

FIXED GAS DETECTORS

2021





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Gas Detection

Because regular inspection and maintenance of gas detectors guarantees people and property's safety, we offer different levels of preventive maintenance or curative services on site (in France and in Europe) or at our workshop laboratory in Ile-de-France.

► Control and periodical checkings



Our team of **trained and qualified** technicians offers inspection and calibration services on site or in our workshop laboratory for a very wide range of fixed or portable gas detectors.

A **very large stock** of spare parts (gas detection sensors, batteries, shells, etc.) allows us to offer high quality services in a very short time.

With our wide range of **standard gas cylinders**, in most cases we calibrate detectors with the target gas for better measurement accuracy.

After each checking, a **calibration certificate** is provided confirming proper operating conditions of the gas detector or the gas detection system.

► On site maintenance or workshop return

Relying on several years of **expertise and collaboration** with the biggest brands in the field (Dräger, Honeywell, Industrial Scientific, Oldham or Scott Safety), guaranteeing quality and compliance with standards, we have the necessary stocks to be very efficient in short response time.



In addition to one-off services (calibration, configuration, repair, etc.), we offer various **maintenance contracts**, whether or not including spare parts.



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Tailored services to each need

Because each client is unique, we offer a complete range of adapted services in each particular case. From a simple workshop return to on site services, we control and maintain your gas detectors and respiratory protective devices.

► The included maintenance concept



The **Included Maintenance** solution is a simple and economical concept which consists of **providing periodic control** of portable gas detectors or respiratory protection equipment for one or more years.

This service includes checking that the device is working properly, calibration or bench testing, provision of a test certificate and even the return transport fee.

► MyGazDetect : simplified PPE management

MyGazDetect - GazDetect's intranet network - is a simple, innovative application, **completely free** and available from any computer, tablet, or smartphone for **the management and monitoring of periodic PPE checkings** (gas detectors and / or respiratory protection equipment). This application is designed to meet the expectations of HSE managers.



It allows you to view up-to-date devices and those requiring periodical control in three clicks. The very user-friendly interface allows you to assign one device to different users and thus easily know and manage your PPE fleet.

► Interventions and on site service



Our care and maintenance solutions are available on your premises. **GazDetect technicians work on site throughout France**. We install your fixed gas detection systems, periodically check and calibrate these devices. We also inflate compressed air cylinders using our mobile compressor, and provide on site gas masks inspection.

Safety is everyone's concern, it's also our job!

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Fixed gas detectors



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▶ OLC(T)10

Explosive, toxic or refrigerant gas detector



Technical specifications

Detection principle:

Explosive combustible gases : 0 – 100 % LEL poison resistant catalytic sensors (methane, butane, propane, LPG, CNG or H2)

EXPLO combustible gas	Gamme de mesure	Référence
Butane	0-100% LEL C4H10	OLCT10-004
Hydrogen	0-100% LEL H2	OLCT10-003
Methane	0-100% LEL CH4 (5%/vol.)	OLCT10-001
Methane	0-100% LEL CH4 (4,4%/vol.)	OLCT10-002
Propane	0-100% LEL C3H8	OLCT10-005

Toxic gases: electrochemical sensor

Refrigerant gases (freons): semiconductor sensor

Output signal:

- OLC and OLC-TWIN version: Wheatstone bridge 340 mA
- OLCT version (all sensors): 4-20mA linear Power supply: 15 - 30 Vdc (24 Vdc nominal)

Consumption:

- Electrochemical version: 30 mA
- Catalytic or semiconductor version: 100 mA max

Connections:

- Catalytic version: 3 active shielded wires 1.5mm²
- Electrochemical version: 2 shielded active wires, 32W max in loop
- Semiconductor version: 2 supply wires and 1 for the signal
- 1 M16 cable gland, cable diameter from 4 to 8 mm

Dimensions (WxHxD): 118 x 126 x 58 mm

Materials: ABS

Protection: IP65

Operating temperature: -10 to + 45 ° C

Humidity: 0% RH to 95% RH

Certifications: electromagnetic compatibility in compliance with EN 50270

Product description

The **OLCT10** is a fixed gas detector with excellent money value for monitoring explosive vapors and gases, toxic combustion gases (CO, NO, NO₂), or refrigerant gases (freons HFC, HCFC, HFO).

▶ OLC(T) 10 in boiler rooms

Preferred area for small and medium-sized boiler rooms in the tertiary sector. Several versions are available:

- **OLC10 and OLC10 TWIN :** Wheatstone bridge catalytic sensor for the detection of explosive gases compatible with Oldham MX32 or MX43 controllers exclusively. The TWIN version makes it possible to connect 2 detectors on the same channel.
- **OLCT10-TWIN :** Standard 4-20mA linear output catalytic sensor for the detection of explosive gases

▶ OLCT10 in car parks

Ideal for monitoring vehicle combustion gases, the **OLCT10** is available for the detection of CO (carbon monoxide), NO (nitrogen monoxide) and NO₂ (nitrogen dioxide) with an electrochemical sensor and a 4-20mA linear output.

Exhaust gases	Mesure range	Code
CO	0-300 ppm	6513567
NO	0-100 ppm	6513569
NO2	0-30 ppm	6513570

▶ OLCT10 refrigerant version (freons)

With a wide range of detected refrigerants, the semi-conductor version of the **OLCT10** is compatible with all controllers or PLCs able to receive a standard 4-20mA input.

Refrigerant gas	Mesure range	Code
FX56	0-2000 ppm	OLCT10-510
HFO-1234YF	0-1000 ppm	OLCT10-662
HFO-1234ZE	0-1000 ppm	OLCT10-525
R11	0-1%	OLCT10-505
R12	0-1%	OLCT10-500
R123	0-2000 ppm	OLCT10-509
R134A	0-2000 ppm	OLCT10-502
R143A	0-2000 ppm	OLCT10-511
R22	0-2000 ppm	OLCT10-501
R23	0-1%	OLCT10-506
R32	0-1000 ppm	OLCT10-515
R404A	0-2000 ppm	OLCT10-512
R407C	0-1000 ppm	OLCT10-517
R410A	0-1000 ppm	OLCT10-514
R434A	0-4000 ppm	OLCT10-520
R507	0-2000 ppm	OLCT10-513

▶ OLCT10N

Digital detector for explosive, toxic or asphyxiating gases



Technical specifications

Detection principle:

- Explosive combustible gases: catalytic sensors resistant to poisons 0-100% LEL (methane, butane, propane LPG, CNG or H₂)
- Toxic gases: electrochemical sensor
- CO₂: infrared sensor

Signal output: proprietary Modbus RS485 digital signal

Power supply: 15 - 30 Vdc (24 Vdc nominal)

Cable type: 2 shielded twisted pairs, one for supplying the detectors, the other for RS485 communication between modules.

Consumption:

- Electrochemical sensor: 2.5 mA / 24 Vdc
- Catalytic sensor: 50 mA / 24 Vdc
- CO₂ infrared sensor: 20 mA / 24 Vdc

Connections: 1 M16 cable gland, cable 4 to 8 mm

Dimensions (WxHxD): 118 x 126 x 58 mm

Material: ABS

Protection: IP65

Operating temperature: -10 to + 45 °C

Humidity: 0% RH to 95% RH

Certifications:

Electromagnetic compatibility according to EN 50270

Product description

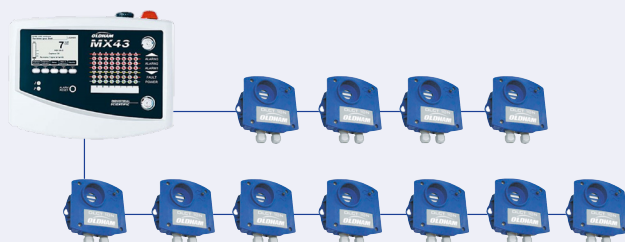
Specially designed for the detection of the most commonly encountered gases in the tertiary sector (small boiler rooms, universities, laboratories, parking garages) or light industry, the **OLCT10N** digital detector is a very economical solution (serial mounting) for the detection of explosive, combustible, toxic or asphyxiating gases.

Designed to be used in digital connection (proprietary protocol) with the Oldham **MX32N** (up to 8 detectors) and **MX43** (up to 32 detectors) gas detection controllers, the **OLCT10N** is a reliable and relevant alternative for many applications. The sensors are connected in series, that is to say that the connection cable (Modbus RS485) leaves from the central unit to go to the first detector, then to the second and so on, which induces substantial savings in wiring costs.

The detector is automatically calibrated with a magnet, preventing the housing from being opened. The calibration information, including the gas response curve, is memorized by the **MX32** or **MX43** control panels.

Gas	Mesure range	Code
Butane	0-100% LEL C4H10	OLCT10N-004
Hydrogen	0-100% LEL H ₂	OLCT10N-003
Methane	0-100% LEL CH ₄ (5% vol.)	OLCT10N-001
Methane	0-100% LEL CH ₄ (4,4% vol.)	OLCT10N-002
Propane	0-100% LEL C ₃ H ₈	OLCT10N-005

Ammonia	0-100 ppm NH ₃	OLCT10N-231
Ammonia	0-1000 ppm NH ₃	OLCT10N-232
Carbon dioxide	0-5000 ppm CO ₂	OLCT10N-252
Carbon dioxide	0-5% vol CO ₂	OLCT10N-239
Carbon dioxide	0-100% vol CO ₂	OLCT10N-241
Carbon monoxide	0-300 ppm CO	OLCT10N-204
Carbon monoxide	0-1000 ppm CO	OLCT10N-205
Hydrogen sulfide	0-30 ppm H ₂ S	OLCT10N-213
Hydrogen sulfide	0-100 ppm H ₂ S	OLCT10N-214
Nitric dioxide	0-10 ppm NO ₂	OLCT10N-219
Nitric dioxide	0-30 ppm NO ₂	OLCT10N-220
Nitric monoxide	0-100 ppm NO	OLCT10N-216
Nitric monoxide	0-300 ppm NO	OLCT10N-217
Oxygen	0-30% vol O ₂ (cell 2 ans)	OLCT10N-200
Oxygen	0-30% vol O ₂ (cell 5 ans)	OLCT10N-272



► SensePoint XCL

Fixed gas detector for light industrial applications



Technical specifications

Detection principle:

- Combustible: poison resistant catalytic sensor 0-100% LEL (methane, butane, propane GPL, GNV or H2)
- Toxic gases: electrochemical sensors for CO, H2, H2S, NH3, NO, NO2, O2 gas
- CO2: infrared sensor

Power supply: 24 Vcc

Output:

- Analog: 0 - 22 mA (linear)
- Digital: Modbus RTU (option)
- Relay: 2 relays 24 Vcc / 240 Vca, 5A (option)

Visual Indicator: Multi-color LED light ring

- Green: normal
- Flashing red: alarm
- Flashing green and yellow: warning
- Flashing yellow: fault
- Solid yellow: inhibited
- Flashing blue: Bluetooth pairing in progress

Wireless interface: Bluetooth 4.0 (Bluetooth Low Energy). Dedicated mobile app enabling wireless configuration and maintenance, Android 4.3 or above compatible.

Material: Polycarbonate (black or white)

Dimensions: 113 x 113 x 59 mm / Weight 500 g

Ingress protection rating: IP65 type 4 (in compliance NEMA 250)

Operating temperature: -20 to +50°C

Humidity:

- 10 to 90% HR (non-condensing) for catalytic version
- 0 to 99% HR (non-condensing) for others gases

Product description

The **Sensepoint XCL** is a fixed point gas leak detector that is designed to meet the needs of commercial and light industrial applications. Thanks to clean aesthetics and a choice of colors, this detector is ideal for public spaces like lobbies and retail environments. It is available with either mA loop analog output or Modbus RTU with optional relays on both.

► Easier settings with smartphone

The **Sensepoint XCL** smartphone interface makes for much faster calibration, configuration and bump tests. Status inspection and detector configuration is simple with the dedicated mobile app.

Use the mobile app to :

- Configure settings
- Read real-time gas concentrations
- Check unit history (alarms).

► Multicolor LED indicator

A Multi-color visual indicator makes it easier to know the detector status. A different color (green, red, yellow, blue) is adapted for each situation, allowing to identify detectors that require attention or are warning of danger.

► Typical Applications

- Hospitals / IRM rooms
- Food processing units
- Bottling and brewery units
- Apartments, accommodations and condominiums
- Boilers rooms
- Transportation and parking

Codification

SensePoint XCL detectors, black color without relay :

Gas	Range	4-20 mA	Modbus
Combustible gas	0-100% LEL	F6BAXCXNZZ	F6BMXXCXNZZ
Ammonia	0-200 ppm	A1BAXCXNZZ	A1BMXXCXNZZ
Carbon dioxide	0-5%/vol.	B4BAXCXNZZ	B4BMXXCXNZZ
	0-5000 ppm	B3BAXCXNZZ	B3BMXXCXNZZ
Carbon monoxide	0-1000 ppm	C1BAXCXNZZ	C1BMXXCXNZZ
Hydrogen	0-1000 ppm	G1BAXCXNZZ	G1BMXXCXNZZ
Hydrogen sulfide	0-50 ppm	H1BAXCXNZZ	H1BMXXCXNZZ
Nitric dioxide	0-50 ppm	F6BAXCXNZZ	F6BMXXCXNZZ
Oxygen	0-25%/vol.	O1BAXCXNZZ	O1BMXXCXNZZ

▶ SensePoint XRL

ATEX gas detector with display and analog or Modbus output



Technical specifications

Detection principle:

- Combustible: poison resistant catalytic sensor 0-100 % LEL (methane, butane, propane GPL, GNV or H2)
- Toxic gases (CO, H2S, NO2, O2) : electrochemical sensor

Power supply: 24 Vcc

Output:

- Analog: 0 – 22 mA
- Digital: Modbus RTU (option)

Visual indicator: Multi-color LED light ring

- Flashing green: normal
- Flashing red: alarm
- Flashing green and yellow: warning
- Flashing yellow: fault
- Solid yellow: inhibited
- Flashing blue: Bluetooth pairing in progress
- Solid blue: established Bluetooth connection

Wireless interface: Bluetooth 4.0 (Bluetooth Low Energy). Dedicated mobile app enabling wireless

Radio: RED, FCC, IC

Casing material: Aluminium alloy LM20 (charcoal or yellow)

Dimensions: 118 x 159 x 93 mm

Weight: 1.4 kg

Ingress protection rating: IP 66, NEMA 4X

Operating temperature: -40°C to 65°C

Humidity: 0 to 99% HR (non-condensing)

ATEX certification:

- ATEX Ex db IIC T6 Gb
- ATEX Ex tb IIIC T85°C Db

EMC Certification: EN 50270 :2015

Product description

The **Sensepoint XRL** is an ATEX fixed point gas leak detector that is designed to meet the needs of industrial applications. With Bluetooth technology, it is available with analog or Modbus RTU output and can easily be incorporated into legacy systems as well as new installations. With high ingress protection (IP66) and resistant to tough environments casing material, the **Sensepoint XRL** is waterproof and water jet proof.

▶ Bluetooth user interface

A dedicated mobile app is available on smartphone or touchpad (Bluetooth) for different tasks like installation, commissioning and maintenance. Use the mobile app to :

- Read real-time gas concentrations
- Configure the detector
- Check unit history
- Generate calibration reports

The calibration can be done by one person without having to open the detector (non-intrusive action in ATEX zone).

▶ Visual indicator

Clean aesthetics and a choice of colors mean that the detector appearance can be selected to compare or contrast with the environment in which it is being used. Multi-color visual indicators allow to quickly see the **Sensepoint XRL** status, to know if it is on alarm or normal operation mode.

▶ Applications

- Manufacturing facilities and factories
- Water treatment plants
- Battery charging facilities
- Vehicle test facilities
- Petrochemical plants
- Fuelling depots

Codification

Gas	Range	4-20 mA	Modbus
Combustible gas	0-100% LEL	SPLIF6BAXCMAZZ	SPLIF6BMXCMAZZ
Carbon monoxide	0-1000 ppm	SPLIC1BAXCMAZZ	SPLIC1BMXCMAZZ
Hydrogen	0-1000 ppm	SPLIG1BAXCMAZZ	SPLIG1BMXCMAZZ
Hydrogen sulfide	0-50 ppm	SPLIH1BAXCMAZZ	SPLIH1BMXCMAZZ
	0-200 ppm	SPLIH2BAXCMAZZ	SPLIH2BMXCMAZZ
Nitric dioxide	0-20 ppm	SPLIN1BAXCMAZZ	SPLIN1BMXCMAZZ
Oxygen	0-25%/vol.	SPLIO1BAXCMAZZ	SPLIO1BMXCMAZZ

► MGS série 400

Refrigerant leak detectors



Technical specifications

Detection of refrigerant gases:

R1234yf, R1234ze, R134a, R290, R22, R32, R404A, R407A, R407C, R407F, R410A, R422A, R422D, R427A, R434A, R448A, R449A, R450A, R452A, R454A, 454C, R507A, R513A, R600, R717 (NH₃), R744 (CO₂).

Sensors: Temperature compensated pre-calibrated probes to prevent false alarms.

Integrated audiovisual alarm:

- Status indicator with three-color LED
- Integrated 72 dB (A) alarm at 10 cm

Output :

- 4-20 mA linear analog output
- Modbus RTU digital communication for connection with MGS 408 central or BMS system
- 3 configurable SPDT relays (MGS 450 and MGS 460 models only)

Setup / Configuration:

Via the MGS-400 application and Bluetooth connection.

Operating conditions:

- Operation with temperatures down to -40 °C
- Protection index: IP41 and IP66 (optional)
- Dimensions: MGS 410: 130 x 130 x 68 mm
MGS 450: 165 x 165 x 77 mm (87 mm / IP66)

Power specifications:

Supply voltage: 24 Vac/Vdc (auto select).

Absorbed power:

2W for MGS 410/4 W for MGS 450 and MGS 460

Compliance: Complies with NF EN 378-3: 2017, EN14624 & EEEW (Electrical and electronic equipment waste).

Product description

Bacharach, renowned manufacturer of refrigerant leak measurement and detection instruments offers an innovative range of refrigerant gas detectors with the **MGS 400** range.

Designed to be directly installed in low temperature environments (down to -40 °C), they can be used as stand-alone devices or in conjunction with a gas detection controller or a BMS (Building Management Systems).

► A complete range of refrigerants

The **MGS 400** series refrigerant leak detectors detect a very wide range of **HFOs** (Low GWP fluoro-olefin hydrocarbons such as R1234yf or R1234ze), **HFCs** (hydro fluoro carbones such as R134A, R407C, R410) and **HCFC** (hydro chloro fluoro carbones like R22) as well as hydrocarbons, NH₃ and CO₂ depending on the selected sensor technology.

► Standards & regulations

European regulation **N ° 842/2006** known as F-gas, relating to tightness control, specifies measures and methods to be applied to avoid and minimize greenhouse gas emissions.

When the refrigerant concentration can exceed the practical limit in accordance with **EN 378-1: 2016 annex C**, the detectors must comply with the specified requirements and must at least trigger an alarm.

The **MGS 400 series** detectors meet the **EN14624 & NF EN 378-3: 2017** European standard requirements as well as EEEW (Electrical and electronic equipment waste).

► Application areas

Engine room, cold rooms and freezers, HVAC ventilation and air conditioning systems, refrigeration compressor groups, service tunnels for ventilation and air conditioning, etc.

► 3 models: MGS410, MGS 450 & MGS 460



MGS 410

Basic model with integrated sound alarm 72 dB (A) linear output 4-20 mA & digital Modbus RTU. Preferably to be connected to a controller or BMS system.



MGS 450

IP41 or IP66 stand-alone model with relay outputs, integrated 72 dB (A) sound alarm and linear 4-20 mA & digital Modbus RTU output. Can be used independently or with a controller unit.

► Refrigerant gases available

Refrigerant gas	Technology	Mesure range	MGS400 detector	
			R410	R450
CO2	Infrared	0 - 50 000 ppm	6302-0095	6302-2095
NH3	Electrochemical	0 - 100 ppm	6302-0026	6302-1026
NH3	Electrochemical	0 - 1000 ppm	6302-0028	6302-1028
NH3	Electrochemical	0 - 300 ppm	6302-0029	6302-1029
NH3	Catalytic	0 - 100 % LEL	6302-0070	6302-1070
R1234yf	Semiconductor	0 - 1 000 ppm	6302-0161	6302-2161
R1234ze	Semiconductor	0 - 1 000 ppm	6302-0152	6302-2152
R134a	Semiconductor	0 - 1 000 ppm	6302-0101	6302-2101
R22	Semiconductor	0 - 1 000 ppm	6302-0109	6302-2109
R290	Infrared	0 - 100 ppm	6302-0054	6302-2054
R32	Semiconductor	0 - 1 000 ppm	6302-0155	6302-2155
R404A	Semiconductor	0 - 1 000 ppm	6302-0103	6302-2103
R407A	Semiconductor	0 - 1 000 ppm	6302-0105	6302-2105
R407C	Semiconductor	0 - 1 000 ppm	6302-0123	6302-2123
R407F	Semiconductor	0 - 1 000 ppm	6302-0126	6302-2126
R410A	Semiconductor	0 - 1 000 ppm	6302-0107	6302-2107
R422A	Semiconductor	0 - 1 000 ppm	6302-6105	6302-2105
R422D	Semiconductor	0 - 1 000 ppm	6302-0166	6302-2166
R427A	Semiconductor	0 - 1 000 ppm	6302-0167	6302-2167
R434A	Semiconductor	0 - 1 000 ppm	6302-0159	6302-2159
R448A	Semiconductor	0 - 1 000 ppm	6302-0156	6302-2156
R449A	Semiconductor	0 - 1 000 ppm	6302-0169	6302-2169
R450A	Semiconductor	0 - 1 000 ppm	6302-0160	6302-2160
R452A	Semiconductor	0 - 1 000 ppm	6302-0157	6302-2157
R454A	Semiconductor	0 - 1 000 ppm	6302-0154	6302-2164
R454C	Semiconductor	0 - 1 000 ppm	6302-0170	6302-2170
R507A	Semiconductor	0 - 1 000 ppm	6302-0111	6302-2111
R513A	Semiconductor	0 - 1 000 ppm	6302-0158	6302-2158
R514A	Semiconductor	0 - 1 000 ppm	6302-0152	6302-2152
R600	Semiconductor	0 - 5 000 ppm	6302-0306	6302-2306
R744 (CO2)	Infrared	0 - 10 000 ppm	6302-0091	6302-2091

► MGS 400 series controllers



The **MGS-402** controller unit centralizes up to 2 **MGS 400** sensors connected in series with Modbus communication. A LED strip shows the status of each detector at a glance: power, fault and alarm. Three freely assignable alarm relays are available for servo controls.



The **MGS-408** gas detection unit centralizes up to 8 **MGS 400** sensors connected in series with Modbus communication. The digital display and a group of LEDs provides concentration and status real-time view for each sensor. An intuitive menu allows easy controller configuration which stores the gas alarm history on an SD card. Three freely assignable alarm relays are available for control systems.



- 8-channel gas detection unit - digital Modbus wiring
- 100-240 Vac Power supply
- Status control by LED (green, orange, red)
- 3 alarm relays for servos
- Event recording on SD card
- Modbus RTU slave for BMS (Building Management Systems)
- Audible alarm 72 dB (A) at 10 cm (optional)
- Certifications: CE, UL / CSA / IEC EN 61010-1

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▶ CTX300

Toxic gas, solvents, freons & CO2 detector



Technical specifications

- Function:** detector with analog 4-20 mA output
Power supply: 15 to 32 V DC
Display: backlit LCD display (optional)
Maximum consumption: 60mA for versions without display, 110 mA for versions with display or semiconductor
Operating temperature: -40°C to +50°C
Housing: polycarbonate housing
Connection: cable entry: PG9 cable gland (6 and 11mm)
- Version without display: a shielded 9/10 pair
 - 3-wire shielded cable for other versions

Detected gases

Gas	Mesure range	Cell	Without display	With display
Ammonia	0-100 ppm NH3	EC	WC30NH3	WC3ANH3
Ammonia	0-1000 ppm NH3	EC	WC30NH1	WC3ANH1
Ammonia	0-5000 ppm NH3	EC	WC30NH2	WC3ANH2
Arsine	0-1 ppm ASH3	EC	CTX300-243	-
Butanone (MEC)	0-500 ppm C4H8O	SC	CTX300-659	-
Carbon dioxide	0-5000 ppm CO2	IR	WC30CO2A	WC3ACO2A
Carbon dioxide	0-5,0 %/vol. CO2	IR	WC30CO2B	WC3ACO2B
Carbon dioxide	0-100 %/vol. CO2	IR	WC30CO2C	WC3ACO2C
Carbon monoxide	0-100 ppm CO	EC	WC30COA	WC3ACOA
Carbon monoxide	0-1000 ppm CO	EC	WC30COC	WC3ACOC
Carbon monoxide	0-1 ppm CO	EC	WC30COD	WC3ACOD
Chlorine	0-10 ppm Cl2	EC	WC30CL2	WC3ACL2
Chlorine dioxide	0-3 ppm ClO2	EC	WC30CLO	WC3ACLO
Ethanol	0-500 ppm C2H6O	SC	CTX300-656	-
Ethanol	0-5000 ppm C2H6O	SC	CTX300-654	-
Ethenol (vinyl alcohol)	0-100 ppm C2H4O	EC	WC30-248	-
Ethylene oxide	0-30 ppm ETO	EC	WC30OET	WC3AOET

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Product description

The **CTX300** gas detector, with 4-20 mA analog linear output for the detection of toxic, refrigerant (freons) or asphyxiating gases (CO2, Helium or lack of oxygen) is mainly dedicated to tertiary or industrial applications in safe, unclassified ATEX areas.

▶ Interchangeable pre-calibrated sensors

The **CTX300** measuring sensor is interchangeable and calibrated by the factory. It requires no special provision, configuration nor calibration when it is replaced.

▶ A wide range of sensors

- Electrochemical sensors for toxic gases and oxygen
- Semiconductor sensor for freons or solvents
- Infrared sensors for CO2 detection
- Built-in sensor for better protection

▶ An outstanding robustness

- Polycarbonate casing loaded with stainless steel fibers and stainless steel screws
- Insensitivity to corrosive agents (H2S, HCl, spray, ...)
- High mechanical resistance

▶ Many available options

- Backlit display
- Removable filters, interchangeable without opening the housing (which is dust-proof, condensation-proof and water resistant)
- Splash guard
- Gas collector cone

Gas	Mesure range	Cell	Without display	With display
Fluorine	0-1 ppm F2	EC	WC30F2A	WC3AF2A
Formaldehyde	0-50 ppm CH2O	EC	CTX300-247	-
FX56	0-2000 ppm FX56	SC	CTX300-510	-
HFO-1234yf	0-1000 ppm HFO-1234yf	SC	CTX300-662	-
HFO-1234ze	0-1000 ppm HFO-1234ze	SC	CTX300-525	-
Hydrogen	0-2000 ppm H2	EC	WC30H2A	WC3AH2S
Hydrogen chloride	0-30 ppm HCl	EC	WC30HLA	WC3AHLA
Hydrogen cyanide	0-10 ppm HCN	EC	WC30HNA	WC3AHNA
Hydrogen cyanide	0-30 ppm HCN	EC	WC30HNB	WC3AHNB
Hydrogen fluoride	0-10 ppm HF	EC	WC30HFA	WC3AHFA
Hydrogen sulfide	0-30 ppm H2S	EC	WC30HSA	WC3AHSa
Hydrogen sulfide	0-100 ppm H2S	EC	WC30HSB	WC3AHSB
Hydrogen sulfide	0-1000 ppm H2S	EC	WC30HSC	WC3AHSC
Isopropanol	0-500 ppm C3H8O	SC	CTX300-658	-
Methyle chloride	0-500 ppm CH3Cl	SC	CTX300-508	-
Methyle chloride	0-500 ppm CH2Cl2	SC	CTX300-507	-
Nitric oxide	0-100 ppm NO	EC	WC30NOA	WC3ANOA
Nitric oxide	0-1000 ppm NO	EC	WC30NOC	WC3ANOC
Nitric acid	0-10 ppm HNO3	EC	CTX300-262	-
Nitrogen dioxide	0-30 ppm NO2	EC	WC30N2B	WC3AN2B
Nitrogen dioxide	0-100 ppm NO2	EC	WC30N3B	WC3AN3B
Oxygen	0-100 %/vol. O2	EC	WC30O2S	WC3AO2S
Oxygen (helium leak)	0-30 %/vol. O2	EC	B301312	B301072
Oxygen (lifespan 2 years)	0-30 %/vol. O2	EC	WC30O2F	WC3AO2F
Oxygen (lifespan 5 years)	0-30 %/vol. O2	EC	WC30O2G	WC3AO2G
Ozone	0-1 ppm O3	EC	WC30O3A	WC3AO3A
Phosgene	0-3 ppm COCl2	EC	WC30CCL	WC3ACCL
Phosphine	0-1 ppm PH3	EC	WC30PH3	WC3APH3
Phosphine	0-1000 ppm PH3	EC	6513584	-
R11	0-1 %/vol. R11	SC	CTX300-505	-
R12	0-1 %/vol. R12	SC	CTX300-500	-
R123	0-2000 ppm R123	SC	CTX300-509	-
R134A	0-2000 ppm R134A	SC	CTX300-502	-
R143A	0-2000 ppm R143A	SC	CTX300-511	-
R22	0-2000 ppm R22	SC	CTX300-501	-
R23	0-1 %/vol. R23	SC	CTX300-506	-
R245FA	0-1000 ppm R245FA	SC	CTX300-521	-
R32	0-1000 ppm R32	SC	CTX300-515	-
R404A	0-2000 ppm R404A	SC	CTX300-512	-
R407C	0-1000 ppm R407C	SC	CTX300-517	-
R407F	0-1000 ppm R407F	SC	CTX300-519	-
R408A	0-4000 ppm R408A	SC	CTX300-518	-
R410A	0-1000 ppm R410A	SC	CTX300-514	-
R422D	0-4000 ppm R422D	SC	CTX300-524	-
R434A (RS45)	0-4000 ppm R434A	SC	CTX300-520	-
R507	0-2000 ppm R507	SC	CTX300-513	-
Silane	0-50 ppm SiH4	EC	WC30SIA	WC3ASIA
Styrene	0-500 ppm C8H8	SC	CTX300-661	-
Sulphur dioxide	0-30 ppm SO2	EC	WC30SOB	WC3ASOB
Sulphur dioxide	0-100 ppm SO2	EC	WC30SOC	WC3ASOC
Toluene	0-500 ppm C7H8	SC	CTX300-657	-
Toluene	0-2000 ppm C7H8	SC	CTX300-652	-
Trichlorethylene	0-500 ppm C2HCl3	SC	CTX300-655	-
Xylene	0-500 ppm C8H10	SC	CTX300-660	-
Xylene	0-2000 ppm C8H10	SC	CTX300-653	-

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► SensePoint

ATEX combustible, toxic gas and oxygen detector



Technical specifications

Detection principle:

- Explosive gases: Catalytic sensor resistant to poisons 0-100% LEL (methane, butane, propane LPG, CNG or H2)
- Toxic gases: Electrochemical sensor for Cl₂, CO, NO₂, H₂, H₂S, NH₃, NO₂, O₂, SO₂ gases.

