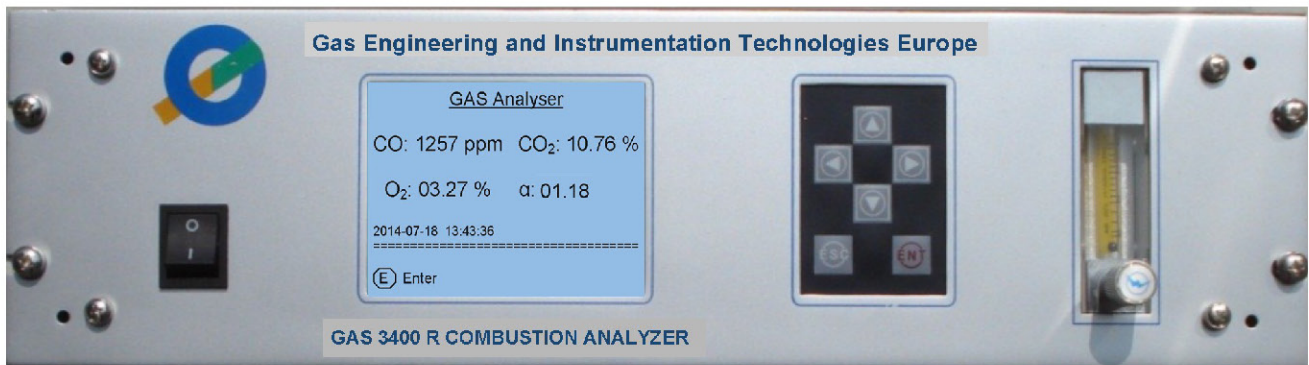


GAS 3400R COMBUSTION Analyser



CO% NDIR + CO₂% NDIR + O₂% ECD + Excess of air (α)



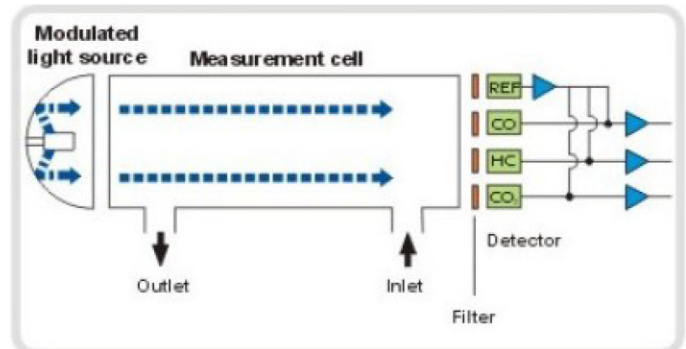
GAS 3400 R COMBUSTION is a specific gas analyser for controlling the combustion efficiency and enabling the optimal adjustment of the air/flue gas ratio to enhance the combustion efficiency of industrial heating appliances, burners, etc...

It implements 2 non-dispersive infrared (NDIR) dual beam detectors for the measures of CO and CO₂, and a galvanic fuel cell (ECD) for the measure of O₂ concentrations in flue gases. It also calculates the excess of air factor (α)

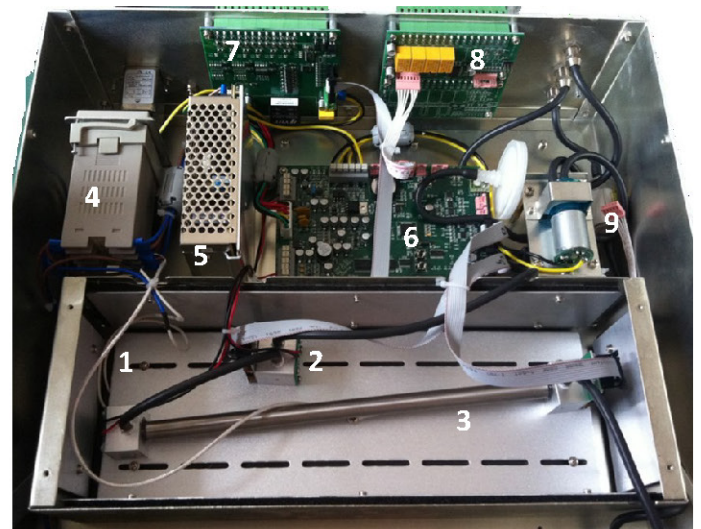
Key features

- Up to 3 gas measures + excess of air calculation
- Real time, accurate and reliable combustion gas measures
- Real CO₂ measure by dual beam NDIR technology
- CO measure in ppm or %vol by dual beam NDIR technology
- No poisoning or damage risks by overload of CO NDIR detector
- Long life Industrial O₂ galvanic fuel cell
- 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

NDIR dual beam NDIR technology for CO and CO₂



G.E.I.T. EUROPE is also specialised in supplying customized industrial gas analysis cabinets for combustion monitoring applications with gas sampling and pre-treatment equipment on one or more measuring points, PLC unit for system control and communication with an external server or PC with our SCADA CEM software.



