

Gas Detection.

**MSR**  
ELECTRONIC

# Living Safety by MSR-Electronic

Fixed Gas Alarm Systems for  
Buildings, Industry and Marine



# Applications

## Safety from many gases



### Garage, Tunnel, Loading zone

The gases CO, NO<sub>2</sub> 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.

Gases: CO / NO<sub>x</sub> / LPG / NH<sub>3</sub> / O<sub>2</sub>

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.

Gases: CO<sub>2</sub> / C<sub>3</sub>H<sub>8</sub> / NH<sub>3</sub> / HFC / O<sub>2</sub>

Products: MSC2, WSB2, SC2-Freon, SC2-CO<sub>2</sub>, PX2, SX1-Ex



### Hydrogen

H<sub>2</sub> 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 H<sub>2</sub> is used, leaks can occur at any time, causing catastrophic damage in the event of ignition.

Gases: H<sub>2</sub> / NH<sub>3</sub> / O<sub>2</sub>

Products: DGC-06, PX2, SX1, SSAX1



### Laboratory, medicine and pharma

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.

Gases: CH<sub>2</sub>O / NO<sub>2</sub> / O<sub>2</sub> / CH<sub>4</sub> / C<sub>3</sub>H<sub>8</sub>

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.

Gases:  $\text{H}_2$  /  $\text{H}_2\text{S}$  /  $\text{C}_3\text{H}_6\text{O}$  /  $\text{CO}_2$  /  $\text{CH}_4$

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  $\text{CO}_2$  accumulation. Heating systems must be monitored for a leakage of flammable gases.

Gases:  $\text{CL}_2$  /  $\text{O}_2$  / LPG /  $\text{CH}_4$  /  $\text{CO}_2$  /  $\text{C}_3\text{H}_8$

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



## Agriculture

When operating biogas plants, aquaculture/fish farming, in fertilizer production or livestock monitoring, attention must be paid to gas leaks in order to detect and warn of explosive and toxic gas mixtures at an early stage.

