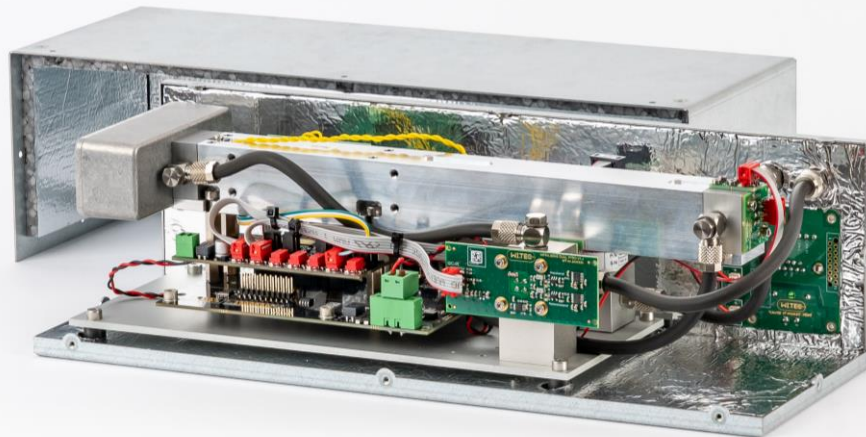


INFRA.sens® AK250TBH

high precision NDIR Gas Sensor for N₂O, CH₄ and CO₂



| | | |
|------------------|-------|-------|
| CH ₄ | 1.000 | ppm |
| N ₂ O | 2.000 | ppm |
| CO ₂ | 5 | Vol.% |



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

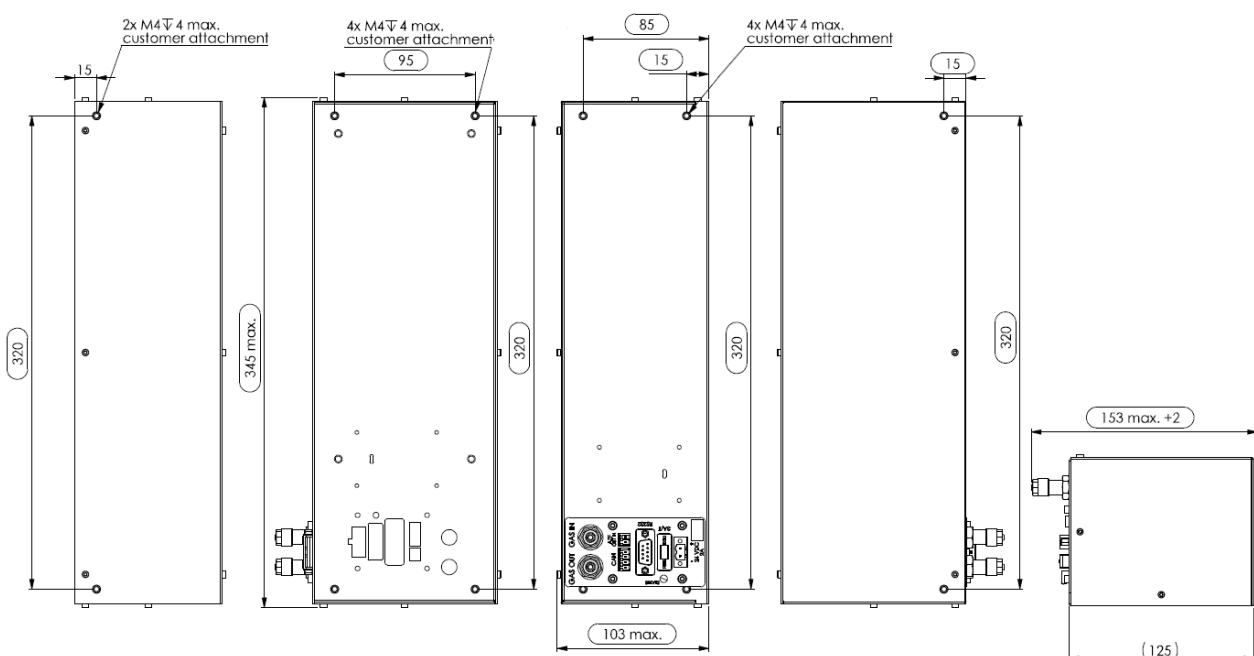
Options

- > 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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| | | |
|------------------|-------|-------|
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| CO ₂ | 5 | 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 [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

Subject to change without notice. // 2024-05 Rev.01



The Gas Measurement Company

CAUSE IT MAKES SENS

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