



PolyXeta® 2

Fixed Gas Warning Systems
for Industrial Plants



Protection under Extreme Conditions

MSR-Electronic protects health and plants under industrial conditions.

In the chemical and petrochemical industry permanent monitoring of rooms and plants, in which explosive atmosphere can occur, is necessary. For the protection of human beings constant monitoring of toxic and combustible gases and vapors is required. In addition, monitoring of lack of oxygen and oxygen surplus must be carried out.

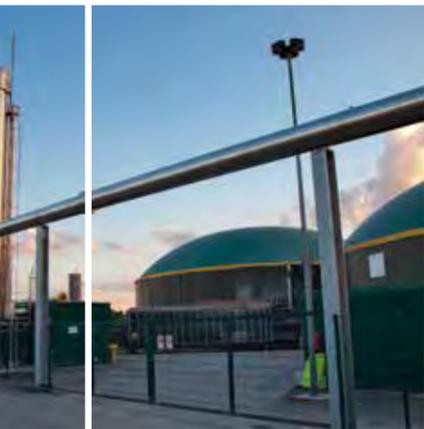
MSR-Electronic offers a wide range of methods for the detection of gases. On this basis MSR-Electronic develops individual gas sensors for industrial applications where extreme environmental conditions prevail.

With MSR-Electronic you improve the Safety, the Efficiency and the Competitiveness.

+ Your advantages:

- More safety
More than required by all national standards
- Exchangeable sensor X-Change:
Considerably lower maintenance costs
- Better planning with overall less costs
Integration in BMS (Bacnet, Modbus, LON)





Biogas Plants

Safe protection from CH₄, H₂S, CO₂ and O₂



Mining

Safe protection from combustible and toxic gases

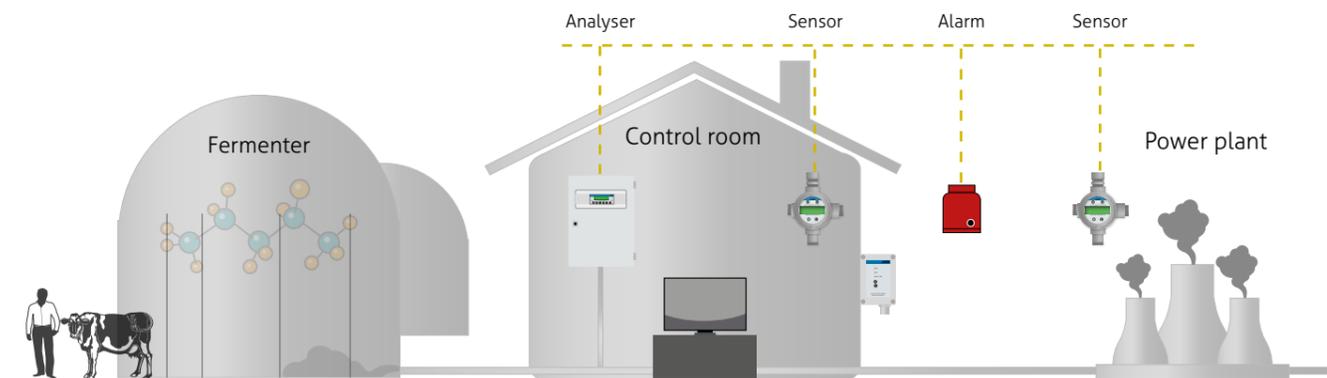
Through early detection in hazardous areas you can prevent damages or contain existing ones.

When operating biogas plants, in addition to process optimization, personal protection and plant safety are of crucial importance. MSR-Electronic offers intelligent devices for the extension of process optimization and operational safety of biogas plants.

With the products of MSR-Electronic you work preventively against hazards. In addition to the state-of-the-art technology, MSR-Electronic also provides consulting and conducts analyses that perfect the safety of your plants, e.g. leakages are localized at an early stage.

