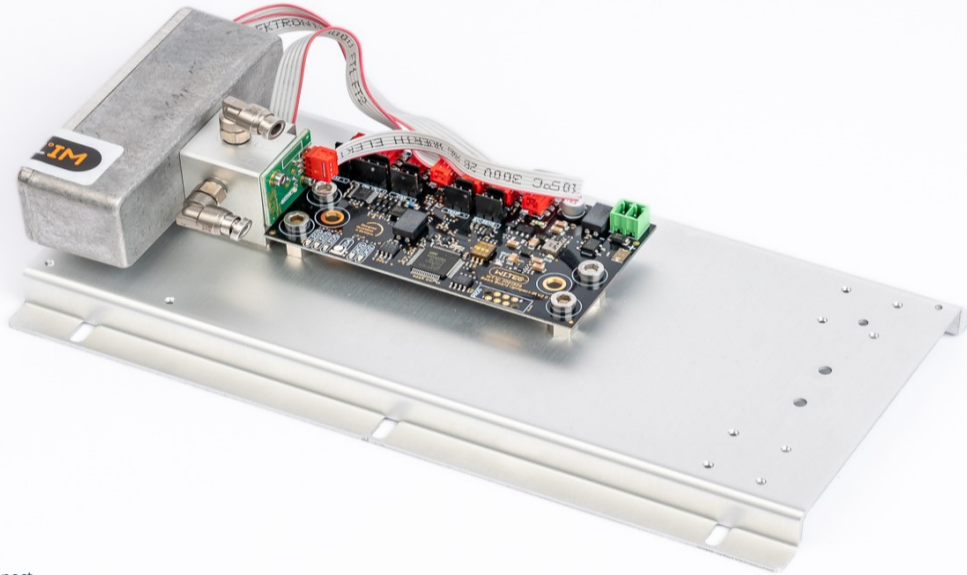


INFRA.sens® AK5 compact



CO₂ / CO / N₂O / CH₄ / C_nH_m



INFRA.sens® AK5 compact

Applications

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

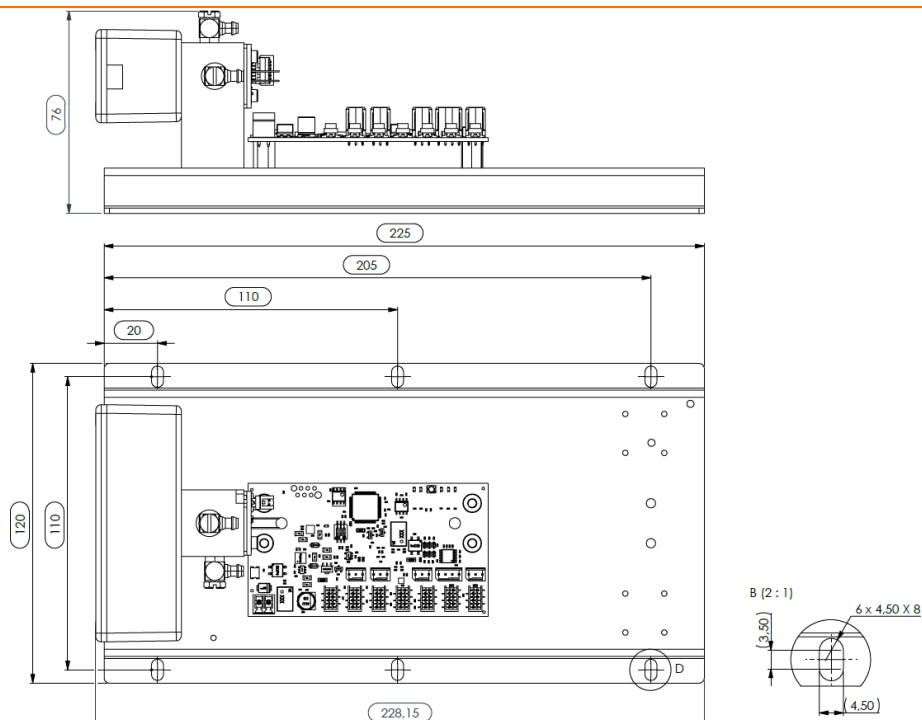
Options

- > 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



Subject to change without notice. // 2023-04 Rev.01

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

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List of module configurations

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

¹ one gas per channel selectable
² O₂ = oxygen sensor (**O2.sens**) P = pressure sensor (**P.sens**) , H = humidity sensor (**HUMI.sens®**)

List of measurement ranges

Measurement range ¹	CO ₂	CO	N ₂ O	CH ₄	C _n H _m	CF ₄	SF ₆	H ₂ O	NO
100Vol.%	✓	✓		✓					
50Vol.%	✓				✓				
30Vol.%	✓		✓						
20Vol.%	✓		✓						
10Vol.%	✓								
5Vol.%									
1Vol.%									
5000ppm									
2000ppm									
1000ppm									
500ppm									
100ppm									
50ppm									
10ppm									

¹ Full scale value (F.S.)
For other measuring ranges please refer to our further datasheets

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CO₂ / CO / N₂O / CH₄ / 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	228.2mm x 120mm x 76mm
Weight	approx. 480g
Tube connector	4/6mm tube
Lifetime of IR radiation source	> 40 000h
Measuring response ¹	
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 (9 – 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	300 – 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 dewpoint considerations

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The Gas Measurement Company

'CAUSE IT MAKES .SENS

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