KGC
KGC RESOURCES

Portable Single Gas Detector
ToxiPro & Toxi Ltd

GASTECH
AUSTRALIA

ToxiPro Gas Detector

SENSORS & CALIBRATION: O2, CO, CO+, H2S, SO2, CO-H, Cl2, ClO2, NH3, NO2, PH3, HCN

Toxi Ltd Gas Detector

SENSORS & CALIBRATION: O2, CO, CO+, H2S, SO2

SPECIFICATIONS

Instrument Type	Replaceable battery and sensor
Dimensions	8.4 x 5.5 x 2.9 cm (3.3 x 2.2 x 1.2 in.)
Weight	110 g (3.9 oz)
Alarms	Two factory-set alarm levels, plus STEL and TWA. (Can be changed with optional BioTrak software)
Audible Alarm	Loud warbling two-tone alarm rated at 92 dBA
Display Backlight	Activates with button
Vibrating Alarm	Standard
Controls	One button operation, including calibration
Clip	Alligator clip standard (belt clip or swivel "cell phone" style also available)
Battery Life	Up to 9000 hrs. (Approximately 1 year)
Housing	Clear polycarbonate with thermal-plastic elastic (TPE) over mold
Durability (IP Rating)	Meets IPX5 / IPX7 water rating
Intrinsic Safety	c-UL-u Classified for Class I, Division 1, Div 1, Group A, B, C, D T4; UL Classified for Class II, Div 1, Group E, F, G ATEX (DEMKO) EEx ia IIC T4 IECEx Ex ia IIC T4 CQST (China) Ex ia IIC T4
Event Logger	20 Events, includes start time, end time, duration, peak and average readings
Datalogging	Approx. 120 hrs @ 1 min. interval (Interval can be changed with optional BioTrak software, IrDA required)
Standard Accessories	Calibration adapter, hose, operators guide and quick reference card
Readouts	Real-time, peak, STEL, TWA and time of day readings

KGC
KGC RESOURCES

Portable Single Gas Detector GT CO2

GASTECH
AUSTRALIA

GT CO2 Gas Detector

- Configured to detect carbon dioxide, hydrocarbons in the LEL/ppm range, Oxygen (O2) content, and either Carbon Monoxide (CO) or Hydrogen Sulfide (H2S)

- Exclusive LIP (Liquid Inhibiting Probe) attachment prevents damage to the sample system by automatically shutting the unit off and sounding a low flow alarm if liquid or water is aspirated

RANGE OF GASES DETECTED

Carbon Dioxide (CO2)	0 to 5.00% Vol in .05% increments OR 0 to 20.0% Vol in 0.1% increments
Carbon Monoxide (CO)	0 to 300 ppm in 1 ppm increments
Hydrocarbons	0 to 100% LEL in 1% increments
Hydrocarbons	0 to 10,000 ppm in 20ppm increments
Hydrogen Sulfide (H2S)	0 to 200 ppm in 1 ppm increments
Oxygen (O2)	0 to 30.0% Vol in 0.1% increments

KGC
KGC RESOURCES

SPECIFICATIONS

Sensors	CO2: Infrared Hydrocarbons: Catalytic compensated O2, CO, H2S: Electrochemical
Sampling Method	Sample-draw, internal pump
Response Time	90% in 30 seconds
Accuracy	LEL: ± 5% of reading O2: ± 0.5% Vol ppm, CO, CO2, H2S: ± 10% of reading (when calibrated & maintained in accordance to instruction manual recommendations)
Repeatability	LEL: ± 2% of reading O2: ± 0.2% Vol ppm, CO, CO2, H2S: ± 5% of reading (when calibrated & maintained in accordance to instruction manual recommendations)
Operating Temperature	-7ÞC to 40ÞC
Humidity Range	0 to 95% RH non-condensing
Alarms	TWA, STEL are programmable, but initially factory set. Alarm levels are software selectable by the user. Audible & visual alarms
Display	LCD, back light on demand
Power Source	Four D alkaline or No-Cd batteries
Battery Life	7 hours @ 21 °C due to the nature of alkaline cells, battery life is greatly reduced at low temperatures. NiCd batteries are recommended for low temperature applications
Controls	Six top-mounted buttons
Dimensions	254mm L x 152mm H x 127mm W
Weight	2.25kg
Case Material	High impact, chemical & RF resistant, polycarbonate-polyester plastic
Warranty	One year materials & workmanship
Dimensions	158mm L x 254mm W x 117mm H
Optional Accessories	Confined Space Kit l Calibration Kit 1 Auxiliary Hydrophobic Filter Storage Case Dilution Fitting 76 cm probe Extra Length Hoses, Up to 30.5 meters Remote Buzzer Data Retrieval Package Battery Charger (220 VAC, 115 VAC, 12 VDC)

Portable Single Gas Detector ExChek & Toxi Vision

GASTECH AUSTRALIA

ExChek Gas Detector

- Designed to continuously monitor explosive range (0-100% LEL) combustible gas
- Automatic calibration adjustment
- Optional vibrator alarm
- One button operation
- Up to 4000 hours continuous operation
- Current and Max gas readings
- STEL and TWA readings
- Low, High, STEL and TWA alarms

Toxi Vision Gas Detector

- SENSORS & CALIBRATION: O2, CO, CO+, CO-H, H2S, SO2, Cl2, ClO2, NH3, NO2, HCN, PH3
- Automatic calibration adjustment
- Optional vibrator alarm
- One button operation
- Up to 4000 hours continuous operation
- Current and Max gas readings
- STEL and TWA readings
- Low, High, STEL and TWA alarms

KGC
KGC RESOURCES

GASTECH
AUSTRALIA

MultiPro

Real-time readings of up to four gases simultaneously, one button operation and calibration, easy to read LCD display, audible and visual alarms, event logger, IrDA port, optional sample draw pump, rugged, compact and affordable - the MultiPro Confined Space Gas Detector.

MultiPro can be configured for your needs. Three sensors and up to four channels let you monitor O2, LEL and either CO or H2S, or using our innovative DuoTox dual channel sensor, measure CO and H2S simultaneously. DuoTox is actually two toxic gas sensors in a single housing, giving you four channels of direct detection in the space of three - without cross interference.

