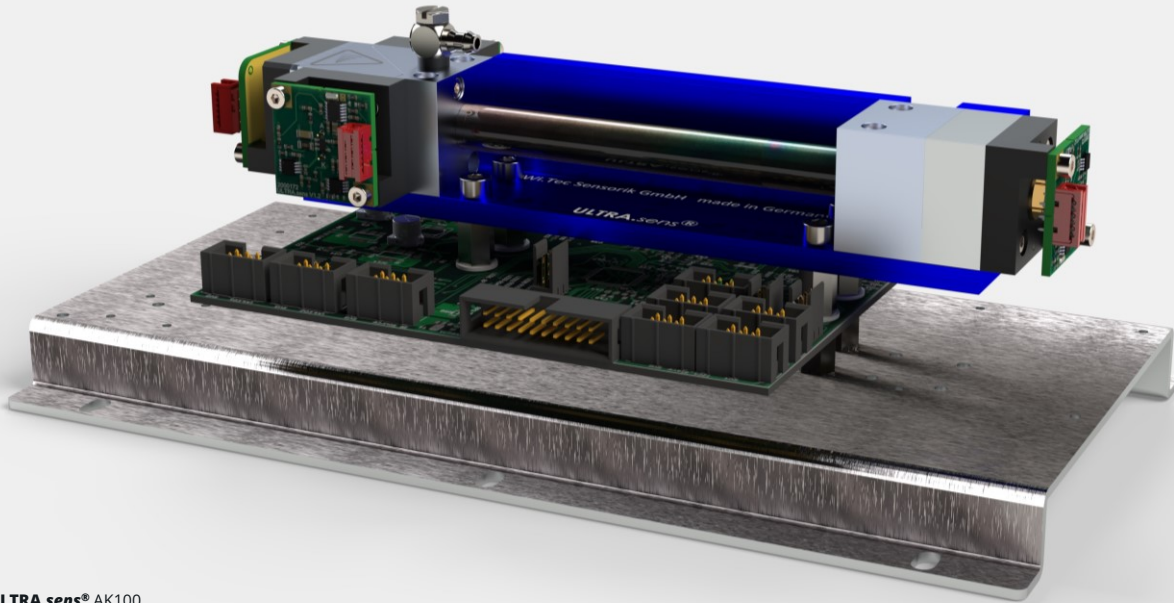


NO₂ / SO₂ / O₃



ULTRA.sens® AK100

Applications

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

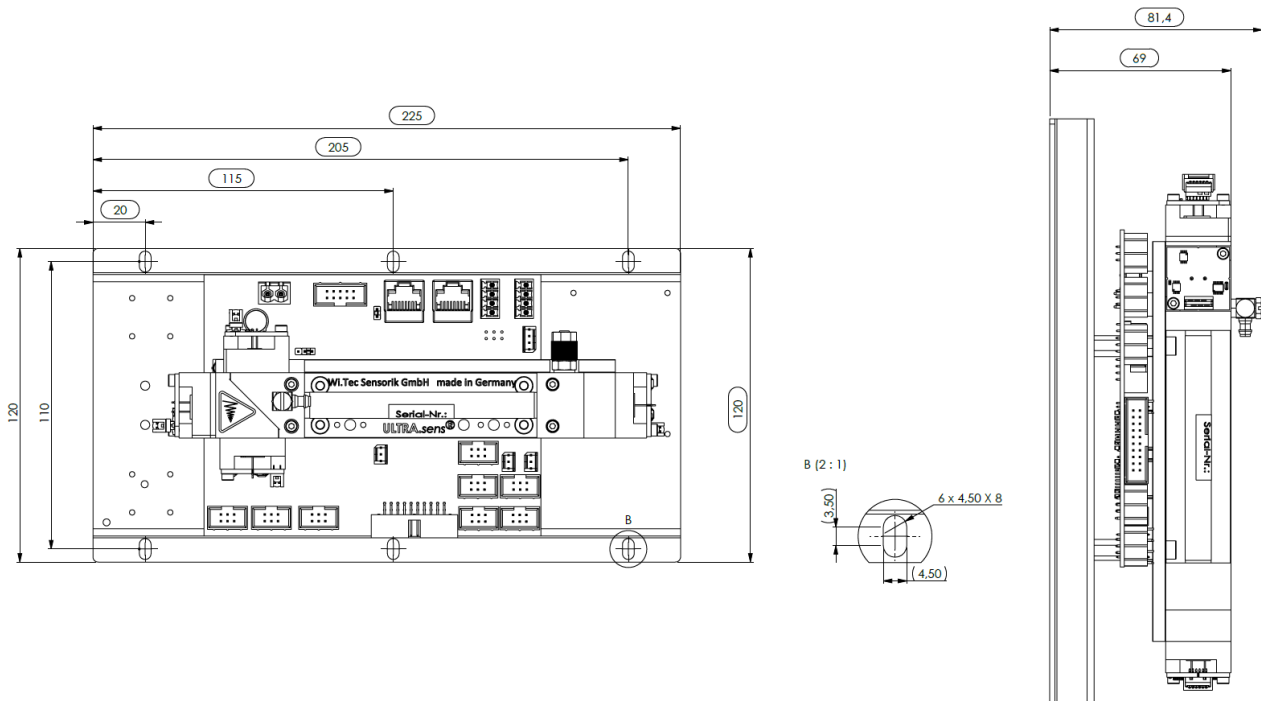
Options

- > 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/

ULTRA.sens® AK100

NO₂ / SO₂ / O₃

	gas channel 1*	gas channel 2*	gas channel 3*	gas channel 4*	Option**		
Single Gas Module			NO ₂ / SO ₂ / O ₃		O ₂	P	H
Dual Gas Module			NO ₂ / SO ₂ / O ₃	NO ₂ / SO ₂ / O ₃	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 ₂ S	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



THE GAS MEASUREMENT COMPANY

!CAUSE IT MAKES .SENS

Subject to change without notice. // 2021-07 Rev.05

ULTRA.sens® AK100

NO₂ / SO₂ / O₃

General features	
Measurement principle	Non-dispersive ultraviolet (NDUV); dual beam
Measurement range	see list of measurement ranges
Gas flow	0.1 – 1.5 l/min
Dimensions	225mm x 120mm x 82mm
Weight	approx. 580g
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)	< 0,5ppm ⁴
Linearity error	< ± 1% F.S.
Repeatability	± 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 ⁸
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 ⁸ stable climatic conditions recommended



THE GAS MEASUREMENT COMPANY

CAUSE IT MAKES .SENS

Subject to change without notice. // 2021-07 Rev.05