



## F-SMS

### Fixed Syngas Monitoring System



Professional online gas analysis systems for continuous monitoring of pyrolysis and gasification processes.

#### Measures All Primary Constituents of Syngas

In modern gasification where syngas composition is paramount for determining the calorific value, the a1-cbiss SMS provides an accurate, cost-effective solution to monitoring all major constituents of the gasification process

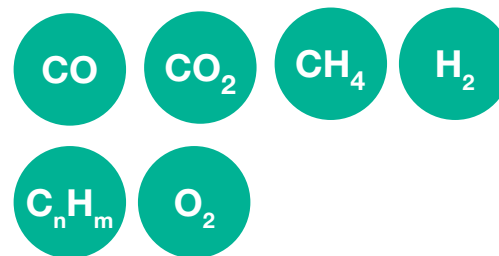
#### Highly Durable to Harsh Process Conditions

The SMS is well equipped to work in environments where there are high levels of particulates and tar present. Sample preparation and conditioning is a key element of the system, upon which substantially depends on the correctness of the consequent measurement, as well as the lifetime of the measurement sensors.

The a1-cbiss SMS utilises varying degrees of high temperature probes ranging from stainless steel through to kanthal.

“SMS provides an accurate, cost-effective solution to monitoring all major constituents of the gasification process”

#### Gases analysed



## KEY FEATURES

- Proprietary infrared dual beam NDIR detectors for CH<sub>4</sub>, C<sub>n</sub>H<sub>m</sub>, CO and CO<sub>2</sub>
- On-board Calculation and display of the BTU index (gas calorific value, only with syngas analysers)
- Keyboard interface for configuration and calibration
- Stainless steel connectors for gas inlet/outlet and zero air inlet ports
- RS232 serial COM port (for real time data download to external PC or laptop as text file, software included)

## Technical Specification

### PNEUMATIC SPECIFICATION

- Gas sampling pump: 2L/min @ -300 mbar
- Pressure reducer on gas sample/calibration inlets set @ +20 mbar

### TEMPERATURE & PRESSURE

- Relative humidity: 0 – 95 % non condensing
- Pressure: 800 – 1200 hPa
- Temperature: +5°C to + 45°C

### POWER

- Power supply: 220 VAC / 110 VAC
- System power supply: 220 VAC / 110 VAC

### PHYSICAL

- Dimensions: 1.200mm x 600mm x 600 mm (HxWxD)
- Weight: approx. 100 kg (with instrumentation)
- Metal plate thickness: 2 mm
- Glass thickness front door: 5 mm
- Ingress protection: IP54

Gas name	Measuring Principle	Range	Resolution	Accuracy	T90
Carbon Monoxide	NDIR	0-40%	0.01%	±2% FS	< 10 s
Carbon Dioxide	NDIR	0-30%	0.01%	±2% FS	< 10 s
Methane	NDIR	0-10%	0.01%	±2% FS	< 10 s
Hydrogen	Thermal Conductivity	0-50%	0.01%	±2% FS	< 10 s
Hydrocarbons (CnHm)	NDIR	0-10%	0.01%	±2% FS	< 10 s
Oxygen	Fuel Cell	0-25%	0.01%	±2% FS	< 15 s

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