

Gasera ONE Formaldehyde

Monitoring low levels of formaldehyde
in ambient air



Description

Measurement need

Formaldehyde levels **above 0.1 ppm** can cause acute health problems, e.g. sore throat, skin irritation, nausea, scratchy eyes and cough. It is also classified as highly carcinogenic compound. Exposure to moderate amounts of formaldehyde has been linked to cancer, such as leukemia. Gasera provides a **portable** and **rackmount** solution to follow formaldehyde gaz.



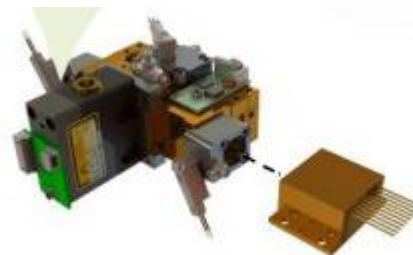
Easy-to-use – one button operation

GASERA ONE FORMALDEHYDE provides the user with a **simple and intuitive** interface with high resolution display and a single rotating knob. In addition, the user can **control** the GASERA ONE FORMALDEHYDE wirelessly with **smartphone, tablet or other devices** coming soon.



Technology

GASERA ONE FORMALDEHYDE analyzer is based on combining ultra sensitive cantilever enhanced **photoacoustic detection technology** with **Quantum Cascade Laser source** operating at a Mid-IR fundamental spectral absorption line of formaldehyde. This combination provides enough **sensitivity** to reliably measure **ambient background levels** of formaldehyde. It also gives an exceptionally **high level of stability** with a re-calibration period ranging from several months up to several years, and thus it offers a low total cost of ownership.



Benefits

- Standalone system with built-in gas exchange unit
- Requires no consumables or wet chemistry
- Portability that enables the field use
- Short optical path that provides industry-leading dynamic range with single-point calibration
- Drift-free operation due to direct absorption measurement
- Two built-in sample inputs and wide dynamic range provide the possibility of before-after comparison in different processes
- Highly selective against aldehydes and other VOCs
- Low maintenance and No consumables

Performance Specifications

Portable and Rackmount version

Response time: From 10 s to 10 min

Detection limit: below 1 ppb

Dynamic range: over 5 orders of magnitude (i.e. 100 000 times the detection limit)

Repeatability: less than 1 % of measured value in operational conditions at the calibration concentration

Accuracy: Better than 5% at the calibration concentration. Limited by the calibration gas accuracy

Temperature and Pressure stability: No drift due to variation of ambient temperature and sample gas pressure

Data storage capacity: sufficient for at least 1 year of continuous monitoring with the shortest sampling interval

Total internal gas volume: 30 ml

4 gas connections in the rear including 2 sample input connections equipped with user changeable filters for dust and small particles

Electrical connections:

Input voltage: 110-240 VAC, 50-60 Hz

Input power: less than 100 W

Interface: Ethernet, USB

remotely operated via smartphone, tablet, laptop or another GASERA ONE. (coming soon)

Operational conditions:

Temperature range: 0 °C – +40 °C

Humidity: below 90% RH, non-condensing

Pressure range: ambient level

Dust/water resistance: IP20 (IEC 529)

Sample gas conditions:

Temperature: 0 – +49 °C

Humidity: non-condensing

Pressure: 930 mbar – 1100 mbar

Gas flow: approx 1 liters/minute

Particulates < 1 µm

Dimensions: 19" 3U (unit) housing; 48,4 cm W x 13,9 cm H x 44 cm D

Weight: approx 13 kg

Applications examples

- Fence-line monitoring: undetected leak from industrial facilities
- Biogas plants: Emission from the production of energy
- New buildings: Following of VOC release
- Wood products: wood must to be tested and proven not to emit too much formaldehyde
- Traffic emissions: exhaust fumes emitted into the atmosphere by cars, buses and trucks.
- Indoor air quality: formaldehyde polluting the indoor air
- Occupational Safety: common to the chemical industry
- Etc.