

Multicomponent Portable FTIR Gas Analyzer

geotech

Gasmet™ DX4015 FTIR Gas Analyzer

The Gasmet DX4015 multicomponent gas analyzer is designed for on-site measurements of both organic and inorganic compounds at low concentrations in ambient air. With a sample cell that is heated to 50°C (122°F) the analyzer offers versatility and performance in a variety of applications and changing conditions.

The Gasmet DX4015 combines Fourier Transform Infrared Spectroscopy (FTIR) analysis technology, a temperature controlled sample cell, a built-in sample gas pump and signal processing electronics in a compact unit to provide reliable measurements with low detection limits and true multi-compound analysis capability.

FEATURES

- Sample cell is heated to 50°C, allowing measurements in conditions of high humidity and providing temperature stability in changing conditions
- Simultaneously measures up to 50 gas compounds
- High sensitivity sample cell for lowest possible detection limits
- Built-in pump eliminates need for separate sampling system
- No span calibration required, simply zero-calibrate to fresh air or nitrogen
- Catalog of over 300 compounds allows user to select and change analysis capability through a user-friendly interface
- Operated with Calcmeter software on an external laptop which provides an easy and flexible method for taking measurements and viewing results
- RS-232 data transfer
- AC power cable included
- Can be powered with a 12 VDC external battery



APPLICATIONS

- Industrial Hygiene
- Greenhouse Gases from Soil
- Greenhouse Gases from Ruminants
- First Responders and Hazmat

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205

(303) 320-4764 • **(800) 833-7958** • FAX (303) 322-7242

email: sales@geotechenv.com website: www.geotechenv.com

Multicomponent Portable FTIR Gas Analyzer

geotech

Gasmet™ DX4015 FTIR Gas Analyzer

SPECIFICATIONS

General Parameters

Measuring Principle:	Fourier transform infrared (FTIR)
Performance:	Simultaneous analysis of up to 50 gas compounds
Response Time, T90:	Typically <120s, depending on the gas flow and measurement time
Operating Temperature:	Short term 0 - 40°C long term 5 - 30°C non-condensing
Storage Temperature:	-20 - 60°C, non-condensing
Power Supply:	100-115 or 230 V/50-60 Hz 12 VDC
Power Consumption:	Average 150 W, maximum 300 W

Spectrometer

Resolution:	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 9.8 m
Material:	100% rhodium coated aluminum
Mirrors:	Fixed, protected gold coating
Volume:	0.4 liters
Connectors:	Inlets Swagelok 6 mm Outlet Swagelok 6 mm
Gaskets:	Viton® O-rings
Temperature:	50°C, maximum
Valve:	Manual Swagelok
Window Material:	Ar coated ZnSe

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 & Outlet Conditions

Gas Temperature:	Non-condensing, the sample gas temperature should be the same as the sample cell temperature.
Flow Rate:	~2 liters per minute
Gas Filtration:	Filtration of particulates (2µ) required
Sample Gas Pressure:	Ambient
Sample Pump:	Internal, for ambient air only

Electronics

A/D Converter:	Dynamic range 95dB
Signal Processor:	32-bit floating point DSP 120 MFLOPS speed
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 2.5 m or 5.0 m
Pressure Measurement:	Inside sample cell
Analog Signals (ext PC):	ADAM 5000/TCP module (for analog inputs, outputs, relays)
Sample Cell Gaskets:	Kalrez®
Power Connection:	12 VDC
Power Supply Cables:	12 V cables with battery clips or cigarette lighter connector
Trolley:	Wheeled cart for the analyzer and laptop computer

Enclosure

Material:	Aluminum
Dimensions (mm):	438 * 164 * 445
Weight:	14.9 kg (32.8 lbs.)
CE Label:	According to EMI guideline 89/336/EC

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205
(303) 320-4764 • **(800) 833-7958** • FAX (303) 322-7242
email: sales@geotechenv.com website: www.geotechenv.com