



Applications

Safety from many gases



Garage, Tunnel, Loading zone

The gases CO, NO_2 and LPG occur in public garages, tunnels or loading zones where many vehicles are in use. In this case the operators rely on gas sensors. If limit values are exceeded, passers-by are warned by the gas detection system and asked to leave the danger zone.

CO / NOx / LPG / NH₃ / O₂

Products: DGC-06, MSC2, MSB2, SB2, SC2-Tox, SC2-Ex



Food & Beverage

In the areas of refrigeration/industrial refrigeration, cold rooms, refrigerated cabinets for discount stores, the beverage industry, breweries, wineries, dispensing systems, beverage storage, vending machines, ripening and storage of food and in the packaging industry, hazards can arise due to toxicity, flammability and oxygen displacement.

CO₂ / C₃H₈ / NH₃ / HFC / O₂

Products: MSC2, WSB2, SC2-Freon, SC2-CO2, PX2, SX1-Ex





Hydrogen

 $\rm H_2$ is a highly reactive gas, making constant monitoring by a gas warning system mandatory throughout its life cycle. Whether in research, production, logistics or mobility. When $\rm H_2$ is used, leaks can occur at any time, causing catastrophic damage in the event of ignition.

 H_2 / NH_3 / O_2

Products: DGC-06, PX2, SX1, SSAX1



Pharma, Laboratory and Research

In the food, pharmaceutical and cosmetics industries organic substances are fermented by adding bacteria, fungi or enzymes in tanks. During this process gases to be detected are produced. Even when handling with gas cylinders, e.g. during experimental work in the laboratory, the environment must be protected from gas hazards.

 $N/CI_{2}/CO/H_{2}S/NH_{3}/O_{2}/CO_{2}/CH_{2}O/NO2/CH_{4}/C_{3}H_{8}$

Products: MSC2, DEM-06, DGC-06, SC2-tox/-ex, MC2-tox, MC2-ex



Industry

In many industrial companies, gases that are hazardous to health and equipment are used in different processes (production, recycling, water treatment). Continuous monitoring of the ambient air for the concentration of toxic gases as well as the oxygen content is an essential part of occupational safety and health protection.

 $H_2 / H_2 S / C_3 H_6 O / CO_2 / CH_4$

Products: DGC-06, PX2, SX1, SSAX1



Agriculture

When operating biogas plants, aquaculture/fish farming, in fertiliser production, livestock monitoring as well as in indoor farming or in the animal carcass utilisation, attention must be paid to gas leaks, to recognise explosive and toxic gas mixtures at an early stage recognise and warn against them.

 $\mathrm{CH_4}\,/\,\mathrm{CO_2}\,/\,\mathrm{NH_3}$

Products: DGC-06, PX2, SX1, SSAX1



Buildings

Commercial and public facilities such as schools, swimming pools, hospitals, hotels and shopping centres use integrated safety systems that include gas detection devices. Large numbers of visitors increase the risk of ${\rm CO_2}$ accumulation. Heating systems must be monitored for a leakage of flammable gases.

