



# Spark Max CO<sub>2</sub>

## Trace Level Carbon Dioxide Analyzer

GASES & CHEMICALS

CEMS

ENERGY

SEMI & HB LED

ATMOSPHERIC

LAB & LIFE SCIENCE

### Compact, affordable and powerful, the Spark Max CO<sub>2</sub> brings you:

- Sub-100-ppb detection capability for carbon dioxide (CO<sub>2</sub>) in inert gases and hydrogen
- Wide measurement range
- Drift-free performance & immunity to vibration
- No spectral interferences
- Standalone or rack-mountable
- Lowest Cost of Ownership
- Available Serani™ Max interface software for remote analyzer control & data analysis

### Simple, Drift-Free CO<sub>2</sub> Contaminant Detection Ideal for Air Separation Plants

With the Spark Max CO<sub>2</sub>, the latest generation of Cavity Ring-Down Spectroscopy (CRDS) instrumentation is now available at a popular price for a host of applications, from process control and quality assurance in Air Separation Units to refineries and hydrogen plants. Other applications include monitoring of cylinder filling, bulk delivery and distribution transfer points, fuel-cell hydrogen analysis, as well as welding, medical, industrial and high-purity gas production, and more. Sensitivity below 100 parts per billion and high-ppm ranges make the Spark Max 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. In addition, the Spark Max has the lowest Cost of Ownership in the industry with fully automatic operation and virtually no maintenance.

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## Trace Level Carbon Dioxide Analyzer



Performance		Dimensions	H x W x D [in (mm)]
Operating range	See tables below	Standard sensor	8.73 x 8.57 x 23.6 (222 x 218 x 599)
Detection limit (LDL, 3σ/24h)	See tables below	Sensor rack	8.73 x 19.0 x 23.6 (222 x 483 x 599)
Precision (1σ, greater of)	± 0.75% or 1/3 of LDL	(fits up to two sensors)	
Accuracy (greater of)	± 4% or the LDL	Weight	
Speed of response	< 1 minute to 90%	Standard sensor	32 lbs (14.5 kg)
Environmental conditions	10°C to 40°C 30% to 80% RH (non-condensing)	Electrical and Interfaces	
Storage temperature	-10°C to 50°C	Platform	Max series analyzer
Gas Handling System and Conditions		Alarm indicators	2 user programmable 1 system fault
Wetted materials	316L stainless steel 10 Ra surface finish		Form C relays
Gas connections	1/4" male VCR inlet and outlet	Power requirements	90 – 240 VAC, 50/60 Hz
Inlet pressure	10 – 125 psig (1.7 – 9.6 bara)	Power consumption	40 Watts max.
Flow rate	~0.7 slpm (in N <sub>2</sub> ), gas-dependent	Signal output	Isolated 4–20 mA per sensor
Sample gases	Most inert and passive matrices	User interfaces	5.7" LCD touchscreen 10/100 Base-T Ethernet USB, RS-232, RS-485 Modbus TCP (optional)
Gas temperature	Up to 60°C	Data storage	Internal or external flash drive
		Certification	CE Mark

Performance, CO <sub>2</sub> :	Range	LDL (3σ)	Precision (1σ) @ zero
In Nitrogen	0 – 500 ppm	50 ppb	20 ppb
In Hydrogen	0 – 800 ppm	80 ppb	30 ppb
In Clean Dry Air (CDA)	0 – 400 ppm	40 ppb	15 ppb

Contact us for additional analytes and matrices.  
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