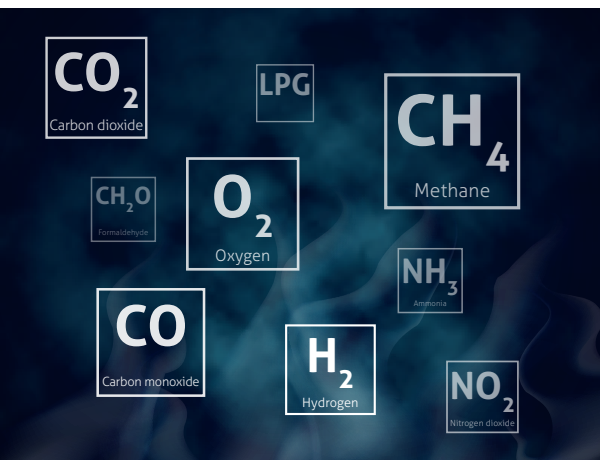


PERFECT SOLUTIONS FOR GAS ALARM SYSTEMS



Living Safety by MSR-Electronic



Fixed Gas Alarm Systems
for Buildings, Industry and Marine



Applications



Garage, Tunnel, Loading Zone

The gases CO, NO₂ 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, the gas warning system warns passers-by and asks them to leave the garage.

Typical Gases: CO / NO_x / LPG

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



Refrigeration Plants

Toxicity, flammability and oxygen displacement are increasingly a serious problem, especially with modern refrigerants, and represent a hazard e.g. in cold storage rooms and wineries. Refrigerant monitoring with gas warning systems, which are specially designed for this hazardous area, has become essential in many refrigerant applications.

Typical Gases: FKWs / HFCKWs / FCKWs / NH₃ / R744 / R290

MSR-Products: MSC2, WSB2, SC2-Freon, SC2-CO₂, SC2-Ex



Beverage Systems

Whether in beer dispensing plants, fermenting cellars, breweries or beverage filling plants; wherever CO₂ bottles, pipes and tanks are required, people must be protected. The gas warning systems suitable for this purpose have at least 2 alarm thresholds. Perceptibility must be ensured from outside the endangered areas (e.g. entrances).

Typical Gases: CO₂ / O₂

MSR-Products: MSC2, DEM-06, SC2-CO₂, MC2-CO₂



Laboratory and Medicine

Many gases are used in laboratories, which can cause serious safety risks, hazards and even explosions. The handling of various gases, gas cylinders, as well as the execution of reactions and experiments require a gas warning system for personal protection in order to provide early warning.

Typical Gases: CH₂O / NO₂ / O₂ / CH₄ / C₃H₈

MSR-Products: MSC2, DEM-06, DGC-06, SC2-Tox, SC2-Ex, MC2-Tox, MC2-Ex



Industry

In many producing industrial companies, such as in the petrochemical and manufacturing industries, in offshore plants or raw material storage facilities, gases that are hazardous to health are used. In order to protect the operatives in these areas effectively, the ambient air must be continuously monitored for the concentration of toxic gases or the threatening drop in oxygen content.

Typical Gases: H_2 / H_2S / C_3H_6O / CO_2 / CH_4

MSR-Products: DGC-06, PX2, SX1, SSAX1



Buildings

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

Typical Gases: CL_2 / O_2 / LPG / CH_4 / CO_2

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



Biogas Plants

When operating biogas plants, the engine rooms and the membranes of the fermenters in particular must be monitored for gas leaks in order to detect explosive gas mixtures at an early stage and warn against them. In addition, the gas can be monitored for purity in order to optimise the process.

