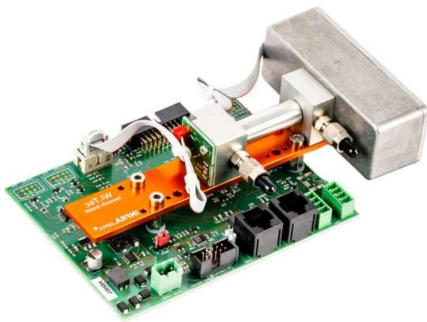


Overview

CO₂ / CO / NO / N₂O / CH₄ / C_nH_m

The »RI.sens Multiline« NDIR Module (non-dispersive IR sensor) has been specially developed for use in high-quality gas analysis. In the design phase special emphasis was placed on high stability and a low detection limit. These goals could be fully achieved through the use of high-performance light-emitting diodes (IR-LED) and thermal micro-radiators which were adapted to the requirements of gas analysis in the spectral range from 2 µm to 12 µm, carbon dioxide, carbon monoxide, hydrocarbons, water vapor and sulfur hexafluoride. These gases can be safely detected down to the ppm range with this innovative sensor platform.



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 and process measuring technology
- › Elemental analysis
- › TOC-analyzers

- › Industrial gas analysis
- › Natural gas analysis

Characteristics and Benefits

- › Group of detectable gases: CO₂, CO, N₂O, NO, CH₄, C_nH_m
- › Measurement technology: Innovative NDIR-Sensor (non-dispersive infrared 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: 2 min
- › Response time (t₉₀): ≈ 3 sec
- › Interface: USB, on request RS232
- › Sensor cuvette: Aluminum, gold plated for sensor length ≥ 100mm
- › Incl. temperature compensation
- › Incl. data acquisition software
- › 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)

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-1>

Dr.-Ing. RITTER Apparatebau GmbH & Co. KG · Coloniastrasse 19-23 · D-44892 Bochum · Germany For questions please contact mailbox@ritter.de or your any local distributor at <https://www.ritter.de/en/worldwide/>