



Continuous Emissions Monitoring

# Real Driving Emissions

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# Continuous Emissions Monitoring Real Driving Emissions

To monitor real driving emissions (RDE) from vehicles is a challenge. The analyser must be fast, accurate and easy to install onto a regular vehicle.

The OPSIS technology uses a beam of light to detect the concentration of gases.

The monitoring system is placed on board the vehicle. The emissions from the exhaust pipe is led into the monitoring path where the measurement takes place. All relevant gases such as NO, NO<sub>2</sub>, NO<sub>3</sub>, CO, CO<sub>2</sub>, CH<sub>4</sub> and THC can be measured with one system.

The system can run for several hours with a single 12V battery.

## TEST AND APPROVALS

The OPSIS system has been tested and approved by a number of internationally recognized institutes and authorities. The system meets the European directives and is approved by German TÜV, British MCERTS and U.S. EPA among others. Full details are available on request.

## OPSIS PRODUCT PORTFOLIO

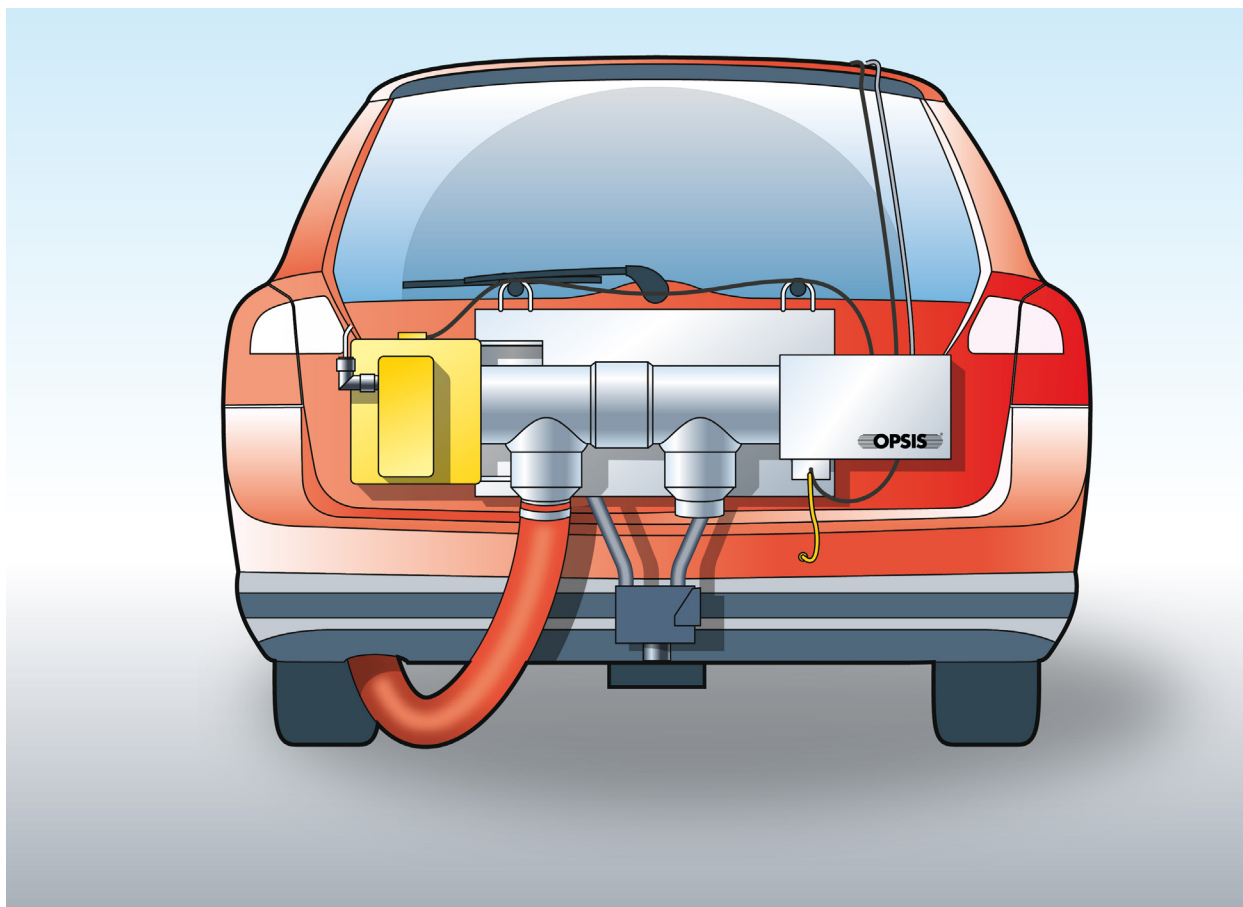
OPSIS provides a full product portfolio for measurements of gases. It includes complete CEM, TDL systems, oxygen analysers and Hg analysers. For further information, please visit [www.opsis.se](http://www.opsis.se).



An OPSIS RDE installation.

# SYSTEM OVERVIEW

A schematic layout for monitoring RDE from vehicles.



## PERFORMANCE DATA

Compound	Measurement Range	Uncertainty
CO	0-10 % Vol.	< 2 %
CO <sub>2</sub>	0- 20 % Vol.	< 2%
CH <sub>4</sub>	0-10000 ppm	< 2%
NO	0-3000 ppm	< 2%
NO <sub>2</sub>	0-3000 ppm	< 2%
NO <sub>x</sub>	0-3000 ppm	< 2%
NH <sub>3</sub>	0-100 ppm	< 2%

### Additional parameters

Exhaust flow rate  
 Temperature  
 Pressure  
 Humidity  
 Location, GPS



## Real Driving Emissions

### by OPSIS

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One analyser for all gases

Direct monitoring of NO, NO<sub>2</sub>, NH<sub>3</sub>, CO, CO<sub>2</sub>, CH<sub>4</sub> and THC

Fast response

Gas calibration only once per year

Cost-effective open-path technology

Low energy consumption

**A50**  
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Please contact your OPSIS supplier to discuss your particular system requirements, including the compounds you wish to monitor. Separate product and other industrial application sheets are available. Specifications subject to change without notice.

## OPSIS AB

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