Gas Meters

PCE-GA3

Pen-sized flammable gas detector

This pen-sized flammable gas detector is very easy to use. It has a visual alarm LCD and an audible alarm with an intense whistle. This device is to be considered as an aid only and must only be used for small gas containers such as lighters, camping-gas containers, cookers, etc. It is not necessary to regulate it manually. It is controlled by a microprocessor that emits an alarm when there are gas concentrations of 100, 1000 and 10,000 ppm. This gas detector is exempt of maintenance except for replacement of its battery. The sensor is calibrated to detect flammable gases in the air.

Applications:
- Gas cars
- Gas heatings
- Combustion engines

Technical specifications
- Natural gas: 1000 to 6500 ppm
- Propane: 500 to 6500 ppm
- Sensor: Catalytic sensor
- Alarms display LED
- Power: 2 AAA batteries (Mignon cell)
- Dimensions: Ø 21 x 130 mm
- Weight: 46 g

Contents
PCE-GA3 pen-sized gas detector, batteries and user’s manual

Model No. Description
PCE-GA3 Pen-size flammable gas detector

PCE-LD 1

Leak detector for refrigerant gases R22, R134a, R410A, R407C...

The PCE-LD 1 leak detector is advanced technology for detecting leaks of refrigerant gases that detects all gases based on CFCs or HFCs. Thanks to its sensitivity, this leak detector can detect all leaks in refrigeration systems although other gases may be present. The device gives off acoustic and visual warnings when leaks have been detected. The sensor extension allows measurements to be taken in places that are difficult to reach.

- Easy to use
- Ideal for refrigerant gases R22, R134a, R410A, R407C, etc.
- Adjustable sensitivity
- Can be used anywhere
- Sensor in a 390mm extension
- Audible and visual alarms
- Multicolor LED display for concentration
- Adapts to concentrations that are already present
- Automatic shut-off after 10 minutes

Technical specifications
- Sensitivity: adjustable (high and low)
- Response time: approx. 90 seconds
- Gases detected: R22, R134a, R404, R407C, R410A...
- Test cycle: continuous
- Power: 4 AA batteries
- Length of sensor: 390 mm
- Operating time: approx. 40 hour of normal use
- Dimensions: 173 x 66 x 56 mm
- Weight: 400 g

Contents
PCE-LD 1 leak detector with sensor, test elements, batteries, carrying case and user’s manual

Model No. Description
PCE-LD 1 Leak detector

PCE-GA 70

CO2 detector with data logger and software

The PCE-GA 70 instrument measures carbon dioxide level, temperature and humidity in real time and includes a data logging function for 20,000 values. With the included software and the RS-232 interface you can transfer data to a PC for further analysis. It is the ideal instrument for checking ventilation rates, air changes and performing thermal comfort studies. The stable NDIR sensor guarantees high accuracy results.

- Range up to 6,000 ppm
- Triple LCD for CO2, % r.h. humidity and air temperature
- Maintenance free dual wavelength NDIR infrared CO2 sensor (non-dispersive infrared)
- Continuous or manual data logging (20,000 values)
- Data hold & maximum / minimum with time stamp
- Data Memory and READ function
- Alarm and Time setting
- RS-232 function / software included

Technical specifications
- Range CO2: 0 to 6000 ppm
- Resolution: 1 ppm
- Accuracy: ±3 % of reading or ±50 ppm
- Temperature: -20 to +60 °C
- Resolution: 0.1 °C
- Accuracy: ±0.5 °C
- Relative humidity: 10 to 95 % r.h.
- Resolution: 0.1 % r.h.
- Accuracy: ±3 % r.h. (30 to 95 % r.h.)
- Memory: 20,000 values (automatic)
- 99 values (manual)
- Operating conditions: +5 to +50 °C / 10 to 95 % r.h.
- Power: 6 AA batteries (1.5 V)
- Dimensions: 158 x 72 x 35 mm
- Weight: 255 g

Contents
CO2 detector, software, RS-232 data cable, batteries, carrying case and user’s manual

Model No. Description
PCE-GA 70 CO2 Detector
Gasman N

Personal gas detector with ATEX approval for flammable gases (Ex), oxygen (O2) and toxic gases (CO, CO2, H2S, ... etc.)

