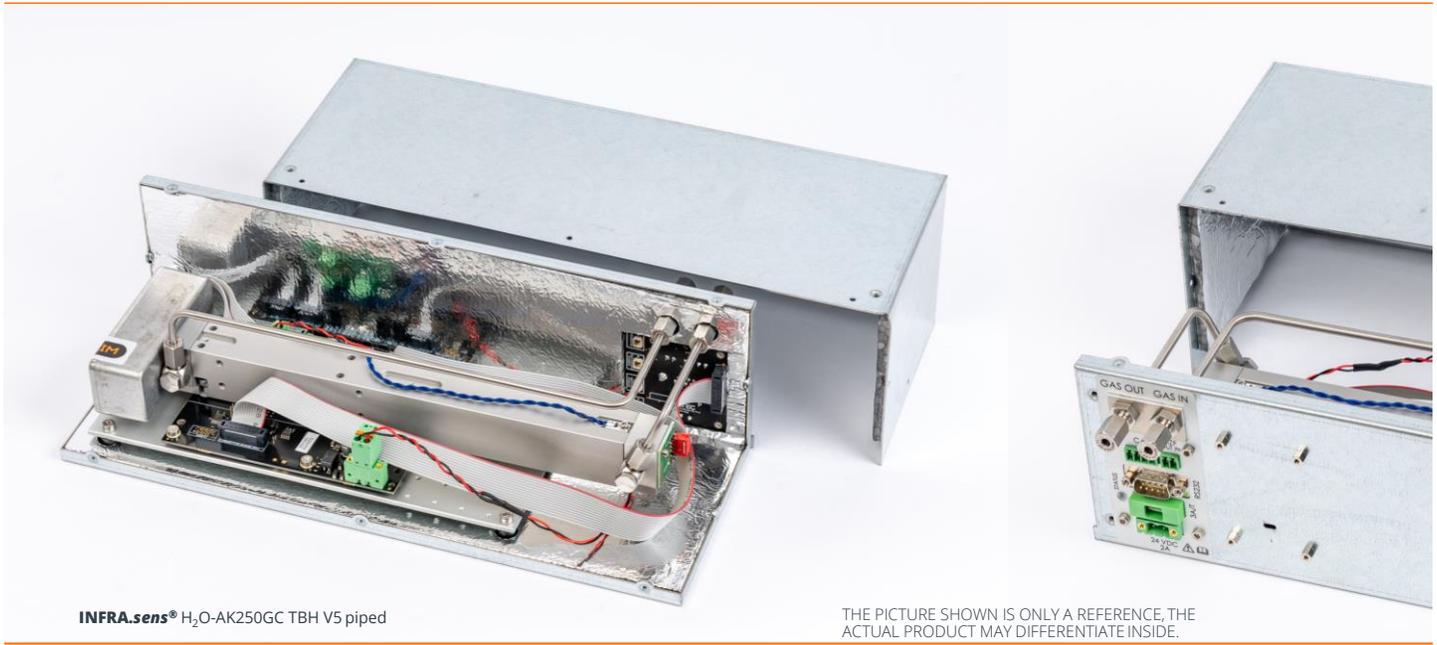


INFRA.sens® AK250TBH

high precision NDIR Gas Sensor for CO and CO2

CO 500ppm
CO2 20 Vol.%



INFRA.sens® H₂O-AK250GC TBH V5 piped

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

Applications

- > control of combustion processes
- > Emission monitoring
- > General Process control
- > Automotive measurement
- > Renewable energy systems

