



TELEDYNE
GAS AND FLAME DETECTION
Everywhere you look™

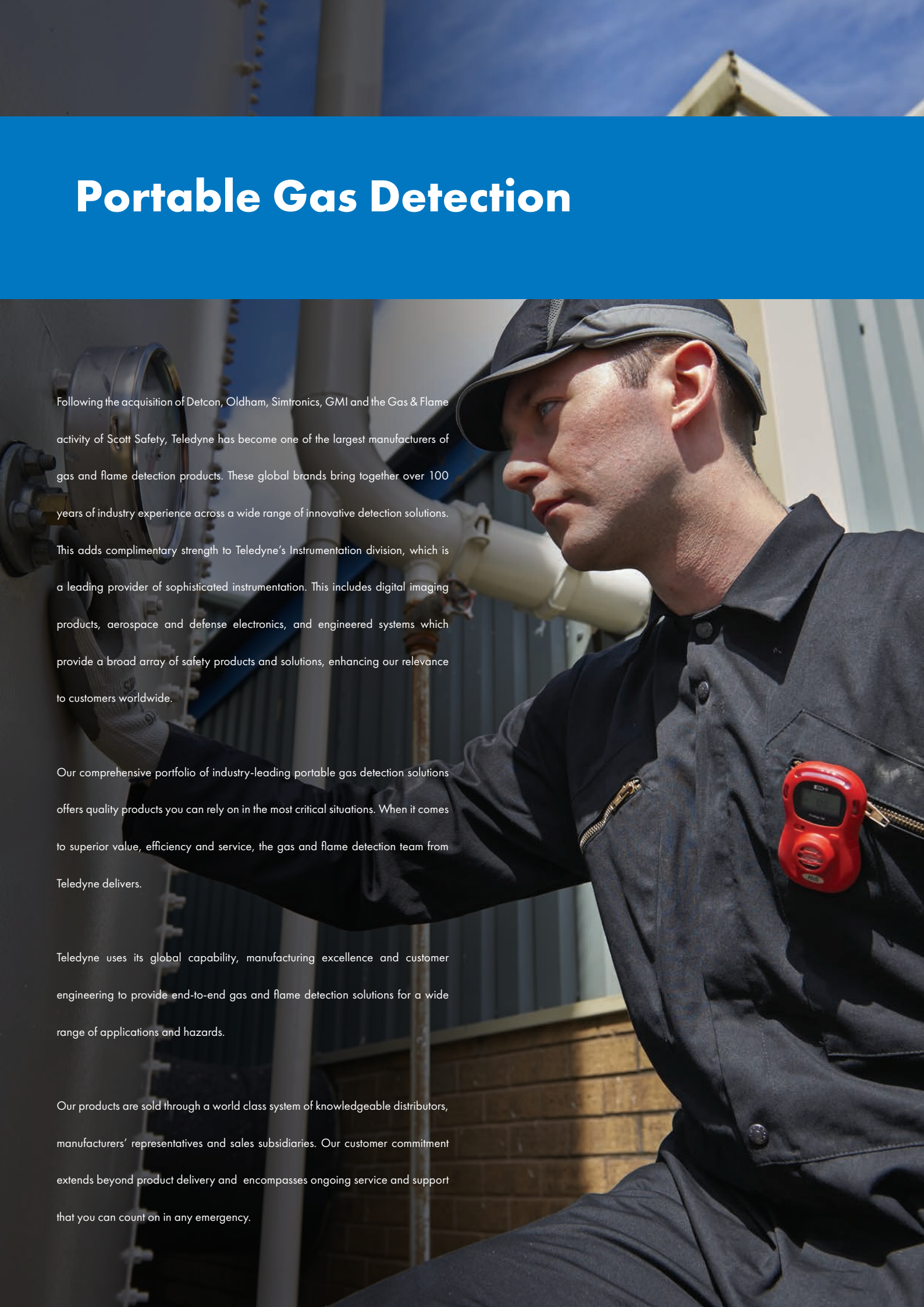


Portable Gas & Flame Detection

Product Overview



Portable Gas Detection



Following the acquisition of Detcon, Oldham, Simtronics, GMI and the Gas & Flame activity of Scott Safety, Teledyne has become one of the largest manufacturers of gas and flame detection products. These global brands bring together over 100 years of industry experience across a wide range of innovative detection solutions. This adds complimentary strength to Teledyne's Instrumentation division, which is a leading provider of sophisticated instrumentation. This includes digital imaging products, aerospace and defense electronics, and engineered systems which provide a broad array of safety products and solutions, enhancing our relevance to customers worldwide.

Our comprehensive portfolio of industry-leading portable gas detection solutions offers quality products you can rely on in the most critical situations. When it comes to superior value, efficiency and service, the gas and flame detection team from Teledyne delivers.

Teledyne uses its global capability, manufacturing excellence and customer engineering to provide end-to-end gas and flame detection solutions for a wide range of applications and hazards.

Our products are sold through a world class system of knowledgeable distributors, manufacturers' representatives and sales subsidiaries. Our customer commitment extends beyond product delivery and encompasses ongoing service and support that you can count on in any emergency.

Portables & Transportables

Protégé ZM

Zero Maintenance Single Gas Personal Monitor

- Three gas options: O₂, CO, H₂S
- Zero maintenance instrument - no charging or calibration required
- 2 years of continuous operation
- Display options: "life remaining" or "gas readings" or both
- Alarm set points - custom or factory pre-programmed
- Hibernate mode – up to one year of additional life (CO and H₂S only)

The Protégé ZM Single Gas monitor is an easy-to-use, zero maintenance gas detector that is available for oxygen, carbon monoxide or hydrogen sulphide.

Once activated, the Protégé ZM monitor does not require charging or calibration. These monitors can be deployed in the field 24 hours a day, every day for two years, maintenance and hassle free.

