

CO₂
H₂S
Cl₂
NH₃
O₃
CO
O₂
CH₄
SO₂
HF
H₂

TXgard & Flamgard Plus



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

Three models are available to suit all requirements:

Flamgard Plus: 'Exd - Flameproof' flammable gas detector with local display and optional relays

TXgard Plus : 'Exd - Flameproof' toxic or oxygen gas detector with local display and optional relays

TXgard-IS+: 'I.S. - Intrinsically Safe' toxic or oxygen gas detector with local display

Low cost of ownership

- Non-intrusive one man calibration
- Long life sensors
- Simple parts replacement

Flexible output options

- 4-20mA current sink or source
- 2 or 3 wire formats
- Optional relays for alarm and fault

Rugged and reliable

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

Wide range of sensors

- Choice of catalytic beads for a wide selection of flammable gases and vapours
- Extensive range of electrochemical sensors for toxic gases and oxygen

TXgard & Flamgard Plus Specification:

Model	Flamgard Plus	TXgard Plus	TXgard-IS+
Size	200h x 115w x 115d (mm)	200h x 115w x 115d (mm)	160h x 123w x 92d (mm)
Weight	2.2kg	2.2kg	0.7kg
Enclosure material	Junction box: Marine grade alloy Sensor housing: 316 stainless steel	Junction box: Marine grade alloy Sensor housing: 316 stainless steel	Junction box: Carbon loaded nylon Sensor housing: ABS plastic
Ingress Protection	IP65	IP65	IP65
Cable entries	2 x M20 or 1/2" NPT	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)	10-30Vdc, 100mA max (relay version) 50mA max (non relay)	8-32Vdc, 4-20mA loop-powered
Operation temperatures	-10°C to +55°C (14°F to 131°F)	-10°C to +55°C (14°F to 131°F) Figures shown exclude the sensors - Please contact Crowcon for a full list of sensor operating temperatures	-20°C to +55°C (-4°F to 131°F) Figures shown exclude the sensors - Please contact Crowcon for a full list of sensor operating temperatures
Humidity	0-99% RH non-condensing	15 to 90% 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	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	3-digit LCD back-lit display, LED status indicator	2-Line, 16 character LCD
Calibration method	Via magnetically operated buttons	Via magnetically operated buttons	Via push-buttons
Electrical output	3 wire 4-20mA (current sink or source)	3 wire 4-20mA (current sink or source)	2 wire 4-20mA (current sink)
Terminals	Suitable for up to 1.5mm ² cable	Suitable for up to 1.5mm ² cable	Suitable for up to 2.5mm ² cable
Sensor type	Catalytic bead	Electrochemical	Electrochemical
Repeatability	+/- 2% FSD typically	+/- 2% FSD typically	+/- 2% FSD typically
Zero drift	+/-2% FSD, 6 months typically	+/-2% FSD, 6 months typically	+/-2% FSD, 6 months typically
Response time	T90 <15 seconds typically	Contact Crowcon for a full list of sensor response times	Contact Crowcon for a full list of sensor response times
Hazardous area zones	Zone 1 or 2	Zone 1 or 2	Zone 0, 1 or 2 Division 1 or 2 (when connected via an isolation device)
Approvals	ATEX II 2 G Exd IIC T6 UL Class I Zone 1	ATEX II 2 G Exd IIC T6 UL Class I Zone 1	ATEX, IECEx II 1 G Exia IIC T4 Ga UL & cUL Class I Groups A,B,C,D.
EMC compliance	EN50270, FCC, ICES-003	EN50270, FCC, ICES-003	EN50270, FCC, ICES-003

Gas Type	LTEL (ppm)	STEL (ppm)	Range Available: TXgard-IS+	Range Available: TXgard Plus
Ammonia (NH ₃)	25	35	50, 100, 1000 ppm	-
Carbon Monoxide (CO)	30	200	250, 500 ppm	100, 250, 500, 1000 ppm
Chlorine (Cl ₂)	-	0.5	5, 10, 20 ppm	-
Chlorine Dioxide (ClO ₂)	0.1	0.3	1 ppm	-
Hydrogen (H ₂)	N/A	N/A	2000ppm, 50%LEL, 100%LEL	-
Hydrogen Cyanide (HCN)		10 (MEL)	25 ppm	-
Hydrogen Fluoride (HF)	1.8	3	10 ppm	-
Hydrogen Sulphide (H ₂ S)	5	10	5, 25, 50, 100, 200 ppm	15, 20, 25, 50, 100, 200 ppm
Nitrogen Dioxide (NO ₂)	1	1	10 ppm	-
Ozone (O ₃)	-	0.2	1 ppm	-
Oxygen (O ₂)	-	-	25% Vol	25% Vol
Phosgene (COCl ₂)	0.02	0.06	1 ppm	-
Phosphine (PH ₃)	0.1	0.2	2 ppm	-
Sulphur Dioxide (SO ₂)	1	1	10, 20, 30 ppm	-

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

Gas Type	LEL (%vol)	Ranges Available: Flamgard Plus
Acetylene (C ₂ H ₂)*	2.3 (2.4)	0-100% LEL
Ammonia (NH ₃)	15	0-100% LEL
Butane (C ₄ H ₁₀)	1.4 (1.8)	0-100% LEL
Ethanol (C ₂ H ₅ OH)	3.1 (4.3)	0-100% LEL
Ethane (C ₂ H ₆)	2.5 (3)	0-100% LEL
Ethylene (C ₂ H ₄)	2.3 (2.7)	0-100% LEL
Hexane (C ₆ H ₁₄)	1.0 (1.1)	0-100% LEL
Hydrogen (H ₂)	4	0-100% LEL
LPG	2	0-100% LEL
Methane (CH ₄)	4.4 (5)	0-100% LEL
Methanol (CH ₃ OH)	5.5 (7.3)	0-100% LEL
Pentane (C ₅ H ₁₂)	1.4 (1.5)	0-100% LEL
Petrol vapour	1.3	0-100% LEL
Propane (C ₃ H ₈)	1.7 (2.2)	0-100% LEL
Propanol (C ₃ H ₈ O)	2.2 (2.1)	0-100% LEL

LEL figures derived from EN61779-1:2000
*Acetylene option not available on UL certified version.

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