



**Electro Optical Components, Inc.**

5464 Skylane Boulevard, Suite D, Santa Rosa, CA 95403

Toll Free: 855-EOC-6300

[www.eoc-inc.com](http://www.eoc-inc.com) | [info@eoc-inc.com](mailto:info@eoc-inc.com)



**smartGAS**  
MIKROSENSORIK

INNOVATIVE GAS SENSORS

## NDIR REFRIGERANT SENSOR FOR REFRIGERATION AND AIR CONDITIONING TECHNOLOGY

*blue performance*



# REFRIGERANTS MEASUREMENT

## NDIR-SENSORS – HIGH TECHNOLOGY FOR YOUR APPLICATION

All smartGAS sensors are based on the NDIR principle (non-dispersive infrared technology). They feature excellent long-term stability and high selectivity over other gases. This guarantees absolutely reliable operation with accurate readings also in demanding environments.

As opposed to sensor technologies that are based on chemical reactions, our optical NDIR sensors require very little maintenance.

We deliver our NDIR gas sensors fully calibrated and temperature compensated, and also pressure compensated on request. The convenient plug & play interface facilitates connection to your hardware.





#### BASIC<sup>EVO</sup> for refrigerants (1000 ppm / 2000 ppm)

The non-dispersive infrared (NDIR) BASIC<sup>EVO</sup> gas sensor for refrigerants with a measuring range of 1000 ppm or 2000 ppm was specially designed by our engineers for installation in stationary gas detectors and indoor air monitoring systems for reliable detection of minute gas leakage in ambient air. It is also suitable for measuring and monitoring applications in food warehouses and cold storage depots. Other potential applications for the low-drift BASIC<sup>EVO</sup> sensor are for continuous gas monitoring in air-conditioned rooms and for scientific research.

R22

R123

R125

R134A

R404A

R407A

R407C

R410A

R507

R1234YF

R...

#### Refrigerants

Refrigerants such as R134a, R125, R404a and many others used in refrigerants are combustible and extremely harmful to the environment. In accordance with the EU F-Gas Directive, refrigerating systems must therefore not only fulfil stringent leakage control requirements, but must also be equipped with a leak detection system for HFC refrigerants. Early detection of leaks is the only way to protect human beings and the environment by preventing the accidental release of coolants and refrigerants. Continuous measurement of refrigerants in the ambient air also prevents the system from running dry, minimising downtimes and subsequent costs.

With a measuring range of 1000 ppm or 2000 ppm, low-maintenance NDIR sensors from smartGAS detect even minute refrigerant quantities – selectively and reliably. Their use in air conditioning technology can be a decisive competitive advantage.

No matter what concentration has to be measured under what conditions – smartGAS offers the suitable NDIR sensor.

## SMARTGAS – SMART SOLUTIONS FOR GAS MEASUREMENT



*The smartGAS Mikrosensorik GmbH is a dynamic company specialized in the development, the production and the marketing of innovative gas sensors and gas analyzing solutions. smartGAS develops, produces and sells both OEM and customized sensor systems. All products are based on infrared absorption (NDIR) which allows selective detection of a gas and accurate determination of its concentration. Recent developments have seen not only significant reduction in size but also an increase in the number of detectable gases. The sensors are used in applications such as fruit ripening and storage, high voltage, emission monitoring, process control, refrigeration analyzers and monitoring, analytical appliances and process control.*

*The goal of smartGAS is to simplify the handling of gases using the innovative IR technology to protect the environment and to advance the safety for humans and equipment. Therefore we offer our standard products and customized solutions and provide support and assistance for the design in.*