

HALO-H₂O-RP

Trace Moisture Analyzer for High Purity Gases

The HALO-H₂O-RP moisture analyzer provides users with the unmatched accuracy, reliability, speed of response and ease of operation that users of Tiger Optics analyzers have come to expect. The HALO moisture analyzer features Tiger Optics' patented Cavity Ring-Down Spectroscopy-based moisture sensor in a very compact and economic analyzer design. This versatile analyzer allows users to measure moisture in most inert, corrosive and toxic gases with just one analyzer. Users also enjoy freedom from requirements such as periodic sensor maintenance, span calibrations, purifier replacement and pump rebuilds. The HALO-H₂O-RP differs from the HALO-H₂O in that it features an absolute pressure controller upstream of the sensor, allowing operation in applications where sample pressures range from 50torr – 15psig. These applications include, among others, monitoring gases from semiconductor wafer handling chambers and process chamber exhausts.



PERFORMANCE*

Lowest Detection Limit**:	2 ppb
Sensitivity:	1 ppb
Accuracy (greater of):	4% of reading or ± 1ppb
Speed of Response (typical):	95% Response < 3 minutes
Operating Range:	0-20 ppm
Environmental Conditions:	10°C-40°C
Storage Temperature:	-10°C-50°C

* Nitrogen background gas

** Based on 24-hour peak-to-peak variation

MATERIALS OF CONSTRUCTION

Materials of Construction:	316L stainless steel (optional Hastelloy®)
Wetted Components:	10 Ra surface finish
Gas Connection:	1/4" M VCR Inlet & Outlet
Leak Tested to:	< 2 X 10 ⁻⁸ mbar • l/sec

ELECTRICAL

Alarm Indicators:	User programmable set points
Power Requirements:	90-240 VAC, 50/60 Hz
Power Consumption:	40 Watts max.
Output Signals:	
• Recorder	Isolated 4-20 / 0-5VDC
• Alarm	Form-C relay
Communications:	RS-232, Wireless (Optional)
User Interface:	5.6" LCD touch screen, 10/100BaseT Ethernet, RS-232

DIMENSIONS

Mounting (H x W x D):	8.75" x 8.5" x 22.5" (22.2cm x 21.6 x 57.2)
Weight:	33 pounds (15 kg)

GAS SAMPLE CONDITIONS***

Sample Inlet Pressure:	50 torr – 15 psig
Flow Rate:	up to 1,000 sccm
Sample Gases:	Most inert, passive, toxic and corrosive gases
Sample Line Temperature:	Up to 60°C
*** Vacuum pump required	

TECHNOLOGY

Approvals:	CE: LVD & EMC
Method:	Cavity Ring-Down Spectroscopy
Patents:	U.S. Patent # 5,528,040 Other Patents Pending