

# TXgard & Flamgard Plus

## Fixed point gas detectors

Non-intrusive calibration

Intuitive 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, IECEx 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, IECEx 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 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, and also UL and cUL certified for use in Division 1 or 2 hazardous areas.

### Low cost of ownership

Non-intrusive one man calibration

Long life sensors

Simple parts replacement

Wide range of sensor options

Easy to operate and maintain

Keeps interruption to on-site activity to a minimum

Reduced training requirements

## Gases and ranges

| Gas                                  | LTEL (ppm)                  | STEL (ppm)          | Range available: TXgard-IS+   | Range available: TXgard Plus |
|--------------------------------------|-----------------------------|---------------------|-------------------------------|------------------------------|
| Ammonia (NH <sub>3</sub> )           | 25                          | 35                  | 50, 100, 1000ppm              | -                            |
| Carbon monoxide (CO)                 | 20                          | 100                 | 250, 500ppm                   | 100, 250, 500, 1000ppm       |
| Chlorine (Cl <sub>2</sub> )          | -                           | 0.5                 | 5, 10, 20ppm                  | -                            |
| Chlorine dioxide (ClO <sub>2</sub> ) | 0.1                         | 0.3                 | 1 ppm                         | -                            |
| Hydrogen (H <sub>2</sub> )           | -                           | -                   | 2000ppm,<br>50% LEL, 100% LEL | -                            |
| Hydrogen cyanide (HCN)               | 0.9                         | 4.5 (MEL)           | 25ppm                         | -                            |
| Hydrogen fluoride (HF)               | 1.8                         | 3                   | 10ppm                         | -                            |
| Hydrogen sulphide (H <sub>2</sub> S) | 5                           | 10                  | 25, 50, 100, 200ppm           | 15, 20, 25, 50, 100, 200ppm  |
| Nitrogen dioxide (NO <sub>2</sub> )  | 0.5                         | 1                   | 10ppm                         | -                            |
| Oxygen (O <sub>2</sub> )             | 19.5% Vol.<br>typical alarm | 23.5% typical alarm | 25% Vol.                      | 25% Vol.                     |
| Ozone (O <sub>3</sub> )              | -                           | 0.2                 | 1ppm                          | -                            |
| Phosgene (COCl <sub>2</sub> )        | 0.02                        | 0.06                | 1ppm                          | -                            |
| Phosphine (PH <sub>3</sub> )         | 0.1                         | 0.2                 | 2ppm                          | -                            |
| Sulphur dioxide (SO <sub>2</sub> )   | 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 <sub>2</sub> H <sub>2</sub> )* | 2.3         | 0-100% LEL                     |
| Ammonia (NH <sub>3</sub> )                  | 15          |                                |
| Butane (C <sub>4</sub> H <sub>10</sub> )    | 1.4         |                                |
| Ethanol (C <sub>2</sub> H <sub>5</sub> OH)  | 3.1         |                                |
| Ethane (C <sub>2</sub> H <sub>6</sub> )     | 2.4         |                                |
| Ethylene (C <sub>2</sub> H <sub>4</sub> )   | 2.3         |                                |
| Hexane (C <sub>6</sub> H <sub>14</sub> )    | 1.0         |                                |
| Hydrogen (H <sub>2</sub> )                  | 4           |                                |
| LPG   | 2           |                                |
| Methane (CH <sub>4</sub> )                  | 4.4         |                                |
| Methanol (CH <sub>3</sub> OH)               | 6           |                                |
| Pentane (C <sub>5</sub> H <sub>12</sub> )   | 1.1         |                                |
| Petrol vapor                                | 1.4         |                                |
| Propane (C <sub>3</sub> H <sub>8</sub> )    | 1.7         |                                |
| Propanol (C <sub>3</sub> H <sub>8</sub> O)  | 2.1         |                                |

LEL figures derived from EN60079-20-1:2010

\*Acetylene option not available on UL certified version

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

## Specification

|                       | Flamgard Plus  | TXgard Plus  | TXgard-IS+  |
|-----------------------|--|--|---|
| Size                  | 200 x 115 x 115mm<br>(7.9 x 6.1 x 6.1ins)  |  | 160 x 123 x 92mm<br>(6.3 x 4.8 x 4.5ins)  |
| Weight                | 2.2kg (4.9lbs)   |  | 0.7kg (1.5lbs)  |
| Enclosure material    | Junction box: Marine grade alloy<br>Sensor housing: 316 stainless steel                  |  | Junction box: Carbon loaded nylon<br>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)<br>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<br>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 <sup>2</sup> cable  |  | Suitable for up to 2.5mm <sup>2</sup> 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,<br>Division 1 or 2<br>(when connected via<br>an isolation device) |
| Approvals             | Ex II 2G<br>Ex db IIC T6 Gb Tamb -20°C/+55°C   |  | Ex II 1G<br>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

### Disclaimer

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