

PORTABLE METHANE DETECTOR FOR SURFACE EMISSIONS MONITORING

KEY FEATURES

- Selective TDLAS Methane Detection
- EPA Method 21 Compliant
- Measurement Range: 1 ppm to 100%
- Integral GPS & Bluetooth
- ATEX Zone 1 Certified
- Lightweight & Portable 2.9 lb (1.3 kg)
- Data Logging, Leak Saving & Visual Alarms

DESIGNED FOR

- Landfill surface emissions surveys
- Leak detection at gas collection points
- Regulatory compliance audits
- Environmental consulting and remediation



PINPOINT PRECISION. PROVEN COMPLIANCE. EFFORTLESS OPERATION.

The LANDTEC SEM5000 is the next-generation surface emissions monitor purpose-built for landfill methane detection. Using advanced LASER-based Tunable Diode Laser Absorption Spectroscopy (TDLAS), the SEM5000 delivers high accuracy from 1 ppm up to 100% volume, with zero cross-gas interference. Whether you're surveying wellheads, surface penetrations, or open landfill areas, the SEM5000 helps you stay compliant while simplifying data collection and reporting.

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

SEM5000

Status Indicators

- Measurement Mode
- Pump
- PC Communications
- Battery Level

LED Alarm Lights

4 Visual Alarm Lights & Impact Bumpers

Jog Dial

- Threshold
- PPM
- LEL
- ON/OFF Absolute
- ON/OFF GPS
- Save Leak
- Memory

Function Button

Pump and GPS Control

Audio Alarm

85 dB Alarm



- More accurate pinpointing
- Accurate classifications
- Specific to Methane
- Quicker detection

TECHNICAL SPECIFICATION

POWER SUPPLY			
Battery type	Li-ion rechargeable battery pack (user replaceable)	Battery charger	Separate intelligent battery charger powered from mains supply (100-240V, or via vehicle power outlet)
Battery life	Swappable Li-Ion battery with 10 hour life at 68°F (20C); 8 hours at extreme temperatures with backlight activated	Charge time	Approximately 4.5 hours from complete discharge
GAS RANGES			
Gases Measured	CH ₄	Range	1-9,999ppm / 1%-100% (Vol)
Response time	Without Probe : T ₉₀ = 2 seconds With Probe : T ₉₀ = 3.5 seconds		
Methane Detection	≤10ppm Detectable	11-9,999ppm: +/- 10% of reading	1%-100%Vol +/- 10% of reading
Resolution	0.1ppm / 0.1% (Range dependent)	Minimum detectable limit	0.3ppm
PUMP			
Flow	Minimum : 0.6 L/Min	Typical : 0.8 L/Min	Maximum : 1.0 L/Min
ENVIRONMENTAL CONDITIONS			
Operating Temperature	-25 to 50°C / -13 to 122° F	Humidity Range	5% to 80% Relative Humidity (non-condensing)
Atmospheric Pressure/ Range	1013mbar +/-100mbar/29.91 inHg +/- 2.95inHg	Protection Level	IP65
PHYSICAL			
Weight	1.3 kg / 2.9 lb	Environmental Storage Conditions	Humidity <95% Temperature -40°C to +60°C/-40°F to 140°F
Dimensions	229 x 97 x 109 mm / 9 x 4 x 4.2 inches		
Alarm Sound Level	~85 dBA @30cm / 12"	User Interface	<ul style="list-style-type: none"> • Display (LxH): 86 x 47mm / 3.39" x 1.85" • Jogdail: Scroll menu for rapid and easy selection of menu items. • 3 Function Keys
Gas Connections	Quick Release Coupler	Electrical Connections	Multiway adaptor for battery charger and USB communication port with a PC
		Carry Strap	30mm/1.2" wide synthetic woven strap
CERTIFICATION RATING			
II 2 G Ex ib op is IIB T3 Gb -25°≤Tas+50°C			

WHY CHOOSE SEM5000?

- No false positives – specifically tuned for methane.
- Rapid start-up – get surveying in under 60 seconds.
- Daily Field Calibration – Meets EPA Method 21 compliance
- Bluetooth-enabled – simplifies data download and integration.
- Rugged & field-proven – tested in landfill environments globally.

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