Gases Detected:	O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical
Run Time:	2 years
Alarms:	high visibility LEDs • 95 dB audible • vibrating
Approvals:	ATEX • IECEx • ETL • CE • EAC (Pending)



PS200

Portable 4-gas monitor

- Any combination of %LEL, O₂, CO and H₂S
- Internal pump (optional) that can support a 30m sample line
- Datalogging (up to 6 months)
- Run-time up to 14 hours
- Easy use, maintenance and calibration

The PS200 Series combines quality, ruggedness and advanced technology in a user friendly, portable gas monitor. It is compact, lightweight, IP67, extremely robust, certified to multiple international and regional standards. It can measure any combination of %LEL, O₂, CO and H₂S. Optional internal pump makes it suitable for a wide range of pre-entry, personal monitoring and confined space applications.

The PS200 has been designed with easy user maintenance which includes a fully automatic calibration station to simplify product compliance.

Gases Detected:	%LEL • O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical • catalytic • infrared
Run Time:	up to 14 hours (diffusion) • up to 10 hours (pumped)
Alarms:	high visibility LEDs • 90 dB audible • vibrating
Approvals:	ATEX • IECEx • CSA • CE • MED • EAC



PS500

Up to Five Gas Personal Monitor

- 20 "plug-and-play" smart sensor options, including PID
- Internal pump (optional)
- Alkaline, Fast Charge and Long Duration battery packs available
- Flexible configuration to suit all applications
- Datalogging of all events for effective data management
- Easy use, maintenance and calibration

The PS500 can be configured to detect up to five gases with its electrochemical, catalytic, photo ionization detectors (PID) and infrared sensor range. "Plug and Play" maximizes flexibility by allowing other gases to be readily detected by simply inserting a new smart sensor assembly.

Optional internal pump makes it suitable for a wide range of pre-entry, personal monitoring and confined space applications. If the pump is fitted, it can be easily turned on/off, depending on application. E.g. pump on to perform pre-entry measurements correctly, pump off for confined space working.

