



# EGA41 series



## A versatile CO<sub>2</sub>, O<sub>2</sub> and humidity analyser

The EGA41 is a portable desk top CO<sub>2</sub> infra-red gas analyser with advanced sensors for oxygen and water vapour measurement.



- Accurate CO<sub>2</sub> infra-red gas analyser
- H<sub>2</sub>O by laser trimmed sensor
- O<sub>2</sub> by electro-galvanic fuel cell
- Integral sample pump
- Auto logging to SD memory card
- 7 analogue inputs
- USB and analogue output

### ADC BioScientific Ltd: Leaders in gas analysis

For over 25 years ADC's name has been synonymous with quality gas analysis. In thousands of laboratories, all over the world, researchers are using ADC technology to accurately measure concentrations of analytical gasses.

### Assured accuracy

The EGA41 features a temperature compensated infra-red gas analyser, ensuring stability over a wide range of operating temperatures. The Infra-red gas analyser features a low loss, gold plated analysis cell to ensure a low noise, high output signal from the detector. Oxygen is measured by a dual thermally compensated, high accuracy electro-galvanic fuel cell.

H<sub>2</sub>O measurement is by the latest technology, laser trimmed sensors.

All readings are automatically compensated for changes in atmospheric pressure.

### Flexible and rapid analysis

The EGA41 can be installed and analysing in minutes. The compact and lightweight instrument features a rear mounted, carrying handle for convenient transportation to the measuring site. The supplied mains power supply is connected to a socket on the rear panel, the EGA41 is switched on and within a few seconds the gas concentrations are displayed on the large, LED backlit, LCD display.

### Designed for ease of operation

The EGA41 has a long life sample pump which is designed to give many years of service.

The integral soda lime column is used to auto zero the infra-red gas analyser, ensuring long-term stability of CO<sub>2</sub> calibration.

The storage capacity of the supplied 2Gb, SD memory card provides enough space for hundreds of thousands of data sets.

Data storage can be initiated by a high signal on the CTS line of the RS232, when an analogue input gets to a particular level, after one of the relays actuates or at timed intervals.

Data download can be via the high speed USB port or the SD memory card can be removed and plugged into a card reader or a suitable memory card slot on a PC. All data is stored in an ASCII comma separated variable (.csv) format.

Gas readings, flow indication, power supply status and date and time are all displayed on the large, LED backlit LCD display.



Configuration and control is by simple to use, menu driven software.



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## Flexible operation

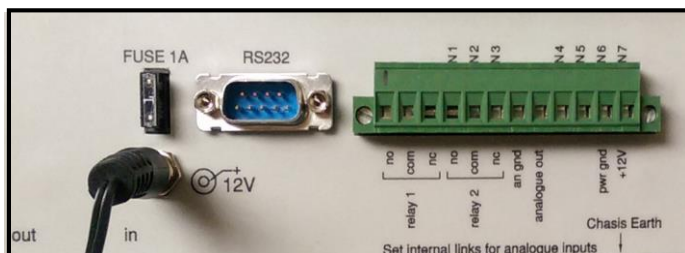
The EGA41 can be powered by a 12V car battery for remote applications. A typical car battery will run the EGA41 for four days on a full charge. The EGA41's auto zero calibration and auto logging makes it an ideal instrument for monitoring durations of a few days. The on-board absorber column holds enough soda lime for many weeks of operation, ensuring accurate CO<sub>2</sub> readings when environmental conditions may be varying.

*For continuous monitoring we recommend the EGA30 series from ADC.*

## Flexible inputs and outputs

The EGA41 has seven 12 bit analogue inputs for connection to external sensors or DC voltage signals. These inputs are logged together with the date, time, gas readings, flow (optional), atmospheric pressure and relay status.

A single analogue output (voltage or current) can be assigned to any of the measured parameters.



Two relays are provided for alarm or control purposes. Each can be user configured to switch at a desired value for any measured parameter.



ADC Bioscientific Ltd.  
Global House  
Geddings Road  
Hoddesdon  
Herts, EN11 0NT  
UK

Tel: +44 (0)1992 464527 Fax: +44 (0)1992 444245  
[sales@adc.co.uk](mailto:sales@adc.co.uk) [www.adc.co.uk](http://www.adc.co.uk)

## Technical specifications:

**CO<sub>2</sub>:** 0 - 2000ppm as standard

**Resolution:** 1ppm

**O<sub>2</sub>:** 0 – 100%

**Resolution:** 0.1% (1000ppm)

**H<sub>2</sub>O:** 0-100% RH,

**Resolution:** 1% RH

**Pump flow maximum:** At least 500cc/min

**Flowmeter (optional):** 0 - 500cc/min

**DC Voltage in:** Minimum 11.5V Maximum 17.5V

**DC Current in:** 1A maximum. Protected with replaceable fuse.

**Analogue input channel resolution:** 12 bit  
Accuracy +/- 1.5%

**Atmospheric pressure range:** 600-1100 mbar  
Accuracy -4/+2 mbar

**Dimensions:** Width 287mm x Depth 191mm x  
Height 168mm

**Weight:** 2.7kg

ADC BioScientific Ltd. specialises in the design and manufacture of non-dispersive infra-red gas analysers and associated equipment for a wide variety of applications and markets.

Whilst every care has been taken in producing this publication, no responsibility can be assumed for possible inaccuracies or omissions.

ADC is constantly improving the design and quality of its products and modifications may be made from time to time.

