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Why Tyco Gas & Flame Detection?

One Collective Brand, One Comprehensive Gas & Flame Detection Portfolio

Tyco Gas and Flame Detection is one of the largest global manufacturers of gas and flame detection products, comprising five internationally known companies – Scott Safety Gas & Flame Detection, Detcon, Simtronics, GMI, and Oldham – under one Tyco brand. We are strongly committed to providing innovative gas and flame detection solutions that save lives, improve businesses, and protect people where they live and work. Hundreds of years of combined experience, as well as a comprehensive portfolio of products and services for diverse industries make Tyco Gas & Flame Detection the unmatched leader in the gas and flame detection marketplace.

One Source for All Gas and Flame Detection Needs

Each customer environment demands a customised gas and flame detection solution, designed with their requirements in mind. Our comprehensive portfolio and industry-leading solutions offer expert perspective and products you can rely on in the most critical situations. When it comes to superior value, efficacy, efficiency, and service, Tyco Gas & Flame Detection delivers like no one else.

Global Reach, Local Gas Detection Expertise

Manufactured in four countries, our products are sold through a worldwide network of distributors, manufacturers’ representatives and sales subsidiaries. Our customer commitment does not stop at product delivery but encompasses ongoing services. From custom-designed solutions to unmatched technical support, our gas and flame detection solutions are backed by expert judgment and premier technology that you can count on in any emergency.
Portables & Transportables

**PS500**

Up to Five Gas Personal Monitor

/// Auto Bump and Calibration Station (Accessory)
/// Over 15 Plug-&-Play Smart Sensors to Choose From Including PID for VOCs

PS500 can be tailored to detect up to five gases and is particularly useful in noisy environments, featuring a piercing 95dBA alarm. An optional internal pump allows for pre-entry checking. PS500 features a high-impact resistance case and on-board data logging for calibration certificates, data management and event logging.

**Gases Detected:** LEL, H2S, O2, CO, CO2, SO2, CL2, NH3, NO, NO2, PH3, VOC, C6H6, dual tox CO/H2S

**Sensor Technologies:** electrochemical, catalytic, PID, NDIR

**Run Time:** 12 hours min with pump - rechargeable NiMH or 3 AA alkaline

**Alarms:** visual 360° light bar, piercing 95 dB audible, TWA, STEL, low battery

**Approvals:** ATEX • CE • IECEx • UL • MED

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**PS1**

Single Gas Personal Monitor

/// Auto Bump and Calibration Station (Accessory)
/// On/Off Capability and Easy One Button Operation

PS1 is a rugged, lightweight single gas monitor that clips easily onto a collar or vest putting the instrument near the breathing zone for maximum user protection. Additional features include fully programmable alarms, data logging, TWA, STEL, low battery and end of life.

**Gases Detected:** H2S, O2, CO, SO2

**Sensor Technologies:** electrochemical

**Run Time:** 2 years

**Alarms:** visual 360° light bar, vibrating, audible 95 dB, TWA, STEL, low battery

**Approvals:** ATEX • CE • IECEx • CSA • UL • MED
PS200

Up to Four Gas Personal Monitor

- Auto Bump and Calibration Station (Accessory)
- Optional Internal Pump and Easy One Button Operation
- Man down option
- 80 Hour Run Time with Low Power Sensor

PS200 provides unrivaled protection in confined space applications. Monitoring up to 4 gases simultaneously, it can be configured to detect a combination of Methane, Oxygen, Carbon Monoxide, and Hydrogen Sulfide, as well as other flammable gases. An optional internal pump allows for pre-entry checking.