This Gasman N personal gas monitor is compact and lightweight yet designed to withstand the toughest of industrial environments. It is easy to use and it emits warnings in the case of danger caused by the presence of dangerous gases. This gas detector includes fully interchangeable i-module sensors and it is operated with one hand. The Gasman N is the most flexible gas detector that is available on the market.

The Gasman N possesses ingress protection IP65 and IP67 and it sets new standards for personal gas monitors for flammable gases, oxygen and toxic gases.

- Dimensions: 90 x 48 x 24 mm
- Ultra lightweight: 90 to 130 g (according to sensor)
- Approval codes: ATEX and UL for USA and Canada
- Continuous indicator in % LEL, vol %, ppm
- Memory for data storage
- Display with backlight: reading, peak and average values
- Multiple alarms sound using a selection of distinctive tones for different alarm levels
- Ingress protection IP65/IP67
- Battery types: rechargeable Li-ion battery / non rechargeable lithium cell

Technical specifications

<table>
<thead>
<tr>
<th>Gas type</th>
<th>CH4</th>
<th>O2</th>
<th>O3</th>
<th>H2S</th>
<th>CO</th>
<th>CO2</th>
<th>SO2</th>
<th>Cl2</th>
<th>NO2</th>
<th>H2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0 to 100 % LEL</td>
<td>0 to 25 vol%</td>
<td>0 to 1 ppm</td>
<td>0 to 100 ppm</td>
<td>0 to 500 ppm</td>
<td>0 to 3 vol%</td>
<td>0 to 10 ppm</td>
<td>0 to 5 ppm</td>
<td>0 to 10 ppm</td>
<td>0 to 1000 ppm</td>
</tr>
<tr>
<td>Alarm</td>
<td>20 % LEL</td>
<td>19 and 23 vol%</td>
<td>0.1 ppm</td>
<td>5 ppm</td>
<td>30 ppm</td>
<td>0.5 to 1.5 vol%</td>
<td>1 ppm</td>
<td>0.1 ppm</td>
<td>1 ppm</td>
<td>100 ppm</td>
</tr>
<tr>
<td>Audible alarm</td>
<td>95 dBA, multiple alarms sound allow selection of distinctive tones for different alarm levels</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Visible alarm</td>
<td>dual colour red/blue flashing LEDs in gas hazard</td>
<td></td>
<td></td>
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<tr>
<td>Vibrating alarm</td>
<td>internal vibrating alarm</td>
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</tr>
<tr>
<td>Display mode</td>
<td>custom LCD with backlight, with display of gas concentration. Graphic symbols for battery (with proportional indication of remaining operation time), and display mode. Start up indication when calibration is due within 30 days. Calibration overdue, or service required</td>
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</tr>
<tr>
<td>Display Protocol</td>
<td>5000 capacity event logging to record all instrument events including: switch on / off, battery status, alarms activate/clear, peak values, gas test pass or fail. All events are time stamped</td>
<td></td>
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</tr>
<tr>
<td>Datalogging (more expensive)</td>
<td>full timed datalogging with adjustable sample rate, set to 1 minute data rate. 900 hours storage at 1 minute interval.</td>
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</tr>
<tr>
<td>Battery types</td>
<td>rechargeable Li-ion battery (flammable gases) non rechargeable Lithium cell (toxic gases and oxygen)</td>
<td></td>
<td></td>
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<tr>
<td>Operating time</td>
<td>rechargeable: 12 hours minimum for flammable unit non rechargeable: up to 1 year</td>
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<tr>
<td>Sampling</td>
<td>optional manual aspirator</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Operating conditions</td>
<td>-20 to +55 °C / 0 to 99 % r.h.</td>
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</tr>
<tr>
<td>Approval codes</td>
<td>ATEX II 1G Ex ia IIC T4 (T amb. -20 °C to +55 °C) toxic gases and oxygen ATEX II 2G Ex ia IIC T4 (T amb. -20 °C to +55 °C) flammable gases</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Standards</td>
<td>EN50014, EN50020, EN50018, 94/9/EC, EN50270, EN50227, EN61779 software designed to meet IEC61508</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ingress protection</td>
<td>IP65 / IP67</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PC interface</td>
<td>RS-232 connection from interface module in charger. RS232 / USB convertor available</td>
<td></td>
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</tr>
<tr>
<td>Autocalibrator</td>
<td>Gasman can be routinely calibrated using the autocalibrator II in conjunction with the PC software</td>
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</tr>
<tr>
<td>Accessories</td>
<td>optional manual aspirator</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charger</td>
<td>single way drop in charger with options of UK, European or US style plug in mains supplies, or in line universal supply. Optional PC interface module within the single way charger. Vehicle lighter socket lead available.</td>
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<td></td>
</tr>
</tbody>
</table>

