TXgard & Flamgard Plus

Fixed Point Gas Detectors

- Flexible output options
- Low cost of ownership
- Rugged and reliable
- Wide range of sensors
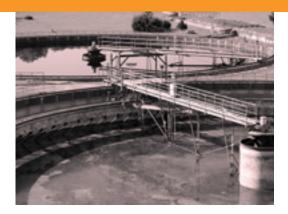- Non-intrusive calibration

TXgard & Flamgard Plus

Toxic and oxygen gas detector with display

When lives and property are at risk and you need gas detection equipment that is totally reliable, you need Crowcon. For over 40 years Crowcon has been developing and manufacturing high quality products with a reputation for reliability and technical innovation.

Crowcon fixed detectors have been proven in many arduous environments, including oil and gas exploration, water treatment, chemical plants and steel mills. They are however also chosen in many other applications where reliability, dependability and lack of false alarms are valued, for example in the automotive and aerospace manufacturing sectors, on scientific and research facilities and in high-utilisation medical, civil or commercial plants.

Choosing the fixed gas detector for your needs

With 3 models available, we have a detector to suit your requirements.

The Flamgard and TXgard Plus range of detectors offer reliable detection of flammable, toxic or oxygen gases with a local display and optional relays.

| Flamgard Plus | TXgard Plus | TXgard-IS+ |

Flamgard Plus:
Flamgard Plus is a Flameproof (Ex d), ATEX 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 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 a Intrinsically Safe (I.S.) 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 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.

Flexible output options

4-20mA current sink or source	Works with a wide selection of control panels
2 or 3 wire formats	
Optional relays for alarm and fault	Can be used for switching local alarms

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	

Wide range of sensors

Choice of catalytic beads for a wide selection of flammable gases and vapours	Gas detector tailored to your requirements
Extensive range of electrochemical sensors for toxic gases and oxygen	

Low cost of ownership

Non-intrusive one man calibration	Easy to operate and maintain
Long life sensors	
Simple parts replacement	Keeps interuption to on-site activity to a minimum

Rugged and reliable

TXgard Plus and Flamgard Plus are constructed using marine grade aluminium with a stainless steel sensor housing	Proven track record for operation in the harshest environments
TXgard-IS+ is made from tough carbon loaded nylon	
Ingress protection to IP65 as standard	

Please see the back page for full technical specifications.

TXgard & Flamgard Plus Specification:

	Flamgard Plus	TXgard Plus	TXgard-IS+
Size	200 x 115 x 115mm (7.9 x 6.1 x 6.1ins)		160 x 123 x 92mm (6.3 x 4.8 x 4.5ins)
Weight	2.2kg (4.9lbs)		0.7kg (1.5lbs)
Enclosure material	Junction box: Marine grade alloy Sensor housing: 316 stainless steel		Junction box: Carbon loaded nylon Sensor housing: ABD Plastic
Ingress Protection	IP65		
Cable entries	2 x M20 or 1/2" NPT		1 x M20 or 1/2" NPT with adaptor
Power	10-30Vdc, 210mA max (relay version) 160mA max (non relay)		8-32Vdc, 4-20mA loop-powered
Operating temperatures	-10ºC to +55ºC (14ºF to 131ºF)	-10ºC to +55ºC (14ºF to 131ºF) *	-20ºC to +55ºC (-4ºF to 131ºF) *
Humidity	0-99% RH non-condensing	15 to 90% RH non-condensing	
Relays (optional)	SPNO or SPNC contacts rated 30Vdc 1A (non-inductive load) for Alarm 1, Alarm 2, Fault		N/A
Display	3-digit LCD back-lit display, LED status indicator		2-Line, 16 character LCD
Calibration method	Via magnetically operated buttons		Via push-buttons
Electrical output	3 wire 4-20mA, sink or source		2 wire 4-20mA
Terminals	Suitable for up to 1.5mm² cable		Suitable for up to 2.5mm² cable
Sensor type	Catalytic bead	Electrochemical	
Repeatability	+/- 2% FSD typically		
Zero drift	+/-2% FSD, 6 months typically		
Response time	T90 <15 seconds typically	Contact Crowcon for a full list of sensor response times	
Hazardous area zones	Zone 1 or 2		Zone 0, 1 or 2 Division 1 or 2 (when connected via an isolation device)
Approvals	Ex II 2 G Exd IIC T6 Gb UL Class I Zone 1		Ex II 1 G Exia IIC T4 Ga UL Class I, groups A, B, C and D
EMC compliance	EN50270, FCC, ICES-003		