**Gases Detected:** LEL, H2S, O2, CO

**Sensor Technologies:** electrochemical, catalytic

**Run Time:** 14 hours, 8 hours (pumped)

**Alarms:** highly visible flashing LED, piercing >90dB audible

**Approvals:** ATEX • CE • IECEx • cCSAus • MED

### Applications suitable for different Combustible Sensor Options

<table>
<thead>
<tr>
<th>Applications</th>
<th>Standard Filter</th>
<th>Enhanced Filter</th>
<th>Low Power</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Industry Clean Water</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Industry Waste Water</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BioDigester High H2S</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Low Power performance unknown with high H2S</td>
</tr>
<tr>
<td>Bio Digester PPE</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>PPE in air should be OK</td>
</tr>
<tr>
<td>TELECOMS</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Low Power sensor not fully tested in this field</td>
</tr>
<tr>
<td>Gas Welding/Brazing (acetylene)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Low Power sensor 50% response to acetylene</td>
</tr>
<tr>
<td>Gas Welding/Brazing (Propane)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refining PPE</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petrochem Chemical &gt;C5 HC's PPE</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>Aromatic (Benzene ring compounds) mostly above C6</td>
</tr>
<tr>
<td>Petrochem (Aromatics)</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Petrochem Eco Fuels (alcohol) Tank farm</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Enhanced filtered sensor unsuitable for Alcohols.</td>
</tr>
<tr>
<td>Gas Transmission</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas Storage</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas Distribution</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil Exploration</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil Exploration High H2S *</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Low Power performance unknown with high H2S</td>
</tr>
<tr>
<td>Tank Cleaning **</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Enhanced &amp; Low power not suitable for heavier fules</td>
</tr>
<tr>
<td>Solvent Recovery (Aliphatic)</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>Low power &amp; Enhanced sensors unsuitable for alcohols</td>
</tr>
<tr>
<td>Solvent recovery (Aromatic)</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>Apart from Benzene most aromatics are greater than C6</td>
</tr>
<tr>
<td>Power Generation Electrical</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Low power sensors unsuitable around alternator H2</td>
</tr>
<tr>
<td>Steel Works Steel Works Blast Furnce</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Low power sensor unsuitable for Blast Furnace Top Gas</td>
</tr>
<tr>
<td>Steel Works Steel Works soaking pits &amp; Reheat</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Blast Furnace Gas used to reheat and maintain steel temperature</td>
</tr>
<tr>
<td>Brewing</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Low alcohol</td>
</tr>
<tr>
<td>Distilling</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>Unknown response for low power sensor to alcohol</td>
</tr>
<tr>
<td>Heat Treatment (carburising/nitriding)</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Care selecting the detector must be taken depending on the process</td>
</tr>
</tbody>
</table>

**Certification Gas Groups ATEX**
- ATEX IIIC
- ATEX IIIC
- ATEX IIB

**Certification Gas Group U/L**
- ABC & D
- ABC & D
- C&D
Protégé ZM

Zero Maintenance Single Gas Personal Monitor

- No Charging or Calibration Required
- Display Shows Life Remaining, Gas Readings or Both
- Inexpensive, zero maintenance device that will alert the user to potentially toxic environment.
- No charging, no calibrating, no maintenance
- Zero Maintenance monitors let you focus on worker safety instead of focusing on your equipment
- 2 years of continuous operation means your monitors stay working in the field instead of sitting in the shop
- Hibernation Mode provides two years of service, on your schedule
- User determines if the monitors operate continuously 24 hours a day, or rest between jobs
- Protégé ZM displays life remaining, gas reading or both

**Gases Detected:** H2S, O2, CO  
**Sensor Technologies:** electrochemical  
**Run Time:** 2 years; hibernate mode extends life up to one year on CO and H2S  
**Alarms:** 95 dB audible, red LED visual, vibrating  
**Approvals:** ATEX • CE • IECEx • CSA • INMETRO • EAC • IP66/67

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Protégé Multigas

Four Gas Personal Monitor

- Masterdock One-touch Calibration (Accessory)
- One-Button Turn On, Functional Self-Testing and Simple Sensor Replacement
- Small size and profile
- Ergonomic shape, one hand operation

Protégé provides simple, intuitive user operation and is designed to monitor combustible gases, O2, CO, and H2S. Protégé software allows users to set parameters that are specific for their workplace, and has significant data logging capabilities. Automated maintenance features reduce cost and time associated with training and maintenance.