Power supply: 24 Vdc

Output:

- Explosive gases: 3-wire mV bridge, 2.9 to 3.5 V, 0.7 W, constant 200 mA electric power
- Toxic gases and oxygen: 2-wire 4-20 mA loop supply (plus shielding), 16 to 30 Vdc, 0.9 W

Housing: Phenylene Polysulfide (PPS)

Protection rating (IP): standard IP65

Connecting box:

- Grounding kit
- 4-wire terminal block BK4 (four-way), 4 x 0.5 mm² (AWG 20) to 2.5 mm² (AWG 14),

Cable gland: 1 x M20, 1 x ¾ "NPT, 1 x ½" NPT

Certifications:

- Explosive gases: ATEX II 2 GD
 Ex d IIC T6 Gb
 Ex tb IIIC A21 Db IP67 T85°Cd
- Toxic gases and oxygen: ATEX II 2 GD Ex d IIC T4 Gb
 Ex d IIC T4 Gb
 Ex tb IIIC A21 Db IP67 T135°C
- Applicable standards: This product complies with current CE standards, in particular the following standards: EN50270 on electromagnetic compatibility, EN60079-29-1 on flammable gases, EN445544 on toxic gases (H₂S only)

Product description

The **SensePoint** range of flammable, toxic and oxygen gas detectors is an affordable solution that meets the needs of users who want to detect and monitor gases, both indoors, outdoors and in potentially explosive atmospheres (ATEX zones).

It consists of an Exd or Exe approved housing and a certified gas sensor. With an IP65 protection rating, it is water and dust protected and its four-way connection box makes it very easy to install.

► Flammable gas detector

This version has a poison resistant pellistor catalytic detection system, which is part of a 3-wire mV bridge measurement circuit.

The flammable gas detector measures target gas concentrations between 0 and 100% of the LEL (Lower Explosive Limit) for which it is calibrated.

► Toxic gas detector

Equipped with a high performance electrochemical sensor, this gas detector version detects toxic gases (in ppm) present in ambient air. The **SensePoint** toxic gas version is available for Cl₂, CO, H₂, H₂S, NH₃, NO, NO₂ or SO₂ gases with a 4-20 mA 2-wire linear output.

► Oxygen gas detector

This version of the **SensePoint** monitors oxygen depletion in the air as a volume percentage (% / vol.) Like the toxic gas version, it has a 4-20 mA 2-wire linear output.

Codification

Gas	Range	Code
Combustible gas	0-100% LEL	SPSTAXF1
Ammonia	0-50 ppm NH ₃	SPSTAXA1
	0-1000 ppm NH ₃	SPSTAXA2
Chlorine	0-5 ppm Cl ₂	SPSTAXL1
	0-15 ppm Cl ₂	SPSTAXL2
Carbon monoxide	0-200 ppm CO	SPSTAXC1
	0-500 ppm CO	SPSTAXC2
Hydrogen	0-1000 ppm	SPSTAXG1
Hydrogen sulfide	0-50 ppm	SPSTAXH1
	0-100 ppm	SPSTAXH3
Nitric dioxide	0-10 ppm	SPSTAXN1
Oxygen	0-25%/vol.	SPSTAXO1
Sulfide dioxide	0-15 ppm SO ₂	SPSTAXS1
	0-50 ppm SO ₂	SPSTAXS2

► B12

Toxic gas detector (2-wire gas transmitter)



Product description

The **B12** gas transmitter is a loop-fed toxic gas detector which provides a linear 4-20 mA signal proportional to the measured gas concentration.

The **B12** transmitter housing is made of NEMA 4X polystyrene and is suitable for any industrial environment. An optional LCD screen allows reading of ambient concentrations on the front of the device.

The **B12** is particularly suitable for the detection of exotic gases such as bromine, fluorine, formaldehyde, germane, iodine, fluorine, hydrogen peroxide, phosgene, hydrogen selenide, etc.

► Assets

- Direct measurement with fast response time
- Minimum maintenance
- Low consumption
- Optional LCD display

Technical specifications

Detected gases: See table

Power supply: 12-28 VDC / Output : 4-20mA

Load resistance: 675 ohms maximum under 24VDC

Settings: by potentiometers (zero and sensitivity) mounted on the electronic card

Precision: ± 5% of the value

Repeatability : ± 1% of span

Linearity : ± 5% of span

Material: NEMA 4X polystyrene, optional LCD display

Operating temperature: from 0 to +50°C

Sensor material: Noryl

Weight: 0,4 kg

Measuring ranges

Code	Description
B12-1-XX	B12 sensor-transmitter without display
B12-4-XX	B12 sensor-transmitter with display

XX corresponds to the gas sensor code

Gas	Standard range	Min. range	Max. range	Code
Acetylene	0-500 ppm	0-500 ppm	0-2000 ppm	40
Alcohol	0-500 ppm	0-500 ppm	0-2000 ppm	39
Ammonia	0-100 ppm	0-50 ppm	0-1000 ppm	15
Arsine	0-1000 ppb	0-1000 ppb	0-100 ppm	28
Bromine	0-2 ppm	0-2 ppm	0-100 ppm	10
Carbon monoxide	0-100 ppm	0-50 ppm	0-1000 ppm	16
Chlorine	0-10 ppm	0-2 ppm	0-100 ppm	11
Chlorine dioxide	0-2 ppm	0-2 ppm	0-100 ppm	12
Diborane	0-1000 ppb	0-1000 ppb	0-100 ppm	29
Ethylene oxide	0-20 ppm	0-20 ppm	0-200 ppm	37
Fluorine	0-2 ppm	0-2 ppm	0-100 ppm	13
Formaldehyde	0-20 ppm	0-20 ppm	0-200 ppm	38
Germane	0-1000 ppb	0-1000 ppb	0-100 ppm	30
Hydrogen	0-4 %/vol.	0-1000 ppm	0-10 %/vol.	18
Hydrogen chloride	0-20 ppm	0-10 ppm	0-200 ppm	21
Hydrogen cyanide	0-20 ppm	0-10 ppm	0-200 ppm	22
Hydrogen fluoride	0-20 ppm	0-10 ppm	0-200 ppm	23
Hydrogen peroxide	0-10 ppm	0-10 ppm	0-2000 ppm	34
Hydrogen selenide	0-1000 ppb	0-1000 ppb	0-100 ppm	31
Hydrogen sulfide	0-50 ppm	0-10 ppm	0-500 ppm	24
Iodine	0-2 ppm	0-2 ppm	0-100 ppm	35
Nitric oxide	0-50 ppm	0-50 ppm	0-500 ppm	25
Nitrogen dioxide	0-20 ppm	0-10 ppm	0-200 ppm	26
Nitrogen oxides	0-500 ppm	0-500 ppm	0-2000 ppm	42
Organic vapors	0-500 ppm	0-500 ppm	0-2000 ppm	45
Oxygen	0-25 %/vol.	0-5 %/vol.	0-25 %/vol.	19
Ozone	0-2 ppm	0-2 ppm	0-100 ppm	14
Phosgene	0-2 ppm	0-2 ppm	0-200 ppm	20
Phosphine	0-1000 ppb	0-1000 ppb	0-100 ppm	32
Silane	0-10 ppm	0-1 ppm	0-100 ppm	33
Sulphur dioxide	0-20 ppm	0-10 ppm	0-200 ppm	27

▶ OLC(T)100

ATEX gas detector (hydrocarbons, solvents, freons and toxic gases)



Technical specifications

Sensor type: Catalytic bead, infrared, electrochemical or semiconductor sensors depending on the nature of the targeted gas.

Material: Epoxy painted aluminum casing (316L stainless steel optional).

Sensor and nose: 316L stainless steel

Protection: IP66

Cable entry: M20 or ≤ NPT

Power supply: 15.5 to 32 VDC

Output:

OLC100: Wheatstone bridge

OLCT100 XP, OLCT100 IS, OLCT100 XPIR, OLCT100 XP HT:

Current source coded from 0 to 23 mA (not isolated)

- Power 4 to 20mA linear reserved for measurement
- 0 mA: electronic fault or lack of power
- <1mA: Fault
- 2 mA: initialization mode
- > 23 mA : over scale

Certifications :

- Complies with the European ATEX 94/9 / CE standard and the IECEx scheme for explosion proof detectors.
- OLC100, OLCT100-XP, OLCT100-XP-IR : ATEX II 2 GD / Ex d IIC T6 Gb / Ex t IIIC T85°C Db IP66.
- OLCT100-IS : ATEX II 2 GD / Ex ia IIC T4 / Ex ia D 21 T135°C IP66 SIL 2 according to EN 50402 / EN 61508 for the catalytic, infrared, O₂, CO, NH₃ and H₂S versions sensor for the detection of explosive gases or some toxic gases.

Product description

OLC(T)100 are fixed gas detectors for control and measurement of explosive gases (hydrocarbons, solvents, alcohols), toxic gases, asphyxiating gases and refrigerant gases (freons, HFO, CFC, HFC) in industrial environments. Available in as explosion-proof or intrinsically safe versions, it is suitable for monitoring all gases in ATEX zones.

▶ Many possible variations

The **OLC(T)100** is available in several versions depending on the type of sensor and gas:

- **OLC100:** Catalytic sensor with Wheatstone bridge output for explosive gas detection (0-100% LEL only).
- **OLCT 100 XP:** Explosion-proof version with linear 4-20 mA output equipped with a catalytic, electrochemical or semiconductor cell for detection of explosive gases or certain toxic gases.
- **OLCT 100 IS:** Intrinsically safe (IS) version with 4-20 mA linear output equipped with an electrochemical sensor for some toxic gases.
- **OLCT 100 XP IR:** Explosion-proof version with linear 4-20 mA output equipped with an infrared sensor for monitoring explosive gases, CO₂ or some freons.
- **OLCT 100 XP HT:** Explosion-proof high temperature version, for combustible gases detection up to 200 °C, supplied with high temperature cables of 5, 10 or 15 meters.

▶ High SIL 2 reliability level

The explosion-proof versions with Wheatstone bridge catalytic sensors or 4-20 mA output as well as the versions with CO, H₂S, NH₃ or O₂ sensors are SIL 2 certified by INERIS, according to the EN 50402 standard, which corresponds to IEC/EN 61508 for gas detectors.

▶ Many available accessories

Description	Code
Calibration cup (allows introduction of calibration gas on the sensor)	6331141
Bypass adapter (allows samples measurement)	6327910
Remote gas introduction head (allows introduction of gas without opening the detector)	6327911
Splash guard system (protects the detector from liquid projections)	6329004
Duct measurement kit (allows gas monitoring in a duct)	6793322
Collecting cone (for use with lighter-than-air gases)	6331168
Protective cover (protects the detector against bad weather conditions or against direct sun radiations)	6123716

Gas	Measure range	Sensor	OLC100-XP (mV)	OLCT100-XP (4-20 mA)	OLCT100-XPIR (4-20 mA)	OLCT100-IS (4-20 mA)	SIL2	Gas code
Acetone	0-100% LEL	CAT	●	●			●	010
Acetonitrile	0-100% LEL	CAT	●	●			●	011
Acetylene	0-100% LEL	CAT	●	●			●	012
Acrolein	0-100% LEL	CAT	●	●			●	014
Acrylic acid	0-100% LEL	CAT	●	●			●	013
Acrylonitrile	0-100% LEL	CAT	●	●			●	017
Allylic alcohol	0-100% LEL	CAT	●	●				074
Ammonia	0-100% LEL	CAT	●	●			●	006
Ammonia	0-100 ppm NH3	EC		●		●	●	231
Ammonia	0-1000 ppm NH3	EC		●		●	●	232
Ammonia	0-5000 ppm NH3	EC		●		●	●	233
Ammonia	0-300 ppm NH3	EC		●		●	●	273
Ammonia (-40°C)	0-100 ppm NH3	EC		●		●	●	264
Ammonia (-40°C)	0-1000 ppm NH3	EC		●		●	●	265
Arsine	0-1 ppm AsH3	EC				●		243
Benzene	0-100% LEL	CAT	●	●			●	018
Benzene	0-500 ppm	SC		●				663
1.3- Butadiene	0-100% LEL	CAT	●	●			●	019
Butane	0-100% LEL	CAT	●	●			●	004
Butane	0-100% LEL	SC		●				666
Butanol (isobutanol)	0-100% LEL	CAT	●	●			●	020
2-Butanone	0-100% LEL	CAT	●	●			●	021
Butyl acetate	0-100% LEL	CAT	●	●			●	008
Butyl acrylate	0-100% LEL	CAT	●	●			●	015
Carbon dioxide	0-5 % vol. CO2	IR			●			239
Carbon dioxide	0-10 % vol. CO2	IR			●			240
Carbon dioxide	0-100 % vol. CO2	IR			●			241
Carbon dioxide	0-5000 ppm CO2	IR			●			252
Carbon monoxide	0-100 ppm CO	EC		●		●	●	203
Carbon monoxide	0-300 ppm CO	EC		●		●	●	204
Carbon monoxide	0-1000 ppm CO	EC		●		●	●	205
Chlorine	0-10 ppm Cl2	EC				●		224
Chlorine	0-20 ppm Cl2	EC				●		259
Chlorine dioxide	0-3 ppm ClO2	EC				●		235
Chloromethane	0-100% LEL	CAT	●	●				070
Chloromethane (Methyl chloride)	0-500 ppm	SC		●				508
CS2	0-500 ppm	SC		●				668
Cumene	0-100% LEL	CAT	●	●			●	022
Cyclohexane	0-100% LEL	CAT	●	●			●	023
Cyclohexanone	0-100% LEL	CAT	●	●			●	024
Cyclopentane	0-100% LEL	CAT	●	●			●	072
Dichloromethane	0-500 ppm	SC		●				507
Diesel	0-100% LEL	CAT	●	●			●	033
Dimethylether	0-100% LEL	CAT	●	●			●	025
DMA (Dimethylamine)	0-100% LEL	CAT	●	●			●	066
DMS (Dymethyl sulfide)	0-100 ppm	EC		●		●		254
Dodecane	0-100% LEL	CAT	●	●			●	026
Ethane	0-100% LEL	CAT	●	●			●	027
Ethanol	0-100% LEL	CAT	●	●			●	028
Ethanol	0-500 ppm	SC		●				656
Ether (diethylether)	0-100% LEL	CAT	●	●			●	029
Ethyl acetate	0-100% LEL	CAT	●	●			●	007

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Gas	Measure range	Sensor	OLC100-XP (mV)	OLCT100-XP (4-20 mA)	OLCT100-XPIR (4-20 mA)	OLCT100-IS (4-20 mA)	SIL2	Gas code
Ethyl acrylate	0-100% LEL	CAT	●	●			●	016
Ethyl chloride	0-100% LEL	CAT	●	●			●	068
Ethylene	0-100% LEL	CAT	●	●			●	030
Ethylene oxide	0-100% LEL	CAT	●	●			●	049
Ethylene oxide (ETO)	0-30 ppm	EC				●		244
Ethylene oxide (ETO)	0-100 ppm	EC				●		248
Ethylmercaptan	0-100 ppm C2H6S	EC		●		●		253
Formaldehyde	0-100% LEL	CAT	●	●			●	031
Formalin	0-50 ppm	EC				●		247
Formalin	0-150 ppm	EC				●		270
FX56	0-2000 ppm	SC		●				510
Heptane	0-100% LEL	CAT	●	●			●	035
Hexane	0-100% LEL	CAT	●	●			●	036
HFO-1234yf	0-100% LEL	IR			●			065
HFO-1234yf	0-2000 ppm	IR			●			526
HFO-1234yf	0-1000 ppm	SC		●				662
HFO-1234ze	0-1000 ppm	SC		●				525
Hydrazine	0-2 ppm N2H4	EC				●		286
Hydrogen	0-100% LEL	CAT	●	●			●	003
Hydrogen	0-2000 ppm H2	EC		●		●		225
Hydrogen chloride	0-30 ppm HCl	EC				●		227
Hydrogen chloride	0-100 ppm HCl	EC				●		228
Hydrogen cyanide	0-10 ppm HCN	EC				●		229
Hydrogen cyanide	0-30 ppm HCN	EC				●		230
Hydrogen sulfide	0-30 ppm H2S	EC		●		●	●	213
Hydrogen sulfide	0-100 ppm H2S	EC		●		●	●	214
Hydrogen sulfide	0-1000 ppm H2S	EC		●		●	●	215
Hydrogen sulfide	0-5000 ppm H2S	EC		●		●	●	249
Isobutane	0-100% LEL	CAT	●	●			●	038
Isobutene	0-100% LEL	CAT	●	●			●	039
Isopropanol	0-100% LEL	CAT	●	●			●	040
Isopropanol	0-500 ppm	SC		●				658
Kerosene (JP4)	0-100% LEL	CAT	●	●			●	041
LPG	0-100% LEL	CAT	●	●			●	032
MEK (2-Butanone)	0-500 ppm	SC		●				659
Methane (4.4% vol.)	0-100% LEL	CAT	●	●			●	002
Methane (4.4% vol.)	0-100% LEL	SC		●				665
Methane (5% vol.)	0-100% LEL	CAT	●	●			●	001
Methane (5% vol.)	0-100% LEL	SC		●				664
Methanol	0-100% LEL	CAT	●	●			●	043
Methanol	0-1000 ppm	EC				●		250
Methyl acetate	0-100% LEL	CAT	●	●			●	009
Methyl methacrylate	0-100% LEL	CAT	●	●			●	042
Methylamine	0-100% LEL	CAT	●	●			●	044
Methylmercaptan	0-100 ppm CH4S	EC		●		●		261
MIBK (methylisobutyl ketone)	0-100% LEL	CAT	●	●			●	064
Naphtha	0-100% LEL	CAT	●	●			●	045
Naphthalene	0-100% LEL	CAT	●	●			●	046
Natural gas	0-100% LEL	CAT	●	●			●	034
Nitric oxide	0-100 ppm NO	EC		●		●		216
Nitric oxide	0-300 ppm NO	EC		●		●		217
Nitric oxide	0-1000 ppm NO	EC		●		●		218

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Gas	Measure range	Sensor	OLC100-XP (mV)	OLCT100-XP (4-20 mA)	OLCT100-XPIR (4-20 mA)	OLCT100-IS (4-20 mA)	SIL2	Gas code
Nitrogen dioxide	0-10 ppm NO2	EC				●		219
Nitrogen dioxide	0-30 ppm NO2	EC				●		220
Nonane	0-100% LEL	CAT	●	●			●	047
Octane	0-100% LEL	CAT	●	●			●	048
Oxygen (2 years)	0-30% vol. O2	EC		●		●	●	200
Oxygen (5 years)	0-30 % vol. O2	EC		●		●	●	272
Oxygen (5 years)	0-10 % vol. O2	EC		●				282
Pentane	0-100% LEL	CAT	●	●			●	051
Phosgene	0-1 ppm COCl2	EC				●		246
Phosphine	0-1 ppm PH3	EC				●		242
Propane	0-100% LEL	CAT	●	●		●	●	005
Propane	0-100% LEL	SC		●				667
Propylene	0-100% LEL	CAT	●	●			●	052
Propylene oxide	0-100% LEL	CAT	●	●			●	050
R11	0-1% % vol.	SC		●				505
R12	0-1% % vol.	SC		●				500
R123	0-2000 ppm	SC		●				509
R134A	0-2000 ppm	SC		●				502
R134A	0-2000 ppm	IR			●			502
R143A	0-2000 ppm	SC		●				511
R22	0-2000 ppm	SC		●				501
R23	0-1% % vol.	SC		●				506
R245FA	0-1000 ppm	SC		●				521
R32	0-1000 ppm	SC		●				515
R404A	0-2000 ppm	SC		●				512
R407A	0-1000 ppm	SC		●				523
R407C	0-1000 ppm	SC		●				517
R407F	0-1000ppm	SC		●				519
R407F	0-2000 ppm	IR			●			528
R408A	0-4000 ppm	SC		●				518
R410A	0-1000 ppm	SC		●				514
R422D	0-4000 ppm	SC		●				524
R434A	0-4000ppm	SC		●				520
R449A	0-2000 ppm	IR			●			529
R507	0-2000 ppm	SC		●				513
SF6	0-2000 ppm	IR			●			527
Silane	0-50 ppm SiH4	EC				●		245
Styrene	0-100% LEL	CAT	●	●			●	054
Styrene	0-500 ppm	SC		●				661
Sulphur dioxide	0-10 ppm SO2	EC				●		221
Sulphur dioxide	0-30 ppm SO2	EC				●		222
Sulphur dioxide	0-100 ppm SO2	EC				●		223
Super (SP95)	0-100% LEL	CAT	●	●			●	055
Toluene	0-100% LEL	CAT	●	●			●	056
Toluene	0-500 ppm	SC		●				657
Trimethylamine	0-100% LEL	CAT	●	●			●	057
White spirit	0-100% LEL	CAT	●	●			●	058
Xylene	0-100% LEL	CAT	●	●			●	059
Xylene	0-500 ppm	SC		●				660

► Series 3000 MkII

ATEX 4-20 mA linear output gas transmitter with display



Technical specifications

Detected gases: Cl₂, ClO₂, CO, ETO, F₂, H₂S, HCl, HCN, HF, NH₃, NO, NO₂, O₂, O₃, PH₃, SO₂

Signal: 4-20 mA, 0 to 100 % full scale reading

2-wire loop powered: 17 Vcc (±10 %) to 30 Vcc (max)

Recommended cable: 2-wire with screen (90 % coverage) or conduit 0, 5 mm² (20AWG) to 2, 0 mm² (14AWG)

Material:

- Transmitter : Epoxy painted aluminium alloy LM25 or 316 stainless steel
- Sensor : 316 stainless steel with polytetrafluorethylene filter

Dimensions: 164 mm x 201 mm x 99 mm

Weight:

- Aluminium alloy LM25 : 1,7 kg
- Stainless steel 316 : 3,7 kg

IP rating: IP66 (EN 60529), NEMA 4X

Certified temperature: -20 °C to +55 °C

Operating humidity: 20 – 90% HR (non-condensing)

Certifications:

- CE conformity
- ATEX directive 94/9/CE
- Electromagnetic compatibility 2004/108/CE (EN50270:2006)

Certifications:

ATEX: II 2 (1) GD Ex d [ia IIC Ga] IIB + H₂ T4 Gb

Ex t [ia IIIC Da] IIIB T135°C Db

IECEX: Ex d [ia IIC Ga] IIB + H₂ T4 Gb Ex t [ia IIIC Da]

UL/c-UL: class I, division 1 & 2, groups B, C & D

class II, division 1, groups E, F & G

class II, division 2, groups F & G

class 1, zone 1, groups IIB + H₂ for hazardous areas

ATEX: II2GDExd[ia IIC Ga]IIB+H₂ T4 Gb Ex t [ia IIIC Da]IIIB T135°C Db

IECEX: Ex d [ia IIC Ga] IIB + H₂ T4 Gb Ex t [ia IIIC Da]

Product description

The **Series 3000 MkII** gas transmitter is a 4-20mA 2-wire loop powered, toxic gas and oxygen detector for use in potentially explosive atmospheres (ATEX area). It is a low power consumption detector that can be integrated into any type of new or retrofit installation. With a large LCD screen and magnetic switches, this detector can be set up non-intrusively using a magnet directly through the glass window of the display.

► **Patented Surecell™ electronic sensor**

The **Series 3000 MkII** gas transmitter uses Surecell™ electrochemical sensors, ideal for hot and humid environments. Made of stainless steel, the smart sensors are supplied preconfigured, tested and calibrated. They are intrinsically safe and can be replaced under voltage without cutting off power to the detector, thus allowing time savings on commissioning and routine maintenance.

► **Patented Reflex™ self-diagnosis**

The **Series 3000 MkII** gas detector is equipped with the patented Reflex™ diagnosis sequence that automatically checks whether the sensor is present, in open circuit or in short circuit. If the electrochemical sensor fails these tests, the sensor error code is displayed. The Reflex™ sequence does not apply to nitrogen monoxide and oxygen sensors and does not exempt from regular performance check and calibrations.

► **A regulations compliant gas detector**

The **Series 3000 MkII** gas transmitter is compliant with the main certifications in force in Europe (ATEX), the United States (UL), Canada (c-UL), South America (Inmetro) and international (IECEX). It is also certified ATEX zone 0 in Europe.

► **Accessories**

Many accessories are available (optional) to facilitate the installation of the detector, such as the remote sensor mounting kit (up to 15 meters), the pipe fixing kit (for detecting gases flowing in a pipe) or the wheater protection device...

► **Applications**

- Exploration and drilling platforms
- Onshore oil and gas terminals
- Offshore platforms, refineries
- Chemical industries & SEVESO classified sites
- Water treatment, sewage treatment plants
- Metallurgy, steel industry
- Power stations
- Treatment plants

Detectable gas

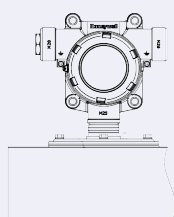


Gazs	Formula	Selectable full scale interval	Code
Ammonia	NH3	50 à 200 ppm	200 ppm
Ammonia	NH3	200 à 1 000 ppm	1,000 ppm
Carbon monoxide	CO	100 à 500 ppm	300 ppm
Chloreine	Cl2	5,0 à 20 ppm	5,0 ppm
Chlorine dioxide	ClO2	1,00 ppm uniquement	1,00 ppm
Ethylen oxide (ETO)	C2H4O	0-25 ppm	50 ppm
Fluorine	F2	0-4 ppm	4 ppm
Hydrogen	H2	1,000 ppm seul.	1,000 ppm
Hydrogen	H2	9,999 ppm uniquement	9,999 ppm
Hydrogen chloride	HCl	10,0 à 20,0 ppm	10 ppm
Hydrogen cyanide	HCN	30,0 ppm uniquement	30,0 ppm
Hydrogen fluoride	HF	12,0 ppm uniquement	12,0 ppm
Hydrogen sulfide	H2S	10,0 à 50,0 ppm	15,0 ppm
Hydrogen sulfide	H2S	50 à 500 ppm	100 ppm
Nitric oxide	NO	100 ppm uniquement	100 ppm
Nitrogen dioxide	NO2	5,0 à 50,0 ppm	10 ppm
Oxygen	O2	25,0 % vol uniquement	25,0 % vol.
Phosphine	PH3	1,2 ppm uniquement	1,2 ppm
Sulphur dioxide	SO2	5,0 à 20,0 ppm	15,0 ppm

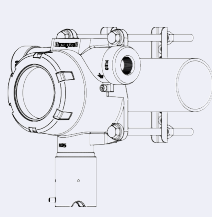
Optional accessories



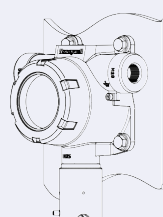
Code	Description
SPXCDMTBR	Pipe mounting bracket
SPXCSDP	Sunshade/Severe weather protection
S3KCAL	Calibration gas flow housing
S3KCC	Collecting cone (for use when detecting Hydrogen gas only)
S3KDMK	Duct mounting kit (for use when detecting O2, CO, H2S or H2 gas)
S3KRMK	ATEX/UL/c-UL approved remote sensor mounting kit (includes enclosure with sensor socket, 15m (50 feet) of digital cable and glands, transmitter cable plus, mounting screws)



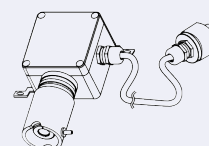
Pipe fixing



Pipe installation



Wall installation



Remote installation

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► SensePoint XCD

Gas detector with display, 4-20mA output and relays



Technical specifications

ATEX "standalone" combustible (all combustibles), toxic (CO, H₂S, NO₂) or asphyxiating (lack of oxygen or CO₂) fixed gas detector.