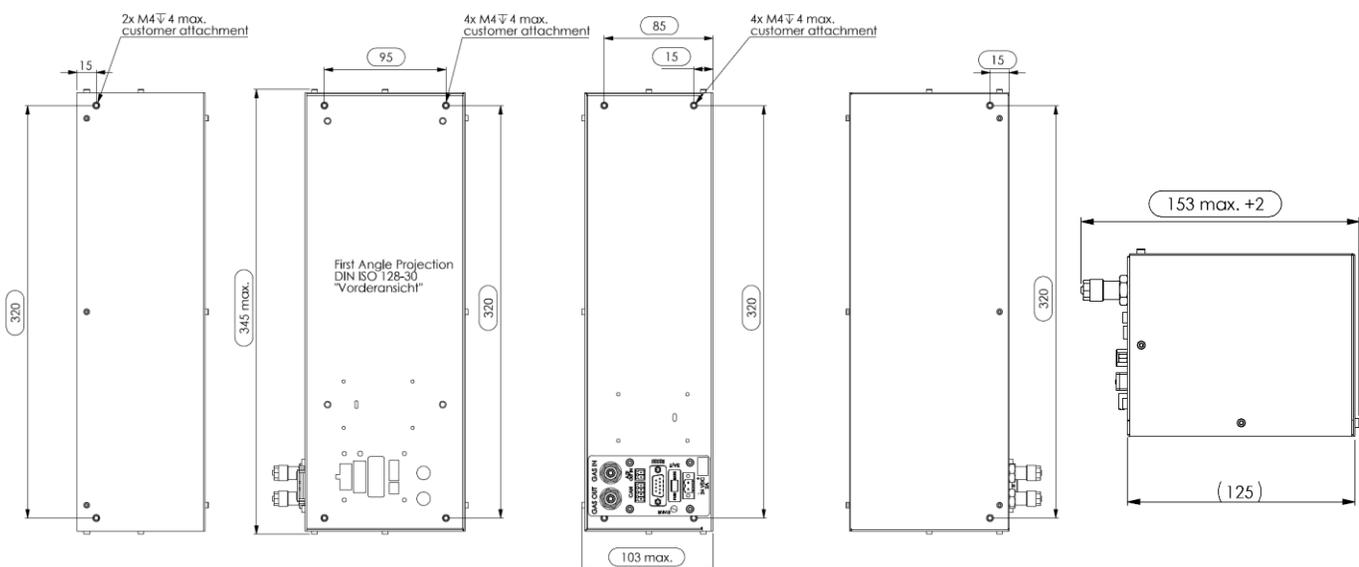
Options

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

Features & Benefits

- > Low detection limit CO without CO2 interference
- > Temperature controlled at 50°C
- > low drift
- > Pressure compensated
- > different interfaces (RS232, CANbus, Analog)
- > MARS-Tool (Datalogger and Controlsoftware)

Dimensions



Subject to change without notice. // 2023-02 Rev.01

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

INFRA.sens® AK250TBH

high precision NDIR Gas Sensor for CO and CO₂

CO 500ppm
CO₂ 20 Vol.%

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	345mm x 153mm x 103mm	
Weight	approx. 1510g	
Tube connector	4/6mm tube	
Measurement gas	Channel 1: CO	Channel 2: CO ₂
Measurement range	0-500ppm	0-20 Vol.%

Measuring response²

Warm-up time	1 min (initial), <45 min ³		
Response time(t ₉₀)	5s		
Detection limit (3·σ) ⁴	2 ppm	0,002 Vol.%	
Digital resolution	0,01 ppm	0,0001 Vol.%	
Linearity error	< 5 ppm	0,05 Vol.%	
Repeatability	3 ppm	0,1% Vol.%	
Long term stability (zero) ⁴	< ± 5ppm / 1000 hour	< ± 0,1 Vol.% / 1000 hour	
Long term stability (span)	< ± 10ppm / 1000 hour	< ± 0,2 Vol.% / 1000 hour	
Temp. Influence zero	< 0,2% F.S./10K		
Temp. Influence span	< 0,4% F.S./10K		
Cross sensitivity ⁵	20 Vol.% CO ₂	< 5ppm	-
	500ppm CO	-	< 0,01 Vol.%
Pressure influence ⁶	< 0.01%/10hPa of reading	< 0.01%/10hPa of reading	

Electrical inputs and outputs

Supply voltage	24 (15 – 30) VDC
Supply current (peak)	< 1.2A
Average power consumption	< 10W
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

Subject to change without notice. // 2023-02 Rev.01



The Gas Measurement Company

'cause it makes .sens

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