Gases Detected:	%LEL • O ₂ • CO • H ₂ S • CO ₂ • SO ₂ • Cl ₂ NH ₃ • NO • NO ₂ • PH ₃ • VOC • Benzene
Sensor Technologies:	electrochemical • catalytic • infrared • PID
Run Time:	up to 12 hours (pumped)
Alarms:	high visibility LEDs • 95 dB audible
Approvals:	ATEX • IECEx • UL (excluding IR sensors) • CE • MED • EAC (Pending)



Typical applications for combustible sensor options (PS200 & PS500) *

Applications	Standard Filter	Enhanced Filter
	Detects most Combustible Gases	Enhanced resistance to H ₂ S and Silicon Poisoning
Water industry - clean water	✓	✓
Water industry - waste water	✓	✓
BioDigester (high H ₂ S)	✓	✓
Bio Digester (PPE)	✓	✓
Telecoms	✓	✓
Gas welding/brazing (acetylene)	✓	✓
Gas welding/brazing (propane)	✓	✓
Refining PPE	✓	✓
Petrochem (aromatics)	✓	✗
Petrochem ECO fuels (alcohol) - tank farm	✓	✗
Gas transmission	✓	✓
Gas storage	✓	✓
Gas distribution	✓	✓
Oil exploration	✓	✓
Oil exploration (high H ₂ S)	✓	✓
Tank cleaning	✓	✓
Solvent recovery (aliphatic)	✓	✗
Solvent recovery (aromatic)	✓	✗
Power generation - electrical	✓	✓
Steel works - blast furnace	✓	✓
Steel works - soaking pits & reheat	✓	✓
Brewing	✓	✓
Distilling	✓	✗
Heat treatment (carburising/nitriding)	✓	✓
Certification gas groups - ATEX	ATEX IIC	ATEX IIC
Certification gas groups - UL	A, B, C & D	A, B, C & D

* Refer to Teledyne GMI for application specific suitability

GT Series

1 Instrument, 7 Applications

- Methane leak detection from PPM to Volume gas with ultrafast ppm response
- Up to 7 modes available
- Manual and automatic datalogging
- 'Ticker' (Geiger) indicator on ppm range (visual and audible)
- Flashlight and pressure range
- Bump Test & Calibration station (accessory)

GT Series is designed for the gas industry, satisfying all the needs of service technicians within a single unit. Seven modes of operation: leak test, confined space entry, barhole testing, carbon monoxide, purge, sniffer and pressure leak tightness.

Gases Detected:	methane (ppm, %LEL, %Vol) • O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical • catalytic • semiconductor • thermal conductivity
Run Time:	up to 8 hours (alkaline or rechargeable)
Alarms:	high visibility LEDs • 85 dB audible
Approvals:	ATEX • IECEx • CSA • UL • CE • EAC (Pending)



GT Fire

Gas detection designed for firefighters

- User-friendly instrument with simple interface
- Ergonomic design that is easy to operate
- Visual and audible assistance to support investigation
- PPM & LEL flammable gas ranges for leak detection
- Manual and automatic datalogging
- Loud audible and high visual 'ticker' (Geiger) on ppm range
- Integral flashlight
- Rugged polycarbonate case

The GT-Fire is a dedicated hand-held gas detection meter specialized for the fire industry.

GT-Fire provides the confidence and assurance required by fire fighters when called to safety-critical environments.

The GT-Fire enables gas detection to be conducted via one instrument in a complete, professional and timely manner, with easy access to data simplifying the reporting process.