Electrical specifications:

- Input voltage range: 16 to 32 VCC (24 VCC nominal) for ATEX/IECEX/AP version
- Electrochemical sensor = 3,7 W,
- Infrared sensor = 3,7 W,
- Catalytic sensor = 4,9 W.
- Maximum inrush current = 800 mA to 24 V CC

Current output sink or source:

- $\geq 0 < 1$ mA: fault
- 2,0 mA or 4 mA (17,4 mA): inhibit (during configuration / user setting)
- 4 mA to 20 mA: normal gas measurement
- 22 mA: maximum over range

Terminals: 15 screws terminals suitable for wire diameter 0,5 mm² to 2,5 mm² (20 AWG to 13 AWG)

Relays: 3 5 A to 250 VCA relays. Selectable normally open or normally closed (switch)

Communication: RS485, MODBUS RTU (optional)

Housing:

Epoxy painted aluminium alloy LM25 or 316 stainless steel

Entries: 2 x M20

Ingress protection: IP66

Humidity: 0 to 99 % HR

Certification: ATEX Ex II 2 GD Ex d IIC T6 (Ta -40 °C to +65 °C)

Product description

SensePoint XCD is a « standalone » ATEX fixed gas detector with display, linear output 4-20 mA and alarm relays for servo controls. It is available for combustible gas, toxic (CO, H₂S, NO₂) or asphyxiating (lack of oxygen or CO₂) gas detection.

A large tri-color backlit LCD indicates clearly and immediately the device status (gas alarms, faults, etc.), even if it is far away. Autonomous and offering numerous possibilities, the **SensePoint XCD** fixed gas detector is often acclaimed for its sophisticated functions and its ease of implementation.

Particularly suitable for industrial and classified sites, the **SensePoint XCD** fixed gas detector with 4-20 mA linear output, measurement display, servo relay and MODBUS communication is a standard in the world of gas detection. Designed for the detection of explosive, toxic, and asphyxiating gas leaks in potentially explosive atmospheres (ATEX zones), this gas detector is available in aluminum or stainless steel version.

With a large LCD screen and magnetic switches, this gas detector can be non-intrusively set up with a magnet directly through the glass window of the display. The pre-calibrated sensors are intrinsically safe and can be replaced under voltage without cutting off the power supply to the detector, saving time for commissioning and routine maintenance.

Gas	Measuring range by default	Selectable measurement range
	Catalytic sensor	
Combustible gas	0-100 % LEL	20 % to 100 % LEL
	Infrared sensor	
Methane (CH ₄)	0-100 % LEL	20 % to 100 % LEL
Methane (CH ₄)	0-100 % vol	20 % to 100 % vol
Carbon dioxide (CO ₂)	0-2 % vol	-
	Electrochemical sensor	
Hydrogen sulfide (H ₂ S)	0-50 ppm	10 to 100 ppm
Carbon monoxide (CO)	0-300 ppm	100 to 1000 ppm
Hydrogen (H ₂)	0-1000 ppm	
Oxygen (O ₂)	0-25 % vol	

▶ XNX

Universal transmitter



Technical specifications

Use: Universal transmitter compatible with many local and remote Honeywell Analytics gas detectors/sensors

Power input: 24 Vcc nominal (18 to 32 Vcc)

Power outputs: Isolated output module 4-20 mA and HART® fully configurable with source or isolated sink operating modes (support for HART® 6.0 protocol) as standard

4-20 mA signal accuracy: ±1 % of full scale working conditions:

- Temperature : -40 to 65 °C
- Humidity : 0 to 99 % HR (non-condensing)

Output modules (optional) :

- Module 3 NO/NF relays (2 alarms + 1 fault relay) fully configurable (non-compatible with Modbus or Fieldbus option)
- Modbus output module with isolated RS-485 output
- Foundation™ fieldbus output module for connection to a multi-point H1 network.

Material: Aluminum alloy or 316 stainless steel housing with 5 layer marine paint finish.

Dimensions : 160 x 197 x 114 mm

Weight: Aluminum alloy: 2,8 kg / 316 stainless steel : 5 kg

IP rating: IP66 according to EN 60529:1992. NEMA 4X

Installation: Wall mounting – 5 cable/conduit entries (2 on the right, 2 on the left and 1 at the bottom of the transmitter)

International certifications: Europe, United States and Canada

Standards compliancy: ATEX, UL, and CSA

Performances:

- Europe : ATEX, EN45544, EN50104, EN50271:2010, EN13980, EN60079-29-1
- North America : UL 913, UL 1203, CSA 22.2 N° 152
- CEI 61508 (SIL, SIL 2 evaluation), IECEx OD 005

Product description

The **XNX** is a universal transmitter configured to accept inputs from any Honeywell Analytics gas sensor technology. It can also be configured to provide many industry standard output signals.

The **XNX** uses standard 4-20mA and HART cabling and works with several communication protocols (Modbus or Fieldbus optional). Its backlit multilingual LCD screen shows all the necessary status information as text, numbers or icons and 3 relays (optional) are available for servo controls.

▶ International certifications

The **XNX** universal transmitter is approved for use in hazardous areas (international certifications) and its performance is certified. It has an explosion-proof enclosure available in two versions: 316 stainless steel or aluminum alloy with marine paint.

The transmitter is configured in a non-intrusive way in an area, (using a magnetic switch magnet) directly through the glass window of the display. The interface between this sensor and the **XNX** is intrinsically safe, which allows sensor replacement under voltage, in ATEX zone without intervention authorization.

▶ 3 entry card types

This simple and easy-to-use universal platform supports 3 types of entry cards:

- An mV card (millivolt) for all sensors whose signal input is of the mV type, including SignalPoint and SensePoint sensors.
- An EC card (electrochemical sensor) intended for toxic gas or oxygen sensors with electrochemical sensors.
- An IR card (infrared) for SearchPoint Optima Plus and Searchline Excel barrier infrared gas detectors.

▶ Many available output options

The **XNX** has a 4-20 mA linear output proportional to the measurement and the HART communication protocol to access complete diagnosis, configuration or calibration information. Many options are available to increase the capacity and flexibility of this universal transmitter such as:

- Foundation™ fieldbus output (Fieldbus) for connection to a multi-point H1 network (incompatible with the relay option) and/ or Modbus RTU.
- 3 fully configurable relay outputs that can switch depending on the current gas concentration and/or the transmitter status 2 NO/NC alarm relays and 1 NO/NC error relay

▶ WatchGas XDI-PID

VOC gas detector (volatil organic compounds)



Technical specifications

Sensor: 10,6 eV PID lamp

Certifications:

- Explosion proof ATEX-IECEx
- II 2G Ex db IIC T6...T4 Gb
- II 2D Ex IIIC T85°C... T135°C Db

Power supply: 18 to 35 Vcc 24V nominal

Outputs:

- Analog 4~20mA (3 wire)
- 3 alarm relays (configurable)
- Communication CANbus (4 wire)
- Inhibit option for servicing
- Terminal RS232 for reading and setting

Data storage: 2880 readings

Display (option):

- 2 lines alpha numeric backlit status display (gas type, concentration, alarm status, etc.)
- Status LED indicator: alarms, fault

Housing material:

Copper free aluminium alloy, optional stainless steel

Finish:

- Chemical resistant epoxy paint, RAL 9003 signal white
- Optional – Marine grade finish

Ingress protection:

- IP64 manufactured
- IP65 with water shield
- IP66 with hydrophobic screen

Cable entry: 2 x M20 or ¾" NTP

Weight: 1.6 Kg

Operating temperature: -15°C to +55°C

Product description

The **XDI-PID** is a fixed gas detector to measure and detect (volatil organic compounds). It is an ATEX 4-20 mA output transmitter with alarm relays and digital display (optional) that can be linked to a DCS controller or used as a stand alone system.

▶ Photoionization lamp 10.6 eV

The XDI-PID uses a 10,6 eV photoionization lamp in diffusion mode which presents fewer contamination and maintenance problems than pump systems with the possibility of selecting 2 measuring ranges (0-50 ppm or 0-1000 ppm) for better measurement accuracy.

▶ Avantages

- Certified ATEX-IECEx (gas and dust)
- 2 measuring ranges for better measurement accuracy
- Moisture resistance without compensation need
- Robust design, withstands harsh environments
- 3 alarm relays configurable (alarms and/or fault)
- Large LCD backlit display for clear measurement indications and on-site configuration of the device (optional)

▶ XDI-PID Applications

- Industrial paints, coatings and solvents
- Chemical and petrochemical industries,
- Pharmaceutical sector
- Paper and pulp industry
- Wastewater treatment plants
- Industrial hygiene (control or surveillance)

▶ Model selection

Code	Designation
169-031	ATEX COV detector without display with 3 alarm relays (Alarm 1, 2 + fault)
170-031	ATEX COV detector with digital display, 3 alarm relays and magnet configuration (non-intrusive system)

▶ Accessories

Code	Designation
003-010	Collector cone
003-020	Universal fitting (test gas applicator)
008-311	Flow block
003-083	Detector head weather shield

List of gases detected (international designation)

Gas	Formula	CAS	IP(eV)
Acetaldehyde	C2H4O	75-07-0	10,23
Acetate de n-amyle	C7H14O2	628-63-7	9,90
Acetone	C3H6O	67-64-1	9,69
Acroleine	C3H4O	107-02-8	10,22
Alcool Allylique	C3H6O	107-18-6	9,63
Ammonia	NH3	7664-41-7	10,18
Amyl alcohol	C5H12O	71-41-0	10,00
Anhydride Acetique	C4H6O3	108-24-7	10,14
Aniline	C6H7N	62-53-3	7,70
Anisole	C7H8O	100-66-3	8,21
Arsine	AsH3	7784-42-1	9,89
Asphalt. petroleum fumes		8052-42-4	9,00
Benzaldehyde	C7H6O	100-52-7	9,49
Benzene	C6H6	71-43-2	9,24
Benzonitrile	C7H5N	100-47-0	9,62
Benzyl alcohol	C7H8O	100-51-6	8,26
Benzyl formate	C8H8O2	104-57-4	9,32
Biphenyle	C12H10	92-52-4	8,23
Bromobenzene	C6H5Br	108-86-1	8,98
Bromoethane	C2H5Br	74-96-4	10,29
Bromoethyl methyl ether. 2-	C3H7OBr	6482-24-2	10,00
Bromopropane. 1-	C3H7Br	106-94-5	10,18
Butadiene	C4H6	106-99-0	9,07
Butadiene diepoxide. 1.3-	C4H6O2	1464-53-5	10,00
Butanol. 1-	C4H10O	71-36-3	10,04
Buten-3-ol. 1-	C4H8O	598-32-3	9,20
Butene. 1-	C4H8	106-98-9	9,58
Butoxyethanol. 2-	C6H14O2	111-76-2	8,60
Butyl acrylate. n-	C7H12O2	141-32-2	8,60
Butyl lactate	C7H14O3	138-22-7	9,80
Butyl mercaptan	C4H10S	109-79-5	9,15
Butylamine. 2-	C4H11N	513-49-5	8,60
Butylamine. n-	C4H11N	109-73-9	8,71
Camphene	C10H16	565-00-4	8,10
Carbon disulfide	CS2	75-15-0	10,08
Carbon tetrabromide	CBr4	558-13-4	10,31
Carvone. R-	C10H14O	6485-40-1	9,10
Chlorine dioxide	ClO2	10049-04-4	10,36
Chloro-1.3-butadiene. 2-	C4H5Cl	126-99-8	8,79
Chlorobenzene	C6H5Cl	108-90-7	9,07
Chloroethyl methyl ether. 2-	C3H7ClO	627-42-9	9,00

Gas	Formula	CAS	IP(eV)
Chloroprene (-3)	C3H5Cl	107-05-1	10,05
Chlorotoluene	C7H7Cl	100-44-7	9,14
Chlorotoluene. o-	C7H7Cl	95-49-8	8,83
Chlorotoluene. p-	C7H7Cl	108-41-8	8,69
Chlorotrifluoroethylene	C2ClF3	79-38-9	9,81
Citral	C10H16O	5392-40-5	8,70
Citronellol	C10H20O	26489-01-0	8,50
Cresol. m-	C7H8O	108-39-4	8,97
Cresol. o-	C7H8O	95-48-7	8,97
Cresol. p-	C7H8O	106-44-5	8,97
Crotonaldehyde	C4H6O	4170-30-3	9,73
Cumene	C9H12	98-82-8	8,75
Cyclohexane	C6H12	110-82-7	9,86
Cyclohexanol	C6H12O	108-93-0	10,00
Cyclohexanone	C6H10O	108-94-1	9,40
Cyclohexene	C6H10	110-83-8	8,95
Cyclohexylamine	C6H13N	108-91-8	8,37
Cyclopentane	C5H10	287-92-3	10,52
Decane. n-	C10H22	124-18-5	9,65
Diacetone alcohol	C6H12O2	123-42-2	9,00
Dibenzoyl peroxide	C14H10O4	94-36-0	9,00
Dimethylacetamide N.N-	C4H9NO	127-19-5	8,81
Dimethylamine	C2H7N	124-40-3	8,24
Dimethylaminoethanol	C4H11NO	108-01-0	9,00
Dimethylaniline. NN-	C8H11N	121-69-7	7,12
Dimethylbutyl acetate	C8H16O2	108-84-9	7,74
Dimethylethylamine. NN-	C4H11N	598-56-1	8,50
Dimethylformamide	C3H7NO	68-12-2	9,13
Dimethylheptan-4-one. 2.6-	C9H18O	108-83-8	9,04
Dimethylhydrazine. 1.1-	C2H8N2	57-14-7	8,05
Dinitrobenzene. m-	C6H4N2O4	99-65-0	10,43
Dinitrobenzene. p-	C6H4N2O4	100-25-4	10,50
Dinonyl phthalate	C26H42O4	84-76-4	9,19
Dioxane 1.2-	C4H8O2	5703-46-8	9,20
Dioxane 1.4-	C4H8O2	123-91-1	9,13
Dipentene	C10H16	138-86-3	8,60
Diphenyl ether	C12H10O	101-84-8	8,09
Disulfur dichloride	S2Cl2	10025-67-9	10,00
Di-tert-butyl-p-cresol	C11H16O	2409-55-4	8,30
Divinylbenzene	C10H10	1321-74-0	8,20
Dodecano	C12H26O	112-53-	9,80

Gas	Formula	CAS	IP(eV)
Epichlorohydrin	C3H5ClO	106-89-8	10,20
Epoxypropyl isopropyl ether. 2.3-	C6H12O2	4016-14-2	10,00
Ethanol	C2H6O	64-17-5	10,43
Ethanolamine	C2H7NO	141-43-5	10,47
Ethoxy-2-propanol. 1-	C5H10O2	1569-02-4	9,60
Ethoxyethyl acetate. 2-	C6H12O3	111-15-9	10,00
Ethyl (S)-(-)-lactate	C5H10O3	97-64-3	10,00
Ethyl acetate	C4H8O2	141-78-6	10,01
Ethyl acrylate	C5H8O2	140-88-5	10,30
Ethyl amine	C2H7N	75-04-7	8,86
Ethyl benzene	C8H10	100-41-4	8,76
Ethyl butyrate	C6H12O2	105-54-4	9,90
Ethyl cyanoacrylate	C6H7O2N	7085-85-0	10,00
Ethyl decanoate	C12H24O2	110-38-3	9,60
Ethyl hexanoate	C8H16O2	123-66-0	9,75
Ethyl hexanol. 2-	C8H18O	105-76-7	9,80
Ethyl hexyl acrylate. 2-	C11H20O2	103-11-7	9,00
Ethyl mercaptan	C2H6S	75-08-1	9,29
Ethyl octanoate	C10H20O2	106-32-1	9,70
Ethylene	C2H4	74-85-1	10,51
Ferrocene	C10H10Fe	102-54-5	6,88
Formamide	CH3ON	75-12-7	10,20
Furfural	C5H4O2	98-01-1	9,21
Furfuryl alcohol	C5H6O2	98-00-0	9,90
Gasoline vapors		8006-61-9	9,90
Gasoline vapors 92 octane		8006-61-9	9,90
Glutaraldehyde	C5H8O2	111-30-8	9,60
Heptan-2-one	C7H14O	110-43-0	9,33
Heptan-3-one	C7H14O	106-35-4	9,02
Heptane n-	C7H16	142-82-5	9,92
Hexamethyldisilazane. 1.1.1.3.3.3-	C6H19NSi2	999-97-3	8,60
Hexamethyldisiloxane.	C6H18OSi2	107-46-0	9,00
Hexan-2-one	C6H12O	591-78-6	9,34
Hexane n-	C6H14	110-54-3	10,13
Hexene. 1-	C6H12	592-41-6	9,44
Hydrazine	H4N2	302-01-2	8,93
Hydrogen peroxide	H2O2	7722-84-1	10,54
Hydrogen sulfide	H2S	7783-06-4	10,46
Hydroquinone	C6H6O2	123-31-9	7,94
Hydroxypropyl acrylate 2-	C6H10O3	999-61-1	9,00
Iminodi(ethylamine) 2.2-	C4H13N3	111-40-0	9,00
Iminodiethanol 2.2'-	C4H11NO2	111-42-2	9,00
Indene	C9H8	95-13-6	8,81
Iodine	I2	7553-56-2	9,31
Iodoform	CHI3	75-47-8	9,25

Gas	Formula	CAS	IP(eV)
Iodomethane	CH3I	74-88-4	9,54
Isobutane	C4H10	75-28-5	10,57
Isobutanol	C4H10O	78-83-1	10,12
Isobutyl acrylate	C7H12O2	106-63-8	9,50
Isobutylene	C4H8	115-11-7	9,24
Isobutyraldehyde	C4H8O	78-84-2	9,00
Isononanol	C9H20O	2452-97-9	9,80
Isooctane	C8H18	565-75-3	9,86
Isooctanol	C8H18O	26952-21-6	9,80
Isopentane	C5H12	78-78-4	10,32
Isophorone	C9H14O	78-59-1	9,07
Isoprene	C5H8	78-79-5	8,85
Isopropanol	C3H8O	67-63-0	10,17
Isopropyl acetate	C5H10O2	108-21-4	9,99
Isopropyl chloroformate	C4H7O2Cl	108-23-6	10,20
Jet Fuel JP-4			9,00
Jet Fuel JP-5			9,00
Jet Fuel JP-8			9,00
Kerosene		008-20-6	8,00
Ketene	C2H2O	463-51-4	9,62
Maleic anhydride	C4H2O3	108-31-6	9,90
Mercaptoacetic acid	C2H4O2S	68-11-1	9,80
Mesitylene	C9H12	108-67-8	8,41
Methacrylic acid	C4H6O2	79-41-4	10,15
Methacrylonitrile	C4H5N	126-98-7	10,34
Methoxyethanol. 2-	C3H8O2	109-86-4	9,60
Methoxyethoxyethanol. 2-	C5H12O3	111-77-3	10,00
Methoxymethylethoxy-2-propanol	C7H16O3	34590-94-8	9,30
Methoxypropan-2-ol	C4H10O2	107-98-2	9,40
Methoxypropyl acetate	C6H12O3	108-65-6	9,00
Methyl acetate	C3H6O2	79-20-9	10,27
Methyl acrylate	C4H6O2	96-33-3	10,25
Methyl bromide	CH3Br	74-83-9	10,54
Methyl cyanoacrylate	C5H5O2N	137-05-3	10,00
Methyl ethyl ketone	C4H8O	78-93-3	9,51
Methyl isobutyl ketone	C6H12O	108-10-1	9,30
Methyl isothiocyanate	C2H3NS	556-61-6	9,25
Methyl mercaptan	CH4S	74-93-1	9,44
Methyl methacrylate	C5H8O2	80-62-6	9,70
Methyl salicylate	C8H8O3	119-36-8	9,70
Methyl sulfide	C2H6S	75-18-3	8,69
Methyl t-butyl ether	C5H12O	1634-04-4	9,24
Methyl-2-propen-1-ol. 2-	C4H8O	51-42-8	9,60
Methyl-2-pyrrolidinone. N-	C5H9NO	872-50-4	9,17
Methyl-4.6-dinitrophenol.	C7H6N2O5	534-52-1	9,10

Gas	Formula	CAS	IP(eV)
Methyl-5-hepten-2-one. 6-	C8H14O	110-93-0	9,40
Methylamine	CH5N	74-89-5	8,97
Methylbutan-1-ol. 3-	C5H12O	123-51-3	9,80
Methylcyclohexane	C7H14	108-87-2	9,85
Methylcyclohexanol. 4-	C7H14O	589-91-3	9,80
Methylcyclohexanone 2-	C7H12O	583-60-8	9,20
Methylheptan-3-one. 5-	C8H16O	541-85-5	9,10
Methylhexan-2-one. 5-	C7H14O	110-12-3	9,28
Methylhydrazine	CH6N2	60-34-4	8,00
Methyl-N-2,4, 6-tetranitroaniline. N-	C7H5N5O8	479-45-8	9,00
Methylpent-3-en-2-one. 4-	C6H10O	141-79-7	9,00
Methylpentan-2-ol. 4-	C6H14O	108-11-2	9,80
Methylpentane-2,4-diol. 2-	C6H14O2	107-41-5	9,00
Methylpropan-2-ol. 2-	C4H10O	75-65-0	9,70
Methylstyrene	C9H10	25013-15-4	8,20
Mineral oil		8042-47-5	9,00
Mineral spirits		64475-85-0	9,00
Naphthalene	C10H8	91-20-3	8,14
Nitric oxide	NO	10102-43-9	9,27
Nitroaniline 4-	C6H6N2O2	100-01-6	8,85
Nitrobenzene	C6H5NO2	98-95-3	9,92
Nitrogen trichloride	NC13	10025-85-1	10,22
Nonane. n-	C9H20	111-84-2	9,72
Norbornadiene. 2,5-	C7H8	121-46-0	8,00
Octachloronaphthalene	C10Cl8	2234-13-1	9,00
Octane. n-	C8H18	111-65-9	9,80
Octene. 1-	C8H16	111-66-0	9,43
Oxyde de diglycidyle	C6H10O3	2238-07-5	9,60
Paraffins. normal		64771-72-8	10,00
Pentacarbonyl iron	FeC5O5	13463-40-6	9,00
Pentan-2-one	C5H10O	107-87-9	9,38
Pentan-3-one	C5H10O	96-22-0	9,31
Pentandione. 2,4-	C5H8O2	123-54-6	8,85
Pentane. n-	C5H12	109-66-0	10,35
Petroleum ether		8032-32-4	10,00
Phenol	C6H6O	108-95-2	8,51
Phenyl propene. 2-	C9H10	98-83-9	8,35
Phenyl-2,3-epoxypropyl ether	C9H10O2	122-60-1	8,60
Phenylenediamine. p-	C6H8N2	106-50-3	6,89
Phosphine	PH3	7803-51-2	9,96
Picoline. 3-	C6H7N	108-99-6	9,04
Pinene. alpha	C10H16	80-56-8	8,07
Pinene. beta	C10H16	127-91-3	8,10
Piperidine	C5H11	110-89-4	8,03
Piperlylen	C5H8	504-60-9	8,60

Gas	Formula	CAS	IP(eV)
Prop-2-yn-1-ol	C3H4O	107-19-7	9,00
Propan-1-ol	C3H8O	71-23-8	10,20
Propene	C3H6	115-07-1	9,73
Propionaldehyde	C3H6O	123-38-6	9,95
Propionic acid	C3H6O2	79-09-4	10,24
Propyl acetate. n-	C5H10O2	109-60-4	10,04
Propylene oxide	C3H6O	75-56-9	10,22
Propyleneimine	C3H7N	75-55-8	9,00
Pyridine	C5H5N	110-86-1	9,25
Pyridylamine 2-	C5H6N2	504-29-0	9,00
Styrene	C8H8	100-42-5	8,40
Terpinolene	C10H16	586-62-9	8,10
Tert-butanol	C4H10O	75-65-0	9,80
Tetrabromoethane. 1.1.2.2-	C2H2Br4	79-27-6	10,00
Tetracarbonylnickel	NiC4O4	13463-39-3	8,28
Tetrachloroethylene	C2Cl4	127-18-4	9,33
Tetrachloronaphthalenes. all isomers	C10H4Cl4	20020-02-4	8,50
Tetraethyl orthosilicate	C8H20O4Si	78-10-4	9,80
Tetrafluoroethylene	C2F4	116-14-3	10,12
Tetrahydrofuran	C4H8O	109-99-9	9,41
Therminol		1336-36-3	9,00
Thiophenol	C6H5SH	108-98-5	8,32
Toluene	C7H8	108-88-3	8,82
Toluene-2,4-diisocyanate	C9H6N2O2	584-84-9	8,82
Toluidine. o-	C7H9N	95-53-4	7,40
Tribromomethane	CHBr3	75-25-2	10,48
Tributylamine	C12H27N	102-82-9	7,40
Trichlorobenzene 1.2.4-	C6H3Cl3	120-82-1	9,04
Trichloroethylene	C2HCl3	79-01-6	9,45
Triethylamine	C6H15N	121-44-8	7,50
Trimethylamine	C3H9N	53-50-3	7,82
Trimethylbenzene mix	C9H12	25551-13-7	8,41
Trimethylbenzene. 1.3.5-	C9H12	108-67-8	8,39
Turpentine	C10H16	8006-64-2	8,00
Undecane. n-	C11H24	1120-21-4	9,56
Vinyl acetate	C4H6O2	108-05-2	9,19
Vinyl bromide	C2H3Br	593-60-2	9,80
Vinyl chloride	C2H3Cl	75-01-4	9,99
Vinyl-2-pyrrolidinone. 1-	C6H9NO	88-12-0	9,00
Xylene mixed isomers	C8H10	1330-20-7	8,56
Xylene. m-	C8H10	108-38-3	8,56
Xylene. o-	C8H10	95-47-6	8,56
Xylene. p-	C8H10	106-42-3	8,44
Xylidine. all	C8H11N	1300-73-8	7,50

► Satellite XT

Toxic, corrosive or combustible gas detector



Technical specifications

Detected gases: AsH₃, B₂H₆, BBr₃, BCl₃, BF₃, Br₂, C₂H₄O₂, C₂H₇N, CH₄, CH₆N₂, Cl₂, ClF₃, ClO₂, COCl₂, ETO (C₂H₄O), F₂, GeH₄, H₂, H₂Se, HBr, HCl, HCN, HF, HMDS (C₆H₁₈O₅Si₂), MCF (C₂H₃ClO₂), NH₃, NO, NO₂, O₂, O₃, PH₃, POCl₃, SiCl₄, SiF₄, SiH₂Cl₂, SiH₃Cl, SiH₄, SiHCl₃, SO₂, TBA (C₄H₁₁As), TBP (C₁₂H₂₇O₄P), TDMAT (C₈H₂₄N₄Ti), UMDH (C₂H₈N₂) or WF₆.

