

Application Brochure

SafePark: Car Park Gas Detection

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International Gas Detectors

Gas Detection for Car Parks

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Less Money

Electricity is expensive, and running a ventilation system all day uses a lot of electricity. However, as the emission levels in a car park vary over the course of a day, constant ventilation is an unnecessary expense. IGD's SafePark Gas Detection System will automatically engage your ventilation fans at the appropriate level when emission levels are breached and reduce ventilation when safe emission levels are established, potentially saving you thousands on electricity, without compromising on safety.

Our 2-Wire Addressable system enables you to interconnect multiple detectors on a single cable highway equipping you with accurate, reliable gas monitoring across the car park. Our Sentinel+™ software also accommodates the addition of various external devices connected directly from the nearest detector, and with SafePark's internal Wi-Fi, cloud-based data acquisitions, and SMS alerts you can remotely access your setup to perform maintenance and download data logs. You can even integrate our components into your system using your existing wiring. All of this means we can significantly cut your installation costs.

Less Effort

We do all the hard work at our end to ensure that your installation is as straightforward as possible. The SafePark Gas Detection System provides you with round-the-clock monitoring and automation of your setup, only alerting you to an issue when your attention is required.

The modular flexibility of all SafePark components means we can provide the perfect gas detection solution for any car park with only three elements. Our intuitive system is easy to address, maintain and service putting you in complete control of your gas detection and ventilation systems.



Total Peace of Mind

A car park ventilation system must be compliant with the following standards:

- EN 50545-1
- IEC 60079-29-1

But knowing everything about the relevant safety standards isn't your job, it's ours. We hold all appropriate accreditations and with an IGD setup, you can rest assured that your gas detection system is reliable, fully compliant, and backed by over a century of expertise and IGD's 10-year warranty.

At IGD we've been dedicated to the development of pioneering gas detection equipment since our incorporation over a century ago. With our unparalleled industry knowledge, experience and commitment to innovation, you can rely on IGD to provide you with a gas detection system that will save you money, and keep you safe.

What are the Hazards?

Implementing appropriate car park gas detection isn't just about saving you money and protecting the environment.

Car parks present a variety of gas hazards, which can pose serious health risks, necessitating accurate, reliable monitoring and management.

Carbon Monoxide (CO)

Carbon monoxide (CO) is almost always the primary gas hazard in a car park. CO is a highly poisonous gas that's both colourless and odourless, which only makes it more dangerous. It is typically a product of incomplete combustion and the main emission from vehicle exhausts. Over time, even low-level exposure can lead to long-term health implications, so low-level, accurate CO detection is a necessity in any car park.



Nitrogen Dioxide & Nitric Oxide

Nitrogen dioxide (NO₂) and nitric oxide (NO) are poisonous gases typically produced by diesel vehicles. This means that NO₂ and NO are a common hazard in underground car parks that primarily operate as "goods delivery points" and have a high volume of HGVs and other large delivery vehicles. While it's non-flammable at room temperature it is an oxidiser that contributes to a flammable atmosphere.



Flammables

In some car parks flammable gases may also pose a threat. Lithium-ion batteries in electric vehicles produce hydrogen (H₂), a highly flammable gas with a large ignition range. In some countries, the prevalence of LPG fuelling stations means that many vehicles will also emit LPGs which, without proper management, can contribute to a flammable atmosphere.



Car Park Gas Detection Recommended Products



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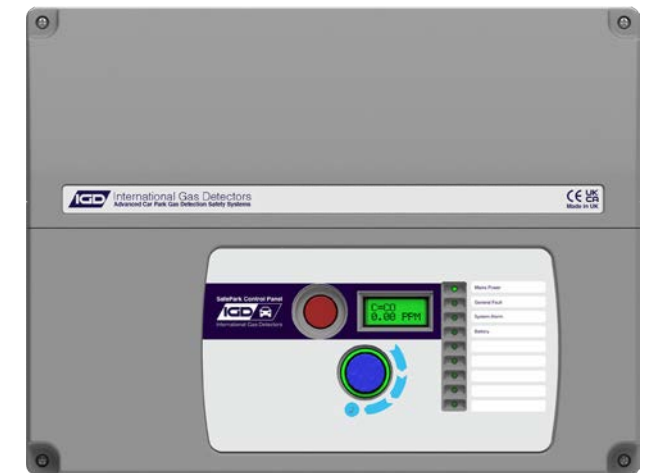
All our fixed devices are supplied with a 10-Year warranty.

