KNESTEL
ELEKTRONIK & TECHNOLOGIE

we invent solutions

we develop customized solutions from idea to production and beyond.

Project details: OEM-NDIR$_{flex}$ Non-Dispersive InfraRed sensor

Industries

- Trace Gas Analysis, Automotive, Testing and Measuring Technology

Technology fields

- Optical Measuring Systems; Measurement, Control and Regulation Technology

Project requirements

- The aim of the project was the development of a NDIRflex measuring bench with modular design for different cuvette lengths. The measured values should be accessed via a CAN or rather a serial RS232 communication protocol. Furthermore, it should also be realized a heated cuvette and a Peltier cooling for the thermopile receiver. About a further measuring input, an electrochemical O2 sensor should be evaluated additionally. A further requirement was to determine the flow of the gas to be measured and a pressure or temperature compensation of the measured values.

Facts / Highlights

- Analysis of up to four thermopile channels
- Modular design for different cuvette lengths
- Temperature and pressure compensation
- CAN and RS232 interface
- Integrated pressure sensors for flow determination
- Measuring input for electrochemical O2 sensor

Services of KNESTEL

- Target price estimate, project management, requirements specification, project planning, development hardware, electrical and mechanical construction, EMC testing, prototyping, serial production

Possible applications

- Emission and immission measurements of industrial and process gases
- Determination of pollutants concentrations in the air
- Quality assurance in manufacturing processes
- Maturity monitoring of fruit and vegetables
- Exhaust gas measurements in the automotive industry or in power plant technology

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