Gases:  $\text{CH}_4$  /  $\text{CO}_2$  /  $\text{NH}_3$

Products: DGC-06, PX2, SX1, SSAX1



## Marine

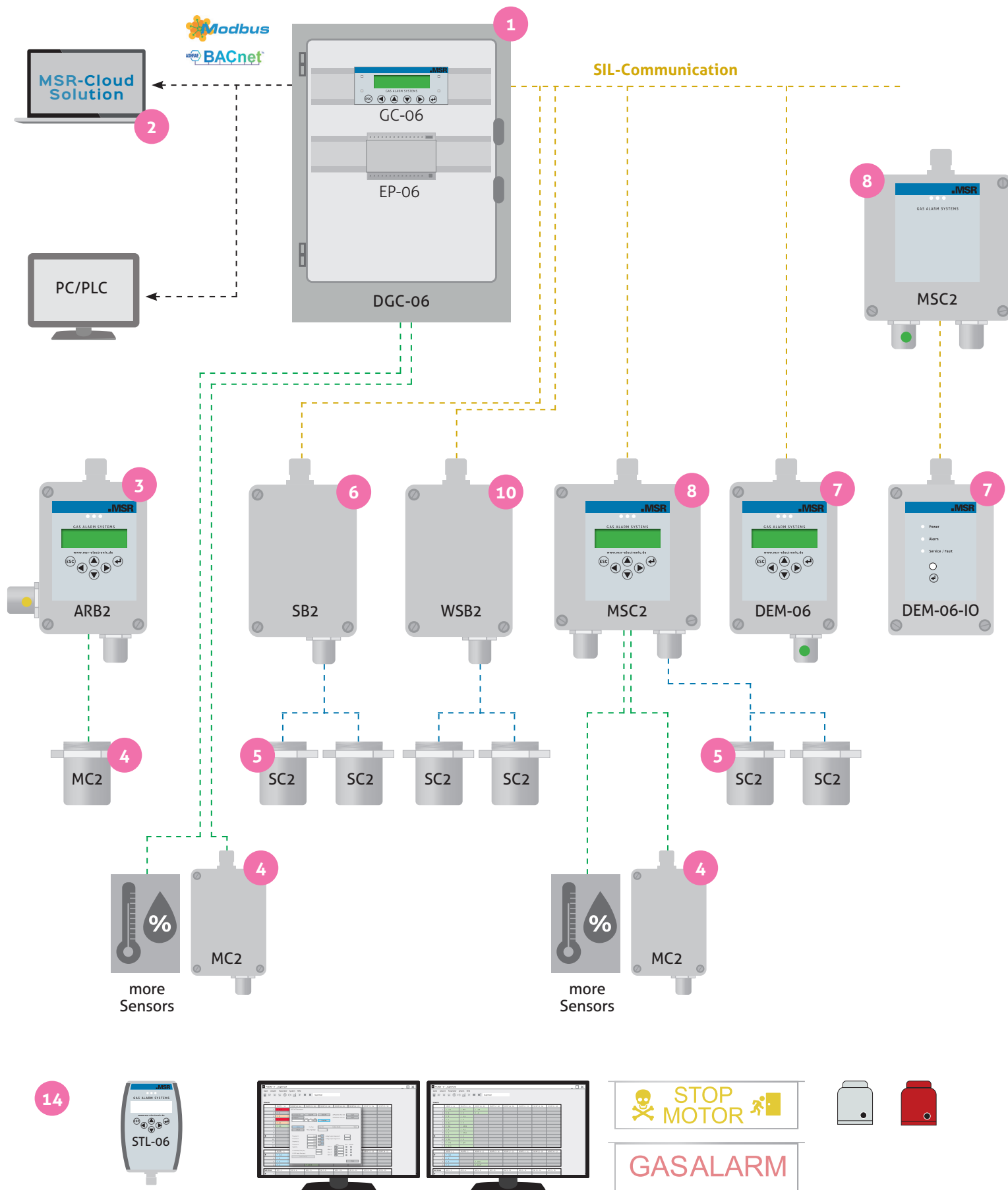
Hazardous substances are transported in the shipping industry and must be monitored with regard to their emissions. In addition, exhaust gases are produced and there is a dependency on various operating materials. These must also be monitored in order to warn the crew of potential hazards in good time.

