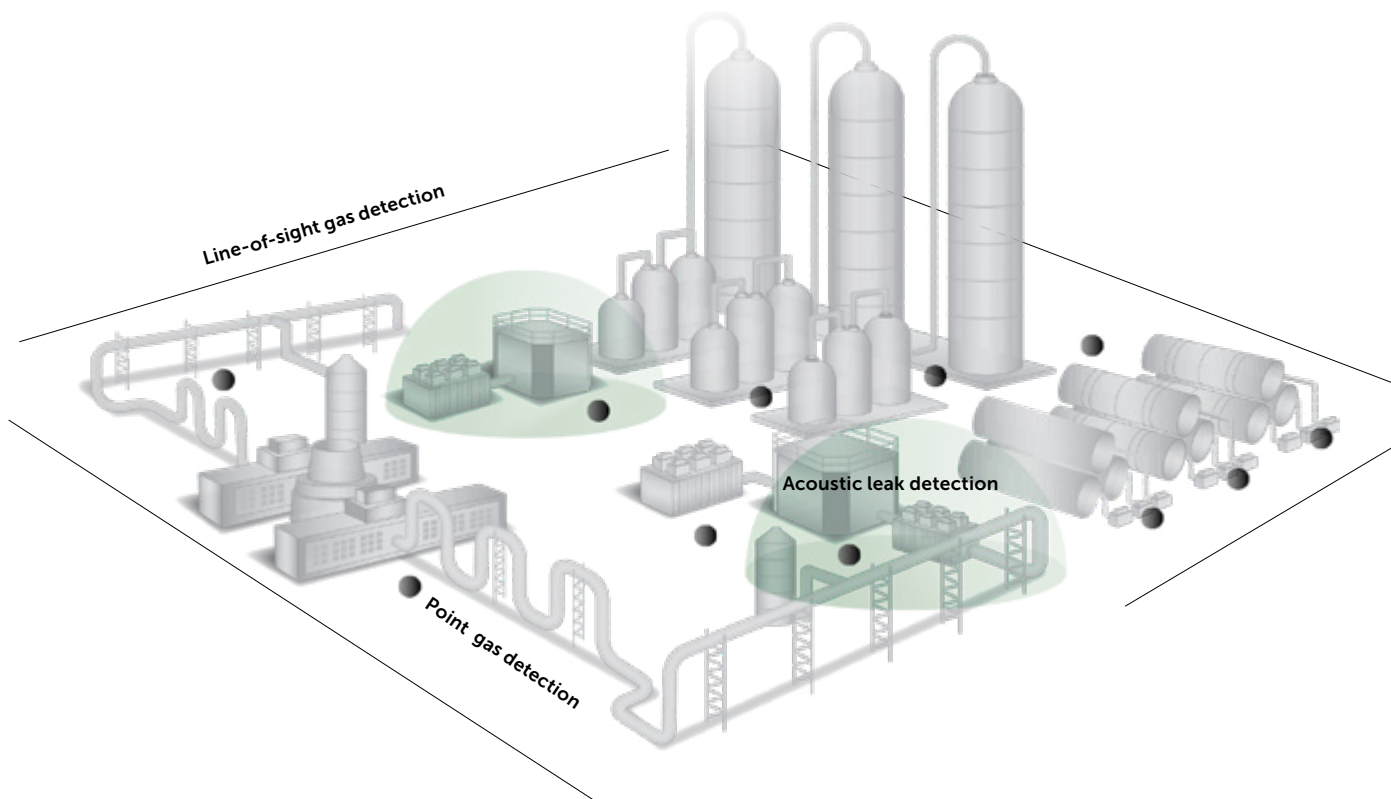# GAS DETECTORS

When every second counts

PERFORMANCE AND SAFETY BEYOND COMPLIANCE

We deliver rock-solid, performance-tested detectors for a wide variety of gas hazards, all with global approval.