Plus, MultiPro is built tough. Ruggedly constructed of an engineered polycarbonate with a rubber overmould, MultiPro goes where you go.

Interchangeable Alkaline (3 AA) and Li-Ion battery packs, and optional sample draw pump, and a range of accessories make MultiPro the most versatile and affordable gas detector on the market.

KEY FEATURES

- **EASY ONE-BUTTON OPERATION.** The MODE button on the front of the MultiPro controls all day-to-day functions including:
  - Scroll through current gas readings, MAX, STEL and TWA screens
  - Initiate fresh air and span calibration sequences
  - Turn on the backlight
  - Access to Advanced Menus

- **LONG BATTERY LIFE**
  - Li-Ion rechargeable battery provides up to 22 hrs of use in diffusion mode
  - Li-Ion batteryand recharges in less than 5 hrs
  - Alkaline batteries provide up to 22 hrs of use between battery changes

- **DATA**
  - Automatic event logger stores information for 20 events including sensor type, max and average readings, time and duration
  - Standard black box recorder stores more than 40 hrs of instrument readings
  - Built-in IrDA port for easy communication with a PC

KGC
KGC RESOURCES

GASTECH AUSTRALIA

PHD6

The GasTech PHD6 is a state of the art multi-gas detector. It's the most configurable gas detector we've ever made with 5 sensor ports, up to 6 channels of detection, and 18 sensor options including electrochemical, LEL, PID and Infrared.

The PHD6 to be reliable and sophisticated while maintaining the ease of use that you've come to expect from us. Day-to-day detector operations are controlled entirely through the mode button.

A status bar on the display with easy-to-recognize icons gives the user immediate access to everything from time to calibration status. Built-in and easy-to-navigate menus give advanced users the ability to configure the detector in the field.

The PHD6 is constructed of an engineered polycarbonate frame with rubber overmold, making it both tough and easy to handle. Power comes from interchangeable alkaline or Li-Ion rechargeable battery packs with run times as long as 24 hours. A manual sample draw kit is included and an optional motorized sample draw pump is available.

SENSORS INSTALLED

O2/CO/H2S/LEL
O2/CO/H2S/PID/LEL
O2/H2S/CO-H/LEL
O2/H2S /CO-H/PID/LEL
O2/Duo-Tox(CO/H2S)/LEL
O2/Duo-Tox(CO/H2S)/PID/LEL
O2/SO2/Duo-Tox(CO/H2S)/LEL
O2/NO/Duo-Tox(CO/H2S)/LEL
O2/NO2/Duo-Tox(CO/H2S)/LEL
O2/HCN/Duo-Tox(CO/H2S)/LEL
O2/SO2 (ext. range)/Duo-Tox(CO/H2S)/LEL
O2/Duo-Tox(CO/H2S)/Cl2
O2/Duo-Tox(CO/H2S)/ClO2
O2/Duo-Tox(CO/H2S)/NH3/LEL

KEY FEATURES

- **5 SENSOR PORTS AND 18 SENSOR CHOICES**

With 18 sensor choices, including PID, IR-CO2*, IR-CH4*, conventional LEL, oxygen and 15 different toxic gas sensors including Duo-Tox, the PhD6 can be configured for just about any use.

INNOVA

The Innova Series of portable gas monitors are designed to protect workers from hazardous gases in confined spaces and other industrial work sites. The Innova features a powerful built-in pump, rugged electronics for the harshest conditions, simple operation, quick calibration, and robust sensors for long life. The Innova Series Portable Gas Monitors are available in several different gas combinations.

KEY FEATURES

- Easy to use one-button calibration
- Peak, STEL, and TWA readings displayed on request
- Interchangeable 4 -"D" NiCad batteries (12 hrs) or alkaline (24 hrs)
- Dual protection if liquid is aspirated
- Built-in pump meets federal regulations for pretesting confined spaces & remote areas
- Built-in datalogger
- Bright LED array (for alarm conditions), 180˚ viewable, plus glow-in-the-dark buttons
- RF resistant
- Five combustible gas ranges from super sensitive 0-1,000ppm to 0-100% by volume
- Water-resistant, rugged high impact Xenoy housing
- Configurable for one, two, three, or four plug-in sensors

KGC
KGC RESOURCES

GASTECH
AUSTRALIA

Cannonball3

When you're working in hazardous areas under harsh environmental conditions, the last thing you want to worry about is your gas detector. The easy-to-use Cannonball3 was designed to handle the worst that Mother Nature can dish out while delivering the highest level of safety and reliability.

The Cannonball3 is designed for the detection of oxygen deficiencies, flammable gases and vapours and a large number of toxic gases. The oversized display features a scratch-resistant, self-healing overlay and is the largest in its class. To keep the Cannonball3 up and running and to ease maintenance issues, the Cannonball3 features modular internal pump, batteries and filters that can be quickly replaced in the field.

The durable and impact-resistant case is sealed from the outside elements, allowing the Cannonball3 to operate reliably in the harshest environments. RFI shielding prevents operating interference with two-way radios and other electronic devices.

The large display enures that readings are easy to view from several feet away or when visibility is limited. The display also features a scratch-resistant, self-healing urethane overlay that will keep the display clear and easy to read even after years of use.

The Cannonball3 includes your choice of a rechargeable NiMH battery back or an Alkaline battery pack that uses 5 D-cell alkaline batteries. Battery packs are fully interchangeable.