CL₂ / O₂ / LPG / CH₄ / CO₂ / C₃H₈

Products: MSC2, WSB2, MC2-CO2, WSB2 VRV



Marine

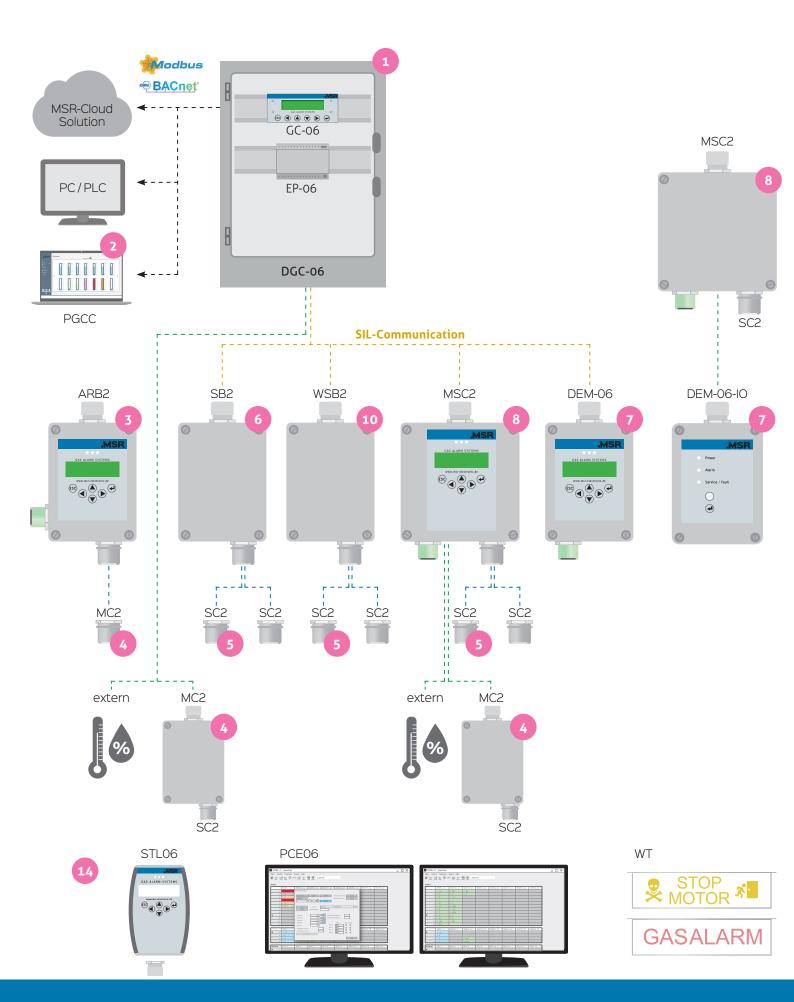
Hazardous substances are transported in the shipping industry and must be monitored with regard to their emissions. In addition, exhaust gases are produced and there is a dependency on various operating materials. These must also be monitored in order to warn the crew of potential hazards in good time.

 ${\rm CO_2}$ / ${\rm NH_3}$ / ${\rm CO}$ / ${\rm LPG}$

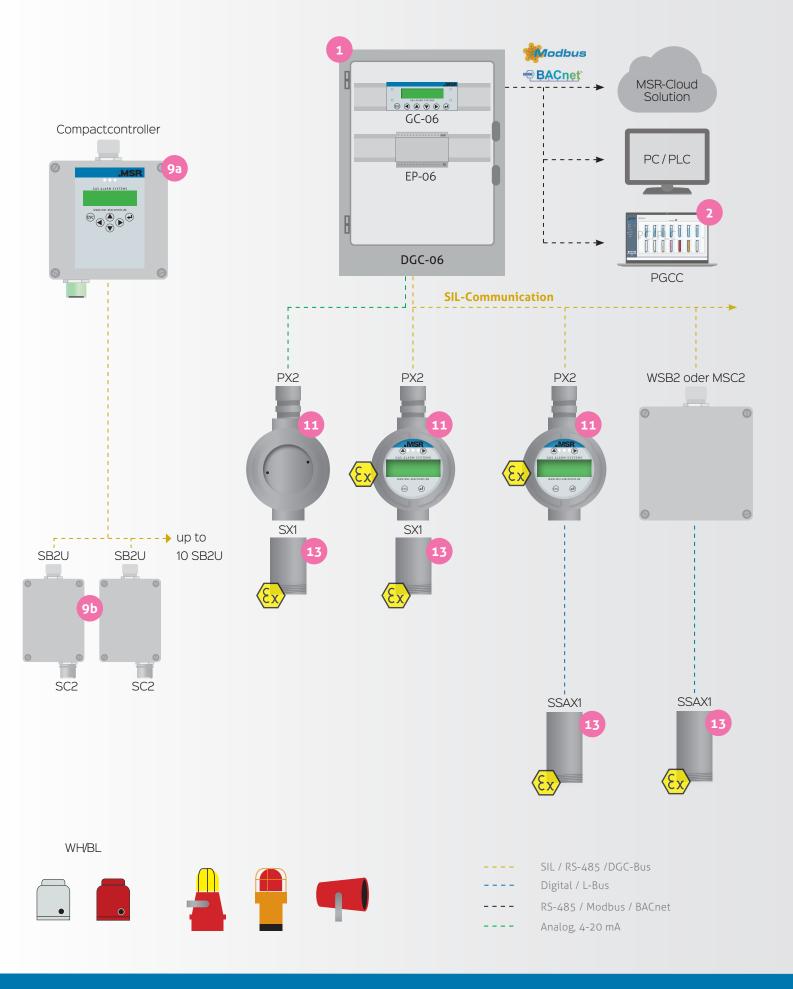
Products: PX2, SSAX1, SX1

PolyGard®





PolyXeta®



Certificates

Approvals for the PolyGard® product series

ANSI/UL 61010-1, CAN/CSA-22.2 No. 61010-1

Instrument series types: DGC-06, GC-06, EP-06, SB2, MSC2, MSB2, WSB2, ARB2, SC2-Tox, SC2-Ex, MC2-Tox, MC2-Ex