Our proven hazardous gas detection systems deliver the highest level of protection for people, processes and property—even under the most extreme conditions.

Complete fire and gas safety solutions,

protecting life, environment and property.

COMBUSTIBLE AND TOXIC GAS DETECTION

Multiple layers of detection

— **Line-of-sight gas detection.** Detect combustible gas beetween two points up to 120 metres apart with infrared technology.

Acoustic leak detection. Detect pressurized gas leaks instantly without contact, regardless of wind direction.

Point gas detection. Detect toxic or combustible gases using electrochemical, catalytic, or infrared technology.

Labels in diagram:
- Line-of-sight gas detection
- Acoustic leak detection
- Point gas detection

AUTRONICA

DET-TRONICS

AutroPoint point IR gas detector

AutroVu universal display

1. Heated to improve operation in cold or damp environments

2. Junction box designed to reduce installation cost

3. Local display to provide confidence that you are being protected

4. Certified SIL 2 Capable to integrate into high availability safety systems

5. Approved to install without conduit seals to reduce installation cost

6. Rugged-weather baffles for best-in-class protection

7. HART communication for comprehensive diagnostic information

GT3000 electrochemical toxic gas detector

Trusted response

We lead the industry with performance tested hazardous gas detection solutions that perform optimally with minimal maintenance

- Certified SIL 2 solutions to streamline safety system design and provide maximum reliability
- Performance tested in third-party labs to validate response and accuracy
- Extra global approvals to ensure optimal safety and protection

	Model	Detected gases	Operating temp. gases	A Performance certified	B Event historian	C Certified SIL2 Capable	D Heated sensor or display	E IP rating	F Analog 4-20 mA	G Hart digital	H Relays	I EQP/ LON	J Digital modbus RTU	K Loop powered
Combustible gas	AutroPoint HC200	Hydrocarbons (not hydrogen)	-55° to +75°	▲	▲	▲	▲	66/67	▲	▲	▲	▲	▲	
	CGS Catalytic Bead Sensor	Wide range of combustible gases (including hydrogen)	-55° to +125°	▲	●	▲	●		●	●	●	●	●	
	AutroPath HC800	Hydrocarbons (not hydrogen)	-55° to +75°	▲	▲	▲	▲	66/67	▲	▲	▲	▲	▲	
Toxic gas	AutroTox GT3000	H2S, CO, O2, NH3, CI2,SO2, H2, NO2	-40° to +55°	▲	▲	▲		66/67	▲	▲	●	●	●	▲
	AutroPoint HC200	CO2	-40° to +75°		▲		▲	66/67	▲	▲	▲	●	▲	
Acoustic leak	AutroSonic	Any gas	-55° to +75°	▲	▲	▲		66	▲	▲	●	●	●	
Universal displays	AutroVu AV10	-	-55° to +75°	▲	▲	▲	▲	66/67	▲	▲	▲	▲	▲	
	AutroVu AV20	-	-20° to +70°	▲	▲	▲		66/67	▲	▲				▲

● **Additional capabilities when integrated with AutroVu AV10 Universal display**

A Performance Certified: Outside laboratories independently validate Det-Tronics accuracy across the temperature range.

B Event Historian: Most sensors maintain calibration logs and usage history. When combined with UD10, additional diagnostic information is maintained like alarm events and faults like failed calibration or loss of power.

C Certified SIL 2 Capable: Det-Tronics uses exida to verify and certify the reliability of combustible gas and toxic gas detectors and displays.

D Heated Sensors or Displays: A sensor covered with condensation, rain or snow cannot detect hazards. Det-Tronics detectors are heated to operate in extreme conditions.

E IP Rating: Verifies that dust and water will not affect the products' operation, third-party testing and ratings are provided on all products.

F Analog 4-20mA: The device outputs to the most common communication method for safety systems. This method requires home run wiring topography to the controller.

