



Detectors

Remote detectors for toxic gas and oxygen

TXgard

TXgard

The TXgard range of remote detectors for toxic gas and oxygen have been specifically designed to meet your requirements.

The dangers presented by toxic gas and low and high oxygen levels are unique to each installation. So TXgard comes in four versions so you can choose exactly what you need for your site.

TXgard offers the widest possible range of sensors in both intrinsically safe and flameproof formats. Our unique sulphistor, for hydrogen sulphide detection, is designed to operate in extremes of temperature even with continuously high background levels of gas.

TXgard-IS intrinsically safe with a uniquely wide range of sensors.

TXgard-HS for high temperature and high background H₂S levels.

TXgard-D certified flameproof.

TXgard-Plus with local display for one-man, non-intrusive calibration

Wide range of sensors

TXgard has the widest range of sensors for both intrinsically safe and flameproof applications, so you can be assured that whatever zone you operate in TXgard can provide the solution.

For situations where there are high temperatures and high background levels of hydrogen sulphide, TXgard-HS is the answer.

Our unique sulphistor has been designed for use at temperatures well above those for electrochemical sensors. Added to this, TXgard-HS will continue to function normally even when the background level of hydrogen sulphide is above 100ppm, a level at which electrochemical sensors can deteriorate and become unreliable.

Rugged and reliable

You need to rely on your detector even in the worst operating conditions.

The junction boxes of TXgard are manufactured from highly durable GRP, cast iron or alloy with stainless steel or plastic sensor housings.

All options can be adapted to particularly dusty or wet conditions with a weatherproof cover so that the whole unit is rated at IP66 for water and dust ingress.

Low cost of ownership

TXgard detectors are engineered for ease of maintenance, so your running costs are kept to a minimum...

Both the plastic (96IS) and stainless steel housing (96HD) are designed for easy access so sensors and sinters can be changed in a matter of moments.

Most spares are common because the 96HD housing is used in the Flamgard range of flammable detectors as well.

For areas that are difficult to get to, we can offer one-man calibration as an option.

Flexible output options

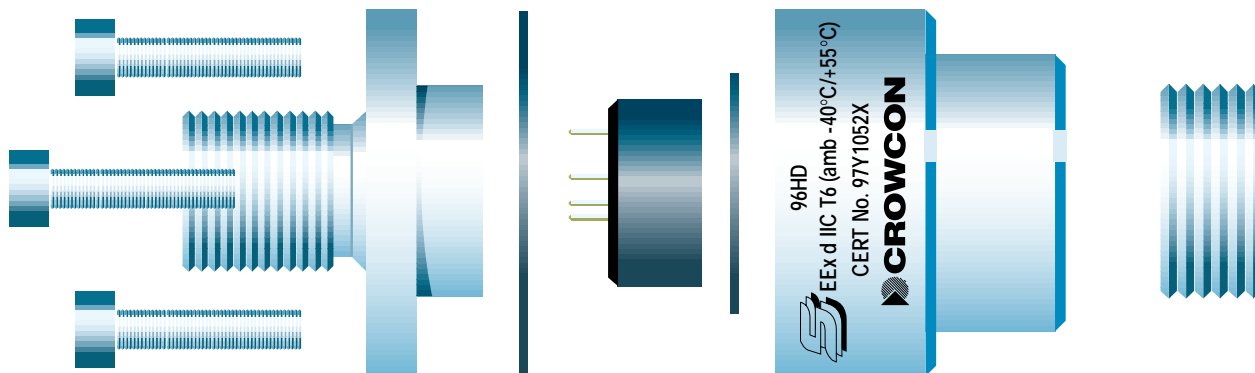
Each installation is different, so TXgard must fit into your system without special cards or wiring. Whether you are using a standard control panel or distributed control system, you need a detector that fits easily.

TXgard offers 2 or 3 wire 4-20 mA outputs and volt-free contacts.

