

Natural Gas and Biogas Facilities and Network Monitoring & Gas Leak Detection

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INSPECTRA® NON ATEX

Laser Technology
applied to Methane Detection

- Methane selectivity (CH₄)
- Measurement range from 0ppm to 100% Vol. Gas CH₄
- 1ppm sensitivity CH₄
- Instant response time

Using laser spectroscopy technology, the NON ATEX INSPECTRA® equipment developed by GAZOMAT™ is a high-performance methane detector suitable for outdoor use only.

The instrument detects very low methane concentrations and allows for pinpointing the precise location of emission sources in natural gas and biogas facilities as well as on pipeline networks.



Total Selectivity to Methane

The measuring chamber of the NON ATEX INSPECTRA® analyzer is fitted with a laser diode adjusted to the absorption wavelength specific to methane.

- In the presence of methane molecules, the laser beam is partially absorbed. Thus, only methane is detected.
- The device is insensitive to other hydrocarbon gases, chemicals, water vapours and pollution that may be present in the ambient air, in small quantities.

Unique Measuring Accuracy

- 1ppm sensitivity thanks to the path length of the multipass laser cell
- 2 measurement scales:
 - PPM scale from 0ppm to 10,000ppm CH₄
 - GAS scale from 0.0% to 100.0% volume gas CH₄
- Simultaneous display of double measurement range
- Very quick response time
- Two sampling flow rates: low and normal

Easy to Use

- Quick start-up
- Automatic self-test at start-up
- Wide backlit LCD screen
- Visual and audio indicators
 - battery charge level, pump status, etc.
- Access to standard and advanced functions with the 5 control key keypad and a scrolling menu
- Autoscale function improves measurement range change
- Measurement in absolute mode or relative mode
- GAZOMAT battery pack easy to replace by operator – no return to Service center required
Note: the INSPECTRA® may be operated with three LR20 dry cells.
- Connects to dedicated survey App for real-time wireless data transmission (optional)
- Several sampling accessories available:
 - Modular telescopic carbon sampling probe that connects easily to any of the instrument's sampling devices (suction cup, single wheel probe, gas-trap trolley)
 - Long semi-rigid probe
 - Short and flexible probe



Accessories and Add-on

- 100-240VAC 50Hz-60Hz charger
- Rechargeable battery pack integrated to the device (not shown)
- Modular telescopic sampling probe with suction cup
- Storage case for the detector and its accessories
- Water-repellent filters and dust filters (not shown)
- Pin wrench to access the water-repellent filter compartment (not shown)
- **Optional:**
 - 12VDC charger
 - Long semi-rigid sampling probe with its filter fitted handle (not shown)
 - Short flexible probe with its handle (not shown)
 - Gas check kit comprising a gas check cylinder and a pressure regulator
 - Bluetooth communicator (not shown) for wireless data transfer



Sampling Accessories Compatible with the Instrument

Telescopic sampling probe and accessories				Other sampling probes	
					
Modular telescopic carbon sampling probe	Suction cup probe	Gas trap trolley (optional)	Single-wheel probe (optional)	Long probe (optional)	Short probe (optional)

GAZOSURVEY™, the Mobile App Dedicated to Methane Leak Monitoring (optional)

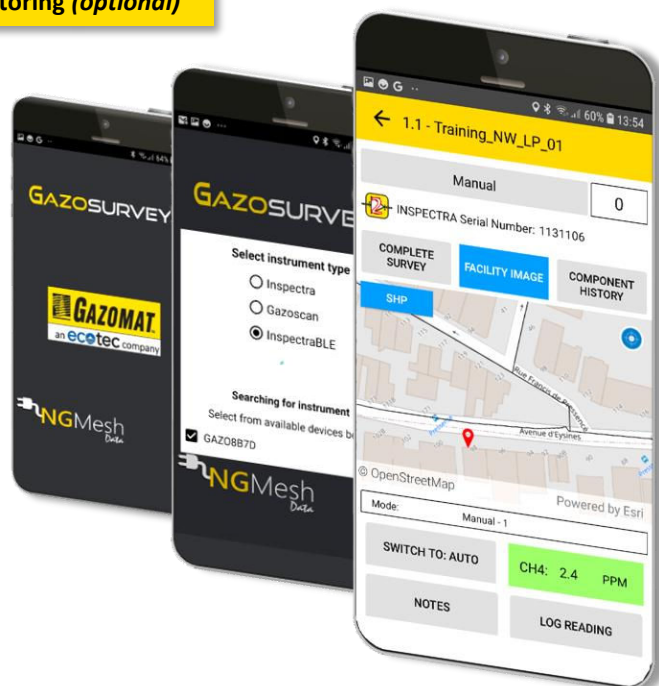
Available as an option, GAZOSURVEY ⁽¹⁾ is a software application running on iOS and Android smart devices. It has been developed for leak monitoring of natural gas/biogas installations as well as underground and aboveground pipelines.

GAZOSURVEY app facilitates survey data collection and transfer. The smart device connects in Bluetooth to the INSPECTRA® detector. Via the app, the field technician can then use the smart device's functions :

- Geolocation and navigation on maps
- Note entry
- Multiple photo storage using the camera

Through an interface with a web platform, georeferenced survey data is transferred and alerts are automatically sent to emergency personnel or services.

