



New Generation Gas Analysis **EcoSpectro Gas Analyzers**

# EcoSpectro – New Generation Gas Analysis

## New gas analyzers

The EcoSpectro new generation gas analyzers can quantitatively measure hydrocarbons up to C6+, CO2 and the sum of oxygen and nitrogen.

## New measuring method

EcoSpectro gas analyzers rely on a high-resolution optical measurement procedure in combination with other sensors.

## New chemometric support

A novel chemometric software allows for the precise determination even of higher hydrocarbons including hexane.

## No carrier gas required

Thanks to their measuring principle, EcoSpectro gas analyzers do not require any carrier gas. This results in lower procurement and operation costs.

## Fit for the future

EcoSpectro gas analyzers are fit for future applications with their options for measuring H2. Power2Gas and enriched or depleted natural gases are no problem for them.

## Stability

Thanks to the integrated self-monitoring feature of the sensor elements and the self-calibration routine of the optical components, EcoSpectro gas analyzers not only achieve long recalibration cycles, but at the same time ensure the quality of every single measured value.

## Characteristics

Stability is the basis for the precise calculation of calorific characteristics, such as the calorific values, Wobbe index, standard density, relative density, or methane number.

## Operation

EcoSpectro gas analyzers can be easily operated via the clearly structured graphic user interface of the data processing unit.

## Data Storage

Different interfaces such as Ethernet, USB, and RS485/422 are available for data communications with various devices. In conjunction with the EcoGate gateway, there is also an access to the System Bus for the current measured values.

## Communication

Different interfaces such as Ethernet, USB, and RS485/422 are available for data communications with various devices. In conjunction with the EcoGate gateway, there is also an access to the System Bus.

## Applications

EcoSpectro gas analyzers can be used in various fields of gas analysis. They meet a wide variety of requirements whether used in gas quality analysis or for fast analyses in the field of engine technology, thermal process engineering or combined heat and power generation.

## Technical Data

Designation	mol%	Description
C1	70 - 100	Methane
C2	0.05 - 15.0	Ethane
C3	0.05 - 4.0	Propane
n-C4	0.01 - 1.0	n-Butane
i-C4	0.01 - 1.0	Isobutane
n-C5	0.01 - 0.5	n-Pentane
i-C5	0.01 - 0.5	Isopentane
Neo-C5	0.01 - 0.5	Neopentane
C6+	0.01 - 0.3	Hexane and higher hydrocarbons
CO2	0.05 - 15.0	Carbon dioxide
N2 + O2	0.1 - 20.0	Sum of nitrogen and oxygen
H2	0.1 - 15.0	Hydrogen is projected

## Calorific characteristics

Superior calorific value as per ISO 6976 < 0.2%
Inferior calorific value
Methane number
Wobbe index
Standard density
Relative density
Compressibility factor
Sound velocity
Measurement speed > 1 measurement per minute
Modbus RTU / TCP
RS485 service
DSfG interface
Ethernet 10/100M
Digital status outputs
4-20 mA analog outputs

## RMA Mess- und Regeltechnik GmbH & Co. KG

Forsthausstrasse 3 | D-77866 Rheinau  
Phone +49 (0) 78 44/404-0  
Fax +49 (0) 78 44/404-138  
E-mail [mrt@rma-rheinau.de](mailto:mrt@rma-rheinau.de)

[www.rma-armaturen.de](http://www.rma-armaturen.de)

**Germany** RMA KehI GmbH & Co. KG, KehI  
RMA Rheinau GmbH & Co. KG, Rheinau  
RMA Training GmbH & Co. KG, Rheinau  
**France** RMA France S.A.S., Bischheim  
**Poland** RMA Polska Sp. z o. o., Chojnów  
**UK** RMA Pipeline Equipment Ltd., Batley  
**Bahrain** RMA Middle East S.P.C, Al Hidd  
**Russia** OOO RMA Rus, Elabuga

  
PIPELINE EQUIPMENT