



# TDL100-P-NH3

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



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

The **TDL100-P-NH3** from TDL Sensors Ltd is a Tunable Diode Laser Gas Sensor for Stack Monitoring.



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** is a single access port probe
- 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  
Ammonia + Moisture + Oxygen  
Hydrogen Chloride + Moisture + Oxygen  
Hydrogen Fluoride + Moisture + Oxygen  
Hydrogen Chloride + Hydrogen Fluoride + Moisture  
Carbon Monoxide + Oxygen

# Specifications

|   |   |
|---|---|
| <b>Measurement</b>                            |   |
| <b>Optical pathlength</b>                     | 1m folded path  |
| <b>Detection limit*</b><br>(NH <sub>3</sub> ) | 0.2ppm (2σ)   |
| <b>Temperature (max)</b>                      | 500°C   |
| <b>Accuracy</b>                               | 2% of reading   |
| <b>Linearity</b>                              | Better than 1%  |
| <b>Resolution</b>                             | <0.2ppm   |
| <b>Span drift</b>                             | < 4% of measuring range between maintenance intervals   |
| <b>Zero drift</b>                             | Negligible (< 2% of measuring range between maintenance intervals)                            |
| <b>Response time (T<sub>90</sub>)</b>         | <2s (depending on application conditions)   |
| <b>Input/Output</b>                           |   |
| <b>Analogue output</b>                        | 4–20mA current loop (optional - up to 4 max)  |
| <b>Digital output</b>                         | RS232, RS485, modbus (optional), ethernet (optional)  |
| <b>Relay output</b>                           | SPCO rated, 24VDC/280VAC 2A (optional) – maximum of 4   |
| <b>Analogue input</b>                         | 4–20mA process temperature and pressure reading (optional)                                    |
| <b>Display</b>                                | Graphic back lit LCD  |
| <b>Power</b>                                  |   |
| <b>Power supply</b>                           | 85 - 254 VAC, 50/60 Hz @100VA or 24VDC (optional)   |
| <b>Maintenance</b>                            |   |
| <b>Interval</b>                               | Every 6–12 months is recommended  |
| <b>Remote maintenance</b>                     | Engineer can check via (optional) GPRS modem or Ethernet (optional)                           |
| <b>Certification</b>                          |   |
| <b>Laser class</b>                            | Class 1   |
| <b>Installation</b>                           |   |
| <b>Flange size</b>                            | ANSI 4" 150lbf  |
| <b>Purge gas</b>                              | Instrument air (dry and oil free) or nitrogen (dry and oil free) or blower (dry and oil free) |
| <b>Purge flow</b>                             | 10 – 100l/min (depends on application conditions)   |
| <b>Warm up time</b>                           | Typically <15 minutes   |
| <b>Environmental</b>                          |   |
| <b>Operating temperature</b>                  | -20°C to +55°C  |
| <b>Storage temperature</b>                    | -20°C to +55°C  |
| <b>Enclosure</b>                              | IP67 rated  |
| <b>Dimensions</b>                             |   |
| <b>Length</b>                                 | 1.3m  |

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

## Contact Details:

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## Distributor: