

Instrumentation and Control



MULTI-CHANNEL GAS ANALYSER

Biogas 401



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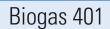
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MULTI-CHANNEL GAS ANALYSER



Application

The **Biogas 401 Analyser** monitors, either continuously or intermittently, gas components contained in Biogas and optionally, monitors the surrounding air to provide an early warning of dangerous, explosive and noncombustible gases and vapours.

Fields of Application

- Monitoring of Biogas components
- 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 controlling intermittent operation Biogas measurement time and test interval
- Extreme service reliability
- Low energy consumption
- Peltier cooling element with condensation pump
- Flow-through adjustement
- Gas components filter system and conditioning
- Water sensor for the detection of condensate break-through
- Modular construction
- Monitoring of more than one measuring point possible

Measurable	0	ases
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Gas	Formula
Methane	CH ₄
Hydrogen sulphide	H ₂ S
Carbon dioxide	CO ₂
Oxygen	02
Hydrogen	H ₂

Accessories

External peltier gas cooler, Signal horn, warning light, warning banner.

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

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Details apply, per control unit Sensors: Electrochemical sensors Infrared sensors Sensor input: 2-wire sensors (TOX 592) or 3-wire sensors (GTR 196)	apply, per control unit	
Sensor input: 2-wire sensors (TOX 592) or 3-wire sensors (GTR 196)		
3-wire sensors (GTR 196)		s
gas mixtures	3-wire sensors (GTR 196 for warning of explosive	3)
Sensor supply: 24 V DC / 200 mA max.	r supply: 24 V DC / 200 mA max.	
Test ranges: $ \begin{array}{c} \text{CO}_2\text{: }0\text{-}50 \text{ Vol.\%} \\ \text{CH}_4\text{: }0\text{-}100 \text{ Vol.\%} \\ \text{O}_2\text{: }0\text{-}21 \text{ Vol.\%} \\ \text{(optionally continuous)} \\ \text{H}_2\text{: }0\text{-}2 \text{ Vol.\%} \\ \text{H}_2\text{S: }0\text{-}50 \text{ ppm }0\text{-}5.000 \text{ ppm} \\ \text{(only discontinuous)} \\ \text{other ranges by request} \end{array} $	CH_4 : 0-100 Vol.% O_2 : 0-21 Vol.% (optionally continuous) H_2 : 0-2 Vol. % H_2 S: 0-50 ppm 0-5.000 p (only discontinuous)	opm
Accuracy: < ±3 %, f.s.d.	ecy: < ±3 %, f.s.d.	
Ambient temperature: +41 °F to +113 °F	nt temperature: +41 °F to +113 °F	
Temperature effects: $< 5\%$ for a \pm 68 °F change	rature effects: $< 5\%$ for a \pm 68 °F change	ge
Installation: Wall-mounting	ation: Wall-mounting	
Output signals: Current output 4-20 mA; RS 232 or RS 485 interface; for each measurement channe 3 alarm relays 1 fault relay	RS 232 or RS 485 interfa for each measurement of 3 alarm relays	ice;
Relay rating: 230 V, 450 VA	rating: 230 V, 450 VA	
Voltage supply: 115 V, 60 Hz optional: 230 V, 50 Hz		
Power consumption: 100 VA	consumption: 100 VA	
Dimensions (W x H x D): 23.6 x 18.8 x 19.6 inch (9 HU)	· · · · · · · · · · · · · · · · · · ·	HU)
Weight: approx. 110.2 lbs	t: approx. 110.2 lbs	