Contents

Personal gas detector, pocket clip, lithium cell or batteries and user’s manual

- Gasman-N-CH4 Personal CH4 detector with accumulator (battery charger nessesary)
- Gasman-N-O2 Personal O2 detector with battery
- Gasman-N-O3 Personal O3 detector with battery
- Gasman-N-H2S Personal H2S detector with battery
- Gasman-N-CO Personal CO detector with battery
- Gasman-N-CO2 Personal CO detector with accumulator (battery charger nessesary)
- Gasman-N-SO2 Personal SO2 detector with battery
- Gasman-N-CO2 Personal CO detector with battery
- Gasman-N-H2 Personal H2 detector with battery

You cannot use the manual aspirator with chlorine, nitrogen dioxide and ozone.

With the Gasman-N-CH4 you can select the gas: methane, propane, butane etc.
TETRA

Personal gas detector for the professional sector (ATEX II 2G Ex ia IIC T4)

The TETRA is a unique multigas monitor for the detection of flammable and toxic gases with an audible, visual and vibrating alarm and displays the current value. It detects up to four gases simultaneously, such as, CH4, H2S, CO and O2 (as well as other combinations of gases). Single button operation and intelligent sensor modules guarantee simplicity and flexibility of use. Data can be stored in the unit and be transmitted to a PC for later assessment (optional software and cable). The TETRA has interchangeable intelligent sensor modules which can be changed on the job, it is not necessary to recalibrate the unit each time you change a sensor module. This gas detector can be calibrated according to DIN-ISO and all international standards.

- Audible alarm: 90 dB (A)
- Visual alarm: LED red and blue
- Vibrating alarm
- Single button operation
- Intelligent sensor modules
- Hand aspirator (optional)
- Special colour mode
- Internal electric sampling pump