* Figures shown exclude the sensors - Please contact Crowcon for a full list of sensor operating temperatures

Gas Type	LTEL (ppm)	STEL (ppm)	Range Available: TXgard-IS+	Range Available: TXgard Plus
Ammonia (NH₃)	25	35	50, 100, 1000ppm	-
Carbon monoxide (CO)	30	200	250, 500ppm	100, 250, 500, 1000ppm
Chlorine (CL₂)	-	0.5	5, 10, 20ppm	-
Chlorine dioxide CLO₂	0.1	0.3	1 ppm	-
Hydrogen (H₂)	-	-	2000ppm, 50% LEL, 100% LEL	-
Hydrogen cyanide (HCN)	-	10 (MEL)	25ppm	-
Hydrogen fluoride (HF)	1.8	3	10ppm	-
Hydrogen sulphide (H₂S)	5	10	25, 50, 100, 200ppm	15, 20, 25, 50, 100, 200ppm
Nitrogen dioxide (NO₂)	1	1	10ppm	-
Ozone (O₃)	-	0.2	1ppm	-
Oxygen (O₂)	-	-	25% vol.	25%
Phosgene (COCl₂)	0.02	0.06	1ppm	-
Phosphine (PH₃)	0.1	0.2	2ppm	-
Sulphur Dioxide (SO₂)	1	1	10, 20, 30ppm	-

STEL & LTEL figures are derived from the UK HSE document: EH40. Other thresholds may apply in countries outside the UK.

Gas Type	LEL (% vol.)	Range Available: Flamgard Plus
Acetylene (C₂H₂)*	2.3	0-100% LEL
Ammonia (NH₃)	15	0-100% LEL
Butane (C₄H₁₀)	1.4	0-100% LEL
Ethanol (C₂H₅OH)	3.1	0-100% LEL
Ethane (C₂H₆)	2.4	0-100% LEL
Ethylene (C₂H₄)	2.3	0-100% LEL
Hexane (C₆H₁₄)	1.0	0-100% LEL
Hydrogen (H₂)	4	0-100% LEL
LPG	2	0-100% LEL
Methane (CH₄)	4.4	0-100% LEL
Methanol (CH₃OH)	6	0-100% LEL
Pentane (C₅H₁₂)	1.1	0-100% LEL
Petrol vapor	1.3	0-100% LEL
Propane (C₃H₈)	1.7	0-100% LEL
Propanol (C₃H₈O)	2.1	0-100% LEL

LEL figures derived from EN60079-20-1:2010
*Acetylene option not available on UL certified version

Crowcon reserves the right to change the design or specification of the product without notice.
Check www.crowcon.com fo updates.

www.crowcon.com

UK:
Tel: +44 (0) 1235 557700
Fax: +44 (0) 1235 557718
Email: sales@crowcon.com

US:
Tel: +1 859 957 1039
Toll Free: 800 527 6926
Fax: +1 513 957 1044
Email: salesusa@crowcon.us

NL:
Tel: +31 10 421 1232
Fax: +31 10 421 0542
Email: eu@crowcon.com

SG:
Tel: +65 6745 2936
Fax: +65 6745 0467
Email: sales@crowcon.com.sg

CN:
Tel: +86 (0) 10 6787 0335
Fax: +86 (0) 10 6787 4879
Email: saleschina@crowcon.com

IN:
Tel: +91 22 6708 0400
Fax: +91 22 6708 0405
Email: salesindia@crowcon.com

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Detecting Gas Saving Lives