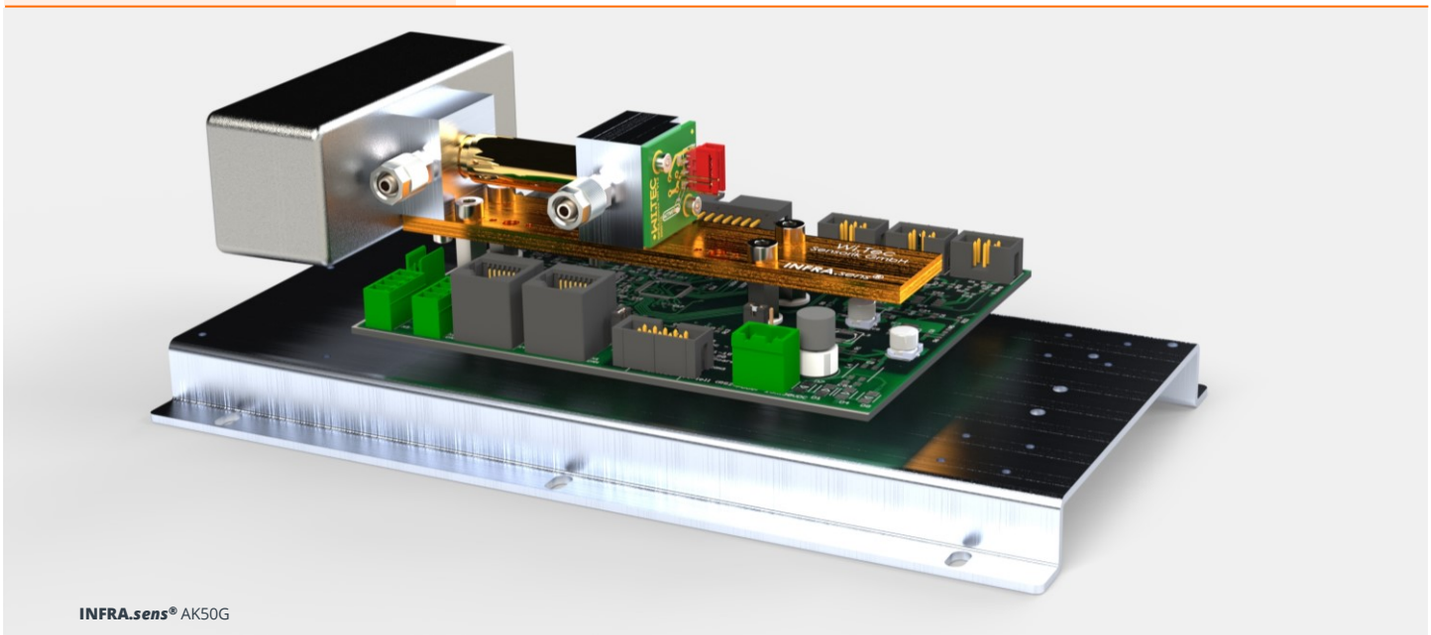
INFRA.*sens*® AK50G

CO_2 / CO / N_2O / CH_4 / C_nH_m



INFRA.*sens*® AK50G

Applications

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

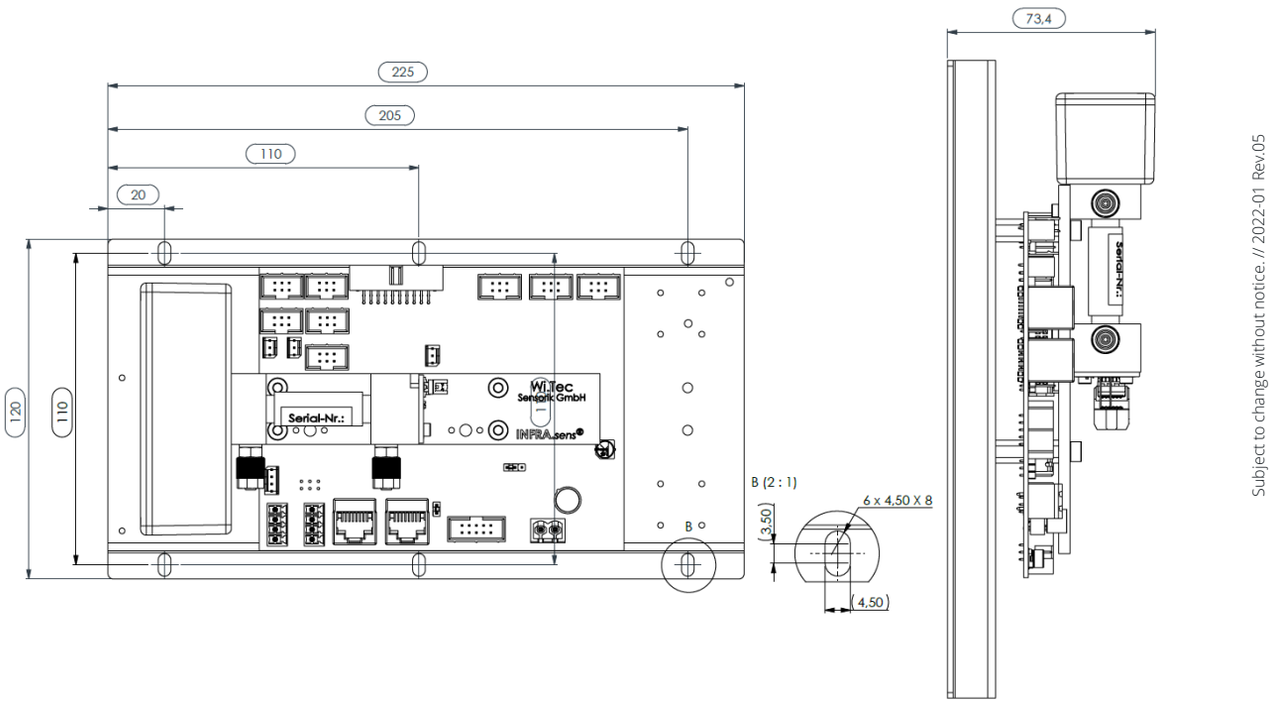
Options

- 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



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

INFRA.*sens*® AK50G

CO_2 / CO / N_2O / CH_4 / C_nH_m

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_2O / CH_4 / C_nH_m				O_2	P	H
Dual Gas Module	CO / CO_2 / N_2O / CH_4 / C_nH_m	CO / CO_2 / N_2O / CH_4 / C_nH_m			O_2	P	H
Triple Gas Module	CO / CO_2 / N_2O / CH_4 / C_nH_m	CO / CO_2 / N_2O / CH_4 / C_nH_m	CO / CO_2 / N_2O / CH_4 / C_nH_m		O_2	P	H

[1] one gas per channel selectable
[2] O_2 = 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_2O	CH_4	C_nH_m	CF_4	SF_6	H_2O	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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INFRA.*sens*® AK50G

CO_2 / CO / N_2O / CH_4 / C_nH_m

General features	
Measurement principle	Non-dispersive infrared (NDIR); dual beam; dual to quad wavelenghts
Measurement range	see list of measurement ranges
Gas flow	0.1 – 1.5 l/min
Dimensions	225mm x 120mm x 73.4mm
Weight	approx. 540g
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.
Repeatibility	± 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 (12 – 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	600 – 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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