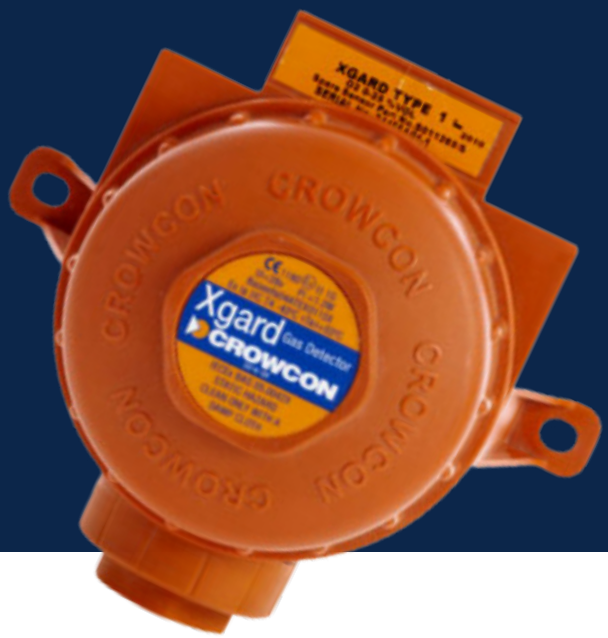
FIXED SYSTEMS

XGARD

Versatile Fixed Gas Detector with Flexible Installation Options.

A comprehensive selection of fixed-point gas detectors, meeting global industry needs for flammable, toxic gas, and oxygen detection.



Xgard offers three distinct sensor concepts, so you can choose exactly what you need for your site. Available in flameproof, intrinsically safe, or safe area formats, Xgard is designed for use in any environment, regardless of classification.

FEATURES

Low Cost of Ownership

- Xgard detectors are designed for easy installation and maintenance to reduce costs.
- Three junction box options simplify sensor and sinter replacement.
- Spare sensors plug in easily for quick replacements.
- Many spare parts are compatible across all Xgard models, minimising spare holding requirements.

Wide Range of Sensors

- Poison-resistant pellistors cater to all flammable detection needs, including hydrocarbons, hydrogen, ammonia, jet fuel, leaded petrol, and halogen-containing vapors.
- Electrochemical sensors detect a wide range of toxic gases and oxygen.
- Thermal conductivity sensors monitor % volume concentrations of gases.

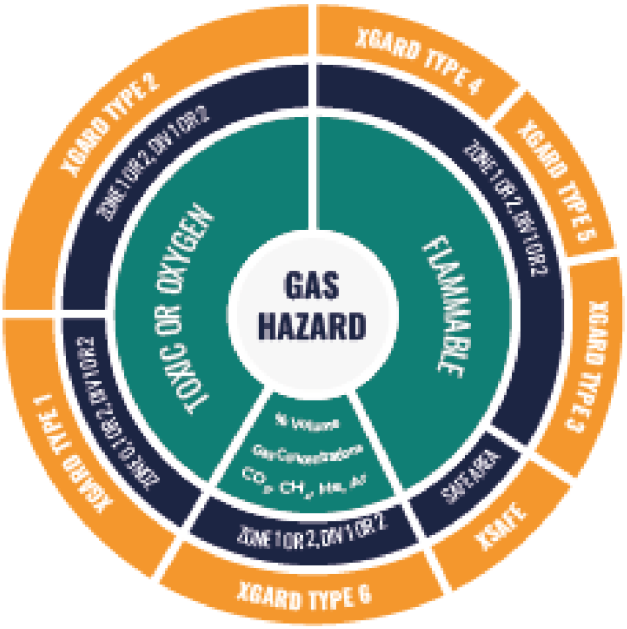
Flexible Installation Options

- Xgard is designed for easy wall or ceiling mounting without additional brackets.
- Accommodates M20, 1/2” NPT, or 3/4” NPT cable glands to meet all site requirements.
- High-temperature models are available for environments up to 150°C.
- Accessories are offered for duct mounting, sampling applications, and remote gassing for simple sensor checking.

