



TDL100-P

- Ammonia + moisture + Oxygen
- Single access port installation
- Interference free measurements
- In-situ & fast response



TDL100-P-NH3-O2 Tunable Diode Laser Gas Sensor

The **TDL100-P-NH3-O2** from TDL Sensors Ltd is a unique Ammonia, Moisture, and Oxygen Tunable Diode Laser Gas Sensor for Stack Monitoring.

TDL100-P



Tunable Diode Laser Gas Sensors offer:

- Measurements are free from interference by other gases
- In-situ, real-time measurements
- Very low maintenance
- Negligible drift

Features

- **TDL100-P-NH3-O2** is a single access port probe
- Laser module for Oxygen means an additional zirconia probe installation is not required.
- Measurements are free from interference by other gases
- In-situ measurement, no sampling lines
- Fast response
- Reliable, very low maintenance
- Operates under high dust loads

Applications

- CEMS
- Optimising combustion in Boilers, Furnaces, Kilns
- Steel Industry (Blast Furnace, Coke Ovens)
- Power Plants

Other Ordering Options

Ammonia + Moisture
Hydrogen Chloride + Moisture
Hydrogen Fluoride + Moisture
Hydrogen Chloride + Moisture + Oxygen
Hydrogen Fluoride + Moisture + Oxygen
Hydrogen Chloride + Hydrogen Fluoride + Moisture
Carbon Monoxide + Oxygen

Specifications

Measurement	
Optical pathlength	1m folded path
Detection limit* (NH ₃), (H ₂ O), (O ₂)	0.2ppm, 0.1%, 0.05%
Temperature (max)	500°C
Accuracy	2% of reading
Linearity	Better than 1%
Resolution	<0.2ppm
Span drift	< 4% of measuring range between maintenance intervals
Zero drift	Negligible (< 2% of measuring range between maintenance intervals)
Response time (T₉₀)	<2s (depending on application conditions)
Input/Output	
Analogue output	4–20mA current loop (optional - up to 4 max)
Digital output	RS232, RS485, modbus (optional), ethernet (optional)
Relay output	SPCO rated, 24VDC/280VAC 2A (optional) – maximum of 4
Analogue input	4–20mA process temperature and pressure reading (optional)
Display	Graphic back lit LCD
Power	
Power supply	85 - 254 VAC, 50/60 Hz @100VA or 24VDC (optional)
Maintenance	
Interval	Every 6–12 months is recommended
Remote maintenance	Engineer can check via (optional) GPRS modem or Ethernet (optional)
Certification	
Laser class	Class 1
Installation	
Flange size	ANSI 4" 150lbf
Purge gas	Instrument air (dry and oil free) or nitrogen (dry and oil free) or blower (dry and oil free)
Purge flow	10 – 100l/min (depends on application conditions)
Warm up time	Typically <15 minutes
Environmental	
Operating temperature	-20°C to +55°C
Storage temperature	-20°C to +55°C
Enclosure	IP67 rated
Dimensions	
Length	1.3m

* Defined for 1m pathlength at 296K and 1 bar. Limit depends on individual application.

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