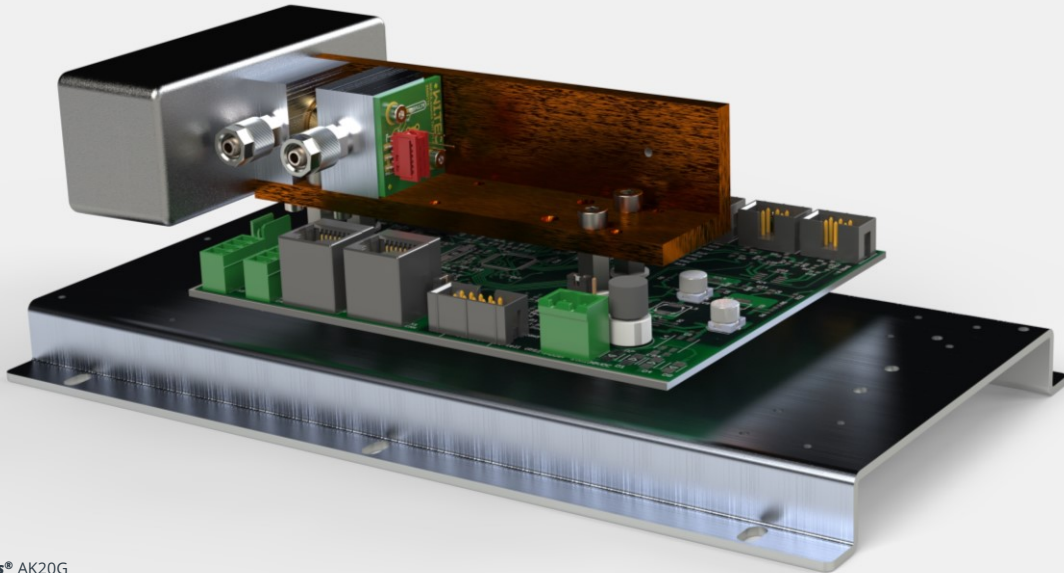


CO₂ / CO / N₂O / C_nH_m



INFRA.sens® AK20G

Applications

- > Biogas
- > Industrial gas analyzer
- > Environmental monitoring
- > Process control
- > Instrumentation