**Technical Data (EL = flammable gases, such as methane)**

<table>
<thead>
<tr>
<th>Model</th>
<th>TETRA-1 (LEL &amp; O2)</th>
<th>TETRA-2 (LEL, O2 &amp; H2S)</th>
<th>TETRA-3 (LEL, CO &amp; O2)</th>
<th>TETRA-4 (LEL, CO &amp; H2S)</th>
<th>TETRA-5 (O2 &amp; O3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement ranges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEL</td>
<td>0 to 100 %</td>
<td>0 to 100 %</td>
<td>0 to 100 %</td>
<td>0 to 100 %</td>
<td></td>
</tr>
<tr>
<td>O2 / O3</td>
<td>0 to 25 % / -</td>
<td>0 to 25 % / -</td>
<td>0 to 25 % / -</td>
<td>0 to 25 % / -</td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>H2S</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Alarm limits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEL</td>
<td>20 %</td>
<td>20 %</td>
<td>20 %</td>
<td>20 %</td>
<td></td>
</tr>
<tr>
<td>O2 / O3</td>
<td>19.5 and 23.5 % / -</td>
<td>19.5 and 23.5 % / -</td>
<td>19.5 and 23.5 % / -</td>
<td>19.5 and 23.5 % / -</td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>30 ppm</td>
<td>30 ppm</td>
<td>30 ppm</td>
<td>30 ppm</td>
<td></td>
</tr>
<tr>
<td>H2S</td>
<td>5 ppm</td>
<td>5 ppm</td>
<td>5 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensors life</td>
<td>methane and other flammable gases: 5 years / toxic gases: 3 years / oxygen: minimum 2 years</td>
<td>methane and other flammable gases: 5 years / toxic gases: 3 years / oxygen: minimum 2 years</td>
<td>methane and other flammable gases: 5 years / toxic gases: 3 years / oxygen: minimum 2 years</td>
<td>methane and other flammable gases: 5 years / toxic gases: 3 years / oxygen: minimum 2 years</td>
<td>methane and other flammable gases: 5 years / toxic gases: 3 years / oxygen: minimum 2 years</td>
</tr>
<tr>
<td>Alarm</td>
<td>visual: 2 flashing red and blue LED’s; acoustic: 90 dB(A) at 1m distance; vibration</td>
<td>visual: 2 flashing red and blue LED’s; acoustic: 90 dB(A) at 1m distance; vibration</td>
<td>visual: 2 flashing red and blue LED’s; acoustic: 90 dB(A) at 1m distance; vibration</td>
<td>visual: 2 flashing red and blue LED’s; acoustic: 90 dB(A) at 1m distance; vibration</td>
<td>visual: 2 flashing red and blue LED’s; acoustic: 90 dB(A) at 1m distance; vibration</td>
</tr>
<tr>
<td>Display</td>
<td>Graphic LCD (128 x 64) with backlight, battery life indicator</td>
<td>Graphic LCD (128 x 64) with backlight, battery life indicator</td>
<td>Graphic LCD (128 x 64) with backlight, battery life indicator</td>
<td>Graphic LCD (128 x 64) with backlight, battery life indicator</td>
<td>Graphic LCD (128 x 64) with backlight, battery life indicator</td>
</tr>
<tr>
<td>Memory</td>
<td>event logging (e.g. when limits are exceeded)</td>
<td>event logging (e.g. when limits are exceeded)</td>
<td>event logging (e.g. when limits are exceeded)</td>
<td>event logging (e.g. when limits are exceeded)</td>
<td>event logging (e.g. when limits are exceeded)</td>
</tr>
<tr>
<td>Interface for PC</td>
<td>infrared interface</td>
<td>infrared interface</td>
<td>infrared interface</td>
<td>infrared interface</td>
<td>infrared interface</td>
</tr>
<tr>
<td>Software</td>
<td>yes (optional) which provides configuration control, calibration and access to data files</td>
<td>yes (optional) which provides configuration control, calibration and access to data files</td>
<td>yes (optional) which provides configuration control, calibration and access to data files</td>
<td>yes (optional) which provides configuration control, calibration and access to data files</td>
<td>yes (optional) which provides configuration control, calibration and access to data files</td>
</tr>
<tr>
<td>Power rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)</td>
<td>Power rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)</td>
<td>Power rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)</td>
<td>Power rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)</td>
<td>Power rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)</td>
<td>Power rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>122 x 128 x 57 mm / Weight 500g</td>
<td>122 x 128 x 57 mm / Weight 500g</td>
<td>122 x 128 x 57 mm / Weight 500g</td>
<td>122 x 128 x 57 mm / Weight 500g</td>
<td>122 x 128 x 57 mm / Weight 500g</td>
</tr>
<tr>
<td>Ingress protection</td>
<td>Ex zones, protection against water and dust, corrosion. IP 65</td>
<td>Ex zones, protection against water and dust, corrosion. IP 65</td>
<td>Ex zones, protection against water and dust, corrosion. IP 65</td>
<td>Ex zones, protection against water and dust, corrosion. IP 65</td>
<td>Ex zones, protection against water and dust, corrosion. IP 65</td>
</tr>
<tr>
<td>Approvals</td>
<td>ATEX II 2G Ex ia IIC T4 (Tamb -20 to +55°C) BASEEEFA 03ATEX0193</td>
<td>ATEX II 2G Ex ia IIC T4 (Tamb -20 to +55°C) BASEEEFA 03ATEX0193</td>
<td>ATEX II 2G Ex ia IIC T4 (Tamb -20 to +55°C) BASEEEFA 03ATEX0193</td>
<td>ATEX II 2G Ex ia IIC T4 (Tamb -20 to +55°C) BASEEEFA 03ATEX0193</td>
<td>ATEX II 2G Ex ia IIC T4 (Tamb -20 to +55°C) BASEEEFA 03ATEX0193</td>
</tr>
</tbody>
</table>

**Contents**

TETRA 1, 2, 3, 4 or 5, rechargeable batteries, user’s manual

**Model No.**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TETRA-1</td>
<td>LEL, O2 Gas detector (with 2 alarm levels)</td>
</tr>
<tr>
<td>TETRA-2</td>
<td>LEL, O2 and H2S Gas detector (with 3 gas levels)</td>
</tr>
<tr>
<td>TETRA-3</td>
<td>LEL, CO, O2 and O3 Gas detector (with 4 gas levels)</td>
</tr>
<tr>
<td>TETRA-4</td>
<td>Gas detector with 2 gas levels: CO and O2</td>
</tr>
<tr>
<td>TETRA-5</td>
<td>Gas detector with 2 gas levels: CO and O3</td>
</tr>
<tr>
<td>TETRA-IP</td>
<td>Internal electric sampling pump (not for O2)</td>
</tr>
</tbody>
</table>