(1) Application marketed separately. Consult GAZOSURVEY brochure



TECHNICAL SPECIFICATIONS
INSPECTRA® NON ATEX – 0ppm-100% Vol. Gas CH₄

Measurement principle :	<ul style="list-style-type: none"> Laser spectroscopy (TDLAS – Tunable Diode Laser Absorption Spectroscopy) 				
Gas selectivity	<ul style="list-style-type: none"> Methane gas (CH₄) only 				
Measurement scales: (Simultaneous display)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">PPM</th> <th style="width: 50%; text-align: center;">GAS</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0ppm-10,000 ppm CH₄</td> <td style="text-align: center;">0.0% to 100.0% Volume Gas CH₄</td> </tr> </tbody> </table>	PPM	GAS	0ppm-10,000 ppm CH ₄	0.0% to 100.0% Volume Gas CH ₄
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0ppm-10,000 ppm CH ₄	0.0% to 100.0% Volume Gas CH ₄				
Measurement range:	<ul style="list-style-type: none"> 0ppm to 100.0% Volume Gas CH₄ 				
Detection threshold:	<ul style="list-style-type: none"> 1ppm CH₄ 				
Response time:	<ul style="list-style-type: none"> T10 standard: 2 seconds T10 with suction probe: <3.5 seconds T90 standard: 4.5 seconds T90 with suction probe: 6 seconds 				
Start-up time:	<ul style="list-style-type: none"> Less than 30 seconds 				
Display:	<ul style="list-style-type: none"> Liquid crystal display with digits, icons and backlighting – 3 areas: <ul style="list-style-type: none"> ○ concentration measurements – Simultaneous display of PPM and Vol. Gas ○ status indicators ○ dialogue window Height of measurement character for PPM scale and GAS scale: 13 mm 				
Keypad :	<ul style="list-style-type: none"> 5 direct-control keys Advanced function control with protected-access scrolling menu 				
Power supply :	<ul style="list-style-type: none"> Ni-MH rechargeable battery pack along manufacturer's references : <ul style="list-style-type: none"> ○ 3.6V / 11Ah 				
Battery pack charger :	<ul style="list-style-type: none"> Input: 100-240VAC 50Hz-60Hz Max 0.35A 				
Charge time :	<ul style="list-style-type: none"> 10 hours 				
Battery life :	<ul style="list-style-type: none"> Over 20 hours at temperatures between 20°C and 25°C - no accessories, with all functions on (backlighting, pump on normal speed) Battery life reduced by 20% at temperatures below 0°C and above 35°C 				
Electric pump flowrate:	<ul style="list-style-type: none"> 55 l/h (normal flow) and 45 l/h (slow flow) 				
Alarms :	<ul style="list-style-type: none"> They activate the visual (LED and LCD displays) and audio warnings <table border="0" style="width: 100%; margin-left: 20px;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ○ Methane CH₄ concentration threshold ○ Geiger </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ○ Explosion risk due to methane CH₄ concentration ○ Pump: pump stopped, pump error </td> </tr> </table> 	<ul style="list-style-type: none"> ○ Methane CH₄ concentration threshold ○ Geiger 	<ul style="list-style-type: none"> ○ Explosion risk due to methane CH₄ concentration ○ Pump: pump stopped, pump error 		
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Status indicators :	<ul style="list-style-type: none"> Battery charge level, pump status (2 speeds) 				
Gas connection :	<ul style="list-style-type: none"> Quick-connect inlet coupling with locking mechanism: suction probe on right side Quick-connect gas outlet coupling 				
Electrical connections :	<ul style="list-style-type: none"> 2.1mm connector for battery charger Communication connector for connection to: - a PC via an optional dedicated cable - an optional external Bluetooth communicator 				
Data transfer:	<ul style="list-style-type: none"> Via an external wireless Bluetooth communicator (optional) 				
Housing :	<ul style="list-style-type: none"> Housing material: polyamide reinforced with fiber glass and carbon Material of front side: anodized aluminum 				
Dimensions :	<ul style="list-style-type: none"> Length 263 mm x Width 113 mm x Height 141 mm (10.3 x 4.4 x 5.5 inches) 				
Weight :	<ul style="list-style-type: none"> 2.7 kg with batteries (5.95 lbs) 				
Operating conditions in stabilized mode:	<ul style="list-style-type: none"> Humidity: 5 % to 80 % relative humidity Operating temperature range: -15°C to +50°C (+5°F to 122°F) Pressure: atmospheric pressure 1013 mbar (± 100 mbar) 				
Storage conditions: (excluding batteries)	<ul style="list-style-type: none"> Humidity: < 90 % relative humidity Temperature: -20°C to +60°C (-4°F to +140°F) 				
Protection rating:	<ul style="list-style-type: none"> IP54 (complies with IEC 60529) 				
CE Marking Standard conformity:	<ul style="list-style-type: none"> EN 50270 :2015 - Electromagnetic compatibility EN 61010-1 :2010 + A1:2019/AC 2019-04 - Safety requirements for electrical equipment for measurement, control and laboratory use IEC 60825-1 :2014 - Safety of laser products 				
Patents:	No 7352463 and No 1647820				
Country of origin:	Made in France				