KEY FEATURES

- **DESIGN**
  - Rugged RFI-protected case designed for demanding environments
  - IP65 rated protection against dust and water
  - One button operation
  - Oversized (5" diagonal) backlit graphic display with automatic backlight
  - Super bright alarm lights visible in any direction
  - Multiple languages

RECORDING

- Black-Box recorder with over 100 hours of storage
- Available with optional datalogging for convenient and easy downloading

KGC
KGC RESOURCES

Fixed Gas Detector – Open Path SafEye Duct

GASTECH AUSTRALIA
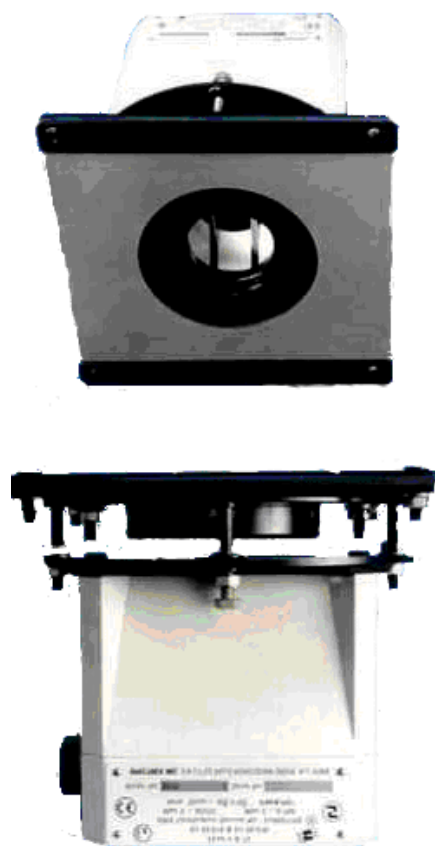
SafEye Duct

- Proven Technology to monitor and alarm against ingress of hazardous gas concentrations into air intakes of turbine engines and HVAC air ducts
- High Sensitivity
    - Alarm up to 0.5 LEL.m
    - 5 Times more sensitive than the normal Open Path equipment
- Fast Response
    - Fast response time of 2 seconds (300 series) and ultra fast response of 1 second (200 series).
    - 5 to 10 times faster than commonly used Open Path, 20-50 times faster than Point Detector.
- Design to perform under extreme harsh environment
- Low Maintenance

The Duct SafEye Open Path was specially designed and is widely used to monitor and alarm against ingress of hazardous gas concentrations into air intakes of turbine engines and HVAC air ducts. The Duct SafEye, due to its special optics design, provides for a misalignment tolerance of ±2° in all directions and is protected against false gas reading and alarms which are caused by partial obscuration and blocking, misalignment, vibration, flexing or tilts. Each SafEye unit is factory calibrated in a temperature cycle run at the entire operating temperature range. The temperature compensating mechanism allows correct operation in changing and extreme temperatures while maintaining the system's accuracy.

APPLICATIONS

- Offshore Oil & Gas Exploration Oilrigs and FPSOs
- Onshore Oil & Gas Terminals
- Storage Farms and Filling Stations
- Petrochemical and Chemical Industries
- Power Utilities and Turbines areas

SPECIFICATIONS

Detection Range and Response Time					
	Model	202FD	301FD	302FD	
	Distance (m)	2-7	0.6-3.5	3-15	
	Response Time	1 sec.	2 sec.	2 sec.	

Detected Gases	Simultaneous detection of C_1 -C_8 flammable gases.
Immunity to False Alarm	Is not influenced by solar radiation, hydrocarbon flames and other external IR radiation sources, high airflows and high loaded streams.
Spectral Response	3.0-4.0 µm
Sensitivity Range	0-2.5 LEL.m Standard 0-1 LEL.m by dip-switch setting
Displacement/Misalignment Tolerance	±2˚
Drift	Long-term ±5% of full scale
Temperature Range	-40˚F (-40˚C) to 131˚F (55˚C) for Series 200 -40˚F (-40˚C) to 158˚F (70˚C) for Series 300
Power Supply	Standard - 24 VDC (18-32 VDC)
Power Consumption	Detector: 150mA @ 24 VDC (200 mA Peak) Source: 100mA @ 24 VDC (220 mA Peak)
Electrical Connection	2 x 3/4˝ - 14NPT conduits or 2 x M25 x 1.5 mm ISO
Electrical Input Protection	Complete electrical interface protection against reversed polarity voltage, surges and spikes according to MIL-STD-1275A
Electromagnetic Compatibility	EMI/RFI protected CE Marked
Outputs - 4-20mA	The 4-20mA current output is source configuration Resistance Loop 100-600 Ω
Outputs - RS-485	Serial communication for full control with maintenance and trouble shooting facility can be integrated for a network of max 64 detectors

Outputs - Relays				
		Type	Normal Position	Maximum Ratings
	Alarm	SPDT	NO, NC	2A at 30VDC or 0.5 at 250 VAC
	Accessory	SPST	Open	5A at 30VDC or 250VAC
	Fault	SPST	Closed	5A at 30VDC or 250 VAC

	ATEX / Cenelec: EX II 2G EExd IIB + H2 T5 (70˚C), T6 (55˚C). EX II 2G

KGC
KGC RESOURCES

Approvals	EExde IIB + H2 T5 (70˚C), T6 (55˚C). UL: UL No. - E209870, Class I Groups C and D Hazardous Location
Water and Dust Tight	IP66 and 67 NEMA 250 6P
Mechanical Design	The standard detector housing is heavy-duty, copper-free (less than 1%) aluminum. The housing is finished in white epoxy enamel and is also available in 316L Stainless Steel upon request.
Environmental Standards	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical shock, High Temp, Low Temp
Dimensions	5.2" (132mm) x 5.2" (132mm) x max. 4.7" (120mm)
Weight	Al. Encl. Detector: max 8.1 lb (3.7 kg) Source: max 8.58 lb (3.9 kg) St. Encl. Detector: max 13.4 lb (6.1 kg) Source: max 13.84 lb (6.3 kg)

KGC
KGC RESOURCES

Fixed Gas Detector – Open Path

GASTECH
AUSTRALIA

SafEye 700 Gas Detector

- One-Person Commissioning and Installation
- Fast Response
- Design to perform under extreme harsh environment
- Detects Wide Range of Gases
- Reliable detection of gas leaks including a wide range of gaseous hydrocarbons such as: Alkanes, Alkenes (C1-C8), Alcohols, LNG, LPG, Ethylene, etc
- No Poisoning Effect
- Large Misalignment Tolerance
- Low Maintenance
- Cost saving

The SafEye 700 Optical Open Path (Line-of-Sight) Gas Detection System employs "spectral fingerprint" analysis of the atmosphere using the Differential Optical Absorption Spectroscopy (DOAS) technique in a unique (patented) method.

