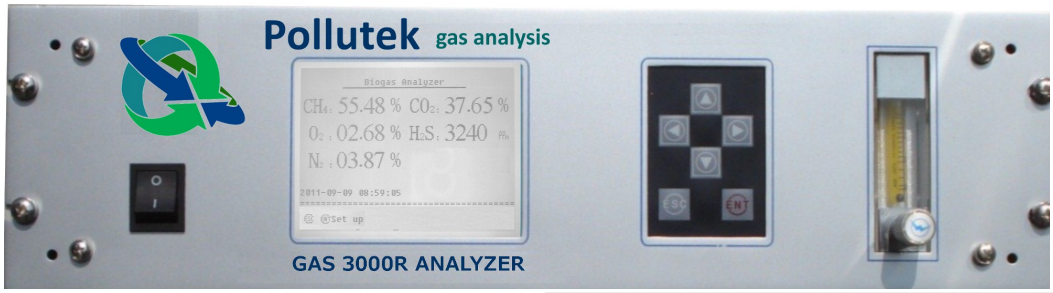
GAS 3200R Series

BIOGAS - BIOMETHANE Analysers

CH_4% + CO_2% + O_2% +

H_2S ppm + H_2 ppm (option) + N_2 (calculated)

Pollutek Gas Analysis

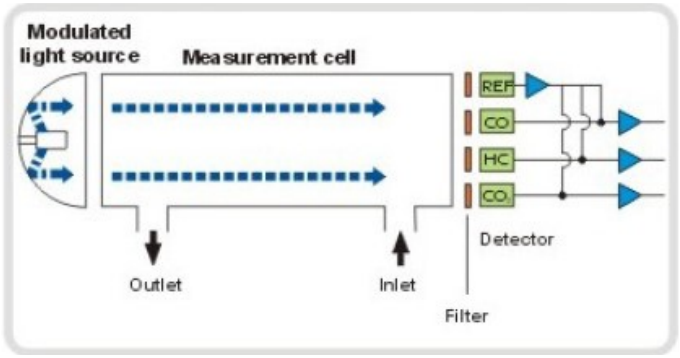


Applications

Landfill sites, wastewater treatment plants, anaerobic digesters, sludge digesters, biomethane production, H_2S scrubbers efficiency, etc.

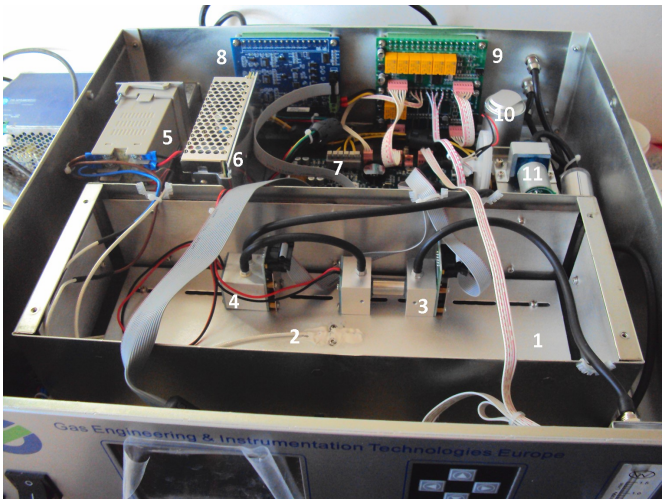
Configurations	
GAS 3250R	$CH_4 + CO_2 + O_2 + H_2S + H_2$
GAS 3240R	**$CH_4 + CO_2 + O_2 + H_2S$ (standard config.)**
GAS 3232R	$CH_4 + CO_2 + H_2S$
GAS 3231R	$CH_4 + CO_2 + O_2$
GAS 3230R	$CH_4 + O_2 + H_2S$
GAS 3222R	$CH_4 + CO_2$
GAS 3221R	$CH_4 + H_2S$
GAS 3220R EFF	$H_2S_{LOW} + H_2S_{HIGH}$
GAS 3220R	$CH_4 + O_2$
GAS 3210R	CH_4 or CO_2 or H_2S or O_2

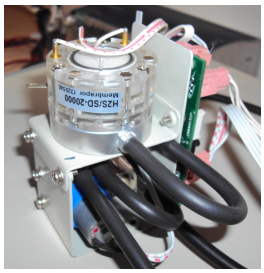
NDIR dual beam NDIR technology



Key features

- Up to 5 gas measures + optional N_2 calculation
- Real time, accurate and reliable biogas measures
- Dual beam NDIR detectors for CH_4 and CO_2
- Industrial electrochemical cell for H_2S up to 20.000 ppm
- Long life Industrial O_2 galvanic fuel cell
- Optional measure of H_2 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 $H_2S \geq 500$ 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_2S 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_2S - H_2	Industrial electrochemical cell (ECD)
Standard measuring ranges	CH_4	0-100%vol (*intermediary ranges on request)*
NDIR detectors	CO_2	0-50% or 0-100%vol (*intermediary ranges on request)*
Standard measuring range ECD	O_2	0-5% or 0-10% or 0-25%vol
sensors	O_2 traces (option)	0-1%
	H_2S	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)
	H_2	0-1000 / 0-2000 / 0-5000 or 0-10000 ppm
Display	LCD (320 x 240), 4 digits	
Display resolution	CH_4 - CO_2 - O_2 : 0.01% O_2 traces : 0.001% (=10 ppm) H_2S range ≤ 500 ppm: 0,1 ppm H_2S, H_2 range ≥ 1000ppm: 1 ppm H_2S high range 0-2%vol: 0.001% (= 10 ppm)	
Precision	CH_4 - CO_2 - O_2 : ≤ ±2% FS H_2S - H_2 - O_2 traces: ≤ ±3% FS	
Repeatability	≤ 1% FS	
Zero & Span Drift	± 1% FS/week	
Warm up time	800 seconds (30 minutes to full specifications and/or for performing calibration)	
Auto zero function	Auto-zeroing on ambient air during the last 100 seconds of the warm-up time Note: the function is disabled for the H_2S 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_2S and H_2 sensors ≥ 500 ppm; The module includes the sensor, solenoid valve, air pump and control board.	
Gas sampling	Preferably by an external diaphragm gas sampling pump. Optional internal compact pump with on/off function via keyboard or by external +12VDC signal	
Response time (T_{90})	CH_4 - CO_2 - O_2: ≤ 15s	H_2S - H_2: ≤ 60 s
Calibration NDIR detectors	5 points factory calibration stored in the microprocessor of the gas analyzer	
Calibration ECD sensors	2 points (zero and span) factory calibration stored in the microprocessor of the gas analyser	
User calibration	2 points (zero and span) (span gas to be min. 85% of the full range)	
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

Pollutek Gas Analysis

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