Ribble Enviro

...everything gas detection

Data Sheet

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CROWCON
Detecting Gas Saving Lives

TXgard & Flamgard Plus

Fixed point gas detectors

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

TXgard & Flamgard Plus

Toxic and oxygen gas detector with display

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

Flamgard Plus

Flamgard Plus is a Flameproof (Ex d), ATEX and IECEx 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 IECEx 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.

Low cost of ownership

Non-intrusive one man calibration	Easy to operate and maintain Keeps interruption to on-site activity to a minimum
Long life sensors	
Simple parts replacement	
Wide range of sensor options	Reduced training requirements

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Gases and ranges

Gas	LTEL (ppm)	STEL (ppm)	Range available: TXgard-IS+	Range available: TXgard Plus
Ammonia (NH_3)	25	35	50, 100, 1000ppm	-
Carbon monoxide (CO)	20	100	250, 500ppm	100, 250, 500, 1000ppm
Chlorine (Cl_2)	-	0.5	5, 10, 20ppm	-
Chlorine dioxide CLO_2)	0.1	0.3	1 ppm	-
Hydrogen (H_2)	-	-	2000ppm, 50% LEL, 100% LEL	-
Hydrogen cyanide (HCN)	0.9	4.5 (MEL)	25ppm	-
Hydrogen fluoride (HF)	1.8	3	10ppm	-
Hydrogen sulphide (H_2S)	5	10	25, 50, 100, 200ppm	15, 20, 25, 50, 100, 200ppm
Nitrogen dioxide (NO_2)	0.5	1	10ppm	-
Oxygen (O_2)	19.5% Vol. typical alarm	23.5% typical alarm	25% Vol.	25% Vol.
Ozone (O_3)	-	0.2	1ppm	-
Phosgene ($COCl_2$)	0.02	0.06	1ppm	-
Phosphine (PH_3)	0.1	0.2	2ppm	-
Sulphur dioxide (SO_2)	0.5	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	LEL (%vol.)	Range available: Flamgard Plus
Acetylene (C_2H_2)*	2.3	0-100% LEL
Ammonia (NH_3)	15	
Butane (C_4H_{10})	1.4	
Ethanol (C_2H_5OH)	3.1	
Ethane (C_2H_6)	2.4	
Ethylene (C_2H_4)	2.3	
Hexane (C_6H_{14})	1.0	
Hydrogen (H_2)	4	
LPG	2	
Methane (CH_4)	4.4	
Methanol (CH_3OH)	6	
Pentane (C_5H_{12})	1.1	
Petrol vapor	1.4	
Propane (C_3H_8)	1.7	
Propanol (C_3H_8O)	2.1	

LEL figures derived from EN60079-20-1:2010

Further gas types may be available - contact Crowcon with your requests.

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 temperature	-10°C to +55°C (14°F to 131°F)	-10°C to +55°C (14°F to 131°F) *	-20°C to +55°C (-4°F to 131°F) *
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 sink
Terminals	Suitable for up to 1.5mm^2 cable		Suitable for up to 2.5mm^2 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 2G Ex db IIC T6 Gb Tamb -20°C/+55°C		Ex II 1G Ex ia IIC T4 (-40°C to +65°C)
EMC compliance	EN50270, FCC: CFR 47 Part 15; ICES-003		

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

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