

# Fixed head gas detectors

# Fixed – Detector head range overview

Market Price ↑



**Xgard**

Range of Detector heads

**Analog 4-20mA**



**Xgard IR**  
Infra red Xgard



**Flamgard+**  
Flammable gas detector head with display



**Txgard / Txgard IS**  
Toxic gas detector heads with display



**Xgard Bright**  
Addressable detector with display



**Xgard IQ**  
Intelligent detector and transmitter



**IRmax**  
Infra red Hydrocarbon detector

**Non intrusive / Display**

**SIL certification.  
Remote sensor / display**

Capability →

# Xgard range



Range of fixed gas detectors with wide range of sensor & gas detection options that provide low cost of ownership with rugged, reliable and highly versatile

The Xgard range is a comprehensive selection of fixed point gas detectors that meet the diverse requirements for gas detection in industries throughout the world. This includes many water treatment, oil and gas, power, research facility and manufacturing installations.

Xgard offers three different sensor concepts so you can choose exactly what you need for your site. Xgard is available in flameproof, intrinsically safe, or safe area formats for use in all environments, whatever the classification.

Features	
Low cost of ownership	Xgard detectors are designed for easy installation and maintenance to keep costs down. The three junction box options are all designed to make replacement of sensors and sinters extremely simple. Spare sensors simply plug-in. Many spare parts are common to all Xgard models, which keeps spares holding requirements to a minimum.
Wide range of sensors	Poison resistant pellistors, for all flammable detection needs including hydrocarbons, hydrogen, ammonia, jet fuel, leaded petrol and vapours containing halogens. Electrochemical sensors are used to detect a vast range of toxic gases and oxygen. Thermal conductivity sensors are available to monitor % volume concentrations of gases.
Flexible installation options	Xgard is designed for either wall or ceiling mounting without the need for additional brackets. Xgard can accommodate M20, 1/2" NPT or 3/4" NPT cable glands to suit all site requirements. High temperature models are available for hot environments (up to 150°C). Accessories are available for duct mounting and sampling applications as well as remote gassing for simple sensor checking.
Rugged and reliable	Xgard is manufactured using a choice of three materials: glass reinforced nylon, highly durable aluminium with a tough polyester coating, or 316 stainless steel for ultimate corrosion resistance. All versions are designed to operate even in the harshest conditions. Spray deflectors and weatherproof caps are available for use in areas subject to regular wash-downs, or offshore environments. All models have been validated to the functional safety standard IEC 61508 (SIL 1 to SIL 3).

Available gases	NH3	AsH3	Br2	CO	Cl2	B2H6	C2H4O	F2	O3	H2	HCl	HCl	HF	H2S	NO	Contact us for more gas / sensor options
	PH3	NH3	SO2	VOC	O2	C4H10	C4H8	CO2	C2H5OH	C2H4	C6H14	LPG	CH4	NO2	O3	

# Flamgard+ / Txgard+ / Txgard-IS+

Flamgard Plus



Flamgard Plus is a Flameproof (Ex d), ATEX, IECEx and UL certified flammable gas detector, which uses poison-resistant pellistors to detect explosive levels of hydrocarbons, hydrogen and other flammable gases and vapours, including aviation fuel and leaded petrol vapours.

TXgard Plus



TXgard Plus is a Flameproof (Ex d), ATEX, IECEx and UL certified toxic or oxygen gas detector with local LCD display. A choice of sensors are available enabling use in a wide range of applications, including water treatment, oil and gas exploration, chemical plants and steel production.

TXgard-IS+



TXgard-IS+ is an Intrinsically Safe (I.S.), 2-wire, toxic and oxygen gas detector with local LCD display. A wide choice of sensors is available for use in a variety of applications. TXgard-IS+ is ATEX and IECEx certified for use in Zone 0, 1 or 2 hazardous areas, and also UL and cUL certified for use in Division 1 or 2 hazardous areas.

Flamgard plus: Flameproof (Exd) flammable gas detector

Txgard Plus: (Ex d), ATEX, IECEx and UL certified toxic or oxygen gas detector

Txgard-IS+ : Intrinsically Safe (I.S.) toxic and oxygen gas detector with local LCD display

Toxic and oxygen gas detectors with display for non-intrusive calibration

## Non-intrusive calibration

- Calibration can be performed locally without the need for hot work permits – minimises operational down-time
- Local display and buttons enable calibration without opening the junction box

## Flexible output options

- 4-20mA current sink or source – works with a wide selection of control panels
- 3 wire format
- Optional relays for alarm and fault – can be used for switching local alarms

## Rugged and reliable

- Constructed using marine-grade aluminium with a stainless steel sensor housing – proven track record for operation in the harshest environments
- Ingress protection to IP65 as standard

## Low cost of ownership

- Non-intrusive one man calibration – easy to operate and maintain
- Long life sensors – keeps interruption to on-site activity to a minimum
- Simple parts replacement

Available  
gases

Flamgard+  
Txgard+  
Txgard-IS+

CH4	H2	LPG	C3H8	C4H10									
CO	H2S	O2											
NH3	CO	Cl2	ClO2	H2	HCl	HCN	HF	H2S	O2	O3	SO2		

Contact us for more gas /  
sensor options

# Xgard Bright



Xgard Bright is a versatile platform offering flammable and toxic gas detection and oxygen monitoring, while providing ease of operation and reduced installation costs.