SafEye 700 consists of an advanced Xenon Flash infrared transmitter (source) and infrared detector (receiver), separated over a line of sight from 13 ft. (4 m) up to 460 ft. (140 m) to detect and quantify flammable gas presence, even when challenged by extremely harsh environments where dust, fog, rain, snow or vibration can cause a high reduction of signal.

APPLICATIONS

- Offshore Oil & Gas drilling and production
- Petrochemical and Chemical storage and production areas
- Storage & loading of hazardous materials and waste areas
- Engine & Turbine air intake and modules
- LNG-LPG storage, pumping and filling
- Fence-line emission monitoring
- Storage Tank Farm protection
- Paint industries, including paint-booths
- Bus terminals (natural gas powered)
- Waste disposal and processing

SPECIFICATIONS

Detection Range	Model NO.	701	702	703	721	722	723
	Distance (m)	4-20	15-70	50-140	4-20	15-70	50-140
	Detected gas	C1-C8			Ethylene / LPG		

Response Time	T90 - 3 sec
Immunity to False Alarm	Is not influenced by solar radiation, hydrocarbon flames and other external IR radiation sources.
Spectral Response	2.0 - 4.0 µm.
Sensitivity Range	0 - 5 LEL.m (optional 0 - 2 LEL.m)
Displacement/Misalignment Tolerance	± 1˚
Drift	Long-term ±5% of full scale
Temperature Range	-40˚F (-40˚C) to 131˚F (55˚C)
Warranty	SafEye system - 3 years Flash source bulb - 10 years
Power Supply	24 VDC nominal (18-32 VDC)
Power Consumption (peak includes heated optics)	Detector: 150mA @ 24 VDC (200 mA Peak) Source: 100mA @ 24 VDC (220 mA Peak)
Electrical Connection	2 x 3/4˝ - 14NPT conduits or 2 x M25 x 1.5 mm ISO
Electrical Input Protection	According to MIL-STD-1275A
Electromagnetic Compatibility	EMI/RFI protected CE Marked

Outputs - 4-20mA	Sink (source option) configuration	
	Maximum load	600Ω at 18-32 VAC
	4-20mA	Gas reading
	4mA	Normal, zero reading
	3mA	Maintenance call
	2mA	Obscuration/misalignment /beam block
	1mA	Zero calibration mode
	0mA	Fault

Outputs - RS-485	The RS-485 input/output provides complete data information to a PC and receives control commands from the PC or handheld unit
Outputs - Relays	Alarm, Fault and Accessory SPST volt-free contacts rated 5A at 30 VDC or 250 VAC Fault relay normally closed, others normally open

KGC
KGC RESOURCES

Fixed Gas Detector – Open Path SafEye 400

GASTECH
AUSTRALIA

SafEye 400 Gas Detector

- Proven Technology to detect low toxic gas (H2S, NH3, Aromatics)
- Cost Saving
- Fast Response
- Design to perform under extreme harsh environment
- Low Maintenance

UV Open Path (Line Of Sight) Gas Detection System provides sensitive (PPM level) monitoring of Hydrogen Sulfide (H2S), Ammonia and Aromatic gases. With its unique flashing light source, SafEye open path gas detector is immune to false alarms, which can be caused by direct or reflected radiation from sunlight, flares, illumination and other "black body" radiation sources.

The SafEye gas detection system can be used in highly sensitive areas to detect low gas concentration levels or in industrial applications where alarm condition is activated only when specific hazardous concentration levels are exceeded. The SafEye, due to its special optics design, provides for an alignment tolerance of ±1/2° in all directions and is protected against false gas reading and alarms which are caused by partial obscuration and blocking, misalignment, vibration, flexing or tilts.

APPLICATIONS

- Petrochemical, pharmaceutical, and other chemical storage and production areas of aromatic hydrocarbons, such as Benzene, Toluene, Xylene, etc.
- Toxic chemical storage sites and hazardous waste disposal areas.
- Detection of H2S in desulfurization processes at refineries, oil platforms, pipelines, refueling stations and fuel storage facilities.
- Transportation depots and shipping warehouses of solvents (aromatic and polymers origin), degreasing and cleaning solvents.
- Styrene monomer, polymers, plastic industries.
- Ammonia production facilities, storage and transportation.
- Air conditioning, refrigeration and agriculture application areas for ammonia and derivatives.
- Semiconductor industry in which ammonia concentration monitoring is required.
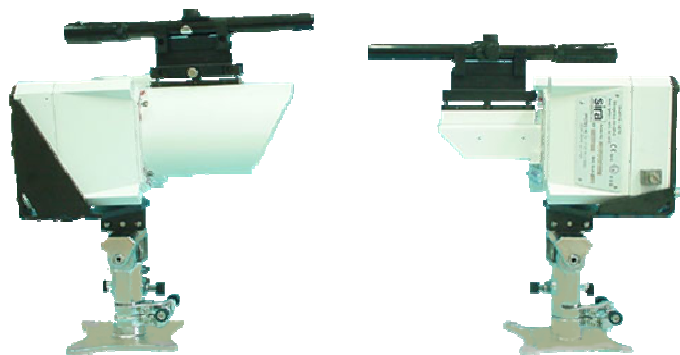
SPECIFICATIONS

Detected Gases	Detection of toxic gases such as hydrogen sulfide (H2S), Ammonia (NH3) and aromatic hydrocarbons such as Benzene, Toluene, Xylene, Styrene, etc.				

