

MCS

MEDIUM
CONTROL
SYSTEME

GASWARNANLAGEN



RIKEN KEIKI

17th SILICON
SAXONY
DAY

**THE INTERNATIONAL HIGH-TECH AND
NETWORKING EVENT**

21 June 2023 | Airport Dresden, Germany

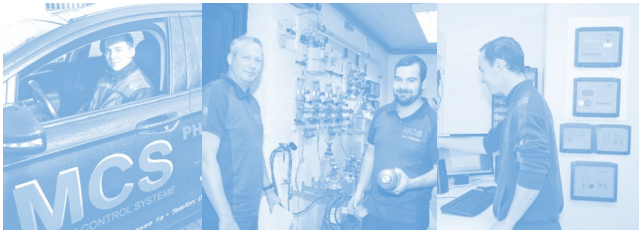


Who are we?

We are distributor and producer of gas detection systems. Design, project management, start-up and maintenance is our day-to-day business. This, we have been doing since 1996.

Our products and services help to protect people and environment as well as capital equipment. They are also used in process control applications.

Based in Altenburg, we serve our customer who are spread all over Germany. Our service technicians are located in different federal states and are near to our customers.



Training and Education

We offer professional training and education!

To ensure that we can serve our customers also in the future with new products and excellent services, we run a program to train and educate our junior staff.

We have collaborations to offer first class education:

Bachelor of Science

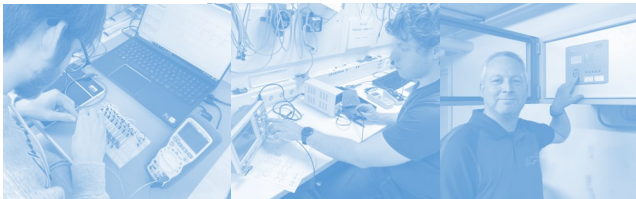
- Electronics
- Automation Technology

Elektroniker (IHK) für

- Betriebstechnik
- Automatisierungstechnik



„Offering professional training and education is both a civic duty as well as a necessity to grow young people into performing the tasks to be done in the future.”
(G.Büche, CEO MEDIUM-CONTROL-SYSTEME)



What do we offer?

We offer fixed and mobile **Gas Detection Systems** and necessary **Accessories**. Service is an important part of our portfolio. We can execute **Start-up** and **Maintenance** but also sell equipment if you don't need any service.

For capital investments, our service starts with **Project Management** and can include **Installation** if required.

Logistics and **Stocking** is getting more and more important, especially since **Replacement Parts** needs to be available quickly. Our standard product range consists of many stock items for fast availability. But we also keep customer specific products and replacement parts on stock for call orders.

Our main supplier



Largest portfolio for SEMICON manufacturing applications • Modern and smallest handheld devices with Bluetooth® • Approvals for many industries • Excellent quality

- Products made in Japan



Excellent product range for harsh environments (chemical industry and marine) • ATEX and SIL rated products • Handheld devices with outstanding toughness

- Products made in UK



Modular systems for laboratory applications to control vast arrays of gas detectors • Cost efficient gas detectors for light applications • LED sign-boards for signalization

- Products made in Germany

„We only pick experienced and reliable suppliers. We have long-time relationships with our customers. Consequently we need long-time relationships with our suppliers too.“ (G.Büche, CEO MEDIUM-CONTROL-SYSTEME)

GD-70

Stand Alone Gas Detector



Overview

The GD-70D can be used as a stand-alone device, offering a number of communication protocols to existing control panels like the MCS 4000™ (page 10) or PLC systems. It contains a long life high capacity pump for sampling.

The smart sensors retain all calibration and sensor-specific data in a memory and thus can be hot-swapped in the field with no programming required. The sensors can be conveniently calibrated separate from the transmitter, avoiding calibration on site, which might be difficult in clean room areas.



„Outstanding product, especially for SEMICON Applications. Can detect a huge range of gases. There is nothing comparable on the market.“