Rugged and Reliable

- Xgard is manufactured from three material options: glass reinforced nylon, durable aluminum with a tough polyester coating, or 316 stainless steel for superior corrosion resistance.
- All versions are designed to perform reliably in the harshest conditions.
- Spray deflectors and weatherproof caps are available for use in wash-down or offshore environments.
- All models are validated to the functional safety standard IEC 61508 (SIL 1 to SIL 3).

THE XGARD RANGE



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DETECTING GAS. SAVING LIVES.

GASES & RANGES

GAS	LTEL (PPM) LEL (% VOL)	STEL UEL (% VOL)	RANGE: TYPE 1	RANGE: TYPE 2	RANGE: TYPE 3, 4, 5 & XSAFE	RANGE: TYPE 6
Acetylene (C_2H_2)	2.3	100	-	-	0-100%* LEL	-
Ammonia (NH_3)	25 15	35 33.6	50, 100, 250, 500, 1000 ppm	-	0-25%* LEL	-
Argon (Ar)	-	-	-	-	-	Contact Crowcon
Arsine (AsH_3)	0.05	-	1 ppm	-	-	-
Bromine (Br_2)	0.1	0.2	3 ppm	-	-	-
Butane (C_4H_{10})	1.4	9.3	-	-	0-100%* LEL*	-
Carbon dioxide (CO_2)	5000 (0.5% Vol)	5000 (1.5% Vol)	-	-	-	Contact Crowcon
Carbon monoxide (CO)	30	200	50, 100, 200, 250, 500, 1000, 2000 ppm	50, 100, 200, 250, 500, 1000, 2000 ppm	-	-
Chlorine (Cl_2)	-	0.5	3, 5, 10, 20, 50, 100 ppm	-	-	-
Chlorine Dioxide (ClO_2)	0.1	0.3	1 ppm	-	-	-
Diborane (B_2H_6)	0.1	-	1 ppm	-	-	-
Ethane (C_2H_6)	2.4	15.5	-	-	0-100%* LEL	-
Ethylene (C_2H_4)	2.3	36	-	-	0-100%* LEL	-
Ethylene oxide (C_2H_4O)	5	-	10, 50, 100 ppm	-	-	-
Fluorine (F_2)	1	1	1 ppm	-	-	-
Germane (GeH_4)	0.2	0.6	2 ppm	-	-	-
Helium (He)	-	-	-	-	-	Contact Crowcon
Hydrogen (H_2)	4	77	200, 2000 ppm	200, 2000 ppm 100% LEL	0- 100%* LEL 50% LEL, 100% LEL	0-5%, 10%, 50% vv (in air) 0-20%, 25%, 30%, 50% vv (H_2 in N_2)
Hydrogen chloride (HCl)	1	5	10, 25 ppm	-	-	-
Hydrogen cyanide (HCN)	-	10	25 ppm	-	-	-
Hydrogen fluoride (HF)	1.8	3	10 ppm	-	-	-
Hydrogen sulphide (H_2S)	5	10	5, 10, 20, 25, 50, 100, 200, 250, 300, 1000 ppm	5, 10, 20, 25, 50, 100, 200 ppm	-	-
LPG	2	10	-	-	0- 100% LEL	-
Methane (CH_4)	4.4	17	-	-	0- 100% LEL	-
Nitric Oxide (NO)	5*[1]	5*[1]	25, 50, 100 ppm	-	-	-
Nitrogen dioxide (NO_2)	1*[1]	1*[1]	10, 50, 100 ppm	-	-	-
Ozone (O_3)	-	0.2	1 ppm	-	-	-
Oxygen (O_2)	-	-	25% Vol	25% Vol	-	-
Pentane (C_5H_{12})	1.1 600 ppm	8.7 1800 ppm	-	-	0- 100%* LEL	-
Petrol vapour	1.4	6	-	-	0- 100%* LEL	-
Phosgene ($COCl_2$)	0.02	0.06	1 ppm	-	-	-
Phosphine (PH_3)	0.1	0.2	1 ppm	-	-	-
Propane (C_3H_8)	1.7	10.9	-	-	0- 100%* LEL	-
Silane (SiH_4)	0.5	1	1 ppm	-	-	-
Sulphur Dioxide (SO_2)	1*[1]	1*[1]	10, 20, 50, 100, 250 ppm	-	-	-
Vinyl chloride (VCM) (CH_2= CHCl)	3.6 3	33 -	-	-	0- 100%* LEL	-
Volatile organics (VO)*[2]	-	-	0-100 ppm *[2]	-	-	-