**Optional accessories**

| TETRA-LS  | Battery charger, 230 V / 50 Hz |
| TETRA-ASP | Aspirator assembly |
| TETRA-INT | Interface for PC, RS-232, IR adaptor |
| TETRA-SW  | Software |
| TETRA-ES-DH | CH4 Spare sensor |
| TETRA-ES-D2 | O2 Spare sensor |
| TETRA-ES-OD3 | O3 Spare sensor |
| TETRA-ES-H2S | H2S Spare sensor |
| TETRA-ES-CO | CO Spare sensor |
| TETRA-CAL | Calibration / Maintenance (e.g. every 6 months) |

**TETRA-MINI**

Personal multigas detector with ATEX authorization

The TETRA-MINI personal multigas detector has a rugged impact resistant design which provides extra shock and vibration protection. It has single button operation for all functions and it can even be operated with gloved hands. The reliable Lithium-ion battery provides over 16 hours of continuous operation from a single charge with no memory effects. It is designed for use in demanding industrial environments (e.g. in tunnels or buildings) and despite its compact size the TETRA Mini is ultra-rugged and waterproof.

- Audible alarm: 95 dB(A)
- Visual alarm: red and blue LED’s
- Vibrating alarm
- Single button operation
- Graphic display
- Internal battery and charger
- RS-232 port) and user’s manual

**Technical specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>TETRA-MINI (LEL, O2, CO and H2S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Range</td>
<td>LEL 0 to 100 % / O2 19.5 and 23.5%</td>
</tr>
<tr>
<td>Alarm</td>
<td>as TETRA (oxygen: minimum 3 years)</td>
</tr>
<tr>
<td>Response time</td>
<td>as TETRA</td>
</tr>
<tr>
<td>Display</td>
<td>graphic LCD with backlight, battery life indicator</td>
</tr>
<tr>
<td>Memory</td>
<td>event logging (e.g. when limits are exceeded)</td>
</tr>
<tr>
<td>Interface</td>
<td>IR interface</td>
</tr>
<tr>
<td>Software</td>
<td>yes (optional)</td>
</tr>
<tr>
<td>Operating cond.</td>
<td>-20 to +55°C and 0 to 99 % r.h.</td>
</tr>
<tr>
<td>Power</td>
<td>rechargeable Li-ion battery (minimum of 16 hours of continuous use)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>112 x 72 x 49 mm / Weight 270 g</td>
</tr>
<tr>
<td>Ingress protection</td>
<td>Ex zones, IP 67</td>
</tr>
<tr>
<td>Approvals</td>
<td>ATEX II 2G Ex ia IIC T4 (Tamb -20 to +55°C) BASEEEFA 03ATEX0193</td>
</tr>
</tbody>
</table>

**Contents**

TETRA-MINI, rechargeable batteries, battery charger (without RS-232 port) and user’s manual
Gas Meters

**Triple Plus+**

Meter for 4 gases, with memory (ATEX I M2: EEX ib dl, ATEX II 2G, Ex ias IIC T4)

The accuracy, solid design, memory and software, make this gas meter an impressive device for daily use in the factory or in the office. The Triple Plus+ allows connection of up to 4 sensors, which can be ordered separately depending on your needs. If you only required testing of two gases, then another two can be ordered if the need arises. The device shows the actual measurement value on the display and warns the user, with acoustic and visual alarms. One big advantage is its memory, which can save the readings continuously and they can be later transferred to a computer for further evaluation.

- Suitable for use in zone Ex
- Acoustic alarm (85dB/A at 1m) and visual with flashing LED's
- Light to indicate the function
- Large display that indicates 4 gases
- Memory function / data logger for 6000 values per parameter
- All types of sensors available
- Ingress protection IP 65
- Powered by rechargeable battery

**Gaseeker**

Gas meter for authorised measurements (ATEX II 2G, Ex ib IIC T4)

To carry out jobs, such as welding, in installations with gas and pipes, it’s important to empty them, and in some cases to flush them with nitrogen, and once the job is completed, fill the pipes with the required gas. The Gaseeker measures the concentration of flammable gases (methane) and the content of oxygen to avoid explosions. The meter automatically changes its indications from LEL to volume in %, Thankfully that the measurement range is 100% of volume, it’s possible to check for gas leaks. The alarm levels can be chosen when ordering. In cases where you wish to use the Gaseeker for authorised measurements, we advise you not to set any alarm limit, because the alarms will constantly be going off.