Detection Range and Response Time

Model	410	411	412	413	414
Distance (m)	1-4	2-8	7-25	15-50	30-100
Response Time	1 sec.	2 sec.	5 sec.	10 sec.	10 sec.
Detected gas	H_2S	H_2S	H_2S	H_2S	H_2S

Model	420	421	422	423
Distance (m)	1-4	2-8	7-25	15-50
Response Time	2 sec.	5 sec.	5 sec.	5 sec.
Detected gas	Ammonia, Benzene/Xylene, Toluene, CS_2			

Immunity to False Alarm	Is not influenced by solar radiation, hydrocarbon flames and other external IR radiation sources.
Spectral Response	200-300 µm
Sensitivity Range	0-500 PPM.m Standard 0-200 PPM.m by dip-switch setting
Displacement/Misalignment Tolerance	± 1/2˚
Drift	Long-term ±5% of full scale
Temperature Range	-40˚F (-40˚C) to 131˚F (55˚C)
Power Supply	Standard - 24 VDC (18-32 VDC)
Power Consumption	Detector: 150mA @ 24 VDC (200 mA Peak) Source: 100mA @ 24 VDC (220 mA Peak)
Electrical Connection	2 x 3/4˝ - 14NPT conduits or 2 x M25 x 1.5 mm ISO
Electrical Input Protection	Complete electrical interface protection against reversed polarity voltage, surges and spikes according to MIL-STD-1275A
Electromagnetic Compatibility	EMI/RFI protected CE Marked
Outputs - 4-20mA	The 4-20mA current output is source configuration Resistance Loop 100-600 Ω

KGC
KGC RESOURCES

Fixed Gas Detector – Open Path SafEye200

GASTECH
A U S T R A L I A

SafEye 200 Series Open Path Gas Detector is a self-contained, fast response optical gas detection system. It detects combustible gases at concentrations lower than the explosion limit (LEL) over a "Line of Sight" of up to 460 ft. (140 m) long. SafEye is the preferred system for offshore oil companies because it is immune to false alarms caused by partial blockage and extreme weather conditions (fog, rain, snow) and direct or reflected sunlight, flame and other black body radiation sources.

APPLICATIONS

- Offshore Oil & Gas Exploration Oilrigs and FPSOs
- Onshore Oil & Gas Terminals
- Storage Farms and Filling Stations
- Petrochemical and Chemical Industries
- Power Utilities and Turbines areas
- Waste Processing and Treatment
- Transportation Terminals

SPECIFICATIONS

Detection Range and Response Time	*Model*	202/252	203/253	204/254	226/256	227/257
	Distance (m)	3-12	10-40	15-60	30-90	50-140
	Response Time	2 sec.	5 sec.	5 sec.	5 sec.	5 sec.
Detected Gases	C1-C8 flammables by models 202-227, Ethylene / LPG by models 252-257.					
Immunity to False Alarm	Is not influenced by solar radiation, hydrocarbon flames and other external IR radiation sources.					
Spectral Response	3.0-4.0 µm					
Sensitivity Range	0-5 LEL.m Standard 0-2 LEL.m by dip-switch setting					
Displacement/Misalignment Tolerance	±1˚					

KGC
KGC RESOURCES

Drift	Long-term ±5% of full scale
Temperature Range	-40˚F (-40˚C) to 131˚F (55˚C)
Power Supply	Standard - 24 VDC (18-32 VDC)
Power Consumption	Detector: 150mA @ 24 VDC (200 mA Peak) Source: 100mA @ 24 VDC (220 mA Peak)
Electrical Connection	2 x 3/4˝ - 14NPT conduits or 2 x M25 x 1.5 mm ISO
Electrical Input Protection	Complete electrical interface protection against reversed polarity voltage, surges and spikes according to MIL-STD-1275A
Electromagnetic Compatibility	EMI/RFI protected CE Marked
Outputs - 4-20mA	The 4-20mA current output is source configuration Resistance Loop 100-600 Ω
Outputs - RS-485	Serial communication for full control with maintenance and trouble shooting facility can be integrated for a network of max 64 detectors

Outputs - Relays		*Type*	*Normal Position*	*Maximum Ratings*	
	Alarm	SPDT	NO, NC	2A at 30VDC or 0.5 at 250 VAC	
	Accessory	SPST	Open	5A at 30VDC or 250VAC	
	Fault	SPST	Closed	5A at 30VDC or 250 VAC	

Approvals	ATEX / Cenelec: EX II 2G EExd IIB + H2 T6 (55˚C). EX II 2G EExde IIB + H2 T6 (55˚C). UL: UL No. - E209870, Class I Groups C and D Hazardous Location GOST R: Approved
Water and Dust Tight	IP66 and 67 NEMA 250 6P
Mechanical Design	The standard detector housing is heavy-duty, copper-free (less than 1%) aluminum. The housing is finished in white epoxy enamel and is also available in 316L Stainless Steel upon request.
Environmental Standards	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical shock, High Temp, Low Temp

KGC Resources SDN BHD (223165-D)

2-4-2, Jalan Setia Prima E, U13/E Setia Alam, Seksyen U13, 40170. Shah Alam, Selangor Darul Ehsan, Ma laysia
Tel: 03-3341 2880   Fax: 03-3343 9880   Email: sales@kgcscientific.com / kgcresources88@yahoo.com

Fixed Gas Detector - Controller Mimic Box

GASTECH
AUSTRALIA

Mimic Box Gas Detector

- Tamper proof construction
- RFI/EMI Resistant powder coated protective case
- MTBF 10 years on electronics
- 10-30VDC operation
- Part number: 51-0001

SPECIFICATIONS

Weight	420g
Dimensions	90mm x 115mm x 55mm
Enclosure	Dicast Aluminium Powder Coated
Warranty	2 Years on electronics

GasTech Australia has designed an advanced economical remote alarm indicator. In many applications there is a need to monitor the status of the Fire and Gas control panel at remote locations

The Mimic Box is designed to be installed indoors. The powder coated diecast aluminium box is designed to protect the electronics in harsh conditions

KGC
KGC RESOURCES

Fixed Gas Detector – Controller GTA4100 MicroRack

GASTECH
AUSTRALIA

GTA4100 MicroRack Gas Detector

- 1 to 8 channels
- User upgradeable to 8 channels
- One processor per channel
- Universal inputs
- 2 individual alarms per channel
- 1 fault alarm per channel
- Analogue output per channel
- Individual Channel isolate
- local or global Accept/Reset
- Common alarms
- Internal amplifier
- Back lit graphical display per channel
- Constant individual channel indication
- High speed response
- Simple set-up
- Hot swap compliant

Gastech Australia's GTA-4100 MicroRack has been developed to operate in conjunction with Gas, fire & Manual Call Point devices & offers a comprehensive Fire & Gas Monitoring System solution. A common Application for this type of system is used in Hotels where Cellar Monitoring of CO_2 concentration from Keg & Post Mix installations is required to provide early warning of asphyxiate hazards.

