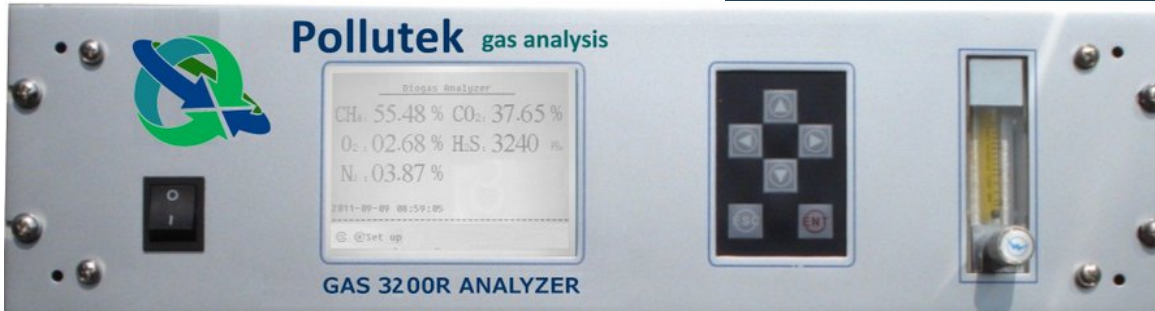


GAS 3200R Series

BIOGAS - BIOMETHANE Analysers

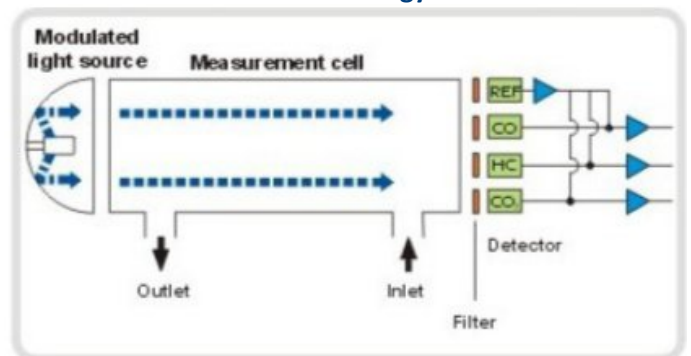
CH₄% + CO₂% + O₂% +
H₂S ppm + H₂ ppm (option) + N₂ (calculated)



Applications

Landfill sites, wastewater treatment plants, anaerobic digesters, sludge digesters, biomethane production, H₂S scrubbers efficiency, etc.

NDIR dual beam NDIR technology

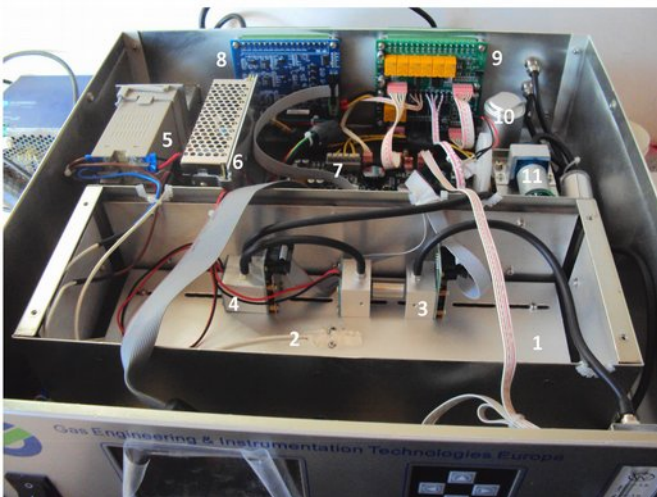


Configurations

GAS 3250R	CH ₄ + CO ₂ + O ₂ + H ₂ S + H ₂
GAS 3240R	CH₄ + CO₂ + O₂ + H₂S (standard config.)
GAS 3232R	CH ₄ + CO ₂ + H ₂ S
GAS 3231R	CH ₄ + CO ₂ + O ₂
GAS 3230R	CH ₄ + O ₂ + H ₂ S
GAS 3222R	CH ₄ + CO ₂
GAS 3221R	CH ₄ + H ₂ S
GAS 3220R EFF	H ₂ S _{LOW} + H ₂ S _{HIGH}
GAS 3220R	CH ₄ + O ₂
GAS 3210R	CH ₄ or CO ₂ or H ₂ S or O ₂

Key features

- ▣ Up to 5 gas measures + optional N₂ calculation
- ▣ Real time, accurate and reliable biogas measures
- ▣ Dual beam NDIR detectors for CH₄ and CO₂
- ▣ Industrial electrochemical cell for H₂S up to 20.000 ppm
- ▣ Long life Industrial O₂ galvanic fuel cell
- ▣ Optional measure of H₂ up to 10.000 ppm
- ▣ Temperature regulated enclosure for NDIR detectors
- ▣ Large LCD display and easy to use tactile keyboard interface
- ▣ Optional Internal gas sampling pump
- ▣ 4-20mA & relays outputs
- ▣ RS232 COM port



Internal view GAS 3240R BIOGAS

1. Heated enclosure (50°C) for NDIR detectors
2. PT100 for temperature control
3. Dual beam NDIR CH₄ detector
4. Dual beam NDIR CH₄ detector
5. Temperature controller
6. Power supply
7. Mainboard
8. 4-20mA outputs board
9. Relay outputs board
10. Oxygen sensor
11. Zero air pump

Special module with air pump and solenoid valve for continue measure of H₂S ≥ 500 ppm; programmable measure/refreshing cycle to extend the sensor lifetime.