G HART Digital: The device allows for the use of the HART handheld maintenance tool. In addition, the GT3000, UD10 and Eclipse are FDT/DTM and AMS compatible.

H Relays: The device has multiple relay outputs to drive local horns and alarms without the need to connect to a controller.

I EQP/LON: The device is compatible with Det-Tronics Eagle Quantum Premier (EQP) Safety System. The EQP uses an addressable loop, which allows customers to use multidrop wiring techniques to reduce installation costs.

J Digital Modbus RTU: Device outputs to an addressable loop, which allows customers to use multidrop wiring techniques to reduce installation costs.

K Loop Powered: A device that uses two wires for both power and signal.

AUTROPOINT HC200, FAST RESPONSE

AutroPoint HC200 infrared hydrocarbon gas detector, a SIL 2 approved detector that detects methane, propane, ethylene, butane and other flammable hydrocarbon gases in the LFL range, now includes a fast response option.

The AutroPoint gas detector delivers exceptional detection of flammable hydrocarbon vapours in lower explosive limit (LEL) range. Ideally suited for on- and offshore oil and gas facilities, the AutroPoint delivers a number of unique features and benefits including stainless steel construction for maximum strength, and a new multi-layer optics protection weather baffle for unequalled protection in harsh environments. In addition, sapphire-coated optics are provided for industrial-grade hardness, and an integral wiring termination compartment removes the need for extra wiring/termination boxes.

All this and more from a product that delivers no undisclosed failures!

The AutroPoint infrared hydrocarbon gas detector is capable of detecting hundreds of flammable hydrocarbon vapours. Field-selectable algorithms are provided for methane (default), ethane, propane, butane, ethylene, and propylene. Numerous additional operating parameters are programmable via an optional HART hand-held field communicator.

Superior communications versatility

- 4-20 mA analogue, HART, RS-485 Modbus outputs
- Tri-Color LED provides local normal/alarm/fault status indication

Superior flexibility and options

- No routine calibration required!
- Hand-held HART Communicator interface
- Optional built-in relay package (2 alarms, 1 fault)
- Compatible with AutroSafe IFG detection system
- Emerson Asset Management System (AMS) compatible
- 5-year device warranty

Superior approvals

- FM, CSA, CENELEC, certifications for performance and hazardous classified locations
- CE certified
- Conforms to Low Voltage, EMC, and ATEX directives
- SIL2 certified model available

Fast reponse option

Most gas detection applications rely on accuracy and fast response times. Not only should a detector meet fast specification times in a laboratory, but it should also be able to meet them in real installation configurations (i.e. with weather protection).

The AutroPoint HC200 has third party approved response times with weather protection baffle installed. The time of response (T90) can be as low as 1.5 seconds, depending on the gas type and filter needs.

Accuracy

± 3% LFL from 0 to 50% LEL

± 5% LFL from 51 to 100% LEL

(at room ambient temperature, +23°C)