- Easy-to-use and portable
- CH4: 0 to 100 % LEL and 0 to 100 % volume
- CO: 0 to 500 ppm
- H2S: 0 to 50 ppm
- O2: 0 to 25 % LEL and 0 to 25 % volume
- Large display
- Integrated aspirator
- Rechargeable battery, up to 10 hours of operation, low battery indicator

**CellarSafe**

Fixed CO2 detector with alarm and electrical relay

This device is mainly used in the food industry, mainly at drinks outlets. Besides CO2 detection, this device emits an alarm when legal limits are exceeded, both a bright flashing LED and an audible alarm. You can also use the relay input to connect ventilation fans in the area being monitored. Remote repeater units are used to alert personnel in the safe area to the presence of a hazardous situation in the area being protected. The CO2 detector is powered by 240 VAC, but you can install a battery so that the system continues working in case of a power outage.

- Easy to use and easy installation
- Dual-band infrared sensor for CO2 (at least 5 years)
- Alarms: bright LEDs and audible alarm (82 dB)
- Relay output for ventilation fan adjustment
- Ingress protection IP 65; against dust and water
- Optional O2 sensor
- Remote repeater with 9 m cable (alerts personnel in a safe area to the presence of a hazardous situation in the area being protected)

### Technical specifications

**Gaseeker**

- **Ranges**
  - Flammable gases (CH4): 0 to 100 % LEL and 0 to 100 % volume
  - Oxygen (O2): 0 to 25 % LEL and 0 to 25 % volume
  - Hydrogen sulphide (H2S): 0 to 100 ppm
  - Carbon monoxide (CO): 0 to 500 ppm
- **Alarm**
  - Audible alarm: 85 dB(A) and visual LED
- **Response time**
  - CH4: 30 s
  - CO2: 10 s
- **Sensor life span**
  - Flammable gases: 3 years
  - Oxygen: 5 years
- **Power**
  - Rechargeable NiMh battery (8-10 h of power)
- **Dimensions**
  - 118 x 167 x 73 mm
- **Weight**
  - 900 g

**CellarSafe**

- **Ranges**
  - Flammable gases (CH4): 0 to 100 % LEL and 0 to 100 % volume
  - Oxygen (O2): 0 to 25 % LEL and 0 to 25 % volume
  - Hydrogen sulphide (H2S): 0 to 500 ppm
  - Carbon monoxide (CO): 0 to 500 ppm
  - Sulfur dioxide (SO2): 0 to 50 ppm
  - Oxygen (O2): 0 to 25 % LEL and 0 to 25 % volume
- **Alarm**
  - Audible alarm: 85 dB(A) and visual LED
- **Power**
  - Rechargeable NiMh battery (8-10 h of power)
- **Dimensions**
  - 118 x 167 x 73 mm
- **Weight**
  - 900 g

### Contents

**Triple Plus+**

- Gas meter, rechargeable batteries, carrying strap and user’s manual
- Sensors and charger can be ordered separately

**Model No.** | **Description**
---|---
Triple Plus+ | Triple Plus+ without sensors

**Sensors**

- **Triple-IR-LEL**
  - IR-Sensor, 0 ... 100 % LEL
- **Triple-RD-LEL**
  - Dual-Range, IR Sensor, 0 ... 100 % LEL
- **Triple-ES-02**
  - Oxygen sensor, O2
- **Triple-ES-H2S**
  - Hydrogen sulphide sensor, H2S
- **Triple-ES-CO**
  - Carbon monoxide Sensor, CO
- **Triple-ES-SO2**
  - Sulfur dioxide sensor, SO2
- **Triple-ES-H2**
  - Hydrogen sensor, H2

**Optional accessories**

- **Triple-P**
  - Internal pump (surcharge)
- **Triple-RIT**
  - Charger / Interface for PC
- **Triple-SW**
  - Software for Triple Plus+
- **GSK-CAL**
  - Recalibration (e.g. every 6 months)

**Gaseeker**

**Model No.** | **Description**
---|---
Gaseeker with sensors | Gaseeker with sensors

**Sensors**

- **SO11375**
  - Replacement sensor 0 to 100 % LEL
- **SO1423**
  - Replacement sensor 0 to 100 % volume
- **SO11371**
  - Replacement oxygen sensor, O2

