

The logo for Sariak, featuring the brand name in a white, stylized script font on a dark blue rectangular background.

integrity solutions

GAS & FLAME DETECTION SYSTEM



Irmax

Infrared Hydrocarbon Gas Detector



IREX

Pellistor Exchange IR Gas Detector



Txgard & Flamgard Plus

Toxic and oxygen gas detector with display



Xgard

Electrochemical, toxic gases and oxygen Gas Detector



Xgard IQ

Intelligent Gas Detector and Transmitter



Vortex & Gas monitor Control Panel

Microprocessor controlled system & modular Gas Control Panels

Pellistor Exchange IR Gas Detector

IREX is an innovative infrared (IR) flammable gas detector designed specifically to directly replace pellistor (catalytic bead) type flammable gas detectors. IREX operates from control systems designed solely for use with pellistor-based gas detectors: it produces a mV Wheatstone Bridge type signal (as per a pellistor) and operates from as little as 2.9Vdc. IREX can be directly connected to a control system, or can be supplied with an M20 'spigot gland' enabling originally installed detector junction boxes and cables to be retained.

Feature

- **EMC compliance** EN 50270, FCC, ICES-003
- **Functional safety** Validation to IEC61508 SIL 2
- **Performance** Tested in accordance with EN60079-29-1
- **Response time** T-90 <4 seconds
- **Electrical output** 3-wire mV (Wheatstone) Bridge. Typically 10-20mV per % vol. methane



Accessories



Spigot gland



Auxiliary junction boxes



Mounting bracket

Fixed Point Gas Detectors

Infrared Hydrocarbon Gas Detector

Irmax is a compact, low power and highly rugged infrared gas detector, that delivers rapid, fail-safe detection of methane, butane, propane and many other hydrocarbon gases and vapors.

Feature

- Industry standard 4-20mA output
- Options for HART communications and RS-485 Modbus
- IRmax is compatible with virtually any control system
- Can be wall mounted, fitted to a 50mm (2 inch) pipe or connected to an auxiliary junction box using a choice of mounting accessories.
- Hand-held Intrinsically Safe (I.S) calibrator
- Enables up to 32 detectors to be multi-dropped on an addressable network

Fixed IR Display

- Large, clear display shows gas level and other status information
- Simple non-intrusive calibration
- Enables connection of hand-held HART communicators
- Can be rotated up and down to provide the optimum viewing angle



Remote IR Display

- Can be mounted up to 30 meters from Irmax
- Removes the need to directly access the IRmax detector
- Choice of connection lead lengths



Fixed Gas Detectors

Xgard are a family of gas detectors for monitoring a very wide range of toxic and flammable gases and oxygen. **Xgard** are available as either Intrinsically Safe (Exia) or Flameproof (Exd) detectors, dependent upon sensor type and customer preference. Intrinsically Safe versions are suitable for use in Zone 0, 1 or 2 hazardous areas when used with a suitable Zener barrier or galvanic isolator. Flameproof versions are suitable for use in Zone 1 or 2 hazardous areas

Feature

- Poison resistant pellistors, for all flammable detection needs including hydrocarbons, ammonia and jet fuel leaded petrol and vapors containing halogens.
- Thermal conductivity sensor are available to monitor % volume concentrations of gases.
- Electrochemical sensor are used to detect vast range of toxic gases and oxygen.

Validity: IEC61508 – SIL1 to SIL3

Electrochemical sensor are used to detect vast range of toxic gases and oxygen.



Xgard range and types:

- **Type 1:** Intrinsically safe toxic and oxygen gas detector
- **Type 2:** Flameproof toxic and oxygen gas detector
- **Type 3:** Flameproof flammable gas detector
- **Type 4:** Flameproof high temperature flammable gas detector
- **Type 5:** Flameproof flammable gas detector with 4-20mA output
- **Type 6:** Flameproof thermal conductivity type gas detector



Toxic and oxygen gas detector with display

Irmx is a compact, low power and highly rugged infrared gas detector, that delivers rapid, fail-safe detection of methane, butane, propane and many other hydrocarbon gases and vapors.

Feature

- 3-digit LCD back-lit display, LED status indicator
- Wide range of sensors
- 4-20mA current sink or source
- 2 or 3 wire formats
- Optional relays for alarm and fault
- Works with a wide selection of control panels
- Can be used for switching local alarms
- Approvals: Ex II 2 G / Exd IIC T6 Gb / UL Class I Zone 1
- EMC compliance: EN50270, FCC, ICES-003

Flamgard Plus:

Flamgard Plus is a Flameproof (Ex d), ATEX and UL certified flammable gas detector, which uses poison-resistant pellistors to detect explosive levels of hydrocarbons, hydrogen and other flammable gases and vapors, including aviation fuel and leaded petrol vapors.



Txgard Plus:

Txgard Plus is a Flameproof (Ex d), ATEX 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 a Intrinsically Safe (I.S.) 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 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.