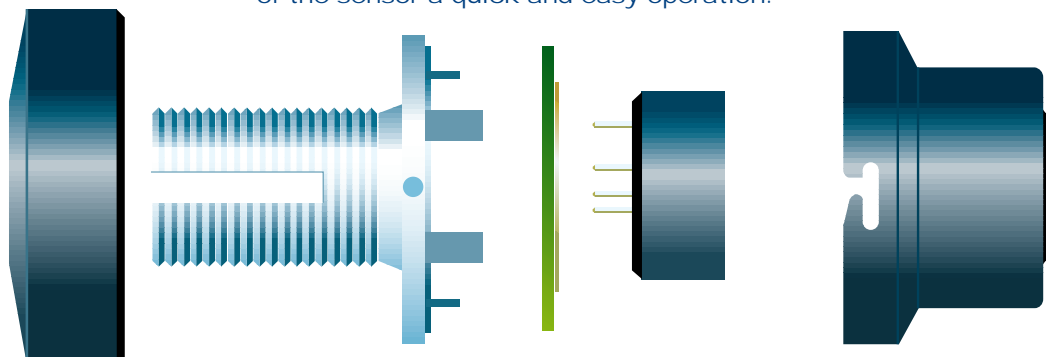
	Relative density (air = 1)	LTEL (ppm)	STEL (ppm)
Hydrogen sulphide	1.19	10	15
Carbon monoxide	0.97	30	200
Sulphur dioxide	2.26	2	5
Chlorine	2.47	0.5	1
Nitrogen dioxide	2.62	3	5
Ammonia	0.60	25	35
Hydrogen cyanide	0.95	-	10 (MEL)
Hydrogen chloride	1.27	1	5
Ozone	1.66	-	0.2
Phosphine	1.18	-	0.3
Fluorine	1.31	-	1
Hydrogen fluoride	1.86	-	3
Bromine	5.50	0.1	0.3
Hydrogen bromide	2.81	-	3
Nitric oxide	1.04	25	35
Carbon dioxide	1.53	5,000 (0.5% v/v)	15,000 (1.5% v/v)
Chlorine dioxide	2.33	0.1	0.3
Ethylene oxide	1.49	5	-

Other sensors available.

The 96HD sensor housing fitted to the TXgard-D, -HS and Plus models is also fitted to the Flamgard range of flammable gas detectors. The housing can be dismantled easily for replacement of the sensor.



The 96IS plastic bayonet housing fitted to TXgard-IS makes replacement of the sensor a quick and easy operation.

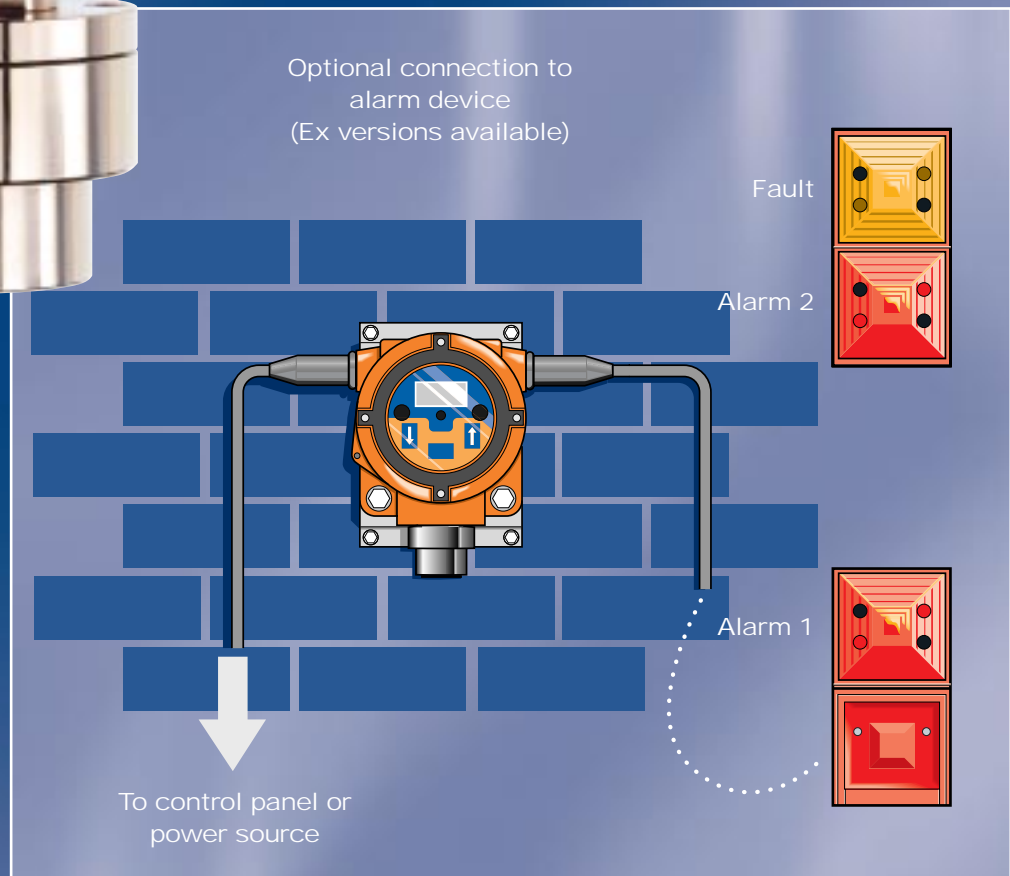


TXgard-Plus



TXgard-Plus offers non-intrusive, one-man calibration with optional built-in gas alarm and fault relays.

- Local display and magnetic adjustment key; means that one man can calibrate the detector without opening the junction box.
- Built-in alarm and fault relays, can drive local alarm devices.



Which detector?



