

Model 2030 LV 1065-Ready

MultiGas™ FTIR Gas Analyzer

5 Hz Engine and Vehicle Emissions Measurement and Certification Analyzer with Low Volume Cell



The MultiGas™ 2030 LV 1065-Ready FTIR Analyzer is designed for fast response time with low flow rate, while retaining very low detection limits and wide analytical ranges. It uses a very low volume gas cell and accommodates flow rates from 0.2 to 25 LPM. When combined with the MKS Engine and Vehicle Application Package, it is designed to meet Euro VI/Euro 6 and EPA 40 CFR part 1065/1066 requirements for exhaust emission compliance certification testing.

The MKS MultiGas 2030 family of analyzers is the worldwide choice for R&D development and certification test labs for light duty (LD) and heavy duty (HD) vehicle and engines as well as catalyst manufacturers. Different fuel source exhaust emissions are supported for raw exhaust measurements and anywhere along the exhaust train.

Product Features

- Designed to meet the Euro VI/Euro 6 and EPA 40 CFR part 1065/1066 requirements
- Low volume (70 mL), long path (5.11m) gas cell produces fast response time without compromising detection limits
- Wide flow range - 0.2 LPM up to 25 LPM
- Stainless steel gas cell design with 3/8" welded inlet/outlet lines, corrosion resistant Dursan™ coating for lowest residence time for "sticky" gases and optimized high-temperature resistant insulation
- Single analyzer measures over 30 component emissions spanning a large dynamic range – ready for future emissions components
- Uses same Engine and Vehicle Application Package as MKS standard MultiGas 2030 analyzer with 200cc cell
- Connectivity through AK Protocol, OPC, Modbus, analog or digital I/Os, and HTML available



Key Benefits

- High resolution (0.5 cm^{-1}) FTIR reduces interferences due to water and CO_2 , providing unbiased, accurate readings
- 5 Hz data acquisition and analysis provides fast transient monitoring
- Rugged analyzer ideal for use in engine or vehicle test labs

Specifications

Analyzer

Measurement Technique	FTIR Spectrometry
Gases and Vapors Measurable	Most molecules except for Ar, He, N ₂ , H ₂ , and O ₂
Analytical Ranges	Dependent upon gas, from ppm to %. Refer to the Engine and Vehicle Application Package.
1065-Ready Calibrations	Instrument independent calibrations fulfill the 1065 requirements for a large number of gases
Factory Calibration	≤2% of Reference Value
Accuracy	≤2% of Reference Value
Repeatability	≤1% of Reference Value
Noise	≤1% of Analytical Range
Drift	≤2% of Analytical Range
Measurement Acquisition Rate	5 scans/sec (5 Hz)
Measurement Time	0.2 sec or longer
Flow Rate	0.2 - 25 LPM
Laser Safety	Class 1 laser product contains a Class 3R laser with continuous wave output at 633 nm
Compliance	CE

Sampling Parameters

Sample Temperature	191°C, 113°C
Sample Flow	3 - 25 L/min
Sample Pressure	0.95 - 1.05 atm (lower pressure also possible)
Analyzer Response Time (t ₁₀ -t ₉₀)	Dependent upon flow rate, < 0.8 sec at 5 LPM, ~ 0.2 sec at 25 LPM

Gas Cell

Pathlength and Volume	5.11 m, 70 cc
Construction	316 stainless steel, Dursan coating
Fittings	3/8" Swagelok compression fittings
Tubing	Heated 3/8" stainless steel
Mirrors	Nickel plated aluminum substrate, with rugged gold coating
Windows	ZnSe
O-rings	Kalrez®

FTIR

FTIR Spectrometer	2102 process spectrometer, with spectral resolution 0.5 cm ⁻¹
Infrared Source	Silicon Carbide
Reference Laser	Helium Neon
Detector	LN ₂ -cooled MCT, 500-5000 cm ⁻¹
Purge Pressure	20 psig (1.5 bar) max.
Spectrometer and Optics Purge Flow	0.4 LPM of dry nitrogen or CO ₂ free clean dry air with dew point below -70°C
Pressure Transducer	MKS Baratron® manometer (0 - 1000 Torr, i.e. 0 - 1.32 atm)
Purge Connection	Swagelok® quick connect
Sample Gas Inlet/Outlet Connection	Swagelok 3/8" threaded
Computer (Optional)	High speed Xeon® processor
Communications	RJ-45 cross-over Ethernet
Output Options	AK, Modbus, OPC, XML, analog or digital I/Os, HTML
Dimensions	17.5"W x 12.5"H x 25.5"D
Installation	19" rack mount chassis
Power	120 or 240 VAC, 50/60 Hz, 3 amps
Weight	110 lbs. (50 kg)

Ordering Information

Please contact your local MKS office for price and availability information.