

Gas analyzer

SIRA UV VOC





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Measurement of VOCs

The SIRA UV VOC is a stationary indoor analyzer for real-time determination of volatile organic compounds (VOCs) using UV spectroscopy.

VOCs are found in a variety of process gases, including biogas, natural gas, exhaust gas streams, and gases from waste treatment. Due to strict emission regulations, potential health risks, and the danger of impairing downstream processes, efficient VOC separation is crucial. This is typically achieved through adsorption on activated carbon, which requires continuous monitoring to detect filter breakthroughs and ensure process reliability.

The SIRA UV VOC offers a versatile and reliable solution for monitoring activated carbon filters, with a customizable configuration and virtually maintenance-free design that is suitable for industrial applications.

- Biogas industry
- Chemical industry
- Filter monitoring industry
- Waste management/
Waste disposal industry

Measured variables SIRA UV VOC (others on request)

Gases Monitored	Detection Range ¹	Initial Measurement Accuracy ²
Gases Included as Standard		
Ketones		
Acetone	0,5 – 350 ppmv	±10% or lower detection limit
2-Butanone (MEK)	1 – 1000 ppmv	±10% or lower detection limit
Terpenes		
3-Carene	0,5 – 200 ppmv	±10% or lower detection limit
alpha-Pinene	0,5 – 250 ppmv	±10% or lower detection limit
beta-Pinene	0,5 – 250 ppmv	±10% or lower detection limit
Limonene	0,5 – 350 ppmv	±10% or lower detection limit
p-Cymene	0,5 – 2000 ppmv	±10% or lower detection limit
Others		
Hydrogen sulfide	1 – 1000 ppmv	±10% or lower detection limit
Ammonia	1 – 500 ppmv	±10% or lower detection limit
m-Xylene	0,5 – 2000 ppmv	±10% or lower detection limit
o-Xylene	0,5 – 2000 ppmv	±10% or lower detection limit
p-Xylene	0,5 – 2000 ppmv	±10% or lower detection limit
Dimethyl sulfide	0,5 – 200 ppmv	±10% or lower detection limit
Carbon disulfide	0,2 – 200 ppmv	±10% or lower detection limit
Optional Additional Gases		
Benzene	0,5 – 2000 ppmv	±10% or lower detection limit
Toluene	0,5 – 2000 ppmv	±10% or lower detection limit
Ethylbenzene	0,5 – 2000 ppmv	±10% or lower detection limit

¹ Gas detection ranges for single components in otherwise clean biogas, biomethane, or nitrogen. Higher concentrations than the stated range can be measured and reported, but with reduced accuracy. This enables the device to provide indicative VOC measurements for raw biogas.

² Measurement accuracy for single components in otherwise clean biogas, biomethane, or nitrogen within the ranges stated above.

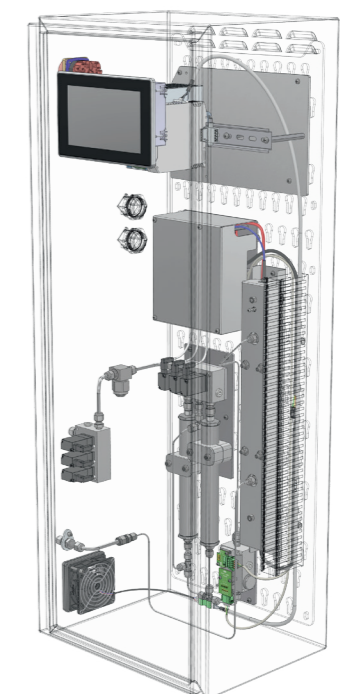
Technical data SIRA UV VOC

Dimensions H x W x D (mm)	990 x 360 x 300, aluminum housing
Weight	Approx. 30 kg
Degree of protection	IP42
Operating temperature	5–45 °C
Ambient humidity	Max. 95% relative humidity, non-condensing
Fastening	Wall mounting, wall bracket included
Mains voltage (AC)	115–240V, 185 VA
Display/Operation	7"-Touchscreen-Display
Gas inlet	Process gas, calibration gas, test gas
Gas connection	6 mm stainless steel clamping ring
Process gases	Biogases
Atmospheric pressure	860–1160 mbar
Gas inlet pressure	20 – 40 mbar
Gas consumption	Max. 20 l/hour
Communication options	0/4 – 20 mA, digital output, relay, fieldbuses
Monitored substances	Volatile organic compounds (VOCs)
Repeatability	0.3 mg/m ³ or 2% of the measured value
Analysis time	< 3 min.

Additional measuring ranges available on request.

Benefits

- High measurement frequency
- Low-maintenance design
- Easy integration
- Durable components





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