



HALO LP N₂O

Trace Level Nitrous Oxide Analyzer

GASES & CHEMICALS

CEMS

ENERGY

ATMOSPHERIC

SEMI & HB LED

SYNGAS

LAB & LIFE SCIENCE

Designed for trace level nitrous oxide analysis, the HALO LP N₂O offers:

- Sub-parts-per-million (ppm) N₂O detection capability
- Absolute measurement (freedom from calibration gases)
- Wide dynamic range—over four orders of magnitude
- Low cost of ownership and operational simplicity
- Clean technology—no external calibration gases required
- Compact analyzer footprint
- User-programmable alarms immediately notify on high events

Simple Trace N₂O Detection in Inert Gases

With the HALO LP N₂O, powerful advanced spectroscopy is available for a host of applications, from process control to quality and safety assurance in Air Separation Plants. Other applications include monitoring of cylinder filling, bulk delivery and distribution transfer points, as well as welding,

medical, industrial and high-purity gas production, and more. 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, FTIRs, or GCs.

Tigeroptics

21ST CENTURY SPECTROSCOPY

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Performance in Nitrogen	
Operating range	0 – 1000 ppm
Detection limit (LDL, 24 h peak-to-peak variation)	250 ppb
Sensitivity (3σ)	200 ppb
Precision (1σ, greater of)	± 1% or 1/3 of Sensitivity
Accuracy (greater of)	± 4% or 1/2 of LDL
Speed of response	< 3 minutes to 95%
Environmental conditions	10°C to 40°C 30% to 80% RH (non-condensing)
Storage temperature	-10°C to 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 1.0 slpm
Sample gases	Inert matrices
Gas temperature	Up to 60°C

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

Dimensions	H x W x D [in (mm)]
Standard sensor	8.73 x 8.57 x 23.6 (222 x 218 x 599)
Sensor rack (fits up to two sensors)	8.73 x 19.0 x 23.6 (222 x 483 x 599)

Weight	
Standard sensor	33 lbs (15.0 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 Modbus TCP (optional)

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