3M | Gas & Flame Detection

OLDHAM detcon inc GMI Gas Measurement Instruments SIMTRONICS Fire & Gas

Product Overview

North America Region

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FIXED GAS & FLAME DETECTION

COMPANY OVERVIEW

Protecting lives, that's our business.

With the acquisition of Scott Safety, Detcon, Oldham, Simtronics and GMI, 3M has become one of the largest manufacturers of gas and flame detection products. These global brands bring together more than 100 years of industry experience across a wide range of innovative gas and flame detection solutions. This adds significant adjacent strength to the Personal Safety Division of 3M that boasts leading products in a wide range of PPE markets, providing a broader array of safety products and solutions, enhancing our relevance to customers worldwide.

Every customer scenario demands a different, customized approach, and 3M applies expertise in building the right plan for the right hazards every time. Our complete portfolio and industry-leading solutions offer expert perspective and quality products you can rely on in the most critical situations. When it comes to superior value, efficacy, efficiency and service, the gas and flame detection team from 3M delivers like no one else.

3M uses its global capability, manufacturing excellence and custom engineering to provide end-to-end gas and flame detection solutions for a wide range of hazards worldwide. With an industry-leading, comprehensive portfolio of products and services, our commitment to cross-platform integration provides protection for today and confidence for tomorrow.

Our products are sold through a world class system of knowledgeable distributors, manufacturers' representatives and sales subsidiaries. Our customer commitment does not stop at product delivery but encompasses ongoing services. From custom-designed solutions to unmatched technical support, our gas and flame detection solutions are backed by expert judgment and premier technology that you can trust.

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3M™ Simtronics GD10P

IR Point Gas Detector

- No Field Recalibration Required
- SIL2 Certified, SIL 3 Capable and Standard HART Interface

GD10P is a sophisticated infrared point gas detector that provides quick, accurate detection for a wide range of applications. Advanced design includes two solid-state IR sources that require no calibration or servicing during the products lifetime. Stable opto-mechanics provide an ultra fast speed of response (T90 < 2s). Unparalleled life, 15-year warranty (IR source) and savings on maintenance.

Gases Detected: Combustible, C02
Sensor Technologies: solid state infrared
Power In/Output: 18-32VDC/ 0-20 mA, HART
Approvals: ATEX • CE • IECEx • CSA • UL • TUV SIL2 • INMETRO • ABS

3M™ Meridian

Universal Fixed Gas Detector

- SIL2 Compliant Certified by TUV-Rheinland
- One Universal Product for Toxic and Combustible Applications

Meridian offers a single detector head that supports hot-swappable combustible and toxic sensors resulting in a true plug and play functionality. It can also have up to 3 heads allowing the detection of multiple gases. Its modular design reduces maintenance time and costs and allows easy integration into existing infrastructures. Advanced industry-standard communications protocols offer detailed diagnostics for preventative maintenance.

Gases Detected: toxic, combustible, O2, CO2
Sensor Technologies: electrochemical, catalytic, infrared
Power In/Output: 18-30VDC/ 0-20 mA, HART, Four integrated relays
Approvals: ATEX • CE • IECEx • cCSAus • SIL2 • INMETRO • ABS • MED

3M™ Detcon Model 700

Environmentally Bulletproof Gas Detector

- Specifically Designed for Harsh Environments and Extreme Locations
- Waterproof, Corrosion-Proof, Vibration-Proof

Model 700 fixed gas detectors feature a proven and robust design that includes an electropolished 316 stainless steel housing, multi-layered transient spike protection circuitry and 100% encapsulated electronics. The sensor electronics are completely protected and immune to water ingress and corrosion. Sensor elements are plug-in components and can easily be replaced in the field.