**Gases Detected:** LEL, H2S, O2, CO  
**Sensor Technologies:** electrochemical, catalytic  
**Run Time:** 18 hours without pump, 12 hours with pump  
**Alarms:** 90 dB audible, wide-angle dual red LED alarm bars, vibrating  
**Approvals:** ATEX • CE • IECEx pending • CSA • UL • INMETRO • EMC • IP67
**Gasurveyor 500**

**Gas Standard Portable Monitor**

- Auto Bump and Calibration Station (Accessory)
- Multiple Modes Including: Combustible Gas Indicator/ Confined Space Monitor/Purge/Sweep

Offering highly accurate and reliable instrumentation in an extremely robust, anti-static case, the Gasurveyor 500 Series measures combustible gases (ppm, %LEL, %Vol) in many applications and optionally O2, CO and H2S. Features include configurable operation, auto ranging, internal sample pump and data logging.

- **Gases Detected:** CO, H2S, combustible (ppm, LEL, % Volume), O2
- **Sensor Technologies:** electrochemical, catalytic, semiconductor, thermal conductivity
- **Run Time:** 15 hours 4 'D' size alkaline or 9 hours rechargeable battery pack
- **Alarms:** highly visible LED, typically 85dB audible
- **Approvals:** ATEX • CE • IECEx • CSA • UL

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**Gasurveyor 700**

**Ensuring compliance**

- GPS & tablet softwares
- Leak detection from PPM to Volume gas

Utilising 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 all gas utility applications. Intelligent data-logging functionality together with optional GPS mapping simplifies data gathering. Our cloud based Instrument Management System improves fleet management by providing access to field usage reports, calibration history, investigation mapping and many other bespoke reports; making it easier for our customers’ to demonstrate compliance.

- **Gases Detected:** PPM, O2, CO, H2S
- **Sensor Technologies:** electrochemical, semiconductor, infrared
- **Run Time:** 15 hrs Alkaline, 20 hrs rechargeable
- **Alarms:** highly visible flashing LED, sounder ~ 90 db at 0.3 m
- **Approvals:** ATEX • CE • IECEx • CSA

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**GT**

**1 Instrument, 7 Applications**

- Auto Bump and Calibration Station (Accessory)
- Leak detection from PPM to Volume gas with ultrafast ppm response

GT Series is designed for the gas industry, satisfying all the needs of service technicians within a single unit. Seven modes of operation include: leak test, confined space entry, barhole testing, carbon monoxide, purge, sniffer and pressure leak tightness. Features include data logging, integral flash light and geiger on ppm range.

- **Gases Detected:** O2, CO, H2S, dual tox CO/H2S, methane (ppm, LEL, % Volume), water gauge
- **Sensor Technologies:** electrochemical, catalytic, semiconductor, thermal conductivity, pressure transducer
- **Run Time:** 8 hours: 3 ‘C’ type batteries – LR14 alkaline or rechargeable
- **Alarms:** high visibility LED, 85 dB audible
- **Approvals:** ATEX • CE • IECEx • CSA • UL

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**SHIPSURVEYOR**

Fully MED certified

- Ability to enter up to 300 unique user identified location areas
- Dual mode operation: Confined Space Monitor (CSM) or Combustible Gas Indicator (CGI)

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:** O2, CO, H2S, CO2, methane (ppm, LEL, % Volume)
**Sensor Technologies:** Infrared (IR) technology for inerting / purging operations
**Battery Life:** 20 hours alkaline or 8 hours rechargeable
**Alarms:** Highly visible flashing LED’s on display panel - Sounder in excess of 80dB(A), typically 85db(A) @ 12in.
**Approvals:** ATEX • CE • IECEx • MED

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**OXYGAS 500**

A combination instrument for your Leak and Purging / Inerting operations

- Directly interface with the auto test calibration units
- Integral pump

The Oxygas 500 compliments the Gascoseeker 500 with a similar performance, measuring % LEL and % volume flammable hydrocarbons, but with the addition of oxygen for either gas/air or gas/nitrogen/air purging. The Oxygas 500 has the following additional features: automated zero during start-up, manually selectable purge mode. The Oxygas 500 is easy to use with very simple training, as the operation of the instrument follows the operation of the purge cycle. The rugged design allows the Oxygas 500 to be used in harsh environments. The instrument is also fully compatible with our range of calibration software and equipment.