GD-70

Stand Alone Gas Detector

List of gases

Ammonia NH₃

Arsine AsH₃

Boron Trichloride BCl₃

Boron Trifluoride BF₃

Bromine BR₂

Carbon Monoxide CO

Carbonyl Sulfide COS

Chlorine Cl₂

Chlorine Trifluoride ClF₃

Diborane B₂H₆

Dichlorethylene DCE

Dichloroethene C₂H₂CL₂

Dichloromethane CH₂CL₂

Dichlorosilane DCS

Diethylamine (CH₃CH₂)₂NH

Difluoromethane R-32

Dimethylamine (CH₃)₂NH

Disilane Si₂H₆

Fluorine F₂

Fluoro-Methane R-41

Germane GeH₄

Hydrazine N₂H₄

Hydrogen Bromide HBr

Hydrogen Chloride HCl

Hydrogen Cyanide HCN

Hydrogen Fluoride HF

Hydrogen H₂

Hydrogen Peroxide H₂O₂

Hydrogen Selenide H₂Se

Hydrogen Sulfide H₂S

Isobutane i-C₄H₁₀

Isopropyl Alcohol CH₃CHOHCH₃

Methane CH₄

Methyl Alcohol CH₃OH

Methylamine CH₃NH₂

Nitric Oxide NO

Nitrogen Dioxide NO₂

Nitrogen Tetraoxide N₂O₄

Nitrogen Trifluoride NF₃

Oxygen O₂

Ozone O₃

Phosphine PH₃

Propane CH₃H₈

Silane SiH₄

Silicon Tetrachloride SiCl₄

Silicon Tetrafluoride SiF₄

Sulfur Dioxide SO₂

Sulfur Tetrafluoride SF₄

Tetraethyl Orthosilicate TEOS

Trimethoxysilane TRIMOS

Trimethyl Silane TMS

Trimethylamine (CH₃)₃N

Trichlorosilane TCS

Tungsten Hexafluoride WF₆



RIKEN KEIKI



GX-3R pro

Confined Space Gas Monitors

Overview

The GX-3R and the GX-3R pro are the worlds smallest 4 resp. 5 gas monitors.

They represent the latest evolution of gas detection technology utilizing a new generation of micro sensors.

GX-3R connects with Bluetooth for communication with smartphones or tablets to allows rapid notification off emergency situations.



„The world smallest handheld gas monitor—the perfect personal protective equipment (PPE). In confined spaces, in cleanrooms or in any other place. The GX-3R and the GX-3R pro are the most handy solution you can get.“

GX-3R pro



Confined Space Gas Monitors

List of gases (GX-3R pro)



GX-3R pro is also available with an external electric pump (left picture).

For more gases, please consider GX-6000 (right picture).



MCS 4000™



Control Panel

Overview

The MCS 4000™ is a truly modular and versatile control panel. Separate modules for input and output functions allow to configure the system to your needs. When later changes and extensions become necessary, the MCS 4000™ system can be easily done by adding modules.



The modules can even be several hundred meters away from the main station, within its own housing. Thus, no need to invest in a big and costly control cabinet when your gas detection system grows. Another advantage of the modules is, that less cables will be needed. Modules can be connected just with three wires. Even a down-grade is easier, since no big housings or cabinets remain or need to be disassembled.

MCS 4000™

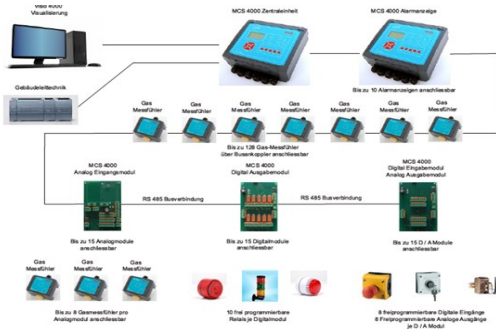


Control Panel

How Modules are connected

The modules are easily connected via 3 wires and can be up to 500m away from each other. Longer distances are possible by use of our repeaters.

Simply add modules whenever and wherever you need!



MCS 4000™



Control Panel

Modules available

Control Unit	This is the unit controlling all modules, which are connected via a RS485 bus system.
Analog Input Module	8 inputs 4-20mA, 2 digital input, available with 24V switch mode power supply. Up to 16 modules.
Digital Output Module	10 relays as digital outputs. Up to 16 modules.
Digital Input / Analog Output Module	8 digital inputs, outputs the stabilized signal of up to 8 connected gas detectors as 4.20mA signal. Up to 16 modules.
Bus Module (for gas detectors)	Allows to connect one 4-20 mA or 0-10V gas detector directly to the bus. Up to 128 modules.
Modbus Output Module	Supplies data to a higher level management system.
Display Module	To mirror and show the display of the control unit in a different location and to reset alarms. Up to 16 modules.

Signalization



MCS Signalization

LED sign-boards

The boards are equipped with LEDs for long lifetime. Products are also available with a piezo buzzer integrated to combine optical and acoustic signalization. We have a standard range, available from stock, but can also adapt the boards to your needs.

Tailor made possible! Your own text or pictogram can be applied.



References - Extract



FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA

SIEMENS



Abbott

A Promise for Life



Fraunhofer



UNIVERSITÄT
LEIPZIG



Our Commitment!

For Semicon related questions, please contact:

Gregor Büche

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„I'm an electrical engineer by profession and graduated at ABB Semiconductors AG in Lenzburg/CH. During my career, I held several global positions before joining MCS. Even though, I was in charge of many market segments, Semicon was always one of them.

Please contact me for any question around gas detection. I'm looking forward meeting you!" Gregor Büche



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„Our start in gas detection was in 1996. Since then, we have sold thousands of systems. Our goal is to offer best service to our customers, independent if they need simple equipment, full scale installation or just a replacement part. “

N.Teplitskaia, Supply-Chain-Manager

www.mcs-gaswarnanlagen.de