Typical Gases: Methan / CO_2 / NH_3

MSR-Products: DGC-06, PX2, SX1, SSAX1

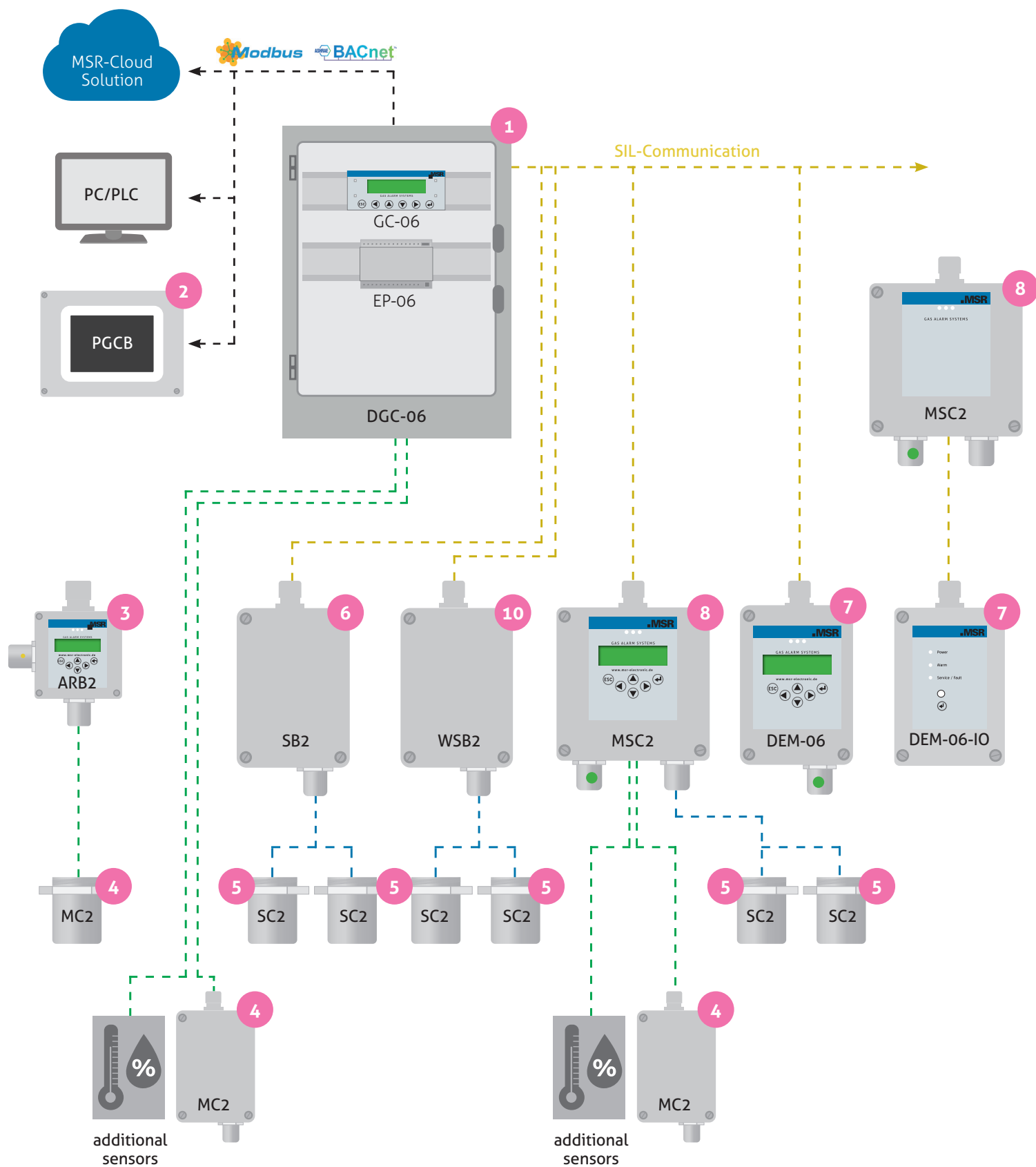


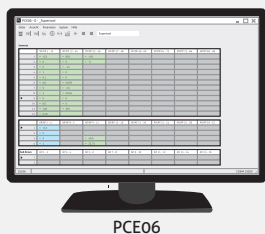
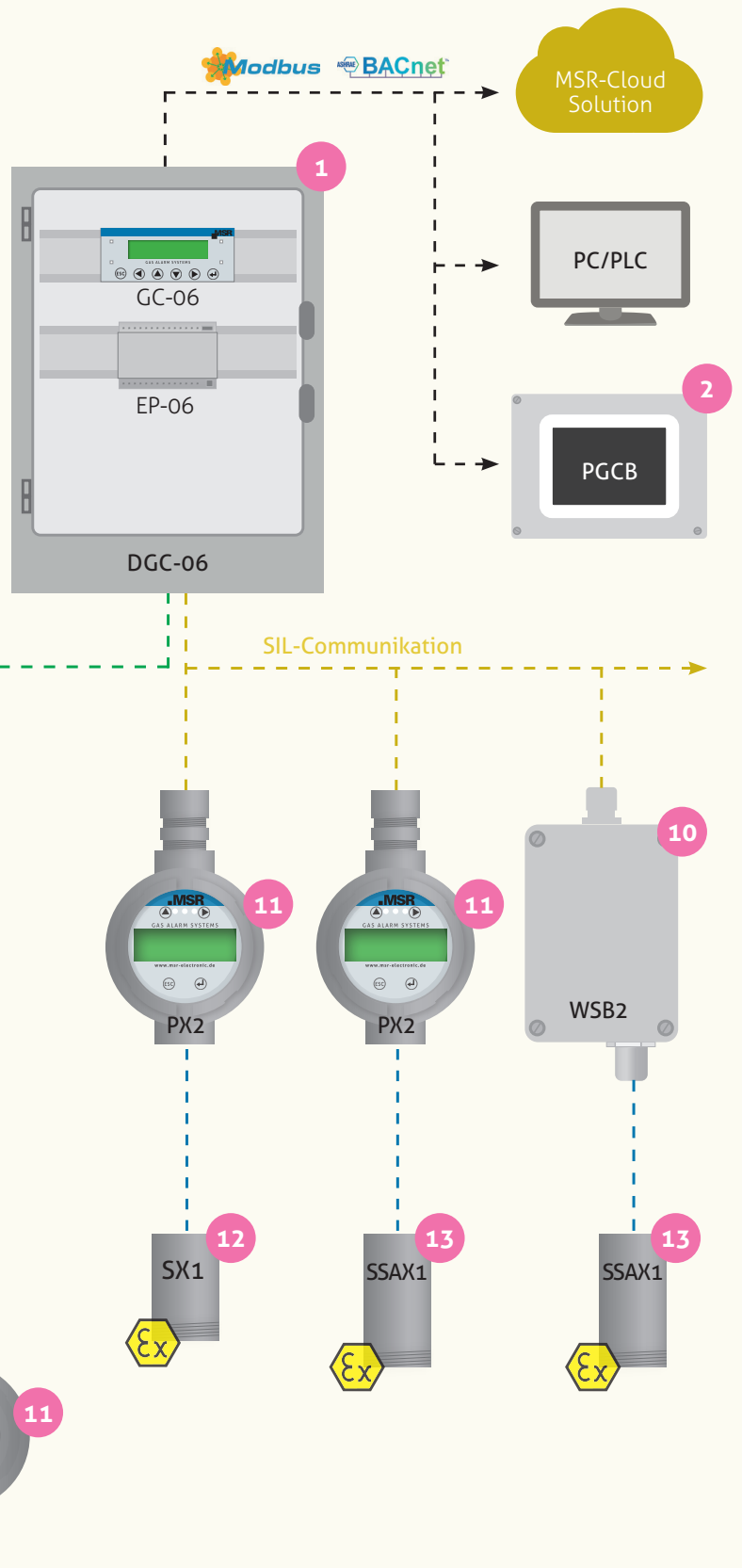
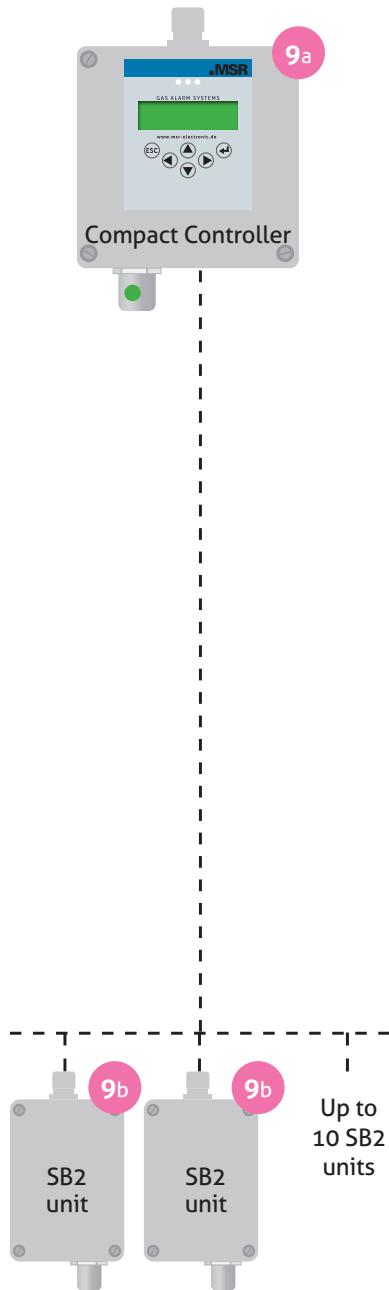
Shipping

In shipping, hazardous substances are transported which must be monitored for emissions. Both private and commercial shipping produce exhaust gases and are dependent on various fuels. These must also be monitored in order to be able to warn the crew of dangers at an early stage.