With pump and pyrolyzer:

C4F₆, C₅F₈, CH₃F, DCE (C₂H₄Cl₂), NF₃ or SF₆

Sensor type: electrochemical

Sensor life span: > 1 year (normal use conditions)

Power supply: 12 ... 24 Vdc

Extraction module power supply: provided by Satellite

Pyrolyzer power supply: 90 – 230 Vac

Analog output: 4 - 20 mA

Relay outputs (optional): 3 contacts, max. 250 Vac / 30 Vdc, 2A

Graphic display: 122 x 32 points with backlight

Keypad: 6 touch function keys

Dimensions (WxDxH): 145 x 95 x 50 mm

Extraction module dimensions: 223 x 97 x 100 mm

Pyrolyzer dimensions: 78 x 95,5 x 50 mm

Mounting: DIN rail mounting

Weight: 480 grams

Protection class: IP 52

Ambient operating conditions:

- -20 to + 40 °C
- 20 - 90% RH (non-condensing)

Electromagnetic compatibility: EN 55022 & EN 50082-2

Product description

Based on the smallest and most reliable electrochemical sensor technology on the market, the **Satellite XT** offers flexibility, simplicity and ease of application.

Plug-and-play measurement sensors facilitate maintenance operations and associated costs. The latter being pre-calibrated, it is not necessary to perform calibration after replacing a sensor.

► Interchangeable pre-calibrated sensors

The proper operation of gas detection equipment requires periodic maintenance and calibration. Operations often become very expensive for particularly toxic or rare gases (standard gases supply, gas cylinders expiration dates, etc.).

A relevant and economical solution, gas detectors with interchangeable sensors: you order the gas sensor, you replace it yourself every year via a simple and intuitive menu and the device is then ready to use and calibrated! (Sensor storage: 6 to 12 months).

► An autonomous gas detector

The **Satellite XT** has a linear 4-20 mA output, a digital display of the measured value and 3 relay outputs (optional) for controls.

This device can therefore be perfectly suited for local fixed gas detection applications with local servo controls.

► Gas sampling pump

The XT extraction module is an additional module to be used with the **Satellite XT**. It allows remote gas sampling up to 50 meters away. Power is supplied by the **Satellite XT** which also provides the appropriate interface.

► Pyrolyzer module

The XT pyrolysis module is an additional module used when gas monitoring requires preparation of a pyrolyzed sample to ensure detection. It requires both a **Satellite XT** and an XT extractor module.





Gas or vapor		Range	Cell	Pyr.	Code
AsH3	Arsine	0-1.00 ppm	AsH3		9602-6000
B2H6	Diborane	0-1.00 ppm	B2H6		9602-6202
BBR3	Boron tribromide	0-30.0 ppm	HBr		9602-7000
BCl3	Boron trichloride	0-30.0 ppm	HCl		9602-5800
BF3	Boron trifluoride	0-10.0 ppm	HF		9602-6500
Br2	Bromine	0-5.00 ppm	Br2		9602-6800
C2H4O2 (CH3COOH)	Acetic acid	0-10.0 ppm	C2H4O2 (CH3COOH)		9602-6500
C2H7N	DMA - Dimethylamine	0-100 ppm	NH3		9602-6704
C4F6	Hexafluoro-1,3-butadiene	0-50.0 ppm	C4F6	Pyr.	9602-9732
C5F8	Octafluorocyclopentene	0-20.0 ppm	C5F8	Pyr.	9602-9730
CH3F	Methyl Fluoride	0-0.500 %-vol.	CH3F	Pyr.	9602-9720
CH4	Methane	0-100 % LEL	CH4		9602-9900
CH6N2	Methylhydrazine	0-1.00 ppm	N2H4		9602-7600
Cl2	Chlorine	0-5.00 ppm	Cl2		9602-5300
ClF3	Chlorine Trifluoride	0-1.00 ppm	ClF3		9602-7410
ClO2	Chlorine Dioxide	0-1.00 ppm	ClO2		9602-7400
CO	Carbon Monoxide	0-500 ppm	CO		9602-5400
COCl2	Phosgene	0-1.00 ppm	COCl2		9602-6600
DCE (C2H4Cl2)	Di-chloro-ethylene 1,2	0-1000 ppm	DCE (C2H4Cl2)	Pyr.	9602-9600
ETO (C2H4O)	ETO - Ethylene oxide	0-20.0 ppm	ETO (C2H4O)		9602-8000
F2	Fluorine	0-30 ppm / 0-5 ppm	F2		9602-6401 / 6400
GeH4	Germane	0-5.0 ppm	GeH4		9602-6902
H2	Hydrogen	0-1 %-vol. / 0-4 %-vol.	H2		9602-5100 / 5101
H2S	Hydrogen Sulfide	0-100 ppm / 0-30 ppm	H2S		9602-5200 / 5201
H2Se	Hydrogen Selenide	0-1.0 ppm	H2Se		9602-5601
HBr	Hydrogen Bromide	0-30.0 ppm	HBr		9602-7000
HCl	Hydrogen Chloride	0-30.0 ppm	HCl		9602-5800
HCN	Hydrogen Cyanide	0-30.0 ppm	HCN		9602-5700
HF	Hydrogen Fluoride	0-10.0 ppm	HF		9602-6500
HMDS (C6H18OSi2)	Hexamethyldisilazane	0-0.5 %-vol. / 0-500 ppm	HMDS (C6H18OSi2)		9602-6715 / 6714
MCF (C2H3ClO2)	MCF - Methyl chloroformiate	0-1.00 ppm	COCl2		9602-6600
N2H4	Hydrazine	0-1.00 ppm	N2H4		9602-7600
NF3	Nitrogen Trifluoride	0-50.00 ppm	NF3	Pyr.	9602-9700
NH3	Ammonia	0-100 ppm / 0-1000 ppm	NH3		9602-6704 / 6705
NO	Nitric Oxide	0-250 ppm	NO		9602-7200
NO2	Nitrogen Dioxide	0-25.0 ppm	NO2		9602-7300
O2	Oxygen	0-25.0 %-vol.	O2		9602-5501
O3	Ozone	0-1.00 ppm	O3		9602-7100
PH3	Phosphine	0-1.00 ppm	PH3		9602-6100
POCl3	Phosphorus oxychloride	0-30.0 ppm	HCl		9602-5800
SF6	Sulfur Hexafluoride	0-0.500 %-vol.	SF6	Pyr.	9602-9710
SiCl4	Silicon tetrachloride	0-30.0 ppm	HCl		9602-5800
SiF4	Sulfur tetrafluoride	0-10.0 ppm	HF		9602-6500
SiH2CL2	Tetrafluorosilane	0-30.0 ppm	HCl		9602-5800
SiH3Cl	Chlorosilane	0-30.0 ppm	HCl		9602-5800
SiH4	Silane	0-50.0 ppm	SiH4		9602-6301
SiHCl3	Trichlorosilane	0-30.0 ppm	HCl		9602-5800
SO2	Sulfur Dioxide	0-25.0 ppm	SO2		9602-5900
TBA (C4H11As)	TBA - Tertiarybutylarsine	0-1.00 ppm	AsH3		9602-6000
TBP (C12H27O4P)	TBP - Tributyl phosphate	0-1.00 ppm	PH3		9602-6100
TDMAT (C8H24N4Ti)	TDMAT - Tetrakis (dimethylamino) titanium	0-100 ppm	NH3		9602-6704
TEOS (C8H20O4Si)	Tetraethyl Silicate	0-100 ppm	TEOS (C8H20O4Si)		9602-7500
TMB (C3H9BO3)	Trimethyl Borate	0-500 ppm	TMB (C3H9BO3)		9602-7510
TMP (C3H9O3P)	Trimethyl Phosphite	0-30.0 ppm	TMP (C3H9O3P)		9602-7800
UMDH (C2H8N2)	1,1-Dimethylhydrazine	0-1.00 ppm	N2H4		9602-7600
WF6	Tungsten hexafluoride	0-10.0 ppm	WF6		9602-6500

► Midas®

Toxic or corrosive gas detectors with pre-calibrated sensors



Technical specifications

Detected gases: AsH₃, B₂H₆, BCl₃, BF₃, Br₂, C₄F₆, C₅F₈, C₈H₂₀O₄Si, CH₂F₂, CH₃F, CH₄, Cl₂, ClO₂, CO, CO₂, F₂, GeH₄, H₂, H₂Cl₂Si, H₂S, HBr, HCl, HCN, HF, N₂O, NF₃, NH₃, NO, NO₂, O₂, O₃, PH₃, Si₂H₆, SiH₄, SO₂ and WF₆.

Sensors: Intelligent sensor cartridge with integrated electronic calibration certificate.

Display: 4-character alpha-numeric screen with separate units of measurement, flow rate as histogram and various other indicators (controlled by icon)

Keyboard: Membrane (4 keys)

Operating voltage: 24 V CC (nominal) +/- 10 %

Outputs:

- Linear 4-20 mA
- 3 configurable alarm relays, NO or NF
- Communication TCP/IP

Integrated suction pump system: Flow rate 500 ml/min

Sampling time: 2 to 30 seconds

Tubing length: Up to 30m (100 feet)

Record events: To view sensor history.

Material: Steel case with paint finish

Dimensions/ Weight: 120 x 63 x 150 mm (HxL xP) / 800 grams

Wall mounting: with 2 pre-punched holes on the rear frame

Operating temperature: 0 °C (32 °F) to 40 °C (104 °F)

Patented technology:

to confirm portable gas fumes and avoid inopportune alarms

Certifications:

ETL according to UL 61010B and CSA-C22.2 n° 1010.1-92

Product description

The **Midas®** is a gas monitoring system that allows you to respond quickly and reliably to the presence of practically all gasses used or generated in semiconductor and other manufacturing applications.

Thanks to its intelligent sensor cartridge with integrated electronic calibration certificate, the sensor replacement is quick and easy, without tools and without calibration.

► Interchangeable pre-calibrated sensors

With nearly 40 available gases, the Midas® enables precise measurement of gas in extremely low concentrations (in ppb).

It is therefore particularly suitable in processes requiring very fine measurements such as the semiconductor industry for example.

The sensor cartridges are pre-calibrated and configured alarm thresholds make periodical sensor replacements very simple and very fast.

► Integrated sampling pump

With a robust pump system, the Midas® can monitor points up to 30 meters (100 feet) away from the transmitter.

The flow rates are automatically regulated with patented control technology to guarantee infallible gas detection.

► A complete and autonomous measurement controller

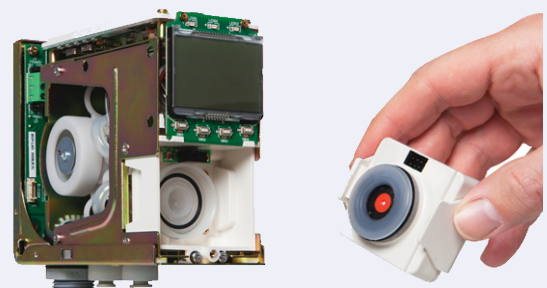
In its standard version, the Midas® incorporates a flexible power and communication platform with a large LCD screen, 4- button navigation, 3 integrated relays (alarms and defaults), a linear analog output as well as MODBUS/TCP Ethernet digital outputs.

This solution also uses the Power over Ethernet (POE) protocol, offering a single Ethernet connection and suitable for all requirements in terms of power supply, control and communications.

► CxFx gas pyrolyzer module

A pyrolyzer is available for CxFx (CH₃F, C₄F₆, C₅F₈ or NF₃) which require gas to be heated to « break » the gas molecule and thus measure it.

Schematic diagram





Gas	Formula	Measure range	Pyr.	Code
Ammonia	NH ₃	9-100 ppm		MIDAS-S-NH3
Arsine	AsH ₃	18-200 ppb		MIDAS-S-ASH
Brome	Br ₂	36-400 ppb		MIDAS-S-BR2
Hydrogen bromide	HBr	0,72-8 ppm		MIDAS-S-HCL
Chlorine	Cl ₂	0,18-2 ppm		MIDAS-S-HAL
Hydrogen chloride	HCl	0,72-8 ppm		MIDAS-S-HCL
Hydrogen cynide	HCN	1,8-20 ppm		MIDAS-S-HCN
Diborane	B ₂ H ₆	36-400 ppb		MIDAS-S-B2H
Dichlorosilane	H ₂ Cl ₂ Si	0,72-8 ppm		MIDAS-S-HCL
Difluoromethane	CH ₂ F ₂	16-240 ppm		MIDAS-S-CFX
		0-40 ppm		MIDAS-S-XCF
Nitric dioxide	NO ₂	1,05-12 ppm		MIDAS-S-NO2
Carbon dioxide (EC)	CO ₂	0,15-2,00 %/vol.		MIDAS-S-CO2
Carbon dioxide (IR)	CO ₂	0,15-5,00 %/vol.		MIDAS-I-CO2
Chloride dioxide	ClO ₂	36-400 ppb		MIDAS-S-BR2
Sulfur dioxide	SO ₂	0,7-8 ppm		MIDAS-S-SO2
Disilane	Si ₂ H ₆	1,8-20 ppm		MIDAS-S-SHX
Fluor	F ₂	0,36-4 ppm		MIDAS-S-HAL
Fluoromethane (R41)	CH ₃ F	8-120 ppm	Pyr.	MIDAS-S-CFX
		0-120	Pyr.	MIDAS-S-XHF
Hydrogen fluoride	HF	0,18-2 ppm		MIDAS-S-HFL
		1,05-12 ppm		MIDAS-S-HFX
Germane - Germanium tetrahydrure	GeH ₄	0-800 ppb		MIDAS-S-ASH
Hexafluorobutadiene	C ₄ F ₆	3-40 ppm	Pyr.	MIDAS-S-CFX
		7,2-80 ppm	Pyr.	MIDAS-S-CFH
		0-240 ppm	Pyr.	MIDAS-S-XCF
Tungsten hexafluoride	WF ₆	0,18-2 ppm		MIDAS-S-HFL
		1,05-12 ppm		MIDAS-S-HFX
Hydrogen	H ₂	90-1000 ppm		MIDAS-S-H2X
		6,5-100 % LEL		MIDAS-S-LEL
Hydrogen sulfide	H ₂ S	3,6-40 ppm		MIDAS-S-H2S
Methane	CH ₄	6,5-100 % LEL		MIDAS-S-LEL
Nitric oxide	NO	9-100 ppm		MIDAS-S-NOX
Carbon monoxide	CO	9-100 ppm		MIDAS-S-COX
Octafluorocyclopentene	C ₅ F ₈	3-40 ppm	Pyr.	MIDAS-S-CFX
Oxygen	O ₂	0,2-25 %/vol.		MIDAS-S-O2S
Ozone	O ₃	36-400 ppm		MIDAS-S-O3X
		36-700 ppb		MIDAS-S-O3H
Phosphine	PH ₃	0,11-1,2 ppm		MIDAS-S-PH3
Nitrous oxide (IR)	N ₂ O	100-1000 ppm		MIDAS-I-N2O
Silane	SiH ₄	0,18-2 ppm		MIDAS-S-SHL
		1,8-20 ppm		MIDAS-S-SHX
TEOS - Tetraethyl orthosilicate	C ₈ H ₂₀ O ₄ Si	3,6-40 ppm		MIDAS-S-TEO
Boron trichloride	BCl ₃	0,72-8 ppm		MIDAS-S-HCL
Boron trichloride	BF ₃	0,18-2 ppm		MIDAS-S-HFL
		0,72-8 ppm		MIDAS-S-HFX
Nitrogen trifluoride	NF ₃	0-40 ppm	Pyr.	MIDAS-S-XHF

▶ SPM FLEX

Optical toxic gas analysis system



Technical specifications

Detection technique: Chemcassette® detection system (chemical cassette with 7 specific gas families)

Use: Device used for both fixed and portable detection

Flow system: Automatic flow control with internal bypass system, sampling up to 30.48 m

User interface: 4 large buttons, 3.5" color LCD screen, web server

Alarm threshold: 2 levels generally defined at half the exposure limit value and when it is reached

Response time: 10 seconds

Alarm indication: Visual (LED), Sound (Siren: 90 dB at 1m)

Output signals:

- Concentration + fault alarm relay (SPDT)
- Linear outputs 4-20 mA - Copy of the measurement signal

Ethernet communication:

- USB 2.0 or later port
- Digital screen

Data recording: Up to 3 months (one measurement every 15 seconds without gas reading, 1 measurement every second in the presence of gas) - 1500 last events

Relay ratings: 250 Vac at 6 A

Operating temperatures: 0 to 40 °C (basic device)

Power supply: 100 - 240 Vac / 50 - 60 Hz

Battery: Lithium ion

Battery life: 6 hours depending on use

Housing: fiberglass

Protection: IP65 NEMA 4X

Dimensions / Weight: H x W x D: 312 x 183 x 163 mm / 4.1 kg

Certification:

- UL 61010-1 / CSA-C22.2
- IEC 61010-1

Product description

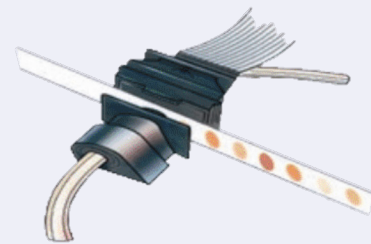
The **SPM FLEX** is a very efficient optical analysis system for toxic gases with a fast response time, insensitive to interferences and using the patented **Chemcassette®** technology. It is particularly suitable for monitoring very dangerous gases such as nitric acid (HNO₃), sulfuric acid (H₂SO₄) or isocyanates (TDI, HDI, MDI).

This advanced technology combines the color change of a chemically impregnated strip of paper with a very powerful optical analysis system. Measurements are targeted, precise and rapid at extremely low concentration levels, in ppb (parts per billion).

▶ Operating principle

The gases sampled by means of a sampling pump are sent to a chemically impregnated paper strip. In reaction with the target gas, the paper strip will change color to be analyzed by a very powerful optical system.

It is a very precise analysis method of the most sensitive gases, such as hydrides, mineral acids, oxidants or amines.



▶ Main advantages

- Patented Chemcassette® technology insensitive to interference
- Integrated sampling pump
- Rapid response for the detection of a target gas
- Sensitivity to gas (in ppb) with physical proof
- Interchangeability of Chemcassette®
- Reduced maintenance and no dynamic calibration required
- Digital concentration display
- Ethernet computer communication (MODBUS TCP / IP)
- USB port for data recovery
- More than 50 available gases (toxic, corrosive or pyrophoric)

▶ A configuration adapted to each application

The SPM FLEX detector has numerous options ensuring reliable detection for each particular application:

- Fixed or portable version with battery
- The capacity of the sampling pump can be up to 30 meters for certain gases
- Possibility of adding a remote display and a remote alarm acknowledgment



Type	Gas	Range	Minimum alarm limit	Default alarm		Response time T50	Max tube length	Filter type	ChemCassette		
				A1	A2				Code 14 days	Code 30 days	Code 90 days
Hydrides	Arsine (AsH3)	0.5-500 ppb	1 ppb	2.5 ppb	5 ppb	55	30	A	1265-4000		1265-3000
	Phosphine (PH3)	3-3000 ppb	5 ppb	150 ppb	300 ppb	6					
	Diborane (B2H6)	5-1000 ppb	10 ppb	50 ppb	100 ppb	14					
	Silane (SiH4)	0.03-50 ppm	0.05 ppm	2.5 ppb	5 ppb	13					
	Germane (GeH4)	50-2000 ppb	100 ppb	100 ppb	200 ppb	245					
	Hydrogen selenide (H2Se)	2-500 ppb	5 ppb	5 ppb	50 ppb	14					
	Hydrogen sulfide (H2S)	1-10000 ppb	5 ppb	5 ppb	1 ppb	7					
Mineral acids	Hydrogen fluoride (HF)	0.02-20 ppm	0.03 ppm	1 ppm	2 ppm	7	5	B, C	1265-4001		1265-3001
	Hydrogen chloride (HCl)	0.02-20 ppm	0.03 ppm	1 ppm	2 ppm	5					
	Hydrogen bromide (HBr)	0.02-10 ppm	0.03 ppm	1 ppm	2 ppm	5					
	Boron trifluoride (BF3)	0.02-10 ppm	0.1 ppm	0.5 ppm	1.0 ppm	5					
Mineral acids (export not limited)	Hydrogen fluoride (HF)	0.4-20 ppm	0.4 ppm	1 ppm	2 ppm	7	5	B, C	1265-4012		1265-3012
	Hydrogen chloride (HCl)	0.02-20 ppm	0.03 ppm	1 ppm	2 ppm	5					
	Hydrogen bromide (HBr)	0.02-10 ppm	0.03 ppm	1 ppm	2 ppm	5					
	Boron trifluoride (BF3)	0.05-10 ppm	0.1 ppm	0.5 ppm	1.0 ppm	5					
	Nitric acid (HNO3)	0.02-20 ppm	0.05 ppm	1 ppm	2 ppm	15					
	Sulfuric acid (H2SO4)	5-750 ppb	10 ppb	25 ppb	50 ppb	2000	0.1	aucun filtre			
Oxidizers	Chlorine (Cl2)	0.005-5 ppm	0.02 ppm	0.25 ppm	0.5 ppm	7	30	B,C	1265-4002		1265-3002
	Fluorine (F2)	0.01-10 ppm	0.05 ppm	0.5 ppm	1.0 ppm	5	6				
	Nitrogen dioxide (NO2)	0.03-10 ppm	0.05 ppm	0.1 ppm	0.2 ppm	56	30		1265-4004	1265-3004	
	Chlorine dioxide (ClO2)	20-1000 ppb	25 ppb	50 ppb	100 ppb	36	15				
Amines	Ammonia (NH3)	0.01-150 ppm	0.05 ppm	12.5 ppm	25 ppm	5	30	B, C	1265-4003		1265-3003
	Dichlorosilane-DMA (H2Cl2Si)	0.5-50 ppm	0.1 ppm	2.5 ppm	5 ppm	10					
	Tetrakis (Dimethylamino) titanium (TD-MAT) (C8H24N4Ti)	0.01-20 ppm	0.05 ppm	1 ppm	2 ppm	14					
	Trimethylamine (TMA) (C3H9N)	0.5-50 ppm	0.1 ppm	2.5 ppm	5 ppm	10					
Phosgene	Phosgene (COCl2)	7-4000 ppb		50 ppb	100 ppb		30	A	1265-4007		1265-3007
Diisocyanates	Toluene diisocyanate (TDI) (C9H6N2O2)	0.5-200 ppb	0.5 ppb	1 ppb	2 ppb		0.15	aucun filtre	1265-4006	1265-3006	
	Ethylene biphenyl isocyanate (MDI) (C15H10N2O2)	2-60 ppb		2.5 ppb	5 ppb						
	Hexamethylene diisocyanate (HDI) (C8H12N2O2)	2-60 ppb		2.5 ppb	5 ppb						
Hydrazines	Hydrazine (N2H4)			5 ppb	10 ppb		3	aucun filtre	1265-4008	1265-3008	
	Monomethylhydrazine (MMH) (CH6N2)	3-2000 ppb		5 ppb	10 ppb						
	Dimethylhydrazine (UDMH) (C2H8N2)	3-2000 ppb		5 ppb	10 ppb						
	Hydrogen cyanide (HCN)	0.5-30 ppm		2.4 ppm	4.7 ppm		30	A	1265-4009		
	Sulphur dioxide (SO2)	5-2500 ppb		120 ppb	250 ppb		31	B, C	1265-4005	1265-3005	
	Ozone (O3)	10-1000 ppb		50 ppb	100 ppb		31	aucun filtre	1265-4011	1265-3011	
	Hydrogen peroxide (H2O2)	0.1-3 ppm			100 ppb		15	aucun filtre	1265-4010	1265-3010	

▶ OLCT80

Wireless gas detector RS485, 4-20mA outputs & relays



Technical specifications

Detected gases: Combustible, hydrocarbon, solvents, toxic, asphyxiating or refrigerant gas

Type of sensors: Catalytic filaments, infrared, electrochemical or semiconductor sensors depending on targeted gas (sensors are pre-calibrated).

Power supply: 16 to 28 Vcc

Inputs: 2 analog inputs 4-20mA (load resistance 120 Ω) usable TOR binary inputs

Outputs:

- Relays: 3 dry relays (fault, A1, A2)
- Analog: standardized 4-20mA output
- Digital: one serial RS 485 output

Display:

- 4-digit LCD display for measurement + 1 alphanumeric line
- 3 LED (green: on / yellow: fault / red: alarm)

Antenna specifications:

- Frequency band 900 MHz or 2400 MHz (to specify when ordering)
- Impedance: 50 Ω / Gain: 2dBi / Power 2 watts

Range (line of sight): 3200 meters (2,4 GHz)

Material: Epoxy coated aluminium + 316 stainless steel sensor

Cable entries: 4 x M20 + 2 x M25

Operating temperature: -20°C to +55°C

Ingress protection: IP66

Weight: 3.5 kg (wire version) / 4 kg (Wireless version)

Certifications:

- EEx d IIB T5 (T 100°C) for OLCT80 with explosion-proof sensor
- EEx d[ia] ia IIB T4(T135°C) for OLCT80 with intrinsically safe sensor
- Approval INERIS 03ATEX0240X

Product description

The **OLCT80** Wireless is a wireless analog and digital gas detector, for combustible leak detection (hydrocarbons, solvents, alcohols), toxics asphyxiating (lack of oxygen) and refrigerants (HFO, CFC, HFC) monitoring in ATEX zone.

Interconnected with each other to form a real mesh network, **OLCT80** Wireless gas detectors can communicate with the master receiver up to 3 km away in open fields. The type of network will depend on the number of points, the surface to be covered, its architecture and the configuration of the terrain.

▶ **The OLCT80: 3 in 1 gas detector**

Thanks to its 2 analog inputs (4-20 mA) available to connect other transmitters (gas detectors, flame detectors, etc.), the **OLCT80** can monitor up to 3 parameters simultaneously making it particularly flexible and suitable for many industrial applications.

An infrared remote control allows remote configuration and control of the **OLCT80** without opening its housing. Approved "intrinsically safe", it can be used in ATEX zone (zone 1) with a maximum range of about 5 meters.

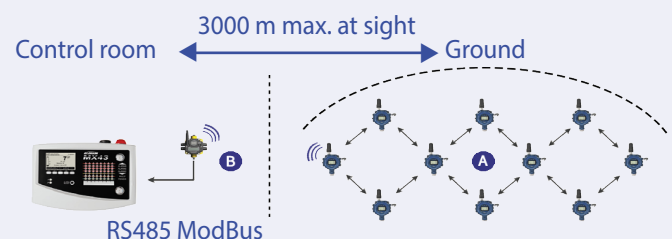
▶ **The OLCT80 Wireless : wireless communication**

The **OLCT80** Wireless is an ideal solution to meet certain wiring constraints for gas detectors in industrial environments, such as :

- Gas detection on moving equipment (crane bucket, overhead traveling cranes)
- Problematic or even impossible device wiring (road, waterway or railroad)
- Measurements transmission over long distances generating significant wiring costs, especially in classified areas

The link between the **OLCT80** Wireless and the measurement controller or a PLC is carried out by radio wave on 2.4 GHz bands in Europe or 900 MHz in the USA, over a distance of up to 3200 or 9600 meters respectively (line of sight).

The **OLCT80** wireless transmitters communicate with each other up to a Master receiver connected to the MX43 controller unit (via an RS485 ModBus link). This Master receiver allows the management of a mesh network (Mesh technology) comprising up to 49 transmitters supplied with 10 to 30 Vdc (batteries, solar panels).