PRODUCTS:

Fixed gas warning systems for measuring combustible and toxic gases and oxygen
Type: PolyXeta® 2 for Zone 1 and Zone 2

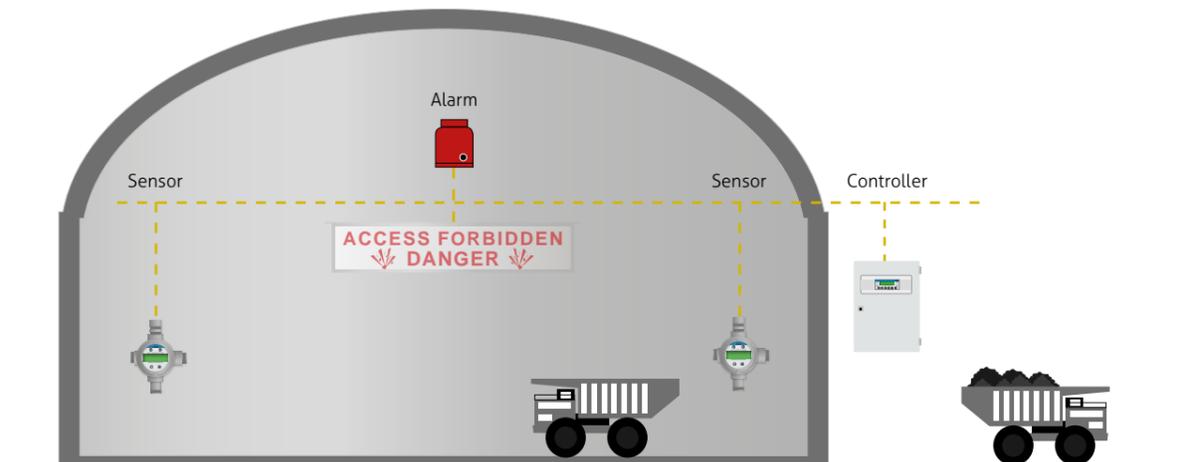


MSR-Electronic provides safe monitoring for combustible and toxic environment in mines. Through early detection in mining areas you can prevent damages and contain existing ones.

Mines are dangerous environments for humans and the mining equipment, the risk of fire, explosions and lack of oxygen is always present. All gases released during mining operations should continuously be monitored. MSR- Electronic provides the products to minimize this risk potential and thus can contribute to the health and safety in the mining industry.

PRODUCTS:

Fixed gas warning systems for measuring combustible and toxic gases and oxygen
Type: PolyXeta® 2 for Zone 1 and Zone 2



Additional Applications

Safer Applications for Zone 1 and Zone 2



PRODUCTION INDUSTRY:

$O_2 / H_2S / CO / CO_2$

In many producing industries health hazardous gases are used. In order to protect workers in these areas effectively, the ambient air must be continuously monitored on the concentration of toxic gases or on the dangerous decrease of oxygen content.

GAS INDUSTRY:

$CH_4 / H_2S / CO_2 / O_2$

All companies that deal with the production and processing of gases need extra protection against explosions or poisoning of the people working there. The continuous monitoring and recording of measurement values serve the primary explosion protection and thus the safety of the plant.



PETROCHEMICAL INDUSTRY:

$CH_4 / C_5H_{12} / C_3H_8 / H_2S / O_2 / CO / NH_3$

In the chemical and petrochemical industry a permanent monitoring of rooms and plants, in which explosive atmosphere may occur, is needed. For personal protection a constant TLV monitoring of toxic gases and vapors is required. In addition, monitoring of lack of oxygen or oxygen surplus must be carried out.

WASTE DISPOSAL:

$CO_2 / H_2S / HEXANE / BENZENE / TOLUENE$

Personnel in the utility and waste management industry are in many areas exposed to risks due to gases. In sewers a decrease of oxygen in the air can occur whereas in disposal sites toxic or explosive gases can arise. In addition it may be necessary to detect damages or leaks in pipelines.



Product Overview

PolyXeta®2

SENSOR X-CHANGE



SX1:
Exchangeable sensor X-Change

SENSORS



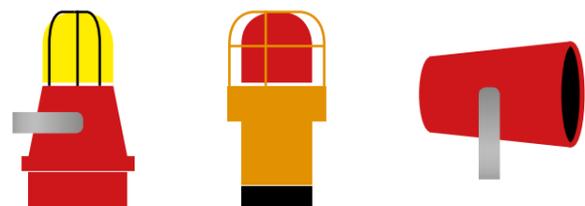
PX2:
ATEX, IEC Ex certificates for electrical Ex-protection
ATEX technical measurement test + SIL2 for safety functions
4-20 mA, RS 485 and relays
Continuous self-monitoring
Easy calibration and calibration service by changing of the sensor head
Proportional 4-20 mA output
Serial interface to the controller
Polarity and overload protection
LCD display with status LED's (optional)
Alarm and fault relays