SPECIFICATIONS

Range	Adjustable to 2000 Reads %LEL, ppm, % Vol, PPMm, LELm and blank
Inputs	1.4 to 24 VDC 4 to 20 mA analogue signal inputs, source or sink type, two or three-wire. 3 wire catalytic, 0-1V, 0-5V, 0-10V, 0-24V. 24V Digital, and resistance
Analogue Outputs	One 4 to 20mA source for each channel 1000 OHM maximum impedance @ 24 VDC input
Relay Outputs	Individual low AL1, high AL2, and Fault for each channel: Programmable for latching/non-latching Each relay rated at 1A/24 VDC Common relay low AL1, high AL2, and Fault. Each relay rated at 5A/24 VDC
Operating Voltage	18 to 30 VDC, 24 VDC nominal

Power Supply	240/110VAC 100W
Low Alarms	Independently adjustable from below zero to full scale. Audible/visual indication. Can be acknowledged. Can be activated on a rising/falling level.
High Alarms	Independently adjustable from below zero to full scale. Audible/visual indication. Can be acknowledged. Can be activated on a rising/falling level.
Buzer	Internal Buzzer
Channel Isolate	Individual channel indicated by inverted display and 1.5mA output on the analogue output.
Operating Temperature	-20˚C to +55˚C
Operating Humidity	0 to 95% non condensing
Housing	IP65 powder coated aluminum
Overall Dimensions	270 x 350 x 209mm
Weight	4.2kg with one card and 100W power supply
Area Classification	General purpose
Warranty	Two year materials & workmanship

AVAILABLE MODELS/PARTS

Part Number	Type
73-4100-02	MicroRack 2 channel PS 100w 240/110VAC relays + 4-20MA
73-4100-04	MicroRack 4 channel PS 100w 240/110VAC relays + 4-20MA
73-4100-06	MicroRack 6 channel PS 100w 240/110VAC relays + 4-20MA
73-4100-08	MicroRack 8 channel PS 100w 240/110VAC relays + 4-20MA
73-4100	GTA-4100R dual processor dual input card

KGC
KGC RESOURCES

Fixed Gas Detector - Controller Maxim III

GASTECH
AUSTRALIA

Maxim III Gas Detector

- 500 millisecond cycle/scan time
- 20 configurable universal inputs
- 12 digital relay outputs + 8 analogue outputs
- Optional user interface on a 4 line, 20 character LCD display
- Optional Ethernet connection for Net Comms
- Status of I/O points displayed on LCD
- 80 user defined watches (up to eight pages of up to 10 watches)
- Data logging of 2MBytes, up to 300,000 readings
- 1 RS485 serial communications port for Net Comms
- 1 RS485 serial communications port for Global Comms
- User Selectable Baud Rates:
  - Net 9600 Global 4800 OR
  - Net 57600 Global 38400
- All wire connections by 2.5mm plug-in screw terminals
- Program resides in non-volatile Flash Ram
- Real Time Clock, battery backed for approximately 5 years

The MAXIM III Controller is a state of the art digital processing system that has the capability of controlling various types of industrial, commercial and domestic systems. The MAXIM III can operate as a standalone device, using its own universal inputs and analogue and digital outputs to receive information and control external equipment, or as part of a network of devices that support Global NetComms. MAXIM III Controllers are designed for mounting inside a control cubicle and offers a varierty of inputs and outputs enabling it to monitor and control all types of external plant and equipment.

APPLICATIONS

- Air conditioning and heating systems
- Lighting control
- Time clock controller
- Monitoring device
- Distributed I/O points controller
- Cold/Freezer Rooms

KGC
KGC RESOURCES

SPECIFICATIONS

Power Supply	24VAC ± 10% @ 50/60 Hz. 24VDC ± 10%. Transformer nominal rating of 10VA.
Temperature Ratings	Storage 0 to 50°C non-condensing. Operating 0 to 40°C non-condensing.
Inputs	20 Universal Inputs, configurable via software to either: • Dry Digital Inputs • Voltage Digital Inputs • 10K Thermistor Inputs • 0-10V DC • LUX sensor input (Light sensor OR P12 LDR) • Dry Duty Cycle Inputs • Voltage Duty Cycle Inputs • Dry Pulse Counter Inputs • Voltage Pulse Counter Inputs
Outputs	12 Digital Outputs: • 12 x normally open relays (2 amp @ 24VAC) supplied by a Class 2 Transformer • Recomended use of pilot relays when switching high voltage/inductive loads 8 Analogue Outputs: • Can be configured individually as either linear 0-10VDC or PWM outputs • Output Load > 2kOhms
Battery	Type CR-2032 Lithium Nominal voltage 3 Volts Shelf life ~5 Years, dependant on ambient temperature
Enclosure	Rectangular case made from flame retardant ABS plastic in accordance with IEC695-2-1 (HD444-2-1) as of EN6335-1, A2 and IEC707 (AS/NZS2420) listed under UL94 Dimensions (max): 224mm(w) x 115mm(h) x 72mm(d)
Data Logging	Data Logging can be assigned to hardware and software points Up to 300,000 time stamped readings 2 Mbyte non-volatile flash RAM All logged data points can be extracted by using the MAXtract Software tool
Communications	*RS485:* 5 way plug in connector for local/remote computer access for purposes of uploading, downloading and monitoring configuration programs and the extraction of logged data, via a 485/232 converter. *Ethernet:* An optional RJ45 Ethernet port for PC and Internet access to the Maxim III Controller and other devices connected to it in an Innotech Net Comms network. This has the same functionality as an external RS485 to Ethernet Converter.