Gas Detection Control Panels

Choosing the Control Panel for Your Needs

Vortex offers all the flexibility you will need while still being simple to operate. All the day to day operations can be completed via push buttons on the front panel. With up to 12 channels*, including up to 3 for fire, Vortex can be customized to meet your site requirements, however complex, without the need for extensive cabling.

Wall Mounted Vortex

A standalone unit for surface mounting on walls, the display panel shows the fault and alarm levels for all the channels, but the LEDs only light when a hazard or fault is detected.



Panel Mounted Vortex Panel

For fitting into an existing panel or door and offering wide range of PSU and battery options.



19 inch Rack Mounted Vortex Rack

A flexible option where modules, PSU and batteries can be supplied separately for fitting within an existing 19 inch enclosure, permitting multi-rack systems to be created.



Intelligent Gas Detector and Transmitter

Product Description

XgardIQ is an intelligent and versatile gas detector and transmitter compatible with Crowcon's full range of sensor technologies. XgardIQ is available fitted with a variety of flammable, toxic and oxygen gas sensors and provides a bright OLED display with clear and comprehensive status information in a range of languages.

Flexible signal outputs

Feature

- Analogue 4-20mA signal with auto sink/source detection\
- RS-485 Modbus communications are provided as standard
- HART communication
- Alarm and fault optional relays contacts, rated 230Vac 5A
- Foundation Fieldbus optional output
- ATEX and IECEx certified for use in Zone 1 and Zone 2 hazardous areas
- 316 stainless steel enclosure
- Bright, clear display. OLED 128 x 64 pixels, yellow text on black background
- Hot-swap sensor modules



Status LEDs

Positive
Safety LED

Bright OLED
display

Function buttons

Feature

- EN60079-29-1 (flammable gas sensors)*
- EN50104 (oxygen sensors)*
- EN45544 (toxic gas sensors)*
- IEC61508, EN50402 SIL 2



Gas monitor Plus

Gas monitor plus is our flexible microprocessor controlled system designed with a modular approach, so you get exactly what you want. Used throughout the world, both on and offshore, Gas monitor plus provides the cost effective solution to your system requirements. Gas monitor Plus, the gas and fire control system you can trust.

Feature

- Each channel has three levels of alarm as well as a dedicated analogue output, set as 4-20 mA as standard.
- Optional relay modules can interface to the panel to provide up to a total of 84 output relays per rack. Sixteen of these relays can be configured/voted from a combination of the three levels of alarm per channel.
- The RS232 digital interface provides connectivity with PC for configuration, monitoring and data log upload
- Each rack is uniquely addressable, making multi-drop architectures possible. This cuts down on configuration and monitoring cabling.
- Each channel is inhibited separately.



Specification

- Mounting Rack mounted (3u format)
- Channels: 16 per rack
- Inputs: 1- Gas: 2 or 3 wire, 4-20 mA (sink or source), or mV bridge 2- Fire - Smoke detectors, heat detectors and manual call points, Maximum of 32 loops per rack.
- Panel indication: 1- Channel number 4 lines x 20 characters back-lit LCD display 2- Gas reading as above plus green LED bar-graph
- Measurement units: ppm, %LEL, %VOL fire

Approvals

- Low voltage directive Meets BS EN 61010-1
- RF immunity Meets EN 50082-1
- RF emissions Meets EN 50081-1



Vortex flameproof (FP) systems are designed for use in ATEX Zones 1 & 2, with IP66 ingress protection.

Vortex FP

With up to 24 relays, the enclosure is capable of accommodating up to 4 intrinsically safe (I.S.) barriers for interfacing with I.S. detectors and alarms.

Channels and Display

- 1 to 12 channels (including 3 for fire)
- Each channel has 1 fault level and 3 alarm levels which can be combined in any pattern to trigger up to 32 output relays.
- Can be factory set to your requirements. Then when in situ, can easily be configured to suit your requirements using Vortex PC software.
- Push buttons on front display.
- LED display panel lights.
- Up to 12 devices can be monitored by reviewing just one control panel saving time and manpower.

Installation and Maintenance

- Modbus compatibility
- Simple to integrate into existing control systems
- Uses industry standard communication links
- Separate zones can be individually inhibited

Compliance and Reliability

- Validated to IEC 61508 (SIL 1)
- System monitors relays continuously
- Demonstrates system dependability
- Validated to IEC61508

Digital communications

- RS-485 Modbus or Profibus
- RS-232 (configuration software and lead supplied)

Inputs

- Gas - 2 or 3 wire 4-20mA (sink or source), 0-5V
- Fire – smoke & heat detectors, manual call-points - Up to 3 loops, Up to 20 devices per loop



Sariak

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PHONE 0098 21 8873 38 12-3

FAX 0098 21 8876 44 55

WEB www.sariak.com

EMAIL info@sariak.com

Central Office: N0.24, 12th St, Niloofar St,
Apadana Ave., Tehran - Iran

P.O.Box: 16315 - 173