Process Insights
Premium Insights Into Process

TigerOptics

HIGH-PERFORMANCE GAS ANALYZERS

PRODUCT DATASHEET

Spark CH_4, CO, C_2H_2 Spark+ CO

Trace Level Analyzers for non-H_2O Contaminants

Compact, affordable and powerful, the Spark family for non-H_2O contaminants brings you:

- Part-per-billion (ppb) level sensitivity for CO, CH_4 and C_2H_2
- Wide measurement range
- Drift-free performance & immunity to vibration
- No spectral interference
- Standalone or rack-mountable
- Lowest cost of ownership & simple operation
- Serani™ interface software for remote analyzer control & data analysis
- Spark+ version with lower LDL available for CO
- NOW INCLUDED: **Speed+ performance upgrade** – intelligent dynamic data processing boosts analyzer's speed of response while maintaining low noise performance

Simple, Drift-Free Contaminant Detection Beyond Moisture

With the Spark analyzer family, powerful advanced spectroscopy is available at a popular price for a host of applications, from process control and quality assurance in Air Separation Plants to refineries and hydrogen plants. Other applications include monitoring of cylinder filling, bulk delivery and distribution transfer points, as well as welding, medical, industrial and high-purity gas production, and more. Part-per-billion level sensitivity and high-ppm ranges make the Spark an ideal trace gas detection solution for these industrial gas applications.

Say goodbye to cumbersome, complex, costly and labor-intensive mid-20th century technology. Gone is the need for calibration, spare parts, limited measurement ranges, and worries about drift and downtime usually associated with NDIRs and GCs. And without the need for H_2 fuel gas and with plug-and-play installation within minutes, the Spark is a faster and safer alternative to FIDs. In addition, the Spark has the lowest cost of ownership in the industry.

The Spark CH_4, CO and C_2H_2 perfectly complement our popular Spark H_2O trace moisture analyzer and our Spark Max CO_2 trace carbon dioxide analyzer to utilize powerful, drift-free and hassle-free Cavity Ring-Down Spectroscopy technology for all your critical contaminants. Choose the Spark+ CO when lower detection limit for carbon monoxide is required.

Performance

Operating range:	See tables on next page
Detection limit (LDL, 3σ/24h):	See tables on next page
Precision (1σ, greater of):	± 0.75% or 1/3 of LDL
Accuracy (greater of):	± 4% or LDL
Speed of response:	< 1 minute to 90%
Environmental conditions:	10°C to 40°C 30% to 80% RH (non-condensing)
Storage temperature:	–10°C to 50°C

Gas Handling System and Conditions

Wetted materials:	316L stainless steel, 10 Ra surface finish
Gas connections:	1/4" male VCR inlet and outlet
Inlet pressure:	10 – 125 psig (1.7 – 9.6 bara)
Flow rate:	~0.7 slpm (in N_2), gas-dependent
Sample gases:	Most inert and passive matrices
Gas temperature:	Up to 60°C

Dimensions & Weight

Standard sensor:	H × W × D 8.73 × 8.57 × 23.6 in (222 × 218 × 599 mm)
Sensor rack (fits up to two sensors)**:**	H × W × D 8.73 × 19.0 × 23.6 in (222 × 483 × 599 mm)
Standard sensor weight:	32 lbs (14.5 kg)

Electrical and Interfaces

Platform	Max Series analyzer
Alarm indicators:	2 user programmable, 1 system fault, Form C relays
Power requirements:	90 – 240 VAC, 50/60 Hz
Power consumption:	40 Watts max.
Signal output:	Isolated 4–20 mA per sensor
User interfaces:	5.7" LCD touchscreen. 10/100 Base-T Ethernet. USB, RS-232, RS-485. Modbus TCP (optional)
Data storage:	Internal or external flash drive
Certification:	CE Mark

Spark CH_4

Performance, CH_2	Range	LDL (3σ)	Precision (1σ) @ zero
In Nitrogen:	0 – 80 ppm	7.5 ppb	2.5 ppb
In Oxygen:	0 – 50 ppm	6 ppb	2.0 ppb
In Clean Dry Air (CDA):	0 – 80 ppm	7.5 ppb	2.5 ppb
In Argon:	0 – 70 ppm	6.5 ppb	2.2 ppb
In Helium:	0 – 50 ppm	6 ppb	2.0 ppb
In Hydrogen:	0 – 80 ppm	7.5 ppb	2.5 ppb

