



HALO 3 H₂O 500

High Range Moisture Analyzer

GASES & CHEMICALS

CEMS

ENERGY

ATMOSPHERIC

SEMI & HB LED

SYNGAS

LABORATORY

Designed for high range moisture analysis, the HALO 3 H₂O 500 offers:

- Low part per billion (ppb) detection limits
- Wide dynamic range to hundreds of part per million (ppm) levels
- Absolute measurement (freedom from calibration gases)
- Low cost of ownership and operational simplicity
- Compact analyzer footprint
- Instant notification with user-adjustable alarms and relays

The HALO 3 H₂O 500 moisture analyzer provides users seeking a higher detection range with the unmatched accuracy, reliability, speed of response and ease of operation that users of Tiger Optics analyzers have come to expect. HALO 3 moisture analyzers feature Tiger Optics' Cavity Ring-Down Spectroscopy-based moisture sensor in a very compact and economic analyzer design. This versatile analyzer allows users to measure high moisture levels in most inert, corrosive and toxic gases with just one device. Users also

enjoy freedom from requirements such as periodic sensor maintenance, span calibrations, purifier replacement and pump rebuilds. As a result, the HALO 3 is ideally suited to many applications where moisture measurement is extremely critical. These applications include fixed bulk gas continuous quality control, portable mobile analytical carts, processtool monitoring, air separation, gas cylinder quality control and many other demanding applications.

Tigeroptics

21ST CENTURY SPECTROSCOPY

HALO 3 H₂O 500

High Range Moisture Analyzer



Performance	
Operating range	See table below
Detection limit (LDL, 24 h peak-to-peak variation)	See table below
Sensitivity (3σ)	See table below
Precision (1σ, greater of)	± 0.75% or 1/3 of Sensitivity
Accuracy (greater of)	± 4% or 1/2 of LDL
Speed of response	< 1 minute 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 (optional Hastelloy®) 10 Ra surface finish
Gas connections	1/4" male VCR inlet and outlet
Leak tested to	1 x 10 ⁻⁹ mbar l / sec
Inlet pressure	10 – 125 psig (1.7 – 9.6 bara)
Flow rate	Up to 1.8 slpm
Sample gases	Most inert, toxic, passive and corrosive matrices
Gas temperature	Up to 60°C

Performance: H ₂ O	Range	LDL	Sensitivity
In Nitrogen	0 – 500 ppm	10 ppb	8 ppb
In Helium	0 – 125 ppm	5 ppb	4 ppb
In Argon	0 – 200 ppm	8 ppb	6 ppb
In Hydrogen	0 – 400 ppm	8 ppb	6 ppb
In Oxygen	0 – 250 ppm	10 ppb	8 ppb

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

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 (fits up to 2 sensors)	8.75 x 19 x 23.6 (222 x 483 x 599)
Weight	
Standard sensor	28 lbs (12.7 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

Tiger Optics, LLC
250 Titus Avenue, Warrington, PA 18976
Phone: +1 (215) 343 6600 • Fax: +1 (215) 343 4194
sales@tigeroptics.com • www.tigeroptics.com