

Overview

SO₂ / NO₂ / O₃ / Cl₂ / H₂S

The »RI.sens Multiline« NDUV Module (non-dispersive UV sensor) has also been specially developed for use in high quality In the design phase special emphasis was placed on high stability and a low detection limit. These goals could be fully ach high-performance light-emitting diodes (UV-LED) and gas discharge lamps (EDL) which were adapted to the requirements detection technology. In the spectral range from 200 nm to 405 nm, nitrogen oxides, aromatic hydrocarbons, ketones, ozo dioxide and halogens can be used with this novel sensor platform, partly detected reliably in the ppb range.



The various photometric components such as detectors, emitters, measuring sample cell, etc. will be assembled user-specifically in a **high-quality tabletop casing** by RITTER.



Applications

- › Biogas research
- › Environmental measuring technology
- › Elemental analysis
- › Industrial gas analysis
- › Process measuring technology

Characteristics and Benefits

- › Group of detectable gases: SO₂, NO₂, O₃, Cl₂, H₂S
- › Measurement technology: Innovative NDUV-Sensor (non-dispersive ultraviolet sensor)
- › Measurement accuracy ±2% of span (full scale)
- › No cross-sensitivity to H₂
- › Operating temperature: 5 - 45 °C
- › Operating pressure: 800 - 1200 mbar (hPa) abs.
- › Flow rate range: 1 ltr/day – 100 ltr/h
- › Warm-up time: 1 min
- › Response time (t₉₀): ≈ 1-2 sec depending on gas
- › Interface: USB, on request RS232
- › In tabletop casing, overall dimensions W x H x L 171 x 85 x 246 mm, weight approx. 1.9 kg
- › Gas connection: PVDF screw-type tube connection for tube Ø_i 4mm, Ø_o 6 mm
- › Power supply: 24 VDC (incl. power plug 100 - 240 VAC / 24 VDC)

In contrast to photometric NDUV sensors the lifetime of electrochemical sensors for measurement of H₂S is limited. Please note that lifetime data for such sensors are given for air and not for measurement of H₂S. For H₂S concentrations > 200 ppm the lifetime is reduced, for concentrations > 1000 ppm critical. While the measurement performance of UV-LED is constant, EC sensors are becoming »deaf«.

Recalibration

- › Readjustment of the zero is recommended once a week.
- › Contamination of the measuring cuvette can lead to misalignment of the end point. Due to the integrated filter, readjustment of the endpoint is generally not required - but can be performed once a year.
- › Additionally, cartridges filled with an inert and the respective test gas for recalibration of the zero and end point can be provided.
- › Long-term drift is less than 1% FS (Fullscale) / 24 h.

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The most recent version of this data-sheet can be found at <https://www.ritter.de/en/datenblatt/ri-sens-multiline-module-2>

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