**Optional accessories**

- **GSK-CAL**
  - Recalibration (e.g. every 6 months)

**CellarSafe**

**Model No.** | **Description**
---|---
99F38008 | CellarSafe III and oxygen sensor
99F38006 | CellarSafe IV with oxygen sensor
99F38007 | CellarSafe II with battery
99F38005 | CellarSafe I Standard

**Optional accessories**

- **CAL-C5**
  - Recalibration of sensors (e.g. every 6 months)
Remote fixed gas detectors

Fixed gas detectors with ATEX authorization for flammable gases (EX), oxygen and toxic gases

Xgard, TCgard, TXgard and Flamgard gas detectors

The Xgard, TCgard, TXgard and Flamgard Series are available for a wide range of applications for the detection of toxic and flammable gases, such as the potential for lack of oxygen in the industrial sector or in shipping.

- **Xgard tipo 1 y TXgard IS**: without display, for own safety, EX 0, 1 and 2 zones
- **Xgard tipo 5**: without display, for EX 1 and 2 zones
- **Xgard IR**: without display, longlife infrared sensors, EX 1 and 2 zones
- **TCgard**: without display, for EX 1 and 2 zones
- **TXgard IS+**: with display, for own safety, EX 0, 1and 2 zones
- **TXgard Plus and Flamgard Plus**: with display, relay for alarm integrated, for EX 1 and 2 zones

### Technical specifications

<table>
<thead>
<tr>
<th>Detector</th>
<th>Xgard type 1</th>
<th>Xgard type 5</th>
<th>Xgard IR</th>
<th>TCgard</th>
<th>TXgard IS+</th>
<th>TXgard Plus</th>
<th>Flamgard Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>EX zone</td>
<td>0, 1, 2</td>
<td>1, 2</td>
<td>1, 2</td>
<td>1, 2</td>
<td>0, 1, 2</td>
<td>1, 2</td>
<td>1, 2</td>
</tr>
<tr>
<td>Display</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>si</td>
<td>si</td>
<td>si</td>
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<tr>
<td>Output signal</td>
<td>2 leads</td>
<td>3 leads</td>
<td>3 leads</td>
<td>3 leads</td>
<td>2 leads</td>
<td>3 leads</td>
<td>3 conductors</td>
</tr>
<tr>
<td>Relay for alarm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Power</td>
<td>8 to 30V DC</td>
<td>8 to 30V DC</td>
<td>10 to 30V DC</td>
<td>10 to 30V DC</td>
<td>11 to 30V DC</td>
<td>10 to 30V DC</td>
<td>10 to 30V DC</td>
</tr>
<tr>
<td>Temperature</td>
<td>-20 to 50 °C</td>
<td>-40 to 55 °C</td>
<td>-20 to 50 °C</td>
<td>10 to 30 °C</td>
<td>-20 to 50 °C</td>
<td>-10 to 55 °C</td>
<td>-10 to 55 °C</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 1 kg</td>
<td>approx. 1 kg</td>
<td>approx. 1 kg</td>
<td>approx. 4 kg</td>
<td>0.7 kg</td>
<td>2.2 kg</td>
<td>2.2 kg</td>
</tr>
</tbody>
</table>

### GasFlag and Gasmaster channel control panels

**GasFlag**

For detectors without relay alarm we offer you the GasFlag. It is a single channel control panel without display and is simple to install on the wall. It accepts industry standard 4 to 20 mA inputs and two alarm relay outputs (max. 1A for 30 VDC). Its LEDs shows the air status, and are powered by 13 to 28 VDC.

**Gasmaster**

Gasmaster is the flexible and simple-to-use solution for a self-contained control panel to monitor gas or fire hazards. We have several models with 1 and 4 channels and with or without PC interface. It provides alarm relays to connect bright flashing LEDs and ventilation fans. It also provides 4 to 20 mA output and RS-485 modbus communications.