Gas	Measure range	Cell	OLCT80-XP (4-20 mA)	OLC80-XPIR (4-20 mA)	OLCT80-IS (4-20 mA)	Code
Acetone	0-100% LEL	CAT	●			10
acetonitrile	0-100% LEL	CAT	●			11
Acetylene	0-100% LEL	CAT	●			12
Acrolein	0-100% LEL	CAT	●			14
Acrylic acid	0-100% LEL	CAT	●			13
Acrylonitrile	0-100% LEL	CAT	●			17
Allylic alcohol	0-100% LEL	CAT	●			74
Ammonia	0-100% LEL	CAT	●			6
Ammonia	0-100 ppm NH3	EC	●		●	231
Ammonia	0-1000 ppm NH3	EC	●		●	232
Ammonia	0-5000 ppm NH3	EC	●		●	233
Arsine	0-1 ppm AsH3	EC			●	243
Benzene	0-100% LEL	CAT	●			18
Benzene	0-500 ppm	SC				663
Brome	0-20 ppm Br2	EC			●	286
Brome	0-300 ppm Br2	EC			●	287
Butadiene 1.3-	0-100% LEL	CAT	●			19
Butane	0-100% LEL	CAT	●			4
Butane	0-100% LEL	SC	●			666
Butanol (isobutanol)	0-100% LEL	CAT	●			20
Butanone2-	0-100% LEL	CAT	●			21
Butyl acetate	0-100% LEL	CAT	●			8
Butyl acrylate	0-100% LEL	CAT	●			15
Carbon dioxide	0-5 % vol. CO2	IR		●		239
Carbon dioxide	0-10 % vol. CO2	IR		●		240
Carbon dioxide	0-100 % vol. CO2	IR		●		241
Carbon dioxide	0-5000 ppm CO2	IR		●		252
Carbon monoxide	0-100 ppm CO	EC	●		●	203
Carbon monoxide	0-300 ppm CO	EC	●		●	204
Carbon monoxide	0-1000 ppm CO	EC	●		●	205
Carbon monoxide	0-1000 ppm /H2	EC	●		●	289
Carbon monoxide	0-2000 ppm	SC	●			512
Chlorine	0-10 ppm Cl2	EC			●	224
Chlorine dioxide	0-3 ppm ClO2	EC			●	235
Chloromethane	0-100% LEL	CAT	●			70
CS2	0-500 ppm	SC	●			668
Cumene	0-100% LEL	CAT	●			22
Cyclohexane	0-100% LEL	CAT	●			23
Cyclohexanone	0-100% LEL	CAT	●			24
Cyclopentane	0-100% LEL	CAT	●			72
Diesel	0-100% LEL	CAT	●			33
Dimethylether	0-100% LEL	CAT	●			25
DMA (Dimethylamine)	0-100% LEL	CAT	●			66
Dodecane	0-100% LEL	CAT	●			26
Ethane	0-100% LEL	CAT	●			27
Ethanol	0-100% LEL	CAT	●			28
Ethanol	0-500 ppm	SC	●			656
Ether (diethylether)	0-100% LEL	CAT	●			29
Ethyl acetate	0-100% LEL	CAT	●			7
Ethyl acrylate	0-100% LEL	CAT	●			16

Gas	Measure range	Cell	OLCT80-XP (4-20 mA)	OLC80-XPIR (4-20 mA)	OLCT80-IS (4-20 mA)	Code
Ethyl chloride	0-100% LEL	CAT	●			68
Ethylene	0-100% LEL	CAT	●			30
Ethylene oxide	0-100% LEL	CAT	●			49
Ethylene oxide (ETO)	0-30 ppm	EC			●	244
Ethylene oxide (ETO)	0-100 ppm	EC			●	248
Ethylmercaptan	0-100 ppm C2H6S	EC	●		●	253
Formaldehyde	0-100% LEL	CAT	●			31
Formol	0-50 ppm	EC			●	247
FX56	0-2000 ppm	SC	●			510
GPL	0-100% LEL	CAT	●			32
Heptane	0-100% LEL	CAT	●			35
Hexane	0-100% LEL	CAT	●			36
HFO-1234yf	0-100% LEL	IR		●		65
HFO-1234yf	0-2000 ppm	IR		●		526
HFO-1234yf	0-1000 ppm	SC	●			662
HFO-1234ze	0-1000 ppm	SC	●			525
Hydrogen	0-100% LEL	CAT	●			3
Hydrogen	0-100% %/vol.	CAT				61
Hydrogen	0-2000 ppm H2	EC	●		●	225
Hydrogen chloride	0-30 ppm HCl	EC			●	227
Hydrogen chloride	0-100 ppm HCl	EC			●	228
Hydrogen cyanide	0-10 ppm HCN	EC			●	229
Hydrogen cyanide	0-30 ppm HCN	EC			●	230
Hydrogen fluoride	0-10 ppm	EC			●	285
Hydrogen sulfide	0-30 ppm H2S	EC	●		●	213
Hydrogen sulfide	0-100 ppm H2S	EC	●		●	214
Hydrogen sulfide	0-1000 ppm H2S	EC	●		●	215
Isobutane	0-100% LEL	CAT	●			38
Isobutene	0-100% LEL	CAT	●			39
Isopropanol	0-100% LEL	CAT	●			40
Isopropanol	0-500 ppm	SC	●			658
Kerosene (JP4)	0-100% LEL	CAT	●			41
MEK (2-Butanone)	0-500 ppm	SC	●			659
Methane	0-100% %/vol.	CAT				60
Methane (4.4% vol.)	0-100% LEL	SC	●			665
Methane (4.4% vol.)	0-100% LEL	CAT	●			2
Methane (5% vol.)	0-100% LEL	SC	●			664
Methane (5% vol.)	0-100% LEL	CAT	●			1
Methanol	0-100% LEL	CAT	●			43
Methyl methacrylate	0-100% LEL	CAT	●			42
Methylamine	0-100% LEL	CAT	●			44
Methylmercaptan	0-100 ppm CH4S	EC	●		*	261
Metyl acetate	0-100% LEL	CAT	●			9
MIBK (methyl isobutyl ketone)	0-100% LEL	CAT	●			64
Naphta	0-100% LEL	CAT	●			45
Naphtalene	0-100% LEL	CAT	●			46
Natural gas	0-100% LEL	CAT	●			34
Nitric dioxide	0-10 ppm NO2	EC			●	219
Nitric dioxide	0-30 ppm NO2	EC			●	220
Nitric monoxide	0-100 ppm NO	EC	●		●	216

Gas	Measure range	Cell	OLCT80-XP (4-20 mA)	OLC80-XPIR (4-20 mA)	OLCT80-IS (4-20 mA)	Code
Nitric monoxide	0-300 ppm NO	EC	●		●	217
Nitric monoxide	0-1000 ppm NO	EC	●		●	218
Nonane	0-100% LEL	CAT	●			47
Octane	0-100% LEL	CAT	●			48
Oxygen (2 ans)	0-30% vol. O2	EC	●		●	200
Oxygen (5 ans)	0-30 % vol. O2	EC	●			272
Ozone	0-1 ppm O3	EC			●	284
Pentane	0-100% LEL	CAT	●			51
Phosgene	0-1 ppm COCl2	EC			●	246
Phosphine	0-1 ppm PH3	EC			●	242
Propane	0-100% LEL	CAT	●			5
Propane	0-100% LEL	SC	●			667
Propylene	0-100% LEL	CAT	●			52
"	0-100% LEL	CAT	●			50
R11	0-1% % vol.	SC	●			505
R12	0-1% % vol.	SC	●			500
R123	0-2000 ppm	SC	●			509
R134A	0-2000 ppm	SC	●			502
R134A	0-2000 ppm	IR		●		502
R143A	0-2000 ppm	SC	●			511
R22	0-2000 ppm	SC	●			501
R23	0-1% % vol.	SC	●			506
R245FA	0-1000 ppm	SC	●			521
R30 (Dichloromethane)	0-500 ppm	SC	●			507
R32	0-1000 ppm	SC	●			515
R40 (Chloromethane)	0-500 ppm	SC	●			508
R407A	0-1000 ppm	SC	●			523
R407C	0-1000 ppm	SC	●			517
R407F	0-1000 ppm	SC	●			519
R407F	0-2000 ppm	IR		●		528
R408A	0-4000 ppm	SC	●			518
R410A	0-1000 ppm	SC	●			514
R422D	0-4000 ppm	SC	●			524
R434A	0-4000 ppm	SC	●			520
R449A	0-2000 ppm	IR		●		529
R507	0-2000 ppm	SC	●			513
SF6	0-100% %/vol.	CAT				62
SF6	0-2000 ppm	IR		●		527
Silane	0-50 ppm SiH4	EC			●	245
Styrene	0-100% LEL	CAT	●			54
Styrene	0-500 ppm	SC	●			661
Sulfur dioxide	0-10 ppm SO2	EC			●	221
Sulfur dioxide	0-30 ppm SO2	EC			●	222
Sulfur dioxide	0-100 ppm SO2	EC			●	223
Super (SP95)	0-100% LEL	CAT	●			55
Toluene	0-100% LEL	CAT	●			56
Toluene	0-500 ppm	SC	●			657
Trimethylamine	0-100% LEL	CAT	●			57
White spirit	0-100% LEL	CAT	●			58
Xylene	0-100% LEL	CAT	●			59
Xylene	0-500 ppm	SC	●			660

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▶ Optima Plus

Hydrocarbon, solvent and alcohol gas detector



Technical specifications

Measurement range: 0-100% LEL with a wide range of calibration curves for hydrocarbons, solvents and alcohols.

Power supply: 18 to 32 V DC (24 V nominal), <4.5 W max

Output signals:

- Linear output: 4-20 mA receiver or autosensor transmitter
- Deactivation: 1 to 3 mA (2 mA by default)
- Fault: 0 mA (HART® units adjustable to 1 mA)
- Overscale: 20 to 21.50 mA (21 mA default)
- Digital output: Optional Modbus RS485 multipoint port

Material / Weight: 316 stainless steel / 1.6 kg

Base point accuracy:

- Optima Plus (hydrocarbons) <± 1% DPE (full scale)
- Optima Plus (ethylene) <± 2% DPE (full scale)

Response time: T90 <4 seconds (methane)

Temperature range: from -40 °C to +65 °C.

Protection: IP 66/67

Diagnosis: With XNX certified portable interrogator or HART communication (and recalibration)

Certifications:

- ATEX : II 2 GD Ex d op is IIC Gb Ex tb IIIC Db
- UL: Class 1, Groups B, C and D (Tamb -40 to +65 °C)
- InMetro (Brazil) : BR-Ex d IIC T4 IP66/67 (-40 °C ≤ Ta ≤ +65 °C)
- CSA: Class I, division 1, groups B, C and D, (40 °C to +65 °C)
- FM: Class I, Division 1, Groups B, C and D
- CU-TR Ex Homologation (Eurasian) - XTC version (Russia)
- Level 2 of safety integrity IEC61508
- Electromagnetic compliance EN 50270: 2006
- Marine MED Directive relating to marine equipment, standard certification by DNV, BV, ABS, Lloyd's Register

Product description

The **Searchpoint Optima Plus** is an infrared hydrocarbon gas detector certified for use in an explosive atmosphere (ATEX zone). Available for many flammable gases, it differs from other infrared absorption models by a very fast response time with a T90 of less than 4 seconds for methane.

It is particularly well suited for applications likely to be affected by poisons or inhibitors harmful to catalytic bead sensors, but especially in processes with permanent presence of explosive gases, solvents or alcohols, even at low concentrations.

▶ A high performance infrared gas detector

The **Searchpoint Optima Plus** is a high performance infrared hydrocarbon gas detector with a very large library of flammable gases with almost a 100 available calibration curves.

It uses a double infrared beam measurement technology with an ultra-fast response time. The device requires reduced routine maintenance compared to conventional catalytic filament gas detectors. And offers secure operation thanks to integrated self-monitoring.

Advanced algorithms for internal fault diagnosis and rejection of false alarms ensure optimum operational integrity. With its high-performance optical unit and its robust stainless steel housing, it is particularly well suited for the most demanding industrial applications.

It is equipped with the HART® communication protocol (Highway Addressable Remote Transducer) to access complete diagnosis, configuration or calibration information from a control room or through a portable HART® device.

▶ The Optima Plus gas detector assets

- Nearly a 100 available calibration curves (hydrocarbons, solvents, alcohols).
- Response time: T50 <3 seconds, T90 <4 seconds (methane).
- Linear output 4-20 mA HART with a <± 1% DPE accuracy.
- Dynamic heat control for a non-condensing optical system.
- Optical auto-compensation for greater stability.
- Remote functional gas testing device.
- No saturation effect, the detector is able to measure gas concentrations up to 100% / vol.
- Immunity against poisons and catalytic inhibitors.
- Operation possible in inert atmospheres.
- ATEX, IECEx, UL, CSA worldwide certifications.

Gas	LEL	Standard	Code	Model
Acetone	2,5 %	EN60079	2108D3013	HC
Band A	NC	EN50054	2108D3150	HC
Band B	NC	EN50054	2108D3151	HC
Band C	NC	EN50054	2108D3152	HC
Band D	NC	EN50054	2108D3153	HC
Benzene	1,2 %	EN60079	2108D3227	ETH
Super 60/95	1 %	EN50054	2108D3047	HC
1,3-Butadiene	1,4 %	EN60079	2108D3229	ETH
Butane	1,4 %	EN60079	2108D3173	HC
Butanone	1,8 %	EN60079	2108D3023	HC
Butyl acetate	1,2 %	EN60079	2108D3021	HC
Chloroethane	3,6 %	EN60079	2108D3084	HC
Cyclohexane	1,2 %	EN60079	2108D3025	HC
Cyclohexanone	1 %	EN60079	2108D3027	HC
Decamethy tetrasiloxane (DCMTS)	0,9 %	EN50054	2108D3060	HC
1,2-Dichloroethane	6,2 %	EN60079	2108D3090	HC
Diethyl ether	1,7 %	EN60079	2108D3049	HC
Dimethyl ether	2,7 %	EN60079	2108D3098	HC
Ethane	2,5 %	EN60079	2108D3171	HC
Ethanol	3,1 %	EN60079	2108D3029	HC
3-Ethoxy-1-Propanol	1,3 %	EN50054	2108D3094	HC
1-Ethoxy-2-Propanol	1,3 %	EN50054	2108D3111	HC
Ethyl acetate	2,2 %	EN60079	2108D3031	HC
Ethylene	2,3 %	EN60079	2108D3240	ETH
Heptane	1,1 %	EN60079	2108D3033	HC
Hexamethy disiloxane (HMDS)	1,3 %	EN50054	2108D3017	HC
Hexane	1 %	EN60079	2108D3035	HC
1-Hexene	1,2 %	EN50054	2108D3083	HC
Isobutane	1,3 %	EN60079	2108D3070	HC
Methane	4,4 %	EN60079	2108D3170	HC
Methane	5 %	EN50054	2108D3001	HC
Methane 0-100 %/vol.	NA %	EN50054	2108D3050	HC
Methanol	5,5 %	EN60079	2108D3041	HC
1-Methoxy-2-Propanol	1,8 %	EN50054	2108D3093	HC
Methyl amyl Ketone (MIAK)	1,3 %	EN50054	2108D3108	HC
Methyl isobutyl Ketone (MIBK)	1,2 %	EN50054	2108D3068	HC
Octamethyl tetrasiloxane (OMTS)	0,9 %	EN50054	2108D3063	HC
Octane	0,8 %	EN60079	2108D3062	HC
1-Octene	0,7 %	EN50054	2108D3081	HC
Pentane	1,4 %	EN60079	2108D3056	HC
1-Pentene	1,4 %	EN50054	2108D3077	HC
Propan-1-ol	2,2 %	EN60079	2108D3085	HC
Propan-2-ol	2 %	EN60079	2108D3037	HC
Propane	1,7 %	EN60079	2108D3172	HC
Propyl acetate	1,7 %	EN60079	2108D3039	HC
Propylene Glycol Methyl Ether Acetate (PGMEA)	1,3 %	EN50054	2108D3101	HC
Styrene	1,1 %	EN60079	2108D3228	ETH
Toluene	1,1 %	EN60079	2108D3043	HC
o-Xylene	1 %	EN60079	2108D3045	HC
p-Xylene	1 %	EN60079	2108D3055	HC

▶ GD10P

Infrared IR gas detector



Technical specifications

Detected gases:

Hydrocarbon vapors (several versions) and CO₂

Detection principle:

IR-absorption, dual wavelength, dual path - Solid state IR source

Autotest: Continuous

Calibration: Factory set, no field recalibration

Accuracy:

- ±3% full scale between 0 and 50%
- ±5% full scale between 50 and 100%

Response time: T₂₀ = 1 sec. / T₅₀ = 2,5 sec. / T₉₀ = 6 sec.

Power supply:

24 VDC (18-32 VDC)-Power consumption approx. 3,5 W

Output signal: Current source 4-20 mA, load impedance max. 500

Ohm (current sink 4-20 mA optional)

Environnement: Humidity 100% HR

Housing :

Ex d IIC T6 Gb/Connexion Ex e Protection IP66/IP67 DIN 40050

Material: Stainless steel SIS2343 (ASTM 316)

Dimensions/weight: 264 x 104 x 106 mm (L, l, h) / Approx 2,9 kg

Warranty:

- 5 years warranty on complete instrument
- 15 years warranty on IR-sources

Certifications :

- ATEX : II 2 G / ex d e IIC T5/T6 Gb
 - CSA : C22.2 No 152-M1984 and ANSI/TSA 12.13.01-2000
- Ex d e IIC T6 (for Canada only) Class i, division 2, groups A, B, C AND D (for USA and Canada)

Product description

The **GD10P** gas detector has been designed with features that provide an effective response to the detection of gas hazards in a wide range of industrial environments like offshore petrochemicals. It differs from all other IR-sources models on the market because it uses a solid-state infrared source giving it unequalled stability and an exceptional lifespan.

Available in hydrocarbon or CO₂ (carbon dioxide) version, the Simtronics **GD10P** (now Oldham Teledyne) is the infrared gas detection reference on the market.

▶ **A gas detector with unrivaled performance**

The **GD10P** has a very solid optical unit providing the detector with unequalled stability, very fast response time and exceptional lifetime considerably reducing operating costs.

- 5 years full warranty - 15 years warranty on the IR-sources (Simtronics patent)
- Response time T₉₀ < 1,5s (methane)
- Certified SIL2 (SIL3 software)
- Optical fouling compensation
- Almost zero maintenance

▶ **Advantages of the infrared technology**

- Presence of oxygen is not required for correct measurement, which makes the **GD10P** suitable even in inert gas atmospheres.
- No possibility of H₂S or silicon vapors poisoning unlike other technologies (catalytic).
- No saturation effects, so no false measurements: the detector is able to monitor gas concentration up to 100 % vol.
- The detector has a continuous self-test function & reports dirty optics and fault conditions to the control system.
- The gas flow rate has no influence on accuracy.
- Due to its reliability, the **GD10P** requires only a few functional tests and no on site special maintenance during its lifetime thus considerably reducing maintenance costs.

▶ **A worldwide recognized reputation**

The explosive gas detector (natural gas, LPG, hydrocarbons, solvents, alcohols) represents the vast majority of gas detection in the petrochemical sector where the infrared technology is preferred.

The **Simtronics GD10P gas detector** is one of the best compromises on the market with its infrared semiconductor technology giving it unequalled stability and an exceptional lifespan.

Inox 316L - ATEX IECEx - 4-20 mA outpout source - HART

Gas	Measure range	Code
Acetone	0 - 100% LEL C3H6O - Source	GD10-P00-08DG-0XH-00
Acetylen	0 - 100% LEL C2H2 - Source	GD10-P00-02DG-0XH-00
Benzene	0 - 100% LEL C6H6 - Source	GD10-P00-13DG-0XH-00
Butane	0 - 100% LEL C4H10 - Source	GD10-P00-38DG-0XH-00
Carbon dioxide	1 %/vol. ppm CO2 - Source	GD10-P00-23AN-0XH-00
Carbon dioxide	3 %/vol. CO2 - Source	GD10-P00-23BH-0XH-00
Carbon dioxide	5 %/vol. CO2 - Source	GD10-P00-23BC-0XH-00
Carbon dioxide	10 %/vol. CO2 - Source	GD10-P00-23BD-0XH-00
Carbon dioxide	25 %/vol. CO2 - Source	GD10-P00-23BJ-0XH-00
Carbon dioxide	5 %/vol. CO2 (CH4 immune) - Source	GD10-P00-24BC-0XH-00
Carbon dioxide	0 - 100 %/vol. CO2 (CH4 immune) - Source	GD10-P00-24BG-0XH-00
Cyclohexane	0 - 100% LEL C6H12 - Source	GD10-P00-73DG-0XH-00
Ethane	0 - 100% LEL C2H6 (2,4 %/vol.) - Source	GD10-P00-56DG-0XH-00
Ethane	0 - 100% LEL C2H6 (2,4 %/vol.) - Sink	GD10-P00-56DG-0XJ-00
Ethanol	0 - 100% LEL C2H6O (3.1 %/vol.) - Source	GD10-P00-05EG-0XH-00
Ethanol	0 - 100% LEL C2H6O (3.3 %/vol.) - Source	GD10-P00-05DG-0XH-00
Ethylene	0 - 100% LEL C2H4 - Source	GD10-P00-03DG-0XH-00
Ethylene	0 - 100% LEL C2H4 - Sink	GD10-P00-03DG-0XJ-00
Hexane	0 - 100% LEL C6H14 - Source	GD10-P00-12DG-0XH-00
Methane	0 - 100 %/vol. CH4 (HC immune) - Source	GD10-P00-81BG-0XH-00
Methane	0 - 100% LEL CH4 (4.4 %/vol.) - Source	GD10-P00-17EG-0XH-00
Methane	0 - 100% LEL CH4 (5 %/vol.) - Source	GD10-P00-17DG-0XH-00
Methane	0 - 100% LEL CH4 (5 %/vol.) - Sink	GD10-P00-17DG-0XJ-00
Methane	0 - 100 %/vol. CH4 - Source	GD10-P00-17BG-0XH-00
Methane	0 - 100 %/vol. CH4 (Biogas) - Source	GD10-P00-18BG-0XH-00
Methane	0 - 100 %/vol. CH4 (Biogas) - Sink	GD10-P00-18BG-0XJ-00
Methanol	0 - 100% LEL CH4O - Source	GD10-P00-19DG-0XH-00
Methanol	0 - 100% LEL CH4O - Sink	GD10-P00-19DG-0XJ-00
Pentane	0 - 100% LEL C5H12 - Source	GD10-P00-11DG-0XH-00
Propane	0 - 100% LEL C3H8 (1.7 %/vol.) - Source	GD10-P00-09EG-0XH-00
Propane	0 - 100% LEL C3H8 (2.2 %/vol.) - Source	GD10-P00-09DG-0XH-00
Propane	0 - 100% LEL C3H8 (2.2 %/vol.) - Sink	GD10-P00-09DG-0XJ-00
Propane	0 - 100 %/vol. C3H8 (CH4 immune) - Source	GD10-P00-80BG-0XH-00
Propene	0 - 100% LEL C3H6 - Source	GD10-P00-07DG-0XH-00
Styrene	0 - 100% LEL C8H8 - Source	GD10-P00-15DG-0XH-00
Toluene	0 - 100% LEL C7H8 (1.2 %/vol.) - Source	GD10-P00-14DG-0XH-00

Inox 316L - CSA - 4-20 mA outpout source - HART

Gas	Measure range	Code
Butane	0 - 100% LEL C4H10 - Source	GD10-P00-38DG-0BH-00
Carbon dioxide	0 - 3 %/vol. CO2 - Source	GD10-P00-23BH-0BH-00
Carbon dioxide	0 - 5 %/vol. CO2 - Source	GD10-P00-23BC-0BH-00
Carbon dioxide	0 - 5 %/vol. CO2 (CH4 immune) - Source	GD10-P00-24BC-0BH-00
Methane	0 - 100% LEL CH4 (5 %/vol.) - Source	GD10-P00-17DG-0BH-00
Methane	0 - 100% LEL CH4 (5 %/vol.) - Sink	GD10-P00-17DG-0BJ-00
Methane	0 - 100 %/vol. CH4 - Source	GD10-P00-17BG-0BH-00
Methane	0 - 100%/vol. CH4 (HC immune) - Source	GD10-P00-81BG-0BH-00
Propane	0 - 100% LEL C3H8 (2.2 %/vol.) - Source	GD10-P00-09DG-0BH-00
Propane	0 - 100 %/vol. C3H8 (CH4 immune) - Source	GD10-P00-80BG-0BH-00

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▶ OLCT710 TP

H2S Detector - semiconductor technology



Technical specifications

High performance H2S detector

Technology: Semiconductor

Measuring range: 0-100 ppm standard - 0-20 ppm, 0-50 ppm or 0-200 ppm on demand

Warranty: 2 years on electronics and 5 years on the sensor

Power: 12 - 28 Vcc

Output signals:

- 4-20 mA (linear)
- RS 485 Modbus RTU

Display: 4 character alphanumeric, (measurements & setting)

Power consumption: < 2 watts usual

Accuracy / Repeatability: ± 10% of the reading or ± 2 ppm

Response time: T50<30s - T90<60s

Operating temperature: -40 ° C to + 75 ° C

Humidity range: 15-100% HR (non-condensing)

Material: Aluminium (Optional stainless steel version)

Dimensions (H x l x P): 350 mm x 127 mm x 130 mm

Weight: 3.36 kg (Aluminium) - 7.44 kg (Stainless steel)

Ingress protection: IP66

Certifications:

- ATEX II 2G
- Ex d IIB + H2 T4 Gb

Functional security: SIL2 according to IEC 61508

Wiring (Cable gland M20 x 1.5):

- Output 4-20 mA: 3 wires
- Modbus output: 4 wires (2 pairs)

Product description

The semiconductor technology **OLCT710 TP** is a high performance gas transmitter, specially designed for optimum and reliable operation in the presence of high concentrations of hydrogen sulfide when electrochemical sensors reach their limits.

Certified ATEX and SIL2, it is particularly suitable for extreme temperature (-40 ° C to + 75 ° C) and humidity (15 to 100% RH) conditions, for example on gas installations, oil rigs, offshore platforms or water and wastewater treatment plants.

▶ The semiconductor technology

The **OLCT710 TP** is a gas transmitter featuring a microprocessor designed to be used with a two-layer metal oxide semiconductor high performance sensor: one layer for heating and preserving a constant temperature, and one sensitive to hydrogen sulfide.

This technology is ideal for H2S measurements when the gas is often present in lower or higher concentrations, and when electrochemical sensors reach their limits.

▶ A multifunctional H2S gas detector

The gas sensor's electronic components are entirely protected and immune to water and corrosion. The semiconductor sensor is pluggable and can easily be replaced in the field. The operating interface is designed for non-intrusive maintenance using a magnet.

A LED display shows measurements and detector's status. The detector has two output signals: a 4-20mA analog linear output and a Modbus RS-485 serial output for wiring several devices.

Because it is very important that safety systems are compliant and developed according to standards' requirements, the H2S semiconductor gas detector **OLCT710 TP** is ATEX and SIL2 certified according to the latest edition of the IEC 61508: 2010 standard.

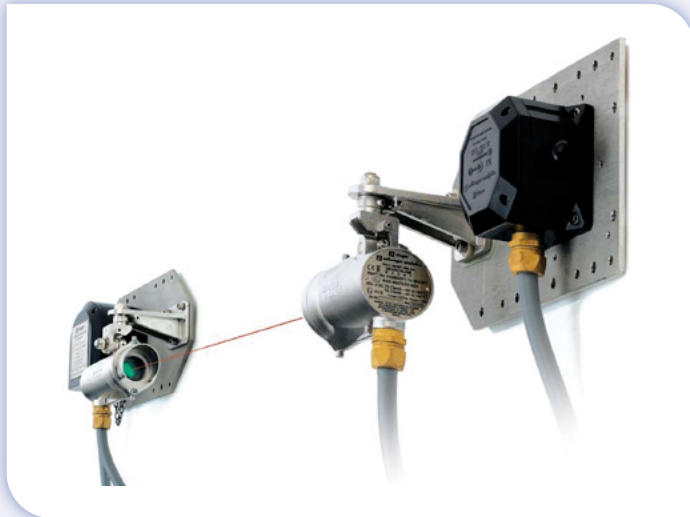
▶ Main features

- Excellent sensors and electronics durability
- Endures high H2S concentrations even continuously
- Use in severe conditions: -40 / +75°C – 15 / 100% HR
- 2 output signals: 4-20 mA and RS485
- Waterproof (IP66)
- ATEX & SIL2 certification

Other **OLCT710 TP** gas sensors are available for explosive gases and carbon dioxide (CO2).

▶ Searchline EXCEL

Open-path infrared gas detector for hydrocarbons



Technical specifications

Available gases: Methane, Ethane, Propane, Butane, Pentane, Ethylene, Propylene, butadiene

Measuring range: 0 to 5 LELm* (Lower explosion limit over a distance in meters).

Recommended alarm setting: 1.0 LELm and 3.0 LELm

Path length:

- Short range: 5 to 40 m
- Medium range: 40 to 120 m
- Long range: 120 to 200 m

Response time: T90 less than 3 seconds (under normal operating conditions)

Power supply: 18 to 32 Vcc

Power consumption:

- Short range: Transmitter: 5 W - Receiver: 8 W
- Medium and long range: Transmitter: 13 W - Receiver: 8 W

Output signal:

- 4-20 mA source or sink (maximum loop resistance: 600 Ω)
- Modbus RS485 multipoint digital output

Case material: 316 stainless steel

IP rating: IP66 and IP67

Operating temperature: -40 °C to +65 °C

Operating humidity: 0 to 99 % HR (non-compensated)

Warm-up time: Less than 5 minutes (operational) or less than 1 hour (complete stabilization)

Weight (including mounting bracket):

- Short range: transmitter and receiver: 3.5 kg
- Medium and long range: Transmitter: 7 kg - Receiver: 3.5 kg

Safety certifications: ATEX, IECEx, UL, CSA, FM, GOST independent assessment for CEI61508

* To find out the LELm, simply multiply the size of a gas cloud by its concentration, so 1 LELm corresponds to 100% LEL over 1 meter or 50% LEL over 2 meters.

Product description

The **Searchline Excel** open-path infrared gas detector is an innovative and relevant solution for hydrocarbons detection over long distances. It is a device that incorporates the latest technology innovations, able to replace several point detectors over a distance between the transmitter and the receiver that can reach up to 200 meters.