AutroPoint HC200 infrared hydrocarbon gas detector
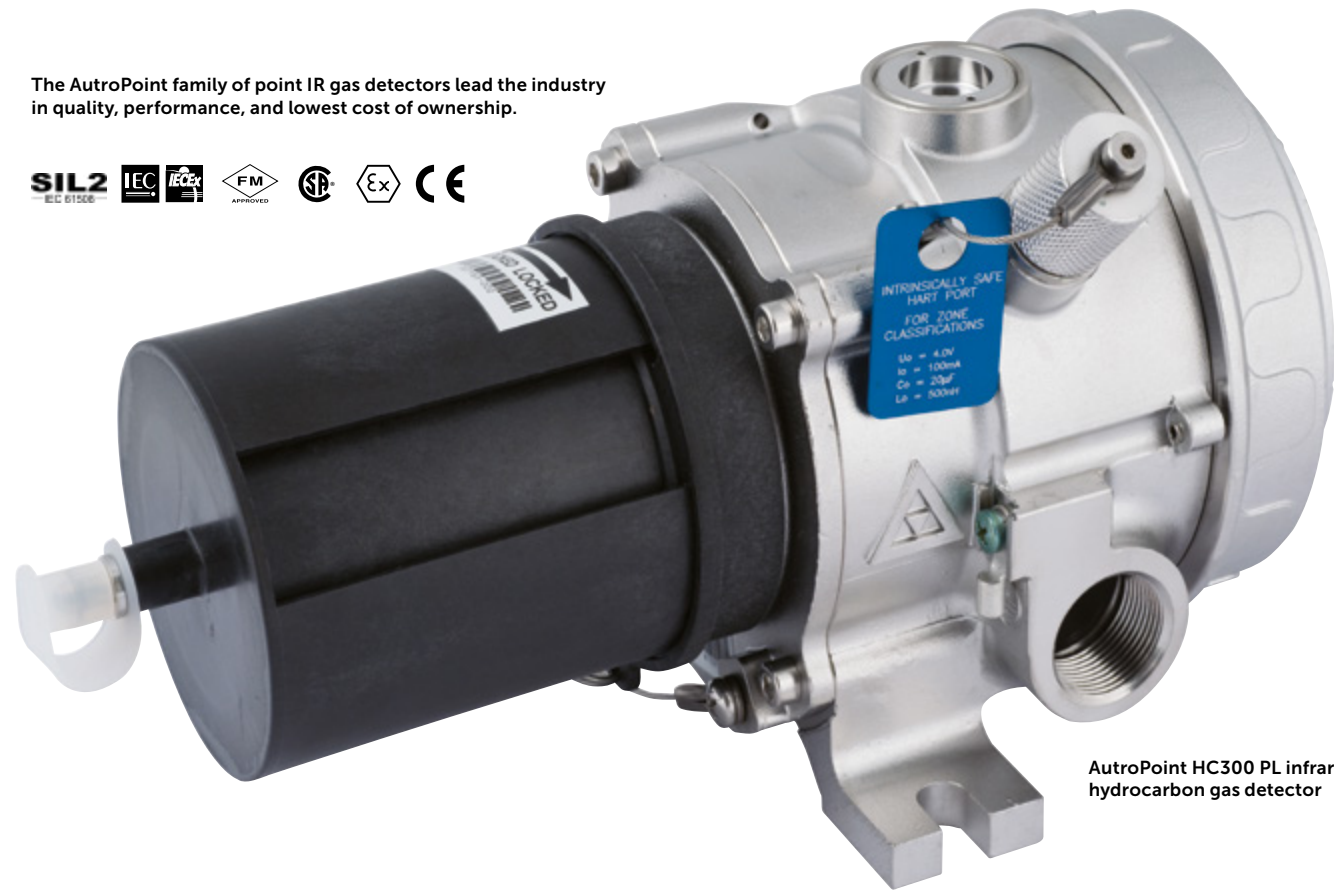
Response time comparison

Table shows summary of response times for AutroPoint HC200 models standard and fast response.

(Average in seconds, with weather protection baffle installed, and 50% LEL applied).

Gas	Baffle	T50 STD/FR	T60 STD/FR	T90 STD/FR
Methane	With hydrophobic filter	4.8 / 1.2	5.1 / N/A	7.6 / 2.6
	Without hydrophobic filter	4.5 / 1.0	4.9 N/A	7.1 / 1.5
Propane	With hydrophobic filter	5.0 / 1.2	5.3 N/A	7.9 / 3.2
	Without hydrophobic filter	5.2 / 1.2	5.5 N/A	9.5 / <2**
Ethylene	With hydrophobic filter	3.7 / 1.1	4.0 N/A	10.6 / 2.0
	Without hydrophobic filter	4.3 / 1.2	4.5 N/A	7.0 / 1.8
Butane	With hydrophobic filter	5.7 / 1.1	6.0 N/A	7.7 / 1.7
	Without hydrophobic filter	5.3 / 1.0	5.6 N/A	7.7 / 1.5

STD = Standard response   *STD based on 100% LFL applied (FM 6320:2011)
FR = Fast response   **The <2 for Propane averaged 1.96 seconds

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The AutroPoint family of point IR gas detectors lead the industry in quality, performance, and lowest cost of ownership.

