



ADOS
est. 1900

Instrumentation and Control



MULTI-CHANNEL GAS ANALYSER

Biogas 401



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since 1997
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Application

The **Biogas Analyser 401** monitors either continuously or intermittently, the gas components contained in the Biogas (process control) and optionally, monitors the surrounding air to provide an early warning of dangerous, explosive and non-combustible gases and vapours.

Accessories

Signal horn, warning light, warning banner, plotter.

Other accessories will be offered, according to the measurement tasks required.

Fields of Application

- Monitoring of biogas, landfill gas or digester gas
- Warning of explosive gas mixtures
- Warning of gases that endanger health
- Warning of non-combustible gases

Features

- Use of various measurement sensors
- Direct indication of a warning state on an LC-display with colored background lighting
- Menu-assisted operation via 2 keys
- 3 alarm levels, independently adjustable from 5–100 % of the selected test range
- 3 floating alarm outputs for driving external warning and control equipment
- Floating contact connections for fault and mains failure
- Serial interface output RS 232 or RS 485
- 4–20 mA current interface
- Various types of housing available, e.g. 19" rack system, wall-mounting cabinet
- Up to 6 measurement channels per unit
- 1 card as Master for the control of the biogas measuring time and interval
- Extreme service reliability
- Low energy consumption
- Peltier cooling element with condensation pump
- Flow-through adjustment
- Gas components – filter system and conditioning
- Water sensor for the detection of condensate break-through

Measurable gases

Gas	Formula
Methane	CH ₄
Hydrogen sulphide	H ₂ S
Carbon dioxide	CO ₂
Oxygen	O ₂
Hydrogen	H ₂

Technical Data

Details apply, per control unit

Sensors:	Electrochemical sensors Infrared sensors Paramagnetic sensors
Sensor input:	2-wire sensors (TOX 592) or 3-wire sensors (GTR 196) for warning of explosive gas mixtures
Sensor supply:	24 V DC / 200 mA max.
Test ranges:	CO ₂ : 0-50 Vol. % CH ₄ : 0-100 Vol. % O ₂ : 0-21 Vol. % (electrochemical) O ₂ : 0-5 Vol. % ... 0-25 Vol. % (paramagnetic) H ₂ : 0-2 Vol. % H ₂ S: 0-50 ppm ... 0-5.000 ppm other ranges by request
Accuracy:	< ±3 %, f.s.d.
Ambient temperature:	+5 °C to +45 °C
Temperature effects:	< 5 % for a ±20 °C change
Installation:	Wall-mounting
Output signals:	Current output 4–20 mA; RS 232 or RS 485 interface; for each measurement channel: 3 alarm relays 1 fault relay
Relay rating:	230 V, 450 VA
Voltage supply: optional:	230 V, 50 Hz 115 V, 60 Hz
Power consumption:	100 VA
Dimensions (W x H x D):	600 x 478 x 480 mm (9 HU)
Weight:	approx. 60 kg