



## GMS800 Extractive Gas Analyzers

Individual or simultaneous measurement of  
more than 60 gas components

# GMS800 – Modular Analysis System – Flexible Configuration Options tailored for Almost Any Application

With the GMS800, SICK offers an innovative product family of extractive gas analyzers which can measure more than 60 different gas components. The GMS800 is characterized by its consequent modular design: Up to 6 analyzer modules, a gas module, I/O modules as well as a control unit. For cost-efficient system integration, standardized 19" enclosures as well as system enclosures

optimized for installation in cabinets can be used. For rugged industrial use, wall enclosures are used with ATEX approval in explosion zones. The GMS800 electronics and software have the interfaces required for remote monitoring from a network as well as to the connection of a process control system.

## EMISSION MONITORING ACCORDING TO EN 15267

- Emission measurements of very low concentrations, e.g. in power plants, cement plants or waste incineration plants and in the pulp and paper industry
- With the analysis module DEFOR, the specialist for gas turbines due to measurement of very low SO<sub>2</sub>, NO and NO<sub>2</sub> concentrations
- Monitoring of NO<sub>x</sub> in denitrification plants by direct measurement of NO and NO<sub>2</sub> as well as compiling to NO<sub>x</sub> in the analyzer
- Efficient measurement in denitrification plants
- QAL1 certificate available for plants requiring approval

## PROCESS GAS MEASUREMENTS FOR MORE THAN 60 COMPONENTS

- Efficient process gas analysis in applications of the chemical and petrochemical industry
- Measurement of sulfur compounds in the process gas of the paper and petrochemical industry
- H<sub>2</sub>S and SO<sub>2</sub> measurement in residual gas purification of sulfur recovery units (SRU)
- High H<sub>2</sub>S contents in reactive or sour gases
- Reliable CO monitoring for explosion protection in coal mills and coal bunkers
- Furnace gas measurement of blast furnaces or coke ovens
- Quality audits in air separation plants and purity measurement of gases (e.g. 5 ppm CO concentration in H<sub>2</sub> in hydrogen production)

## PRODUCT FEATURES

- Reliable measuring results due to proven measuring principles, such as NDIR, thermal conductivity, paramagnetic/electrochemical O<sub>2</sub> measurement, UVRAS<sup>1)</sup> and NDUV<sup>2)</sup>
- Strict modular design with many configuration options from up to 6 analyzer modules, a gas module, I/O modules – each combinable in an enclosure
- System solution due to turnkey analysis cabinet MAC800 using modular system enclosures
- Explosion protection models for explosion zones 1 + 2
- Very easy maintenance due to simple exchange of complete modules, therefore easy servicing as well as high availability
- Remote diagnosis with innovative SOPAS ET software
- The modules are thermostat-controlled, therefore independent from ambient temperature, for low-drift, stable measurements
- No costly test gases<sup>3)</sup> required due to the use of an optional adjustment unit:
  - Filter wheel with adjustment cells that are swiveled automatically into the optical path
  - Adjustment: Manual or automatic
- Optionen
  - Cell material and gas paths also in stainless steel
  - Process cell with purgeable windows

<sup>1)</sup> UV Resonance Absorption Spectrometry

<sup>2)</sup> Non-dispersive UV photometry

<sup>3)</sup> For the DEFOR and UNOR/MULTOR modules



#### 4 GMS800 MODELS FOR EASY INTEGRATION AT THE INSTALLATION LOCATION

**Type GMS810:**  
19" rack housing with 4 rack units,  
IP 40



**Type GMS815P:**  
Wall enclosure, IP 65 for use in rough  
industrial environment, optionally us-  
able in explosion zones 1 and 2



**Typ GMS820P:**  
Flame-proof enclosure, IP 65, for use  
in Ex-zone 1 area



**Type GMS830/831:**  
System enclosure for easy integration  
in analysis cabinets



#### 6 ANALYZER MODULES FOR MORE THAN 60 GASES

##### **DEFOR**

Modern UV gas analyzer for simultaneous measurement of up to 3 gas components. Specialist for extremely selective NO measurement with small measuring ranges and an all-rounder for many other UV-active gases, e.g. SO<sub>2</sub>, NO<sub>2</sub>, Cl<sub>2</sub>, NH<sub>3</sub>, CS<sub>2</sub>, H<sub>2</sub>S and COS.

##### **UNOR**

Highly selective NDIR analyzer for continuous measurement of almost any gas component which absorbs in the infra-red spectral range. Especially insensitive to building vibrations due to the variably adjustable chopper frequency.

##### **MULTOR**

Multicomponent NDIR analyzer for continuous measurement of up to 3 IR-absorbing gases and H<sub>2</sub>O for internal interference sensitivity correction. Especially insensitive to building vibrations due to the variably adjustable chopper frequency.

