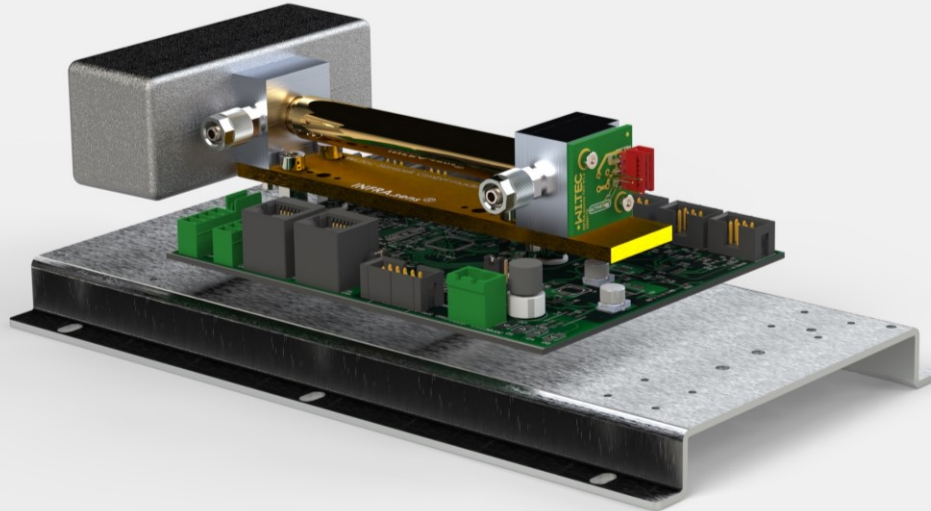


CO<sub>2</sub> / CO / N<sub>2</sub>O / C<sub>n</sub>H<sub>m</sub> / SF<sub>6</sub> / H<sub>2</sub>O



INFRA.sens® AK100G

## Applications

- > TOC water analysis
- > Elemental analysis
- > Environmental monitoring
- > Automotive
- > Leakage detection

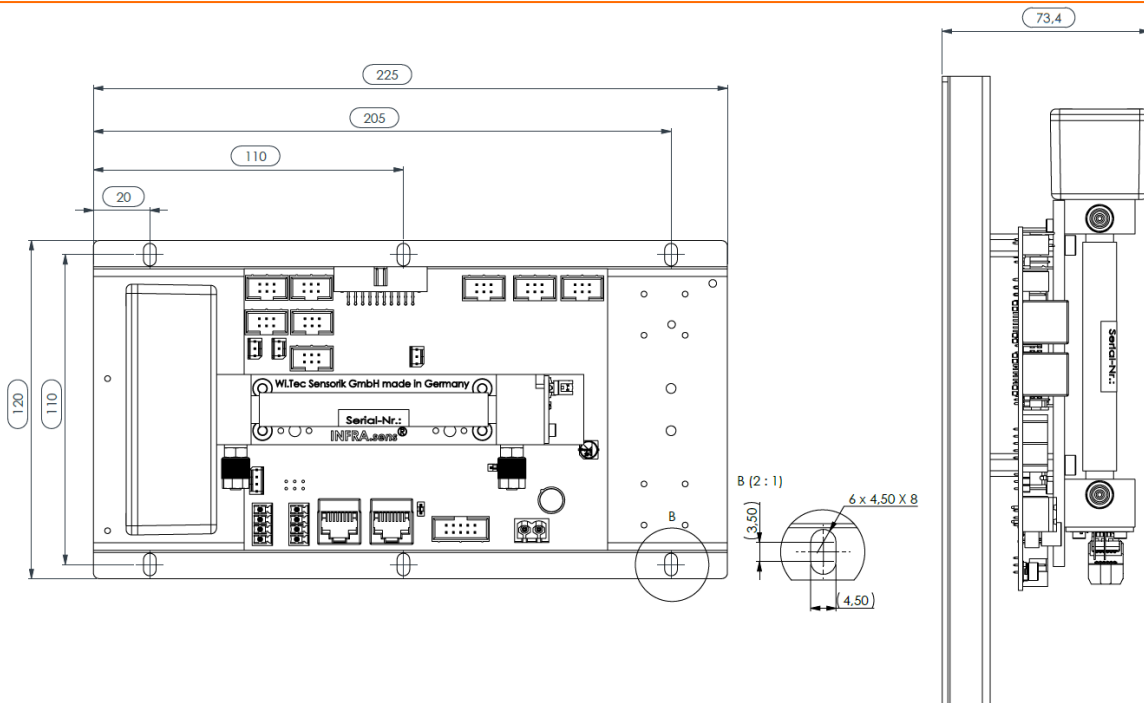
## Options

- > 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/](http://www.witec-sensorik.de/en/)

# INFRA.sens® AK100G

CO<sub>2</sub> / CO / N<sub>2</sub>O / C<sub>n</sub>H<sub>m</sub> / SF<sub>6</sub> / H<sub>2</sub>O

	gas channel 1*	gas channel 2*	gas channel 3*	Option**		
<b>Single</b> Gas Module	CO / CO <sub>2</sub> / C <sub>n</sub> H <sub>m</sub> / CH <sub>4</sub> / N <sub>2</sub> O / SF <sub>6</sub> / H <sub>2</sub> O			O <sub>2</sub>	P	H
<b>Dual</b> Gas Module	CO		CO <sub>2</sub> / C <sub>n</sub> H <sub>m</sub> / CH <sub>4</sub> / N <sub>2</sub> O / SF <sub>6</sub> / H <sub>2</sub> O	O <sub>2</sub>	P	H
		CO <sub>2</sub>	CO <sub>2</sub> / C <sub>n</sub> H <sub>m</sub> / CH <sub>4</sub> / N <sub>2</sub> O / SF <sub>6</sub> / H <sub>2</sub> O	O <sub>2</sub>	P	H
<b>Triple</b> Gas Module	CO	CO <sub>2</sub>	CO <sub>2</sub> / C <sub>n</sub> H <sub>m</sub> / CH <sub>4</sub> / N <sub>2</sub> O / SF <sub>6</sub> / H <sub>2</sub> O	O <sub>2</sub>	P	H

\* one gas per column selectable

\*\* P = pressure sensor, H = humidity sensor

## List of measurement ranges

Measurement range*	CO <sub>2</sub>	CO	N <sub>2</sub> O	CH <sub>4</sub>	C <sub>n</sub> H <sub>m</sub>	CF <sub>4</sub>	SF <sub>6</sub>	H <sub>2</sub> 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® AK100G

CO<sub>2</sub> / CO / N<sub>2</sub>O / C<sub>n</sub>H<sub>m</sub> / SF<sub>6</sub> / H<sub>2</sub>O

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 73.4mm
Weight	approx. 630g
Tube connector	4/6mm tube
Lifetime of IR radiation source	> 40 000h
Measuring response <sup>1</sup>	
Warm-up time	1 min (initial), <15 min <sup>2</sup>
Response time(t <sub>90</sub> )	1.5s – 15s <sup>3</sup>
Detection limit (3·σ)	< 0,5% F.S. <sup>4</sup>
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 <sup>5</sup>
Cross sensitivity	< 2% F.S. <sup>6</sup>
Pressure influence	< 1.5%/10hPa of reading <sup>7</sup>
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 <sup>8</sup>
Storage temperature	-20 – 60 °C
Air pressure	600 – 1200 hPa (mbar)
Ambient humidity	0 – 95% rel. humidity (not condensing)

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



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