

# EC500 – Portable analyser for biogas measurements

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## **GENERAL**

The EC500 is a portable analyser for the measurement of Methane (CH<sub>4</sub>), Carbon Dioxide (CO<sub>2</sub>), Oxygen (O<sub>2</sub>) and Hydrogen Sulphide (H<sub>2</sub>S) in many applications like landfills, co-generation plants, etc.

The unit is portable (weight ca. 3kg), supplied with a water resistant plastic bag with shoulder belt, powered by a Li-ION 20Ah battery for ca. 10 hours of continuous operation.

The concentration measurements are showed on a LCD display on the front panel.

The unit is realized with a modular criteria, which allows limited costs

and times for the maintenance and repair.

## **MEASUREMENT TECHNIQUES**

The analyser EC500 uses a long life electrochemical cell for O<sub>2</sub> (3-5 years), a specific electrochemical cell for H<sub>2</sub>S, and two separate IR sensors for CH<sub>4</sub> and CO<sub>2</sub>, assuring precise and reliable measures.

### *Infrared for CH<sub>4</sub> and CO<sub>2</sub>*

Linearity: within  $\pm 10\%$

Zero repeatability:  $\pm 0,05\%$

Span repeatability:

$\pm 0,1\%$  at 5%,  $\pm 2\%$  at 100%

Response time T90: <30s

### *Electrochemical cell for O<sub>2</sub>*

Accuracy:  $\pm 1\%$  f.s.

Response time T90: <15s

Average life: 3-5 years

### *Electrochemical cell fo H<sub>2</sub>S*

Linearity: 0 to -40 ppm error at f.s., linear at zero and 400ppm H<sub>2</sub>S

Response time T90: <25s

Average life: 1-2 years

## **Ranges**

0-100% for CO<sub>2</sub> e CH<sub>4</sub>

0-25% for O<sub>2</sub>

0-2000ppm for H<sub>2</sub>S

## **STANDARD ACCESSORIES**

- hygroscopic 0,2 $\mu$  disk filter
- PVC sampling tubing
- battery charger
- plastic bag with shoulder belt, with transparent front cover which allows the reading of the display without opening the bag.

## **ACCESSORIES and SPARES**

- coalescence filter
- hygroscopic 0,2 $\mu$  filters kit (10 pieces)

## **TECHNICAL FEATURES**

### **Warning light**

Battery status (on the rear side)

### **Power supply**

Rechargeable Li-Ion 20Ah battery (ca. 10 hours of continuous use)

### **Operating temperature**

5-40°C

### **Sampling pump**

internal (200ml/min)

### **Warmup time**

less than 60 sec

### **Dimensions and weight**

230(h) x 210 x 80 mm; 1,2 Kg