

HALO-H₂O-LP

Trace Moisture Analyzer for Hydride Gases

The HALO-H₂O-LP 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. The LP (low pressure) version of this analyzer allows users to measure moisture in hydride gases, such as ammonia, arsine, and phosphine, plus inerts. Users enjoy freedom from requirements such as periodic sensor maintenance, span calibrations, purifier replacement and pump rebuilds. The HALO-H₂O-LP differs from the HALO-H₂O in that it incorporates an absolute pressure controller to provide the precise control needed for accurate measurements in hydride gases.



PERFORMANCE

Lowest Detection Limit*:	12 ppb
Sensitivity*:	6 ppb
Accuracy (greater of)*:	4% of reading or ± 6ppb
Speed of Response (typical)*:	95% Response < 3 minutes
Operating Range:	0-12 ppm
Environmental Conditions:	10°C-40°C
Storage Temperature:	-10°C-50°C

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)

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

GAS SAMPLE CONDITIONS

Sample Inlet Pressure:	Opsig - 125psig
Flow Rate:	up to 1,000 sccm
Sample Gases:	Ammonia, Phosphine & Inerts
Sample Line Temperature:	Up to 60°C

ELECTRICAL

Alarm Indicators:	User programmable set points
Power Requirements:	90-240 VAC, 50/60 Hz
Power Consumption:	200 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, 10BaseT Ethernet, RS-232/422

TECHNOLOGY

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