

The biogas analysers from MRU

The right device for every application.

Whether biogas, landfill gas, coal mine gas, biomethane or offgas: these gases are harmful for the environment. Their composition should be therefore regularly analyzed and controlled. Analysis of these gases will result in an optimal operation in many diversified biogas applications.

MRU's ready-to-measure biogas analysers are a unique industrial solution for use in ...

- Biogas plants
- Combined heat and power plants
- Municipal or industrial waste water treatment plants
- Coal seam (coal mine gas)
- Food and animal waste treatment plants
- Biomethane plants (natural gas grid feed-in)
- Landfills



OPTIMA Biogas

04

- Flexible handheld unit for control measurements
- Measurement of biogas pressure, flow velocity and temperature



NOVAplus Biogas

05

- For simultaneous measurement of O₂, CH₄, CO₂ and H₂S



SWG 100 BIOcompact

06

- Stationary, discontinuous biogas analysis
- Designed for use in rough industrial environments at CHPs



SWG 100 Biogas

08

- Stationary, continuous biogas analysis
- Up to 10 measuring points switching with only one analyser



SWG 100 BIO-Ex

10

- For Ex zone 2
- Gas sampling from low-pressure to high-pressure gas intake

Measured values	Measuring principle	Measuring range	Accuracy	Resolution
Oxygen O ₂	electrochemical	0 ... 25 Vol. %	± 0.2 Vol. % absolutely	0,01 %
Carbon dioxide CO ₂	NDIR	0 ... 100 Vol. %	± 0.3 % or 3 % m.r. (reading) **	0,01 %
Methane CH ₄	NDIR	0 ... 100 Vol. %	± 0.3 % or 2 % m.r. (reading) **	0,01 %
Hydrogen sulphide H ₂ S	electrochemical	0 ... 2,000/4,000* ppm	± 5 ppm or 5 % m.r. (reading) **	1 ppm
Hydrogen sulphide H ₂ S _{high}	electrochemical	0 ... 5,000/10,000 ppm	± 10 ppm or 5 % m.r. (reading) **	1 ppm
Hydrogen sulphide H ₂ S _{low}	electrochemical	0 ... 50/250* ppm	± 2 ppm or 5 % m.r. (reading) **	1 ppm
Hydrogen H ₂	electrochemical	0 ... 1,000/2,000* ppm	± 10 ppm or 10 % m.r. (reading) **	1 ppm
Carbon monoxide CO	electrochemical	0 ... 10,000/20,000* ppm	± 10 ppm or 5 % m.r. (reading) **	1 ppm
Nitric oxide NO	electrochemical	0 ... 1,000/5,000* ppm	± 5 ppm or 5 % m.r. (reading) **	1 ppm
Nitrogen dioxide NO ₂	electrochemical	0 ... 200/1,000* ppm	± 5 ppm or 5 % m.r. (reading) **	1 ppm
Exhaust gas temperature T _{Gas}	NiCrNi	0 ... 650 °C (stainless steel probe tube) 0 ... 1,000 °C (Inconel probe tube)	± 2 °C or 1 % m.r. (reading) ** ± 2 °C or 1 % m.r. (reading) **	1 °C 1 °C
Gas pressure	Piezoresistive	-300 ... + 300 hPa	± 0.02 hPa	0,01 hPa
Calculations		mg/Nm ³ , NO _x as mg/m ³ , real NO _x measurement NO _x = NO ₂ + NO incl. O ₂ reference adjustable by user		

* for short-term measurements only
** whichever is larger