KGC

KGC RESOURCES

Flame Detector
40/40 and 20/20 Series

GASTECH
AUSTRALIA

Current Model range and Characteristics

Model Number*	Detector Type	Max. Detection Range** ft (m)	Response Time (Typical)	Description
40/40U-UB 20/20U-UB	UV	50 (15)	3 sec.	UV detector for indoor applications -detects organic and inorganic flames.
40/40L- LB 20/20L-LB	UV/IR	50 (15)	5 sec. (150msec.)	Dual UV/IR for detection of organic and inorganic flames for indoor and outdoor applications.
40/40L4-L4B	UV/IR	50 (15)	5 sec. (150msec.)	Dual UV/IR for detection of hydrocarbon fires.
20/20F	UV/IR	20 (6)	Max. 5 msec.	High Speed UV/IR Flame Detector with high reliability, immunity to false alarms.
40/40R 20/20R	IR	50 (15)	5 sec.	Single IR Detector for hydrocarbon fires - indoor applications
				Triple IR (IR3) offers two to three times the detection
40/40I 20/20SI (SIL)	Triple IR (IR3)	215 (65) 200 (60)	5 sec.	distance of single IR or UV/IR detectors and the highest immunity to false alarms. This model includes heated
				optics, HART and complies with SIL-2.
20/20SI	Triple IR (IR3)	200 (60)	5 sec.	Triple IR (IR3) generally as above but without heated optics, HART and SIL-2.
40/40M	Multi IR	HCs -215 (65) H2 -100 (30)	5 sec.	Special design for detection of invisible Hydrogen flames and hydrocarbon fires.
20/20FI	Triple IR (IR3)	33 (10)	0.2-1 sec.	High Speed Triple IR (IR3) Model for industrial applications.
20/20CTIN & CTIP	CCTV - IR3	200 (60) & video 100 (30)	5 sec.	CCTV Flame detector is a Triple IR (IR3) detector that incorporates a video color camera.
20/20MI	Triple IR (IR3)	133 (40)	5 sec.	Triple IR performance in a compact design with 80% less power consumption.
20/20ML	UV/IR	50 (15)	5 sec.	Special compact design UV/IR flame detector for industrial applications
20/20SH	Triple IR (IR3)	100 (30)	5 sec.	Special design IR3 detector for invisible Hydrogen fires.

KGC
KGC RESOURCES

Flame Detector 40/40 Series

GASTECH
AUSTRALIA

Current Model range and Characteristics

Model Number*	Detector Type	Max. Detection Range** ft (m)	Response Time (Typical)	Description
40/40U-UB 20/20U-UB	UV	50 (15)	3 sec.	UV detector for indoor applications -detects organic and inorganic flames.
40/40L- LB 20/20L-LB	UV/IR	50 (15)	5 sec. (150msec.)	Dual UV/IR for detection of organic and inorganic flames for indoor and outdoor applications.
40/40L4-L4B	UV/IR	50 (15)	5 sec. (150msec.)	Dual UV/IR for detection of hydrocarbon fires.
20/20F	UV/IR	20 (6)	Max. 5 msec.	High Speed UV/IR Flame Detector with high reliability, immunity to false alarms.
40/40R 20/20R	IR	50 (15)	5 sec.	Single IR Detector for hydrocarbon fires - indoor applications
				Triple IR (IR3) offers two to three times the detection
40/40I 20/20SI (SIL)	Triple IR (IR3)	215 (65) 200 (60)	5 sec.	distance of single IR or UV/IR detectors and the highest immunity to false alarms. This model includes heated
				optics, HART and complies with SIL-2.
20/20SI	Triple IR (IR3)	200 (60)	5 sec.	Triple IR (IR3) generally as above but without heated optics, HART and SIL-2.
40/40M	Multi IR	HCs -215 (65) H2 -100 (30)	5 sec.	Special design for detection of invisible Hydrogen flames and hydrocarbon fires.
20/20FI	Triple IR (IR3)	33 (10)	0.2-1 sec.	High Speed Triple IR (IR3) Model for industrial applications.
20/20CTIN & CTIP	CCTV - IR3	200 (60) & video 100 (30)	5 sec.	CCTV Flame detector is a Triple IR (IR3) detector that incorporates a video color camera.
20/20MI	Triple IR (IR3)	133 (40)	5 sec.	Triple IR performance in a compact design with 80% less power consumption.

KGC

KGC RESOURCES

20/20ML	UV/IR	50 (15)	5 sec.	Special compact design UV/IR flame detector for industrial applications
20/20SH	Triple IR (IR3)	100 (30)	5 sec.	Special design IR3 detector for invisible Hydrogen fires.

* All models, except those noted below, have automatic and manual Built-in-Test (BIT) to verify proper operation and lens cleanliness.

Models without BIT

- 20/20U, 20/20F, 20/20L,
- 40/40U, 40/40L and 40/40L4

** Max detection range based upon a 1ft2 (0.1m2) gasoline / heptane pan fire.

Flame Detector 40/40 Series

- UV/IR Dual-Sensor
- High-Speed Response - 150 msec Response to Saturated Signal
- Solar blind
- Automatic and Manual Built-In-Test (BIT) - to assure continued reliable operation
- Heated window - for operation in harsh weather conditions (snow, ice, condensation)
- Multiple output options for maximum flexibility and compatibility
- High Reliability - MTBF - minimum 150,000 hours 5-Year Warranty
- User Programmable via HART or RS-485

The 40/40 model range includes IR3, combined UV/IR, single UV types which are available now and single IR type as well as a new Multi IR Detector, which provides combined hydrocarbon and hydrogen flame detection, later in the year.

KGC
KGC RESOURCES

Model Types

40/40I - Triple IR (IR3) Flame Detector

The new 40/40I Triple IR (IR3) Flame Detector detects fuel and gas fires at long distances with the highest immunity to false alarms. The 40/40I IR3 can detect a 1ft2 (0.1m2) gasoline pan fire at 215 ft (65m) in less than 5 seconds.

40/40M - Multi IR Flame Detector

The new 40/40M Multi IR Flame Detector is specifically designed for detection of hydrocarbon and hydrogen flames. It detects hydrocarbon-based fuel and gas fires at long distances with the highest immunity to false alarms.

Its new features include a heated window, to eliminate condensation and icing; HART capabilities, for digital communications; lower power requirements, and a compact, lighter design.

40/40L-LB; L4-L4B - UV/IR Flame Detector

Spectrex offers two versions of the new 40/40 Series UV/IR Flame Detectors:

Model 40/40L (& LB) detects hydrocarbon-based fuel and gas fires, hydroxyl and hydrogen fires, as well as metal and inorganic fires.