AutroPoint HC300 PL infrared hydrocarbon gas detector

AUTROPOINT HC300PL, TWO WIRE SOLUTION

The AutroPoint HC300PL infrared hydrocarbon gas detector has built-in PowerLoop system technology, enabling the detector to communicate with AutroSafe Integrated Fire and Gas (IFG) systems on a single pair of wires.

This compatibility is made up of a two-wire power and signalling bus connected in a ring topology and galvanically isolated from the rest of the system, saving cable cost and weight.

Each detector has a built-in short-circuit isolator, hence no detectors will be lost because of a single break or short-circuit in the PowerLoop lines. All alarms and faults are signalled via the PowerLoop. The detector does not require any local power supply. With the PowerLoop technology, it is also possible to mix fire and gas detectors on the same loop, keeping commissioning time and cabling cost to a minimum.

The AutroPoint HC300PL also contains the SelfVerify technology, so when used with the AutroSafe IFG system, not only does the system test whether a detector is capable of provoking an alarm, it even verifies the sensitivity of every detector with a calibrated signal.

The SelfVerify system ensures that each detector always responds to the correct alarm level. In the event of irregularities, the display on the fire and gas control panel will accurately pinpoint the source of any problem.

10

AutroPath HC800 line-of-sight infrared gas detector

AUTROPATH HC800

The AutroPath HC800 line-of-sight infrared gas detector sets new performance standard

Line-of-sight solutions must function under the heavy vibration typical of an industrial site and must endure harsh environments. They must also have the flexibility of easy installation. Finally, alignment reliability is a requirement.

AutroPoint HC800 detects combustible gas between two points and is an optimal solution in perimeter monitoring applications.

Field configurable using the HART® handheld device

The HC800 is compatible with the HART communication protocol, which can be used to review calibration and alarm data logs, operation parameters, and diagnostic information.

The Model 475 Communicator includes the HC800 and HC200/300 infrared gas detector device description language (DDL) software. Intrinsically safe extension cables are available for remote access of the HART communication.

Improved optics
The difference between a 0.1° and a 0.8° alignment tolerance is significant. AutroPoint HC800 is a 60% improvement over the previous industry leading technology. It also has a more reliable and consistent signal strength.

Simple installation
Simplified alignment process reduces installation time by over 50%. Housing and mounting advancements also make it much easier to install in the field.

AutroPath HC800 (0,8°)

Previous leading technology (0,5°)

Common technology (0,1°)

Best in class features

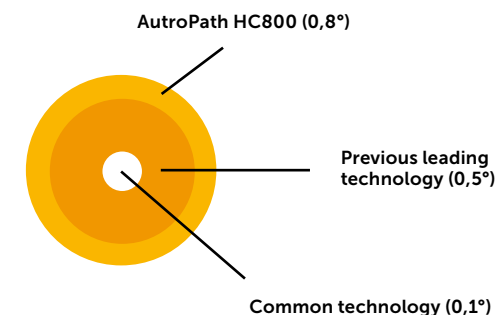Our advanced technology and smart features in the AutroPoint HC800 include:

Easy to install

• Industry leading field of view creates more tolerant alignment
• Simple adjustment and mounting method
• Simplified alignment process does not require specialized handheld interrogator tool
• Factory calibrated to methane, propane, and butane

Best performance

• Improved optical field of view (60% improvement over previous leading technology) provides wider target and more consistent signal strength
• Advanced housing design tolerates harsh conditions: vibration, snow, fog, intermittent obstructions and unstable mounting post
• Ten-year IR source warranty; 5-year device warranty