Lowering the cost of installation, the 3-wire addressable implementation drastically reduces cabling requirements. The large OLED display allows users to easily work with Xgard Bright during install, calibration and routine maintenance without the need to open the housing.

One stop solution for flammable, toxic and Oxygen gas detection with additional OLED display window and addressable capability.

## Features

Versatile sensor option	Supports flammable, toxic, oxygen, sensor Explosion proof housing IP65 or IP66 rating (with weatherproof cap)
Ease of installation and operation	Plug in type terminal blocks for easy wiring Choice of M20 or 1/2"NPT conduit connection Configuring via magnetic key Non-intrusive calibration without removing access MODBUS or Hart communication for remote access
Compact size	Low power requirement (-3W max)
Non-intrusive calibration	Zero and calibration functions (plus set-up, tests and adjustments) are performed via the display using the magnetic wand, without needing to open the housing reducing the need for a hot-work permit.
OLED display	The brightly illuminated "organic light emitting diode" display clearly indicates the gas level and units as well as providing comprehensive menus for set-up and diagnosis. In low ambient light conditions, such as a dark room, the OLED display achieves a much higher contrast ratio than an LCD used on conventional gas detectors.

## Lowering the cost of installation and maintenance

Addressable communications	Xgard Bright detectors can be connected on an addressable network using RS-485 Modbus. This option significantly reduces cable and installation costs, whilst increasing the flexibility and functionality of the wider system.
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Available  
gases

CH4	O2	H2S	CO
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Contact us for more gas /  
sensor options

# Xgard IQ



XgardIQ, our most intelligent fixed-point gas detector, increases safety by minimising the time operators must spend hazardous areas. (SIL-2 certified)

This versatile transmitter and gas detector has a range of features that protect engineers and support facilities managers of oil, gas, chemical & petrochemical plants to name a few. Available fitted with a variety of flammable, toxic or oxygen gas sensors. (including High temp H2S +70°C)

### Easy to use

Positive Safety indicator	Status checking at a glance and from a distance.
OLED display	Bright, clear display indicates gas level even in dark locations.
Buttons	Functions performed via buttons, without the need for special magnets or tools.
Event log	Clear history of detector use.

### Simple installation and maintenance

Hot-swap sensor modules	Easily removed or replaced using the tool provided without requiring hot work permit or special tools.
Auto-sense function	Automatically detects whether the control system is 4-20mA current sink or source, saving time and faults.
Auto-configure function	Detects when sensor module is plugged in and uploads the appropriate gas type, range, units and alarm levels.
Smart Bump and Speedy Bump test	Sensor health and response verified quickly and easily following simple on-screen instructions. Detector automatically provides a reminder when next bump test is due.
Calibration due warning	Automatically reminds the user when calibration is due to ensure sensors remain accurate at all times.
Sensor range selection	Users can set the full-scale range of the sensor via the display menu according to site or specific location requirements.

Available gases

NH3	CO	HF	H2S	O2	SO2	Cl2	O3
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Contact us for more gas / sensor options



IRmax is an ultra-compact infrared (IR) gas detector that delivers rapid, fail-safe detection of hydrocarbon gases and vapours. The IRmax gas detection system offers the choice of a detector only, a local gas/status display, a remote gas/status display or non-intrusive calibration via an I.S. calibration tool or hand-held HART communicator.

IRmax is a compact, low power and highly rugged infrared gas detector, that delivers rapid, fail safe detection of methane, butane, propane and many other hydrocarbon gases and vapours. (SIL-2 certified)

### Simple to install

Compact size	Requires less space, effort and time to install
Various installation options	Can be wall mounted, fitted to a 50mm (2 inch) pipe or connected to an auxiliary junction box using a choice of mounting accessories
Industry standard 4-20mA output	IRmax is compatible with virtually any control system
Options for HART communications and RS-485 Modbus	

### Easy maintenance

Remote non-intrusive calibration	The Remote Display can be mounted up to 30 metres from the IRmax and test gas can be applied without requiring direct access to the detector
Hand-held Intrinsically Safe (I.S) calibrator	IRmax detectors fitted with an I.S barrier module can be checked and calibrated using an I.S handheld display
STAY-CLIR optics	Prevents condensation on optical components