Typical Gases: CO_2 / NH_3 / CO / LPG

MSR-Products: DGC-06, PX2, SSAX1, SX1





--- SIL
RS-485
DGC-Bus

--- Digital
L-Bus

--- RS-485
Modbus
BACnet

--- Analog
4-20 mA

Products

1



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.

2



PolyGard®2 Control Box PGCB

For visualization of measurement data, parameters and statistics, in combination with GC-06 and PG2/PX2 Controller. The integrated network interface allows remote access.

3



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.

4



Analog Sensor MC2

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

5



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.

6



Sensor Board SB2

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

7



Door Entrance Module DEM-06

The module in different versions opens up new possibilities for the safe monitoring of accesses.

8



Multi-Sensor Controller MSC2

Compact gas detector (plug & play) for the connection of up to 3 sensors. The device has 3 power relays, Modbus (BMS), analog output as standard. Optional with display and UPS.

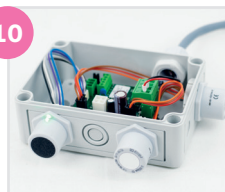
9a+b



Compact Controller

The controller (9a) is designed for connecting up to 10 SB2 units (9b) via the local bus and can be parameterized and configured completely without a tool.

10



Warning and Sensor Board WSB2

Compact gas detector (plug & play) for the connection of up to 3 sensors, 2 of which with the same gases. Optionally the device can be equipped with display, 2 relays, Modbus and analog output.

11



PolyKeta®2 PX2

Gas detector with certification for ATEX and IECEx Zone 1/2 and SIL2, signal transmission via display, relay, Modbus or analog output.

12



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.

13



Sensor SSAX1

Innovative, remote sensor probe for connection to the WSB2 board 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.

14



Accessories

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



MSRSHOP24

Configure your product here: www.msr-24.com

Certificates and Approvals

Building: Approvals for PolyGard®2

Measurement function test of sensors and devices according to EN 50545-1 (TÜV-Rheinland)

Device series types: DGC-06, GC-06, EP-06, SB2, MSC2, MSB2, SC2-Tox, SC2-Ex

Functional test (SIL) of sensors and devices according to EN 50271 chapter 4.7 (TÜV-Rheinland)

Device series types: DGC-06, GC-06, EP-06, SB2, MSC2, MSB2, SC2-Tox, SC2-Ex

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

Device series types: DGC-06, GC-06, EP-06, SB2, MSC2, MSB2, MGC2, WSB2, ARB2; SC2-Tox, SC2-Ex, MC2-Tox, MC2-Ex

Further conformities: EU Directive 2014 / 30 / EU and 2014 / 35 / EU, EN 61010-1, EN 50270, EN 378,

EN 60079-29-1, EN 45544-1, EN 50104, EN 50402, EN 14624, EN 61508-1 -2 -3, EN 50271, EAC-TR TO 012, ISO 9001

Industry: Approvals for PolyXeta®2

Electrical explosion protection of sensors and devices according to ATEX/IECEx, EN 60079-0, -1

(DEKRA Testing and Certification GmbH)

Device series types: PX2, SX1, SSAX1

Measurement function test of sensors and devices according to EN 60079-29-1 / EN 50104

(DEKRA Testing and Certification GmbH)

Device series types: PX2, SX1, SSAX1

Functional test (SIL2) of sensors and devices according to IEC/EN 61508-1 -2 -3, EN 50271

(DEKRA Testing and Certification GmbH)

Device series types: PX2, SX1, SSAX1

Further conformities: EU Directive 2014 / 34 / EU, 2014 / 30 / EU and 2014 / 35 / EU,

EN 61010-1, EN 50270, EN 378, EN 50402, EN 14624, EAC-TR TO 012, ISO 9001

Device series types: PX2, SX1, SSAX1



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