Easy to maintain

• Less susceptible to vibration and installation movement
• Smart monitoring and control
• Temperature and obscuration triggers
• Power consumption management
• Field replaceable electronics module
• Highly visible local LED status indicators
• Easy diagnostics with event and calibration logs
• HART communication link

AUTRONICA

DET-TRONICS

Easy to install, simple to calibrate and maintain

AUTROTOX GT3000

Toxic gas sensor/ transmitter

The GT3000 toxic gas detector is an intelligent stand-alone industrial gas detector that provides continuous monitoring of the atmosphere for hazardous gas leaks or oxygen depletion.

The GT3000 gas detector consists of a replaceable sensor module (Model GTS) connected to a transmitter module (Model GTX) that is compatible with all GTS sensor modules. A variety of sensor modules are available in various concentration ranges.

Flexible installation
Can be installed as a stand-alone device. Or the sensor/transmitter can be combined with a local or remote display, such as the AutroVu Universal Display.

Functional and fast
Can exceed the ISA specification T90 requirement in under 30 seconds.

Reliable operation
Proven through third-party performance testing to the ISA-92.0.01 standard. The GT3000 has been found by Exida to meet the systematic capability requirements of IEC 61508 for SIL2 (H2S and O2 sensors).

Cost-effective
Approved for use with or without local display. And offers one-person calibration, ideal for remote mounting.

High accuracy
Even in extreme climates, provides consistent operation and third-party verified accuracy and performance.

Easy field swapping
Intrinsically safe and automatically recognizes new sensors (hot swappable).

AUTRONICA

DET TRONICS

GTX transmitter
v 4-20 mA output with HART protocol
v Approved for use in explosion-proof or intrinsically safe areas
v Automatic sensor recognition

GTS sensor module
v Sensors: H2S, CO, O2, NH3, Cl2, H2, and SO2
v Multiple ppm measurement ranges
v IP66 ingress protection
v Hot swappable
v History logs

GT3000 detector
v Approved as stand-alone gas detector
v Local LED indicators
v Magnetic calibration