### Low cost of ownership

Low power	IRmax only consumes 1W of power, enabling small power supplies and battery back up systems to be used
Automatic optical obscuration monitoring	Minimal routine maintenance keeps costs to a minimum
Annual proof-test interval	

Available  
gases

CH4	C3H6O	C4H10	C4H6	C6H12	C2H6	C2H5OH	C2H4	CH3COOH	C6H14	C6H12	C3H8O	LPG	CH3OH
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Contact us for more gas /  
sensor options

# Control panels



# Fixed - Controller range overview

Market Price ↑



**Gasflag**

Single channel control panel



**Gasmaster**

1-4 channel control panel



**Vortex**

1-12 channel control panel



**GM16**

Addressable 1-16 channel control panel



**Gasmonitor Plus**

1-16 Modular control panel



**GM64**

Addressable 1-64 channel control panel



**Vortex Flameproof**

1-12 channel FP control panel

# Gasflag



Single Channel Control Panel  
The cost-effective solution to simple gas detection problems

Gasflag is the cost-effective solution to monitoring a single flammable, toxic or oxygen gas detector. Ideal for use in applications such as filling stations, swimming pool plant rooms and boiler rooms; Gasflag provides clear indication of gas hazards in a simple to use package.

Easy and safe to use	Bright intuitive alarm display Loud internal audible alarm Clear system integrity indication
No hidden costs	Integral alarm outputs Simple installation Minimum maintenance One button operation
Fully flexible	Accepts industry standard 4-20 mA inputs Multiple units can be daisy chained Variable alarm configurations

# Gasmaster



Gasmaster is a compact, versatile and powerful gas detection control panel that combines simple operation with an extensive array of input and output functions.

Gasmaster provides all the information you need about your gas and fire detectors at a glance. The large multi-lingual display shows gas levels from all detectors simultaneously and enables system adjustment and testing using buttons on the front panel. Gasmaster can operate 'stand-alone' or interface with any alarm devices and control systems using a selection of outputs.

1-4 Channel Gas Detection Control Panel providing simultaneous readings for all live channels

## Large display

All gas levels are displayed simultaneously	Enables full systems status check at a glance
Alarm messages can be customised to indicate the name or location of any detector in alarm	
The LCD can be set to display in many languages	

## User friendly

Menu system is intuitive and easy to use	Enables configuration changes to be made easily
All functions, from day-to-day operation to re-calibration, can be carried out from the front panel	Routine testing can be performed rapidly
Event log feature	Enables system fault and alarm history to be viewed

## Versatile input and output features

Provides analogue, relay and Modbus outputs	Facilitating communication around the site
Flexibility	Gasmaster can monitor up to four detectors in virtually any combination of gas detectors, fire zones or Environmental Sampling Unit*
	Software enables re-configuration and event log upload in an instant**
Two levels of independent alarm per channel	Can be configured to suit site requirements
Remote inhibit and reset facilities	Enables control from any point on your site
Compatible with 4-20mA or mV pellistor type gas detectors	mV pellistor detectors reduce system purchase and maintenance costs



Gas Detection Control Panels 1 to 12 Channels that can be customised to meet your site requirements, however complex, without the need for extensive cabling.

Vortex offers all the flexibility you will need while still being simple to operate. All the day to day operations can be completed via push buttons on the front panel.

With up to 12 channels\*, including up to 3 for fire, Vortex can be customised to meet your site requirements, however complex, without the need for extensive cabling.

### Channels and displays

1 to 12 channels (including 3 for fire)	Up to 12 devices can be monitored by reviewing just one control panel – saving time and manpower
Each channel has 1 fault level and 3 alarm levels which can be combined in any pattern to trigger up to 32 output relays.	Flexibility built in; initially configured to suit your operational needs, then channels/alarms are easily customised by you if requirements change
Can be factory set to your requirements. Then when in situ, can easily be configured to suit your requirements using Panels Pro software.	
Push buttons on front display	Day to day operations are easily undertaken
LED display panel lights	Faults are easily seen and whole system can be checked at a glance

### Installation and maintenance

Modbus compatibility	No extensive cabling required; cable connections within the unit are easy
Space within units for access to cable terminals	
Uses industry standard communication links	Simple to integrate into existing control systems
Any adjustments are performed electronically	Minimal maintenance – no drift from adjustable potentiometers
Separate zones can be individually inhibited	You can work on specific areas without affecting the rest of the system
Modular construction	Replacement parts if required just plug straight in

# Gasmonitor plus



Gasmonitor Plus is Crowcon's flexible 19" rack-based control system. This microprocessor-controlled unit is used throughout the world, both onshore and offshore. Gasmonitor Plus can monitor up to 16 gas detectors or 32 fire zones per rack. Racks can be supplied separately or built into wall mounting or floor standing enclosures.