The **Searchline Excel** system includes a transmitter that produces infrared radiation and a receiver with optical sensors that electronically processes signals. They are both incorporated in a resistant stainless steel frame for use in the most demanding applications and harshest environments. The analog output of the receiver provides a linear 4-20 mA signal corresponding to a 0 to 5 LELm scale (Lower Explosive Limit over a distance in meters).

▶ Insensitivity to solar radiation

The **Searchline Excel** open-path gas detector is completely insensitive to interference caused by sunlight or other sources of radiation, such as flares, arc welding or lighting. The transmitter lens is heated to minimize condensation, frost and snow build-up. When it is very cold, SMART heating increases significantly.

▶ Why a barrier gas detection system?

- Very fast response time (T90 < 3 seconds)
- High sensitivity which allows earlier alarms with lower thresholds
- Less strategic detector location
- Simple installation and commissioning, a single system replaces several point devices

▶ The advantages of the Searchline Excel open-path

- Semiconductor detectors with full temperature compensation
- Dual bandpass filters that compensate the interference from all types of fog, rain and mist.
- Symmetrical heating elements integrated into the windows offering excellent performance at low temperatures
- Insensitivity to solar radiation

▶ Examples of applications

Examples of gas leaks not detected by conventional point detectors but identified by an open-path infrared gas detector:

- Offshore platforms and ships (storage and unloading)
- Chemical and petrochemical plants
- Gas and oil pipelines



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Optical flame detectors



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▶ FSL100

UV/IR & IR3 flame detector



Technical specifications

Type of flame detector:

- FSL100-UVIR : combination of a UV sensor and an IR sensor
- FSL100-IR3 : combination of 3 IR sensors

Range: 35 m (IR3), 25 m (UV, UVIR) alerting within 10 seconds to a 0.1 m² n-heptane fire

Vision cone: 90° minimum horizontal and vertical

Power supply: 10-28 VCC (12-24 VCC nominal)

Local LEDs:

- Continuous green : normal operation
- Continuous yellow : fault
- Continuous red : alarm

Current output : 4–20 mA (stepped, sinking, non-isolated)

Relay output :

- Alarm relay : De-energized during normal operation (NO)
- Fault relay: Powered during normal operation (NF)
- Type of relay : SPDT, 30 VCC – 2 A, 60 W max.

Automatic & manual Self-Test: Automatic Sensor Test (built in Self-Test) and manual Self-Test

Cable entries: M20 – Terminals suitable from 0,5 mm² (20 AWG) to 1,5 mm² (15 AWG) wire

Housing: Polyester Reinforced Glass (PRG), Non-incendiary. UV resistant, Self-Extinguishing V-0 (UL-94)

PA66, UV resistant; Stainless Steel fixings; 280 g

Pressure compensating element: PCE (Pressure Compensating Element) avoids moisture build-up in the detector housing due to changes in ambient air-pressure

Ingress protection: IP65

Operating temperature: –40 °C to +70 °C

Certifications:

- ATEX/IECEx : Zone 2/22
- FM3611 : Non-incendiary (anti-sparks) Classe 1, 2 & 3 Div 2

Dimensions / weight : 125 x 80 x 57 mm / 465 g

Product description

The **FSL100** flame detector quickly and reliably detects open flame fires in a wide range of industrial applications. They rely on reliable sensors and sophisticated signal analysis to quickly detect fires while rejecting false alarms.

Compact and lightweight for easy installation, it has been designed to operate in harsh environments, both indoors and outdoors, and in potentially explosive atmospheres (ATEX zones).

▶ UV/IR FSL100-UV/IR flame detector

- The dual sensor methodology enables a wide range of fires.
- Detects higher hydrocarbons flames (wood, paper, gasoline) but also hydrogen and lower hydrocarbons like methanol and methane.
- Good resistance to sunlight (direct or reflected), artificial light (fluorescent tubes and halogen lamps), electric arcs and discharges & radiation from electric welding operations (more than 3 meters from the flame detector) .

▶ IR3 FSL100-IR3 flame detector

- It is the most commonly used model in the industry, it detects most fires with the exception of hydrogen.
- Flame vibration frequency analysis for improved rejection of false alarms.
- Perfect for liquid hydrocarbon fires.
- Less affected by window clogging or smoke producing fires.
- Good resistance to sunlight (direct or reflected), artificial light (fluorescent tubes and halogen lamps), electric arcs discharges and radiation from electric welding operations (more than 3 meters from the flame detector) .

Codification

Description	Code
Flame detector UV/IR	FSL100-UVIR
Flame detector IR3	FSL100-IR3
Swivel support for FSL100	FSL100-SM21
FSL100 test lamp with universal charger and carrying case; safe areas only	FSL100-TL
FSL100 test lamp with intrinsically safe carrying case, risk areas	FSL100-TLX

▶ SharpEye

UV/IR, IR3 or IR4 flame detector



Technical specifications

SharpEye 40/40 optical flame detection

Housing: Stainless steel SS 316L

Vision cone:

- Model 40/40I & 40/40LB: 100° horizontal, 95° vertical
- Model 40/40M: 90° horizontal & vertical

Optical sensibility:

- Model 40/40I (IR3) & 40/40M (IR4): Up to 65m
- Model 40/40LB (UV/IR): Up to 15m

Autotest: Integrated test (Built-In-Test, BIT)

Heated window: For operation in difficult conditions (snow, ice, condensation)

Power supply: 24 V DC nominal (18 – 32 VDC)

Power consumption:

- Stand-by: max. 90 mA (110 mA with heated window)
- Alarm: max. 130 mA (160 mA with heated window)

Output signals: analog 0-20 mA (stepped) & HART

Output relays: SPST volt-free contacts rated 2A at 30Vdc

Communication: Modbus compatible

Certifications:

- ATEX & IECEx: Ex II 2GD
- Ex de IIB+H2 T5 (-55°C +75°C)
- FM / FMC / CSA: Class I Div1 Groups B,C&D
 Class II/III Div1, Groups E,F&G
 Class II/III Div1, Groups E,F&G
- SIL: SIL2 certified by TÜV (IEC61508)
- Marine: DNV and ABS type approval
- MED-B and MED-D approval (wheelmark), issued by DNV
- CE mark EMI/RFI protected to EN61326-3 and EN61000-6-3

Dimensions: 90 x 114 x 156 mm

Ingress protection: IP66 & IP67, NEMA 250 6P

Weight: 2.5 kg (+1 kg with tilt mount)

Operating temperature: from -50°C to +75°C

Product description

Based on the optical analysis technology, the **SharpEye 40/40** flame detector is sensitive to radiation emitted by flames and combustion products. Depending on the model, it can be equipped with one or more sensors, either UV or IR or a combination of both.

With an MTBF (average time between failures) of 150,000 hours, it quickly detects and reports all fuel and gas fires at very long distance with a response time of less than 5 seconds in the worst case.

▶ SharpEye 40/40I – IR3 flame detector

It is the most commonly used model in the petrochemical industry and oil platforms. This flame detector combines 3 infrared sensors for the detection of hydrocarbon fires up to 65 meters, while guaranteeing reliability and immunity. Marine certification.

▶ SharpEye 40/40LB – UV/IR flame detector

This detector combines a UV sensor and an IR sensor for detection of hydrocarbon (petrol, ethanol, diesel, methane), metal and hydrogen fires. Good resistance to sunlight, artificial light and radiation from welding operations.

▶ SharpEye 40/40M – IR4 flame detector

Combination of 4 infrared sensors for flame detection of most fires over distances of 5 to 65 meters maximum, with high immunity to false alarms. Version with the same characteristics as the IR3 with hydrogen detection in addition.

Performances

Combustibles	Fire size	40/40I IR3	40/40LB UV-IR	40/40M IR4
		in meter		
Essence	Fire 0,1 m2	65	45	65
Gasole		45	11	45
N-heptane		65	15	65
Kerosene		45	11	45
Ethanol		40	7,5	40
Methane		30	5	30
Isopropylic alcohol		40	7,5	40
Methane	Fire feather 50 cm high	30	5	30
Hydrogen		NA	5	30
GPL		30	5	30
Polypropylen	Fire 0,2 m2	5	5	5
Paper	Fire 0,1 m2	10	5	10

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▶ FS20X

UV/IR optical flame detector



Technical specifications

Field of view: 90° horizontal vision cone, ± 45° from axis

Sensitivity: 4 levels switch selectable – very high (60 m), high (45 m), medium (30 m) and low (15 m)

Response time:

- 3 to 5 seconds to 0,1 m² n-heptane fire at 30 m
- 3 to 10 seconds to 0,1 m² n-heptane fire at 60 m

Power supply : 24 Vcc nominal (18-32 Vcc) - regulated

Analog output: 0 to 20 mA stepped–source or sink user selectable

Communication: ModBus RS-485 or RS-485 FireBus II

Output relays:

- Fire alarm: Contacts NO and NC selectable
- Auxiliary: Contacts NO and NC selectable
- Fault: Contacts NO and NC selectable

Visual indicators: Green (power), red (alarm), yellow (fault)

Housing: Aluminium NEMA4 (IP66), tamper-evident with openings NPT 3/4" (M25 optional), 316 stainless steel available.

Ingress protection: IP66

Mounting: Swivel bracket assembly - optional

Temperature range: -40°C to 85°C

Humidity range: 5 to 98% relative humidity, non-condensing

Weight: 1,8 kg (Aluminum) or 3,4 kg (stainless steel)

Certifications:

ATEX/IECEx: II 2 G Ex db IIC T4 (Ta : -40 à + 110 °C),

FM: Class I, division 1 & 2, group B, C & D; Class II, Div. 1 & 2, groups E, F et G; Class III

CE: EN6100-6-4 and EN50130-4 INMETRO CU-TR compliant

SIL Classification: FMEDA

Product description

The **FS20X** is an efficient and reliable UV / IR optical flame detector combining ultraviolet and infrared sensors, thus increasing immunity to false alarms by measuring two different flame spectra.

If the detector's UV signal is degraded due to thick fumes or a contaminated lens, the IR sensor will trigger the fire alarm despite reduced sensitivity and slower response time.

▶ **Combination of 2 different sensors**

To trigger a fire alarm, the UV / IR flame detector must simultaneously receive information from the UV and IR sensors. In case of an arc weld, the UV sensor will be energized but the IR sensor will not detect heat, there will be no fire alarm. Similarly, in front of an object emitting a large heat source, the IR sensor will react but the UV sensor will not be triggered.

▶ **Two high performance microprocessors**

Two microprocessors guarantee performance and measurements reliability with a very short response time. The master microprocessor performs high-speed digital sampling and signal processing calculations, while the slave microprocessor processes various sensor data such as self-diagnosis, interface communication, events and data storage.

▶ **Up to 60 meters range**

The FS20X detector has a detection range greater than 60 m (with a very high sensitivity setting) able to detect a heptane reference fire of 0.1 m². Its vision cone is, in terms of volumetric coverage, significantly superior to most UV / IR detectors on the market.

▶ **Main features**

- Technology suitable for hydrogen, hydrocarbons (petrol, ethanol, methane), paper, wood fires and more
- Two high performance microprocessors for better measurements integrity in very short response time
- Immunity to arc welding and rejection of false alarms in all ambient conditions.
- 4 sensitivity levels selectable by switch for each particular case adaptation
- PC software and interface module for diagnosis, data and event log downloads
- Visual indicators : Green (power), red (alarm), yellow (fault)
- Minimum maintenance for error-free operation

▶ FS24X

IR3 optical flame detector



Technical specifications

- Field of view:** 90° horizontal vision cone, 45° from axis
Sensibility: 4 levels switch selectable – very high (60 m), high (45 m), medium (30 m) and low (15 m)
Response time:
- 3 to 5 seconds to 0,1m² for n-heptane fire at 30 m
 - 3 to 10 seconds to 0,1m² for n-heptane fire at 60 m
- Power supply:** 24 Vcc (18-32 Vcc) – regulated
Analog output: 0 to 20 mA stepped - sink or source
Communication: ModBus RS-485 or RS-485 FireBus II
Output relays:
- Fire alarm relay : Contacts NO and NC selectable
 - Auxiliary relay : Contacts NO and NC selectable
 - Fault relay : Contacts NO and NC selectable
- Visual indicators:** Green (power), red (alarm), yellow (fault)
Housing: NEMA4 Aluminium (IP66), tamper-resistant with NPT 3/4" openings (M25 optional). Stainless steel available
Ingress protection: IP66
Mounting: Swivel bracket assembly - optional
Temperature range: -40°C to 85°C
Humidity range: RH of 5 à 98 %
Weight: 1,8 kg (Aluminum) or 3,4 kg (Stainless steel)
Certifications:
- ATEX/IECEx : II 2 G Ex db IIC T4 (Ta : -40 à + 110 °C),
 - FM: Class I, division 1 & 2, group B, C et D; Class II, Div. 1 & 2, group E, F & G; Class III
 - CE : EN6100-6-4 and EN50130-4 INMETRO CU-TR compliant
 - Classification SIL: FMEDA

Product description

The FS24X is an efficient and reliable IR3 optical flame detector combining three infrared sensors on different optical wavelengths, thereby increasing immunity to false alarms. It is suitable for both indoor and outdoor applications that require maximum false alarm rejection and the highest fire detection performance. The detector is available in aluminum or 316 stainless steel version for installation in the harshest environments.

▶ The combination of 3 different IR sensors

Thanks to ultra-fast semiconductor IR quantum sensors, the FS24X flame detector is able to distinguish between flames and other light sources, being sensitive only to optical wavelengths and specific flame pulse frequencies. To generate an alarm, the 3 IR sensors will have to be energized, which avoids false alarms caused by factors such as sunlight fluctuations.

▶ Two high performance microprocessors

Sophisticated software algorithms and two microprocessors provide the FS24X flame detector with the highest fire detection performance and optimal rejection of false alarms.

▶ Range up to 60 meters

With a range greater than 60 meters in the "high sensitivity" setting, the FS24X flame detector is capable of detecting a 0.1 m² heptane reference fire in a few seconds. Its vision cone is, in terms of volumetric coverage, significantly higher than that of most IR3 detectors on the market.

▶ PMain features

- Technology suitable for hydrogen, hydrocarbons (petrol, ethanol, methane), paper, wood fires and more
- Welding immunity and rejection of false alarms in all ambient conditions
- PC software and interface module for diagnosis, data & event logs downloading
- Visual indicators : Green (power), red (alarm), yellow (fault)
- ModBus RS-485 communication, analog output and relays

▶ Application examples

Oil refineries and production facilities, offshore platforms, oil & gas pipelines and pumping stations, LNG / LPG loading & unloading, ethanol & methanol storage and production, paints or solvents storage.



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Gas detection controllers



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▶ SE126K

Explosive gas detection unit with integrated sensor



Technical specifications

Power supply: 230 Vac, 12-24 Vac or 12-24 Vdc

Sensor : Catalytic filament

Measure range: 0 - 20 % LEL

Response time: 5 to 10 seconds

Average life in clean air: 5 years

T90 response time: < 30 seconds

Operating conditions:

-5 to + 50 ° C / 5 to 90% RH (non-condensing)

Display: Gas concentration display bar graph

3 status LEDs:

- Green: In operation
- Red : Alarm
- Yellow: Fault

TEST and RESET function: Annual verification required

Alarm :

- 2 pre-set alarm thresholds at 10% LEL and 20% LEL
- 2 output relays for servo controls (potential-free changeover contact)

- Relay contacts: 3A SPDT (230 Vac)

Housing: Polycarbonate

Protection index: IP 44

Dimensions / weight: 202 x 153 x 104 mm / 720 grams

2 available versions:

- Natural gas: SE126KM
- Butane or propane : SE126KG

Conformity : EN 50054 50057

Product description

The **SE126K** series flammable gas detection unit with integrated probe is specially designed for the detection of flammable gas leaks such as natural gas, butane or propane in unclassified areas. Calibrated to trigger an alarm at 10% & 20% of the lower explosive limit (LEL), it has 2 relays for the controls (signals, and solenoid valves etc.).

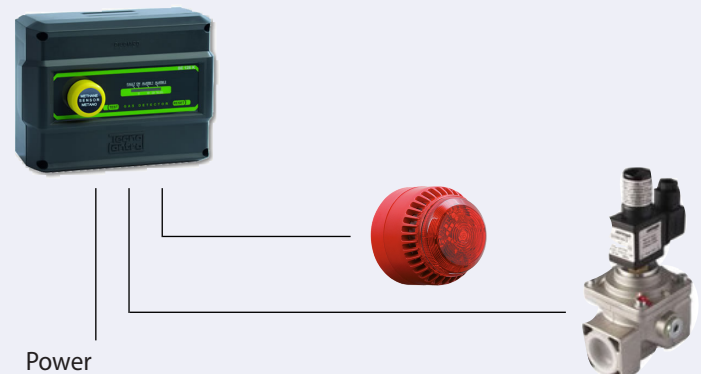
▶ Main advantages

- A versatile flammable gas detector
- Ideal for small unclassified applications
- 230 Vac or 12-24 Vdc power supply
- 2 preset alarm thresholds with relays for servo controls
- Status indication by LED and luminous bargraphs
- TEST and RESET functions on the front
- Great value

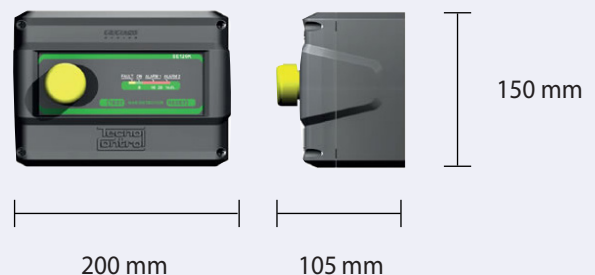
▶ Applications

- Professional kitchens
- Small boiler rooms in the tertiary sector

▶ Schematic diagram



▶ Dimensions



► Unipoint

Gas detection module - DIN rail mounting



Technical specifications

Use: gas controller - Mounting on TS35 DIN rail (omega rail) in a cabinet or control cabinet

Power supply: Nominal 24Vdc (18-32Vdc)

Features:

- 3-wire, 4-20mA 2 and 3-wire mV bridge inputs
- 3 alarm relays (Single pole / 3A, 240Vac / 28Vdc inverter)
- 1 system fault relay (single pole inverter)
- 1 sensor inhibition input
- 1 alarm acknowledgment input

Display: Backlit LCD display

Alarms: Integrated audiovisual

Indicator lights:

- Under voltage (Green LED)Défaut (LED yellow)
- Alarms (Red LED)

Operation:

- 2 keys: normal alarm reset operations and triggering of the system self-test
- 4 keys: user programming via an intuitive menu

Dimensions / weight: 140 x 30 x 115 mm / 225 grams

Protection class: Indoor, IP3x, according to BS EN 60529: 1992 (control module to be installed in a suitable enclosure)

Input / output cables: Removable termination connectors, easy access to all terminals

Operating conditions :

- Operating temperature -10 ° C to +55°C
- Humidity 10 to 90% RH (non-condensing)

Certifications :

- CEM/RFI: EN50270
- Electrical safety: EN61010, UL61010b
- Performance ATEX measurement function: EN61779
- Others: CE, TUVDescription

Product description

The **Unipoint** is a control module mounted on a DIN rail, offering integrators a flexible and economical solution for incorporating their detection of flammable, toxic and oxygen gases into their control systems.

This module can easily be integrated into any existing control cabinet, thereby reducing installation costs. By connecting several modules together, it is possible to make small to medium-sized monitoring solutions.

► **All the functions of a controller**

Each module incorporates audiovisual alarms, three programmable alarm relays, a fault relay and a logic input for deactivating the alarm without opening the cabinet or the control cabinet.

► **A fully configurable module**

The gas concentration and system status appear on the backlit liquid crystal display and each control module is fully programmable by the user via an intuitive menu system with selection keys. The configuration menus can be password protected to prevent unauthorized access.

► **Main assets**

- Mounting on TS35 DIN rail (omega rail) for integration in a box or in a control cabinet
- Compatible with a wide range of gas detectors for the 4-20 mA version
- 3 alarm levels associated with 3 independent potential-free relays + 1 sensor fault relay
- User-friendly with backlit display and 3 status lights

► **2 available models**

UniPoint control module available in two versions:

- The mV version is used with 3-wire Honeywell flammable gas detectors such as SignalPoint or SensePoint detectors
- The 4-20 mA version is used with 4-20 mA, 2 or 3-wire Honeywell detectors and is compatible with a wide variety of all brands gas detectors

Codification

Description	Code
MV input module (SignalPoint, SensePoint)	2106B1000
mA entry module	2106B2000

▶ MGS CO2

CO2 controller with buzzer & relay outputs



Technical specifications

▶ MGS-450 single-point CO2

Controller sensor: Infrared 0-5000 ppm or 0-5% / vol.

Power supply: 24 Vac/Vdc (auto select)

Integrated audiovisual alarm:

- Status indicator with three-color LED
- Integrated buzzer 72 dB (A) at 10 cm

Outputs:

- 4-20 mA linear analog output
- Modbus RTU digital communication
- 3 configurable SPDT relays

Setting: Via the MGS-400 application and Bluetooth

Dimensions: 165 x 165 x 87 mm / Protection: IP66

▶ Multipoint CO2 controller

Controller

Supply voltage: 100-240 Vac

Capacity: Up to 8 MGS-410 or MGS-450 detectors

Wiring: Modbus digital cabling (2 twisted pairs)

Display:

- Backlit graphic LCD
- Status control by LED (green, orange, red)

Alarms: 3 alarm relays for servos

Recording: Recording events on SD card

Certifications: CE, UL / CSA / IEC EN 61010-1

MGS-410 CO2 sensor

Sensor: Infrared 0-5000 ppm or 0-5% / vol.

Power supply: 24 Vac/Vdc (auto select)

Outputs: Modbus RTU digital communication

Setting: Via the MGS-400 application and Bluetooth

Dimensions: 130 x 130 x 68 mm / Protection : IP66

Product description

The **MGS-450 CO2** control unit is an autonomous gas detector with integrated buzzer and relay outputs for local control systems. A 4-20 mA linear output of the measurement is also available for a link with a central unit or for supervision.

Thanks to the **MGS-400** application (compatible with Android and iOS), the use of this autonomous CO2 controller is simple, intuitive and particularly suitable in the winemaking sector during fermentation, devatting or tank cleaning phases.

▶ MGS-450 single-point CO2 controller



With a high protection index (IP66), the waterproof and dustproof **CO2 MGS-450** controller, is particularly suitable in wine cellars, in craft or industrial breweries and in all applications requiring the control of carbon dioxide in ambient air.

▶ Multipoint CO2 MGS-408 controller

For tertiary or industrial applications requiring several measurement points, the **MGS-408 CO2** central unit can control up to 8 **MGS-410 CO2** detectors connected in series on a single line, considerably reducing wiring costs.



MGS-408 with 8 CO2 MGS410 detectors

The digital display as well as a group of LEDs provides a real-time view of the concentration and status of each CO2 sensor. An intuitive menu allows easy configuration of the control unit which keeps the alarm history on the SD card.

Three freely assignable alarm relays are available for the controls.

▶ The MGS-400 application



Thanks to the **MGS-400** application (compatible with Android and iOS), users can intuitively use, commission and maintain their gas detection system without the need for training or specialized tools.

► PointGard 2100

Oxygen monitoring device



Technical specifications

Operating power: 100 - 240 V CA 50 - 60 Hz

Display & Control: 3 Backlit LCD Screen" (75 mm)

Indicators: 3 status LEDs (green, yellow, red)

Alarm devices:

- Sound signal with adjustable volume from 85 to 105 dB with continuous or discontinuous tone
- Orange and red LED flashing lights with different flashes corresponding to A1 and A2 alarms

Outputs:

- 2 alarm relays and 1 fault relay (2-pole, single-pole contact 5 A at 230 V AC)
- 1 analog output 4 -20 mA (measurement copy)

Functions:

- Data and event recorder with a capacity of over 35,000 entries
- Full display of warning and fault messages
- The alarm is reset using the push button located on the front panel

Electrical certifications:

- CE classification, CEI / NF EN 61010-1
- Complies with the UL 61010-1 standard
- Class B device, residential use, conforms to standard ICES-3 (B) / NMB-3 (B)

Material:

- Polyester reinforced fiberglass material (GFRP)
- Wall mounting using internal screws or with optional stainless steel mounting brackets
- NEMA 4X protection rating enclosure, IP66 (pending) indoors or outdoors
- Cable entry 3 cable glands, M20
- Dimensions (L x l x p) 255 x 280 x 120 mm
- Weight 2,5 kg

Product description

The **PointGard 2100** is a standalone gas detection system with integrated alarms that is easy to install and commission. Just mount it on the wall and connect it to a power supply and the device is operational.

► **Fully ready to use**

Pre-calibrated, the sensor is fully ready for use and its self-test function facilitates preventive maintenance. As the horn and the flashing lights are integrated into the box, no installation or special wiring is required.

► **Advanced display with diagnosis**

The information is displayed clearly and concisely on a large backlit graphic screen. In normal operation, the device indicates the type of gas, its concentration and its measurement unit. The colored LEDs (green, yellow and red) provide additional alarm and status information. Advanced diagnosis, events records and gas measurements, can be displayed on the screen as graphs.

► **Alarm relay and feedback as standard**

Thanks to its three integrated relays, the PointGard 2100 can be equipped with additional external alarm devices such as a servos, an alarm report or a remote siren. In addition, a 4-20 mA output signal (measurement copy) allows it to be integrated into a larger detection system such as supervision.

► **Both compact and durable**

With its 4X / IP66 protection rating, the polyester reinforced fiberglass housing is waterproof and dustproof. Its compact size is suitable for most applications. Thanks to its integrated cable glands, it is easy to install.

► **The main advantages in 3 points**

- Simple & economical system for monitoring the oxygen level in the air in rooms using nitrogen or asphyxiating gas cylinders.
- Complete ready-to-use device including buzzer, flash lights and 230 volt power cord.
- Exceptional system longevity with a sensor life of approximately 5 years (annual calibration required).

► **Application examples**

- Research centers,
- Universities,
- Laboratories,
- Clean rooms,
- Cryogenic environments, etc...

▶ MX16

Single gas controller



Technical specifications

Function: Single gas monitor and alarm controller

Power supply: 100-240 Vac 50-60 Hz (35W)

Input: 1 linear input 4-20 mA or digital RS485

Display :

- Backlit graphic LCD
- Switching to reverse video in case of an alarm
- Bar graph with indication of alarm thresholds

Keys: 5 contextual keys + 1 audible alarm acknowledgment button

Alarms: 2 alarm levels (A1 & A2) + fault

Outputs :

- 2 alarm relays (A1 & A2) + 1 fault relay
- RS485 Modbus RTU protocol (option)

Data recording: History of the last 512 events

Dimensions: 265 x 266 x 196 mm

Protection class: IP55

Operating conditions: -20 to +50°C and 5 to 95% RH (not condensed)

Cable inputs and outputs:

- 3 PE M16 for cables from 4 to 8 mm²
- 2 PE M20 for cables from 6 to 12 mm²

Certifications:

- EMC: Compliant with EN 50270:15
- Low Voltage Directive: Compliant with EN 61010-1: 10

Product description

Specially designed for small tertiary or industrial applications, the **MX16** single gas detection controller is an excellent value for money model for monitoring risks related to toxic, asphyxiating or explosive gases.

This easy-to-use controller unit has many advantages such as a large backlit graphic LCD screen, 2 programmable alarm levels and contextual keys for easy menu navigation.

Two types of transmitters can be connected to this gas controller unit: either an analog transmitter such as the OLCT10, CTX300, OLCT100, any other 4-20 mA transmitter on the market, or a digital transmitter like the OLCT10N series.

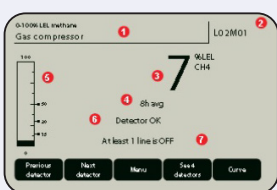
The **MX16** gas controller unit has as standard the events' history recording function (alarms, faults, etc.). As an option, an RS485 Modbus communication card is available for connection with a PLC supervision.