Gases Detected: toxic, combustible, O2, CO2, VOCs
Sensor Technologies: electrochemical, catalytic, infrared, MOS, photo ionization
Power In/Output: 11.5-28VDC/ 4-20 mA, RS485 Modbus RTU; optional relays and HART
Approvals: ATEX • CE • cCSAus • SIL2 • INMETRO • PESO • ABS • CNEX • EAC • DGMS • ITRI

3M™ Oldham iTrans 2

Single or Dual Sensor

- Optional HART Communication Protocol
- Smart Infrared Gas Sensor Technology

iTrans 2 is equipped with intelligent electronics to provide one or two points of detection from a single head for maximum flexibility, superior performance and lower installation costs, local and remote . With the optional HART Communication Protocol, the iTrans 2 offers remote diagnostics, set-up and calibration.

Gases Detected: toxic, combustible, O2, CO2
Sensor Technologies: electrochemical, catalytic
Power In/Output: 12-28VDC/ 4-20 mA, RS485 Modbus RTU, relays, optional HART
Approvals: ATEX • CE • IECEx • China Ex • CCCF

3M™ Freedom 5000

2-Wire Loop Powered Toxic Transmitter

- Compatible with industry leading Rock Solid sensor technology
- 4-20 Milliamp Output

The Freedom 5000 toxic gas transmitter is 2-Wire loop powered with a standard analog 4-20 mA output. The easy to use transmitter features a non-intrusive operator interface and an intrinsically safe housing, making it an ideal solution for general industrial applications. The device is compatible with the traditional GasPlus electrochemical sensor or the advanced Rock Solid sensor technology. The unique electrical design of the 5000 transmitter and sensor virtually eliminate false alarms due to RFI/EMI sources.

Gases Detected: toxic
Sensor Technologies: GasPlus electrochemical, Rock Solid electrochemical
Power In/Output: 1-28 VDC/4-20 mA
Approvals: ATEX • CSA

3M™ Detcon Models 500 and 600

MicroSafe Intelligent Fixed Gas Detector

- Simple Menu-driven Calibration and Programming
- Plug & Play Sensors and Transmitters

Models 500 and 600 gas detectors feature a non-intrusive operator interface. Calibration and programming instructions appear in simple intuitive and sequential script on a 4-character backlit display. The transmitter design incorporates extensive fault diagnostics with each condition conveniently identified on the transmitter display.

Gases Detected: toxic, combustible, O2, CO2
Sensor Technologies: electrochemical, catalytic, infrared, MOS
Power In/Output: 12-28VDC/ 4-20 mA (500); RS485 Modbus RTU, relays (600), optional HART output (D-series only)
Approvals (vary by individual product): ATEX (TP 524D/624D only) • CE (TP 524D/624D only) • cCSAus • ABS • FM (TP 524D/624D only)

3M™ Spyglass

Open Path Combustible Gas Detector

- Detects Over a Range of up to 200 Meters
- Built-in Event Recorder

Spyglass can replace 20 point gas detectors, saving up-front and ongoing maintenance costs. There are only two units to service and the maintenance requirements are minimal. Spyglass detects hydrocarbon gases by analyzing the absorption of radiation caused by gases in the atmosphere.

Gases Detected: combustible
Sensor Technologies: open path
Power In/Output: 18-32VDC/ 4-20 mA, RS485 Modbus RTU, HART
Approvals: ATEX ● CE ● IECEx ● SIL2 ● FM ● FMC

3M™ Oldham CTX 300

4-20 mA Transmitter with Optional Backlit Display

- 2-Wire Loop Powered Option (Electrochem Only)
- Commercial or Industrial Applications in Unclassified Areas

CTX 300 is designed to detect hazardous levels of toxic gases and oxygen in unclassified areas. It has the flexibility to protect against many potentially hazardous environments for both commercial and industrial applications. Maintaining the unit is easy with
pre-calibrated sensors.

Gases Detected: toxic, NH3, O2, CO2, refrigerant
Sensor Technologies: electrochemical, infrared, semiconductor
Power In/Output: 15-32VDC/ 4-20 mA
Approvals: CE ● CSA ● EAC

3M™ Oldham AirAware

General Purpose Indoor Gas Detection Monitor

- Light Industrial, Commercial Applications, Gas Detection
- Dual Alarm LEDs and Push-Button Operation

AirAware is the logical choice for areas that require continuous monitoring without the need of an explosion-proof enclosure. It provides discrete monitoring with enhanced aesthetics becoming the ideal solution for reliable, low-cost fixed-point detection. An optional vanity plate hides the display.