CONTROLLER



XGC-80:
128 sensors
Extendable relay via EPS
Display LED
Hand tool for configuration
Direct connection to BMS
Configurable units
Integrated GC module
Option UPS / data logger
Mountable in the control cabinet
Safety product

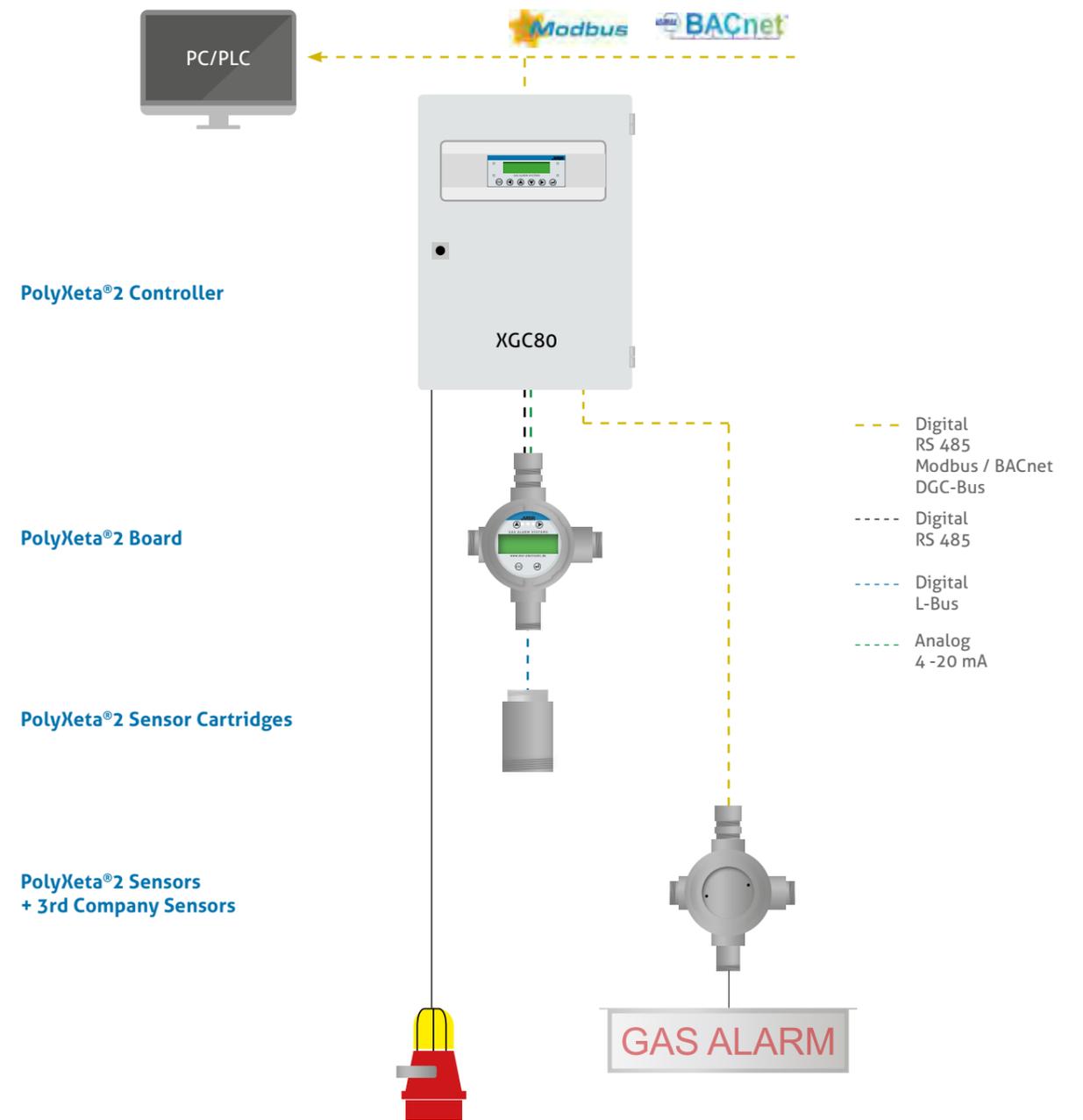
Warning Devices



WH-X:
Safety products for Zone 1 and 2

System Overview

PolyXeta®2



Sensors

With the innovative exchangeable sensor X-Change

The PolyXeta®2 exchangeable sensor 84

Sensors for ATEX Zone 1 and 2 86



X-Change

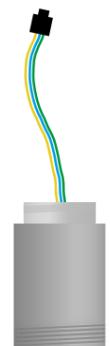
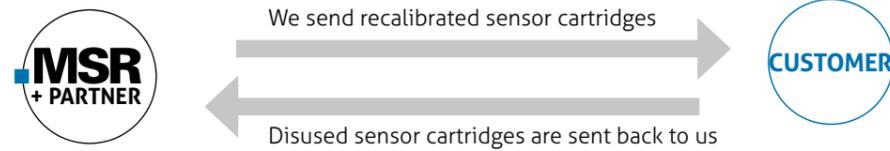
The PolyXeta[®]2 exchangeable sensor

New and simple calibration for gas alarm sensors.

Until now, the necessary calibration of the sensors was a complex procedure: Dependent on an external certified company, a great deal of time and money.

With the exchangeable sensor X-Change you turn the recalibration into a home game:

- Delivery of recalibrated sensor cartridges
- Easy and independent change (see next page)
- Considerable time and cost savings



Sensor cartridge SX1 with X-Change

Experience the change – the quick and safe change:



Open the housing (1).



Disconnect the sensor cable and unscrew the disused sensor cartridge (2). **The yellow LED lights up.**



Change the sensor cartridge (3) and connect the cable of the recalibrated cartridge with the board (4). **The yellow LED goes off again.**



Close the cover of the housing again and the recalibrated sensor is immediately ready for use.

Sensors for ATEX Zone 1 and 2

With the innovative exchangeable sensor X-Change



Micro-processor based sensor

4 – 20 mA output, RS485 Modbus output

The sensor is suitable for connection to XGC-80, GC-06, GC-05 and GC-03

OPTIONS LCD display
2 relay outputs: Alarm and fault relays

VARIATIONS Ex demb[ib] Zone 1, housing can be opened during operation
Ex d Zone 1, flame-proof enclosure
Ex d Zone 2, flame-proof enclosure

PolyXeta®2 Sensor Components

With sensor head SX1 (X-Change)

