

Pocking, 8. September 2022

## CO<sub>2</sub> gas monitoring for natural substance extraction processes

**MSR-Electronic digital gas sensors monitor CO<sub>2</sub> and lack of oxygen.**

Supercritical CO<sub>2</sub> extraction is a proven, environmentally-friendly, guaranteed chemical- and solvent-residue-free process, which is used to generate a wide variety of extracts and raffinates.

Pressurisation and temperature adjustment increase the density of the liquid CO<sub>2</sub> – creating a supercritical state that makes it possible to extract specific substances in different fractions. This method is particularly suitable for lipophilic substances such as fats, oils and waxes. It is used, for example, in the production of CBD oil.



The company NATECO<sub>2</sub>, based in Bavaria, is an expert in the careful and solvent-free extraction of natural substances for the food, beverage, cosmetics and pharmaceutical industries, using CO<sub>2</sub>.

NATECO<sub>2</sub> processes up to 20,000 tonnes of various raw materials per year, operates worldwide and is the largest provider of CO<sub>2</sub> contract extraction. An in-house research and development centre as well as a certified analysis laboratory round out its comprehensive range of services.

### **Where is detection carried out?**

CO<sub>2</sub> detection is urgently needed in the working areas of extraction plants, as the gas displaces the oxygen in the ambient air and is thus a danger to human life.

**MSR-Electronic solutions for reliable CO<sub>2</sub> gas detection.**

MSR offers reliable fixed gas warning systems that provide continuous monitoring of the ambient air for dangerous gas concentrations. This protects lives and plants. MSR develops individual gas sensors and gas warning systems that can detect toxic or combustible gas concentrations.

NATECO<sub>2</sub> uses the exchangeable sensor system with digitalised measurement value processing, temperature compensation and self-monitoring for continuous monitoring of the ambient air.



The digital (type SC2) gas sensors are used to detect CO<sub>2</sub>. The exchangeable sensor system consists of Warning and Sensor-Board (type WSB2) and sensor head (type SC2) components. The sensor head has an independent  $\mu$ Controller that evaluates and stores all relevant measuring values and data of the sensor element. The sensor head transfers this data to the board via the internal local bus.

Up to 3 sensor heads for different gases can be connected to the WSB2. The sensor head can be mounted directly on the WSB2. The WSB2 communicates with the DGC-06 Gas-Controller – the heart of the fixed gas warning system – via the RS-485 field bus interface.

Thanks to the X-Change Technology, calibration can be performed by simply exchanging the sensor head (type SC2) or by the integrated, convenient calibration routine directly at the plant. The gas sensors are designed to connect to the MSR controllers and boards. The DGC-06 controller is suitable, for example, for large plants and manages up to 128 gas sensors, the Compactcontroller up to 10 gas sensors and the MSC2 controller up to 3 gas sensors.

## The control centre: The DGC-06 Gas-Controller



The controller is used for monitoring and warning of toxic and combustible gases and vapours as well as Freon refrigerants in a wide range of gas measuring technology applications. The large number of freely configurable parameters and set points allows for individual adaptation to many applications. The DGC-06 Gas-Controller also fulfils the functions of carbon monoxide monitoring in parking garages, tunnels and go-kart tracks and is compliant

with the current EN 50545-1 standard.

Further information on **MSR products** can be found in the current [online catalog](#) or in the webshop [www.msr-24.com](http://www.msr-24.com).

**MSR-Electronic is a manufacturer of fixed gas warning systems with decades of experience in the area of building automation and gas measuring technology.** The international company with headquarters in Germany offers a wide range of methods for the detection of toxic and combustible gases. On this basis, MSR-Electronic develops individual gas sensors, controllers and warning devices for many applications, such as parking garages, tunnels, the petrochemical industry and shipping. The products meet and surpass general standards and regulations and can thus guarantee the safety of the plant. [www.msr-electronic.de](http://www.msr-electronic.de)

**MSR-Electronic GmbH** | Bürgermeister-Schönbauer-Str. 13 | 94060 Pocking, Germany | Tel.: +49 8531 9004-0

### Product images copyright and title

© MSR-Electronic GmbH, Germany, WSB2 Warning and Sensor-Board and SC2 gas sensor

© MSR-Electronic GmbH, Germany, DGC-06 Gas-Controller

© Hopfenveredlung St. Johann GmbH (NATECO<sub>2</sub>), Germany, NCO\_LogoBildSlogan.jpg

Contact: MSR-Group GmbH, Michaela Kosmella-Rauner, Bgm.-Schönbauer-Str. 13, 94060 Pocking, [m.kr@msr-group.eu](mailto:m.kr@msr-group.eu)

Contact: NATECO<sub>2</sub> (Hopfenveredlung St. Johann GmbH), Auenstr. 18-20, 85283 Wolnzach, [contact@nateco2.de](mailto:contact@nateco2.de)