See terms and conditions.

SafePark Detector 

SafePark Controller 

SafePark Control Panel 



Key Features

- + Detect over 700 gases and vapours including CO, NO, NO₂ and C_xH_x
- + Sentinel+™ communication
- + 2-Wire Addressable technology
- + Leading long-life sensor technology
- + Unique labyrinth sensor protection
- + Plug-and-Play auto-change sensors
- + Repurpose existing wiring for up to 70% cost savings
- + Enhanced ABS housing design
- + Standard 2-gang mount

Key Features

- + Up to 70% cheaper installation on our 2-Wire Addressable system
- + Up to 128 devices as standard (gas detectors, ancillary and 3rd party)
- + Intuitive control of your entire system
- + DIN rail mounting
- + Available in both single and 6 port models
- + Compatible with optional 15" HMI display
- + Service and report apps and cloud-based data acquisition
- + Internal Wi-Fi for remote servicing
- + SMS and email alerts
- + Repurpose your existing wiring
- + BACnet/Modbus connectivity
- + Best suited to system upgrades

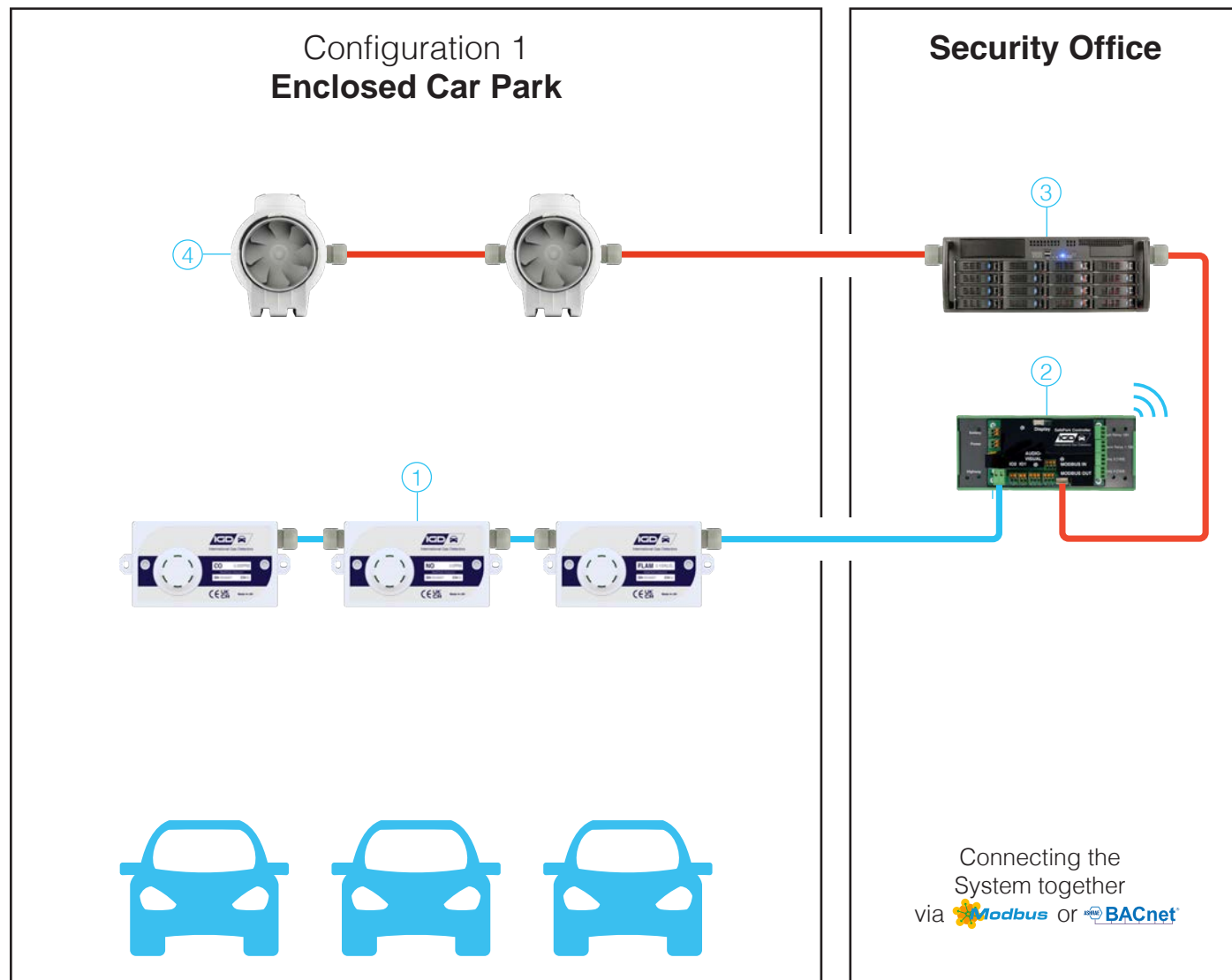
Key Features

- + Up to 80% cheaper installation on our 2-Wire Addressable system
- + Up to 128 devices as standard (gas detectors, ancillary and 3rd party)
- + Intuitive control of your entire system
- + 2x8 LCD display
- + Service and report apps and cloud-based data acquisition
- + Internal Wi-Fi for remote servicing
- + SMS and email alerts
- + Assignable LEDs and relays
- + Repurpose your existing wiring
- + BACnet/Modbus connectivity
- + Best suited to HVAC installers

Suggested System SafePark Control Panel

The configuration of a SafePark system depends on the existing infrastructure and Building Management Systems, there are two possible configurations.

In configuration 1, The SafePark Detectors ① are linked in series across the application, feeding information into The SafePark Controller ②, which then communicates with the existing BMS system ③ to control the ventilation ④.