Spark CO

Performance, CO	Range	LDL (3σ)	Precision (1σ) @ zero
In Nitrogen:	0 – 2000 ppm	200 ppb	70 ppb
In Oxygen:	0 – 1800 ppm	180 ppb	60 ppb
In Clean Dry Air (CDA):	0 – 2000 ppm	200 ppb	70 ppb
In Argon:	0 – 1600 ppm	160 ppb	55 ppb
In Helium:	0 – 1800 ppm	180 ppb	60 ppb
In Hydrogen:	0 – 2500 ppm	250 ppb	85 ppb

Spark+ CO

Performance, CO	Range	LDL (3σ)	Precision (1σ) @ zero
In Nitrogen:	0 – 2000 ppm	120 ppb	40 ppb
In Oxygen:	0 – 1800 ppm	110 ppb	40 ppb
In Clean Dry Air (CDA):	0 – 2000 ppm	120 ppb	40 ppb
In Argon:	0 – 1600 ppm	100 ppb	35 ppb
In Helium:	0 – 1800 ppm	110 ppb	40 ppb
In Hydrogen:	0 – 2500 ppm	150 ppb	50 ppb

Spark C_2H_2

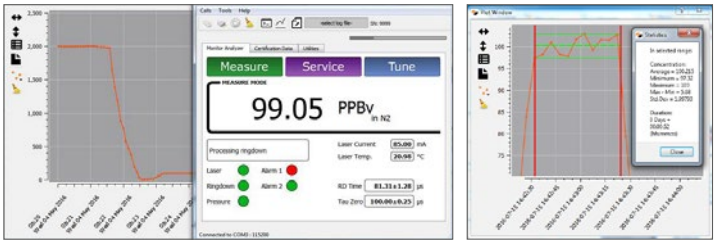
Performance, C_2H_2	Range	LDL (3σ)	Precision (1σ) @ zero
In Nitrogen:	0 – 80 ppm	8 ppb	3 ppb
In Oxygen:	0 – 70 ppm	7 ppb	2.5 ppb
In Clean Dry Air (CDA):	0 – 80 ppm	8 ppb	3 ppb

Analyzer Upgrades

Add more value your Spark analyzer with these powerful options:

Serani™ Max Analyzer Interface Software

- Connect to your analyzer remotely from your computer via Ethernet or RS-232 (Windows XP or higher required)
- Data recording, plotting and analysis in real-time with the click of a button
- One-step data collection and other service function shortcuts



Annual Performance Verification

- Low-cost and easy remote verification process, with no need to return the analyzer to the factory
- Annual verification by Tiger Optics ensures that your analyzer continues to meet its original specifications
- Up-to-date Verification Certificate to comply with your QA/QC standards

Tiger Optics
High-Performance Gas Analyzers

Verification Certificate

Customer: The Trusted Gas Company
Item: HALO 3
Serial Number: 3252-0-24
Date Tested: 4 February 2019

This certifies that Tiger Optics

Installation & Commissioning Package

- On-site analyzer installation and start-up by Tiger Optics trained personnel
- Ensuring correct installation helps prevent future issues with the analyzer or your sampling system
- Gain peace of mind and save money in the long run

Process Insights
Premium Insights Into Process

Tigeroptics

HIGH-PERFORMANCE GAS ANALYZERS

PREMIUM INSIGHTS – GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights' products and solutions deliver innovative and differentiated analysis and measurement solutions and technologies that add high value to our customers and protect the environment.

Our commitment is to deliver smart and affordable innovation that optimizes process, improves safety, and transforms our world.

Equipamientos Analíticos S.A

DESDE 1989 | BRINDANDO SOLUCIONES

OUR PREMIUM GLOBAL BRANDS

ALPHA OMEGA INSTRUMENTS

ATOM INSTRUMENT

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MBW calibration

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