitor are splash-proof and located on the front of the device. Connecting an external keyboard is very convenient thanks to a socket on the rear of the unit.

## ***User-friendly software***

The software for operating the MCA100 is menu driven and features two levels: one for the measuring mode and another for password-protected configuration changes.

## MCA 100 Applications

- Cogeneration, gas turbines
- Electric Power Plants
- MSW & Hazardous Waste incinerators
- Cement Kilns
- Industrial Boilers & Furnaces
- Pulp & Paper
- Chemical & Petrochemical Plants
- Glass Plants
- Research
- CEM's
- Steel Production
- Crematorius



The MCA 100 system (with permeation Dryer ETG SPP-100 for drying gases) is designed for recording extremely small measurement ranges in power plants and refuse incineration plants, for example for very low limit values or for monitoring guarantee values for flue gas cleaning.

## Specifications

Gases	Suggested Ranges	LDL
■ HCl	0...15 mg/m	1 ppm
■ CO	0...50 mg/m	1 ppm
■ NO	0...200 mg/m	1 ppm
■ NH3	0...20 mg/m	1 ppm
■ NO2	0...100 mg/m	1 ppm
■ SO2	0...50 mg/m	1 ppm
■ CO2	0...25 vol.%	10 ppm
■ O2	0...21 vol.%	100 ppm
■ H2O	0...5 vol.%	10 ppm
■ N2O	0...100 mg/m	1 ppm
■ CH4	0...100 mg/m	1 ppm
■ HF	0...10 mg/m	1 ppm
■ THC	0...100 mg/m	1 ppm
■ Formaldehyde	0...100 mg/m	1 ppm
■ H2S	0...100 mg/m	1 ppm

  

<b>Meas. gas components</b>	Continuous, max. 15 plus
<b>Analyser MCA 100 enclosure</b>	19" Rack mounting
<b>Measuring principle</b>	NDIR Infrared
<b>Measure Cell</b>	White Cell with path length of 6 m or 10 (it depend by the requested sensitivity)
<b>Measurement ranges</b>	Fully programmable by the user Limit values limit values in each case as
<b>Zero drift</b>	Automatic zero point correction
<b>Temp. influence</b>	< % of the relevant measurement range/10 K
<b>Cross sensitivity comp.</b>	CO2 and H2O compensation by internal algorithm
<b>Barometric correction</b>	Range from 0.7 to 1. hPa (0. ...0.5 inWC) atmospheric pressure (optional)
<b>Response time T90</b>	Plant and component specific, typically < 180 s (sec)
<b>Display</b>	Colour TFT 8,4"monitor, Touch Screen 600x800
<b>Dimensions</b>	Rack 19" 6U
<b>Power supply</b>	230 VAC, +10/-15%; 50 Hz; opt.: -ph 115 V, +10/-15%; 60 Hz; Power consumption
<b>Ambient conditions Temperature</b>	+10 to 35°C
<b>Humidity</b>	up to 80% (without condensation)

  

**Interfaces and Signals**  
 Interfaces Serial: modem, Modbus protocol, others available on request; parallel: optional

**Signal outputs**  
 Digital: 50 V AC/4 A; 4 V DC/4 A; 50 V DC/0.8 A for maintenance and faults; others optional  
 Analog (optional): 0/4 to 20 mA, resolution 12 bit, accuracy 0.5%, load 500 Ω

**Signal inputs**  
 Optional: analog and digital