Communication: L-Bus

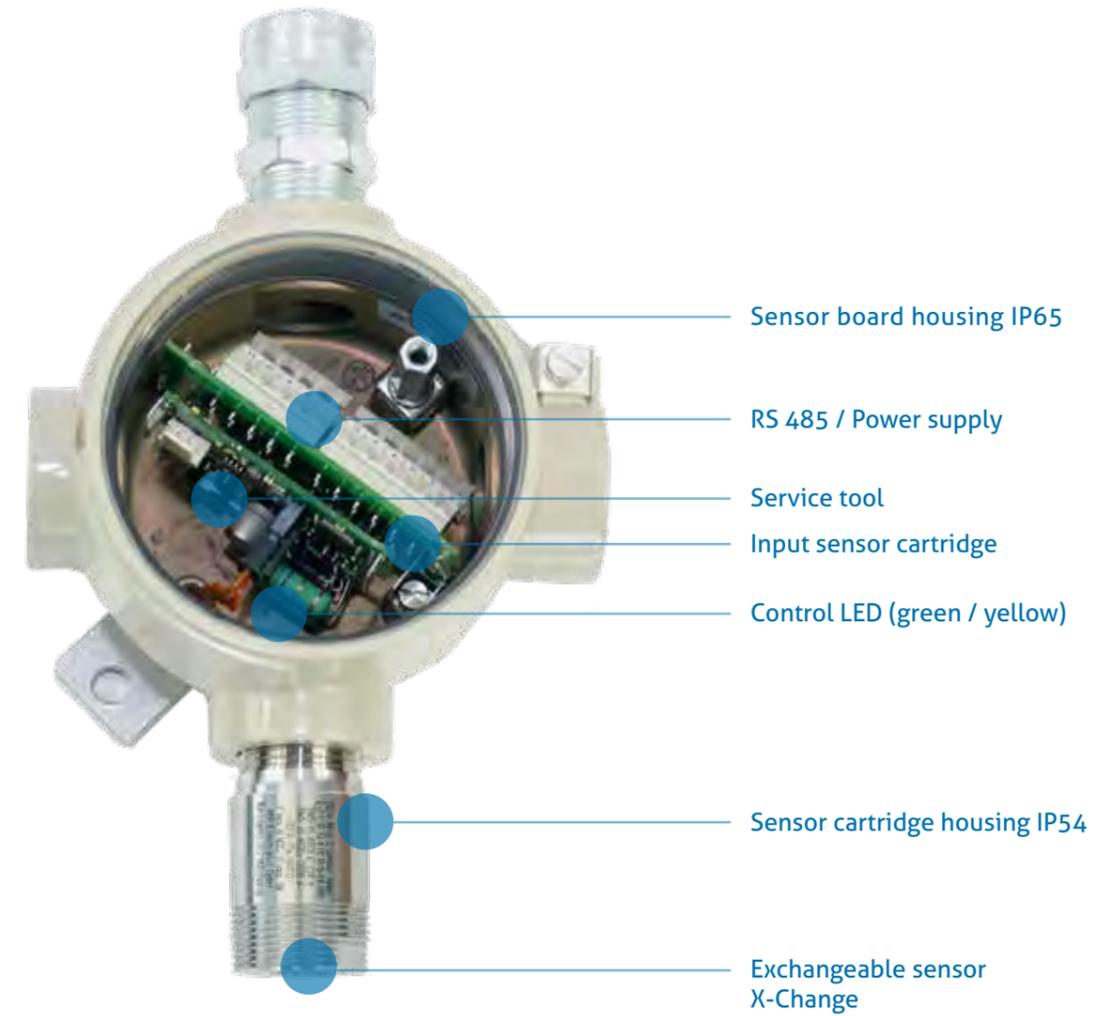
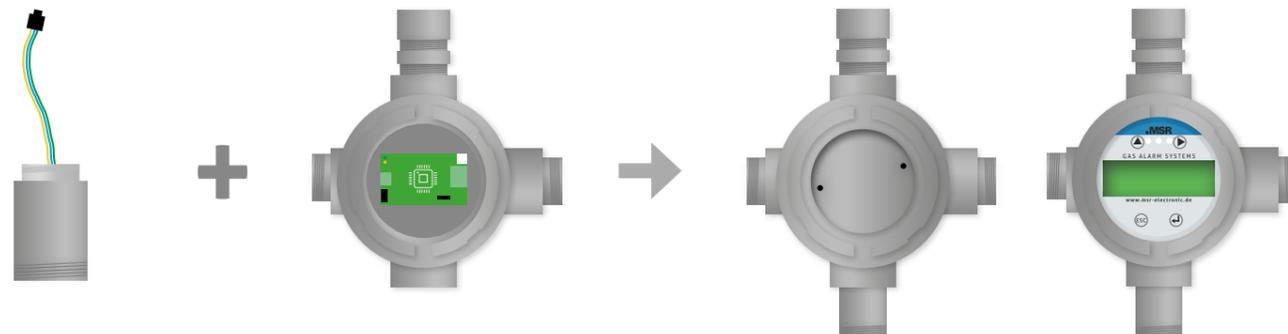
FEATURES AND BENEFITS:

- Signal output analog, ModBus
- Connection to SB2, MSB2, MSC2
- Calibration – digital
- X-Change housing with M25-threaded connection, protection type IP65

