



Trace Methane (CH₄) Monitor

- 1 ppbv level for 1 s averaging
- Cavity-enhanced technology
- ¹³CH₄/¹²CH₄ ratio measurement



Trace Methane Monitor

Methane Diode Laser Gas Sensor offers:

- In-situ, real-time absolute concentration measurements
- 1 ppbv sensitivity at 1 s averaging
- Very low maintenance
- Negligible drift

The methane (CH₄) laser diode based cavity-enhanced absorption sensor for ambient, airborne and vehicle-mounted measurements from TDL Sensors Ltd.

Features

- **1 ppb** limit of detection for 1 s averaging
- CH₄ direct cavity-enhanced absorption measurement
- Absolute measurements
- Low operating cost

Applications

- Air quality monitoring
- Ambient methane monitoring
- Carbon isotope measurements
- Research of CH₄ reactions with other species

Ordering Options

GPRS modem or Ethernet

Specifications

Measurement	
CH₄ detection limit*	1 ppbv at 1 s averaging
Accuracy	2% of reading
Linearity	Better than 1%
Resolution	< detection limit values
Response time (T₉₀)	<2s (depending on air flow rate and application conditions)
Optical cell volume	<90 cm ³ at cavity base length of 28.2 cm
Input/Output	
Analogue output	4–20mA current loop (optional)
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
Warm up time	Typically <10 minutes

*Defined for mirror reflectivity of 0.99982, separated by a distance of 28.2 cm, and typical observed experimental noise-equivalent cavity output absorption of $6.3 \times 10^{-5} \text{ Hz}^{-1/2}$.

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