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## Landfill and Biogas Monitoring System

Introducing the Model AB-100 Wall Mount Continuous Landfill and Biogas Monitoring System



### APPLICATION

The Control Analytics, Inc. Model AB-100, is designed to monitor oxygen (O<sub>2</sub>), methane (CH<sub>4</sub>), and/or carbon dioxide (CO<sub>2</sub>) in recovered gases from landfill and biogas operations. The system employs state of the art IR Technology for methane and CO<sub>2</sub> analysis and includes options for long life electrochemical O<sub>2</sub> or more robust non-depleting paramagnetic O<sub>2</sub> detectors.

The system includes a fast response sample system including continuous moisture removal without the need for thermoelectric coolers. The dual stage moisture removal employs both compression and permeation drying for handling samples with moistures up to 8 % by volume. A high moisture option is available for moisture contents to 40% by volume.

The system employs a modular design which separates the sample system from the analyzer module providing longer life of the analyzer electronics and circuitry.

The standard system includes auto calibration programmable by the user on the instrument LCD display panel. An option can be purchased to provide internal span calibrations such that the only calibration gas needed to operate the system is compressed nitrogen for the O<sub>2</sub> detector zero gas. An optional H<sub>2</sub>S filter for use in high H<sub>2</sub>S applications (> 100 ppm) is also available.

The system is supplied for use in general purpose electrical classifications or can be purchased in a Class 1 Division 2 Groups B-C-D configuration without the need for a Z purge system eliminating the need for compressed air in these applications.

**Call us today for pricing and additional information. Customized systems also available.**

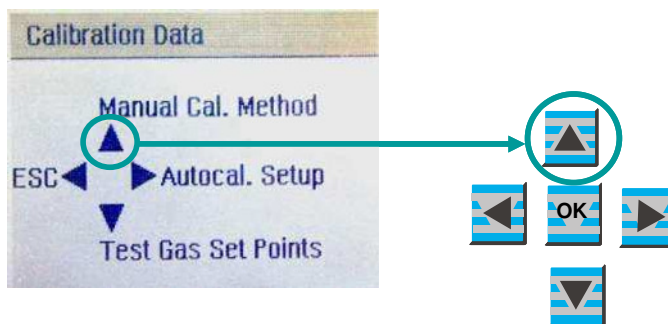
Control Analytics, Inc

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State of the art analyzer design



Auto calibration from front panel is standard

### **Base System**

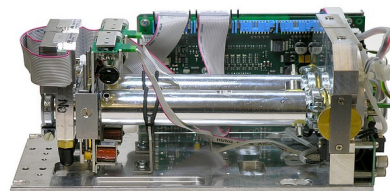
- ❖ Space saving wall mount in NEMA 4 and 4X fiberglass or stainless steel
- ❖ Low (< XXX% v/v) and high moisture sample conditioning options
- ❖ Multi-component IR gases analyzed (CH<sub>4</sub>, CO<sub>2</sub> typical)
- ❖ Optional Oxygen analysis using paramagnetic or fuel cell technologies
- ❖ Auto calibration is standard with front panel user programmable calibration cycles
- ❖ Internal cal option eliminates the need for span gases
- ❖ Remote control and diagnostic capability
- ❖ Modular design separates sample system from analyzer module
- ❖ NDIR Photometer with Luft Detector
- ❖ Multi component: 1 to 4 measured components, simultaneous, continuous
- ❖ Optimized for Biogas applications
- ❖ Calibration with gas-filled calibration cells, without test gas bottles (Option)
- ❖ References: Over 10 years stability tests through TÜV
- ❖ Corrosion resistant measuring cells
- ❖ High stability < 1% fs per week
- ❖ Approvals for emission monitoring (TÜV, MCerts, EPA)

### **Outputs**

- ❖ Analog 4-20mA for each measured component (Modbus optional)
- ❖ Form C Relay - Calibration failure
- ❖ Form C Relay - Instrument Fault
- ❖ Form C Relay - High concentration alarm

### **Options**

- ❖ H<sub>2</sub>S filter
- ❖ High Moisture Dryer
- ❖ Internal Span cells
- ❖ Modbus
- ❖ Data Logger with additional analog inputs
- ❖ Low temperature option (<35°F)
- ❖ C1D2 Group BCD and C1D1 Group BCD
- ❖ Cold weather package



NDIR – Photometer with Luft Detector

### **Specifications**

Method of Detection:	Luft infrared CH <sub>4</sub> & CO <sub>2</sub> detector. Long life Electrochemical O <sub>2</sub> Sensor. Optional Paramagnetic O <sub>2</sub> Sensor
Ranges Available:	0 - 25% O <sub>2</sub> . Any range between 0 - 20% and 0 - 100% CH <sub>4</sub> , CO <sub>2</sub>
Resolution:	0.1% on CO <sub>2</sub> , O <sub>2</sub> , & CH <sub>4</sub>
Accuracy & Repeatability:	±1% of full scale
Drift:	Less than 2% of full scale per month
Response Time (T-90):	Less than 20 seconds not including sample line delay
Ambient Temp. Range:	40° - 120°F (4° - 48°C). Lower temperatures (-5°F, -20°C) with Cold Weather Package
Linearity:	±1% of full scale for each gas measured
Size and Weight:	Approximately 24" H x 30" W x 10" D @ 80 lbs (61 x 51 x 25 cm @ 20 kg) Physical data may vary depending on options required
Power:	115vac 60Hz (220vac 50Hz available)
Outputs:	4-20mA into 500 ohms non-isolated standard. Isolated 4-20mA, RS 232, RS 485, Modbus, Ethernet outputs optional
Alarms:	High O <sub>2</sub> , High CO <sub>2</sub> , Low CH <sub>4</sub> , Analyzer Fault, Calibration Fault, SPDT relays with 2A contacts