Gasmonitor Plus is our flexible microprocessor controlled system designed with a modular approach, so you get exactly what you want.

## Features

Fixed systems for gas and fire monitoring	Gasmonitor Plus is our flexible microprocessor-controlled system designed with a modular approach, so you get exactly what you want. Used throughout the world, both on and offshore, Gasmonitor Plus provides the cost-effective solution to your system requirements. Gasmonitor Plus, the gas and fire control system you can trust.
Simple to use	Gasmonitor Plus offers flexibility while still providing simple operation. All the day to day functions are accessible via push buttons on the front panel. As well as a rolling display, indicating the channel currently monitored, each channel has a bar graph display. This unique bar graph format is ranged to indicate readings below the first alarm setting, providing an instantaneous representation of the gas concentration on every detector. Common alarm LEDs on the display card and individual alarms on the panel only light when a hazard or fault is detected. This means the whole rack status can be checked at a glance.
Flexible architecture	Each channel has three levels of alarm as well as a dedicated analogue output, set as 4-20 mA as standard. Optional relay modules can interface to the panel to provide up to a total of 84 output relays per rack. Sixteen of these relays can be configured/voted from a combination of the three levels of alarm per channel. The RS232 digital interface provides connectivity with PC for configuration and datalog upload. Each rack is uniquely addressable, making multi-drop architectures possible. This cuts down on configuration.
Proven in-use	Gasmonitor Plus is a microprocessor-based expandable control system, which can be multiplied to offer unlimited channels and outputs. Its modular construction provides ultimate customisation capacity with minimum wiring.

# GM controllers



Simultaneous channel and alarm display via colour LCD screen for complete visibility and control over all live channels in system setup directly from non-intrusive controller display panel or remotely with direct to webpage live feed communication functionality on any device with internet access.

Crowcon's new range of addressable digital and 4-20ma analog controllers are modular, flexible, easy to configure and user friendly

## Features

### Modular design build

Select how controller is configured  
Choose the configuration for your application:  
Select how many channel inputs are required  
Channel input communication type (MA, MV or Addressable):  
Select how many relay outputs are required  
Reduce complexity and cost by only including what is required for your application

### Multiple display options

Display all active channels on the same screen  
Ability to combine channels into zones and view up to 8 zones simultaneously on one screen  
Trends screens allows view of last 24 hours or last 30-minute gas readings (current, max, min and average)

### Multiple communications

4-20mA analog, RS-485 MODBUS and HART enabled communications as standard

3 controller options : 1-16 channel (GM16) 1-64 channel (GM64) 1-128 channel (GM128)  
Analog 4-20mA 2/3 wire current sink or source & Digital RS-485 MODBUS addressable communications



Crowcon HMI is a touchscreen controller display mimic that provides remote visibility from one point, with additional channel reading data and functionality over standard controller panel which improves efficiency and safety for operators in potentially hazardous environments.

HMI Centralised Visibility of Multiple Controllers  
View gas concentration, alarms, fault and location details from a single screen

Minimise the time operators spend in hazardous areas.

HMI is a Human Machine Interface which offers remote monitoring of up to 6 Vortex (72 detectors) or up to 10 Gasmaster Controllers (40 detectors) from one panel. HMI delivers advantages aimed at improving service, maintenance and system visibility for existing or new installations.

HMI employs license activated software which can be operated from a dedicated panel.

### Capability

Monitor up to 6 Vortex panels or 10 Gasmasters

Simultaneous display showing:

- Gas concentration and name
- Inhibit status
- Sensor integrity
- Detector settings and location

Enhanced functionality:

- Alarm log
- Over-exposure registration
- Event log and reporting
- Password access restrictions
- Response testing



Home screen



Detector screen



Configuration screen



Trend screen

Remote visibility and functionality of Crowcon Gasmaster and Vortex controllers.  
New installations and can be retrofitted to existing installations including Gasmaster and Vortex controllers

# Sample systems



A sample system uses a means of draw technique to bring an air sample from a remote point to a gas detector. There are various configurations that can be tailored, built and installed to meet demands of the application.

Sample system can provide a solution to frequent sensor failure or reduce downtime to service or maintain gas detection system in hazardous environment

Sample system are used in applications where environment is particularly hazardous which can result in restricted access for operator or where sensor functions incorrectly



**Safeguard your employees**



**Prevent operational downtime**



**Ensure reliable, cost-effective gas detection**

Bespoke to application sample draw system that reduces risk of premature sensor failure and operational downtime



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