Model 40/40L4 (& L4B) is identical to the 40/40L except that the IR sensor works at a wavelength of 4.5 µm and is only suitable for hydrocarbon-based fires.

40/40U-UB - UV Flame Detector

The new 40/40 UV Flame Detector design is the most durable and weather resistant UV flame detector currently on the market. Its new features include a heated window, to eliminate condensation and icing; HART capabilities, for digital communications; lower power requirements; and a compact, lighter design.

40/40R - Single IR Flame Detector

The new 40/40R single IR Flame Detector detects hydrocarbon-based fuel and gas fires using advanced flame analysis tools.

Flame Detector 20/20 Series

GASTECH
AUSTRALIA

Current Model range and Characteristics

Model Number*	Detector Type	Max. Detection Range** ft (m)	Response Time (Typical)	Description
40/40U-UB 20/20U-UB	UV	50 (15)	3 sec.	UV detector for indoor applications -detects organic and inorganic flames.
40/40L- LB 20/20L-LB	UV/IR	50 (15)	5 sec. (150msec.)	Dual UV/IR for detection of organic and inorganic flames for indoor and outdoor applications.
40/40L4-L4B	UV/IR	50 (15)	5 sec. (150msec.)	Dual UV/IR for detection of hydrocarbon fires.
20/20F	UV/IR	20 (6)	Max. 5 msec.	High Speed UV/IR Flame Detector with high reliability, immunity to false alarms.
40/40R 20/20R	IR	50 (15)	5 sec.	Single IR Detector for hydrocarbon fires - indoor applications
				Triple IR (IR3) offers two to three times the detection
40/40I 20/20SI (SIL)	Triple IR (IR3)	215 (65) 200 (60)	5 sec.	distance of single IR or UV/IR detectors and the highest immunity to false alarms. This model includes heated
				optics, HART and complies with SIL-2.
20/20SI	Triple IR (IR3)	200 (60)	5 sec.	Triple IR (IR3) generally as above but without heated optics, HART and SIL-2.
40/40M	Multi IR	HCs -215 (65) H2 -100 (30)	5 sec.	Special design for detection of invisible Hydrogen flames and hydrocarbon fires.
20/20FI	Triple IR (IR3)	33 (10)	0.2-1 sec.	High Speed Triple IR (IR3) Model for industrial applications.
20/20CTIN & CTIP	CCTV - IR3	200 (60) & video 100 (30)	5 sec.	CCTV Flame detector is a Triple IR (IR3) detector that incorporates a video color camera.
20/20MI	Triple IR (IR3)	133 (40)	5 sec.	Triple IR performance in a compact design with 80% less power consumption.
20/20ML	UV/IR	50 (15)	5 sec.	Special compact design UV/IR flame detector for industrial applications
20/20SH	Triple IR (IR3)	100 (30)	5 sec.	Special design IR3 detector for invisible Hydrogen fires.

* All models, except those noted below, have automatic and manual Built-in-Test (BIT) to verify proper operation and lens cleanliness.

KGC
KGC RESOURCES

Models without BIT

- 20/20U, 20/20F, 20/20L,
- 40/40U, 40/40L and 40/40L4

** Max detection range based upon a 1ft2 (0.1m2) gasoline / heptane pan fire.

Flame Detector 20/20 Series

- Triple Spectrum Design
- Sensitivity Selection
- User Programmable Configuration
- Highly Immune to False Alarms
- Automatic and Manual Built-In Test (BIT)
- Heated Optics (Optional)
- Standard 4-wire Connection
- 4-20mA sink/source (3-4 wires) configuration
- Hart Control (Optional)
- RS-485 Modbus Compatible
- MTBF Minimum 100,000 Hours
- 3-Year Warranty

The 20/20 Series Flame Detectors is a proven range using IR3, UV/IR, Single, UV and IR techniques to suit a wide range of flame detection applications. This explosion proof approved (FM / ATEX) detectors are highly resistant to harsh environments and designed for use in difficult conditions. The range also includes a combined CCTV/IR3 detector and ultra fast response models for special applications.

Model Types

20/20SI Triple IR (IR3) Flame Detectors

The 20/20SI Triple IR (IR3) Flame Detector can detect a 1ft2 (0.1m2) gasoline pan fire at 215 ft (65m) in less than 5 seconds with the highest immunity to false alarms

The 20/20SI has sealed electronics to protect the integrity of the unit when opened for installation or maintenance.

20/20CTIx - CCTV plus Triple IR (IR3) Flame Detector

The 20/20CTIx is a self contained IR3 flame detector that also incorporates a color video camera. Thus the fire can be viewed and verified at a remote location.

20/20L (LB) - UV/IR Flame **Detectors**

The Model 20/20L (& LB) combined UV/IR flame detector employs a solar blind UV sensor coupled with a narrow band IR sensor to provide excellent sensitivity combined with enhanced immunity to false alarms (solar blind).

20/20U (UB) - UV Flame Detectors

The 20/20U (& UB) UV Flame Detector responds to high energy UV radiation emitted by fires and by explosions.

The UV sensor incorporates a special logic circuit that helps prevent false alarms caused by solar radiation.

20/20R - Single IR Flame Detector

The 20/20R single IR Flame Detector provides early warning of flaming fires working at 4.4 µm for maximum sensitivity, and immunity to false alarms from IR sources such as sunlight and IR projectors.

20/20SH - Hydrogen Flame Detector

The 20/20SH is designed to specifically detect invisible hydrogen flames. It utilizes our well proven triple IR design along with special sensors to provide the greatest degree of spectral matching to hydrogen flame emissions whilst being highly immune to false alarms.

20/20F- Fast UV/IR Flame Detector

The 20/20F UV/IR is designed to meet two important requirements; fast response time (<5 milllisecs) and high reliability (immunity to false alarms).

20/20FI - Fast IR3 Flame Detector

The 20/20FI is a high speed version of our triple IR flame detector design with the highest possible immunity to false alarms. Specifically designed for applications such as painting or solvents manufacturing.