Gases Detected: CO, Cl2, H2S, NO2, SO2, O2, NH3, NO, or HCl
Sensor Technologies: electrochemical
Power In/Output: 12-24VDC/ RS485 Modbus RTU; 4-20 mA, relays & on board audible alarm optional
Approvals: CSA for non hazardous area

3M™ FV-40

Single UV, Single IR, Multi IR, Triple IR (IR3), UV/IR2.5µm, UV/IR4.5µm, Ultra-Fast UV/IR

- Excellent False Alarm Immunity
- Long Range of Detection and Wide Field of View

FV-40 Series flame detectors are a portfolio of smart, flexible flame detection solutions designed to sense multiple types of flame and operate reliably even in the harshest environments. All devices are available in aluminum or a heavy-duty 316 stainless steel housing and feature a heated sensor window/LED indicator to eliminate condensation and icing. The FV-40 Series boasts a quick response time of 5 seconds or less, meeting the needs of multiple industries and environments where the presence of flame poses a hazard.

Type of Flame Detected: Detected: Hydrocarbon, Hydrogen, Silane, Ammonia, other Hydrogen-based fires, Metal fires
Sensor Technologies: Ultraviolet (UV), Infrared (IR), Combined UV/IR, Multi IR, Triple IR
Power In/Output: 0-20mA, HART® Protocols, RS-485 and MODBUS
Approvals: ATEX, FM/FMC/CSA, DNV, INMETRO, SIL2

3M™ Detcon Model X40

Integrated Alarm and Control System

- 8 or 32 Channel Capacity
- Wired or Distributed I/O and SmartWireless Capable

Model X40 is designed to monitor gas detection sensors and a wide range of other field devices. It functions as a Modbus™ master and can be expanded based on application needs using Detcon's stackable I/O modules. The X40 is field programmable using a small handheld magnet and includes extensive event data logging.

Modules for Distributed I/O: 4-20 mA input, 4-20 mA output, relay output, relay contact input
Input/Output: RS-485 Modbus RTU, 4-20 mA, relays, wireless option
Power In: 11.5-30 VDC, 115-230 VAC Option
Classification Options: NEMA 1 panel mount, NEMA 4X fiberglass or stainless steel, NEMA7
Approvals: CE Marking (Models X40-N4X & X40-SS) • cTUVus

3M™ Detcon MCX-32

Integrated Alarm and Control System

- Up to 64 Channel Capacity
- Wired or Distributed I/O and SmartWireless Capable

MCX-32 can receive inputs from a wide range of field devices. Standard serial protocol is RS-485 Modbus RTU and is expandable using din rail mountable I/O modules which can significantly reduce wiring and installation costs. Features include "auto-configuration" of addressable devices that are located in a device library, touch screen, compact flash for data logging and Ethernet port for remote monitoring.

Input/Output: 4-20 mA, RS-485 Modbus RTU, relays, wireless option
Power In: 20-30 VDC, 110-230 VAC
Classification Options: NEMA 1 panel mount or rack mount, NEMA 4X fiberglass or stainless steel

3M™ QuadScan Series II

Four Point Analog Controller

- Easily Expand the number of channels from 1 to 4
- Voting Logic for Relays
- Built-in Buzzer, Optional Relays and Battery Backup

The Series 7400 QuadScan II is a wall-mount 1 to 4 channel receiver housed in a NEMA-4X enclosure. QuadScan II accepts any 4-20 MA Input and large backlit display provide individual readout of each channel's status. The QuadScan II includes common Alarm, Warm, Fault and Horn relays while the optional relay package offers 8 individual 5 amp relays (6 SPDT, 2 DPDT) that are completely user programmable and assigned for any of the four channels. Individual relays can be configured for "voting logic." Installation of QuadScan II is easy and the receiver's set up and operation is performed via an intuitive pushbutton interface. Optional battery backup (096-0179) provides 2.5 amp/hours of operation during power outages to ensure continued protection against airborne hazards.

