



MKAS Multi Component Analyzer System

Modular extractive gas analysis
Up to 3 analyzers in one cabinet

MKAS – Multi Component Analyzing System

Modular Extractive Gas Analysis

AREAS OF APPLICATION – COMPLIANCE WITH EN 14181 AND 15267 PROTECTS FUTURE OPTIONS

The innovative system is based on the concept of a modular analyzing system and fulfills the new European Directive for emission monitoring, the EN 15267. This Directive describes, amongst other things, the requirements of the

complete measurement system (AMS) including sampling and processing. The system offers versions built for European wide reliable emission applications in the future.

EXTRACTIVE ANALYSIS MADE TO MEASURE

Are you looking for a perfect technical solution to meet your measuring task? And does this solution have to make good economic sense?

SICK offers the extractive analyzing system with top quality standard subassemblies and components. The configurable design allows an optimized assembly suitable to your requirements. Retrofits with analyzers as well as with gas processing devices are easy and cost-efficient. This secures long-term system support.

MODULAR SYSTEM

The basic system consisting of proven standard modules can be extended with additional components that optimally cover the specific measuring task and installation conditions. They are tuned to each other and integrated in a quality assured system. The following can be configured:

- Up to 3 analyzers with up to 12 measuring components
- High-performance sample gas cooler (one- or two-stage)
- Heated sample gas line and a large choice of sampling probes
- Control systems for heating circuits
- Air conditioner or fan
- Automatic test gas supply
- Sample point switching
- NO_x converter
- Matching filters and sample gas pumps

EU DIRECTIVE EN 15267

The new EN 15267 serves as basis for the certification of measuring systems. It defines the roles of the individual parties (manufacturers, test institutes, authorities, operators). For example, exactly defined requirements exist on the quality assurance of the measuring systems that were tested during manufacture.

Notice: The correct use and interaction of the components of an automatic measuring system (AMS) are most important. In addition to the analyzer, all other subassemblies that could affect the measuring result must be capable of complying with the certification requirements.

KEY FEATURES

- Usage of well-proven standard modules
- Easy to upgrade or retrofit due to modular concept
- Optimized sample gas cooler (one- or two-stage operation) incl. condensate pump, filter and flow meter
- Intelligent sample point switching (2 ... 8 sample points)
- Simple installation and commissioning
- Complete system mounted in a steel sheet or GRP cabinet and wired and tested ready for use
- Matching sampling system



SYSTEM VARIATIONS

Basic

for operational measurement

Comfort

An automatic measuring system (AMS) for emission monitoring in compliance with EU standards.

Multipoint

Sample point switching function ranging from 2 to 8 sample points.

Twin

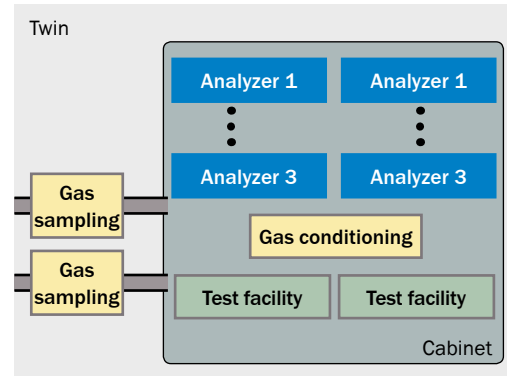
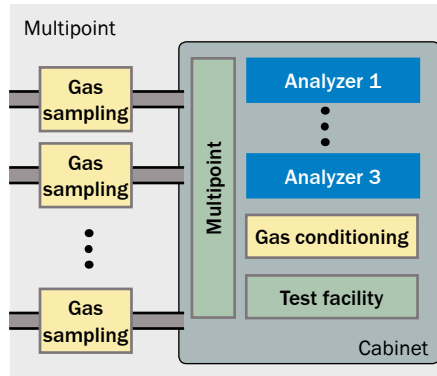
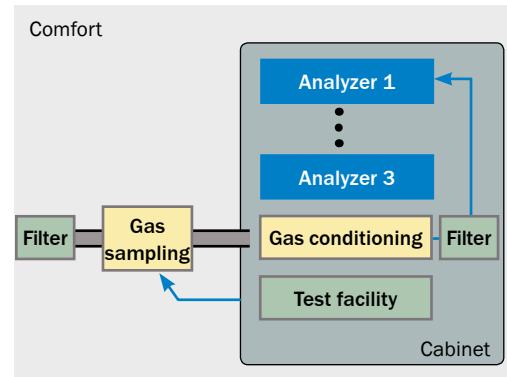
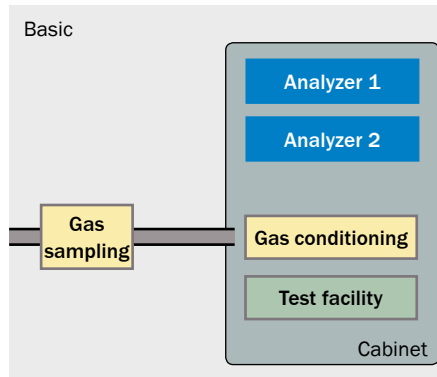
Space-saving parallel analysis of 2 emission sample points.

