Spark H_2O: Trace Level Moisture Analyzer
At last, measurements made easy!

GASES & CHEMICALS | CEMS | ENERGY | ATMOSPHERIC | SEMI & HB LED | SYNGAS | LABORATORY

For the first time, powerful advanced spectroscopy is available at a popular price for a host of applications, from quality assurance to cylinder filling, as well as welding, medical, industrial and high-purity gas production; bulk delivery and distribution transfer points; and more. Say goodbye to cumbersome, complex, costly and labor-intensive 20th century technology. Gone is the need for calibration, spare parts, cramped ranges, and worries about drift and downtime. The speed alone will make you gasp. Plus, it's a joy to start up and to operate.

The new, affordable Spark H_2O offers:

- Powerful, proven Cavity Ring-Down Spectroscopy (CRDS) technology
- Self-tuning and auto-calibration
- Extremely low Cost of Ownership
- Ethernet, 4-20 mA and RS-232 connectivity
- Fast response, with low gas consumption
- H_2O analysis over a vast range: 15 ppb to 2000 ppm!

The original maker of CRDS analyzers, Tiger Optics has been serving users worldwide for over a dozen years. We are in HyCO plants, with our Class I, Div 2 rated CO-rekt analyzer; in nuclear plants, where we are Safety Integrity Level One (SIL 1) approved; and we are widely used in semiconductor fabs for bulk and specialty monitoring, in addition to toolmounted process control and QA/QC of purifiers and gas delivery systems. We are the designated standard under SEMI F-112-0613 for determining moisture dry-down characteristics of such systems. Tiger Optics was used by NIST to name the new hydrogen chloride protocol for continuous emissions monitoring, and we now measure HCl in stack gas at coal-fired utilities.

Put a little Spark in your life!

Tiger Optics | 21ST CENTURY SPECTROSCOPY

Spark H_2O
Trace Level Moisture Analyzer

Performance	
Operating range	See table below
Detection limit (LDL,	See table below
24 h peak-to-peak variation)	
Sensitivity (3σ)	See table below
Precision (1σ, greater of)	± 0.75% or 1/3 of Sensitivity
Accuracy (greater of)	± 4% or the LDL
Speed of response	< 3 minutes to 90%
Environmental conditions	10°C – 40°C
	30% – 80% RH (non-condensing)
Storage temperature	-10°C – 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	~1.4 slpm
Sample gases	Most inert, toxic, and
	passive matrices
Gas temperature	Up to 60°C

Dimensions	H x W x D [in (mm)]
Standard sensor	8.75 x 8.5 x 23.6 (222 x 216 x 599)
Sensor rack	8.75 x 19 x 23.6 (222 x 483 x 599)
(fits up to two sensors)	
Weight	
Standard sensor	32 lbs (14.5 kg)

Electrical	
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
	802.11g Wireless (optional)
	RS-232

Performance, H_2O:	Range	LDL	Sensitivity
In Nitrogen	0 – 2000 ppm	15 ppb	12 ppb
In Oxygen	0 – 1000 ppm	7 ppb	6 ppb
In Argon	0 – 900 ppm	6 ppb	4.5 ppb
In Helium	0 – 450 ppm	4 ppb	3 ppb
In Hydrogen	0 – 1750 ppm	10 ppb	7.5 ppb
In Dry Air (CDA)	0 – 1800 ppm	14 ppb	10 ppb
In Neon	0 – 450 ppm	40 ppb	30 ppb
In Krypton	0 – 1100 ppm	7 ppb	5.5 ppb
In Xenon	0 – 1300 ppm	10 ppb	7.5 ppb

Contact us for additional analytes and matrices.
U.S. Patent # 7,277,177

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12/2015