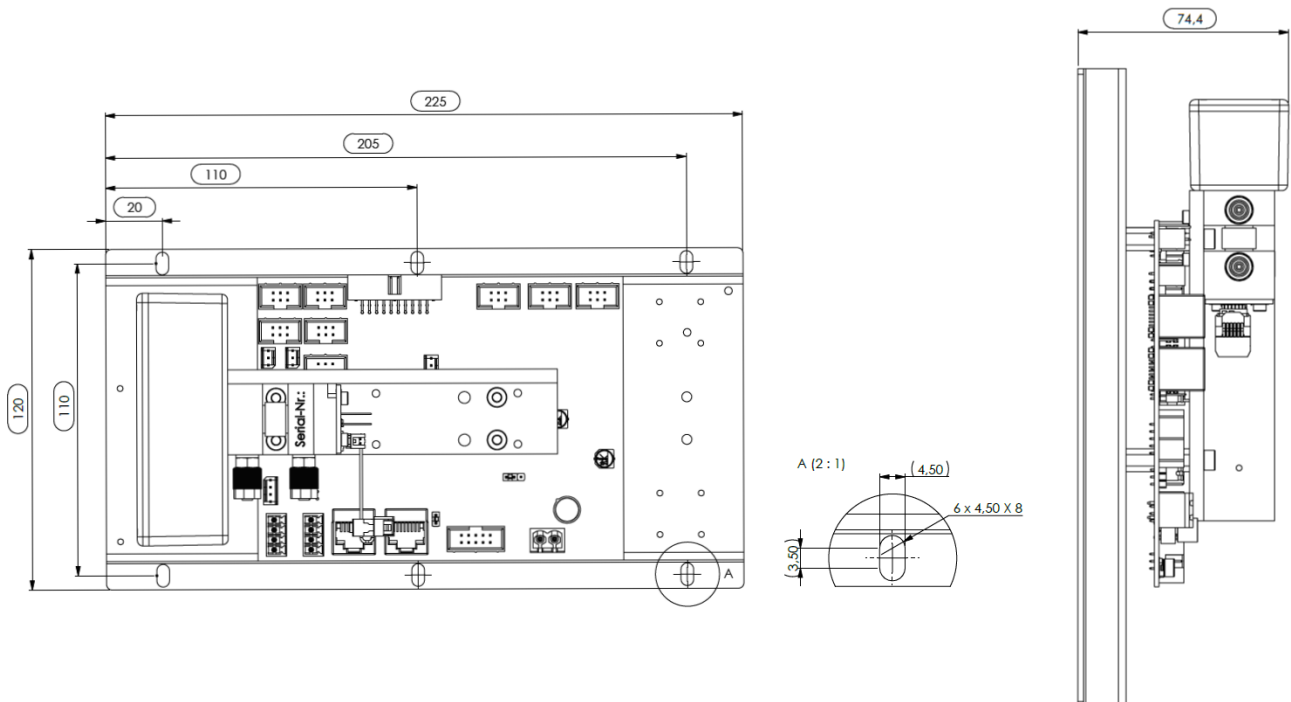
Options

- > O2.sens (Oxygen sensor)
- > P.sens (Pressure sensor)
- > HUMI.sens® (Humidity sensor)
- > Analogboard (0-10V)
- > Thermobox

Features & Benefits

- > rugged sensor design
- > low power consumption <2W @ 24V
- > different Interfaces (RS232, CANbus)
- > low drift
- > MARS-Tool (Wi.Tec Software)

Dimensions



For more and most recent information please have a look on our website at www.witec-sensorik.de/en/

INFRA.sens® AK20G

CO₂ / CO / N₂O / C_nH_m

	gas channel 1*	gas channel 2*	gas channel 3*	Option**		
Single Gas Module	CO / CO ₂ / C _n H _m / CH ₄ / N ₂ O			O ₂	P	H
Dual Gas Module	CO		CO ₂ / C _n H _m / CH ₄ / N ₂ O	O ₂	P	H
		CO ₂	CO ₂ / C _n H _m / CH ₄ / N ₂ O	O ₂	P	H
Triple Gas Module	CO	CO ₂	CO ₂ / C _n H _m / CH ₄ / N ₂ O	O ₂	P	H

* one gas per column selectable

** P = pressure sensor, H = humidity sensor

List of measurement ranges

Measurement range*	CO ₂	CO	N ₂ O	CH ₄	C _n H _m	CF ₄	SF ₆	H ₂ O
100Vol.%	✓	✓		✓	✓			
50Vol.%	✓	✓	✓	✓	✓			
30Vol.%		✓	✓	✓	✓			
20Vol.%	✓							
10Vol.%	✓	✓						
5Vol.%	✓							
1Vol.%	✓							
5000ppm								
2000ppm								
1000ppm								
500ppm								
300ppm								
100ppm								
50ppm								
10ppm								

* Full scale value (F.S.)

For other measuring ranges please refer to our further datasheets



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INFRA.sens® AK20G

CO₂ / CO / N₂O / C_nH_m

General features

Measurement principle	Non-dispersive infrared (NDIR); dual beam; dual to quad wavelengths
Measurement range	see list of measurement ranges
Gas flow	0.1 – 1.5 l/min
Dimensions	225mm x 120mm x 74.4mm
Weight	approx. 520g
Tube connector	4/6mm tube
Lifetime of IR radiation source	> 40 000h

Measuring response¹

Warm-up time	1 min (initial), <15 min ²
Response time(t ₉₀)	1.5s – 15s ³
Detection limit (3·σ)	< 0,5% F.S. ⁴
Linearity error	< ± 1% F.S.
Repeatability	± 0.5% F.S.
Long term stability (zero)	< ± 2% F.S./week
Long term stability (span)	< ± 2% F.S./month
Temp. Influence zero	< 1% F.S./10K
Temp. Influence span	< 1% F.S./10K ⁵
Cross sensitivity	< 2% F.S. ⁶
Pressure influence	< 1.5%/10hPa of reading ⁷

Electrical inputs and outputs

Supply voltage	24 (15 – 30) VDC
Supply current (peak)	< 0.1A
Average power consumption	< 2W
Digital output signal	RS 232 (ASCII) or CANbus

Climatic conditions

Operating temperature	5 – 45 °C ⁸
Storage temperature	-20 – 60 °C
Air pressure	800 – 1200 hPa (mbar)
Ambient humidity	0 – 95% rel. humidity (not condensing)

F.S. full scale ¹ related to P_a = 1020hPa ; T_a = 25°C ; flow = 1l/min ² full specification, demands to environmental conditions ³ depends on digital filter settings ⁴ at zero point ⁵ with span temperature compensation ⁶ to each calibrated gas channel, other gases on request ⁷ without pressure compensation ⁸ stable climatic conditions recommended, please check dew point considerations



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