Input/Output: 4-20mA, 24 VDC
Power In: 100-240 Vac or 24 VDC
Indicators: LEDs for inhibit, alarm 1, alarm 2, and fault for each channel, audible buzzer
Approvals: CSA for Ordinary Locations

ALARM STATIONS

3M™ Detcon AV1/AV2-N4X

NEMA 4X Alarm Stations

- Designed for Use in Non-Hazardous Environments
- Rugged Construction and Easy Mounting

AV1-N4X & AV2-N4X audio visual alarm stations are design for use in light industrial non-hazardous environments where a very bright visual and high decibel alarm signal is required. The audible alarm is capable of producing coded blasts or sustained tones. AV1 consists of a single strobe and horn. The AV2 includes an additional strobe.

Power Options: 12 VDC, 24 VDC, 120 VAC or 240 VAC
Dome Colors: amber, blue, clear, green, or red
Horn/Strobe: 99dbA @ 10 feet/ 1.75 joules per flash, 60-80 fpm

3M™ Detcon AV1/AV2 C1Dx

Hazardous Area Alarm Stations

- Designed for Use in Hazardous Environments
- Optional Class I, Div 1 and Class I, Div 2

AV1/AV2-C1Dx audio visual alarm stations are designed for installation and use in heavy industrial areas. The alarm stations consist of a warning light (2 lights for AV2) and a siren and are suitable for hazardous locations or corrosive environments. Horn options include coded blast, sustained tone and multi-tone.

Power Options: 24 VDC, 120 VAC or 240 VAC
Dome Colors: amber, blue, clear, green, red or magenta
Horn/Strobe Options: coded blasts, sustained tones, multi-tones/ 98-100 dB @ 10 ft, 80-85 flashes per minute

3M™ Detcon CXT

SmartWireless Gas Detector

- Proprietary Self-Healing Mesh Network Topology
- Battery Powered Devices Eliminate Expensive Installation Costs

CXT gas detectors are easily and economically deployable in both permanent and temporary installations. Rechargeable and disposable battery options allow for run times of up to 9 months. Features include 1.5 mile (2.4 km) line-of-site, no single point of failure and a network capacity of up to 32 devices.

Gases Detected: toxic, combustible, O2
Sensor Technologies: electrochemical, infrared
Power In/Battery Life: 9-30 VDC/ 2 months “C” cell (3.6V) disposables, 9 months “D” cell (3.6V) disposables, 5 months rechargeable pack
Input/Output: 2.4Ghz DSSS Radio Transmission
Approvals: ATEX (“C” and “D” cell batteries only) ● CE (“C” and “D” cell batteries only) ● cCSAus ● IECEx (“C” cell batteries only)

3M™ Detcon CX

Low Power Wired Gas Detector

- Compatible with Site Sentinel CX/CXT Controllers and other Control Systems
- Fully Encapsulated Electronics & Electropolished 316SS Construction

CX is the wired version of the CXT. It can be economically and easily deployed within a wireless system where a wireless transmitter is not needed. The CX is a very low power device making it an ideal choice for a battery powered detector (optional) in applications where power is unavailable or not economically feasible.

Gases Detected: toxic, combustible, O2
Sensor Technologies: electrochemical, infrared
Power In/Battery Life: 9-30 VDC/ Internal “D” cell (3.6V) disposable pack or Lithium Ion Rechargeable pack optional
Input/Output: 4-20mA
Approvals: ATEX ● CE ● cCSAus ● IECEx

3M™ Detcon Site Sentinel CXT

SmartWireless Alarm and Control System

- Compatible with CX/CXT Gas Detectors and SmartWireless Alarm Systems
- Command Functions Include Alarm Reset, Acknowledge, Test & Radio Silence

Site Sentinel CXT Controller is a SmartWireless gas detection and control system that provides operator interface to the network and real time status display of all network devices. Features include 1.5 mile (2.4 km) line-of-site, network capacity of up to 32 devices including 4 wired, optional audible and visual alarms and non intrusive magnetic interface. Rated for Class 1, Division 2 environments.