Gases Detected:	flammable (ppm, %LEL) • O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical • semiconductor • catalytic bead
Run Time:	8 hours (alkaline)
Alarms:	high visibility LEDs on both sides of instrument • 85 dB audible
Approvals:	ATEX • IECEx • UL



Gas Laser

Highly advanced laser technology designed to detect natural gas

- Quickly scan common venting points from a Safe Distance
- Highly visible, sunshine resistant Guide Laser equipped for location accuracy
- Graphical Interface for easy user interpretation
- Color Camera with Bluetooth, Wi-Fi, and datalogging onboard
- Trusted Technology used in gas utility since 2005

Highly advanced laser technology designed to detect natural gas with the aim of enhancing safety and improving detection for fire services, first responders and utility markets.

Gases Detected:	natural gas
Sensor Technologies:	Tunable Diode Laser Absorption Spectroscopy (TDLAS)
Run Time:	8 hours at 32°F (approx.)
Alarms:	audible tone • visible color border when detection threshold exceeded
Approvals:	EMC • ETSI • EN • ICES



Gasurveyor 700

IR detector with Natural Gas discrimination

- Infrared Technology
- Natural gas discrimination
- GPS (optional)
- Bluetooth and IrDA communication
- Leak detection from PPM to Volume gas
- Flexible configuration (gas ranges & modes of operation)
- Compatible with the GDUnet – GMI Auto Calibration System

Utilizing the latest infrared gas detection technology in a robust and reliable design, the Gasurveyor 700 (GS700) is a highly configurable instrument with leading performance and a user-friendly interface which makes it the perfect choice for many gas utility applications.

The natural gas discrimination feature quickly determines the source of gas leaks. It indicates if the gas detected is from a pipeline or other naturally occurring source. This feature can save valuable time and reduce detection related costs.

Gases Detected:	combustible (ppm, %LEL, %Vol) • O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical • semiconductor • infrared
Run Time:	up to 15 hours (alkaline) • up to 20 hours (rechargeable battery pack)
Alarms:	360° high visibility LEDs • 90 dB audible
Approvals:	ATEX • IECEx • CSA • CE



Gasurveyor 500

Multi-purpose gas measuring device

- Dual modes of operation including Combustible Gas Indicator (CGI) & Confined Space Monitor (CSM)
- Extremely robust anti-static case
- Internal sampling pump
- Gas utility standard instrument
- Compatible with the GDUnet – GMI Auto Calibration System
- Wide range of optional probes for various applications

The Gasurveyor 500 Series is the most popular series of gas detectors available from GMI. By simple selection of hardware and software options, the instrument can be readily configured to suit your exact application. Offering highly accurate and reliable instrumentation in an extremely robust, anti-static case, the Gasurveyor 500 Series is a versatile gas measuring device that can be used to accurately measure gas in a number of applications across a variety of industries.

Any combination of flammable gas from parts per million (ppm) through Lower Explosive Limit (%LEL) to percent volume, oxygen, carbon monoxide and hydrogen sulphide can be selected to ensure that your exact requirements are met.

Gases Detected:	combustible (ppm, %LEL, %Vol) • O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical • catalytic • thermal conductivity
Run Time:	up to 15 hours (alkaline) • 9 hours (rechargeable battery pack)
Alarms:	highly visible flashing LEDs • 85dB audible
Approvals:	ATEX • IECEx • CSA • UL • CE



First Responder

Combination instrument for emergency response

- PPM, LEL and Volume flammable gas ranges for leak detection and general safety monitoring
- Carbon Monoxide range for internal atmosphere monitoring
- Optional probe with Semiconductor Sensor (0 → 10,000 ppm), providing instant response leak detection
- Internal sampling pump as standard
- 'Ticker' (Geiger) on ppm range (visual and audible)
- Compatible with the GDUnet – GMI Auto Calibration System

The GMI First Responder is a combustible gas indicator designed for emergency response technicians in the gas industry. This instrument combines quality, ruggedness and advanced GMI Technology in a user friendly, portable gas detector.

An optional diffusion probe with a high-speed semiconductor sensor provides rapid response in detecting small fitting leaks.

