

INNOVATION:
The Bio Gas Monitor is a
continuously working analyser
for CH₄, CO₂, O₂ and H₂S



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Product information Biogas-Monitor

Field of application

The biogas industry has experienced a substantial boom because of the price increase for oil and gas. Operating a modern biogas plant is hardly possible without a continuous control of the gas composition. Knowing the gas composition helps the operator to increase the efficiency of the plant and to counteract promptly wrong developments. In addition more and more manufacturers of combined heat and power units demand for the compliance with pollutant limit values - especially for the aggressive H₂S - in order to keep warranty.

The biogas monitor can monitor up to 4 gas components **continuously**. The basic version includes the measurement of **CH₄** and **CO₂** by means of an infrared cell as well as **O₂** and **H₂S** by means of an electrochemical cell.



Measuring gas from
the sampling point

Diluted
measuring
gas



Gas sampling &
mixing probe

Ambient air
for dilution

Biogas
monitor

Examples for applications

- Process monitoring and optimisation
- Determination of energy content (CH₄ measurement)
- Protection of engines (H₂S measurement)
- Biogas plants, dry fermentation
- with modified devices:
 - biogas and landfill gas
 - wood gasification and pyrolysis



Device characteristics

- compact analysis system as 3-parts wall case with integrated analyser modul and separate mixing probe
- on-site diagnosis of the plant state by high-resolution graphique display with bar diagram
- display possibility in in ppm and Vol%
- excellent price /performance ratio

General technical data

Case: 3-parts wall-case
Dimensions: 610 x 750 x 480 mm (W x H x D), weight ca. 25 kg
Ambient temperature: +5 ... +35 °C
Power supply: 230 VAC / 50 - 60 Hz

Probe

Principle: gas sampling via flame barrier
mix of extracted measuring gas with inert gas in the proportion of 1:50

Analyser

Measuring principle: infrared photometer (CH₄, CO₂)
Electro-chemical cell (O₂, H₂S)

Display: LC-Display, 240 x 128 Pixel, back-lighted
Keyboard: keypad
Operation: menu driven
Detection limits: < 2 % of the respective measuring range
Zero point correction: automatically
Sensitivity correction: manually with calibration gas
Baro correction: Internally
Response time: T₉₀ < 180 seconds (depending on plant and chosen component)

Drift: < 5% in maintenance interval
Analogue outputs: 4 ... 20 mA (CO₂, CH₄, H₂S and O₂)
Digital signals: failure, maintenance, maintenance request, limit values
Interfaces: RS 232, Profibus (optionally)
Maintenance and service: at least half-yearly

Measuring ranges

- CO₂ 0 ... 100 Vol%
- CH₄ 0 ... 100 Vol%
- H₂S 0 ... 10.000 ppm
- O₂ 0 ... 25 Vol%

other components and measuring ranges on request