

### MultiGas Infrared plus Ultraviolet Module

NON-DISPERSIVE ULTRAVIOLET SENSOR (NDUV), NON-DISPERSIVE INFRARED SENSOR (NDIR), SENSORS

MULTIGASNDIRNDUV

CO<sub>2</sub> CO N<sub>2</sub>O CNHM CH<sub>4</sub> C<sub>2</sub>H<sub>6</sub> C<sub>3</sub>H<sub>8</sub> C<sub>4</sub>H<sub>10</sub> CF<sub>4</sub> SF<sub>6</sub> H<sub>2</sub>O O<sub>3</sub> CL<sub>2</sub> CLO<sub>2</sub> CS<sub>2</sub> SO<sub>2</sub> H<sub>2</sub>S NO<sub>x</sub> NO<sub>2</sub> NO

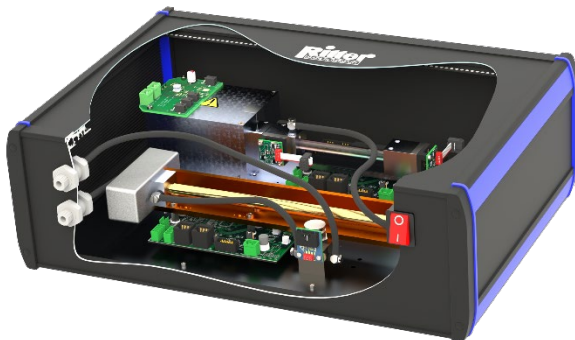
- Combination of NDIR and NDUV Sensor
- Enables the measurement of 3 gas components simultaneously.



### Overview

The third RITTER MultiGas module is a combination of both Module NDIR and Module NDUV on a common board. With this unit, up to 3 gas components can be measured simultaneously. The basic electronics can supply IR and UV radiation sources with different frequencies for 0 Hz (DC) to 100 Hz (AC). This system is an ideal tool for detecting multi-component gas at low ppm levels.

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-analysers
- Industrial gas analysis
- Natural gas analysis

### Characteristics and Benefits

- Group of detectable gases: CO<sub>2</sub> CO N<sub>2</sub>O CH<sub>4</sub> C<sub>n</sub>H<sub>m</sub>\* CF<sub>4</sub> SF<sub>6</sub> H<sub>2</sub>O O<sub>3</sub> Cl<sub>2</sub> H<sub>2</sub>S SO<sub>2</sub> NO<sub>2</sub>
- Measurement accuracy ±2% of Full Scale (F.S.)
- No cross-sensitivity to H<sub>2</sub>
- Operating temperature: 5 – 45 °C
- Operating pressure: 800 – 1200 mbar (hPa) abs.
- Flow rate range: 1 ltr/day – 100 ltr/h
- Warm-up time: IR 2 min / UV 1 min
- Response time (t<sub>90</sub>): ≈ 1-2 sec depending on gas
- Interface USB, on request RS 232
- IR Sensor cuvette: Aluminium, gold plated for sensor length 100 ≥ mm
- UV Sensor cuvette:

### Recalibration

- Readjustment of the zero-point is recommended once a week.
- Contamination of the measuring cuvette can lead to shifting of the endpoint. Due to the integrated filter, re-adjustment 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 endpoint can be provided.
- Long-term drift is < 1% of Full Scale (F.S.) / 24 h.