▶ MX16 single gas controller assets

- Excellent value
- 1 digital or analog input to receive most gas detectors on the market
- Large 4 " backlit LCD display
- 2 alarm relays + 1 fault relay
- RS485 output Modbus RTU protocol (option)
- History of the last 512 events

▶ MX16 gas controller applications

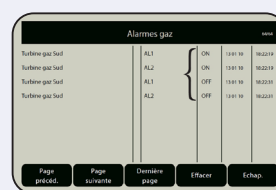
- Hospitals / MRI rooms
- Food processing units
- Bottling and brewery units
- Cosmetic laboratories
- Small boiler rooms
- Garages and small car parks
- Service rooms



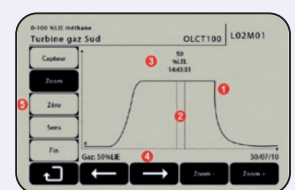
Normal mode display



Alarm mode display



History management



Calibration curve display

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▶ MX32

Gas detection controller (up to 8 gas sensors)



Technical specifications

Function: Multichannel measurement and alarm controller

Capacity/number of sensors:

- Digital line: 4 detectors per channel, 2 lines max.
- Analog line: 4-20 mA linear inputs, 2 lines max.
- Wheatstone bridge line: 2 lines max. (OLC series)

Dimensions: 265 x 266 x 196 mm **IP Rating:** IP55

Power supply: 100-240 Vac 50-60 Hz or 21-28 Vcc, 92 W max

Display: Backlit graphic LCD, user-customizable views, bargraph with indication of alarm thresholds

Status indicators: 7 LEDs for each of the 2 channels, 1 power-on indicator and 1 general fault indicator

Alarms: 5 alarm levels per measurement channel

Internal relays: 4 programmable potential-free changeover contact relays + 1 fault relay (non-configurable)

Digital output: RS485 Modbus protocol (optional)

Cable entry and exit: 5 PE M16 for cables from 4 to 8 mm² & 2 PE M20 for cables from 6 to 12 mm²

Certifications :

- SIL 1 : According to EN50271:10
- CEM : According to EN 50270:2015, industrial type 2

Operating temperature: -20 to +50°C

Humidity: 5 to 95 % non-condensed

Product description

The **MX32** gas controller unit, available in Wheatstone bridge version, analog and / or digital, easily adapts in most applications with the possibility of connecting up to 8 detectors on all of its 2 channels.

This excellent value for money controller unit, has many advantages such as exceptional modularity, a backlit 4" graphic LCD display, 5 alarm levels programmable by channel, as well as contextual keys for easy menu navigation (several languages available).

▶ 3 available versions

The MX32 controller unit is available in 3 versions to meet the greatest number of applications:

- Version 1: 1 4-20 mA sensor or up to 4 digital sensors
- Version 2: 2 4-20 mA sensors or up to 8 digital sensors
- Version 3: 2 Wheatstone bridge sensors series OLC10/100

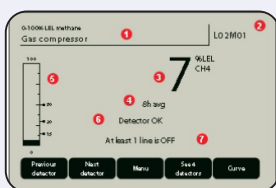
▶ Numerous modules for great flexibility

The MX32 controller unit accepts different modules allowing system capacities and flexibility to be increased:

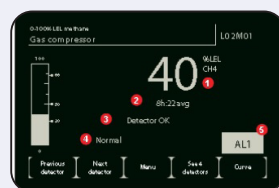
- Addressable module with 8 analog inputs that can receive all types of 4-20 mA analog transmitters
- Addressable module of 4 or 8 relays (+2 logic inputs) which can be deported as close as possible to servo controls.
- Addressable module with 16 digital inputs that can receive all digital information (emergency stop, limit switch, fire alarm).
- Addressable module with 4 analog outputs for connection to a recorder, a PLC, a building management system, etc.

▶ The MX32 controller assets

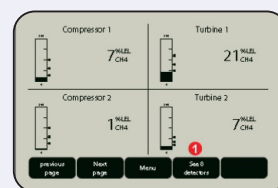
- Up to 8 digital or 2 analog gas detectors
- Large graphic LCD screen and customizable views
- 5 alarm levels per measurement channel
- History of the last 512 events



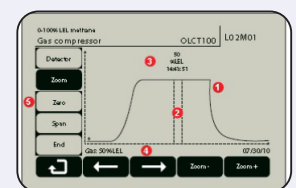
Normal mode display



Alarm mode display



4 sensors simultaneous display



Calibration curve display

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▶ MX43

Gas Detection Controller (up to 32 gas detectors)



Technical specifications

- Function:** Multichannel measurement and alarm controller
Dimensions: 370 x 299 x 109 mm (wall-mounted version) 483 x 177 x 192,5 mm (rack 19" 4U) – Ingress protection IP55 (wall-mounted), IP31 (rack)
Capacity:
- Digital lines: 4 detectors per line, 8 lines max, RS485 communication, proprietary protocol
 - Analog lines: Linear inputs 4-20 mA, 8 lines max.
- Power supply:** 100-240 Vac 50-60 Hz, consumption 500mA
Display: LCD back-lit display, user-customizable views, bargraph with indication of alarm thresholds
Visual indicators: 7 LEDs for each of the two channels, 1 power-on indicator and 1 fault indicator
Alarms: 5 alarm levels per measurement channel
On-board relays: 5 fully programmable alarm relays potential free + 1 fault relay (non-configurable)
Datalogging:
- By default, 512 storages by event types
 - Optional USB port to save measurements and alarms
- Digital output:** RS485 Protocole Modbus (optional)
Cable entries: 12 PE M16, 4 to 8 mm² outer diameter cable & 6 PE M20, 6 to 12 mm² outer diameter cable
Certifications: EMC: according to EN50270
Operating temperature: -20 to +50°C

Description du produit

The MX43 multi-channel gas detection unit has been developed to meet the user's needs in terms of flexibility, quality and ease of use. It is a digital and analog unit intended for the measurement of gases present in the atmosphere with the possibility of connecting up to 32 gas detectors in 8-line version.

This controller has many advantages such as exceptional flexibility with a wide choice of input / output modules, a backlit 4" graphic LCD screen, as well as contextual keys for easy navigation in the menus. An optional USB port allows archiving of measurements and events over several years with a 4 MB storage key.

▶ Several versions available

The MX43 controller unit is available in 3 versions to meet the greatest number of applications. A 4-line version for wall mounting (up to 16 sensors), an 8-line version for wall mounting (32 gas sensors) or 19" 4U rack mounting.

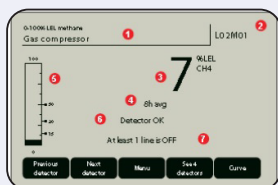
▶ Numerous modules for great flexibility

The MX43 controller unit accepts different modules to increase the capabilities and flexibility of the detection system.

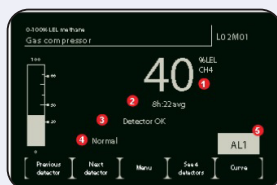
- Addressable module with 8 analog inputs that can receive all types of 4-20 mA analog transmitters.
- Addressable module of 4 or 8 relays (+ 2 logic inputs) which can be deported as close as possible to the controls.
- Addressable module with 16 digital inputs that can receive all digital information (emergency stop, limit switch, fire alarm).
- Addressable module with 4 analog outputs for connection to a recorder, a PLC, a building management system, etc.
- USB port for recording measurements, events (alarms, sensor faults, etc.) and configuring the system.
- Modbus RS485 digital communication module for connection with supervision or wireless receiver module.

▶ The the MX43 controller assets

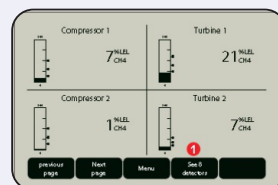
- Up to 32 digital or analog gas detectors.
- Large graphic LCD screen and customizable views.
- 5 alarm levels per channel (AL1, AL2, AL3, and average)
- Logs of the last 512 events (standard) and archiving of measurements and parameters on optional USB key.



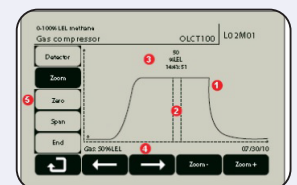
Normal mode display



Alarm mode display



4 sensors simultaneous display



Calibration curve display

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► TouchPoint Plus

8-channel gas detection unit, extendable to 16 channels



Technical specifications

Capacity: Up to 8 channels with a base unit, up to 16 channels with an expansion unit (wall mounting)

Type of inputs: 2 or 3 wires, 4-20 mA or Wheatstone mV bridge

Power supply: 110/220 Vac, 50-60 Hz or 18 to 32 Vdc (+/- 10%)

Basic I / O modules: 4 relay outputs + 2 digital inputs
I / O modules available (8 channels maximum):

- 4-20 mA inputs: 2 or 3 wires, 2/4/8 channel modules
- mV inputs: 3 wires, 2/4/8 channel modules
- Mixed inputs: 2-channel mA modules + 2 mV channels & 4 + 4 module
- Relay outputs: 12 or 24 configurable relay modules
- Communication: RS485 Modbus RTU / Modbus HTTP/TCP/ IP

Screen: 7" LCD color touchscreen with GUI

Visual indicators: 3 LED indicators for basic indications

Audible alarm: ≥ 70 dB at 1 m

History: Configuration, events and data saved on SD card

Battery: Internal 22.2 V lithium-ion battery, capacity 2600 mAh (> 30 minutes for typical systems)

Material: Polycarbonate ABS housing

Dimensions / Weight: 426 mm × 300 mm × 156 mm / 8,5 kg

Protection index: IP65 and NEMA 4X

Cable feed and outfeed: 13 pre-drilled and sealed cable entries for PG16 / M20 cable glands

Environnement:

Operating temperature: -10 °C to +55 °C continuous

Humidity: up to 95% non-condensing

Certifications:

- EMC: according to EN 50270: 2015x
- Safety: IEC 61508: 2010 Ed.2 SIL2, EN50271:2010
- Marine MED (Item number: 3.54)

Product description

The TouchPoint Plus is an easily configurable multi-channel gas detection unit that supports up to 8 gas detectors. Its very intuitive user interface and modular approach allow it to respond to most industrial applications.

This controller unit has many advantages such as great flexibility with a wide choice of input / output modules, a very intuitive color touch screen for better analysis and an SD card for data recording and archiving.

► Intuitive user interface

With its intuitive and ergonomic touch interface, the TouchPoint Plus is particularly simple to implement. All information is accessible by icons in a familiar environment which simplifies operation and reduces training needs. The information is displayed clearly and concisely on the backlit color screen.

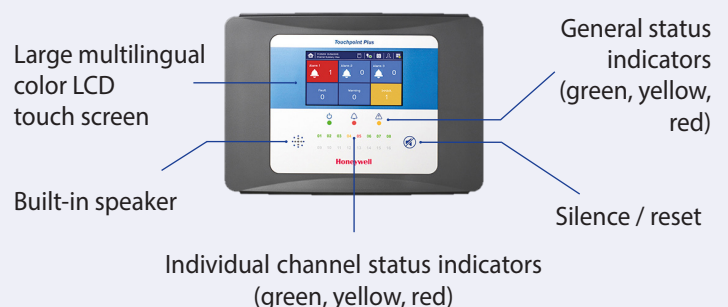
► Many input / output modules

The TouchPoint Plus accepts many input / output modules that allow you to customize and configure the control panel to suit most applications. A database of gas detectors integrated into the control unit enables faster configuration and commissioning.

An extension module can be added allowing the controller unit to control up to 16 gas sensors. The configuration of the control unit as well as the recording and archiving of the measurements are stored on an SD card for better traceability of the process.

► The TouchPoint Plus controller advantages

- Up to 16 gas detectors with the 8-way extension module
- 7" color touch screen user interface
- Recording and archiving of measurements on SD card
- Very resistant case, waterproof and dustproof
- Built-in backup battery for continuous operation
- Powered outputs, dedicated to flashes and sirens
- TCP / IP and Modbus communication protocols available



▶ HGM-MZ

Multi zone refrigerant gas monitor



Technical specifications

Power supply: 100 to 240 VAC, 50/60 Hz, 20W

Coverage: 4,8,12 and 16 zone systems available

Sensor: Proprietary non-dispersive infrared (NDIR) technology

Dimensions: 21 x 34,8 x 12,6 cm / weight : 6,8 kg

User Interface:

- LCD back-lit display
- Front panel with 3 indicators:
 - Green: power-on, normal
 - Yellow: fault, flashing yellow : system fault
 - Flashing red: point has exceeded alarm set

Communications: Full 2-way communication with MZ-RD display module or building management system via RS-485 Serial Interface. RS-232C Comm. Port Standard00

Alarms: 4 SPDT alarm contacts are provided rated 2A at 250 VAC (inductive), 5A at 250 VAC (resistive). 3 assigned to ppm level alarms, 1 assigned to system faults

Conditioned signal: optional dual 4-20 mA DC isolated output. Channel 1 = Zone, Channel 2 = ppm

System noise: less than 40dB at 3 m

Response time: 5 to 315 seconds per zone, depending on air line length and number of zones

Sampling mode: automatic or manual

Monitoring distance: 365 m max (152m for NH3) for combined length of sample and exhaust tubing (each zone)

Operating conditions:

- Temperature: 0 to 50°C
- Humidity: 5% to 90% RH (non condensing)
- Altitude limit: 2000 m

Certifications:

- UL 61010-1
- CAN/CA 22.2 No.61010-1
- EN61010-1, EN61326, EN14624

Product description

The **Bacharach multi-zone HGM-MZ controller** is a multi-point vacuum system which offers a very wide range of refrigerant gas detection. Large graphic LCD display and LED status indicators provide a system overview at a glance.

This controller measures gas based on infrared absorption. The gas sample enters a measuring sensor inside the cabinet and is then exposed to infrared rays. The energy absorbed by the gas sample is then proportional to the gas concentration. This measurement principle thus makes it possible to detect gases quickly, selectively and with very high precision (1 ppm for halogenated gases).

The **multi-zone HGM-MZ controller** effectively improves refrigerant gas management and guarantees compliance with standards and regulations relating to refrigeration systems and heat pumps such as EN 378-2000 for Europe or ASHRAE 15 for the United States. With a sampling speed guaranteeing leak detection very quickly, this multi-zone controller allows substantial savings in recharging expensive refrigerant gases while reducing the refrigeration systems breakdown risk.

This controller can manage up to 16 different zones, expandable up to 48 measurement points. Alarm relays are available for control systems and signaling of leaks. For easy integration into BMS / BAS systems and remote monitoring solutions, the **HGM-MZ multi-zone control** panel has several communication interfaces such as Modbus, BACnet and LonWorks.

▶ Main advantages

- Infrared sensor technology with a high reliability level
- High performance sampling pump for quick response time of refrigerant gas leaks
- Very low minimum detection threshold (1 ppm)
- Monitors up to 16 remote areas, expandable to 48 monitoring points
- Over 50 different accurately detected refrigerants
- Minimal maintenance and no required calibration
- Refrigeration installation (additional gas and intervention requests) maintenance cost reduction
- Reduced energy consumption caused by lack of refrigerant

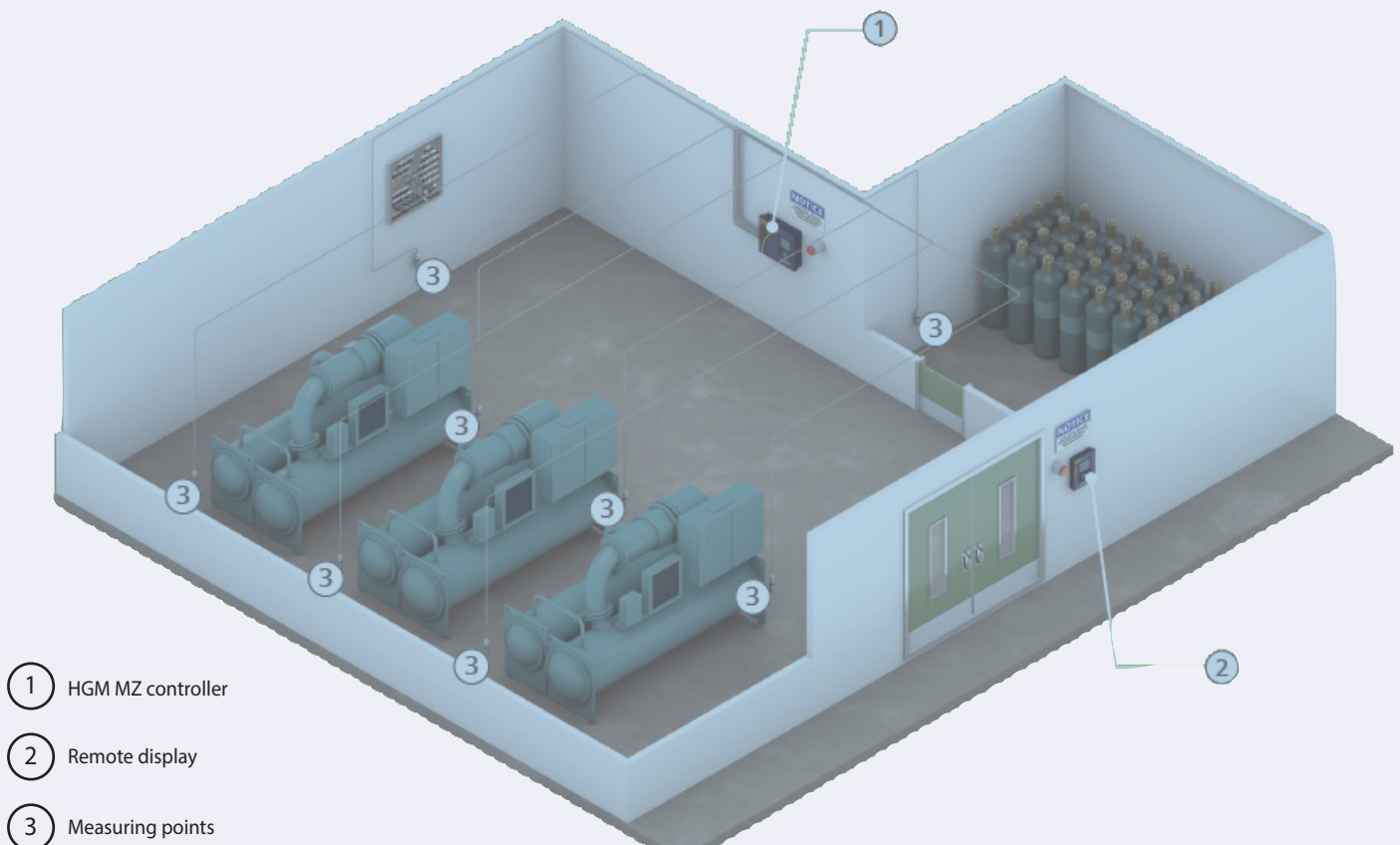
▶ Applications

- Cold rooms
- Datacenters
- Refrigeration systems in large and medium-sized stores
- Industrial cold storage
- Machinery / Mechanical equipment rooms

Technical specifications

Apparatus		Description
Gas library	HGM-MZ	FA188, FC72, H1211, H1233ZD, H1234YF, H1234ZE, H1301, H2402, HFP, N1230, N4710, N7100, N7200, N7300, N7600, R-11, R-113, R-114, R-12, R-123, R-124, R-125, R-134a, R-21, R-22, R-227, R-23, R-236fa, R-245fa, R-32, R-401A, R-402A, R-402B, R-404A, R-407A, R-407C, R-407F, R-408A, R-409A, R-410A, R-422A, R-422D, R-424A, R-426A, R-427A, R-438A, R-448A, R-449A, R-452A, R-452B, R-500, R-502, R-503, R-507, R-508B, R-513A, R-514A, R-1233zd
	AGM-MZ	Ammonia (NH ₃), R717
	CO ₂ -MZ	Carbon dioxide (CO ₂), R744
Measuring range	HGM-MZ	All gases 0 to 10 000 ppm
	AGM-MZ	Ammonia 25 to 10 000 ppm
	CO ₂ -MZ	Carbon dioxide 0 to 8 000 ppm
Accuracy	HGM-MZ	1 ppm Minimum Detectable Level (MDL) (most gases)
		± 1 ppm ± 10% of reading from 0 to 1 000 ppm (most gases)
		± 1 ppm ± 2% of reading with field calibration (most gases)
		± 10 ppm ± 15% of reading from 0 to 1 000 ppm (R-11, R-21, R-32, R-113)
	AGM-MZ	± 10 ppm ± 10% of reading from 0 to 1 000 ppm (most gases)
		± 5 ppm ± 5% of reading from 0 to 1 000 ppm, ± 10% of reading from 1 000 to 4 000 ppm, ± 15% of reading from 4 000 à 8 000 ppm

Example of us



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► CPS

Parking gas detection unit



Technical specifications

- Power supply:** 85 to 264 Vac / Consumption: 1.5 A
- Internal backup battery:** Optional, capacity 600 mA / h
- Capacity:** 8 lines of 32 modules or 256 gas sensors
- Cable type:** 2 shielded twisted pairs RS485
- Module power supply:** 12 to 30Vdc delivered by the control panel
- Digital network of modules:** RS485 Modbus, addresses 1 to 32 selectable by mini-switches
- Isolation:** 1500 V between power supply and digital network
- Display:** Backlit LCD display (2 lines of 32 characters, 1 line of pictograms, 3 LEDs for operating status)
- Keyboard:** Intuitive 7 keys
- Local buzzer:** Audible alarm and fault signal
- Alarms:** 6 alarms per sensor (programmable thresholds on instantaneous or average values, by increasing or decreasing value, with manual or automatic reset)
- Relay output:** 3 internal local relays
- Digital outputs:**
 - RS485 Modbus Protocol (connection with centralized supervision equipment)
 - RS232 or USB for connection to a printer
- Dimensions:** 320 x 180 x 95 mm (wall version) or 19"4 U (rack)
- Protection:** IP54 (wall version) or IP31 (rack version)
- Cable inlets / outputs:** 5 M20 cable glands for local power supply and relays / 9 wire pass or PG 9
- Operating conditions:**
 - Temperature: -10 to +40 °C
 - Humidity: 5 to 95% RH (non-condensing)
- Certifications:**
 - Low Voltage Directive: The device complies with the safety requirements of directive 2014/35 / EU
 - Metrology: Underground car parks: according to VDI 2053
 - EMC electromagnetic: According to EN 50270

Product description

The **CPS** (Car Park System) has been specially developed for the measurement and control of pollutants in parking lots and tunnels. This continuous monitoring system significantly reduces operating costs by optimizing the efficiency of ventilation and smoke extraction systems.

Available in a 19" wall or rack version, the **CPS** control panel and its various alarm modules can manage up to 256 gas sensors distributed over 8 lines. Several ventilation run orders are available such as low or high speed, timed run, forced run, night mode, etc..

► Parking gas detection

The presence of gas detection systems in parking lots is a necessity for the safety of users. Car parks are confined spaces and exhaust fumes emitted by vehicles' combustion engines can be dangerous to health.

The main harmful gases present in car parks and tunnels are carbon monoxide (CO) and nitrogen oxides (NOx). Other gases are also present, in lower concentrations such as LPG (liquefied petroleum gas) and recently hydrogen (H2) emitted when charging electric vehicles.

► Real energy savings

In order to minimize risks associated to the presence of combustion gases, most car parks are equipped with air extractors. These devices, although effective, are very expensive in energy because the ventilation systems operate at fixed times or randomly unrelated to toxic gases concentrations...

The technology used by the **CPS** unit allows continuous air control. The direct consequence is a significant and immediate reduction in operating costs in addition to the safety aspect of air quality control. This device will allow proper management of ventilation systems and other controls that will be optimally operating based on the exact gas concentrations.

► The main advantages of the CPS

- Continuous air quality control with significant reduction in operating costs by optimum ventilation system operation.
- A flexible and scalable system up to 256 gas sensors including CO, NO, NO2, LPG and H2
- Several operating orders available such as low or high speed, timed work, forced work, night mode, etc.
- 6 programmable alarm thresholds by detectors for better management of servos and smoke extraction
- Suitable for most car parks, from small 1,500 m2 car parks to larger car parks

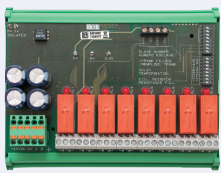
Modules specifications

► CPS10 sensor module



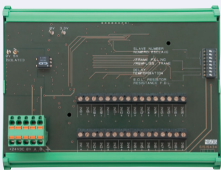
Detected gases: CO, NO, NO₂, GPL, H₂
Dimensions: 118 mm x 110 mm x 60 mm – IP rating: IP 65
Inputs/Outputs: 2 M16 cable glands (cable Ø 4 to 8 mm)
Sensor consumption: 2.5 mA (CO, NO, NO₂) – 50 mA (GPL and H₂)
Status indication during calibration: Red/green LED
Calibration: Automatic, without sensor opening

► CPS RM4 & RM8 relay module



Dimensions: 125 x 165 x 60 mm
Mounting: Snap-on DIN rail, box mounting
2 available relay modules: CPS RM4 (4 relay outputs) or CPS RM8 (8 relay outputs)
Contact types: NO/NF potential free, nominal contact load: 2A/250 V on resistive load
Connection: Screw terminals (cable: 1,5 mm² maximum)
Consumption: 3,5 mA in normal operation (maximum 5,7 mA)

► CPS DI16 logic input module



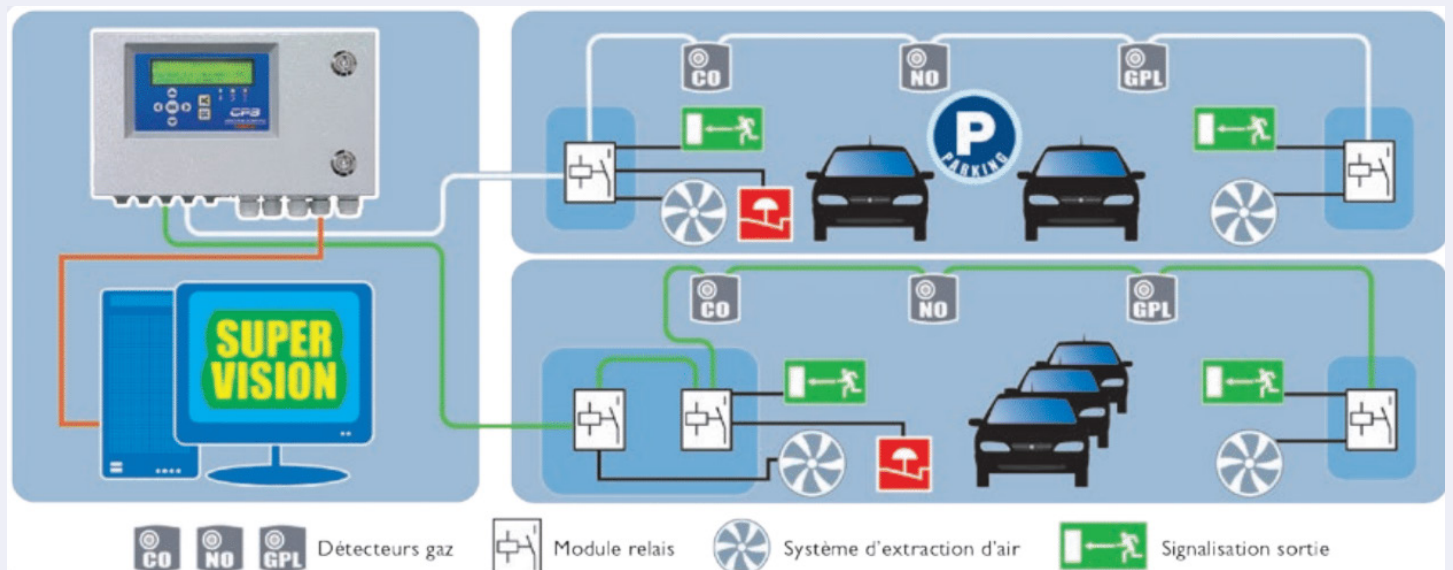
Function: Emergency stop management, forced operation or emergency box for example
Dimensions: 125 x 165 x 60 mm
Mounting: Snap-on DIN rail, box mounting
Number of digital inputs: 16
Connection: Screw terminals (cable: 1,5 mm² maximum)
Consumption: 3,2 mA in normal operation (maximum 5,5 mA)

► CPS analog output module



Function: Copying channel or channels average measurement
Dimensions: 125 x 165 x 60 mm
Mounting: Snap-on DIN rail, box mounting
Number of analog outputs: 4
Connection: Screw terminals (cable: 1,5 mm² maximum)
Consumption: 130 mA in normal operation (maximum 256 mA)

► CPS DI16 logic input module





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▶ SONOS LED

Combined sound and light device



Technical specifications

Power supply: 10-60 VDC or 110-230 VAC

Sound power:

- SONOS LED: 106 dB at 1 meter,
- SONOS (electronic siren only): 100 dB at 1 meter

Number of sounds: 32 sounds including AFNOR NFS32001 sound adjustable by potentiometer to -20 dB maximum

Selecting sounds: By internal microswitches. Control of 3 sounds by internal connection (except 110/230 Vac version)

Light output:

- SONOS LED: LED light (equivalent to 5 joules)
- SONOS XN (flashing light only): Xenon 5 Joules

Available glass colors (SONOS LED & SONOS XN):

- Red as standard
- Orange, green, blue on request

Material / finish:

- Body: red high resistance ABS in the mass
- Verrine: polycarbonate

Sealing: IP65 (long base) - IP21 (short base)

Cable entry: 2 pointed entries to be drilled

Terminal block: 8 terminals of 2.5 mm²

Dimensions :

- Vcc: Ø 100 mm - Height 80 mm
- Vac: Ø 97.5 mm - Height 104 mm

Weight: 250 grams

Certification: EN54-3 (Sound Alarm Fire Devices)

Product description

Available in 3 versions (combined sound and light, electronic siren only, flashing light only), the SONOS range is a multi-use signal device.

