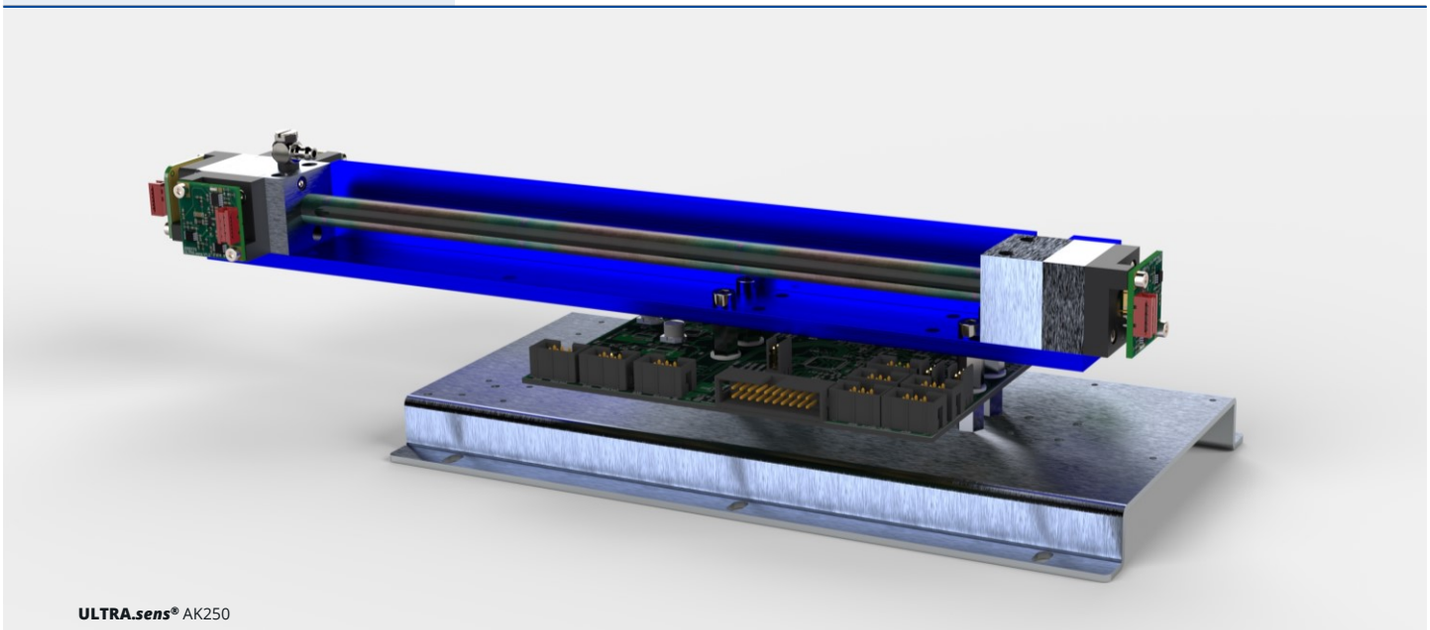
# ULTRA.*sens*® AK250

$NO_2$ / $SO_2$ / $O_3$ / $Cl_2$



**ULTRA.*sens*®** AK250

## Applications

- Industrial gas analyzer
- Automotive
- Environmental monitoring
- Process control
- Leakage detection