**Gases Detected:** O2
**Sensor Technologies:** Infrared (IR) technology for inerting / purging operations
**Battery Life:** 15 hours Alkaline or 9 hours rechargeable at 20°C
**Alarms:** indicates gas concentration increase in ppm range via the increased rate of sounder pulse (Oxygas P-500 only)
**Approvals:** CE, ATEX, IECEx, UL

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**BM 25/BM 25W**

Up to 5 Gas Transportable Monitor (with Wireless Option)

- Network up to 30 Wireless Devices (up to 1 km / 62 Mile Line of Sight)
- Intrinsically Safe Trickle Charger For Long-Term Monitoring In Classified Zones

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 of four months or more and is compatible with the MX 40 controller. There are 16 possible wireless channels available to the BM25 so you can have 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:** toxic, combustible, O2, CO2, Isobutylene
**Sensor Technologies:** electrochemical, catalytic, infrared, PID
**Battery Life:** NiMH up to 170 hours operating time, 135 hours in wireless mode
**Alarms:** ultra bright LED beacon visible 360 degrees, 103 dB @ 1 meter, relays
**Approvals:** ATEX • CE • IECEx • CSA • INMETRO • EAC
Data Driven Management
Data Driven Management enables business to utilise real data from their own organisations to shape business and process decisions, without estimation and guesswork. The ability to harness the power of everyday field data to improve business performance ensures that organisations can focus on their own business, leaving the management of Gas Detectors to Tyco Gas & Flame Detection.

flexiCal Plus
Test and Calibration Software

// Automatic or Manual Calibration
// Results Storage
// Instrument History
// Report Generation
// Internet Updates
// Display Real Time Results
// Gas Cylinder Tracking
// Generation of Cal Certificates
// Digital Signatures

FlexiCal Plus is a Windows™ based software package that allows customers to Test and Calibrate GMI’s full range of portable instruments (PS1, PS200, PS500, GT Series, Gasurveyor) to comply with relevant legislation. All GMI portable instruments have two-way communications and the FlexiCal software can be configured to test and calibrate either manually or automatically. The user can specify parameters such as gas type, concentration and pass or fail criteria. Results are stored automatically on a PC or laptop. A test/cal certificate can then be produced after successful completion if required.

flexiCal IMS
Instrument Management System Software

// Enables Remote Fleet Management of Equipment
// Automatic Calibration and Data Collection
// Issue Reminders Automatically When Calibration is Due
// Maintain Calibration Records Securely
// Generate Reports on Instrument Fleet Status

Instrument Management System (IMS) is a Microsoft Windows™ based software package used to automate the management of multiple GMI portable gas detectors. IMS helps ensure that the GMI portable instruments remain usable in field operations for as long as possible, knowing that they are functioning correctly without returning them to the workshop for routine checks. IMS provides System Managers with useful information on instruments including those that are overdue for testing or instruments that have not been successfully tested.
**Introduction to Docking Technology**

To complement the Personal Surveyor and Gas Surveyor product ranges, Tyco 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.

**PS1 Series**

*Calibration Station*

- Simple user interface
- Full bump and Calibration available
- Bump/calibration results storage
- Robust construction

**PS200 Series**

*Calibration Station*

- Simple user interface
- Full bump, calibration and charging options
- Stand-alone, PC and ethernet options
- Robust construction
- Ability to charge instrument

**PS500 Series**

*Calibration Station*

- Simple user interface
- Full bump, calibration and charging options
- Bump/calibration results storage
- Robust construction
- Stand-alone, PC and ethernet options
Protégé ZM
Portable Test Station

- Bump, Calibrate, Program and Hibernate up to four Protégé ZM monitors at once
- Automatically configure monitors during testing
- Intuitive to use with simple two button operation
- Dedicated Pass/Fail LEDs for each test bay report results

Protégé ZM
Stationary Test Station

- Bump, Calibrate, Program and Hibernate up to four Protégé ZM monitors at once
- Automatically configure monitors during testing
- Intuitive to use with simple two button operation
- Dedicated Pass/Fail LEDs for each test bay report results

Protégé
Master Dock

- Fully automated bump and calibration
- One button operation
- 30-second bump test, 2-minute calibration
- Portable with optional battery operation