



ProCeas[®] BioGas Online Monitoring System

Description The ProCeas is a complete pre-calibrated multicomponent (H₂S, CO₂ and CH₄) **laser Infrared Spectrometer** designed for online monitoring of biogas primary constituents in industrial methanation process.

The ProCeas features the exclusive LPS **Low Pressure Sampling System** enabling cost-effective installation and reduced operating cost by eliminating the need for “heated” sampling system. The ProCeas uses the patented **OFCEAS** IR laser technology for enhanced specificity, selectivity, accuracy and stability (no span or zero drift).



Applications The ProCeas BioGas fulfils the requirements of waste recycling facilities, associated odour filtration systems and large scale Methanation processes...Highly durable to harsh process conditions, the ProCeas is a field proven, reliable, robust, cost-effective and user friendly solution for online process monitoring in Biogas plants.

AP2e True innovation in online gas analysis, the patented OFCEAS and LPS technologies offer numerous advantages in terms of operation and performance. With the **LaserCEM** and **ProCeas** analysers, **AP2e** has established a strong position in a large field of application including the Oil & Gas, Pharmaceutical and Chemical industries, Power Generation and Waste-to Energy with references such as Veolia, Exxon, GDF Suez, Air liquide...

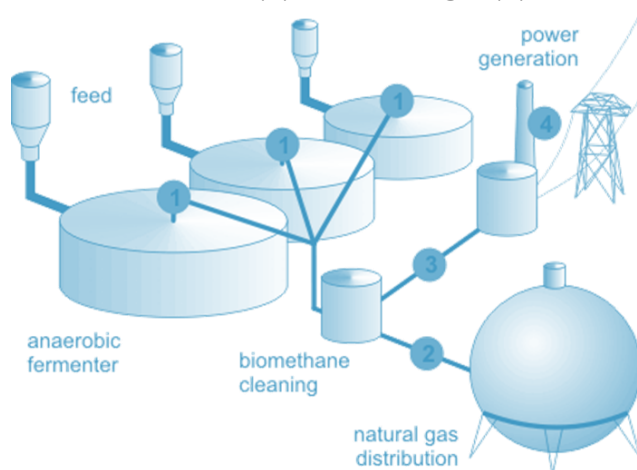
ProCeas[®] Key Features

- **True Direct Extractive CEMS (No sample treatment)** - 100mbar sampling pressure removes any risk of chemical adsorption, desorption and condensation along the sample line.
- **Ease of integration** - The LaserCEM allows digital (Ethernet, RS485, RS232, ModBus) analogue and TDR IOs.
- **Field proven** - The ProCeas is free of optical moving part and was designed and built strictly for industrial and on-board mobile applications.
- **Interferences Free** - OFCEAS technology provides exceptional selectivity, enabling simultaneous monitoring of multicomponent without interferences, regardless of the gas matrix.
- **No Drift** - The zero is contained in the signal, enabling automated and intrinsic zero drift compensation.
- **Low maintenance** - The LPS system allows flow low rates within 3 and 9l/h without affecting the response time and reducing considerably dust and materials build-up.



ProCeas® Multipoint Monitoring System

The **ProCeas** offers sampling solutions tailored to the needs of the biogas production industry with **automated sampling sequences and multipoint monitoring** enabling fast, accurate and detailed analysis at various location with a single instrument: Raw biogas (1), processed biomethane (2), vented biogas (3) and stack emissions (4).



ProCeas® Specifications

INTEGRATION

Dimensions	Standard 19" 4U rack unit - 550mm depth
Weight	20kg
Flow	3 to 9 lph
Sample	Temp 600C max.

Pressure 1 atm. +/- 100mbar at the sampling point

Sampling Line	No heating required if: Ambient temp> 10C and H2O<40% vol. Heating required if: Ambient temp<10C and H2O>40% vol.
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Drift	None
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Response time	10s to 200 s depending on sample line
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Interface	5.7" touch screen
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Output	Ethernet / RS485 / RS232 / ModBus
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Options	ATEX - Wall mount version
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Power supply	110-240 VAC 50/60 Hz - 200W
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Operating conditions	Temp 15-35C Pressure 86-108kPa Compressed air 1-6 bar (oil free)
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GAS

RANGES

DETECTION LIMIT

H2S	50 ppm min	2 ppb min
	10% max	100ppm max

Option: **CH₄, CO₂, C₂H₆** can be measured using the same diode.