Pollutek gas analysis is also specialised in supplying customized analysis systems for single or multiple gas sampling points, in 1200 or 1600 mm height industrial cabinets, including dedicated equipment for gas sampling and conditioning, PLC unit for system operation control and communication with an external server or PC with our SCADA software.



Technical specifications

Standard measurements	CH ₄ % - CO ₂ % - O ₂ % - H ₂ S ppm
Optional measurements	H ₂ ppm ; O ₂ traces (0-1% range)
Optional calculation	N ₂ %
Gas analysis principle	CH ₄ - CO ₂ Non-dispersive Infrared Absorption (NDIR dual beam) O ₂ - H ₂ S - H ₂ Industrial electrochemical cell (ECD)
Standard measuring ranges NDIR detectors	CH ₄ 0-100%vol (<i>intermediary ranges on request</i>) CO ₂ 0-50% or 0-100%vol (<i>intermediary ranges on request</i>)
Standard measuring range ECD sensors	O ₂ 0-5% or 0-10% or 0-25%vol O ₂ traces (option) 0-1% H ₂ S 0-10 / 0-50/ 0-100 / 0-200 / 0-500/ 0-1000 / 0-2500 / 0-5000 or 0-10000 ppm Special high range 0-20000 ppm (optional) 0-1000 / 0-2000 / 0-5000 or 0-10000 ppm
Display	H ₂
Display resolution	LCD (320 x 240), 4 digits CH ₄ - CO ₂ - O ₂ : 0.01% O ₂ traces : 0.001% (=10 ppm) H ₂ S range ≤ 500 ppm: 0,1 ppm H ₂ S, H ₂ range ≥ 1000ppm: 1 ppm H ₂ S high range 0-2%vol: 0.001% (= 10 ppm)
Precision	CH ₄ - CO ₂ - O ₂ : ≤ ±2% FS H ₂ S - H ₂ - O ₂ traces: ≤ ±3% FS
Repeatability Zero & Span Drift	≤ 1% FS
Warm up time	± 1% FS/week
Auto zero function	800 seconds (30 minutes to full specifications and/or for performing calibration) Auto-zeroing on ambient air during the last 100 seconds of the warm-up time Note: the function is disabled for the H ₂ S and O ₂ traces measuring channels Programmable auto-zero function on ambient air via setting menu Note : 4-20mA outputs are frozen during the zeroing cycle + 120 sec.
Measure/refreshing module	Module with programmable measuring/air refreshing cycle for H ₂ S and H ₂ sensors ≥ 500 ppm; The module includes the sensor, solenoid valve, air pump and control board. Preferably by an external diaphragm gas sampling pump. Optional internal compact pump with on/off function via keyboard or by external +12VDC signal
Gas sampling	CH ₄ - CO ₂ - O ₂ : ≤ 15s H ₂ S - H ₂ : ≤ 60 s
Response time (T₉₀)	5 points factory calibration stored in the microprocessor of the gas analyzer
Calibration NDIR detectors	2 points (zero and span) factory calibration stored in the microprocessor of the gas analyser
Calibration ECD sensors	2 points (zero and span) (span gas to be min. 85% of the full range)
User calibration	
Sample Gas Conditions	Flow rate Nominal 1L/min (0.7 to 1.2 L/min) Inlet pressure 30-50 mbar Outlet pressure Atmospheric pressure Temperature Gas dew point +4°C R _H 10 to 95% non condensing Quality Free of dust, water and oil traces
Operation conditions	T _{AMB} 0 to 50°C P _{AMB} Patm ± 10% R _H 10 to 95% non condensing
Communication interface	RS232/485 with proprietary communication protocol
Analogue output signals	4-20 mA output per measuring channel
Digital output signals	2 gas alarm contacts per measuring channel (freely adjustable level)
Mechanical	19" - 3U rack or desk type Dimensions L485 x W457 x H 132 mm Weight < 12kg
Power supply	220 ±44 VAC - 50Hz ± 1 Hz (power cable included)
Options	Internal gas sampling pump Real time data transfer software RS232-USB cable adapter

Non contractual pictures and specifications - subject to change without prior notification - Issue -EN17v1



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