Power In/Battery Life: 14-30VDC and/or internal rechargeable (1-2 months operating time)
Input/Output: 2.4Ghz DSSS radio transmission, 4-20mA wired device inputs
Alarms (optional): xenon strobe lamp, 1.75 joules, 60-80 fpm; 80-90 dB audible min @ 2 ft
Approvals: CE ● cMETus

* Model X40 and MCX32 are also available in wireless versions

3M™ Detcon Site Sentinel CX

SmartWireless Sensor Station

- Accommodates Up to 4 Wired SmartWireless CX Gas Detectors
- CX Sensors are Powered by the CX Sensor Station Internal Battery

SmartWireless Site Sentinel CX Sensor Station is an accessory to the Site Sentinel CXT and is easily and economically deployable in both permanent and temporary installations. The CX wirelessly transmits the data from up to 4 wired CX gas detectors back to the CXT. Features include 1.5 mile (2.4 km) line-of-site, optional audible & visual alarms, and solar power option. Rated for Class 1, Division 2 environments.

Power In/Battery Life: 14-30VDC and/or internal rechargeable (1-2 months operating time)
Input/Output: 2.4Ghz DSSS radio transmission, 4-20mA wired device inputs
Alarms (optional): xenon strobe lamp, 1.75 joules, 60-80 fpm; 80-90 dB audible min @ 2 ft
Approvals: CE • cMETus

3M™ Detcon SW-AV Series Alarms

Audio/Visual Alarm Stations

- Up to 6 1/2 months continuous operation - no alarm
- Up to 9 hours continuous operation in full alarm

SmartWireless audio-visual alarm stations are easily and economically deployable in both permanent and temporary installations. Relay options include adjustable set points and latching/non-latching. The audible can be configured for acknowledge/silence. Both are configured via operator interface at the SmartWireless CXT Controller.

Available Models: single audible & visual
Alarms: intense light LED array, 108-115 dB ; 5 joules, 110 dB @ 1m
Battery Life*: 5-6 1/2 months no alarms, 4-9 hours full alarm
Input/Output: 6-30VDC or battery pack/ 2.4Ghz DSSS radio transmission

* typical depending on battery pack used

3M™ Detcon Model 1000 Series

Single or Dual Gas Analyzers

- H2S Low Range, H2S High Range, CO2, H2S & CO2 Versions

Model 1000 Series gas analyzers provide accurate and continuous measurement of target gases in natural gas treating plants, gas production wells and at custody transfer points along gas transmission pipelines. Model 1000 is field tested and proven offering capabilities of analyzer technologies costing much more.

Operating Pressure: inlet 10 ±2 psig, vent atmospheric ±1 psig
Sensor Technologies: electrochemical for H2S, infrared for CO2
Measurement Range: 0-10ppm up to 0-5% for H2S, 0-0.3% up to 100% for CO2
Power In/Output: 18-36VDC, 117-220 VAC/ 4-20 mA, RS485 Modbus RTU, relays

3M™ Detcon Model P-1000 Series

Portable H2S Gas Analyzers

- Data Logger Downloads Spreadsheet for Trend, Average and Peak Values

P-1000 is designed to provide accurate measurement of H2S gas in natural gas treating plants, production wells, and at custody transfer points along gas transmission pipelines. It utilizes advanced electrochemical sensor technology, microprocessor based electronic control circuitry and includes a built-in data logger.

Battery Life: 30 days continuous operation
Sensor Technologies: electrochemical
Measurement Range Options: 0-20ppm, 0-100 ppm, 0-1,000 ppm
Power In/Output: internal 12 VDC battery, 120 VAC charger/ USB port for data logger

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GF-00276D

R011018GFAmericas