HD

Heavy-duty system suitable for high concentrations, acidic or extremely dusty sample gases.

Compact

Space-saving wall-mounted system.



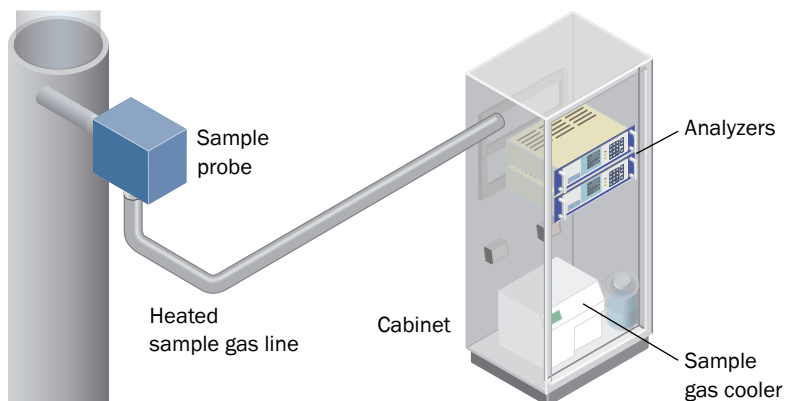
All versions can be fitted with defined options

OVERVIEW SYSTEM TECHNOLOGY

The systems use the so-called “Cold/Dry Technology”. This means:

- Gas sampling via probe, filter and sample gas line (optionally heated)
- Gas drying with high-performance cooler inside the cabinet
- “Cold” measurement inside the analyzer

The measurement itself is carried out by the well-proven SICK extractive analyzers SIDOR and S710.



Technical data	MKAS
Analyzer	<ul style="list-style-type: none"> • Modular gas analyzer S710 • Gas analyzer SIDOR
Measuring components	CO, NO, NO _x , SO ₂ , CO ₂ , O ₂ , N ₂ O, etc. (depending on analyzer)
Output and status signals	<ul style="list-style-type: none"> • Typically 4 ... 20 mA (depending on analyzer, see product information) • Further digital inputs/outputs
Sample conditions	
Sample amount	<ul style="list-style-type: none"> • Approx. 60 l/h • With bypass pump: 250 l/h for high-speed T₉₀ time
Sample temperature	Max. 200 °C (390 °F) at cabinet inlet
Dew point H ₂ O	Max. 65 °C (150 °F)
General data	
Conditions at installation site	<ul style="list-style-type: none"> • Under roofing or other protection against exposure to direct heat radiation, high dust loads and/or corrosive atmospheres • Ex-setup for Zone 1 or 2 on request
Power supply	<ul style="list-style-type: none"> • 230 V (+10/-15 %), 50 ... 60 Hz, max. 1000 VA • 400 V (+10/-15 %), 50 ... 60 Hz, max. 1000 VA • 115 V (+10/-15 %), 50 ... 60 Hz, max. 1000 VA • In addition 230 V USV, max. 500 VA; external heat circuits 230/115 V, max. 5000 VA
Ambient temperature during operation	+5 ... +35 °C (40 °F ... 95 °F) with no direct exposure to sun radiation optional: +5 ... +50 °C (40 °F ... 122 °F) with added-on cooler
Transport and storage temperature	-20 ... +55 °C (-4 °F ... +130 °F)
Relative moisture	Class F (DIN 40040), 75 % annual mean, 95 % short term, non-condensing
Length of sample gas lead	Max. 70 m
Cooler (incl. filter and condensate pump)	<ul style="list-style-type: none"> • 1-stage • 2-stage
Dimensions (H x W x D)	<ul style="list-style-type: none"> • 2,100 x 800 x 600 mm (steel sheet cabinet) • 2,100 x 900 x 600 mm (GRP cabinet)
Color	RAL7035
Degree of protection	IP 54 (IP 34 for optionally added-on cooler with outer circuit)
Weight	Approx. 200 kg
Version	<ul style="list-style-type: none"> • Steel sheet cabinet • GRP cabinet
Calibration	<ul style="list-style-type: none"> • Manual (sample gas application using a hand valve) or automatic (using a solenoid valve) • Automatic via sample gas probe



For more informations and technical data regarding the extractive analyzers, see:

- SIDOR
 - Product information, order no. 8009736
 - Data sheet, order no. 8010913
- S710
 - Data sheet, order no. 8009718