Remote detectors with display

TXgard and Flamgard Plus

The Flamgard and TXgard 'Plus' range of detectors offers 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.

In short, a range of gas detectors **you can trust.**

Low cost of ownership
- Non-intrusive one-man calibration
- Long-life sensors
- Simple parts replacement

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

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

CROWCON
Gas Detection You Can Trust

TXgard and Flamgard Plus

Specifications

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	2.2 Kg	2.2 Kg	0.7 Kg
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, IP66 with weatherproof cap	IP65, IP66 with weatherproof cap	IP65, IP66 with weatherproof cap
Cable entries	2 x M20 or ½"NPT	2 x M20 or ½"NPT	1 x M20 or ½"NPT (with adaptor)
Power	10-30Vdc, 210mA max. (relay version), 160mA max. (non-relay.)	10-30Vdc, 100mA max. (relay version), 50mA max. (non-relay.)	10.8-30Vdc, 4-20mA loop-powered
Operating temperature	-10°C to +55°C (14 to 131°F)	-10°C to +55°C (14 to 131°F) Sensor dependant, contact Crowcon for details	-20°C to +55°C (-4 to 131°F) Sensor dependant, contact Crowcon for details
Humidity	0 to 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 1.5mm² cable	Suitable for up to 1.5mm² cable	Suitable for up to 2.5mm² cable
Sensor type	Catalytic bead	Electrochemical	Electrochemical
Repeatability	+/- 2% FSD	+/- 2% FSD	+/- 2% FSD
Zero drift	+/- 2% FSD, 6 months	+/- 2% FSD, 6 months	+/- 2% FSD, 6 months
Response time	T90 <10 secs. typically	T90 <10 secs. typically (oxygen) T90 <30 secs. typically (toxic)	T90 <10 secs. typically (oxygen) T90 <30 secs. typically (toxic)
Hazardous area zones	Zone 1 or Zone 2	Zone 1 or Zone 2	Zone 0, Zone 1 or Zone 2 (when connected via an isolation device)
Approvals	⟨Ex⟩ II 2 G EExd IIC T6 UL Class 1 Div. 1 Groups B, C, D	⟨Ex⟩ II 2 G EExd IIC T6 UL Class 1 Div. 1 Groups B, C, D	⟨Ex⟩ II 1 GD EExia IIC T6 UL Class 1 Div. 1 Groups A, B, C, D

Available ranges

Gas Type	LTEL (ppm)	STEL (ppm)	Range Available: TXgard-IS+	Ranges Available: TXgard Plus
Ammonia (NH_3)	25	35	50, 100, 1000 ppm	50, 100, 150, 500 ppm
Carbon Monoxide (CO)	30	200	250, 500 ppm	100, 250, 500,1000 ppm
Chlorine (Cl_2)	0.5	1	5, 10, 20 ppm	
Ethylene Oxide (C_2H_4O)	5 (MEL)	-		10 ppm
Hydrogen (H_2)	N/A	N/A	2000, 20000 ppm (50%lel)	
Hydrogen Cyanide (HCN)	-	10 (MEL)	25 ppm	
Hydrogen Fluoride (HF)	1.8	3	10 ppm	
Hydrogen Sulphide (H_2S)	5	10	5, 25, 50, 100 ppm	10,15,20,25,30,50,100,200 ppm
Nitrogen Dioxide (NO_2)	1	1	10 ppm	
Ozone (O_3)	-	0.1	1 ppm	
Oxygen (O_2)	-	-	25% Vol	25% Vol
Phosgene ($COCl_2$)	0.02	0.06	1	
Phosphine (PH_3)	-	0.3	2 ppm	
Sulphur Dioxide (SO_2)	1	1	10, 20, 30 ppm	

Gas Type	LEL (% vol)	Ranges Available: Flamgard Plus
Acetylene (C_2H_2)*	2.5 (2.3)	0-100% lel
Ammonia (NH_3)	15	0-100% lel
Butane (C_2H_{10})	1.8 (1.4)	0-100% lel
Ethane (C_2H_6)	3 (2.5)	0-100% lel
Ethylene (C_2H_4)	2.7 (2.3)	0-100% lel
Hexane (C_6H_{14})	1.2	0-100% lel
Hydrogen (H_2)	4	0-100% lel
LPG	2	0-100% lel
Methane (CH_4)	5 (4.4)	0-100% lel
Pentane (C_5H_{12})	1.5 (1.4)	0-100% lel
Petrol	1.3 (1.2)	0-100% lel
Propane (C_3H_8)	2.2 (1.7)	0-100% lel

Ethanol, Methanol and Propanol also available.

Figures in brackets are taken from IEC61779.

*Acetylene not available in UL certified form.

Other ranges may be available, please contact Crowcon.