##### **THERMOR**

Precise heat conductivity analyzer for the determination of concentrations in binary or quasi-binary gas mixtures, e.g. H<sub>2</sub>, He, CO<sub>2</sub> and Ar. Also available in solvent-resistant or corrosion-resistant version.

##### **OXOR-P**

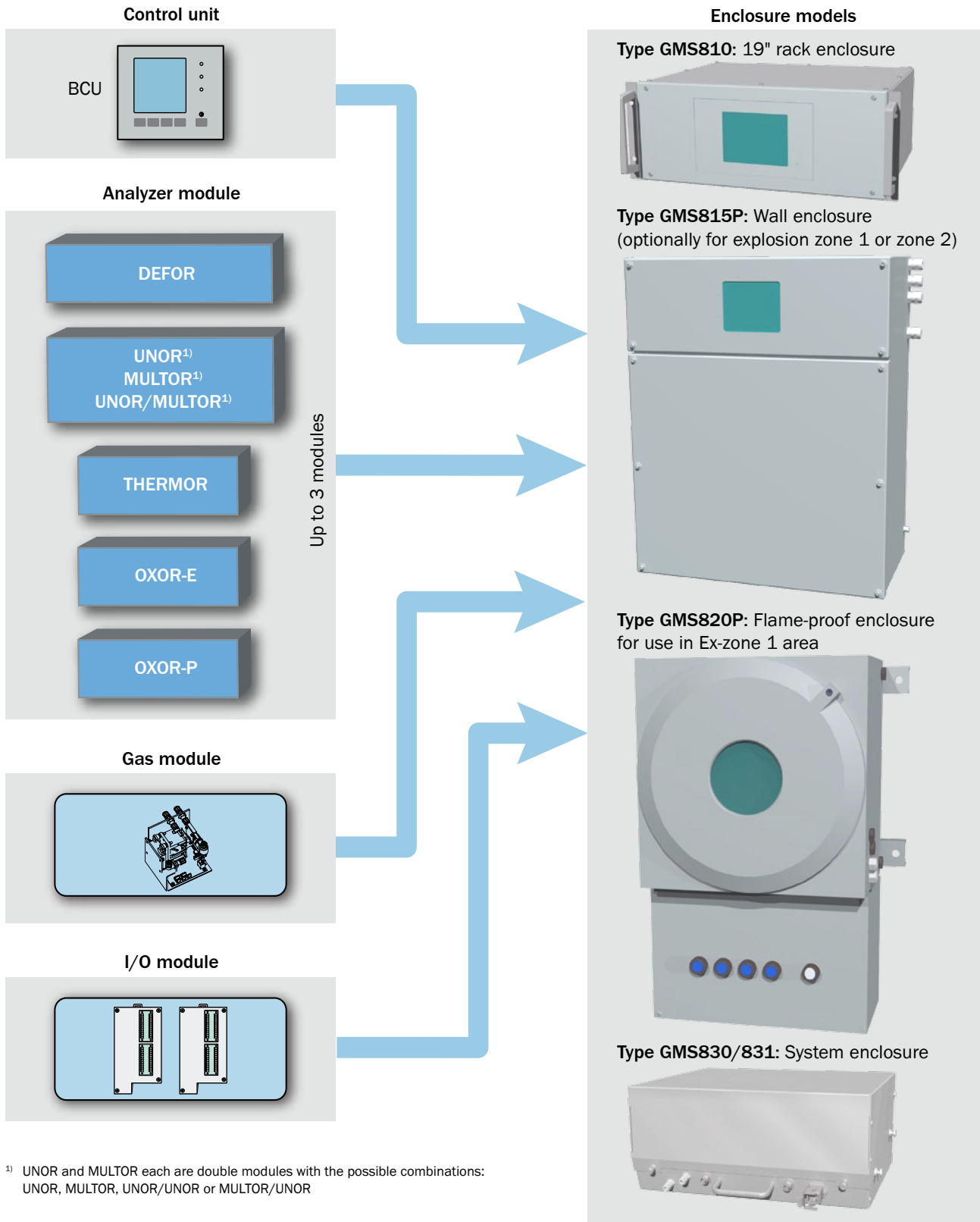
Precise oxygen analyzer which operates according to the paramagnetic measuring principle. Also available as special model as especially solvent-resistant or corrosion-resistant version

##### **OXOR-E**

Determination of oxygen contents using an electrochemical cell.

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**GMS800 CONFIGURATION - PRODUCT COMPONENTS AND MODELS**



<sup>1)</sup> UNOR and MULTOR each are double modules with the possible combinations: UNOR, MULTOR, UNOR/UNOR or MULTOR/UNOR