Gases Detected:	combustible (ppm, %LEL, %Vol) • O ₂ • CO • H ₂ S
Sensor Technologies:	electrochemical • catalytic • semiconductor • thermal conductivity
Run Time:	up to 18 hours (alkaline) • up to 8 hours (rechargeable battery pack)
Alarms:	high visibility LEDs • 85 dB audible
Approvals:	ATEX • IECEx • CSA • UL • CE



Leaksurveyor

Fast response gas detector

- Methane leak detection from PPM to Volume gas with fast ppm response
- Internal Semiconductor Sensor (0 → 10,000 ppm), providing fast response leak detection
- Internal pump with pressure sensor for flow fail detection
- Configurable 'Ticker' (Geiger) on ppm range (visual and audible)
- Compatible with the GDUnet – GMI Auto Calibration System

The GMI Leaksurveyor combines quality, ruggedness and advanced GMI Technology in a user friendly, portable gas detector. The internal semiconductor sensor with fast response and high sensitivity enables leakage surveys to be performed and distribution leaks to be quickly found.

Gases Detected:	Methane (ppm, %LEL, %Vol)
Sensor Technologies:	catalytic • semiconductor • thermal conductivity
Run Time:	up to 21 hours (alkaline) • up to 18 hours (rechargeable battery pack)
Alarms:	high visibility LEDs • 85 dB audible
Approvals:	ATEX • IECEx • UL • CE



OXYGAS 500

Instrument for leak detection and purging/inerting operations

- Dual modes of operation - Combustible Gas Indicator (CGI) & Purge
- Simple 2-button operation, allowing user access to all features
- Internal sampling pump
- 'Ticker' (Geiger) on ppm range (visual and audible)
- Compatible with the GDUnet – GMI Auto Calibration System

The Oxygas 500 instrument provides similar performance to the Gascoseeker 2-500 (%LEL and %Vol measurement) but with the addition of the oxygen sensor for either gas/air or gas/nitrogen/air purging. (The P-500 variant has an additional flammable ppm range.)

Gases Detected:	combustible (ppm, %LEL, %Vol) • O ₂ • CO
Sensor Technologies:	electrochemical • catalytic • thermal conductivity
Run Time:	up to 15 hours (alkaline) • 9 hours (rechargeable battery pack)
Approvals:	ATEX • IECEx • UL • CE



Gascoseeker 2-500

Gas utility entry-level detector

- Automatic range selection (%LEL & %Vol)
- Simple 2-button operation, allowing user access to all features
- Internal sampling pump
- Compatible with the GDUnet – GMI Auto Calibration System
- Wide range of optional probes for various applications

Built on the success of the robust and reliable Gascoseeker MK2, the Gascoseeker 2-500 is the gas industry's standard instrument for measuring % LEL and %Vol flammable hydrocarbons, with over 30,000 instruments sold to European gas utility companies.

The two-button operation means the Gascoseeker 2-500 is easy to use and operator training can be conducted quickly. The rugged design allows use in harsh environments. The instrument is also fully compatible with our range of calibration software and equipment.

Gases Detected:	combustible (%LEL, %Vol)
Sensor Technologies:	catalytic • thermal conductivity
Run Time:	up to 15 hours (alkaline)
Approvals:	ATEX • IECEx • UL • CSA • CE



ShipSurveyor

IR solution for marine applications

- Dual modes of operation: Confined Space Monitor (CSM) & Combustible Gas Indicator (CGI)
- MED certified
- Infrared (IR) technology suitable for inerting operations
- Datalogging with ability to enter 300 unique user identified locations
- Compatible with the GDUnet – GMI Auto Calibration System
- Internal pump with high flow rate to minimize tank sampling times

A solution for all your safety monitoring and inerting marine application requirements. With 8 models to choose from, this extremely versatile instrument complies with international marine regulations for Confined Space Monitoring, Inerting, Pre-entry Testing, Tank Cleaning and many other marine applications in vessels such as LNG / LPG Tankers, Oil Tankers, Fruit Carriers and Refrigerated Cargoes.