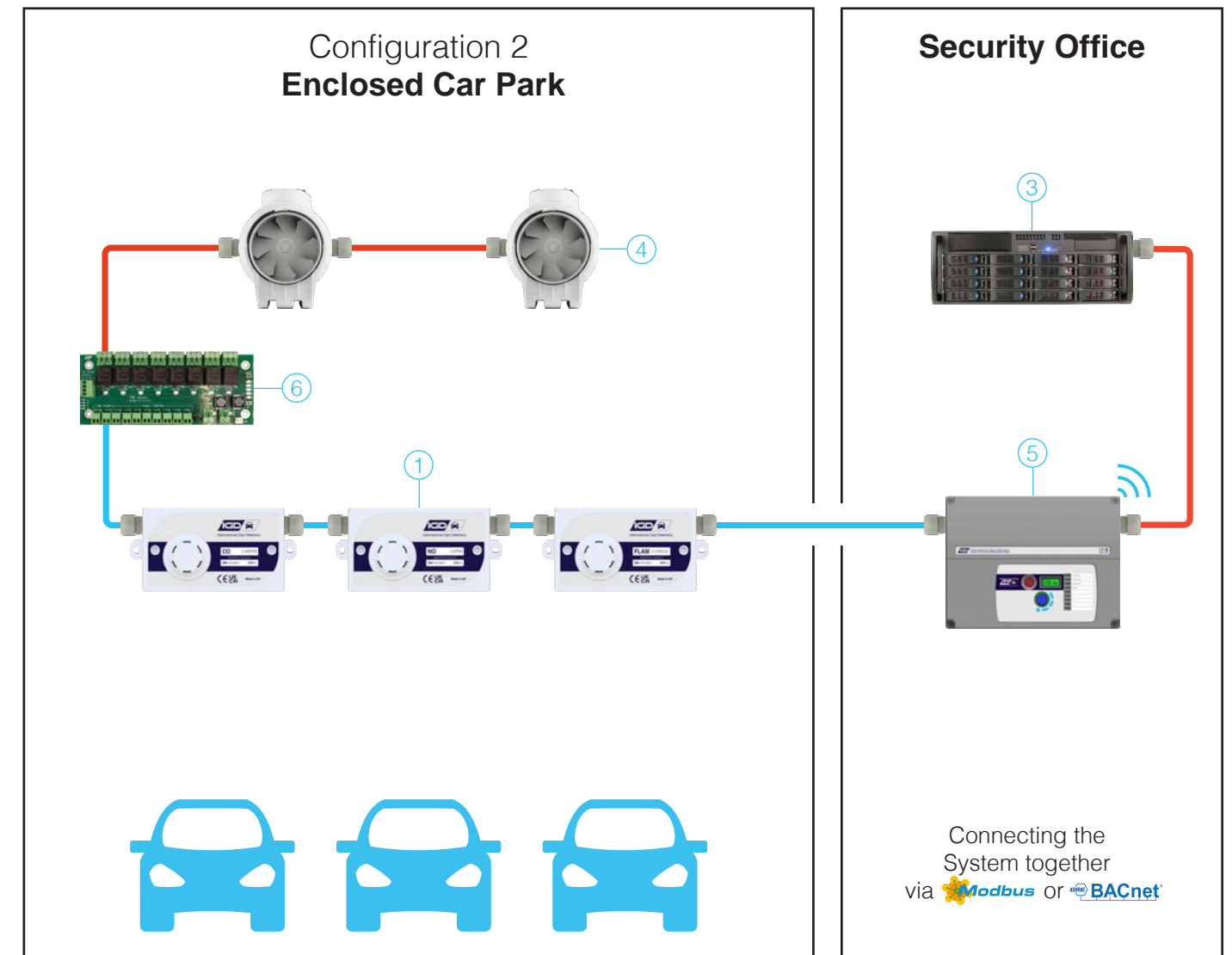
Suggested System SafePark Controller

In configuration 2, The SafePark Control Panel ⑤ operates as part of a standalone system. The SafePark Control Panel takes readings from The SafePark Detectors ①, and feeds this information into one of our I/O cards ⑥ which in turn controls the ventilation.

SafePark incorporates a non-latching system, which means that if there is a significant enough build-up of gas to trigger the ventilation ④ or any other

programmed alarms, the system will automatically reset itself once safe gas levels have been restored, meaning that you will only be alerted to an issue if your attention is required.

The simplicity of SafePark products makes addressing, maintaining, and upgrading your system easy, and the flexibility of the range means that we can provide a scalable solution for any car park.



