

Model 2030 10 Hz MultiGas™ FTIR Gas Analyzer



The Model 2030 10 Hz MultiGas™ FTIR Gas Analyzer's fast response time with low flow rate, very low detection limits, and wide analytical range make it the ideal choice for vehicle emissions monitoring systems. Leveraging MKS' industry proven 2030 FTIR platform, this model operates at 10 Hz and 0.5cm^{-1} resolution, providing exceptional detail of fast transient emissions.

The gas sample is introduced hot and wet, directly into the MultiGas™ Analyzer, with no need for chillers. The stainless-steel design, with a corrosion resistant

Dursan™ coating, provides the lowest residence time for "sticky" gases. The analyzer includes a liquid N_2 -cooled broadband detector, capable of measuring a minimum of 20 gas components, and is available with gas cells of 200 cc (1065 Ready model) or 70 cc (1065 Ready LV model) for fast gas turnover. The 10 Hz model supports light duty (LD) and heavy duty (HD) vehicles and engines as well as catalyst manufacturers. Its rugged design makes it an ideal choice for engine or vehicle test labs, test cell, and on-board, portable emissions monitoring.

Product Features

- Stainless steel gas cell with corrosion resistant Dursan™ coating and 3/8" welded inlet/outlet
- 70 cc or 200 cc gas cell volume for fast turnover
- Connectivity through AK Protocol or Modbus
- Compatible with all MKS Engines and Vehicles recipe packages



Key Benefits

- High spectral resolution reduces interferences from water and CO_2 , providing unbiased, accurate readings
- 10 Hz sampling rate for flows from 0.5 LPM up to 100 LPM provides fast transient monitoring
- Measures 20+ gas components simultaneously, reducing the need for separate bench analyzers

Specifications

| Analyzer | 1065-Ready 10 Hz (200 cc cell) | 1065-Ready LV 10 Hz (70 cc cell) |
|---|--|----------------------------------|
| 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 Engine and Vehicle Application Package. | |
| Sampling Acquisition Rate | 10 Hz | |
| Resolution | 0.5cm ⁻¹ | |
| 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 dewpoints below -70°C | |
| Pressure Transducer | MKS Baratron® (0-1000 Torr) | |
| Purge Connection | Swagelok® quick connect | |
| Sample Gas Inlet/Outlet Connection | Swagelok 3/8" male connector | |
| Minimum 10 Hz Computer Specifications Operating System CPU RAM Hard Drive Display Communications | <ul style="list-style-type: none"> • Windows 10/11 (64 bit versions) <ul style="list-style-type: none"> • Intel Core i5, 5GHz • 8GB RAM • 40GB of free hard disk space • 1920x1080, 32 bit color. At least 1080 vertical. • One Ethernet RJ-45 communication port (integrated Ethernet port recommended for better reliability) | |
| Communications | RJ-45 cross-over Ethernet | |
| Output Options | AK, Modbus | |
| Dimensions | 17.5"W x 12.5"H x 25.5"D | |
| Installation | 19" rack mount chassis | |
| Power | 120 VAC/3 Amps or 240 VAC/1.5 Amps | |
| Weight | 110 lbs. (50 kg) | |
| Laser Safety | Class 1 laser product contains a Class 3R laser with continuous wave output at 633 nm | |

| Sampling Parameters | 1065-Ready 10 Hz (200 cc cell) | 1065-Ready LV 10 Hz (70 cc cell) |
|-----------------------|--|--|
| Sample Temperature | 191°C or 113°C | |
| Sample Flow | 0.5 - 100 L/min | 0.2 to 25 L/min |
| Sample Pressure | up to 1.3 atm (calibration pressure dependent); 0.95 - 1.05 atm (recommended) | |
| Gas Cell | | |
| Pathlength and Volume | 5.11m, 200 cc | 5.11m, 70 cc |
| Construction | 316 stainless steel, Dursan coating | |
| Fittings | 3/8" Swagelok male connector | |
| Tubing | Heated 3/8" stainless steel | |
| Mirrors | Nickel plated aluminum substrate, with rugged gold coating with MgF ₂ coating | Nickel plated aluminum substrate, with rugged gold coating |
| Windows | ZnSe (other window material available) | |
| O-rings | Kalrez® (others available) | |

Ordering Information

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