Gases Detected: combustible (%LEL, %Vol) • O₂ • CO • H₂S • CO₂
Sensor Technologies: electrochemical • infrared
Run Time: up to 20 hours (alkaline) • 8 hours (rechargeable)
Alarms: highly visible LEDs on display panel • 85dB audible
Approvals: ATEX • IECEx • MED • CE



BM 25/BM 25W

Area monitor with Infrared technology

- Network up to 30 devices using wireless connectivity (up to 1 km line of sight)
- Intrinsically safe Trickle Charger available for long-term monitoring in classified zones
- Compatible with MX40 controller
- Detect up to 5 gases simultaneously
- Resistant to harsh environment

The BM 25 is ideal for mobile or temporary work applications, team protection, area surveillance or locations where fixed detection systems are not suitable. Features include STEL and TWA values, data logging for four months or more and is compatible with the MX 40 controller. There are 16 possible wireless channels available to the BM25 allowing 16 separate networks in the same area with up to 30 instruments per network. Self-healing wireless Mesh Network ensure robust plant operation.

Gases Detected: combustible (%LEL, %Vol) • O₂ • Toxics • VOC
Sensor Technologies: electrochemical • catalytic • infrared • PID
Run Time: up to 170 hours
Alarms: highly visible 360° LED beacon • 103 dB audible • relay output/input
Approvals: ATEX • IECEx • CE • INMETRO • EAC

Docking Stations

Introduction to Docking Technology

To complement the Personal Surveyor and Gas Surveyor product ranges, Teledyne Gas & Flame Detection have developed a range of compact, robust and easy to use docking stations which provide customers with the confidence and assurance that their instruments will operate safely and effectively within the environment or application of use.

Automatic Bump & Calibration (ABC) Station

- Bump Test and Calibration solution for the PS200 or PS500 instruments
- Simple to use
- Assists with compliance record-keeping
- Three operating modes: Standalone / PC / Ethernet
- Results storage – up to 5000 results in Standalone mode
- Calibration time - typically 90 seconds for standard 4-gas instrument
- Instrument charging (PS200 version only)
- 1-gas or 3-gas versions available to suit various configurations (PS500 version only)

To complement the PS200 or PS500 instruments, the compact, robust and easy to use Auto Bump & Calibration Station provides bump and calibration options. Standalone mode is easy to install and configure and allows automatic record collection for certificate generation.

A special version of the PS500 ABC is available for reactive gases.



Protégé ZM IR Connect

- Works with PC software
- Simple USB connection
- Programs, bump tests, calibrates and hibernates the monitors
- Affordable and easy to use
- Software downloadable from Teledyne Gas and Flame Detection website

The Protégé ZM monitors are supported by an easy to use IR Connect programming accessory. The accessory connects to a PC with a standard USB connection and stores downloaded event logs, facilitates bump tests and calibration, allows changes to alarm points, and activates hibernation mode as desired.

GDUnet

- Comprehensive solution to support Teledyne GMI gas utility and marine instruments
- Simple to use
- Assists with compliance record-keeping
- Three operating modes: Standalone / PC / Ethernet

Easy to use Bump Test & Calibration Station for the Teledyne GMI range of gas utility products (GS700, GS500, First Responder, Leaksurveyor, Gascoseeker, Oxygas 500) and marine products (ShipSurveyor) that provides a quick and efficient way to test your entire fleet of the instruments. The station is easy to set up and with aid of the FlexiCal Plus software you can collect test records and create certificates.



GT Test & Calibration Station

- Test and Calibration solution for the GT Series instrument
- Simple to use
- Assists with compliance record-keeping
- Available in "Mixed Gases" and "Individual Gases" versions

Easy to use Test & Calibration Station for the GT Series. Provides a quick and efficient way to support your fleet of instruments. The station is easy to set up and with FlexiCal Plus software you can collect test records and create certificates.

Notes



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