Other conformities: EU Directive 2014 / 30 / EU und 2014 / 35 / EU, EN 50545-1, EN 50271, EN 61010-1, EN 50270, EN 378, EN 60079-29-1, EN 50104, EN 62990-1, EN 14624, EN 61508-1-2-3, SIL EN 50402

Approvals for the PolyXeta® product series

Electrical explosion protection of sensors and devices according to ATEX/IECEx, IEC/EN 60079-0, -1 and EU Directive 2014/34/EU (DEKRA Testing and Certification GmbH) Device series types: PX2, SX1, SSAX1

Metrological testing of sensors and devices according to EN 60079-29-1 for combustible gases / EN 50104 for oxygen (DEKRA Testing and Certification GmbH)

Device series types: PX2, SX1

Functional testing (SIL2) of sensors and devices according to IEC/EN 61508-1 -2 -3, EN 50271, EN 50402 (DEKRA Testing and Certification GmbH)

Device series types: PX2, SX1

Approval for shipping according to the European Directive 2014/90/EU, 2021/1158/EU and according to the international directive DNVGL-CG-0339 Device series types: PX2, SX1, SSAX1

Other conformities: EU Directive 2014/30/EU and 2014/35/ EU, EN 61010-1, EN 50270, EN 378, EN 50402, EN 62990-1, EN 14624 Device series types: PX2, SX1, SSAX1

ISO-certifications for the company MSR-Electronic GmbH

Quality Management System: DIN EN ISO 9001:2015

Environmental protection management system: DIN EN ISO 14001:2015

Energy management system: DIN EN ISO 50001:2018



























Products



Digital-Gas-Controller DGC-06

Measuring, warning and controlling device system in different versions. Applicable for large systems for monitoring and evaluation of up to 128 sensors and control of up to 32 relays.



Multi-Sensor-Controller MSC2

Compact gas detector for connection of up to 3 sensors, 2 of them with the same gases. It has 2 relays, Modbus and an analog output, optional display.



Online Gas Monitoring PGCC

For visualization of measurement data, parameters and statistics, in combination with GC-06 and PG2/PX2 Controller. The MSR cloud solution enables remote access.



Compactcontroller

The controller (9a) is designed for connecting up to 10 SB2U (9b) via the local bus and can be parameterized and configured completely without a tool.



Analog-Relay-Board ARB2

Gas measuring, warning and control board for connection of a MC2 X-Change sensor. The 2 relays are activated by alarm thresholds, which are adjustable by potentiometer.



Warning- and Sensor-Board WSB2

Compact gas detector for connection of up to 3 sensors, 2 of them with the same gases. It has 2 relays, Modbus and an analog output, optional display.



Analog Sensor MC2

Analog exchangeable sensor with 4-20 mA / 2-10 V output and simple, integrated, digital calibration routine using



PolyXeta®2 PX2

Gas detector with certification for ATEX, IECEx Zone 1/2, SIL2, MED und DNV. Signal transmission via display, relay, Modbus or analog output.



Digital Sensor SC2

Digital exchangeable sensor with local bus provides information on calibration interval and lifetime in addition to the measured value. Digital signature of the sensor for a clear assignment with the connected board.



Digital Sensor SX1

Digital exchangeable sensor with local bus for use in PX2. In addition to the measured value, it provides information on the calibration interval and lifetime. Certified for ATEX and IECEx Zone 1/2 and SIL2.



Sensor-Board SB2

For the provision of the measured values of up to 3 SC2 sensors on the GC-06 Controller or superior BMS.



Sensor SSAX1

Remote sensor for connection to PG2 boards, for use in ATEX and IECEx Zone 1/2 and SIL2. In addition to the measured value, the probe provides information on calibration interval and lifetime.



Door-Entrance-Modul DEM-06

The module in the versions with display or LED enables individual warning at entrances.



Accessories

Various accessories for calibration, parameterization of MSR products, as well as warning devices for visual and acoustic display of alarms.



Gas Detection.



We are part of the MSR-Group.







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