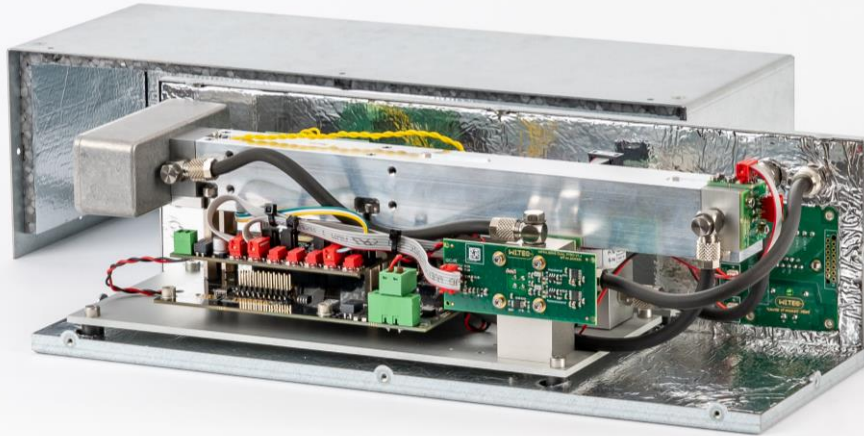


INFRA.sens® AK250GC/μP/AK5 TBH V5

high precision NDIR Gas Sensor for N₂O, CH₄ & CO₂



Overview



INFRA.sens® AK250GC TBH V5

THE PICTURE SHOWN IS ONLY A REFERENCE, THE ACTUAL PRODUCT MAY DIFFERENTIATE INSIDE.

Applications

- > Monitoring on wastewater plants
- > Control of combustion processes
- > General Process control
- > Automotive measurement
- > Renewable energy systems

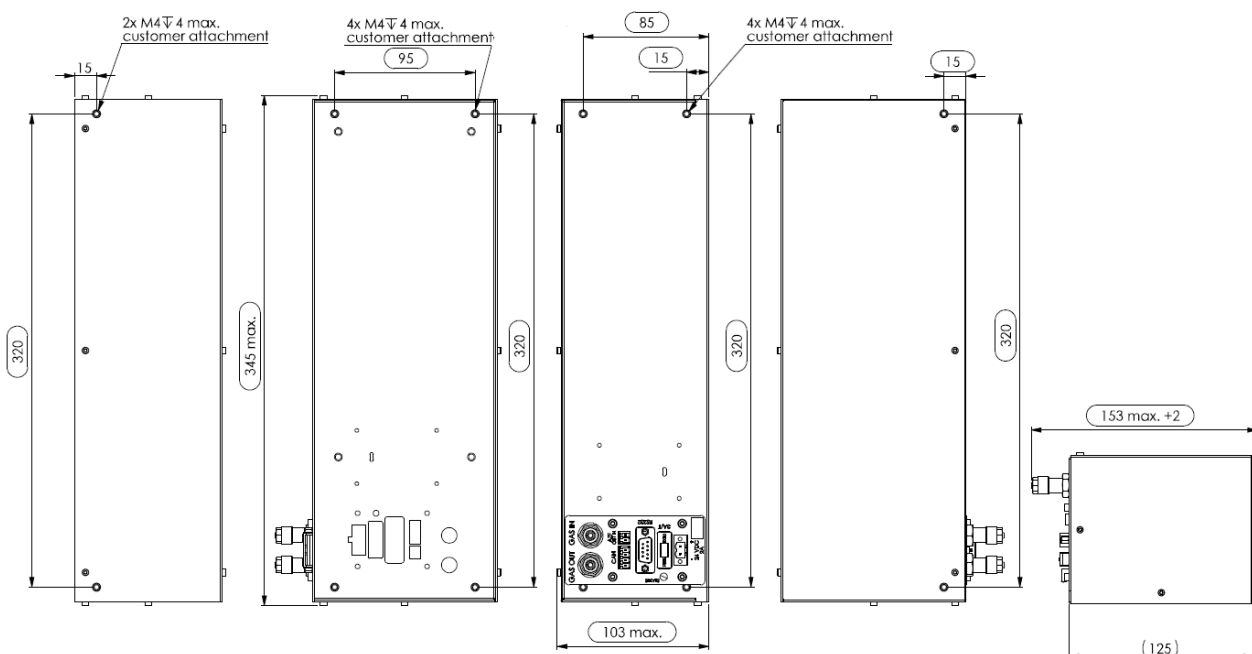
Options

- > O2.sens (Oxygen sensor)
- > HUMI.sens® (Humidity sensor)
- > Analogboard (0-10V)
- > Autozero Module

Features & Benefits

- > Low detection limit N₂O without CO₂ interference
- > Temperature controlled at 50°C
- > Low drift
- > Internal pressure compensated
- > Different interfaces (RS232, CANbus, Analog)
- > MARS-Tool (Datalogger and Controlsoftware)

Dimensions



Subject to change without notice. // 2024-05 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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Technical Data

General features¹

Measurement principle	Non-dispersive infrared (NDIR); dual beam; 3 wavelengths including reference path		
Lifetime of IR radiation source	> 40 000h		
Gas flow	0.1 – 1.5 l/min		
Dimensions [L x W x H]	345mm x 153mm x 103mm		
Weight	approx. 1510g		
Tube connector	4/6mm tube		
Measurement gas	Channel 1: CH ₄	Channel 2: N ₂ O	Channel 3: CO ₂
Measurement range	0-1.000 ppm	0-2.000 ppm	0-5 Vol.%

Measuring response²

Warm-up time	< 45 min ³			
Response time(t ₉₀)	< 5s			
Detection limit (3·σ) ⁴	2,5 ppm	0,5 ppm	5 ppm	
Digital resolution	0,01 ppm	0,01 ppm	0,1 ppm	
Linearity error	< 5 ppm	< 5 ppm	< 50 ppm	
Repeatability	< 5 ppm	< 5 ppm	< 50 ppm	
Long term stability (zero) ⁴	< ± 10 ppm/ month	< ± 20 ppm/ month	< ± 100 ppm/ month	
Long term stability (span)	< ± 5 ppm / month	< ± 5 ppm/ month	< ± 50 ppm/month	
Temp. Influence zero	< 0,2% F.S./10K			
Temp. Influence span	< 0,4% F.S./10K			
Cross sensitivity ⁵	1.000 ppm CH ₄	-	- 5 ppm	10 ppm
	2.000 ppm N ₂ O	< 5 ppm	-	10 ppm
	5 Vol.%	-2 ppm	- 2 ppm	-

Pressure influence⁶ < 0.01%/10hPa of reading

Electrical inputs and outputs

Supply voltage	24 (15 – 30) VDC
Supply current	< 1.5A
Power consumption	< 35W
Digital output signal	RS 232 (ASCII) or CANbus

Climatic conditions

Operating temperature	5 – 45 °C ⁷
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 with N₂ ⁵ to each calibrated gas channel, other gases on request ⁶ with pressure compensation ⁷ stable climatic conditions recommended, please check dewpoint considerations

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The Gas Measurement Company

CAUSE IT MAKES .SENS

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