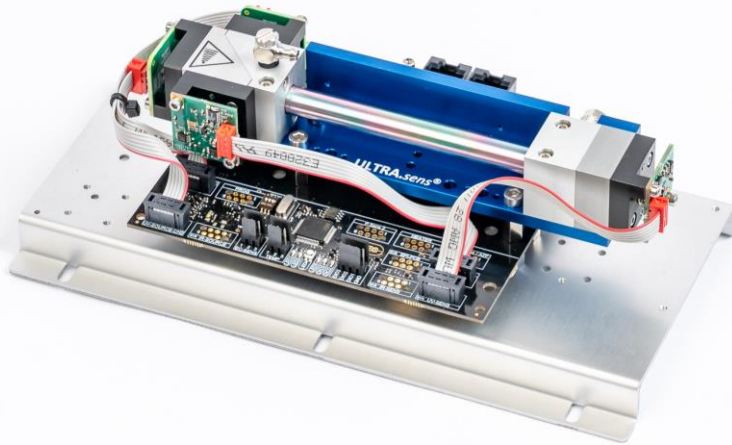


ULTRA.sens® AK100 (LED)

high precision NDUV Gas Sensor for H₂S



Overview



ULTRA.sens® AK100

Applications

- > Biogas monitoring
- > Paper industry
- > Industrial gas analyzer
- > Environmental monitoring
- > Process control
- > Leakage detection

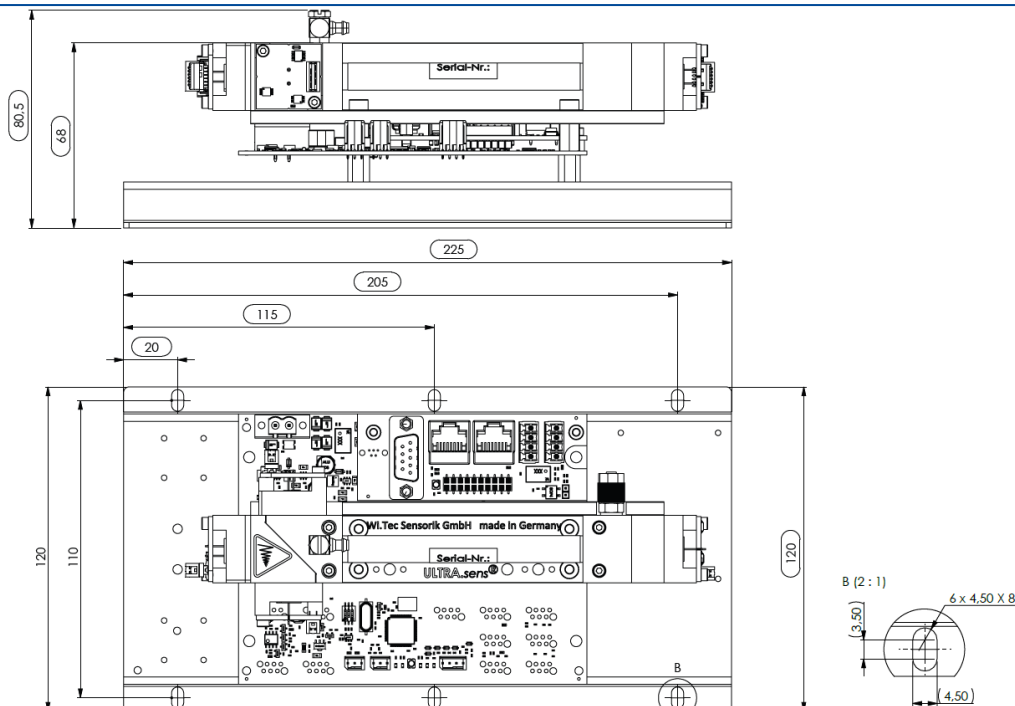
Options

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

Features & Benefits

- > Compact and robust optical sensor
- > Applicable for continuous measurements
- > Different Interfaces (RS232, CANbus)
- > Adjustable measurement rate 1min to 120min
- > Longlife UV-LED
- > Mercury-free design

Dimensions



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

ULTRA.sens[®] AK100 (LED)

high precision NDUV Gas Sensor for H₂S

Technical Data

General features

Measurement principle	Non-dispersive ultraviolet (NDUV) ; dual beam
Measurement range	1.000ppm / 2.000ppm / 5.000ppm
Gas flow	0.1 – 2 l/min
Dimensions [L x W x H]	225mm × 125mm × 81mm
Weight	approx. 580g
Tube connector	4/6mm tube
Lifetime of UV radiation source	> 1 500h – 180 000h ¹

Measuring response²

Warm-up time	5min (initial) ≤ 45min ³
Response time(t ₉₀)	1min – 120min ¹
Detection limit LOD (3-σ)	≤ 1ppm
Digital resolution	0.001 [ppm / Vol.%]
Linearity error	≤ ±2% F.S.
Repeatability	± 0.5% F.S.
Long term stability (zero)	≤ ±1%F.S./month ≤ ± 20 ppm /month
Long term stability (span)	< ± 1% 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	15..30 VDC
Supply current	≤ 0.4A
Power consumption	≤ 7.5W
Digital output signal	RS 232 (ASCII) , CANbus, Modbus (RTU)

Climatic conditions

Operating temperature	5 – 45 °C ⁸
Storage temperature	-20 – 60 °C
Air pressure	300 – 1200 hPa (mbar)
Ambient humidity	0 – 95% rel. humidity (not condensing)

F.S. full scale ¹ depends on measurement interval ² related to P_a = 1020hPa ; T_a = 25°C ; flow = 1l/min ³ full specification, demands to environmental conditions 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, please check dewpoint considerations

Basisnumber 2001970 // Subject to change without notice. // 2024-05 Rev.02



The Gas Measurement Company

CAUSE IT MAKES .SENS

Schepersweg 41 · 46485 Wesel · Germany ☎ +49-281-206578-20 ✉ info@witec-sensorik.de 🌐 www.witec-sensorik.de