TXgard-IS

Intrinsically safe, lightweight (low cost) option with 2-wire, 4-20 mA output. GRP junction box with hinged lid for easy access and plastic, bayonet, sensor housing.

TXgard-IS
+Zener barriers

-20°C to +40°C

Wide range of toxic gases

ZONES
0,1 or 2

Gas
Hazard

ZONES 1 & 2

0-100ppm H₂S
Up to 80°C

TXgard-HS

O₂, CO, NH₃, SO₂, S
plus 0-25ppm H₂S

Display

With display

TXgard-Plus

Without display

TXgard-D

The TXgard range comprehensively covers toxic gas and oxygen detection requirements in a wide range of industries throughout the world.

This diagram will help you choose which TXgard model you need for your plant.



TXgard-HS

Special poison-resistant sulphistor for use up to 80°C, with cast iron junction box, stainless steel sensor housing and 3 wire, 4-20 mA output.









TXgard-D

Certified flameproof with cast iron junction box, stainless steel sensor housing and 2-wire 4-20 mA output.



TXgard-Plus

A 3 wire, 4-20 mA output device with alloy junction box, integral local display and stainless steel sensor housing

TXgard model	 IS	 D	 HS	 Plus
Assembly				
Operating temperature range	-20 to +40°C	-20 to +55°C	-20 to +80°C	-10 to +55°C
Operating humidity range	0-99% RH, non-condensing	0-99% RH, non-condensing	0-99% RH, non-condensing	0-99% RH, non-condensing
Dimensions	160 x 122 x 85 mm	190 x 129 x 85 mm	190 x 129 x 85 mm	200 x 115 x 115 mm
Weight	0.65 kg	4 kg	4 kg	2.2 kg
Display				LCD 3 digit backlit display, LED status indicator
Repeatability	+/- 2% FSD	+/- 2% FSD	+/- 2% FSD	+/- 2% FSD
Zero drift	+/- 2% FSD, 6 months	+/- 2% FSD, 6 months	+/- 2% FSD, 6 months	+/- 2% FSD, 6 months
Response time (typical)	T50 <5 s, T90 <10 s	T50 <5 s, T90 <10 s	T50 <5 s, T90 <10 s	T50 <5 s, T90 <10 s
Zones	0, 1 or 2	1 or 2	1 or 2	1 or 2
Electrical output	2 wire, loop powered, 4-20 mA	2 wire, loop powered, 4-20 mA	3 wire, 4-20 mA, (sink/source) 2 mA or 4 mA = inhibit 4-20 mA = normal 25 mA = over range (clamp)	3 wire 4-20 mA (sink/source) 0 mA = fault 2 mA or 4 mA = inhibit 4-20 mA = normal 24 mA = over range (clamp)
Relay outputs				2 x Alarm relays SPNO (SPNC option) 1 x Fault relay SPNC (SPNO option) 1 A @ 30 V dc
Operating voltage	10-30 V dc	10-30 V dc	10-30 V dc	10-30 V dc
Power requirements (typical)	24 mA maximum	24 mA maximum	25 mA maximum (signal) 350 mA @ 10 V, 160 mA @ 24 V (power)	Relay: 100 mA @ max Non-relay: 50 mA @ max
Approvals  	EEx ia IIC T4	EEx d IIC T6	EEx d IIC T6	EEx d IIC T6 Tamb = +55°C AEx d IIC T6
Junction box				
Cable entry	1 x M20	1 x M20	1 x M20	2 x M20, or 1/2" NPT
Termination	0.5 to 2.5 mm ²	0.5 to 2.5 mm ²	0.5 to 2.5 mm ²	1.5 mm ²
Material	GRP	Galvanised Cast iron	Galvanised Cast iron	Marine grade alloy
Ingress protection	IP66	IP66	IP66	IP66
Detector				
Type	96IS	96HD	96HD	96HD
Material	Plastic	316 stainless steel	316 stainless steel	316 stainless steel
Ingress protection	IP66 with weatherproof cap	IP66 with weatherproof cap	IP66 with weatherproof cap	IP66 with weatherproof cap
Detection range (ppm)				
Hydrogen	0-2000			
Oxygen	0-25% v v	0-25% v v		0-25% v v
Hydrogen sulphide	0-25	0-25	0-100	0-25
Carbon monoxide	0-250	0-250		0-250
Sulphur dioxide	0-10	0-10		0-10
Chlorine	0-5			
Nitrogen dioxide	0-10			
Ammonia	0-50	0-50		0-50
Hydrogen cyanide	0-25			
Hydrogen chloride	0-10			
Ozone	0-1			
Phosphine	0-2			
Fluorine	0-3			
Hydrogen fluoride	0-10			
Bromine	0-3			
Hydrogen bromide	0-10			
Nitric oxide	0-100			
Chlorine dioxide	0-1			
Ethylene oxide	0-10			

PO3002 Issue 4 06/00