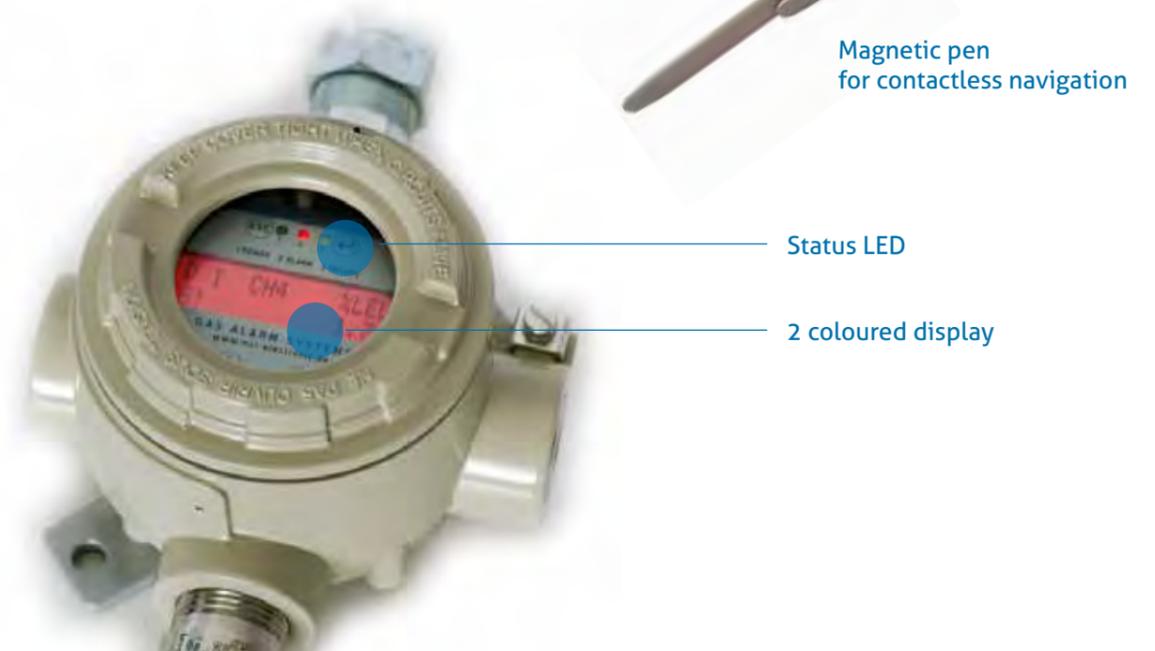
Sensor cartridge

Housing + Sensor board

Sensors without/with display



Variation with Display



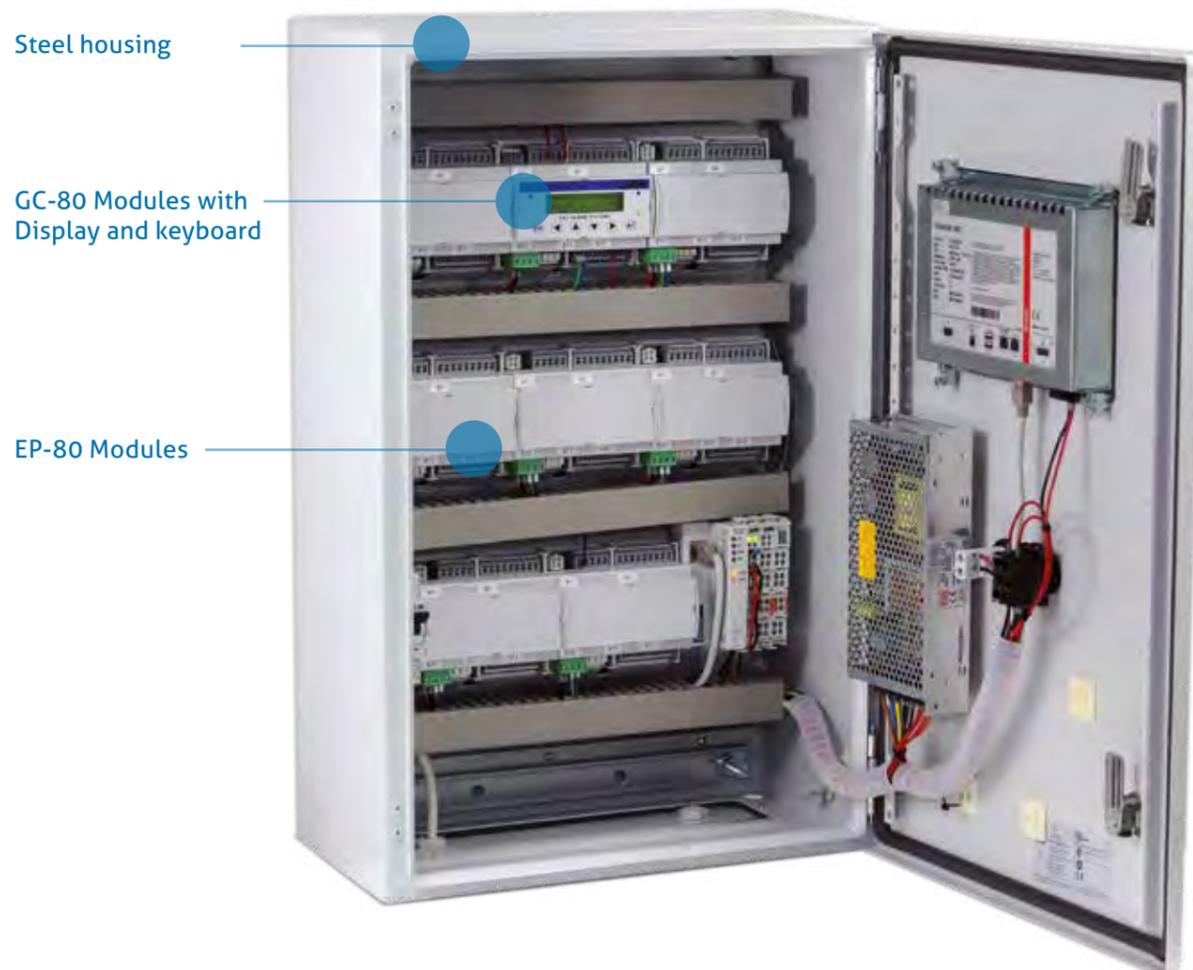
Controller

Freely extendable for your requirements



Gas Controller System

Measuring, alarm and control system XGC-80



System for toxic, combustible gases and vapors.

The gas controller series XGC-80 is designed among other things according to the EN 50545-1 and can monitor and evaluate up to 128 gas sensors; 96 of them can be PolyXeta(R)2 digital sensors and/or 32 of them analog sensors (4-20mA). Per sensor four freely adjustable alarm levels are available. For alarm signals the controller system has up to 32 alarm relays with potential-free changeover contact and up to 16 analog outputs with 4-20 mA signal. Freely adjustable parameters and set points enable the flexible use in the gas detection technology. The easy and comfortable commissioning is also possible thanks to the configuration with standard parameters.