Detector with AutroVu display
v Approved as stand-alone gas detector
v 4-20 mA output with HART protocol
v Magnetic calibration
v Non-intrusive user interface
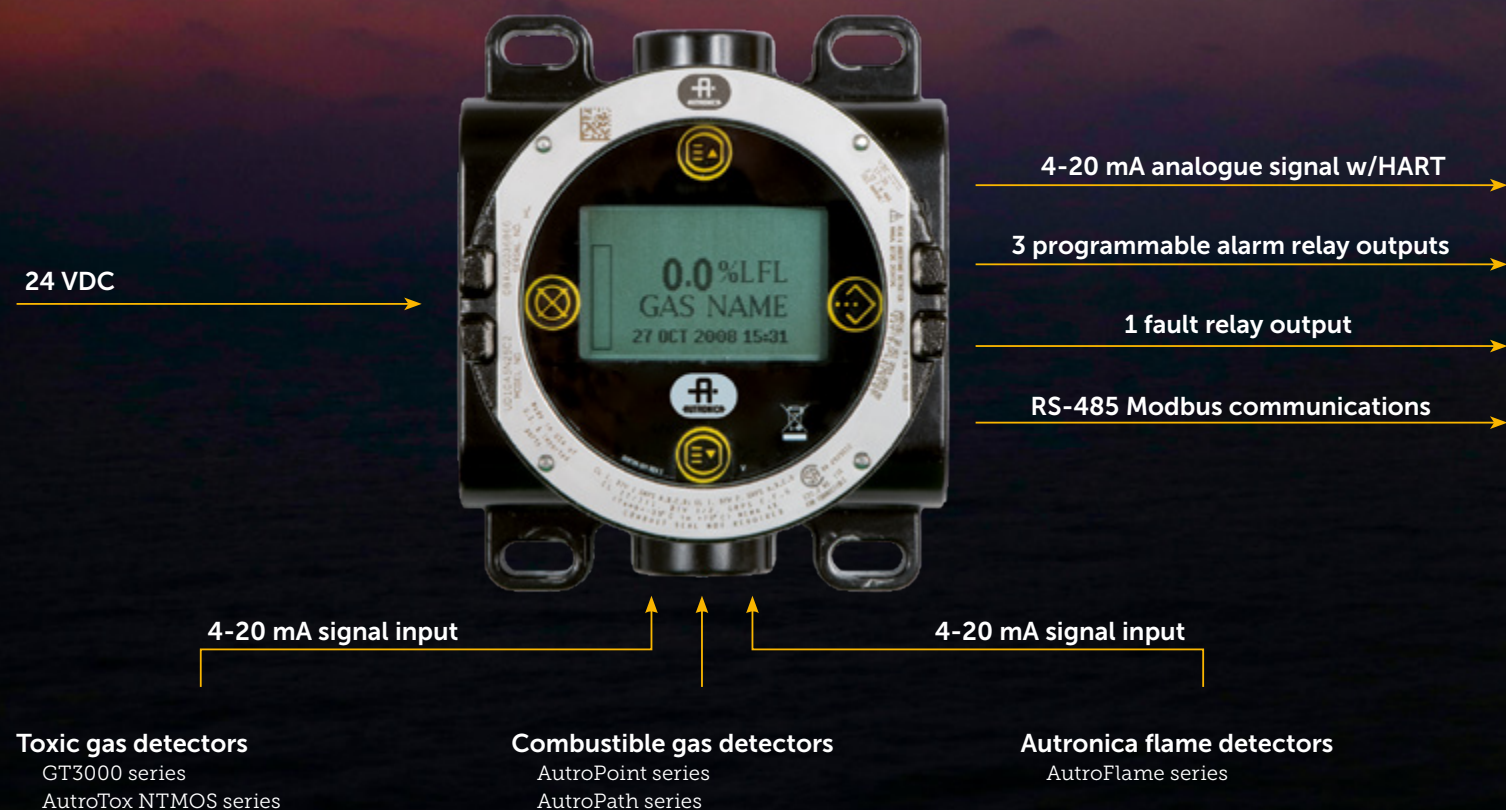v Single data log with a common interface for event, fault, and alarm data

Gases detected

- H2S
- Cl2
- SO2
- CO
- H2
- NH3
- O2
- NO2

Onboard data and HART® diagnostics

- Event logs
- Gas exposure data
- Calibration data
- High/low temperature data

24 VDC

4-20 mA analogue signal w/HART

3 programmable alarm relay outputs

1 fault relay output

RS-485 Modbus communications

0.0 %LFL
GAS NAME
27 OCT 2008 15:31

4-20 mA signal input

4-20 mA signal input

Toxic gas detectors
GT3000 series
AutroTox NTMOS series

Combustible gas detectors
AutroPoint series
AutroPath series

Autronica flame detectors
AutroFlame series

AUTRONICA

DET-TRONICS

AUTROVU UNIVERSAL DISPLAY

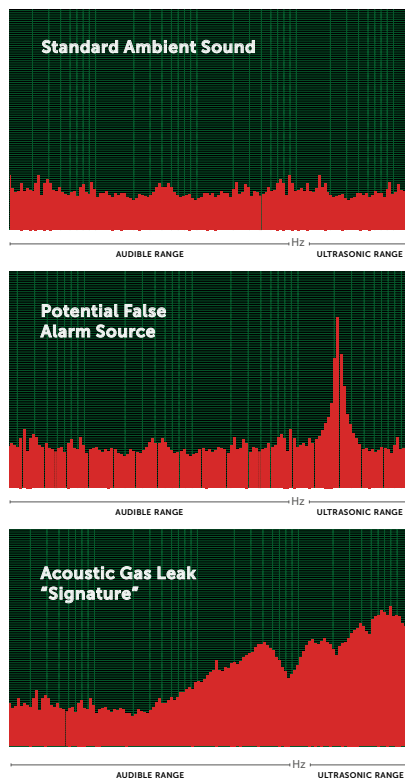### Add flexibility, functionality, and reliability to your safety system

