v1.12

CX4000 FTIR Gas Analyzer

Multicomponent FTIR Gas Analyzer

Gasmet On-line Series includes industrial multicomponent gas analyzers for continuous monitoring applications. The Gasmet CX4000 incorporates a Fourier transform infrared spectrometer, a temperature-controlled sample cell, and signal processing electronics. The analyzer is fully equipped for fixed installations and it offers versatility and high performance for all industrial users.

The Gasmet CX4000 is designed for continuous emission monitoring (CEM). It is an ideal tool to analyze trace concentrations of pollutants in wet, corrosive gas mixtures. The sample cell can be heated up to 180 °C. Sample cell absorption path length is selected according to the application.

The Gasmet CX4000 allows simple calibration using only single component calibration gases. The user can easily configure the analyzer for a new set of compounds.

General parameters

Measuring principle:	Fourier transform infrared, FTIR
Performance:	Simultaneous analysis of up to 50 gas compounds
Response time, T_{90}:	Typically < 120 s, depending on the gas flow and measurement time
Operating temperature:	5 - 30°C, non-condensing air conditioning recommended
Storage temperature:	-20 - 60°C, non-condensing
Power supply:	100-115 or 230 V / 50 -60 Hz
Power consumption:	300 W max, continuous 150 W

Spectrometer

Resolution:	Recommended 8 cm^{-1} or 4 cm^{-1}
Scan frequency:	10 scans / s
Detector:	Peltier cooled MCT
Source:	SiC, 1550 K
Beamsplitter:	ZnSe
Window material:	ZnSe
Wave number range:	900 - 4 200 cm^{-1}

Sample cell

Structure:	Multi-pass, fixed path length 5.0 m
Standard material:	100 % rhodium coated aluminium
Mirrors:	Fixed, protected gold coating
Volume:	0.4 liters
Connectors:	Inlet Swagelok 6 mm Outlet Swagelok 8 mm
Gaskets:	Viton® O-rings
Temperature:	180 °C, maximum
Window material:	BaF_2

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Measuring parameters

Zero-point calibration:	24 hours, calibration with nitrogen (5.0 or higher N_2 recommended)
Zero-point drift:	< 2 % of measuring range per zero-point calibration interval
Sensitivity drift:	None
Linearity deviation:	< 2 % of measuring range
Temperature drifts:	< 2 % of measuring range per 10 K temperature change
Pressure influence:	1 % change of measuring value for 1 % sample pressure change. Ambient pressure changes measured and compensated

Electrical connectors

Digital interface:	9-pole D-connector for RS-232 Analyzer is connected to an external computer via RS-232C cable. The external computer controls Gasmet.
Power connection:	Standard plug CEE-22

Gas inlet and outlet conditions

Gas temperature:	Non-condensing, the sample gas temperature should be the same as the sample cell temperature
Flow rate:	120 - 600 liters per hour
Gas filtration:	Filtration of particulates (2 µm) required
Sample gas pressure:	Ambient
Sample pump:	External, not included

Electronics

A/D converter:	Dynamic range 95 dB
Signal processor:	32-bit floating point DSP 120 MFLOPS
Computer:	External, not included

Analysis software (for external PC)

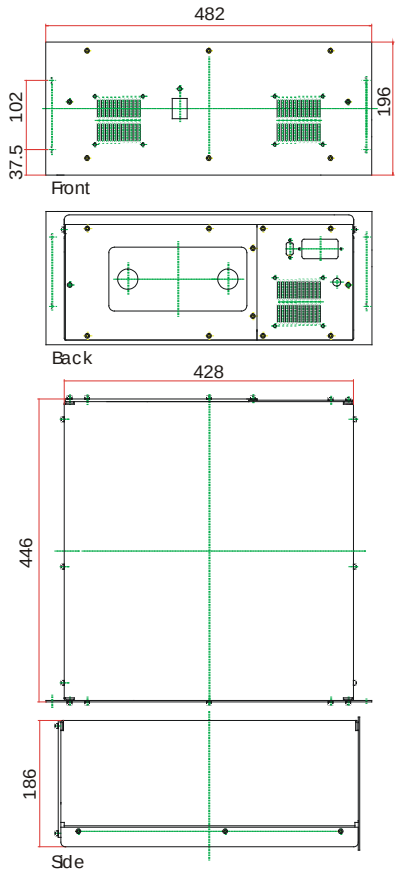
Operating system:	Windows 7 (32-bit)
Analysis software:	Calcmet for Windows

Options

Sample cell:	Multi-pass, fixed path length 2.5 m or 9.8 m
Pressure measurement:	Inside sample cell
External PC:	Gasmet PC for control and analysis with optional alarm relay boards and analog inputs or outputs
Sample cell gaskets:	Kalrez®

Enclosure

Sample cell material:	Aluminium
Dimensions (mm):	482 * 196 * 450
Weight:	17 kg
CE label:	According to EMI guideline 89/336/EC



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