FEATURES AND BENEFITS:

- 128 sensors
- Relay extendable via EP-80 modules
- Display, optional with touchscreen
- Hand tool for configuration
- Direct connection to BMS
- Units are selectable
- Integrated GC-80 module
- Option UPS / data logger
- Can be installed into the control cabinet
- Safety product

Variations	Max. digital sensors	Max. analog sensors	Relays
A	32	12	12
B	64	20	20
C	96	32	36

Modules

Gas controller extension modules GC-80 and EP-80

Extend your control.

Via the fieldbus up to 7 extension modules can be connected both centrally and locally to the GC-System. For the fieldbus output an overload and polarity protection is integrated. In addition another fieldbus output with repeater function is available.

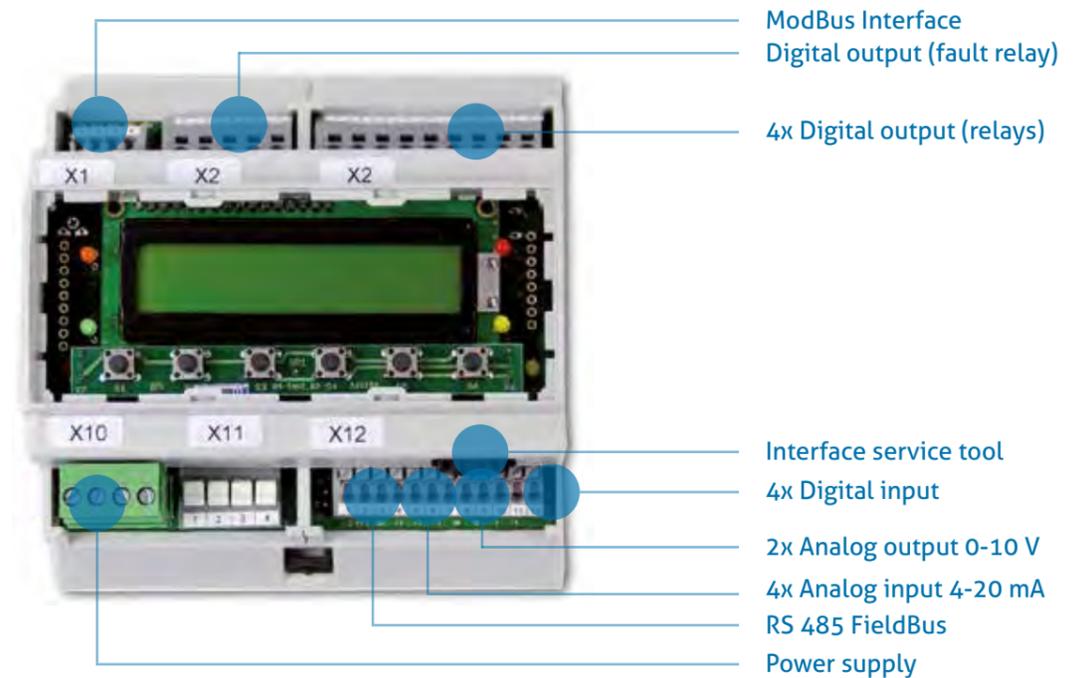
For the alarm relays AR03 and AR04 an open-circuit and functional monitoring of the external warning devices is optionally deliverable.