The AutroVu Universal Display is a life-safety display unit that provides non-intrusive calibration, local event logging, and third-party performance certifications. This display/communicator reduces spare-parts inventory by operating with industrial communication protocols such as HART and Modbus and by working with a wide spectrum of toxic and combustible gas sensors.

Rated for hazardous areas (explosion proof) and third-party approved to FM, CSA, ATEX/IEC, and IEC61508 SIL 2, the AutroVu display performs as a gas transmitter and controller. It can be coupled directly to a single transmitter/sensor or be placed remotely using a sensor termination box. The device features non-intrusive calibration using a hand-held magnetic tool or a HART communicator.

SIL2 IEC-61508   FM APPROVED   CSA   Ex   CE

Built to deliver a higher degree of safety

ᵛ   Functional with toxic, combustible, and optical flame detectors

ᵛ   Saves time with smart-device set up, calibration, and interrogation

ᵛ   Rugged construction suitable for industrial applications

ᵛ   Menu is intuitive and easy to use

ᵛ   Operates in rain or shine and dusty days NEMA 4X / IP66

ᵛ   Backlit LCD display simple to read night or day

ᵛ   Performance approved by CSA and FM

ᵛ   Convenient eye-level display when used with sensor separation kit

ᵛ   Non-intrusive calibration using a hand-held magnetic tool

ᵛ   Compatible with HART Communicator for remote log and status retrieval

ᵛ   IEC61508 SIL 2 certified

Standard Ambient Sound

AUDIBLE RANGE · Hz · ULTRASONIC RANGE

Potential False Alarm Source

AUDIBLE RANGE · Hz · ULTRASONIC RANGE

Acoustic Gas Leak "Signature"

AUDIBLE RANGE · Hz · ULTRASONIC RANGE

See what you're not hearing

- Wide acoustic dynamic range
- Recognizes actual acoustic gas leak "signature"
- Superior false alarm discrimination with patented technology
- Detects both toxic and combustible gas leaksat or below 6 bar (87 psi)

AUTROSONIC ACOUSTIC GAS LEAK DETECTOR

Designed to withstand the harshest environments, from Arctic to tropical conditions, the AutroSonic detector is the first non-contact gas leak detector of its kind that recognizes unique ultrasound "finger-prints".

The AutroSonic detector analyses 24 discrete ultrasonic bands, ignoring nuisance ultrasonic sources. A high-fidelity microphone continuously monitors for the distinct ultrasound emitted by pressurized gas leaks across the widest spectrum of frequencies.

Unlike traditional non-contact gas leak detectors, the AutroSonic detector can be programmed to ignore background noises, discerning between gas leaks and environmental noises, such as metal-on-metal contact, fans, machinery or vehicles. For noisy applications, the AutroSonic detector learns both regularly occurring and random sounds, detecting the actual acoustic gas

leak 'signature.

Windy, harsh or changing environmental conditions can compromise traditional catalytic and infrared sensors. By the time a gas cloud triggers an alert, it could reach a highly explosive state.

This next-generation technology improves gas leak detection capabilities by recognizing real leaks and reducing false positives. For potentially hazardous locations, the AutroSonic detector offers an additional layer of protection that complements traditional gas leak detectors.

AUTRONICA

WE PROTECT LIVES AND PROPERTY
with high-technology certified fire and gas safety solutions delivered with

uncompromising standards and quality.

DET-TRONICS

We protect lives and property
with high-technology certified fire and gas safety solutions delivered
with uncompromising standards and quality.