



# Continuous Emissions Monitoring System CEMS II e

Gasmet CEMS II e is an extractive emission monitoring system, suitable for measuring pollutants continuously from hot, wet and corrosive gas streams in various industrial processes. It consists of an FTIR gas analyzer, industrial computer, and sampling system. As an option, the system can be equipped with Gasmet oxygen analyzer and/or total hydrocarbon analyzer (GFID). The system has a low need for maintenance and provides an excellent solution for even demanding industrial measurement conditions.

## System specifications

<b>General Parameters</b>	Measuring principle:	FTIR (Fourier Transform Infrared) spectroscopy	
	Performance:	Simultaneous analysis of up to 50 gas components	
	Operating temperature:	0...40 °C (0...45 °C with B-cabinet) non-condensing / certified for +5...40 °C	
	Storage temperature:	-20 - +60 °C	
	Response time, T <sub>90</sub> :	< 120 s with 20-meter heated line	
	Sample-wetted parts regulated temperature:	180 °C	
	Sample gas:	Non-condensing, particle free	
	Flow rate:	~ 4 l/min	
	Sample gas pressure:	Ambient	
	Installation place:	Dust free and clean ambient air, without external vibrations	
	Product compliance:	CE, UKCA	
	<b>Analyzer Cabinet</b>	Material:	Bake painted steel
		Dimensions (cm):	<b>Cabinet A</b> (H x W x D): 212 x 61 x 70 (A/C unit on the cabinet roof) <b>Cabinet B</b> (H x W x D): 210 x 61 x 80 (A/C unit at the back of the cabinet) Depth with A/C unit: 113 cm
		Weight:	~290 kg (A), ~330 kg (B)
Protection:		IP 54	
<b>Air conditioning</b>	Cooling capacity (A cabinet):	A35 °C / A35°C 1500 W A50 °C / A35°C 1100 W	
	Cooling capacity (B cabinet):	A35 °C / A35°C 1500 W A50 °C / A35°C 1230 W	
	Power consumption (A cabinet):	1050 W	
	Power consumption (B cabinet):	1125 W	
	Internal circulation:	500 m <sup>3</sup> /h	
	Protection:	Ext. circuit IP 34 / Int. circuit IP 54	
	<b>Instrument air</b>	<b>Instrument air inlet:</b>	6 mm tube
<b>Instrument air quality:</b>		Dry, oil and particle free	
<b>Consumption:</b>		1 l/min with continuous instrument purge, 15 l/min with safety flushing (error mode), 50 l/min with waste gas dilution (optional)	

**Electrical connections**

**Main power supply:** The main power supply system model is TN-S (3 x L, N + PE).

**Power consumption:** Depends on the length of the heated sample line. The full Gasmeter CEMS II e including sample probe and heated line (21 m) it is max. 7.5 kW while heating up

**Signal interface**

**Hardwired signals**

**Analog output:**  
Output range: 4 - 20 mA, isolated, active  
Channels: 16 freely programmable

**Analog input:**  
Input range: 4 - 20 mA, isolated, passive  
Channels: 8 freely programmable

**Digital output:**  
Output range: 24 VDC  
Channels: 15 freely programmable

**Digital input:**  
Control: By potential free contacts  
Channels: 16 freely programmable

**Alarm output:**  
Output range: Potentially free relay contact  
Channels: 4 fixed: System alarm, Service Request, Maintenance, Results Valid

More digital and analog signals available upon request.

**Bus Output**

Output format: Modbus RTU, Modbus TCP, ASCII (RS 232), DDE link

Modbus RTU can be converted into Profibus or RS422/485. Other fieldbus formats are available on request

**Industrial computer**

See *Gasmeter Industrial Computer Technical Datasheet*

**Gasmeter CX4000 FTIR Analyzer**

See *Gasmeter CX4000 Technical Datasheet*

**Oxygen Analyzer (Optional)**

See *Gasmeter Oxygen Analyzer Technical Datasheet*

**GFID Analyzer (Optional / Only in CEMS II ef version)**

The Gasmeter Flame Ionization Detector (GFID) is designed for continuous total hydrocarbon (THC) measurements. Gasmeter Continuous Emission Monitoring System CEMS II ef is equipped with GFID analyzer, offering a TÜV certified solution (QAL1) for measuring pollutants from hot, wet and corrosive gas streams.

For more information please see *Gasmeter GFID Analyzer Technical Datasheet*

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