Extension of the analog inputs and outputs and the alarm relays of the gas controller XGC-80 system.

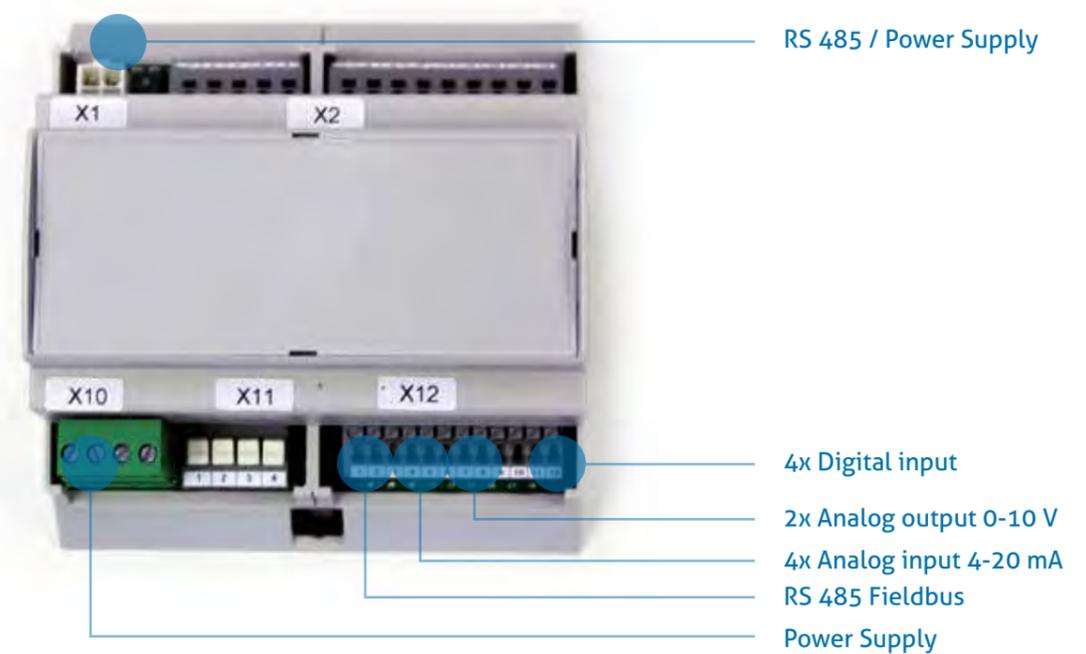
FEATURES AND BENEFITS:

- Extension module with four analog inputs (4-20 mA), four alarm relays with potential-free changeover contact and two analog outputs (4-20 mA)
- For connection of the PolyGard®2 gas controller XGC-80

Module GC-80



Module EP-80



Warning Devices

Reliable warning in the EX area

For areas where due to explosive substances special requirements exist.

MSR-Electronic offers an extensive repertoire of audible and visual signal devices with different approvals in the EX area. The audible and visual signal devices of the Ex series are characterized by a particularly robust construction and resistance to environmental influences and chemicals.

These are information, warning and emergency signals for safety, hazard and fire alarm systems, building, industrial and commercial automation systems, disaster warning and danger zones.

The products are suitable for the use in gas and steam atmospheres, as well as in dust atmospheres. MSR-Electronic offers Ex signal towers, visual Ex signal devices, audible Ex signal devices and visual-audible Ex signal devices.

FEATURES AND BENEFITS:

- Compatible with all controllers by MSR-Electronic
- Applicable for Zone 1 and Zone 2
- Durable and robust



ALARM HORN SOUNDER & XENON STROBE BEACON:

- Explosion proof LED multi-function Beacon
- Double / triple strike flash



OMNI-DIRECTIONAL XENON BEACON:

- Xenon strobe beacon
- Suitable for Zone 1, 2,
- Approved to IECEx, ATEX, Ex EAC



WARNING HORN:

- Suitable for Zone 1 & Zone 2
- High impact, fire retardant ABS