* Ranges not available for Xsafe or Xgard Type 4
LTEL & STEL figures are derived from the UK HSE document: EH40 2011
Alternative thresholds may apply in countries outside of the UK
LEL figures derived from EN60079-20-1: 2010

*1 Current limits advised in the UK
*2 Nominal 0-100ppm range with Carbon Monoxide (CO).
Other sensors and ranges may be available, please contact Crowcon.

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SPECIFICATIONS

	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	XSAFE
SIZE	156 x 166 x 111mm (6.1 x 6.5 x 4.3 inches)			195 x 166 x 111mm (7.6 x 6.5 x 4.3 inches)	156 x 166 x 111mm (6.1 x 6.5 x 4.3 inches)		
WEIGHT	Nylon: 0.5kg (1.1 lbs) Alloy: 1kg (2.2 lbs) 316 S/S: 3.1kg (6.8 lbs)	Aluminium: 1kg (2.2 lbs) Stainless steel: 3.1kg (6.8lbs)		1.5kg (3.3 lbs)	Aluminium: 1kg (2.2 lbs) Stainless steel: 3.1kg (6.8lbs)		1kg (2.2 lbs)
ENCLOSURE MATERIAL	ATEX certified: Glass reinforced nylon or 316 S/S UL Certified: Aluminium or 316 S/S	Aluminium or 316 Stainless Steel		Aluminium	Aluminium or 316 Stainless Steel		Aluminium
INGRESS PROTECTION	IP65			IP54	IP65		
CABLE ENTRIES	1 x M20, $^{1}/_{2}$ "NPT or $^{3}/_{4}$ NPT* on right-side						
TERMINATIONS	0.5 to 2.5mm^2						
SENSOR TYPES	Electrochemical		Catalytic bead	316 S/S sensor housing with catalytic beads	Catalytic bead	Thermal conductivity	Catalytic bead
OPERATING TEMPERATURE	-20 to +50°C (-40 to 122°F) (Sensor dependant)	-20 to +50°C (-4 to 122°F) (Sensor dependant)	-40 to +80°C (-40 to 176°F)	-20 to +150°C (-4 to 302°F)	-40 to +55°C (-40 to 131°F)	+10 to +55°C (50 to 301°F)	mV: -40 to +80°C (-40 to 176°F) mA: -40 to +55°C (-40 to 131°F)
HUMIDITY	0-90% RH non-condensing		0-99% RH non-condensing			0-90% RH	0-99% RH
REPEATABILITY **ZERO DRIFT**	<2% FSD (Typical) <2% FSD per Month (Typical)						
RESPONSE TIME	T90 <15s Oxygen T90 <30s to 120s Toxic (sensor dependant)		T90 <15s (Typical)				
OPERATING VOLTAGE	8- 30V dc		2.0V dc +/- 0.1V (Typical)		10-30V dc		mA: 10- 30V dc mV: 2.0Vdc
POWER REQUIREMENTS	24mA maximum		300mA (Typical)		50mA at 24V dc 1.2W		mA: 50mA at 24V dc 1.2W mV: 300mA (Typical)
ELECTRICAL OUTPUT	2-wire 4-20mA (current sink)		3- wire mV bridge Typical signal: 12-15 mV/ %LEL CH4	3- wire mV bridge Typical signal: >10 mV/ %LEL CH4	3- wire 4-20mA (current sink or source)		mA: 3- wire 4-20mA (current sink or source) mV: 3- wire mV bridge Typical signal: 12-15mV/ %LEL CH4

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