Gases:  $\text{CO}_2$  /  $\text{NH}_3$  / CO / LPG

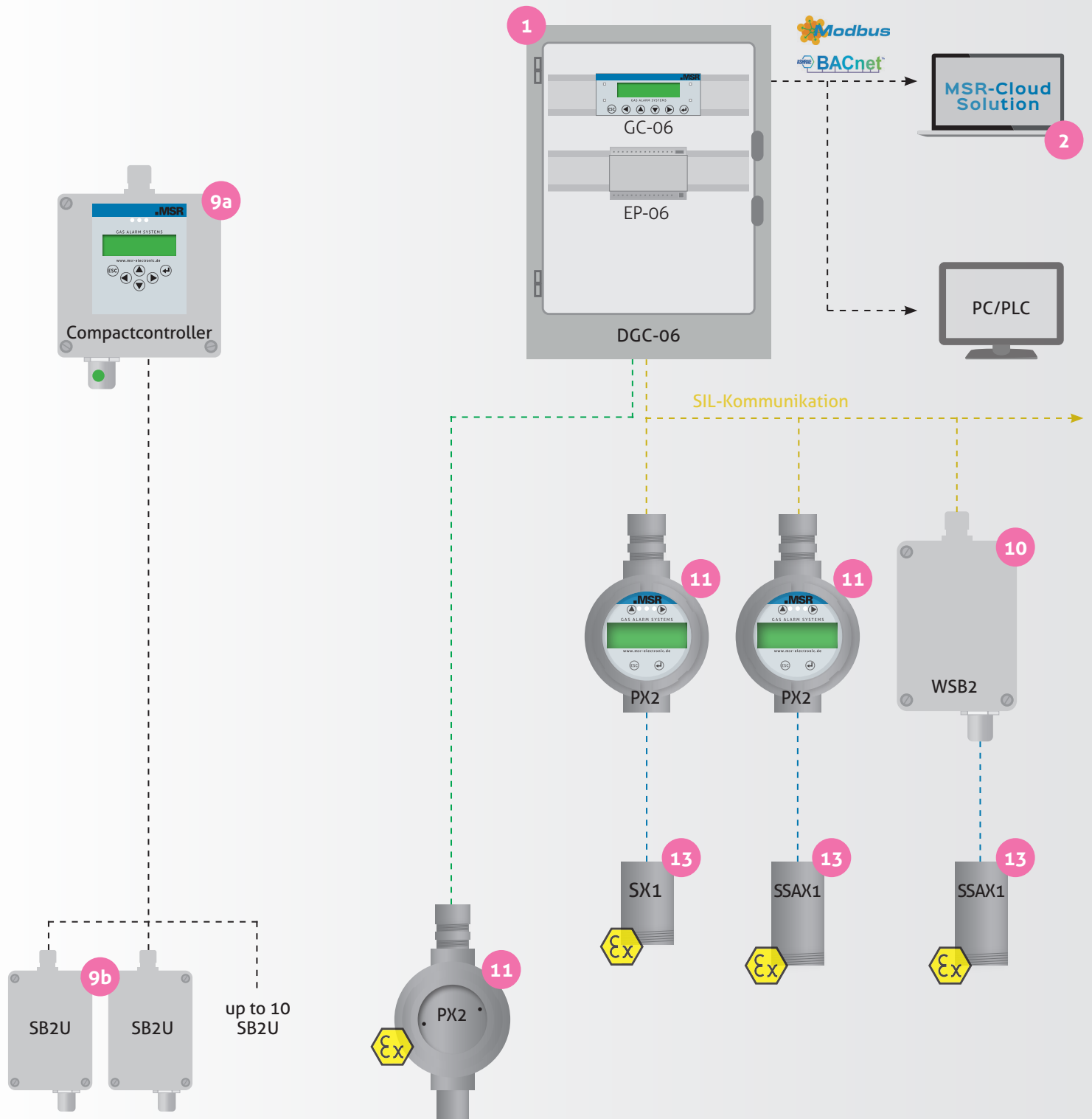
Products: PX2, SSAX1, SX1



# PolyGard®



# PolyXeta®



**Interactive** product overview  
Get to know our products here.

- SIL / RS-485 / DGC-Bus
- Digital / L-Bus
- RS-485 / Modbus / BACnet
- Analog, 4-20 mA

# Certificates

## Approvals for the PolyGard® product series

ANSI/UL 61010-1, CAN/CSA-22.2 Nr. 61010-1

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

EAC Metrological Certifications: Device series types: PolyGard® product series

Other conformities: EU Directive 2014 / 30 / EU and 2014 /35 / EU, EN 50545-1, EN 50271, EN 61010-1, EN 50270, EN 378, EN 60079-29-1, EN 50104, EN 50402, EN 45544-1, EN 14624, EN 61508-1 -2 -3, SIL

## 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 (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

EAC Metrological Certifications: 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 45544-1, EN 14624, device series types: PX2, SX1, SSAX1

## ISO certifications for the company MSR-Electronic GmbH

Certifications for quality, environmental and energy management

ISO 9001, ISO 50001, ISO 14001



# Products

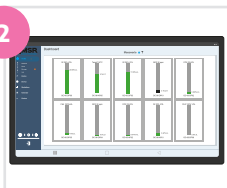
1



## 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



## MSR Cloud Solution

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

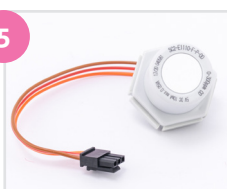
4



## 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-Modul DEM-06

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

8



## 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.

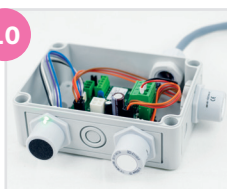
9a+b



## 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.

10



## 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.

11



## 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.

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

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.

14



## Accessories

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



**MSR SHOP24**

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**MSR online catalog 2023**

Fixed gas warning systems for buildings, industry and marine

Gas Detection.



We are part of the MSR-Group.



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