Car Park Gas Detection Detector Placement and Ranges

Placement of Gas Detectors

A gas detector can provide coverage for an area of up to 75m² based on a 5m radius of operation.

There are many factors affecting this including: the geometry of a room, equipment in the area, gas characteristics, ventilation and airflow. IGD will be on hand to support you from your survey, to your design and installation, to ensure the best possible result.



Lighter than Air

Lighter than air gases, detectors should be placed at the highest ceiling point. For example Hydrogen gas will require a ceiling-height detector.



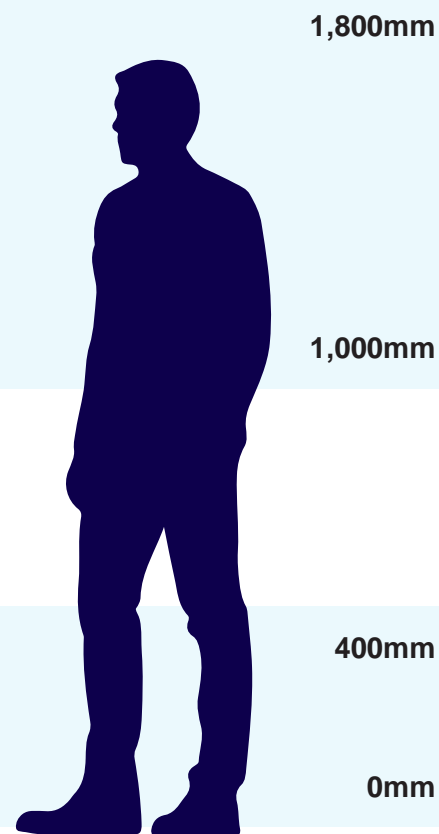
Life Safety Zone

Carbon Monoxide, Carbon Dioxide, Nitric Oxide and Nitrogen Dioxide will accumulate at this level.



Heavier than Air

Gases that are heavier than air will require low-level gas detectors. Such as Carbon Dioxide and Liquefied Petroleum Gas.