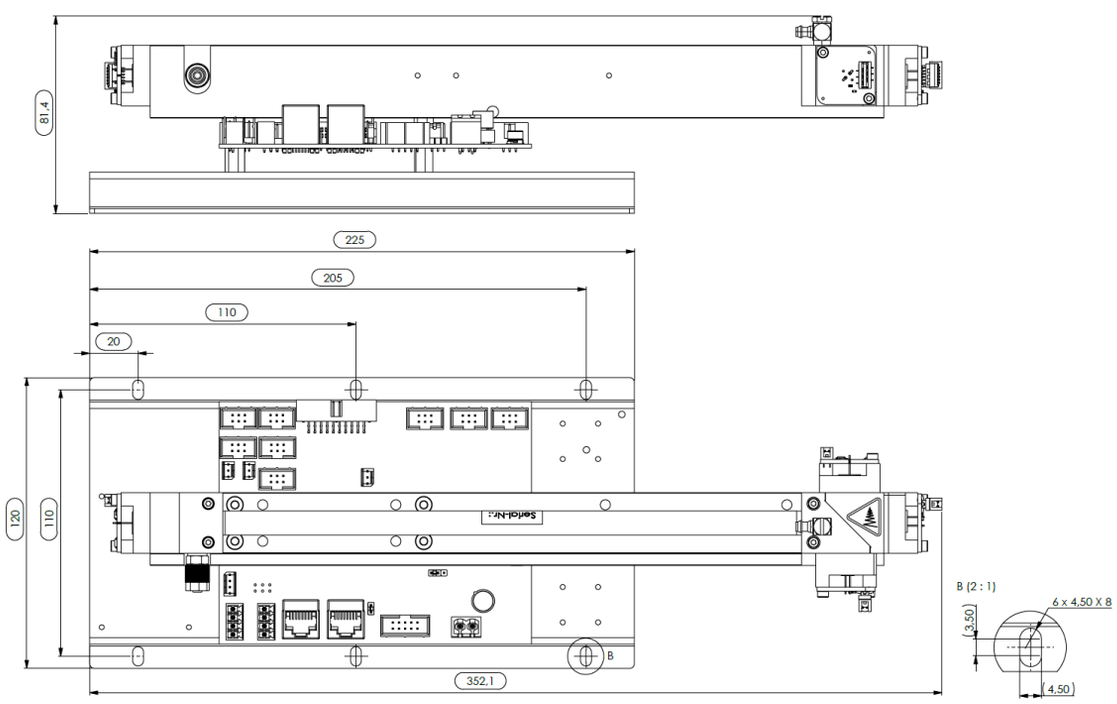
## Options

- O2.sens (Oxygen sensor)
- P.sens (Pressure sensor)
- HUMI.sens® (Humidity sensor)
- Analogboard (0-10V)
- Thermobox

## Features & Benefits

- High dynamic range
- Rugged sensor design
- Gas tight O-ring sealing
- Low power consumption <1W @ 24V
- Different  Interfaces (RS232, CANbus)

## Dimensions




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

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**$NO_2$ / $SO_2$ / $O_3$ / $Cl_2$**

| | gas channel 1* | gas channel 2* | gas channel 3* | gas channel 4* | Option** | | |
|---|---|---|---|---|---|---|---|
| **Single** Gas Module | | | $NO_2$ / $SO_2$ / $O_3$ / $Cl_2$ | | $O_2$ | P | H |
| **Dual** Gas Module | | | $NO_2$ / $SO_2$ / $O_3$ / $Cl_2$ | $NO_2$ / $SO_2$ / $O_3$ / $Cl_2$ | $O_2$ | P | H |

* one gas per column selectable
** P = pressure sensor, H = humidity sensor

## List of measurement ranges

| Measurement range* | $O_3$ | $Cl_2$ | $H_2S$ | $SO_2$ | $NO_2$ | NO |
|---|---|---|---|---|---|---|
| 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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## $NO_2$ / $SO_2$ / $O_3$ / $Cl_2$

| | |
|---|---|
| **General features** | |
| Measurement principle | Non-dispersive ultraviolett (NDUV); dual beam |
| Measurement range | see list of measurement ranges |
| Gas flow | 0.1 – 1.5 l/min |
| Dimensions | 348mm x 120mm x 82mm |
| Weight | approx. 720g |
| Tube connector | 4/6mm tube |
| Lifetime of UV 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) | < 0,25ppm[4] |
| Linearity error | < ± 0,5% F.S. |
| Repeatibility | ± 0.5% F.S. |
| Long term stability (zero) | < ± 2% F.S./24h |
| Long term stability (span) | < ± 2% F.S./month |
| Temp. Influence zero | < 1% F.S./10K |
| Temp. Influence span | < 2% 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 (15 – 30) VDC |
| Supply current (peak) | < 0.1A |
| Average power consumption | < 1W |
| Digital output signal | RS 232 (ASCII) or CAN bus |
| **Climatic conditions** | |
| Operating temperature | 5 – 45 °C |
| 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

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