Internal view GAS 3400 R COMBUSTION

1. Heated enclosure (50°C) for NDIR detectors
2. Dual beam NDIR CO₂ detector 0-25%vol
3. Dual beam NDIR CO detector 0-10000 ppm
4. Temperature controller
5. Power supply
6. Mainboard
7. 4-20mA outputs board
8. Relay outputs board
9. Zero air pump (or optional gas sampling pump)



Flue Gas sampling probe and heated line

Technical specifications

Measures	CO/CO ₂ /O ₂
Calculation	Air excess factor (α)
Gas analysis principle	CO/CO ₂ Non-dispersive Infrared Absorption (NDIR dual beam) O ₂ Industrial electrochemical galvanic fuel cell
Standard measuring ranges	CO 0-5000 ppm or 0-9999 ppm or 0-5%vol CO ₂ / O ₂ 0-25% vol
No risk of damages by overload of the CO detector	The NDIR CO detector cannot be poisoned or damaged by overload of CO gas. No air flushing circuit is needed to purge the sensor in case of CO gas overload as with combustion analysers implementing electrochemical sensors.
No calculated CO₂ value	The NDIR CO ₂ detector provides real CO ₂ measures whatever the type of fuel is used. No estimated value of CO ₂ obtained by calculation.
No interferences on O₂ measure	The galvanic fuel cell is specific for use in combustion gases and is not interfered by CO ₂ , CO, NOx or SO ₂ even in high concentrations and long exposure.
No effect of Tamb variations	NDIR detectors are integrated in an heated enclosure with auto-regulation at 50°C to provide higher stability and prevent the remaining water vapour after gas cooling from condensing.
Display	LCD (320 x 240), 4 digits, in % vol
Standard display resolution	CO: 1 ppm or 0.001% / CO ₂ , O ₂ : 0.01%
Precision	≤ ±2% of Full Scale
Repeatability	≤ ±1% of Full Scale
Zero Drift	≤ ±1% of Full Scale/day
Warm up time	800 seconds (30 minutes for full specifications of before performing an user calibration)
Auto zero function	Auto-zero function on ambient air during the last 100 seconds of the warm-up time Programmable auto-zero function on ambient air via setting menu Note : 4-20mA outputs are frozen during the zeroing cycle + 120 sec.
Response time (T ₉₀)	≤ 15 s
Gas sampling	With external pump. Internal pump available in option with operation via keyboard or by external server (+12VDC voltage signal)
Calibration	5 points factory calibration stored in the microprocessor of the gas analyzer 2 points (zero and span) user calibration
Sample Gas Conditions	Flow rate Nominal 1L/min (0.7 to 1.2 L/min) Inlet pressure 20 mbar mini - 500 mbar maxi Outlet pressure Atmospheric pressure Temperature Max. 50°C Quality Free of dust, water vapor and oil traces
Operation conditions	T _{AMB} 0 to 50°C P _{AMB} 86 to 108kPa (860 to 1080 mbar) R _H ≤ 95%
Communication interface	RS232/485 with proprietary communication protocol
Analogue output signals	4-20 mA signal per measuring channel
Digital output signals	2 gas alarm contacts per measuring channel (freely adjustable level)
Mechanical	19"- 3U rack or desk type Dimensions/weight L485 x W457 x H 132 mm - Weight : < 12kg
Power supply	220 ±44 VAC - 50Hz ± 1 Hz (Power cable delivered)
Optional	Internal gas sampling pump Real time data transfer software RS232 cable DB9-USB cable adapter

Non contractual pictures and specifications - subject to change without prior notification - Issue -EN15v0

Gas Detection and Analysis
Industrial Processes Gas Monitoring
Landfill & Environmental Gas Monitoring



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