Industry-Leading Sensor Technology

Over 100 years of innovation have positioned IGD as the Detectably Better choice for car park gas detection solutions.

Our in-house team of experts design and manufacture our products to provide you with the highest quality safety equipment and total peace of mind.

We've developed a huge range of sensor technologies to guarantee the perfect gas detection solution for any application. The SafePark series makes use of our pioneering MK8 Pellistor and Electrochemical sensors.

MK8 Pellistor



Our MK8 Pellistor monitors for flammable gases (H₂ and LPG) and offers ultimate protection from inhibiting materials, heat and humidity. Unmatched poison resistance protects our sensors from toxic gases, providing a long operational life and minimal drift for continuous accuracy.

Electrochemical

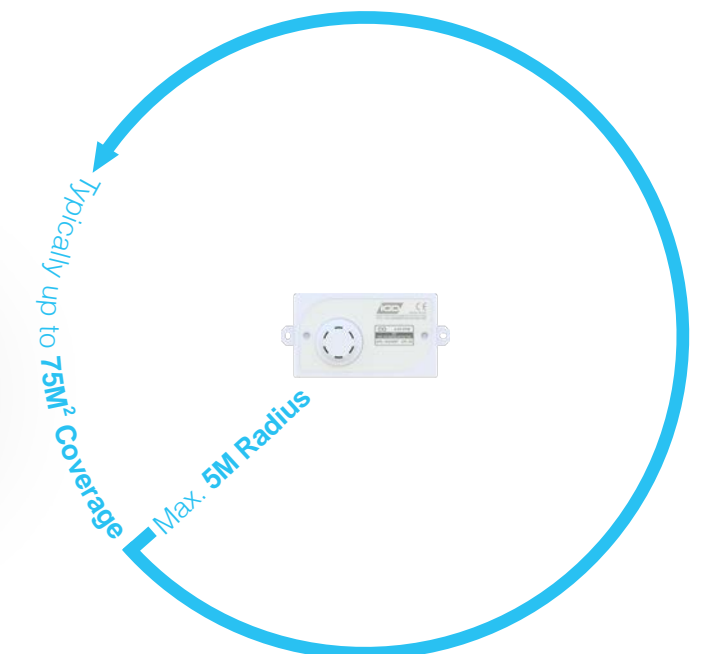


Our electrochemical sensor provides parts per million (PPM) monitoring for CO, NO₂ and NO. Electrochemical sensors detect gas leaks quickly and accurately, allowing for the precision management of your ventilation systems.

Range of Gas Detectors

SafePark Detectors offer industry leading, accurate gas monitoring across a 5m radius, but most car parks are so large that providing gas detection across the entire application could require hundreds of detectors.

The solution is to implement targeted detection in areas where gas hazards are likely to pool and build up. These areas include dead ends, places where traffic tends to idle, and entrances and exits. Loading bays are another problem area in car parks that have them. Placing detectors in these areas is the best way to ensure site safety, and the appropriate implementation of your ventilation.





Gas Detection Service

All gas detection systems, fixed or portable, must be regularly maintained, calibrated and tested to ensure correct operating and compliance.

The service and maintenance we offer is carried out in accordance with BS EN 60079-17 and UK PUWER.

IGD offer a wide range of competitive maintenance services that can be tailored to suit your specific requirements:

- Gas detection system installation by our in-house NICEIC approved and CompEx certified by our installation teams
- Gas detection system commissioning by our trained & competent engineers
- Flexible fixed & portable gas detection service contracts

The flexibility of our IGD Aftercare+ team will ensure the fulfilment of all site requirements. This could involve your installation team, the provision of turnkey project solutions, comprehensive training or ongoing maintenance contracts.

We pride ourselves on providing Detectably Better Aftercare.

IGD Training


At IGD our work doesn't end with the installation of your system.

We provide support to our clients through versatile training packages because we believe the best way to limit the threat of gas hazards is through education. That's why our team provide training, not only on the installation and maintenance of your system, but also on the fundamentals of gas safety.

The IGD Online Training Academy is completely free and externally approved by the training body CPD UK, and our Aftercare+ Team will always be on hand if you need further support.

With a SafePark system and the unrivalled experience of our team of experts you can relax in the knowledge that you're protected by a century of innovation, safety and gas detection expertise.

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