TDL-500
PORTABLE LASER DIODE CH_4 ANALYSER







1ppm Sensitivity
ATEX Certified (Zone 1)
Leak Detection

Laser detection applied to methane detection

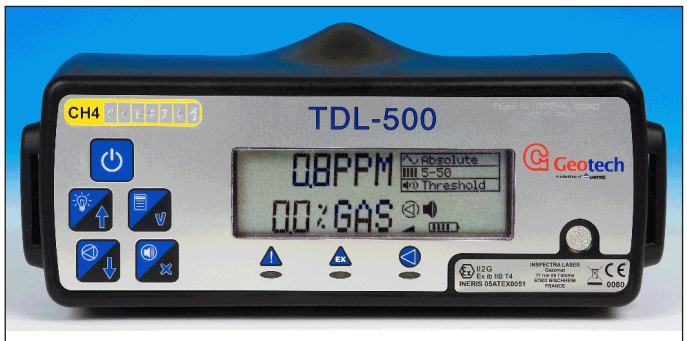
Using laser spectroscopy technology, the TDL-500 is a high performance methane detector offering total selectivity to methane and sensitivity of 1ppm. The instrument offers ATEX certification to Zone 1 and makes it possible to detect methane leaks and determine their location with precision.

Features

- Automatic self test at start up
- Wide backlit LCD screen
- Visual and audible alarm indicators
- Choice of measurement modes
- Total selectivity to methane
- 8 hours constant use at 20°C
- Supplied with carry case, sampling rod and filters
- GPS available to record leak position, set up routes, and record readings
- Stable and repeatable

Benefits

- Low maintenance - reduced total ownership cost
- High accuracy
- ATEX certified (Zone 1) - safe use in explosive atmosphere
- Multiple measurement modes - simultaneous display
- Fast response times - reduced monitoring
- No flame, no hydrogen cylinder, no shipping of cylinders, no cleaning of FIDs
- Identifies exact leak location, not line of sight



Applications

- Natural gas networks
- Landfill surface emissions
- Momentary leaks of methane

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TDL-500

With high selectivity and a high sensitivity to methane (ppm scale) the TDL-500 offers exceptional performance from a portable analyser and is a truly efficient tool for gas professionals

Technical Specifications

TDL-500		
POWER SUPPLY		
Battery Type	Either with rechargeable battery pack: 3 x 1.2 V - 4 A/h NiCd in accordance with ATEX directive OR with Alkaline type D batteries: 3 x 1.5 V alkaline cells in accordance with ATEX directive	
Battery Life	Typical use: - 8 hours at 20°C with all functions on (backlighting, pump on speed 2) - 6 hours at temperatures below 0°C with all functions on (backlighting, pump on speed 2) - 6 hours at temperatures above 35°C with all functions on (backlighting, pump on speed 2)	
Battery Charger	100 to 240 VAC/ 50-60 Hz battery charger for ATEX battery pack	
Charge Time	Approximately 14 hours from complete discharge	
GAS RANGES		
Response Time, T^{90}	CH4	4.5 seconds T10 standards: 2 seconds With suction rod T90: 6 seconds With suction rod T10: < 3.5 seconds
Gases Measured	CH4 by laser spectroscopy	
Range	CH4 - 0-10,000 ppm and 0 ppm to 100% gas volume	
Typical Accuracy	CH4 detection threshold - 1 ppm	
FACILITIES		
Alarms	They activate the visual (LED and LCD displays) and audio warnings Alarms include: Methane CH4 concentration threshold Explosion risk due to methane CH4 concentration Pump stopped or pump error	
Status Indicators	Include: Battery charge level Pump status (speed 1 or speed 2)	
Gas Connection	Quick connect inlet coupling with locking mechanism: suction rod on right side Quick connect gas outlet coupling	
Keypad	5 Direct control keys Advanced function control with protected access scrolling menu	

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Product designs and specifications are subject to change without notice. User is responsible for determining suitability of product.

TDL-500, cont'd.	
PUMP	
Output	45 l/h and 60 l/h - 2 speed pump with status indicator on display
ENVIRONMENTAL CONDITIONS	
Operating Temperature Range	- 15°C to +40°C
Relative Humidity	From 5 to 80% relative humidity (non-condensing)
Case Seal	IP54
Barometric Pressure	Atmospheric pressure 1013mbar (± 100mbar)
PHYSICAL	
Weight	2.7 Kilograms (with batteries) (5.9lbs)
Size	L 263mm, W 113mm, D 141mm (10.3 x 4.4 x 5.5 inches)
Case Material	Polyamide reinforced with fibreglass and carbon. Front panel: anodised aluminium
Display	Liquid crystal display with digits, icons and backlighting 3 areas: Concentration measurements (0-10,000ppm and 0.0% to 100% gas volume) Status indicator and dialogue window Height of measurement character for ppm scale: 13mm Height of measurement character for gas scale: 13mm
Storage Conditions (excluding batteries	Humidity:<90% relative humidity Temperature: -20°C to +60°C
CERTIFICATION RATING	
ATEX	II 2G Ex ib IIB T4
CE	CE Marking 94/9/CE directive dated March 23rd 1994 89/336/CE CEM directive dated May 3rd 1989: electromagnetic compatibility
European Standards	Conditions for the ATEX 1ppm to 100% gas volume version; European standards of use in explosive atmospheres: EN 60079-0 from March 2004 EN 60079-11 from January 2007 See ATEX above
Important Note	The information in this document is correct at the time of generation, we do however, reserve the right to change the specification without prior notice as a result of continuing development.

CAUTION LASER
INVISIBLE RADIATION
CLASS 1 LASER PRODUCT
Pat. No ZI
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