### Contents

- TXgard or Xgard with their sensors, calibration page and user’s manual
- TXgard or Xgard with their sensors, calibration page and user’s manual

### Available gases: >>>>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xgard-1-O2</td>
<td>Xgard-Typ 1, 0 to 25 vol% oxygen</td>
</tr>
<tr>
<td>Xgard-1-H2</td>
<td>Xgard-Typ 1, 0 to 2000 ppm hydrogen</td>
</tr>
<tr>
<td>Xgard-1-H2-UEG</td>
<td>Xgard-Typ 1, 0 to 4 vol% hydrogen (100% LEL)</td>
</tr>
<tr>
<td>Xgard-1-CO</td>
<td>Xgard-Typ 1, 0 to 250 ppm carbon monoxide</td>
</tr>
<tr>
<td>Xgard-1-NH3</td>
<td>Xgard-Typ 1, 0 to 50 ppm ammonia</td>
</tr>
<tr>
<td>Xgard-1-CL2</td>
<td>Xgard-Typ 1, 0 to 5 ppm chlorine</td>
</tr>
<tr>
<td>Xgard-1-D3</td>
<td>Xgard-Typ 1, 0 to 1 ppm ozone</td>
</tr>
<tr>
<td>Xgard-1-SO2</td>
<td>Xgard-Typ 1, 0 to 10 ppm sulphur dioxide</td>
</tr>
<tr>
<td>Xgard-1-PK3</td>
<td>Xgard-Typ 1, 0 to 1 ppm phosphine</td>
</tr>
<tr>
<td>Xgard-5-CH</td>
<td>Xgard-Typ 5, 0 to 100% LEL, Select the corresponding gas: methane, propane, butane, pentane, LPG, ethane, ethylene, hydrogen, acetylene, benzene (without lead)</td>
</tr>
<tr>
<td>Xgard-IR-1</td>
<td>Xgard infrared sensor, 0 ... 5 % carbon dioxide, CO2</td>
</tr>
<tr>
<td>Xgard-IR-2</td>
<td>Xgard infrared sensor, 0 ... 2 % carbon dioxide, CO2</td>
</tr>
<tr>
<td>TXgard-CH4</td>
<td>TXgard 0 to 100% methane</td>
</tr>
<tr>
<td>TXgard-CO2</td>
<td>TXgard 0 to 100% carbon dioxide</td>
</tr>
<tr>
<td>TXgard-S-02</td>
<td>TXgard-S+ display included, 0 to 25 vol% oxygen</td>
</tr>
<tr>
<td>TXgard-S-03</td>
<td>TXgard-S+ display included, 0 to 500 ppm carbon monoxide</td>
</tr>
<tr>
<td>TXgard-S-H2S</td>
<td>TXgard-S+ display included, 0 to 50 ppm hydrogen sulphide</td>
</tr>
<tr>
<td>TXgard-S-03</td>
<td>TXgard-S+ display included, 0 to 1 ppm ozone</td>
</tr>
<tr>
<td>TXgard-S-PK3</td>
<td>TXgard-S+ display included, 0 to 2 ppm phosphine</td>
</tr>
<tr>
<td>TXgard-Plus-02</td>
<td>TXgard-Plus display and relay for alarm included, 0 to 25 Vol% oxygen</td>
</tr>
<tr>
<td>TXgard-Plus-H2S</td>
<td>TXgard-Plus display and relay for alarm integrated, 0 to 50 ppm hydrogen sulphide</td>
</tr>
<tr>
<td>TXgard-Plus-CO</td>
<td>TXgard-Plus display and relay for alarm integrated, 0 to 500 ppm carbon monoxide</td>
</tr>
<tr>
<td>Flamgard-Plus-CH</td>
<td>Flamgard-Plus display and relay for alarm integrated, 0 to 100% LEL. Select the corresponding alarm: methane, propane, butane, pentane, hexane, LPG, ethane, hydrogen, propan.</td>
</tr>
<tr>
<td>G01818</td>
<td>GasFlag, with 1 channel without display, relay output, alarm LEDs</td>
</tr>
<tr>
<td>G01906</td>
<td>Gasmaster with 1 channel, without PC interface</td>
</tr>
<tr>
<td>G01928</td>
<td>Gasmaster with 1 channel, with PC interface</td>
</tr>
<tr>
<td>G01889</td>
<td>Gasmaster with 4 channels, without PC interface</td>
</tr>
<tr>
<td>G01927</td>
<td>Gasmaster with 4 channels, with PC interface</td>
</tr>
<tr>
<td>E07635</td>
<td>Software and interface for Gasmaster</td>
</tr>
</tbody>
</table>

### Remote fixed gas detectors

- **Recommended Accessories**
  - C03331: Zener MTL 702 barrier +, for EX 0 zone (1 for each detector)
  - TX-CAL: Recalibration (e.g. every 6 months)