It is particularly suitable for tertiary or industrial applications indoors (offices, storage rooms, laboratories, etc.) or even outdoors under shelters with its IP65 protection rating (long base version).

▶ **Assets**

- Available in combined sound and light version, electronic siren only or flashing light only
- Independent activation of siren and LED light possible (Vcc version only)
- Small size, small footprint
- Excellent value
- 360 ° sound and light diffusion
- Available in 17-60 VDC or 110-230VAC version
- Reduced power consumption
- Simple installation, connection in the base
- Applications: process faults, anoxic alert, gas and/or fire detection

Model selection

▶ **SONOS LED combined light and sound version**

Code	Description
100094	Combined SONOS LED 106 dB with Red glass 10 - 60 Vdc
100098	Combined SONOS LED 106 dB with Red glass 110 - 230 Vac

▶ **SONOS electronic siren version only**

Code	Description
100091	Electronic siren 100 dB SONOS 100 dB 17 - 60 Vdc
100093	Electronic siren 100 dB SONOS 100 dB 110 - 230 Vac

▶ **SONOS XN flashing light version only**

Code	Description
726002	SONOS XN strobe light red glass 10 - 60 Vdc
726005	SONOS XN blue strobe light 10 - 60 Vdc
726102	SONOS XN strobe light red glass 110 - 230 Vac
726105	SONOS XN blue strobe light 10 - 230 Vac

▶ Nexus-C

Industrial combined sound and light device



Technical specifications

Sound power:

Available in 3 versions depending on the sound power:
 NEXUS 105: 105 dB, NEXUS 110: 110 dB, NEXUS 120: 120 dB

Power setting: -20dB per potentiometer (except for AFNOR NFS32001 sound)

Number of sounds: 64 sounds including AFNOR NFS32001 sound

Selecting sounds: By internal microswitches. Control of 3 sounds by internal connection (except 110/230 Vac version)

Light output for the whole range:

- Vac: 5 Joule Xenon light - 60 flashes / min.
- Vcc: LED light equivalent power

Available glass colors:

Red as standard (Orange, green, blue on request)

Power supply: 10-60 VDC or 110-230 VAC

Consumption:

- NEXUS 105 : 8 to 40 mA
- NEXUS 110 : 10 to 50 mA
- NEXUS 120 : 120 to 550 mA

Certification: EN54-3 (Sound Alarm Fire Devices)

Material / Finish:

- Body: red high resistance ABS in the mass
- Verrine: Polycarbonate

Waterproof: IP66

Tapping: 5 entries pointed on 2 sides

Terminal block: 8 terminals of 2.5 mm²

Dimensions / weight:

- NEXUS 105: 136.2 x 173.1 x 124.5 mm / 0.8 kg
- NEXUS 110: 166.3 x 213.5 x 149.5 mm / 1.2 kg
- NEXUS 120: 166.3 x 213.5 x 149.5 mm / 2.0 kg

Product description

The **NEXUS-C** combined sound and light device has a 5 Joule flashing light and a 105 to 120 dB sound power depending on the model. With a high protection degree (IP66), this waterproof and dustproof handset can be installed indoors or outdoors.

It is particularly suitable in an industrial environment for optical and audible information and / or danger signalling. The adjustable sound power allows use in very noisy areas.

▶ Assets

- Simultaneous or independent siren and light activation by a double wiring terminal block
- Waterproof and dustproof (IP66), can be installed indoors or outdoors
- Sound level adjustable on site
- Choice of light technology: xenon or LED
- Available in 10-60 VDC or 110-230VAC version
- Simple installation, connection in the base
- Use: tertiary or industrial sector

Model selection

▶ NEXUS-C combined sound & light device version

Code	Description
101121	Combined NEXUS-C 105 dB 10 - 60 Vdc power supply
101122	Combined NEXUS-C 105 dB 110 - 230 Vac power supply
102121	Combined NEXUS-C 110 dB 10 - 60 Vdc power supply
102122	Combined NEXUS-C 110 dB 110 - 230 Vac power supply
103121	Combined NEXUS-C 120 dB 10 - 60 Vdc power supply
103122	Combined NEXUS-C 120 dB 110 - 230 Vac power supply

▶ NEXUS electronic siren version only

Code	Description
101001	Combined NEXUS-C 105 dB 10 - 60 Vdc power supply
101002	Combined NEXUS-C 105 dB 110 - 230 Vac power supply
102001	Combined NEXUS-C 110 dB 10 - 60 Vdc power supply
102002	Combined NEXUS-C 110 dB 110 - 230 Vac power supply
103001	Combined NEXUS-C 120 dB 10 - 60 Vdc power supply
103002	Combined NEXUS-C 120 dB 110 - 230 Vac power supply

▶ AL1 XB

Sound and light device (light panel)



Technical specifications

Power supply: 12-24 Vcc or 110-230Vca

Light power: Xenon strobe light 4W

Sound power: Buzzer 70 dB (disconnectable buzzer)

Sound type: 1 continuous type

Case material: Self-extinguishing white polycarbonate with transparent cover

IP rating: IP65

Nominal consumption:

- 100 mA with Buzzer at 24Vcc with Buzzer
- 10 mA at 230 Vca with buzzer

Inputs: 4 pre-drilled 20mm inputs

Wiring: Screw terminal, max. 2,5 mm²

Device mounting type: Surface

Temperature: -15°C to +50°

Dimensions (l x h x P): 325 x 130 x 80 mm

Weight : 0.6 Kg

Finishing: White background with transparent cover and texts in red letters, customizable on request

Standard texts:

- FORBIDDEN ENTRY
- IMMEDIATE EVACUATION
- GAS HAZARD

On demand:

- ANOXIA DANGER
- CO2 DANGER
- GAS ALARM
- H2S DETECTION

Product description

The **AL1 XB** sound and light device (also called a light panel) is particularly suitable for tertiary or industrial applications indoors (offices, storage rooms, laboratories, etc.) or even outdoors under shelter (IP 65).

Equipped with a 4W Xenon flash light and a 70 dB buzzer (disconnectable), this signal light panel is the ideal complement to any gas detection installation and can be used to prohibit access, evacuate an area, or indicate a danger's nature.

▶ Assets

- Excellent value
- Small size, small footprint
- Available in 12-24 Vcc or 110-230Vca version
- Reduced power consumption
- Simple installation, connection in the base
- Indoor or outdoor use under shelters

Model selection

Code	Description
300 201	AL1-XB 110 - 220 Vac "FORBIDDEN ENTRY"
300 202	AL1-XB 110 - 220 Vac "IMMEDIATE EVACUATION"
300 210	AL1-XB 110 - 220 Vac "GAS DANGER"
300 260	Special text for AL1-XB (to be specified)

Application areas

- In boiler room at incoming access points
- Electric vehicle charging stations
- Gas cylinders storage rooms
- Universities, laboratories with anoxia risk (use of nitrogen)
- Hospitals, MRI room with helium detection
- Winemaking & Brewers environments

ATEX version for classified areas



For applications in classified areas, the explosion-proof AL2 light panel is certified ATEX zone 1,2,21 & 22 (gas and dust) and is ideal for indicating or managing access during alerts or emergency evacuations on industrial sites.

With a high protection index (IP66/68) it is particularly suitable for indoor or outdoor use in the oil, gas or chemical industries.

▶ FT883

Industrial rotating light (beacon)



Technical specifications

Voltage supply: 12 VDC, 24 VDC, 155 VDC / Vac, 230 Vac

Voltage tolerance: ± 10%

Power consumption: See table opposite

Protection class: Class 2

Light output: Halogen 35 W

Halogen bulb: G 6.35 35 W 12 V / 24 V

Optical life: > 5 000 h

Drive: By roller, motor located in the center of gravity

Frequency of rotation: 180 rpm

Engine life: > 5.000 h

Duty cycle: 100%

Housing color: black

Glass color: red (standard), also available in orange, green or blue

Dimensions (Ø x H): 142 mm x 218 mm

Weight: 713 grams

Housing: PC / ABS mixture

Shell material: PC, transparent

Impact resistance: 20 joules

Protection: IP65

Wiring: screw terminal block with protection, max. 2.5 mm²

Cable entry: cable diameter 5-7 mm

Cable entry: Rubber pinch connection

Fixing: on flat bottom, optional fixing bracket

Operating temperature: -30 °C to +50 °C

Product description

The **FT883** waterproof rotating light (rotating beacon) is used to signal a process in progress or imminent danger in difficult environments. This very resistant rotating light (impact resistance up to 20 joules) is suitable for indoor or outdoor use under shelters (IP65).

The visibility from a distance is optimized thanks to the 3 Fresnel lenses lights focus allowing visibility increase in particular in places where there is strong smoke, fog or heavy rain.

▶ Assets

- Excellent visibility from afar (halogen lamp)
- Indoor or outdoor use (IP65)
- Very long service life thanks to roller drive
- Tube mounting possible with adapter (accessories)
- Installation possible in any position (including upside down)
- Impact resistance up to 20 Joules
- Available in 12 Vdc, 24 Vdc / Vac, 115 Vdc / Vac or 230 Vac versions
- Simple installation, connection in the base
- Several available colors for better adaptability.

Model selection

Tension	12Vcc	24Vcc	115 Vcc/Vca	230Vca
Consumption	3A	1,6A	0,35A	0,17A
Red	883 100 54	883 100 75	883 100 77	883 100 68*
Green	883 200 54	883 200 75	883 200 77	883 200 68
Orange	883 300 54	883 300 75	883 300 77	883 300 68
Blue	883 500 54	883 500 75	883 500 77	883 500 68

*Available in stock

Optionnal accessories

Code	Description
955 883 34	35W / 12V halogen bulb for 115 Vdc / Vac & 230 Vdc lights
955 883 35	35W / 24V halogen bulb for 24 Vdc lights
910020	Mounting bracket for rotating light FT883

ATEX version for classified areas



For applications in classified areas, the **FT729** LED rotating light indicates a process in progress or an imminent danger in ATEX area 1, 2, 21 and 22 (gas and dust). With a high protection index (IP66 / 68) it is particularly suitable for indoor or outdoor use in the oil, gas or chemical industries.

► DB3

ATEX electronic siren



Technical specifications

Sound power: Up to 122 dB (A) at 1m (depending on the selected sound), volume adjustable by potentiometer

Tolerance: ± 3 dB

Sounds: 28 sounds including AFNOR NFS32001 sound.

- Vcc: Activation of 1 to 3 different sounds.
- Vca: Activation of 1 to 2 different sounds.

Available voltages: 12 to 48 Vcc - 110 240 Vac

Wiring entry: 2 x M20 (Without cable gland)

- Vcc terminal block: 8 standard 2,5mm² terminals
- Vca terminal block: 7 standard 2,5mm² terminals

Materials:

- Body in polyester reinforced with glass fibers (GRP) flame retardant V0 according to UL94V, high impact resistance, UV stable according to ISO 4892 part 3
- Thermoplastic polyester horn
- 316 stainless steel screws

IP rating: IP66 & IP67

Standard finish: Red horn in the mass and black base in the mass

Weight: 4,6 kg (Ex d) in long pavilion version

Certifications:

- Standard: ATEX gas and dust (GD) version.
- Ex II 2 G, Ex d IIC T4/T5/T6 Gb
- Ex II 2 D, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
- Temperature certification: T4 (-55° to +70°C), T5 (-55° to +55°C), T6 (-55° to +40°C)
- SIL 1 according to IEC 61508

Area of use:

Zones 1, 2, 21 and 22 for gas and dust risks (GD)

Other certifications: IECEx, UL (USA + Canada), GOST (Russian and kazakh), CQST (China), Inmetro (Brazil), SAA (Australia)

Product description

Light and fire resistant, the **DB3** electronic siren for use in classified areas (ATEX) is made of polyester reinforced with UV and corrosion resistant glass fiber.

It has been designed with a high protection level in order to meet the rigorous use conditions generally observed in "offshore environments" with very severe weather conditions.

► Assets

- ATEX 1, 2, 21 and 22 for gas and dust risks (GD)
- SIL 1 according to IEC 61508
- GRP body (Glass fiber reinforced polyester)
- UV resistant according to ISO 4892 part 3 and corrosion
- Up to 122 dB(A) at 1m (depending on the chosen sound)
- 28 sounds including AFNOR NFS32001 sound
- IP rating IP66 & IP67
- Extreme temperature ranges -55 to +70°C

► Available options

- Epoxy red paint finish, blue or yellow (others, contact us)
- « Exe » increased safety connection box
- Customizable markings (Tag and/ or function)
- Swivel mounting bracket
- Special sound possible on request
- Short horn version (in 113 dB)

Model selection

Code	Description
810 048	Electronic siren DB3B Exd GD (Gas and Dust) 12-48 Vcc power supply – Black body, red horn
810 049	Electronic siren DB3B Exd GD (Gas and Dust) 12-48 Vcc power supply – Black body, red horn

ATEX light and sound combination



In the same quality and performance range, the **CU1** sound and light combination certified ATEX zone 1, 2, 21 & 22 is particularly suitable in an industrial environment where the visual signal supplements the sound signal.

Made of glass fiber reinforced polyester, it is also suitable for use in the harshest applications and environments.

▶ CU1

ATEX combined sound and light device



Technical specifications

Power supply: 24 Vdc, 48 Vdc, 110 Vac, 240 Vac

Light output:

- 24 or 48 Vdc: 5 Joule xenon tube
- 110 or 230 Vac: 10 Joule xenon tube
- Flash frequency: 60 flashes / min
- Tube life: 5x10⁶ flashes

Sound power: 116 dB at 1 meter 3 dB - Variable data depending on the selected sound

Sounds:

- 27 sounds including AFNOR NFS32001 sound
- Selection by internal microswitch
- Activation of 2 different sounds possible (Vcc only)
- Volume adjustable from 0 to 100%
- Independent operation of sound and light

Materials:

- Polyester body reinforced with fiberglass (GRP)
- Glass verrine
- Stainless steel screws and fixings
- Stainless steel protection grid as standard
- Epoxy paint finish

Available glass color :

- Red as standard
- Orange, clear, blue, green, yellow on request

Dimensions / Weight: 386 x 254 x 320 mm / 6.5 kg

Wiring:

- "Exe" increased safety connection box
- 2 x M20 / 8 terminals of 4 mm²

ATEX certifications:

- Ex II 2 G - Ex of IIB T3Gb zone 1 and 2
- Certification temperature: -50 ° C to + 50 ° C
- Other certifications on request: ECEX, CUTR, Inmetro

Product description

Designed to operate in an explosive atmosphere in zones 1, 2, 21 and 22, the **ATEX CU1** combined sound and light device has a 5 or 10 Joule xenon flash light and an audible signal up to 116 dB, variable depending on the selected sound.

Made of glass fiber reinforced polyester (GRP), the **CU1** is particularly suitable for the rigorous use conditions generally observed in oil & gas, chemical, petrochemical, marine and all offshore application industries..

The **ATEX CU1** combines design, robustness and efficiency. It is a strategic link in the safety chain of severe industrial gas detection, fire detection or process fault installations.

The simultaneous or independent activation of the siren and the flash light makes it possible to differentiate different levels of danger alert by offering the choice of an ATEX flashing light, an ATEX siren or an ATEX sound and light combination.

▶ Assets

- ATEX 1, 2, 21 and 22 for gas and dust risks (GD)
- GRP body (Glass fiber reinforced polyester)
- Up to 116 dB (A) at 1m (depending on the chosen sound)
- 27 sounds including AFNOR NFS32001 sound
- Protection index IP66 & IP67
- Extreme temperature ranges -50 to + 50 ° C

▶ Available options

- Epoxy paint finish red, blue or yellow (others, contact us)
- High temperature version +70 ° C
- Customizable markings (Tag and / or function)
- Swivel mounting bracket

Model selection

Code	Description
842122	Combined CU1SP 24 Vdc, Black body, 5 joule fire flash, red verrine
842122-R	Combined CU1SP 24 Vdc, Red body, 5 joule fire flash, red verrine
842282	Combined CU1SP 230 Vac, Black body, 10 joule flash light, red verrine
842282-R	Combined CU1SP 230 Vac, Red body, 10 joule flash light, red verrine

▶ AL2

ATEX Light device



Technical specifications

Light power: Xenon red flashing light device

- Xenon red flashing light device
- 2W (indoor applications) or 5W (outdoor applications)

Power supply: 12 to 80 Vcc or 230 Vac

Consumption:

- 2W : 95 mA at 24 Vcc - 83 mA at 48 Vcc - 18 mA at 240 Vca
- 5W : 200 mA at 24 Vcc – 112 mA at 48 Vcc

Material :

- Alloy body (Zamak) and translucent glass tube
- Finishing: White background with transparent cover and text in red letters, on request customization

IP rating : IP66/68 (10m) / IK08

Inputs: 2 x M20 (Without cable glands)

Wiring : screw terminal, max. 2,5 mm²

Dimensions: Ø 50 mm x 430 mm / **Weight:** 5 kg

ATEX certifications:

- ATEX zones 1, 2, 21, 22
- Gas (G) : Ex II 2 G – Ex d IIC T5/T6
- Dust (D) : Ex II 2 D Ex tD A21 T95°C
- Temperature certification : T5 (-40 °C to +55 °C)
T6 (-40 °C to +40 °C)

Standard text:

- FORBIDDEN ENTRY
- IMMEDIATE EVACUATION
- GAS HAZARD

On demand :

- ANOXIA DANGER
- CO2 DANGER
- GAS ALARM
- H2S DETECTION

Product description

ATEX certified zone 1,2,21 & 22 with gas explosion & dust risks and designed with a very high protection level, the **ATEX AL2** light allows to prohibit access, evacuate an area, or indicate a danger's nature in a classified area.

With a very robust alloy body, a 2W or 5W xenon flashing light device and a very high protection index (IP66/68), this light device is waterproof and dustproof and is particularly well suited for industrial applications, gas, fire and extinction in a potentially explosive environment.

▶ Assets

- ATEX 1, 2, 21 and 22 for gas and dust risks (GD)
- Alloy body (Zamak) and glass tube
- 12Vcc to 80Vcc or 230 Vac power supply
- Power 2W (indoor use) or 5W (outdoor)
- Replaceable xenon flash light
- High protection index: IP66/68

Model selection

Ref.	Description
300 101	AL2 2W power supply " IMMEDIATE EVACUATION"
300 102	AL2 2W power supply 12-80 Vcc "FORBIDDEN ENTRY"
300 111	AL2 2W power supply 12-80 Vcc "GAS HAZARD"
300 103	AL2 5W power supply 12-80 Vcc "IMMEDIATE EVACUATION"
300 104	AL2 5W power supply 12-80 Vcc " FORBIDDEN ENTRY "
300 111	AL2 5W power supply 12-80 Vcc "GAS HAZARD"
300 105	AL2 2W power supply 230 Vac "IMMEDIATE EVACUATION"
300 106	AL2 2W power supply 230 Vac " FORBIDDEN ENTRY "
300 112	AL2 2W power supply 230 Vac "GAS HAZARD"

In addition to the ATEX light

As the **ATEX AL2** light device doesn't have an audible signal, it may be necessary to supplement the signal panel with an ATEX electronic siren.



Waterproof, dustproof and fire resistant, the **ATEX DB3** electronic siren made from reinforced polyester is particularly well suited to harsh use conditions generally observed in oil & gas, chemical, petrochemical, marine and all offshore applications.

▶ FT729

ATEX LED Beacon (rotating light)



Technical specifications

Light source: LED double flash - Intense flashing effect with very low power consumption

Rotation frequency: 180 tr/min

Optics service life: maximum 70 000 h

Dome color: red (others colors on demand)

Operating voltage: 24 Vcc

Voltage tolerance: ± 10%

Nominal operating current: 170 mA

Rated inrush current: 500 mA

Protection class: Class 1

Housing:

- Casing: Aluminium sea-water resistant
- Glass: reinforced borosilicate glass
- Stirrup: stainless steel

Ingress protection: IP66

Dimensions (Ø x H): 139 mm x 214 mm

Weight: 3,260 Kg

Operating temperature: -50°C to +50°C

Power connection: Spring terminal in the base

Cable entry: 2 x M20 – delivered with 1 plug and 1 M20 cable gland (for 6-13mm cable)

Type of fixing: Base mounting or wall mounting

ATEX Gas certification:

- Vcc: Ex II 2G Ex de IIC T6 Db
- Vca: Ex II 2G Ex de IIC T5 Db

ATEX Dust certification:

- Vcc: Ex II 2D Ex tb IIIC T80°C Db
- Vca: Ex II 2D Ex tb IIIC T95°C Db

Certified temperature: -40°C to +50°C

Product description

Compliant with the ATEX directives for zones 1, 2, 21 and 22 (gas and dust), the **ATEX FT729 LED** beacon can indicate a process in progress or an imminent danger in a dangerous zone. The LED technology on board this ATEX beacon is highly appreciated for the quality of the lighting with very low energy consumption.

Made of seawater-resistant aluminum with a reinforced borosilicate glass verrine and a stainless steel stirrup, it is particularly suitable for operating in harsh environmental and industrial conditions such as, petrochemical, marine and all oil applications.

▶ **Assets**

- ATEX 1, 2, 21 and 22 for Dust and Gas area (GD)
- Aluminum housing resistant to sea water
- Ingress protection IP66
- Very low energy consumption
- Extreme temperature range -50 to + 50 ° C
- Very limited maintenance and unsurpassed longevity

Model selection

Code	Description
815422	ATEX LED beacon - 24 Vdc power supply
815482	ATEX LED beacon - 115/230 Vac power supply

In addition to the ATEX LED beacon

As the **ATEX FT729 LED** beacon is not fitted with an audible signal, it may be necessary to supplement this light device with an ATEX electronic siren or an ATEX sound and light combination.

▶ **ATEX DB3 electronic siren**



Waterproof, dustproof and fire resistant, the **ATEX DB3** electronic siren - made from reinforced polyester - is particularly well suited for the harsh use conditions generally observed in oil & gas, chemical, petrochemical, marine and all offshore applications.

▶ **ATEX combined sound and light device**



In the same quality and performance range, the **CU1 ATEX** zone 1, 2, 21 & 22 certified CU1 sound and light handset is particularly suitable for industrial environments where the visual signal complements the sound signal. It is also suitable for use in very harsh applications and environments.

▶ PE A2F

ATEX cable gland for unarmored cable



Product description

An ATEX polyamide or nickel-plated brass cable gland is a sealing device mainly used for cables passage and maintenance. It is the essential accessory for all electrical connections in ATEX zones.

They are found on most fixed gas detectors, optical flame detectors, junction boxes or sound and light signaling devices on ATEX or Seveso classified industrial sites.

As polyamide or nickel-plated brass version, cable glands for unarmored cables comply with the ATEX 2014/34 / EU directive and the international IEC Ex standard for use in zones 1 & 2 Gas and 21 & 22 dust (conductive or not -conductive).

They provide a simple seal on the outside diameter of a cable by compression joint with a filling mass.

Technical specifications

▶ ATEX polyamide version cable gland

Material: Polyamide 6 Fv
Use: With plastic or polycarbonate boxes or junction boxes
ATEX Certification: Ex II 2G - Exe II
Use areas: 1, 2, 21 & 22 GD (Gas and Dust)
Operating temperature: -20 to +55 °C
Other certifications: GOST R, INMETRO
Protection class: IP68
Thread: Metric thread in steps of 1,5 (Pg on request)

Caliber	Part Number
M16	634402
M20	617001
M25	617012
M32	617102
M40	-

▶ ATEX nickel-plated brass version cable gland

Material: nickel-plated brass
Use: With boxes or metal junction boxes (Avoid plastic or polycarbonate boxes)
ATEX certification: Ex II 2G - Exe II
Use areas: 1, 2, 21 & 22 GD (Gas and dust)
Certification temperature: -60 to +130 °C
Other certifications: IECEX, CSA, GOST R, KCS, NEPSI, INMETRO
Protection class: IP66/67 (IP68 with accessory CMP.IP68)
Thread: Metric thread in steps of 1,5 (Pg on request)

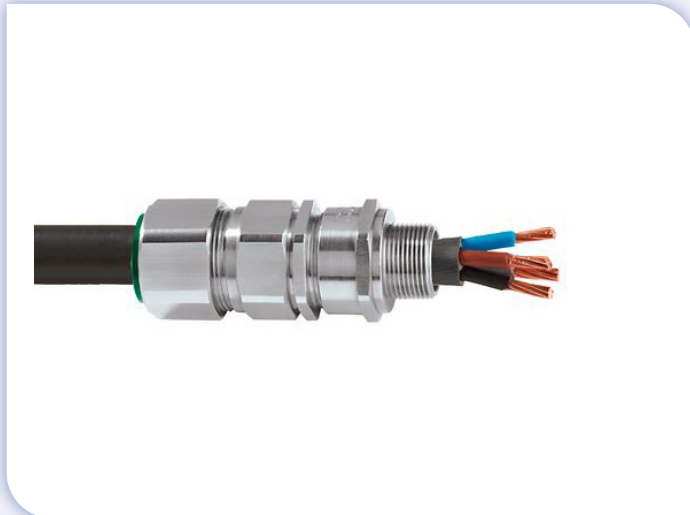
Caliber	Part Number
M16	610LN02
M20	610LN03
M25	610LN05
M32	610LN06
M40	610LN07

ATEX cable gland accessories

Caliber	Blanking plug Nylon (Exe)	Blanking plug nickel-plated brass (Exd & Exe)	White Nylon gasket
M16	631301	631211	-
M20	631302	631212	632109
M25	631303	631213	632108
M32	631304	631214	632116
M40	631305	631215	632117
M50	631306	631216	632118

▶ PE E1FU

ATEX cable gland for armored cable



Technical specifications

Function: ATEX cable gland for armored cable. Suitable for SWA, AWA, STA, SWB, ASA and PWA armor thanks to its reversible armor mooring ring

ATEX certification: II 2 G, II 1D Exd IIC Gb, Exe IIC Gb, Ex ta IIIC Da

Other certifications: IECEx, cCSAus, cCSA EAC (Ex GOST R, K, & B), Ukr SEPRO, KCs KOSHA, NEPSI, INMETRO, CCOE/PESO (India)

Marine certification: LRS, DNV, ABS et BV

Certification temperature: From -60 °C to + 130 °C standard)

Protection sign: IP66/67 (IP68 with CMP accessories)

Material: Nickel-plated brass standard (brass or aluminum)

Mechanical resistance: Impact level 8 according to IEC / EN 62444. IK10 according to IEC 62262 (20 Joules) for brass and nickel-plated brass version

Caliber	Part number
M16	610LN02
M20	610LN03
M25	610LN05
M32	610LN06
M40	610LN07

ATEX cable gland accessories

Caliber	Blanking plug Nylon (Exe)	Blanking plug nickel-plated brass (Exd & Exe)	White nylon gasket
M16	631301	631211	-
M20	631302	631212	632109
M25	631303	631213	632108
M32	631304	631214	632116
M40	631305	631215	632117

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Product Description

The ATEX double compression E11FU cable gland for armored cable is particularly suitable for the electrical connection of ATEX gas and dust type "d", "e" or "nR" equipment requiring earth continuity.

It has two compression joints for the internal diameter (under armor) and the external diameter and is suitable for all types of cable armor (strip, wire, metal braid)

In nickel-plated brass or stainless steel version on request, the ATEX E1FU cable gland for armored cables complies with the ATEX 2014/34 / EU directive and the international IEC Ex standard for use with fixed gas detectors, optical flame detectors, junction boxes or sound and light signaling devices for classified industrial sites.

▶ ATEX E1FU cable gland assets

- ATEX zones 1, 2, 21 & 22 Gas & t dust cable gland compatible for SWA, AWA, STA, SWB, ASA and PWA armor
- Ensures an explosion-proof seal (Type "d") on the inner cable mattress
- Ensures a gas-tight seal allowing use compatibility with limited breathing equipment (Type "nR")
- Allows mechanical anchoring and earth continuity through the shielded cable termination
- Armed terminations and the internally displaced seal are separate clamps, providing maximum control over the pressure applied to the cable mattress
- Reversible cone configuration and AnyWay clamping ring facilitate on-site installation and allow easy cable removal from the equipment
- An environmental / charge retention seal is provided on the outer cable sheath
- Shouldered cone is suitable for SWA cables
- Splined cone fits all other approved armored cables



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